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Determinants of audit fees for Swedish listed non-financial firms in NASDAQ OMX Stockholm

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Abstract

- Title** : Determinants of audit fees for Swedish listed non-financial firms in NASDAQ OMX Stockholm.
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- Key words** : Audit fees, audit independence, auditee risk, auditee size, audit committee, audit, auditee complexity, Big4.
- Purpose** : The purpose of this thesis is to define factors which influence audit fees.
- Methodology** : I have used the deductive approach to find out the results.
- Theoretical perspectives** : I have used factors found in previous studies to discuss about and build my own hypotheses.
- Empirical foundation** : I have used data from 2010 annual reports of Swedish listed non-financial firms in NASDAQ OMX Stockholm. Spearman correlation and multiple linear regression are used to analyze audit fee structure.
- Conclusions** : The study finds that auditee size and other fees have positive correlations with audit fees. In addition, audit committee presence has a negative relation with audit fees. Meanwhile, there is no precise answer that audit risk, auditee industry, auditor branch name have associations with audit fees or not. Other factors of auditee complexity, year-end date and audit tenure have no relation with audit fees.

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Lund University, May 2012

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Abbreviations

CPA	Certified Public Accountant
EC	European Commission
EU	European Union
FAR	The Swedish Institute of Authorized Public Accountants (Föreningen Auktoriserade Revisorer)
AICPA	American Institute of CPAs
IAS	International Auditing Standards
IASC	International Accounting Standards Committee
IFAC	International Federation of Accountants
IFRS	International Financial Reporting Standards
IT	Information Technology
MTFs	Multilateral Trading Facilities
NAS	Non-audit services
SBPA	The Supervisory Board of Public Accountants (Revisorsnämnden)
SEC	U.S. Securities and Exchange Commission
SOX	The Sarbanes-Oxley Act 2002

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1. Introduction

1.1. Background

1.1.1. Auditing History and Auditor's Role

The auditing profession was initiated early in the world history, antedating the Christian era. Evidences for the existence of auditing activity in ancient China (the Zhao dynasty), Egypt (3000 BC) have been found. "Auditors" at these times was supervisors of the accounts of Chinese Emperor and Egyptian Pharaoh. Auditing activity also appeared early in Greece and Rome. The terminology "auditor" in the Latin means a "hearer" or "listener". This implies that auditors in Rome "heard" taxpayers (for example farmers) report their business results and tax duty. (Hayes *et al*, 2005).

Like any other industry, the development of modern auditing profession is also stimulated by the development of economy and related industries. Specifically, the Industrial Revolution in the 18th century with the appearance of the separation between ownership and management made more demand for the practice of modern auditing. Additionally, nowadays the trend of globalization and the development of stock market are also motivations for the further strengthening of the profession. (Hayes *et al*, 2005). Globalization is a process of trade and culture exchange (BBC, 2012). In the globalization era, organizations, especially large organizations run business not only within their nations but also in other countries. This trend leads to the need for globalization in auditing field. The evidences of globalization in auditing field are the foundation of International Federation of Accountants (IFAC) and International Accounting Standards Committee (IASC), the appearance of Big International Auditing Firms and the introduction of International Auditing Standards/ International Financial Reporting Standards (IAS/IFRS).

One area of concern of modern audit profession is auditor role. The full separation between ownership and management and the development of stock market make a need for owners, investors to supervise business results reflected in financial statements and made by company management. The company management has responsibility to report business results to external users but it is company managers who decide the information presented in financial statements. Thus, external users have to rely on opinions of financial statements delivered by

auditors. The importance of auditors, especially in the era of globalization, makes a steadier and larger market for auditing service. (Hayes *et al*, 2005).

”Auditors are the ... ”guardians of the ‘truth in markets’ acting in the public interest to maintain reliable and consistent financial reporting” (Volcker, 2002).

1.1.2. Accounting Scandals and Concerns about Audit Fees

However, in earlier years of 21st century, after accounting scandals in the US (Enron, WorldCom) and Europe (Parmalat), auditing world witnessed a collapse of public’s belief in auditor’s role and auditor’s morals. The reason is many decisions to invest in these companies were dependent on not only financial figures but also strong brand names of auditing firms. Following these scandals, auditing firms were falling into disrepute and a number of changes in audit regulations have been introduced to reinforce audit independence.

Among elements supposed to impair audit independence, traditionally, audit fees including negative abnormal audit fees and positive abnormal audit fees prompt major criticism from public. Auditors who provide “low balling” audit cannot be fully independent to their clients and these auditors generally expect to earn positive “quasi-rents” in the future. “Low-balling” audit implies that auditors maintain customers by cutting price (DeAngelo, 1981). However, the results of investigations into this issue remain mixed. Baber *et al* (1987) show a strong evidence of the existence of relation between cutting-price and political factors. Meanwhile, Choi *et al* (2010) find that audit quality has no association with negative abnormal audit fees and Magee and Mei-Chiun (1990) present that the link between audit fees and audit independence exists under certain circumstances. Besides, public and authorities also express their concern about the relation of audit quality and positive abnormal audit fees. In the 1990s, U.S. Securities and Exchange Commission (SEC) suggested that audit quality decreased due to the situation that auditor’s clients were allowed to play “the numbers game”¹ (Businessweek, 2002). However, Levitt and Dwyer cited by Francis and Ke (2006) recognized that auditors would however never confess that they allowed clients to manage earnings because they want to gain more audit fees.

¹ Arthur Levitt - a practice SEC Chairman used this word in his speech at New York University in 1998. He meant that auditors clients were allowed to report earnings as the way they wanted. This speech is in the book

1.2. Audit Pricing

Before analyzing how audit fees are computed, it is necessary to take a look into the two aspects of the demand and the supply for audit services.

The demand for audit services comes from company owners, outside investors, company managers, governments and general public. However there exists a paradox that some demanders do not have the same goal because they do not have the same interest. For example, company managers want to report higher earnings since it means they will get higher bonus and uphold their position; meanwhile outside investors need to know the real loss or profit as well as information about company future events to make investment decisions. In the era of stock market, the main demander of audited financial statements is outside investors. However, they are not the ones who decide to sign audit contract with auditing firms - the supplier of audit services. Auditing firms and clients have the same goal - maximizing profit. To maximize profit, it is clear that audit firms have to gain more customers and minimize audit procedures. It means in certain cases they may compromise with client's managers. Aftermath, audit independence is injured. However, it simultaneously means auditors face the risk of litigation and being revoked their audit practice (like Andersen's case in Enron scandal). This fact entails that auditing firms have to consider cautiously loss and profit to decide their audit fees. Therefore, it is understandable that auditors who have the right to conduct an audit engagement have to be qualified and thus, attested by certified public accountant (CPA). To be qualified to take the exam of CPA, they normally need to have background of accounting and auditing and have certain years of experience in auditing and accounting. (Benston, 1985).

There are four types of audit contract regulated in legal documents and presented in practice: fixed price, contingent fee, benefit in kind and hourly billing rate (in form of monetary) (Diamant, 2000). Contingent fee means fees will only be paid if the provider of a service or a project gets certain results (SEC, 2004). The nature of audit services points out that auditors should satisfy not only managers but also investors. Meanwhile, the interests of managers and investors are so different, even antagonistic. Accordingly, SEC believes contingent fees can impair auditor's independence and then prohibits receiving contingent fees by accounting firms (SEC, 2004). In 2011, EC proposed a regulation on specific requirements regarding statutory audit of public-interest entities to stipulate a prohibition of contingent fees paid by auditees (EC, 2011). Being a member of EU, Sweden however early presented the same

regulation in 1995 (Diamant, 2000). When it comes to benefit in kind, EC requires that reporting entities have to specifically disclose the nature and estimated value of benefit (EC, 2011). However, in certain cases researched by Diamant (2000), the Swedish Supervisory Board of Public Accountants (Revisorsnämnden – SBPA) stated that auditors objectivity were questioned because of receiving benefit in kind paid by auditees for audit assignments. There is no prohibition or limitation for fixed price and hourly billing rate contracts. Diamant (2000) finds that there is no general legal requirement related to the pricing of an audit contract in Sweden. By and large, audit price charged by all sizes of auditors has been calculated by hourly billing rate (Illinois CPA Society, 2007).

From the analyses about the demand and supply for audit services and some information about types of audit pricing, it leads to a question: how audit fees are computed? Like any other service, audit fees are basically calculated based on cost and profit (auditors expect from an auditing contract). Since audit services have some special characteristics, audit fees can be determined by (1) audit costs including costs to perform audit procedures, opportunity cost (2) expected loss costs including litigation cost occurred, reputation cost and rehabilitation costs (3) profit expected (Mellett *et al*, 2007; Gonthier-Besacier and Schatt, 2007; Ahmed and Goyal, 2005; Joshi and Bastaki, 2000). This formula shed some more light on my analyses above that to maximize profit, auditors have to choose increasing audit fees or decreasing audit costs. In either cases auditors face risks. However, it is not always the case that auditing firms maximize audit profit. Researchers already find out their “low-balling” strategy (DeAngelo, 1981). Therefore, both positive abnormal audit fees and negative abnormal audit fees should be questioned.

1.3. Problem Discussion

The idea for this research derives from my question: is it true that any case of abnormal audit fees is the result of a damage to audit independence? For example A and B - two auditing firms conduct two similar audit contracts but audit fees paid to A is much higher than that paid to B; does it mean that A’s auditors lose their audit independence? One of the possible answers is the reputation of A in audit market is higher than that of B. This fact has been proved empirically by researchers who have the same question: what determine audit fees?

As a matter of fact, the US and the UK are the earliest countries to control the issue of audit remuneration. Therefore, in researches on audit fee determinants, the two countries have been focused on: the US (Taylor and Simon, 1999; Callaghan *et al*, 2008; Mellett *et al*, 2007; Ettredge and Greenberg, 1990; Rubin, 1988; Bell *et al*, 2000; Pratt and Stice, 1994; Bedard and Johnstone, 2010) and the UK (Moizer, 1997; Brinn *et al*, 1994; Pong, 2004). Besides, researchers have also taken companies of France (Gonthier-Besacier and Schatt, 2007), Denmark (Thinggaard and Kiertzner, 2008), Finland (Niemi, 2004), Belgium (Caneghem, 2009), Australia (Carson *et al*, 2004; Carson and Fargher, 2006), Bahrain (Joshi and Bastaki, 2000), HongKong (Sandra and Patrick, 1996), Bangladeshi, Pakistan and India (Ahmed and Goyal, 2005) into consideration. In most of the previous researches, associations between audit fees and some factors are usually found. Joshi and Bastaki (2000) discover that audit remuneration paid by listed companies in Bahrain depends on size of reporting entity, auditee risk, profitability, auditee complexity, fees paid for non-audit services (NAS) and market concentration. Meanwhile, Gonthier-Besacier and Schatt (2007) determine that audit remuneration paid by listed companies in France has a significant relation with only firm size, firm risk and the presence of 2 Big4. The research of Ahmed and Goyal (2005) shows that auditee size and auditor size are important determinants of audit fees while audit fees and auditee complexity are however not related. Bedard and Johnstone (2010) find that audit tenure has a positive association with audit remuneration. The impact of each determinant on fees to auditors will be more discussed in the theory part.

The empirical findings of audit fee determinants in different countries show that audit fee structure is complex. In most of studies researching relations between auditee size, auditee risk and audit fees, evidences of these relations are normally found. It means that in certain cases investors can trust companies even these companies pay high fees to their auditors. However, these findings also show that the concern about audit independence impairment derived from high audit fees is reasonable. For example the positive relation between audit fees and audit tenure in the USA (Bedard and Johnstone, 2010) indicates that the closer relationship between auditors and clients can create a financial dependence of auditors on clients which threatens audit independence. Therefore, the regulation of audit rotation is necessary. Moreover, this result can suggest legislators revising their regulations to be suitable to the country's context and for other countries it can be also a warning of audit independence impairment coming from audit tenure. To this end, information about audit fee determination can be provided not only to outside investors - a main demander of audited

financial statements but also to legislators who set business regulations imposed on companies.

These aforementioned discussions show that it is necessary to empirically research audit fee structure. It is interesting to research developed countries with the stock market presence which are vulnerable to accounting scandals. There are several reasons leading me to the choice of Sweden. Firstly, previous studies mainly focus on the large capital markets of the UK and the US. Sweden has a developed economy but on the other hand its capital market is small. A research on this issue in Sweden can give new evidences to audit fee structure. Thus, the result can make contribution to the audit fee literature. Secondly, the existence of audit remuneration disclosure requirements and other regulations related such as NAS disclosure, audit rotation in Sweden make it possible to do the research. Last but not least, Sweden has no regulation about NAS limitation and hence, it is interesting to examine the relation between audit fees and other fees.

1.4. Research Purpose and Question

The purpose of this study is to determine factors influencing audit fees paid by Swedish listed non-financial firm in NASDAQ OMX Stockholm (Swedish listed non-financial firms) and thus the research question of the paper is “what are audit fee determinants for Swedish listed non-financial firms”.

I hope my research will provide outside investors and public users a new look of the issue of audit fees in Sweden, thereby helping them read financial statements effectively and making effective investment decisions. Besides, I try to get findings which can suggest Swedish lawmakers regulating audit fees and other related issues.

1.5. Disposition

The disposition is to provide readers the outline of the thesis as well as to help readers know main information presented in each chapter.

Chapter 1. Introduction

Chapter 1 provides some background on audit profession, the concern about audit fees in relationship with audit quality, audit pricing and problem discussion. After that I raise my research purpose and question.

Chapter 2. Research Method

In this chapter, I show my choice of methodology after some discussion.

Chapter 3. Institutional Settings and Regulations

Chapter 3 is to provide readers with information about Swedish institutional settings and some regulations of factors potentially having relationships with audit fees (which will be presented in Chapter 4).

Chapter 4. Determinants of Audit Fees

Basing on literature about audit fee determination and results of earlier empirical researches, I will give my hypotheses about relations between audit fees and factors that may have effects on audit price in a certain logical order.

Chapter 5. Empirical Method

The purpose of this chapter is to describe data utilization and the measures of the dependent variable and the independent variables.

Chapter 6. Empirical Analysis

Chapter 6 is to present my research results based on statistical analysis.

Chapter 7. Conclusion Remarks

The thesis will close with my findings of audit fee determinants. Also, this chapter will contain a discussion of some limitations of the study and present some suggestions for future researches.

2. Research Method

Designing a project is the first step and an important step in researching. Saunders *et al* (2007) reveal that the extent an author knows about theory at the beginning of the research can decide how to design the project. Accordingly, there are two types of research approach: deduction and induction. Using the inductive approach means an author collects data and deduces theory through the result of data analysis. On the contrary, the deductive approach implies that a study begins with developing theory and hypotheses. After that the author will choose data and test the hypotheses. Therefore, deduction is appropriate when an author aims to make a cause-effect link between specific variables while induction is used when an author tries to interpret the world through its phenomena or events. (Saunders *et al*, 2007).

Since the purpose of this thesis is to define factors which have influences on audit fees, it is suitable to use the deductive approach. My choice is also based on the fact that other authors who research the same topic also use the deductive approach (e.g Taylor and Simon, 1999; Callaghan *et al*, 2008; Mellett *et al*, 2007; Ettredge and Greenberg, 1990; Rubin, 1988; Bell *et al*, 2000; Pratt and Stice, 1994).

Robson (2002) (through Saunders *et al*, 2007) points out five main steps of the deductive approach as follows: 1. Developing hypotheses from the theory; 2. Collecting data and using data to defining operational terms to express hypotheses; 3. Testing the hypotheses; 4. Confirming the hypothesis outcome; 5. Based on the results, modifying theory if necessary. Regarding to data, a research with the deductive approach can use quantitative data or qualitative data or both in combination. Quantitative data includes numerical data or data that can be quantified. Therefore, quantitative data can be analysed and thus helps us to test relationships or trends. Meanwhile, qualitative data contains non-numeric data or data that cannot be quantified. Besides, both of quantitative data and qualitative data can be used in an explanatory study. In an explanatory study, when quantitative data is used to test a correlation between variables, qualitative data can be useful for explaining relationships. (Saunders *et al*, 2007).

In this research, I will build my own hypotheses basing on audit fee-affecting factors found in previous studies (e.g Taylor and Simon, 1999; Callaghan *et al*, 2008; Mellett *et al*, 2007; Ettredge and Greenberg, 1990; Rubin, 1988; Bell *et al*, 2000; Pratt and Stice, 1994; Bedard and Johnstone, 2010; Moizer, 1997; Brinn *et al*, 1994; Pong, 2004). I will measure

quantitatively the dependent and independent variables with data from annual reports of Swedish non-financial firms listing their stocks in NASDAQ OMX Stockholm. Since I want to get the answer for all Swedish non-financial firms in NASDAQ OMX Stockholm, I will chose all Swedish listed non-financial firms in NASDAQ OMX Stockholm as the population. Operational hypotheses will be tested through analyzing data with bivariate tests and multiple linear regression. Any necessary changes in theory will be reported. Finally, I will come to a conclusion about audit fee determinants.

3. Institutional Settings and Regulations

The purpose of this research is to define audit fee determinants of Swedish listed non-financial firms. That makes a need to provide readers with some information about the audit profession and the audit market of Sweden as the supply and demand sides of audit services. In addition, regulations related to factors potentially affecting audit fees will be presented. They include audit fees and other fees disclosure, NAS, audit committee and audit rotation. As Swedish audit environment can be affected by regulations of the US and Europe, in these presentations, I also compare these regulations with regulations in the US and Europe.

3.1. Audit Profession and Audit Market

The history of the Swedish audit profession began in 1912 when the Stockholm Chamber of Commerce (Stockholms handelskammare) authorized their first six auditors. In early years, the development of audit profession in Sweden was supported by the Company Act 1895 with the regulation that accounts of limited companies should be examined and reported by at least one auditor. However in the period from 1912 to 1983, Sweden had not enough authorized public accountants to meet the demand of limited companies. From 1983, the increases in number of auditors, limited companies together with the legislative requirement that limited companies have to be audited by authorized auditors make it possible for Swedish audit profession to greatly develop. (Wallerstedt, 2001). Currently, Swedish audit profession has been supervised by the Swedish Institute of Authorized Public Accountants (Föreningen Auktoriserade Revisorer - FAR) established in 1923. Following the trend of globalization of auditing, FAR has adopted ISA and IFAC's Ethical Code of Ethics. (Svanström and Sundgren, 2012). FAR has about 6.500 members of public accountants (authorized and approved) and specialists. (FAR, 2012).

Audit profession in Sweden developed not only in the aspect of the number of public accountants but also in regard to audit firms. While 1970s and 1980s are periods of merger activities between local audit firms, the periods of 1980s and 1990s are for international merger activities. In 1980s and 1990s, local audit firms extended their business to attract international accounting firms. (Wallerstedt, 2001). Currently, Swedish audit market has been dominated by Big4 (Öhrlings PricewaterhouseCoopers, Ernst & Young, KPMG and Deloitte)

(Svanström and Sundgren, 2012). The domination of Big4 in Swedish audit market was conducted through organic growth and by mergers and acquisitions with 4 Swedish audit firms (Öhrlings, Bohlins, and Sillén and Hagström) (Wallerstedt, 2001). The turnover of the Big4 of Sweden in 2009 reached nearly 11.000 billion SEK, accounting for 83.7% of all revenues of the ten largest audit firms in Sweden. Their number of employee was up to 7.860 staffs. Outstandingly, Swedish Big4 hire 56% of authorized accountants² and 29% of approved accountants³. (Svanström and Sundgren, 2012).

3.2. Some Audit Regulations

As a member of the European Union, audit practice of Sweden has to follow European Union regulations. Swedish audit practice has been controlled by the Annual Accounts Act 1995⁴, the Auditors Act 2001⁵, the Company Law 2005⁶ and national auditing standards issued by FAR. FAR and SBPA are the most important audit organizations. SBPA is a governmental authority under the control of the Ministry of Justice and is responsible for approving, supervising auditors and matters of registered audit firms. Decisions of SBPA in different cases can be interpreted to be rules of audit practice. (Svanström and Sundgren, 2012). Corporate governance in Swedish listed companies has been under control of the Companies Act 2005, the Swedish Code of Corporate Governance 2010⁷ and other laws for companies with traded shares.

3.2.1. Audit Fee Disclosure

Due to its concerns about audit independence in the accounting scandal era, SEC has mandated and updated audit fee disclosure from 2000. Having the same concern with SEC about auditor's independence and objectivity, FEE also presented its recommendation on the issue of audit fee disclosure in May 2002 (FEE, 2002). On May 17 2006, The Council of the

² To be qualified to be an authorized accountants, a person must meet three requirements (1) having a master's degree (2) having two years of experience and (3) passing the examination of professional competence.

³ To be qualified to be an approved accountants, a person must meet three requirements (1) having a bachelor's degree (2) having three years of experience and (3) passing the examination of professional competence.

⁴ <http://www.notisum.se/rnp/sls/lag/19951554.htm>

⁵ http://www.imolin.org/doc/amlid/Sweden_Auditors%20Act%20SFS%202001_883.pdf

⁶ <https://lagen.nu/2005:551>

⁷

http://www.corporategovernanceboard.se/media/45322/svenskkodbolagsstyrn_2010_eng_korrigerad20110321.pdf

European Union adopted Directive 2006/43/EC⁸ amending Directive 83/349/EEC (1983) and Directive 78/660/EEC (1978) to regulate statutory audits of annual accounts and consolidated accounts. In compliance with Directive 2006/43/EC (Chapter X, Article 40.1.i), audited companies have to disclose the total fees paid to auditors and also specify fees paid to each service including “audit services, other assurance services, tax services, and other non-audit services”.

Audit fee disclosure for Swedish companies was required early compared that of the US and other countries in EU. The Annual Accounts Act (Årsredovisingslagen [1995:1554]) regulates that a limited company shall disclose the fees paid to its auditors (Diamant, 2000). In recent years, one of the most critical events influencing auditing profession development was Sweden entered the EU in 1995. Accordingly, Swedish regulations have to be adjusted to be compliance with the EU’s requirements. In accordance with Directive 2006/43/EC, the Annual Accounts Act. 1995 (Chapter 5, Section 21) require that Swedish listed companies have to disclose fees paid to auditors including audit service, audit-related service, tax consultancy and others in the two most recent years.

3.2.2. NAS

The Sarbanes-Oxley Act 2002 (SOX⁹) treats NAS as an element which can impair audit independence. That leads to the regulation of limitation in types of NAS provided by auditors. Though EU shares the same concern about audit independence, Directive 2006/43/EC does not limit types of NAS provided to clients by audit firms. According to the Directive, audit firms are not allowed to provide NAS if there is a possibility that independence can be impaired. Besides, the information about fees of NAS must be disclosed in detail: other assurance services, tax advisory services and other non-audit services. The Company Law 2005 (Chapter 9, section 6b) and the Auditor Act 2001 (Section 21) in Sweden also prohibit auditors from rendering NAS in cases supposed to impair audit independence. More than that, the Auditor Act 2001 (Section 4) stipulates that if there is a case outside the cases provided by laws which can threaten audit independence, auditing firms have to refuse the NAS provision to their clients. If there is any confusion, auditing firms can request SBPA (Svanström and Sundgren, 2012). The Swedish law is similar to

⁸ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:157:0087:0087:EN:PDF>

⁹ <http://www.sec.gov/about/laws/soa2002.pdf>

European in the aspect of types of NAS. There is no limitation of NAS types. According to the Annual Accounts Act 1995, Swedish listed companies have to disclose NAS fees.

3.2.3. Audit Committee

The issue of audit committee in Swedish listed companies on a regulated market is presented in the Companies Act 2005 (Chapter 8, section 49a) and the Swedish Code of Corporate Governance 2010 (Section 7.3). According to these regulations, Swedish listed companies have to establish audit committees with at least 3 members. The tasks of audit committee is to monitor the company's financial statements, the company's internal control system, the company's risk related to financial reporting and external auditor independence. At least one of members of the audit committee has experience working with accounting or auditing. Majority of members of the audit committee must be independent in relation with the company and controlling shareholders. Audit committees must make work plan and have regular meetings with external auditors. (Deloitte, 2012).

The regulation of Sweden on the issue of audit committee is in accordance with EU laws - Directive 2006/43/EC. Compared to the US law (SOX), Swedish law on this issue is almost similar.

3.2.4. Audit rotation

Auditor rotation is another solution of SEC to the problem of audit independence impairment. To avoid familiarity threat, SOX (Section 203) regulates that audit partners who have responsibilities for the audit or reviewing the audit have to rotate within five years. Meanwhile, Directive 2006/43/EC (Article 42.2) stimulates the maximum time for an audit partner serving a client is seven years. The Company Act 2005 (Chapter 9, section 21a) of Sweden follows the Directive to require Swedish listed companies to change audit partner at least every seven years.

4. Determinants of Audit Fees

As mentioned above, theories of audit fee determination have been found in previous studies. In this part, I choose factors which have been empirically proven to have strong relationships with audit fees. Like any other service, audit remuneration depends on the demander - auditee and the supplier - auditor. Thus, the factors chosen are divided into the two groups of auditee perspective and auditor perspective.

4.1. Factors and Hypotheses

Auditee Perspective

4.1.1. Auditee Size

Obviously, compared to auditing small-sized clients, auditing large-sized clients makes a need of spending more time and effort. External auditors have to spend more time for client meetings, understanding client complicated internal control systems, designing more audit procedures and conducting more test of detail. Larger companies may have more effective internal control systems and thus it can be expected that auditors reduce audit procedures. However, Steward and Munro (2007) discover that in Australia, auditors trust internal control but does not make a big reduction in audit testing. Moreover, most of authors share the same view that auditors have to spend more time to understand complicated transactions and to test a great number of transactions in larger companies. To this end, as the fees paid to auditors depend on the amount of time to complete the job given, it is expected that larger companies have to pay higher audit fees.

A considerable body of empirical auditing literature has focused on researching the role of auditee size in changing audit fees (e.g., Joshi and Bastaki, 2000; Rubin, 1988; Gonthier-Besacier and Schatt, 2007; Ahmed and Goyal, 2005; Brinn *et al*, 1994). Theirs study results support the typical assumption that auditee size has a significantly positive influence on audit fee determination. However, in contrast to the aforementioned finding, Carson *et al* (2004) using Australian audit fee data for the period from 1995 to 1999 find no linear correlation between audit fees and auditee size.

Basing on these above discussions, I generate the following hypothesis:

H1: Audit fees are positively associated with auditee size.

4.1.2. Auditee Risk

SAS. 107 Audit risk and Materiality in Conducting an Audit (AICPA, 2012) indicates that audit risk, together with materiality needs to be considered in defining audit work, such that I consider an effect of auditee risk on audit fees. Clearly, the higher auditee risk leads to the more efforts auditors have to make to decrease litigation risks in the future. As discussed in Audit Pricing Part, audit fees are partly defined by potential litigation fees. In the case of clients with bad financial conditions, auditors will charge higher risk premium. Subsequently, audit fees increase.

The influence of auditee risk on audit fees has been researched by many previous authors and a strong relationship between auditee risk and audit fees is evident. (e.g Simunic, 1980; Maher *et al*, 1986 through Hill *et al*, 1994; Turpen, 1990; Bell *et al*, 2000; Gonthier-Besacrier and Schatt, 2007; Joshi and Bastaki, 2000; Francis and Stokes, 1986; Gist, 1992 through Jubb *et al*, 1996; Chan *et al*, 1993). Using financial figures as proxies of auditee risk, Gonthier-Besacrier and Schatt (2007), Francis and Stokes (1986), Simunic (1980), Turpen (1990), Gist (1992) through Jubb *et al* (1996) and Chan *et al* (1993) get the result that auditee risk has a strong relation with audit fees. For instance, growth measured by variation of turnover over past 3 years has a strongly positive relation with audit fees (Gonthier-Besacrier and Schatt, 2007). Besides, these studies of Francis and Stokes (1986), Simunic (1980) indicate a positive association of audit opinion and audit fees. In addition, previous studies (Simunic, 1980; Maher *et al*, 1986 through Hill *et al*, 1994) find out a positive relation between audit fees and loss incurred in the last 3 years.

Therefore, I generate a hypothesis of the relationship between audit fees and auditee risk:

H2: Audit fees are positively associated with auditee risk.

4.1.3. Auditee Complexity

Basically, audit fees are dependent on how long time auditors have to spend for an audit engagement. It means companies with complexity are charged higher audit fees. Complexity

of an audited firm is examined in two aspects: complexity of operation and complexity of balance sheet composition. Under the impact of globalization, companies can extend their operation to foreign countries by establishing subsidiaries. Auditors for such companies have to spend more time for evaluating consolidated financial statements. On the other hand, the complexity of operations can lead to complex transactions which require auditors to invest more time to test. The complexity of balance composition can be reflected through the complexity of assets. Generally, companies with higher ratio of liquid assets (inventory, receivables) to total assets are more complex than others.

Like auditee size, auditee complexity is of interest in researching determinants of audit fees. (e.g Joshi and Bastaki, 2000; Rubin, 1988; Gonthier-Besacier and Schatt, 2007; Ahmed and Goyal, 2005; Thinggaard and Kiertzner, 2008; Brinn *et al*, 1994; Simunic, 1980; Francis, 1984; Francis and Stokes, 1986; Francis and Simon, 1987; Simon and Francis, 1988). Most results are consistent with the view that auditee complexity has a positive relation with audit fees. Joshi and Bastaki (2000), Thinggaard and Kiertzner (2008), Brinn *et al* (1994) reveals that audit fees are positively associated with the number of subsidiaries in foreign countries proxied for auditee complexity. Attempting to assess the relation between audit fees and the complexity of balance sheet composition, many authors (Simunic, 1980; Francis, 1984; Francis and Stokes, 1986; Francis and Simon, 1987; Simon and Francis, 1988; Gonthier-Besacier and Schatt, 2007) find considerable evidences to suggest a positive association of audit fees and auditee complexity. Ahmed and Goyal (2005) however do not find such relation.

In regard to auditee complexity, a hypothesis is generated as follows:

H3: Audit fees are positively associated with auditee complexity.

4.1.4. Audit Committee Presence

Beside factors mentioned above, the presence of audit committee has been also much focused (Collier and Gregory, 1996; Ho and Hutchinson, 2010; Goddard and Masters, 2000; Steward and Munro, 2007).

Basing on the role of audit committee, Collier and Gregory (1996) argue that audit committees may have influence on audit fees in two opposite ways. The first is to enhance audit quality, audit committees may require more work done by external auditors and hence

may put pressure on the companies to pay higher audit fees. The second is since audit committees can strengthen internal control systems, audit procedures may be decreased and thus audit fees will decrease. The authors discover that in the UK the existence of audit committee has a positive and significant effect on audit fees. By contrast, Ho and Hutchinson (2010) find that in HongKong auditors expect that the presence of audit committee lowers audit risk, leading to a lower audit fees charged. Nevertheless, Goddard and Masters (2000) find out that presence of audit committee in the UK's companies has no relation with the amount of audit fees. Steward and Munro (2007) state that Australian external auditors rely on an effective internal control but they however do not reduce their audit testing. Moreover, time and effort saved due to the presence of effective internal control can be balanced with time spending for more meetings with client managers and partners and so there is no big change in audit fees associated with the existence of audit committee .

A hypothesis about the relation between audit fees and audit committee presence should be deduced:

H4: Audit fees are associated with audit committee presence.

4.1.5. Auditee Fiscal Year-end Date

As a matter of fact, majority of companies has the same fiscal year-end date of December 31. Time around December 31 is called the busy season for auditors. In this period, auditors, especially auditors of big auditing firms usually have to work overtime. Previous researches point out auditor behaviors can be affected by a higher demand for audit services during the busy season (Alderman and Dietrick 1982 cited by López and Peters, 2011; Sweeney and Summers 2002; López and Peters, 2011). López and Peters (2011) find that December year-end companies have lower likelihood to change auditors. This behavior is to avoid high switching cost due to the busy season.

Though there are not many authors researching the relationship between audit fees and year-end date (Gonthier-Besacier and Schatt, 2007; Pong, 2004), I am still convinced that if a company is audited not in busy season, they can be charged less audit fees. Thus, I hypothesize the relationship of date of year-end and audit fees:

H5: Audit fees are positively associated with December year-end date.

4.1.6. Auditee Industry

It can be argued that each industry has its own characteristics. Therefore, auditors might make different audit procedures for different industries. In this sense, audit fees will be charged differently.

Previous researches that test activity sector get considerable evidence to suggest that auditee industry is related to fees paid to external auditors. Anderson and Zeghal (1994) find that for Canadian companies, audit rates for large transportation, communication, or utilities companies are significantly lower than that of firms in other sectors. Nevertheless, Simunic (1980) recognizes audit process for financial sector is much less complicated than the manufacturing sector, explaining for less audit fees paid by financial institutions. Basing on growth speed, Gonthier-Besacier and Schatt (2007) subdivide French listed firms into firms in information technology (IT) sector and others to test. The result indicates that audit fees paid by companies in IT sector are higher than that paid by the others.

Thus, I deduce a hypothesis about audit industry and audit fees:

H6: Audit fees are associated with client industry.

Auditor Perspective

4.1.7. Auditor Brand Name

The motivation for considering auditor size mainly comes from the assumption that higher auditor reputation implies higher audit quality. Therefore, there may exist a relation between auditor size and audit price which is due to audit quality perceived.

Motivated by previous studies, Niemi (2004) conducts a research about that relation in Finland and get a suggestion that there exists a differentiation in audit quality among audit firms and auditor brand name can have a great effect on auditor remuneration paid. This finding is consistent with the results of Firth (1993), Craswell *et al* (1995) and Caneghem (2009). Surprisingly, though Che-Ahmad and Houghton (1996) find many factors influencing audit fees paid by UK medium-sized companies, their result does not indicate any impact of audit brand name on audit pricing. The result of Moizer (1997) shows that large audit firms in 9 of 12 countries studied get higher audit remuneration for the same audit contract. More than

that, the author discovers audit fees of strong brand names account for 16 to 37% of the total audit fees in the countries and firms with a change of name to one of Big Eight can earn an audit fee premium. Comparing audit fees between Big4 (Deloitte, KPMG and Ernst & Young, PricewaterhouseCoopers) in Denmark, Thinggaard and Kiertzner (2008) discover that PricewaterhouseCoopers is paid less than the others.

Accordingly, my hypothesis is generated as follows:

H7: Audit fees are positively associated with auditor branch name.

4.1.8. Other Fees

Beside providing audit services, according to laws, auditors can provide NAS to customers. Recently, examining the NAS influence on audit quality has been central to audit and accounting literature, especially after highly publicized scandals such as Enron, WorldCom and the introduction of SOX. The provision of NAS and audit services of an auditor to a client may influence audit fees charged by that auditors. The results of previous researches indicate both negative and positive relations between NAS fees and audit fees (Simunic, 1984; Firth, 1997; Thinggaard and Kiertzner, 2008; Knechel *et al*, 2012). However, most of researches (Simunic, 1984; Firth 1997; Thinggaard and Kiertzner, 2008) present a significantly positive association between audit fees and NAS fees.

The provision of NAS can negatively influence audit fees due to “knowledge spillover” (Simunic,1984) which may lead to cost savings. The terminology “knowledge spillover” implies that clients of auditing firms can get knowledge about auditing and accounting “spilled” from auditors through the process of NAS provision. It can be argued further about cost savings by considering it from auditor perspective. Understandably, compared to auditors who provide audit services and NAS to two different clients, auditors who provide both service to one client can save much more time. Time savings might be due to less meeting time and less time to understand the client’s business. As a result, auditors can save cost which is associated with time savings. Firth (1997) argues that the audit-related cost saved can be transferred to auditor clients or kept by auditing firms. In a competitive audit market, auditing firms generally pass cost savings to their clients rather than keep it. When it is passed to clients, it can be passed through lowering audit fees or NAS fees. The authors also point out that generally auditors favor lowering audit fees instead of cutting NAS fees.

More than that, accounting firms choose to treat themselves as “a loss leader” (Hillison and Kennelley, 1988 cited by Firth, 1997). It means auditors use lower audit price to keep clients. The losses will be offsetted later by returns from NAS fees.

Audit fees can be positively affected by NAS fees. However, I cannot find much explanation for this association. Mellet *et al* (2007) argues that due to their complexity large firms may need more consultancy services. It can be argued further that other services provision can create more work for audit fees. For example an auditor consults a client about a new accounting software and thus auditors of financial statement have contribute more time and efforts to understand the new system. It may lead to an increase in audit fees.

Because of the mixture of empirical results of previous studies, the following hypothesis is generated:

H8: Audit fees are associated with other fees.

4.1.9. Audit Tenure

After the failures of Enron and Worldcom, the relation of audit quality and audit tenure has been more focused by many authors (e.g Arel *et al*, 2005; Jackson *et al*, 2008; Daniels and Booker, 2011; Carey and Simnett, 2006). Regulations of audit rotation are to decrease the familiarity threat due to long audit tenure. The negative relation between audit quality and audit rotation has been empirically proven (Carey and Simnett, 2006; Daniels and Booker, 2011) and convincingly argued by Arel *et al* (2005). To some extent, a familiarity relation can lead to a compromission between auditors and clients, for example higher audit fees paid to the auditor and higher earning management for the client managers. However, Jackson *et al* (2008) find out that audit tenure can increase audit quality.

To speak to the requirement of SOX (section 203) about audit rotation, Bedard and Johnstone (2010) research the issue of audit partner tenure, audit planning and pricing. The result indicates a strong relation between audit pricing and audit tenure of American companies. This author reveals that audit fees for longer partner tenure have a significantly positive association with realization rates though interestingly, audit partners however contribute more audit effort in the first year of engagement. The realization rate is the ratio of planned audit fee to standard audit fees. Standard fees are defined by planned labor hours and the

standard billing rate. This finding can be explained by “low-balling” pricing strategy of DeAngelo (1981). Besides, Bedard and Johnstone (2010) argue that a long tenure means in-depth knowledge of the client and hence creates a more valuable auditor-client relation. Since an auditor client desires such a relation, audit fees will increase.

Concerning about audit quality which can be proxied by audit fees, I generate this following hypothesis:

H9: Audit fees are positively associated with audit tenure.

4.2. Summarization of Hypotheses

H1: Audit fees are positively associated with auditee size.

H2: Audit fees are positively associated with auditee risk.

H3: Audit fees are positively associated with auditee complexity.

H4: Audit fees are associated audit committee presence.

H5: Audit fees are positively associated with December year-end date.

H6: Audit fees are associated with client industry.

H7: Audit fees are positively associated with auditor branch name.

H8: Audit fees are associated with other fees.

H9: Audit fees are positively associated with audit tenure.

5. Empirical Method

5.1. Data Selection

Since I use the quantitative method to do the research, I have chosen data to test the hypotheses. My aim is to define audit fee determinants for listed firms. In 2010, there are 527 Swedish public limited firms trading their stock in two regulated markets (NASDAQ OMX Stockholm and Nordic Growth Market) and four Multilateral Trading Facilities (MTFs). However, I chose data in annual reports of only listed non-financial firms in NASDAQ OMX Stockholm. There are some reasons for the choice. Firstly, during the data selection process, I find that firms in MTFs usually disclose insufficient information for hypothesis testing. Compared to regulations for firms in regulated markets, regulations applied for firms in MTFs are simpler. Secondly, though I tried to get the list of these 22 firms in the regulated market of Nordic Growth, I could not have a complete list (only 16/22). According to Saunders *et al* (2007), an incomplete list means some cases are excluded and do not have a chance to be selected. As the consequence of that, the sample is not representative for the population. Finally, financial firms are regulated to apply a different accounting regulation system. Thus, I do not choose financial firms.

I have difficulty in collecting annual reports for the fiscal year of 2011. At the thesis time, many firms have not published their annual report 2011. Hence, I have collected annual report 2010 instead. There are 258 firms (accounting for 99% value of market capitalization of the whole Swedish stock market) in NASDAQ OMX Stockholm in 2010. (Sveriges Riksbank, 2011). Of which, there are 41 listed financial firms and 14 listed foreign firms. Therefore, the population is defined to be 203 firms.

Due to the purpose of this study, I choose the sample data as follows 1. Excluding 9 firms which do not disclose audit fees paid by parents companies. The reason is audit fees tested include only fees for auditing annual accounts of parent companies and consolidated accounts and as a rule such fees are paid by parent companies; 2. Excluding 2 firms audited by 2 audit firms due to the complexity of defining who has the main influence; 3. Excluding 18 firms who did not pay other fees since one of the independent variables is natural log of other fees; 4. Excluding 24 firms disclosing insufficient information for testing. Thus, the total number of firms excluded is 53.

Finally, the sample includes 2010 annual reports of 150 firms (in the total of 203 firms). According to Saunders *et al* (2007), researchers normally apply 95% level of certainty plus or minus from 3% to 5%. With this level of certainty, sample size for the population of 200 is 132. Therefore, my sample size of 150 firms is sufficient.

5.2. Data Sources

The list of Swedish listed firms has been collected from the website of NASDAQ OMX Stockholm¹⁰. Following the list, I find annual reports of Swedish listed non-financial firms. Information of audit fees, other fees, auditor names, the presence of audit committee and audit tenure are collected from annual reports which are mainly downloaded from Finansinspektion¹¹. If any annual report cannot be found in Finansinspektion, I will get it from the company website. Other variables except industry are extracted from annual reports of these companies available in *Datastream 5.0* of Reuters. The information of company industry is included in the list of companies mentioned above.

5.3. Dependent Variable

Basing on the purpose of this thesis and learning from previous researches (e.g Mellett *et al*, 2007; Brinn *et al*, 1994; Gonthier-Besacier and Schatt, 2007; Thinggaard and Kiertzner, 2008; Callaghan *et al*, 2008; Ahmed and Goyal, 2005; Taylor and Simon, 1999), the dependent variable is natural log of audit fees paid for auditing annual accounts of parent companies and consolidated accounts. Audit fees do not include fees for auditing annual reports of branches, subsidiaries etc.

5.4. Independent Variables

5.4.1. Auditee Size

Proxies of auditee size have been discussed in previous studies. Auditee size can be measured by number of employees (Rubin, 1988), turnover (Brinn *et al*, 1994) and total assets at the year-end (Gonthier-Besacier and Schatt, 2007; Joshi and Bastaki, 2000; Ahmed and Goyal,

¹⁰ <http://www.nasdaqomxnordic.com>

¹¹ <http://www.fi.se/Folder-EN/Startpage/Market-information/Stock-exchange-information/>

2005; Brinn *et al*, 1994). Since audit process is a process of inspecting clients' financial figures in the balance sheet and loss and profit accounts, financial measures are chosen by most of authors. In this study I use natural log of total assets as the proxy for auditee size. (e.g Gonthier-Besacier and Schatt, 2007; Carson *et al*, 2004; Joshi and Bastaki, 2000). The variable of total assets is measured in thousand SEK.

5.4.2. Auditee Risk

Proxies for auditee risk used by prior studies (e.g Simunic, 1980; Maher *et al*, 1986 through Hill *et al*, 1994; Turpen, 1990; Bell *et al*, 2000; Gonthier-Besacier and Schatt, 2007; Joshi and Bastaki, 2000; Francis and Stokes, 1986; Gist, 1992 through Jubb *et al*, 1996 ; Chan *et al*, 1993) include audit opinion, debt ratio, profitability and loss. Of which, profitability (ROE) and and loss at least 1 time in the last 3 years are usually used and found to be significant to audit fees (Simunic, 1980; Maher *et al*, 1986 through Hill *et al*, 1994; Turpen, 1990; Francis and Stokes, 1986; Simunic, 1980; Gist, 1992 through Jubb *et al*, 1996; Chan *et al*, 1993). Therefore, I will use these figures as proxies of auditee risk.

ROE is the ratio of net income to shareholder's equity (e.g Gist, 1992 through Jubb *et al*, 1996; Gonthier-Besacier and Schatt, 2007; Chan *et al*, 1993).

Loss at least 1 year in the last 3 years is a dummy variable. A company will get a value 1 if making loss at least 1 year in the last 3 years. Otherwise, it will get a value 0. (e.g Simunic, 1980; Maher *et al*, 1986 through Hill *et al*, 1994; Turpen, 1990).

5.4.3. Auditee Complexity

Earlier researchers (Joshi and Bastaki, 2000; Rubin, 1988; Gonthier-Besacier and Schatt, 2007; Ahmed and Goyal, 2005; Thinggaard and Kiertzner, 2008; Mellett *et al*, 2007; Simunic, 1980; Francis and Simon, 1987; Brinn *et al*, 1994; Simon and Francis, 1988) use number of subsidiaries and nature of assets (the ratio of receivables and inventory to the total assets) as proxies to measure auditee complexity. However, in this thesis, due to the difficulty to collect data of number of subsidiaries, I will use only nature of asset as the measure of auditee complexity. (e.g Gonthier-Besacier and Schatt, 2007; Joshi and Bastaki, 2000; Ahmed and Goyal, 2005; Simunic, 1980; Simon and Francis, 1988).

5.4.4. Audit Committee Presence

According to prior studies (Collier and Gregory, 1996; Ho and Hutchinson, 2010; Goddard and Masters, 2000; Steward and Munro, 2007), auditee can be charged differently if that auditee has a separate audit committee. Therefore, audit committee presence is a dummy variable. I will give a value 1 if a company has a separate audit committee and otherwise a value 0 (Collier and Gregory, 1996; Steward and Munro, 2007).

5.4.5. Auditee Fiscal Year-end Date

Learning from Gonthier-Besacier and Schatt (2007), Pong (2004) and Carson and Fargher (2006), I will give a value 1 for companies ending fiscal year at December 31 and a value 0 if the year-end date is not December 31.

5.4.6. Auditee Industry

I translate company industry in line with the divisions used by Scandinavian Information Exchange (SIX) index, namely: consumer goods, health services, manufacturing, IT, raw materials, telecommunications and energy. Industry will be transformed into 7 dummy variables.

5.4.7. Auditor Brand Name

Firth (1993), Craswell *et al* (1995), Caneghem (2009) and Che-Ahmad and Houghton (1996) find that companies assigning auditors with higher reputation are charged higher audit fees. Currently, four companies with high reputation recognized internationally are PricewaterhouseCoopers, KPMG, Deloitte and Ernst & Young (Big4). Hence, I will use the criteria of Big4 to divide companies into two groups. Accordingly, companies audited by Big4 will be received a value 1 and otherwise, they will get a value 0. (Firth, 1993; Che-Ahmad and Houghton, 1996; Craswell *et al*, 1995).

5.4.8. Other Fees

Basing on researches of Simunic (1984), Firth (1997), Thinggaard and Kiertzner (2008), Knechel *et al* (2012), I suppose other fees have a relation with audit fees paid by the same customer. In annual reports of Swedish listed non-financial firms, fees paid to auditors are classified as fees for audit engagements, auditing activities over and above audit engagements, tax consultancy and other engagements. Other fees include fees of auditing activities over and above audit engagements, tax consultancy and other engagements (Thinggaard and Kiertzner, 2008). Other fees are measured in thousand SEK.

5.4.9. Audit Tenure

Bedard and Johnstone (2010) test the influence of audit-partner tenure on audit fees and give a value 1 if audit-partner tenure is more than 5 years, otherwise a value 0. However, I will use the number of year a principal auditor has served a client to measure audit tenure. Accordingly, the time includes time working as an auditor assistant (if any) and time working as a partner. There are two reasons for my choice 1. Choosing the number of year a partner has worked with a client, I can still check whether auditor independence measured by audit fees can be damaged due to familiarity or not. 2. Moreover, I believe Swedish listed firms shall not deviate from the law on audit rotation. Therefore I cannot use a dummy variable. According to laws, audit rotation for Swedish listed firms is 7 years. Therefore, due to my choice, audit tenure tested can be more than 7 years.

6. Empirical Analysis

6.1. Descriptive Data

Table 1 and Table 2 are the summarizations of data characteristics. The data has been collected from 150 annual reports of Swedish listed non-financial firms for the year 2010 with the purpose to define audit fee determinants.

As reflected in table 1, the average audit fee is 1 283 thousand SEK and the standard deviation is 2 311 thousand SEK, nearly double the mean. The standard deviation presents that the variation of audit fees is rather large. There is also a big difference among Swedish firms in auditee size reflected through total assets. The average total assets is 11 200 thousand SEK and the standard deviation is 31 190 000 thousand SEK. The average of ROE is a minus figure and ROE has a very high standard deviation. It might indicate that there is a big difference in profitability among companies and many companies made loss for the year 2010. Examining the raw data, I find that the proportion of firms making loss in the sample in 2010 is 26.7% (40/150). As regard to other services used, it should be noted that the demand for other services varies among public limited firms. The average of other fees is 1 456 thousand SEK and the standard deviation is 3 299 SEK, over twice of the mean. The wide variation of audit fees, total assets, ROE and other fees might be due to my choice of sample. According to my choice, firms in all caps (small cap, middle cap and large cap) are included in the sample. Nature of assets has the average level of 0.33 and has a medium standard deviation. Audit tenure is the number of years a current audit partner has served the client. The average of audit tenure is 3.75 years and the standard deviation is medium, 2.04. Audit rotation for Swedish listed non-financial firms is 7 years. So, the mean and the standard deviation is reasonable.

Table 1 also indicates the structures of dummy variables. In 150 cases tested, there are up to 68 firms making loss at least 1 year in the last 3 years and accounting for 45.3% of the sample. As mentioned in Part 3.2.3. Audit Committee, the Companies Act 2005 and the Swedish Code of Corporate Governance 2010 require Swedish public companies have to establish separate audit committees to mainly control issues of internal control, external auditors. However, in 2010 many firms deviate from the laws on this issue. Only 66% firms have separate audit committees. The main reason argued by firms is their small size and the

Board of Directors can cover audit committee tasks. Of 150 cases, only 14 cases accounting for 9.3% have year-end date different from December 31. Besides, when it comes to the choice of Big4, 96% of companies assign Big4 to audit their financial statements. This result is consistent with the description about Swedish audit market in Part 3.1. Audit Profession and Audit Market. I choose public limited firms in all three caps (large cap, middle cap and small cap) with the hope that small-cap firms may assign Non-Big4 but however, the result still shows that there is a big favor of Big4 among small-size firms.

Table 1		Descriptive Statistics
<i>Dependent variables</i>		
	Audit_fees (Tsek): Mean/SD	1 283 / 2 311
<i>Independent variables</i>		
1	Total_assets (Tsek): Mean/SD	11 200 000 / 34 190 000
2.1	ROE	-44.5% / 516.1%
2.2	Losses_3years	
	Yes (1)	68 / 45.3%
	No (0)	82 / 54.7%
3	Nature_assets : Mean/SD	33% / 18.2%
4	Audit_Committee	
	Yes (1)	99 / 66.0%
	No (0)	51 / 34.0%
5	December yearend_date	
	Yes (1)	136 / 90.7%
	No (0)	14 / 9.3%
7	Big4	
	Yes (1)	144 / 96.0%
	No (0)	6 / 4.0%
8	Other_fees (Tsek): Mean/SD	1 456 / 3 299
9	Audit_tenure (Years) : Mean/SD	3,75 / 2,04

Table 2 analysis firms according to industry. There are 7 industries in total. The most popular industries are IT and manufacturing accounting for 26.7% and 27.3%. Besides, health services, consumer goods have high percentages of 14.7% and 20.7% respectively. The three other industries account for merely 10.6%. As regard to mean of audit fees, telecommunications is the industry paying highest audit fees (2.909 thousand SEK on average).

Factor No.	Industry	Number	Percentage (%)	Mean	Std. Deviation
6.1	Consumer_Goods	31	20.7	1,241	1,517
6.2	Health_Services	22	14.7	562	510
6.3	Manufacturing	41	27.3	1,554	2,131
6.4	IT	40	26.7	1,081	2,992
6.5	Raw_Materials	8	5.3	2,027	2,734
6.6	Telecommunications	5	3.3	2,909	5,087
6.7	Energy	3	2.0	1,297	661
	Total	150	100		

6.2. Hypothesis Testing

To test the hypotheses, I have done the bivariate tests and the multiple linear regression. I have used SPSS 16.0 statistical program to do these tests. Through the bivariate tests where Spearman's rho test is applied, I aim to measure correlations between each two variables. The result of the bivariate tests can also predict multicollinearity problem. Multicollinearity happens when two independent variables are highly related or one independent variable has strong relations with two or more independent variables. This problem might mislead the results of the multiple linear regression (Elliott and Woodward, 2007, pp. 99). Since there are many independent variables, I also analyze data through the multiple linear regression. In this part, I will present my test results.

I have used confidence level of 90%. It means a correlation is statistically significant if its Sig. (called P) is less than 0.1.

6.2.1. Bivariate Tests

Table 3 presents correlation matrix with \ln_audit_fees as constant. The correlation matrix reflects correlations in pair between the dependent variable and the independent variables. The dependent variables is \ln_audit_fees and the independent variables include \ln_total assets, ROE, loss incurred in the last 3 years, nature of assets, audit committee presence, industry, year-end date, Big4, \ln_other_fees and \ln_audit_tenure . Of which, loss incurred in the last 3 years, industry, audit committee presence, year-end date and Big 4 are dummy

variables used to compare with ratio and numerical variables. There are 7 industries in total. However, only 6 industries have been tested since manufacturing is used as reference.

Table 3 shows that there are 9 independent variables being statistically significant to audit fees ($P < 0.1$). Of which, total assets has a significantly positive effect on audit fees (correlation coefficients = 0.675). In addition, ROE, audit committee presence, the industry of consumer goods, Big4 and other fees are positively related to audit fees ($P < 0.1$ and correlation coefficients are between 0.174 and 0.476) while the other variables of loss incurred in the last 3 years, health services and IT industries are negatively correlated with audit fees ($P < 0.1$ and correlation coefficients are between -0.153 and -0.236). It should be noted that the variables of ROE and loss incurred in the last 3 years show opposite relationships to what were expected. It means companies having worse financial conditions have tendency to pay less audit fees. Furthermore, nature of assets, year-end date and audit tenure have no association with audit fees.

Regarding multicollinearity problem, the correlation matrix indicates that pairwise independent variables also have relationships. There are 35 associations between independent variables. The independent variable of total assets has relations with 10 other independent variables. However, there are only two strong relationships: total assets with audit committee presence and total assets with other fees ($P = 0.000$ and 0.000 ; correlation coefficients = 0.513 and 0.624 respectively). Therefore, to avoid misleading due to these strong relations, I will detect multicollinearity through checking the values of VIF.

TABLE 3

CORRELATION MATRIX

No.		Ln_audit_fees	1	2.1	2.2	3	4	5	6.1	6.2	6.4	6.5	6.6	6.7	7	8	9	
	Ln_audit_fees	Correlation Coefficient	1															
		Sig. (2-tailed)	.															
1	Ln_total_assets	Correlation Coefficient	.675***	1														
		Sig. (2-tailed)	0.000	.														
2.1	ROE	Correlation Coefficient	.174**	.236***	1													
		Sig. (2-tailed)	0.033	0.004	.													
2.2	Losses_3years	Correlation Coefficient	-0.153*	-0.154*	-.578***	1												
		Sig. (2-tailed)	0.061	0.059	0.000	.												
3	Nature_assets	Correlation Coefficient	-0.035	-0.095	.243***	-.172**	1											
		Sig. (2-tailed)	0.673	0.247	0.003	0.035	.											
4	Audit_Committee	Correlation Coefficient	.298***	.513***	0.039	0.088	-0.094	1										
		Sig. (2-tailed)	0.000	0.000	0.634	0.283	0.250	.										
5	Yearend_date	Correlation Coefficient	0.016	-0.059	-0.02	0.062	0.013	0.06	1									
		Sig. (2-tailed)	0.842	0.475	0.807	0.451	0.87	0.466	.									
6.1	Consumer_Goods	Correlation Coefficient	.176**	0.16*	0.047	0.031	-0.009	0.123	-.176**	1								
		Sig. (2-tailed)	0.032	0.051	0.565	0.704	0.914	0.134	0.031	.								
6.2	Health_Services	Correlation Coefficient	-.202**	-.235***	-.194**	0.115	-.347***	-0.021	-0.126	-.212***	1							
		Sig. (2-tailed)	0.013	0.004	0.018	0.163	0.000	0.802	0.124	0.009	.							
6.4	IT	Correlation Coefficient	-.236***	-.342***	0.018	-0.095	.227***	-0.267***	0.142*	-.308***	-.250***	1						
		Sig. (2-tailed)	0.004	0.000	0.826	0.248	0.005	0.001	0.084	0.000	0.002	.						
6.5	Raw_Materials	Correlation Coefficient	0.046	0.151*	0.008	0.082	-0.026	0.108	-0.026	-0.121	-0.098	-0.143*	1					
		Sig. (2-tailed)	0.580	0.064	0.927	0.319	0.755	0.189	0.754	0.140	0.231	0.081	.					
6.6	Telecommunications	Correlation Coefficient	0.068	-0.015	.162**	-.169**	-.208**	-0.102	0.06	-0.095	-0.077	-0.112	-0.044	1				
		Sig. (2-tailed)	0.407	0.855	0.048	0.039	0.01	0.215	0.469	0.249	0.349	0.172	0.592	.				
6.7	Energy	Correlation Coefficient	0.109	0.153*	-0.023	0.157*	-.209**	0.103	0.046	-0.073	-0.059	-0.086	-0.034	-0.027	1			
		Sig. (2-tailed)	0.182	0.061	0.784	0.055	0.01	0.212	0.578	0.375	0.472	0.295	0.680	0.747	.			
7	Big4	Correlation Coefficient	.220***	.174**	0.027	0.049	-0.083	.284***	0.051	0.104	-0.108	-0.031	0.048	0.038	0.029	1		
		Sig. (2-tailed)	0.007	0.033	0.738	0.55	0.313	0.000	0.532	0.205	0.190	0.709	0.556	0.645	0.723	.		
8	LN_other_fees	Correlation Coefficient	.476***	.624***	0.064	-0.07	-0.123	.343***	0.055	0.06	-0.098	-.237***	0.049	0.014	-0.035	.161**	1	
		Sig. (2-tailed)	0.000	0.000	0.434	0.393	0.133	0.000	0.501	0.468	0.235	0.004	0.552	0.863	0.674	0.049	.	
9	Ln_audit_tenure	Correlation Coefficient	0.059	0.032	-0.002	-0.047	0.080	-0.026	.184**	-0.092	-0.152*	-0.018	0.069	0.093	0.029	.171**	0.039	1
		Sig. (2-tailed)	0.470	0.698	0.983	0.564	0.332	0.748	0.024	0.263	0.064	0.830	0.399	0.258	0.724	0.036	0.632	.

***. Correlation is significant at the 0.01 level (2-tailed).

**. Correlation is significant at the 0.05 level (2-tailed).

*. Correlation is significant at the 0.1 level (2-tailed).

6.2.2. Multiple Linear Regression

In this part, I will present the multiple linear regression result where I test the hypotheses with audit fees as the dependent variable. For robustness purpose, beside the full model with all 15 variables tested, I also run another model with industry variables excluded. In both models, values of Sig. (called P) are defined. When P is less than 0.1, the independent variable has correlation with the dependent variable or the model is statistically significant. The value of R square is to measure how well the explanatory variables can predict the dependent variable. The value of R square falls between 0 and 1. The bigger R square is, the better independent variables can predict the dependent variable. When R square is equal to 0, it means there is no independent variable having effect on the dependent variable. On the contrary, when R square is equal to 1, we have a perfect prediction. Adjusted R square is to define how much of the change of the dependent variable in the sample can be explained by the independent variables. To define multicollinearity problem, I check the values of VIF. VIF of 2.5 and above indicates multicollinearity problem presence. Otherwise, no multicollinearity does exist and thus, I can run the model with all variables.

Table 4 illustrates the results of the full model. P of the model is 0.000, indicating that the model is statistically significant. According to table 4, there are only two variables having positive relations with audit fees namely total assets and other fees (P = 0.000 and 0.038). The variable of audit committee presence has a negative relation with audit fees with P = 0.060 and coefficient is =-0.25. Other factors of ROE, loss, nature of assets, year-end date, industry, Big4 and audit tenure do not have any link with audit fees. Adjusted R square of 0.605 means that the model can explain 64.5% variance of audit fees. The results of the multiple linear regression indicate no multicollinearity problem since the values of VIF are less than 2.5.

Table 4:

Factor No.	Variables	Full Model						
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-0.296	0.619	0	-0.478	0.633	0.000	0.000
1	Ln_total_assets	0.394	0.041	0.764	9.505	0.000	0.410	2.437
2.1	ROE	-0.009	0.010	-0.045	-0.841	0.402	0.940	1.064
2.2	Losses_3years	-0.009	0.114	-0.004	-0.076	0.939	0.792	1.263
3	Nature_assets	0.475	0.334	0.088	1.425	0.157	0.702	1.425
4	Audit_Committee	-0.250	0.132	-0.12	-1.898	0.060	0.661	1.513
5	Yearend_date	0.266	0.185	0.078	1.440	0.152	0.892	1.121
6.1	Consumer_Goods	0.153	0.154	0.063	0.988	0.325	0.658	1.519
6.2	Health_Services	0.133	0.190	0.048	0.699	0.486	0.569	1.757
6.3	IT	0.108	0.152	0.048	0.707	0.481	0.568	1.761
6.4	Raw_Materials	-0.064	0.246	-0.015	-0.26	0.795	0.845	1.184
6.5	Telecommunications	0.335	0.316	0.061	1.062	0.290	0.800	1.250
6.7	Energy	0.167	0.397	0.024	0.42	0.675	0.830	1.204
7	Big4	0.395	0.281	0.079	1.404	0.163	0.846	1.182
8	LN_other_fees	0.099	0.047	0.144	2.092	0.038	0.562	1.780
9	Ln_audit_tenure	-0.091	0.090	-0.055	-1.004	0.317	0.880	1.136
a. Dependent Variable: Ln_audit_fees								
R					.803a			
R Square					0.645			
Adj R Sq					0.605			
F					16.238			
Sig					.000a			

The result of the second model (without the variables of industry) is presented in table 5. The result of the new model is nearly the same with that of the full model. With $P=0.000$, the model is significant. The result also points out that total assets, other fees are positively associated with audit fees ($P = 0.000$, 0.041 and coefficients = 0.388 , 0.094). Meanwhile, audit committee presence has a negative relation with audit fees ($P=0.040$, coefficient= -0.264). The variables of ROE, loss incurred in the last 3 years, nature of assets, year-end date, Big4 and audit tenure are not related to audit fees. Adjusted R square of 0.616 which is almost the same with that of the full model means that the model can explain 63.9% variance of audit fees. The value of F in this model (27.551) is much higher than in the full model (16.238). It means industry has a big influence. In general, the values of VIF are smaller than that of the full model.

Table 5

Factor No.	Variables	Model with industry excluded						
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.389	0.537	0	8.176	0		
1	Ln_total_assets	0.388	0.038	0.751	10.254	0.000	0.480	2.082
2.1	ROE	-0.009	0.010	-0.047	-0.904	0.367	0.947	1.056
2.2	Losses_3years	-0.034	0.108	-0.017	-0.311	0.756	0.868	1.152
3	Nature_assets	0.345	0.286	0.063	1.205	0.230	0.929	1.076
4	Audit_Committee	-0.264	0.127	-0.127	-2.071	0.040	0.688	1.453
5	Yearend_date	0.258	0.176	0.076	1.468	0.144	0.956	1.046
7	Big4	0.436	0.273	0.087	1.595	0.113	0.871	1.148
8	LN_other_fees	0.094	0.046	0.137	2.066	0.041	0.590	1.694
9	Ln_audit_tenure	-0.104	0.087	-0.063	-1.187	0.237	0.915	1.093
a. Dependent Variable: Ln_audit_fees								
R					.799a			
R Square					0.639			
Adj R Sq					0.616			
F					27.551			
Sig					.000a			

6.2.3. Hypothesis Outcomes

Table 6 is a summarization of hypothesis outcome according to the bivariate tests and the multiple linear regression. I found that there is a difference between the outcomes and my expectations. These differences can be explained by differences in institutional settings of Sweden, time conducting the research and some limitations of the sample. In the next part, I will analysis the result of each hypothesis test and try to find reasons for these outcomes.

Table 6: Hypothesis outcome

Fator No.	Hypothesis	Factors	Predicted sign	Outcome (Correlation)	Outcome (Regression)
1	Hypothesis 1	Auditee size	+	+	+
2	Hypothesis 2	Auditee risk (ROE)	-	+	Fail
		Auditee risk (Loss)	+	-	Fail
3	Hypothesis 3	Auditee complexity	+	Fail	Fail
4	Hypothesis 4	Audit committee presence	+/-	+	-
5	Hypothesis 5	Auditee December year-end date	+	Fail	Fail
6	Hypothesis 6	Auditee industry (*)	+/-	+/-	Fail
7	Hypothesis 7	Auditor branch name	+	+	Fail
8	Hypothesis 8	Other fees	+/-	+	+
9	Hypothesis 9	Audit tenure	+	Fail	Fail

(*) *The bivariate tests: consumer goods has a positive relation with audit fees, health services and IT have negative associations with audit fees.*

6.3. Analysis of Statistical Results

To determine audit fee structure, I have tested the hypotheses through the bivariate tests and the multiple linear regression. While the bivariate test result reflects correlations between two variables, the multiple linear regression indicates effects of the group of the independent variables on the dependent variable. In this research, both of them provide evidence to **hypothesis 1** (auditee size proxied by total assets – positive), **hypothesis 4** (audit committee presence – positive and negative), **hypothesis 8** (other fees - positive). Besides, the bivariate test results support **hypothesis 2** (auditee risk proxied by ROE and loss incurred in the last 3 years), **hypothesis 7** (auditor branch name-positive) and **hypothesis 6** (auditee industry: health services and IT – negative; consumer goods - positive). **Hypothesis 3** (audit complexity), **hypothesis 5** (year-end date) and **hypothesis 9** (audit tenure) are rejected by both of the bivariate tests and the multiple linear regression. Since auditors have to consider many factors at the same time to define audit fees, the results of multiple linear regression should be more emphasized. Since the results of the full model and the second model are almost the same, I will present figures in the full model.

6.3.1. Auditee Size

In the bivariate tests, auditee size using the proxy of total assets has a strongly positive correlation with audit fees ($P=0.000$ and correlation coefficient = 0.675). The regression also reflects a positive relation with audit fees ($P=0.000$ and regression coefficient = 0.394). It is clearly that the bigger auditee size means the more effort auditors have to contribute. Accordingly, audit fees charged will increase. This finding agrees with results of previous studies (e.g. Joshi and Bastaki, 2000; Rubin, 1988; Gonthier-Besacier and Schatt, 2007; Ahmed and Goyal, 2005; Brinn *et al*, 1994).

6.3.2. Auditee Risk

The bivariate test results show that loss incurred in the last 3 years as a measure of audit risk has a negative relation with audit fees ($P=0.061$, correlation coefficient = -0.153) and ROE as a proxy of audit risk has a positive relation with audit fees ($P=0.033$, correlation coefficient= 0.174). Meanwhile, the multiple linear regression result does not present any relation between audit fees and audit risk (ROE: $P=0.402$; loss: $P=0.939$). That is not consistent with the results of previous researches (e.g. Simunic, 1980; Maher *et al*, 1986 through Hill *et al*, 1994; Turpen, 1990; Gist, 1992 though Jubb *et al*, 1996; Chan *et al*, 1993) which show that loss incurred in the last 3 years and ROE are related to audit fees. The multiple linear regression result means that in reality Swedish listed non-financial firms do not think it is necessary to increase workload due to auditee risk proxied by loss and profitability.

6.3.3. Auditee Complexity

The results of the bivariate tests and the multiple regression for audit complexity are not strong ($P=0.673$ and 0.157). It is not consistent with Gonthier-Besacier and Schatt (2007), Joshi and Bastaki (2000). It means when defining audit fees, auditors do not pay attention to the ratio of receivables and inventory to the total assets. Beside nature of assets, number of subsidiaries was used as a proxy of auditee complexity by earlier authors and proven to have explanation power for audit fee changes (e.g. Joshi and Bastaki, 2000; Thinggaard and Kiertzner, 2008; Simunic, 1980). However, I could not collect data of number subsidiaries to test this relationship. That is a limitation of this thesis.

6.3.4. Audit Committee Presence

While the bivariate tests present audit fees and audit committee presence are positively related ($P=0.000$, correlation coefficient = 0.298), the regression results find that audit committee presence and audit fees are negatively related ($P =0.060$ and coefficient = -0.25). This regression result agrees with the previous result of Ho and Hutchinson (2010). Accordingly, companies with audit committee are charged less audit fees. It can be explained that audit committee presence can strengthen internal control and thus decrease audit workload. Hence, audit fees decrease.

6.3.5. Auditee Fiscal Year-end Date

That year-end date get P of 0.842 and 0.152 (the bivariate tests and the multiple linear regression respectively) suggests an auditor totally does not charge more fees if the client has the closing date of December 31. My hypothesis has been based on the empirical result of López and Peters (2011) which shows that auditor clients ending fiscal year at December 31 are charged higher switching cost. However, the test results do not support my presumption.

6.3.6. Auditee Industry

While the bivariate tests shows that health services and IT sectors are negatively related to audit fees ($P = 0.013, 0.004$; correlation coefficients = -0.202 and -0.236) and consumer goods has a positive relation with audit fees ($P=0.032$, correlation coefficient = 0.176), the multiple linear regression points no difference in audit fee change due to client industry (Consumer goods: $P=0.325$; Health services: $P=0.486$; IT: $P=0.481$; Raw Materials: $P=0.795$; Telecommunications: $P=0.290$; Energy: $P=0.675$). The results of previous researches (Gonthier-Besacier and Schatt, 2007; Simunic ,1980; Anderson and Zeghal ,1994) indicate that there exists a difference in audit fees in different industries. However, my multiple linear regression result does not share the same view.

6.3.7. Auditor Branch Name

As stated above, Big4 was assigned by 96% (144/150) companies in the sample. It indicates that Swedish audit market is dominated by Big4. Companies with small size still choose Big4. The result of the bivariate tests shows a positive association on audit fees ($P=0.007$,

correlation coefficient = 0.220) while the regression result does not support such relation (P=0.163).

6.3.8. Other Fees

According to the results of the both tests, beside auditee size, other fees is also positively associated with audit fees (P=0.000 and P=0.038). Most of authors examining other fees argue about a negative association between audit fees and other fees. Their argument is based on the convincing theories of “low-balling” and “knowledge spill-over” (DeAngelo, 1981; Simunic, 1984). However, most of authors find empirical evidences for a positive effect of other fees on audit fees (Simunic, 1984; Firth 1997; Thinggaard and Kiertzner, 2008). My test outcomes are the same with previous results. Interestingly, Swedish laws do not limit types of NAS auditors can provide to their customers. Therefore, the result of a positive relation between audit fees and other fees suggests that auditors in Sweden can extend their business and make higher profit by providing diversified types of NAS. However, since there exists a relation between total assets and other fees (P=0.000, correlation coefficient= 0.624), it can be further argued that larger companies have higher demands for other services and pay higher other fees.

6.3.9. Audit Tenure

According to both tests, audit tenure has no effect on audit fees with P = 0.470 and 0.317. Meanwhile, previous researches (Bedard and Johnstone, 2010) reveal a positive association between audit fees and audit-partner tenure. The result might indicate that principal auditors for Swedish listed non-financial firms do not change audit workload due to audit tenure and thus present that auditor independence is not impaired. As interpreted in 6.3.8. Other fees, auditors in Sweden do not use such strategies of “low-balling” or “loss leader”. The result of audit tenure shares the same view.

7. Conclusion Remarks

7.1. Conclusion

The study sought to define audit fee determinants of Swedish listed non-financial firms in NASDAQ OMX Stockholm. The research uses the deductive approach and has been conducted based on a sample of 150 annual reports of the year 2010. Nine factors proxied by fifteen variables are chosen to be tested.

The multiple linear regression and bivariate test results shows that for Swedish listed non-financial firms, there are three factors having explanatory power on audit fees, namely audit size (measured by the total assets - positive), audit committee presence and other fees (positive). According to the multiple linear regression result, audit committee presence has a negative association with audit fees. Auditee risk (ROE, loss incurred in the last 3 years), auditee industry (consumer goods, health service and IT) and auditor branch name are affecting factors only in the bivariate tests. Auditee complexity, auditee year-end date and audit tenure are not evident to have associations with audit fees in both of the bivariate tests and the multiple linear regression. The descriptive data points out that Swedish audit market has been dominated by Big4 and therefore the competition in Swedish audit market is actually the competition between Big4. However, according to the result of other fees, to some extent, Swedish auditors do not use such strategies “low-balling” “loss leader” to get more customers. Additionally, auditors do not gain an audit premium for longer audit tenure. The results can be interpreted that to be more competitive, auditors for Swedish listed non-financial firms might concentrate on only audit workload to define audit fees.

I should note that my results are different from results of previous studies. Beside the difference in environment context, the difficulty of data collection and my shortage of experience in statistical analysis can be reasons. For example, while most of previous researches (Simunic, 1980; Joshi and Bastaki, 2000; Rubin, 1988; Gonthier-Besacier and Schatt, 2007; Ahmed and Goyal, 2005; Thinggaard and Kiertzner, 2008; Mellett *et al*, 2007; Brinn *et al*, 1994) find out a relation between audit fees and auditee complexity, my results do not indicate such relation. In these researches, besides nature of assets, number of subsidiaries also is used and found to be in relation with audit fees (Joshi and Bastaki, 2000;

Thinggaard and Kiertzner, 2008; Simunic, 1980). However, due to the difficulty of data collection, I did not test number of subsidiaries as a proxy of auditee complexity.

7.2. Limitations and Further Studies

Though I have tried to do the research with a great effort, my study still has many limitations. First of all, my data population is annual reports for the year of 2010 of Swedish listed non-financial firms in NASDAQ OMX Stockholm. The choice of only 1 year might limit the outcome. Researching an issue in a long time can get more reliable results. Therefore, Pong (2004), for example, uses data of Britain quoted firms for the period from 1991 to 1995. In addition, choosing Swedish listed non-financial firms make it hard to test the relation between audit fees and auditor branch name since most of listed companies assign Big4. Besides, due to the shortage of data, I cannot test some variables which have been strongly proven to be significant to audit fees, such as audit opinions as a proxy for auditee risk, number of subsidiaries as a proxy for auditee complexity.

From these limitations, in future, firstly I will do research for a longer period. Secondly, I can expand my study by examining audit fee determination for Swedish limited companies. Thirdly, learning from Steward and Munro (2007), to avoid data limitation, I can collect data from questionnaires. Accordingly, together with continuing testing these factors, I can examine other variables which are empirically proven to have strong relations with audit fees. Finally, I will research the difference in audit fee determination of two countries including a developed country and a developing country.

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