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A Comparison Between Small Newly Registered and Small Mature Limited Companies' Decision to Appoint an Auditor Voluntarily

- a Quantitative Study

School of Business, Economics and Law, University of Gothenburg Department of Business Administration Bachelor thesis, Accounting, summer term of 2013 Authors: Malin Gergely, 900104 Johanna Randén, 821130 Supervisor: Märta Hammarström

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Johanna Randén

Malin Gergely

Conclusion

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Authors: Malin Gergely and Johanna Randén Supervisor: Märta Hammarström

Title: A Comparison Between Small Newly Registered and Small Mature Limited Companies' Decision to Appoint an Auditor Voluntarily - a Quantitative Study

Background and problem discussion: Since the law of audit exemption was introduced 2010, some companies have appointed an auditor voluntarily. These companies must balance the costs and benefits of auditing; various indicators affect the decision. In addition, the characteristics and needs of newly registered companies and mature companies differ. These determinants can affect the decision to choose an auditor.

Purpose: The main purpose of this report is to investigate if there is a difference in to what extent small newly registered limited companies in comparison with small mature limited companies choose to appoint an auditor voluntarily and which determinants affect newly registered limited companies' respectively mature limited companies' decision to appoint an auditor voluntarily.

Limitations: This bachelor thesis is only investigating Swedish private limited companies, small enough to be included by the Swedish voluntary audit requirements. The selections are limited to two specific groups of enterprises that presented a financial statement 31st of December 2011. Newly registered companies are limited to those companies registered during 2011 respectively mature companies registered before 1993.

Method: The empirical data was assembled through a quantitative document study and tested via hypotheses. The hypotheses were rejected or confirmed.

Conclusions: We can conclude that there is a greater proportion of small newly registered companies that appoint an auditor and that the determinants differ in relation to small mature limited companies. The newly registered companies are affected by total assets and solidity and if the company belonged to the retail industry and health care industry whereas the determinants of mature companies were solely the two industries of construction, design and interior design respectively hotels and restaurants.

Proposal for future studies: It would be interesting to investigate other type of businesses' attitude towards the voluntary audit or to conduct a qualitative survey equivalent to this study. Another possibility would be to investigate companies' included in the statutory law of *Personalliggare* attitude towards voluntary audit.

Keywords: Voluntary audit, small companies, indicators, demand

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1. Introduction

The background chapter introduces the topic, giving the reader a first idea about the field of study. Thereafter, a discussion leads to the thesis' purpose and the specific research questions. In addition, limitations and definitions are presented.

1.1 Background

Since the first of November 2010, small Swedish private limited companies are by law permitted to evade the former mandatory audit. Public limited companies on the other hand are not exempted from the statutory audit (Justitiedepartementet 2010). In order to dismiss the auditor, the small company must be small enough to fulfill two of the three following criteria and continuously have done so during the corporation's two most recent financial years:

- 3 or fewer employees
- 1,5 million SEK or less in balance sheet total
- *3 million SEK or less in turnover* (Justitiedepartementet 2010)

The primary aim for auditing is to secure a satisfactory quality of the business management, on behalf of the shareholders. The responsibility of the auditor may contain to audit the financial reports and the control of the corporation's everyday business (Justitiedepartementet 2010; SOU 2008). It is important to emphasize that an auditor's duty is to inspect the company's annual report and confirm or deny its correctness and reliability, in other words to pay attention to and notify the firm - or in some cases the authorities - about missing information or inaccuracies in the financial reports and taxes. To draw up income-tax return forms, financial reports or daily accounting activities are *not* part of an auditor's responsibility (SOU 2008).

Auditing has additional benefits. Auditing can also facilitate the firm's relationship with banks, shareholders, society as well as governmental authorities such as the Swedish Economic Crime Authority (Ekobrottsmyndigheten) and the Swedish Tax Agency (Skatteverket). This is done by improving the banks willingness to grant a loan, allowing dismissal of shareholders' responsibility, increasing the flow of information to society and give the authorities' a chance for control and supervision of the company (Thorell & Norberg 2005). By forcing the shareholders' meeting to make the decision if utilize the voluntary audit or not, the law does not allow ignoring the opinion of the firm's shareholders. If used, audit exemption must be written in the articles of association (Justitiedepartementet 2010).

One of the benefits of the auditing process is as mentioned the assessment of annual reports, especially through the eyes of the Government, e.g. the Swedish Tax Agency and the Swedish Economic Crime Authority. Even though auditing was legislated in Swedish law 1895 and had many alterations made the years to come (SOU 2008, p. 71), the debate about auditing accelerated in the 80s; fighting economic crime was a highly debated and prioritized issue by the Government (SOU 2008; Frivision 2010). As a result, audit became mandatory for small Swedish limited companies in 1988. Continuously, during the following years, the requirements were tighten up (SOU 2008).

The main reasons why voluntary audit was introduced was the change of perspective from the Government to the perspective of the small companies. The public inquiry SOU 2008:32 claims that the benefit of dismissing mandatory audit gives the small businesses the possibility of making its own decisions about what auditing services are needed and from which firm of accountants they should supply the most cost efficient services from. Thereby voluntary audit allows the corporation to balance their individual case of auditing costs and benefits (Justitiedepartementet 2010). In fact, if a small firm appoints an auditor, usually two types of audit costs commonly occur: direct- and indirect costs. The majority of the direct costs include the cost of employing an auditor. According to the Swedish audit trade association FAR SRS, the size of the fee depends on the time and effort consumed during the auditing process, not on basis of commission. Indirect costs, on the other hand, affect the companies that are still included in the statutory audit, making them less competitive in the pursuit of lower costs (SOU 2008). In general, the mean audit cost amounts to nearly 12 700 SEK a year, according to Tillväxtverket 2010 (Frivision 2010).

Relatively high auditing costs and the great burden of auditing in general for small enterprises, however, were not the only reason behind the audit exemption. The European Council and the international business climate have played a crucial role in the Swedish Government's decision to alter the Swedish auditing law. In general, European accounting directives greatly affect the national rules and regulations. In 2008, nearly all European countries had abrogated the mandatory audit requirements, in line with the exception of the mandatory audit in the fourth European directive. Besides Malta and Norway, Sweden was the last European country to deregulate the statutory audit. However, European member states could already optional use this possibility even before introducing new national laws of auditing in each country. The Swedish Government chose not to take not of this opportunity (SOU 2008; Justitiedepartementet 2009; Thorell & Norberg 2005, p. 4).

At that time, the EU prioritized homogenous simplifications of for instance accounting and audits for smaller companies among its member countries, which had the effect that one country after another laid down the law of voluntary auditing (SOU 2008). Since the share of small corporations is sizably larger in Sweden than the other European countries, the three audit exemption criteria are considerably lower in contrast to equivalent European requirements (SOU 2008, p. 14-17, 86; Thorell & Norberg 2005, p. 4).

When the exposition by the Swedish Government was created in 2008, the investigator estimated that around 250 000 active firms would be affected by the voluntary audit (Justitiedepartementet 2010). This was equivalent to more than 60 per cent of all active companies in 2010 (Frivision 2010). In fact, the inquiry anticipated that about 60 per cent of the companies with less than SEK 3 million in turnover would optionally appoint an auditor (SOU 2008, p. 131). The expected cost savings among all active and non-active corporations were roughly 5.8 million SEK (SOU 2008).

1.2 Problem discussion

However, the actual effects of introducing the voluntary audit proved different than expected. According to the Swedish Companies Registration Office (Bolagsverket), the share of small companies appointing an auditor voluntarily turned out lower than expected. About 25 per cent of the small, newly registered limited companies concerned chose auditing voluntarily. The corresponding share for well-established corporations was still uncertain. In addition, the number of entrepreneurial companies grew rapidly with 43 per cent during 2010, possibly due to the introduction of the audit exemption and/or the lower startup capital requirements. (Frivision 2010; Bolagsverket 2011; Bolagsverket n/a a). During 2012 nearly 40 000 new firms were registered at the Swedish Companies Registration Office (Bolagsverket 2011 n/a a), which was an 11 per cent decrease relatively year 2011.

In order to understand why small companies chose to appoint an auditor, despite being exempt of the mandatory auditor, one has to distinguish the determining factors of the decision. In the early 1980s, scientists began to investigate the factors affecting the decision of appointing an auditor (Seow 2001, p. 62; Niemi *et al.* 2012, p. 172). Chow (1982) was one of the forerunners; he stated that leverage and accounting-based debt contract were important determinants behind why companies use the service of an auditor. To some degree the size of the firm also affected the decision. In addition, the influence of the shareholder-manager relationship could not be confirmed (Chow 1982, p. 182). Furthermore, the greater distance between managers and owners, the greater likelihood of appoint an auditor (Chow 1982, p. 287; Seow 2001, pp. 62-63; Niemi et al. 2012, p. 169). The demand of auditing is also influenced by the share of debt (Chow 1982; Tauringana & Clarke 2000) and the share of external ownership (Chow 1982; Collis, Jarvis & Skerrett 2004; Tauringana & Clarke 2000; Seow 2001).

Other incentives increasing the possibility of appointing an auditor were mostly related to the stakeholders. The distinguished determinants were the relationship with the external financiers, i.e. shareholders and lenders; turnover as measurement of company size; the managers' attitude towards the audit's ability to increase the quality of information; and internal check of the financial statements. Collis *et al.* (2004, p. 87, pp. 96-97) additionally discussed the complex variables the managers' attitude and knowledge about the elements in the cost-benefit analysis of auditing as well as the size of the firm influencing the director's decision. In fact, the benefit of auditing in a small company expand over a wider range than in a large companies; the auditing might positively influence both the principal-agent information asymmetry as well as contribute with general management improvements (Svanström 2008; Collis 2012, pp. 462-463).

Additional indicators were also found. A study, which compared the auditing in small companies in the UK and Denmark, identified that turnover on its own not is an incentive for appointing an auditor. In combination with other national characteristics, turnover became an indicator (Collis 2010, pp. 211-213). A later, similar study of Finnish small limited companies drew related conclusions. The developed model identified the following factors, affecting the decision to appoint an auditor: company size in terms of turnover; the degree of external financing; demand of internal check of the corporation's financial state and performance; the need of increasing the quality of audit; previous experience; financial distress; and the relationship between shareholders and managers. The managers' prior experience of auditing may also affect the decision (Niemi *et al.* 2012, p. 189). Tauringana & Clarke (2000, pp. 165-166) also points out that the ownership structure influences the determinants of appointing an auditor. Moreover, turnover, owner's capital/debt-ratio and the proportion of the managing shareholders have a positive influence on the decision of using the auditing service voluntarily. The liquid ratio and company size in terms of total assets was concluded not to have an impact.

In short, previous research distinguishes a variety of influential factors; the determinants vary with the research. The studies' samples are observed in various countries and the researches

have had different research design. Consequently, it would be interesting to investigate the particular determinants, influencing Swedish companies exempted by the statutory audit. Additionally, to our knowledge, there is no Swedish prior inquiry investigating the proportion of small mature limited companies that have dismissed the auditor. Therefore, it would be interesting to establish if that share diverge from the proportion of equivalent newly registered companies.

1.3 Purpose and research questions

The main **purpose** of this bachelor thesis is:

To investigate if there is a difference in to what extent small, newly registered limited companies in comparison with small mature limited companies choose to appoint an auditor voluntarily and which determinants affect newly registered limited companies' respectively mature limited companies' decision to appoint an auditor voluntarily.

To be able to fulfill the main purpose of this bachelor thesis we have formulated two **research questions**:

Research question 1:

Is there a statistically significant difference in to what extent small newly registered Swedish private limited companies choose to appoint an auditor voluntarily in comparison to small mature Swedish private limited companies?

Research question 2:

Are turnover, total assets, solidity, number of board members and industry affiliation determining factors in the decision to appoint an auditor voluntarily in small, newly registered Swedish private limited companies and in small, mature Swedish private limited companies?

1.4 Limitations

This paper is limited to the business structure of Swedish private limited companies. Moreover, the limited companies in question are only those corporations small enough to be included in the audit exemption. Other types of Swedish business structures such as trading partnership (*handelsbolag*) or economic association (*ekonomisk förening*), which also are affected by the altered audit requirements, have not been examined any closer due to the short time available. Correspondingly, public limited companies are not a part of this bachelor thesis, since these types of firms are not exempted from appointing an auditor.

The limited time has also affected the chosen selection; we have decided to only conduct the study in Jönköping County, Sweden. The frequency of small companies in the county of Jönköping is very high; almost 99 per cent is classified as small firms which employ over 60 per cent of the county's total private employees (Företagarna 2012).

1.5 Definitions

A *limited company* refers to the Swedish business structure *private limited company*. A limited company is a legal entity with rights and responsibilities, owned by at least one person or enterprise, has a minimum share capital of SEK 50 000, is represented by a board of directors and must be reregistered at the Swedish Companies Registration Office and the Swedish Tax Agency.

An *auditor* is defined as an authorized auditor (*auktoriserad revisor*) or a qualified auditor (*godkänd revisor*). An auditor is an official title that only can be examined, approved and authorized by the governmental authority Supervisory Board of Public Account (Revisorsnämnden), an authority under the Department of Justice (Revisorsnämnden 2013).

A *small company* refers to the Swedish corporations, fulfilling the requirements of audit exemption. Please note that this delimitation is not equal to the official European definition.

A *large company* is defined as those corporations not being a small company. Please note that this definition is not equal to the official European definition.

A *newly registered company* is defined as a Swedish enterprise registered at Swedish Company Registration Office after 1st of January 2011 and presented a financial statement 31st of December 2011.

A *mature company* refers to a Swedish enterprise registered at Swedish Company Registration Office before 1 January 1993 and presented a financial statement 31st of December 2011.

2. Conceptual framework

The theoretical framework is divided into two main parts. The first part describes the generally applicable theories, that is, the agency theory, the stakeholder theory and the pecking-order theory. The second part addresses each influential factor individually: the utility of auditing, the company size in terms of turnover and total assets, solidity, shareholders which could equal the number of board of directors and finally industry affiliation.

2.1. A macro-level perspective on auditing

2.1.1. The agency theory

From an agency theory point of view, the main aim for auditing is to decrease the information asymmetry between the principal and the representing agent, the so called principal-agent dilemma (Norashikin, Zubaidah & Smith 2012, pp. 152-153). The theory is based on the relationship between the principal and the agent: the principal have assigned the agent to perform tasks on the principal's behalf and thereby represent his/her interests in the company. From the principal's perspective, the agent is a risk and insecurity (Svanström 2008, p. 21).

Additionally, the higher the risk the shareholders have taken, the more incentives they have to monitor the agent's management of the shareholder's invested capital and thus the agent's management of the company (Svernlöv 2012, p. 27).

The concept of the agency theory is based on the belief that the agent will act in his or her interest and not necessarily for the best of the principal interest. This is called the moral hazard (Niemi, Kinnunen, Ojala & Troberg 2012, pp. 169-196). The monitoring principal in question usually is the shareholder of the firm (Norashikin *et al.* 2012, pp. 152-153; Svanström 2008, pp. 15-18). In small companies, non-managing shareholders and external financiers could also be included in the definition of principal. (Collis 2012, pp. 448-449) By enduring the cost of auditing, shareholders (principals) receive information about how well the business managers (agents) have managed the corporation in their place. This usually refers to the corporation's recent financial state and performance as well as the financial statements. Thereby, the principals can take a stand on strategic business decisions, for instance possible investments, lending money or doing business with the corporation in question (Norashikin *et al.* 2012, pp. 152-153; Svanström 2008, pp. 15-18).

How the agency theory is applied on larger respectively smaller corporations differ. In larger enterprises, the relationship between shareholders and managers of the corporations is usually complex. Thereby, the difference between ownership and control is greater, increasing the shareholders' incentive to demand an internal and external check of the management of the firm through auditing. The agency theory could also be applied on small companies. On one hand, the manager and the company owner of the small company usually are the same person or persons or at least have a near, communicative and trusting relationship with each other, which go against why the principal should monitor the agent (Soew 2001, p. 62; Collis 2012, p. 449).

On the other hand, firstly, this intra-firm relationship itself may increase the need for an auditor's external, unbiased point-of-view. Appointing an auditor could be one way of assessing the quality of the financial statements and the firm's credibility as well as avoid making decisions based on biased or incorrect financial information (Soew 2001, p. 62-63; Niemi et al. 2012, pp.172-173). However, the independency of an auditor can be jeopardized because of the close relationship between the auditor and the manager. In case of voluntary audit, the principal must therefore balance the cost and benefit of appointing an auditor (Soew 2001, p. 62-63). Secondly, because of changes in the organization or growth of the company, the number of shareholders and the ownership structure and management of the small company may demand an independent point of view. The principal shareholder/manager could have lost the former detailed overview and does not know what and how other parts of the corporation execute business any longer (Collis 2012). Thirdly, information asymmetry between the managing shareholders in the small company can occur due to for example his or her lack of everyday management of the firm or the lack of ability to understanding the concept of running a business or the financial information presented. These conflicts normally occur in small corporations which are not fully owned by a family or where some shareholders are not active in the day-to-day business (Collis 2012, p. 499). Fourthly, small business owner-managers must also make hard or complicated business decisions based on the financial statements available. An audited financial statement can give extra credibility to the manager's point of view in case of an argument as well as an overall knowledge about the correctness of the business' financial state (Collis 2012, p. 498).

2.1.2. The stakeholder theory

In contrast to the agency theory, the stakeholder theory also points out that shareholders are not the only stakeholder or groups of stakeholders with interests in the company (Donald & Preston 95, p. 66). Although shareholders are considered the prioritized user of the auditing services, other stakeholders might also have an interest in the presented financial information and thereby an interest in the decision of auditing (Svanström, 2008, p. 26). Moreover, the exchange of resources between the corporation and the stakeholders goes both ways: the stakeholders contribute to the company (in-put) but the company also produces benefits to the stakeholders (out-put). The interest of the various stakeholders is in general considered equally important. Nonetheless, the definition of stakeholders and the perspective of interest differ among the authors (Donald & Preston 1995, pp. 68-69). On one hand, the main stakeholders of a firm are investors (shareholders), customers, suppliers, employees, governments, communities, political groups and trade associations (Donald & Preston 1995, pp. 68-69). On the other hand, the most influential internal and external stakeholders are referred to as the shareholders, employees, lenders, suppliers, customers, society and the public (Thorell & Norberg 2005, p. 34). This latter approach is more applicable on a small firm that needs external financial capital from a bank in alignment with the pecking-order theory. Society might also include public authorities, which in case of auditing may refer to the Swedish Tax Agency and the Swedish Economic Crime Authority (Thorell & Norberg 2005, pp. 40-43). In addition, the role of suppliers and customers for financing the firm and their influence on the decision to appoint an auditor is relatively scanty. Nevertheless, suppliers might prefer audited accounts. The auditor's external check of the financial statements can increase the reliability of the company's ability to pay the invoice from the supplier, increasing the suppliers' willingness to extend the period of credit. Granting the paying company extra time to pay can tie additional capital to the company and thereby improve the company's financial state, i.e. the total assets (Svanström 2008, p. 40).

Since the foundation of the stakeholder theory 1984, the theory has developed and has been used for describing the behavior of a corporation on three dimensions: the descriptive, the normative and the instrumental dimensions. This includes for example, the managers' attitude towards managing the firm and the resulting practical business management as well as the relationship between the stakeholders and the ethical perspectives on an enterprise (Donald & Preston 1995, pp. 69-73; Fassin 2009, pp. 113-114). A more developed model than the original stakeholder theory model describes the additional environmental elements, affecting the stakeholders' relationship with the firm and with each other. The environmental elements in question are NGOs, Governments, environmentalists, critics, media and others (Fassin 2009, pp. 113-115). In case of auditing, stakeholder theory points out the demand of an audit of the business finances; other stakeholders than shareholders have an information asymmetry with the mangers. In other words, other stakeholders' interest in the financial state of the firm is just as great as the shareholders' interest (Seow 2001, p. 76).

2.1.3. The pecking-order theory

The pecking-order theory states that the company might value its stakeholders differently. This is contradictive to the stakeholder's theory, which claims that all stakeholders have an equal interest in the company and vice versa. In alignment with the pecking-order theory, small companies firstly try to use generate revenue in order to cover any need of capital (Sjogren & Zackrisson 2005, pp. 77). Small companies' main strategy is to survive and

maintain stability in the corporation's financial situation. Large enterprises on the other hand, tend to prioritize the shareholder's ambition; the company's growth and maximize the profit (Collis 2012, p. 499). Secondly, in case the revenue is not enough, small companies are willing to go further down the hierarchy, i.e. borrow capital from banks. Thirdly, small enterprises are most reluctant to alert stakeholders about the possibly negative financial state in order to gain external funds (Sjogren & Zackrisson 2005, pp. 77). Due to that the companies prefer the bank to the shareholders; the bank may have a proportional greater role as an external lender. Thus, the bank can have a greater indirect influence on the decision of appointing an auditor, even though they cannot vote on the shareholders' meeting (Berger & Udell 1995, p. 378; Collis 2012, p. 449).

2.2. A micro-level perspective on auditing

Theory and research in this field have attempted to chart what determinants influence companies' choice to appoint an auditor. The results are contradictory. However, researchers' previous conclusion has led us to identify the following determinants: turnover, total assets, solidity, number of board members and industry affiliation. They are presented below.

2.2.1 Auditor

Auditing benefits internal and external company stakeholders as well as larger environmental parties such as NGOs and the society. The parties in question usually refer to shareholders, lenders, suppliers, customers and public authorities such as the Swedish Tax Agency or Swedish Economic Crime Authority. Moreover, auditing includes a variety of fields. The advantages of auditing include the monitoring benefit between the principal and the agent in addition to the utility of internal functions like the internal check and increasing efficiency of the internal processes, as well as the quality of the information that decisions are based on (Svanström 2008, pp. 16-41). Likewise, operational processes might benefit from auditing and the general management of the firm might improve when the auditor provides advice on financial problems, which could increase the client's understanding of the finances (Svanström 2008, pp. 30-32). Audited information can also facilitate the company's chances of being granted a loan, but that is still a debated issue (Svanström 2008, pp. 16-41, p. 133).

The demand of audit differs between small and large companies. A small company generally has a tighter ownership structure between the shareholders and the managers; the managers are often also the owners. Hence, the necessary information is often spread to both the owners and the managers in order to give them a good understanding of the company's financial performance. However, external non-managing shareholders also exist in small companies (Seow 2001, pp. 62-63). Furthermore, for small company with relatively small sales revenue, the cost and the time required for preparing an audit might be a comparatively heavier financial burden for a small company (Collis et al. 2004, pp. 462-463; Thorell & Norberg 2005). On the other hand, small companies might benefit from auditing in more ways than a larger company. Instead of just benefit the shareholders' monitoring of the managers, the auditor's expertise might increase the management of the firm, the personnel's performance and possibly improve the processes in the firm. This might improve the small company's financial performance in the long perspective (Collis 2012, pp. 462-463; Svanström 2008, pp. 16-41). Furthermore, society may benefit from auditing's forestalling characteristics, like

preventing economic crimes (Thorell & Norberg 2005, p. 40). On the other hand, small limited companies must balance the costs and benefits of auditing; various indicators affecting the decision. Additionally, the characteristics and needs of newly registered companies and mature companies differ. These determinants can affect the decision to choose an auditor.

Consequently we will investigate the following hypotheses:

 H_0 1: There is no difference in to what extent small, newly registered, limited companies choose to appoint an auditor voluntarily in comparison to small mature limited companies.

 H_1 1: There is a difference in to what extent small, newly registered, limited companies choose to appoint an auditor voluntarily in comparison to small mature limited companies.

2.2.2. Turnover

The size of the firm has been discussed as an incentive in companies' decision to appoint an auditor (Tauringana & Clarke 2000; Chow 1982, p. 287; Svanström 2008, p. 136). However, it depends on how the size of the company is measured. Usually the size is measured as turnover, total assets or numbers of employees (Svanström 2008, p. 136). Turnover or total assets are commonly used among researchers (Svanström 2008, p. 112).

In case of turnover, some disagree with previous enquiries and others agree of its suitability. On one hand, it is stated that turnover is an influential determinant of the decision to appoint an auditor (Tauringana & Clarke 2000, p. 165; Collis et al. 2004, p. 97). On the other hand, later researchers have a more skeptical attitude: turnover itself is not an independent factor of affecting the costs-and-benefit analysis of appointing an auditor or not. However, in combination with other national factors of managing and agency factors, specific for each country, turnover might play a role (Collis 2010, pp. 211-212).

In order to measure the information asymmetry problem between agent and the principals, turnover has been used as a substitute for the size of the firm. Still, the research argues that the agency theory would be a better indicator. Turnover itself had been used as a weak indicator on the size of the firm in contrast to the agent-principal theory. (Collis 2012, pp. 448-449)

The influential determinants of the decision to appoint an auditor differ between small and large companies. On one hand, in larger companies with higher sales revenue than a small company, turnover could have a positive relationship with the likelihood of appointing an auditor. The correlation deepens in when combined with the demand of transparency from investors and owners. In addition, since the sales revenue is that high in comparison with a small company, the auditing cost is still comparatively small. The benefits exceed the costs. Small companies on the other hand have other determining factors which expand over both the management and pure agent-principal-monitor field. Turnover alone is not a very determining factor. Sorted according to rank, the most influential factors in small companies are the auditor's advice, the manager's positive opinion about the benefits of auditing exceed the costs, the shareholders demand of auditing. Thereafter, turnover, an indirect pressure from

the lenders and the benefits of an internal check could correspond positively with the decision to appoint an auditor. (Collis 2012, pp. 462-463)

Consequently we will investigate the following hypotheses:

 H_0 2: The turnover of small newly registered limited companies does not affect their choice to appoint an auditor.

 H_1 2: The turnover of small newly registered limited companies does affect their choice to appoint an auditor.

 H_0 3: The turnover of small mature limited companies does not affect their choice to appoint an auditor.

 H_1 3: The turnover of small mature limited companies does affect their choice to appoint an auditor.

2.2.3. Total assets

As mentioned, turnover or total assets are commonly used among researchers as a measurement of the company's size when investigating the determinants of appointing an auditor (Svanström 2008, p. 112). Prior research states that the demand to use the service of an auditor is not affected by the company's size in terms of total assets. Instead, turnover is a preferred measurement with stronger correlation with the corporation's size. (Tauringana & Clarke 2000, p. 165; Collis *et al.* 2004, p. 165)

Consequently we will investigate the following hypotheses:

 H_0 4: The total assets of small newly registered limited companies do not affect their choice to appoint an auditor.

 H_1 4: The total assets of small newly registered limited companies do affect their choice to appoint an auditor.

 H_0 5: The total assets of small mature limited companies do not affect their choice to appoint an auditor.

 H_1 5: The total assets of small mature limited companies do affect their choice to appoint an auditor.

2.2.4. Solidity

The solidity ratio describes the company's long-term payment capacity and indicates the proportion of assets that are financed with equity. A low degree of solidity means that the

company has a high proportion of debts in contrast to the equity capital. From a principal's point of view, when the share of debt grows, the demand of auditing increases. The shareholders' risk grows. (Svanström 2008, p. 132-134)

Banks are a very important external financier to small companies; banks are the most common external lender instead of stakeholders or bondholders (Berger & Udell 1995, p. 351; Collis 2012, p. 449; Sjogren & Zackariasson 2005, p. 75). The likelihood that small companies in particular lack equity capital or stable sales revenue is greater than a large corporation (Svanström, 2008, pp. 33-35), which is why they prioritize stability and survival rather than growth and getting the most profit out of the company (Collis 2012, p. 449). In order to assess the company's lending risk, the bank will investigate the company's ability to repay and collateral securities (Garmer & Kyllenius 2004). The bank can request different types of specific and general information, both externally accessible information and intrafirm information. The bank's first evaluation is based on the easy accessible information like the annual reports and intra-firm accessible information such as the financial accounts. However, from the banks standpoint, the most important document are the most reliable - the financial statements. In order to increase the reliability of the financial accounts, the company could have appointed an auditor to audit these financial records (Collis 2012, p. 449). Some banks may even demand audited accounts. Moreover, in general, auditing might be considered a sign of accounting quality. Choosing not to appoint an auditor might be considered lack of orderliness in the financial reports among external financiers (Thorell & Norberg, 2005, p. 4).

Not being able to rely on the information given by the borrowing party is a considerable issue for the lender, since the relationship between lender and borrower is essentially about trust. The importance of the factors which lead to trust will therefore increase, such as what kind of information is accessible but also the persons constructing the reports (Gianuzzi 2010; Thorell & Norberg 2005, p. 4). However, additional information about the business, the persons involved with the company or the financial statements and the lending proposition are also of central importance. General characteristics such as industry and risk indicators are also evaluated (Collis 2012, p. 449). All in all, audit could improve the company's image with the help of auditing and thereby improve their credit ratings (Collis 2012, p. 449; Danielsson 2013) and lower the credit risk (Danielsson 2013).

In small companies, the external easy accessible information about the company is limited. Thus, to both the bank and the company, the relationship is of greater importance to the bank's information gathering about the company. The collected information forms a base for the bank's assessment of the company and also the parties' relationship. As a result, information sharing could increase the company's chances of being granted a loan in the long perspective (Berger & Udell 1995, pp. 378-379). With frequent communication between the bank and the firm, the information asymmetry between the manager and the bank decreases considerably until almost extinction (Voordeckers & Steijvers 2006). The base of the relationship is from the banks standpoint the access to additional private information together with the possibility of speaking with the parties involved. The company on the other hand shares information and hopes for a loan or possibly favorable loan terms such as interest rates and collaterals (Berger & Udell 1995, p. 351; Svanström 2008, pp. 33-35; Collis 2012, p. 449). Moreover, the information sharing creates a relationship of trust and reduces some of the financial risk from the bank's perspective (Voordeckers & Steijvers, 2006).

In contrast to mature companies, it is not as likely that a newly registered company already have established a long-lasting relationship with a bank. Consequently, to establish and

maintain a good relationship with a bank could be very important to a small, newly established company. The company's internal generated capital (revenue) or in some cases the startup capital is not enough for financing further investments. According to the pecking-order theory, the firm can then request additional capital from an external financier, either the shareholders or more commonly in Sweden, the banks (Sjogren & Zackariasson 2005, pp. 75-77). This understanding could be important for companies in certain capital intensive industries. To start a business in this industry may require higher initial capital assets than the shareholders might be willing to invest. The company may need a bank, willing to grant a loan in exchange for a certain capital costs (Garmer & Kyllenius, 2004).

On the other hand, other scientists have a more reserved attitude. In prior research, there was an unclear correlation between the decision to appoint an auditor and the bank's willingness to provide capital (Seow 2001, p. 62). Furthermore, bank's representatives argue that banks do not prefer audited accounts from a company. If needed, the bank could get the financial statements audited themselves (Gianuzzi 2010). Moreover, other determinants might be more influential than auditing alone, even if bank's preferred audited accounts (Thorell & Norberg 2005; Svanström 2008).

Consequently we will investigate the following hypotheses:

 H_0 6: The solidity of small newly registered limited companies does not affect their choice to appoint an auditor.

 H_1 6: The solidity of small newly registered limited companies does affect their choice to appoint an auditor.

 H_0 7: The solidity of small mature limited company does not affect their choice to appoint an auditor.

 H_1 7: The solidity of small mature limited company does affect their choice to appoint an auditor.

2.2.5. Number of members of the board of directors

As mentioned, the ownership structure can be one factor that may influence the choice of employing an auditor. Ownership structure refers to the identity of shareholders and how many shares each shareholder possesses. In case of a small company, managing shareholders respectively the non-managing shareholders could be important. Since the information asymmetry between the small company and the surrounding world is relatively great, one must consider a more accessible substitution for the number of shareholders such as the number of board directors or the share-capital. The number of board directors is a better measurement of number of shareholders than share capital. Especially in a small company, it is highly likely that the manager, the board members and the owners of the company is represented by the same group of people. Share capital and number of shareholders has a more indirect relationship to the worth of quotient (*kvotvärde*).

Ownership structure also determines the degree of information asymmetry. The information asymmetry can be extensive between the shareholders taking an active part in managing the business and those shareholders only owning the company. On behalf of the merely owning shareholders, an external auditor could control that the business management has been in the best interest of both groups. The allocation of shares among the owners also affects each shareholder's power over the company in terms of voting and managing. This power could for instance influence the decision to appoint an auditor or not (Tauringana & Clarke 2000, pp. 161-162, pp. 165-166). In small companies, where the relationship between the external lenders and the business managers are tighter and less formal, the demand for an auditor may decrease. The contrasting owner structure is the relationship of the manager and company owner in a larger company – especially a listed one (Niemi *et al.* 2012, pp. 172-173). These companies, however, are not included in the audit exemption.

The ownership structures can also emphasize the shareholders' relations: many of the small companies are family owned. (Retriever 2013; Svanström 2008, p. 151) On one hand, the information asymmetry in family-owned companies is not a determining factor (Collis *et al.* 2004, p. 97), possibly due to the close relationship between the shareholders. The shareholders are also likely to manage the small company. On the other hand, fully family-owned companies are more likely to appoint an auditor (Svanström 2008, p. 151). This could be associated with the pecking-order theory in combination with the companies' willingness to be transparent and to provide reliable information to lenders. Besides, kinship does not exclude the risk of disagreements between the shareholders, which audited information could prevent or solve.

To invest time and money in a company may demand thoughtfulness. Since shareholders and members of the board can be personally liable for the company's responsibilities, participating in the company's operations could have devastating personal consequences. For instance, if the company has violated the law and evaded to pay tax or social charges, members of the board have a joint and several responsibilities to remedy the situation (Undin n/a). The liability is a way for the law to encourage the member of the Board of Directors to act in alignment with the stakeholders' interest (Svernlöv 2012, p. 35).

Consequently we will investigate the following hypotheses:

 H_0 8: The number of board members of small newly registered limited companies does not affect their choice to appoint an auditor.

 H_1 8: The number of board members of small newly registered limited companies does affect their choice to appoint an auditor.

 H_0 9: The number of board members of small mature limited companies does not affect their choice to appoint an auditor.

 H_1 9: The number of board members of small mature limited companies does affect their choice to appoint an auditor.

2.2.6. Industry affiliation

Previous research about the relationship between audit and industry is very limited. Moreover, the relationship is very complicated. It is hard to seclude industry as an isolated determinant, since industry can be well-connected with other indicators. This makes it much harder to draw any certain conclusions or exclude that other factors influence the results (Svanström 2008, p. 136-137). Still, early research conducted in the early 1980s (Chow 1982) argued, that companies with very complex transactions choose not to appoint an auditor, due to the increase of cost of auditing. However, the benefit-perspective is not considered in that approach. Complex operational processes and assets which are hard to estimate the value of can increase the demand of an auditor's external point-of-view (Svanström 2008, p. 136-137).

Each industry has its own characteristics in terms of for instance the demand of initial capital to start a business or the length of the industry's business cycle. For example, there is a difference between the manufacturing industry and service sector. During the first period of the newly established firm, the small firm's few shareholders with already limited resources have no more capital to invest. The next alternative lender would be to lend from the bank, which is the most importance external financier for small companies. In addition, the company's credit risk is affected by its industry affiliation (Collis 2012, p. 449). Subsequently, a borrowing company's credit risk varies in accordance with industry, affecting the bank's assessment of the company. In summary, the company would prioritize to have a good relationship with the bank.

Other differences between industries are also indicated by the Government. During 2011, certain small limited companies that fulfill all the requirements of audit exemption could not dismiss the external supervision completely. Companies in either the construction sector, hairdressing and catering were forced to verify who and when employees and others are active in the premises, by writing down the necessary information on a list. This list is called a *Personalliggare*. The requirement prevents illicit work and by this means tax evasion. (SFS 2006:575) Later another proposition was presented by the Department of Finance, suggesting that the laundry industry and the construction industry also should be included in the law about *Personalliggare*. (Finansdepartementet 2012)

Consequently we will investigate the following hypotheses:

 H_0 10: The industry affiliation of small newly registered limited companies does not affect their choice to appoint an auditor.

 H_1 10: The industry affiliation of small newly registered limited companies does affect their choice to appoint an auditor.

 H_0 11: The industry affiliation of small mature limited companies does not affect their choice to appoint an auditor.

 H_1 11: The industry affiliation of small mature limited companies does affect their choice to appoint an auditor.

2.2.7. All determinants relative to each other

In social science, it is not possible to draw conclusions about a single factor in isolation from its context. We have therefore decided to put all the factors in the model to see what factors affect small newly registered limited company's decision to use the auditor, and how much impact the factors have in relation to each other.

Consequently we will investigate the following hypotheses:

 H_0 12 - Test of the complete model: Small newly registered limited companies' turnover, total assets, solidity, number of board members and industry affiliation do not affect their choice to appoint an auditor.

 H_1 12 - Test of the complete model: Small newly registered limited companies' turnover, total assets, solidity, number of board members and industry affiliation do affect their choice to appoint an auditor.

 H_0 13 - Test of the complete model: Small mature limited companies' turnover, total assets, solidity, number of board members and industry affiliation do not affect their choice to appoint an auditor.

 H_1 13 - Test of the complete model: Small mature limited companies' turnover, total assets, solidity, number of board members and industry affiliation do affect their choice to appoint an auditor.

3. Method

Initially, the chapter begins with the study's chosen approach. Subsequently, the research process is stated, followed by the description of the sample and data collection and a data reduction analysis. Moreover, each variable from the two collected samples is scribed in more detail. Lastly, the validity and reliability of the study is commented on, as well as criticism and research ethics.

3.1. Approach

To answer the problem statement, a deductive approach was chosen. This means that the empirical findings were established only after an examination of previous research and theories in the field, which prove an idea about the reality (Jacobsen 2002). Furthermore, in accordance with the hypothetical-deductive theory, a number of null hypotheses were formulated. The hypotheses were based on the prevailing theory of the subject, which in turn were tested against the empirical findings. The hypotheses have either been verified or rejected, with the result that the theory was confirmed or revised (Holme & Solvang 1997).

The criticism against the deductive approach has stated that prior researchers have defined what is relevant, limiting the researcher's mind to solely search for the known information. Thus, important information might be ignored or overlooked. The collected data also tends to confirm the researcher's present view (Jacobsen 2002). In fact, a combination of inductive and deductive approach limits the risk that important information is overseen. Moreover, due to limited resources, a deductive study was chosen. However, the investigated field of study is up to date and the availability of studies in this area is extensive, facilitating a true, fair and comprehensive view of the field of study. In addition, since Sweden was one of the last countries in Europe to abolish the mandatory audit requirements, the large amount of previously written articles from other European countries where the audit exemption had been introduced before 2011 formed the base of the scope of the study. Consequently, the determinants stated in the research questions could be identified and later developed into relevant hypotheses. Nonetheless, a deductive approach can lead to overlook relevant information.

The research questions of the thesis should answer what factors influence newly registered small limited companies' decision to appoint an auditor, and whether these factors differ from factors affecting mature small companies. Moreover, the thesis should also measure the proportion of newly established small companies that have voluntarily chosen to use the services of an auditor despite the abolishment of the statutory audit requirement, and if this ratio differs from the proportion of mature small companies that choose to appoint an auditor. On the basis of the results, conclusions can be drawn that hopefully can be generalized on the whole population of Sweden.

The purpose has been fulfilled by using a quantitative study. A quantitative approach is suitable when the intention is to measure frequency and space (Esaiasson, Gilljam, Oscarsson & Wängnerud 2012). Furthermore, the benefits of the method include the ability to make comparisons, to show the strength of the relationship between various factors, to illustrate the extent of certain phenomena and the ability to make generalizations (Holme & Solvang 1997). It also facilitates testing theories and hypotheses: a quantitative approach is appropriate when studying a large number of units, allowing generalizations with a high level of reliability at a relatively low cost (Jacobsen 2002).

The problem with a broad research design is that the results of the study can be superficial and do not provide any deeper understanding of the field of study. Additionally, the study's design is affected by the researcher's perception and the research might become isolated from its context. The result of the study might likely become irrelevant. Still, the research design benefits a result's high external validity, which means that the sample is generalizable on a larger population. On the other hand, the profits of external validity must balance with the internal validity. The method provides low internal validity since the answer only is a result of the question asked (Jacobsen 2002). As with a deductive approach, a quantitative study can only be used when the researcher has a high understanding about what he or she will be studying. In addition, using a scientific method for studying a social phenomenon has also been questioned (Bryman & Bell 2003).

3.2. Research process

The empirical data was collected through a document study; the data was collected for other purposes, so-called secondary data. First-hand sample data would have been incredibly difficult to assemble with the limited time available. However, the aim was to draw statistically significant conclusions. A document study was therefore the appropriate method, since it is appropriate when primary data is impossible to collect. The main disadvantage of implementing a document study is that the data likely were collected for other purposes than the intended and in some cases; the information could only be useful for a specific research question. Thus, the original documents required high credibility. Using secondary data is risky: it is hard to confirm who collected the data, how it is collected and how it is registered. Subsequently, it is difficult to verify the exact reliability of the material (Jacobsen 2002). The data samples were accumulated through the database Retriever Business, which collects the scanned original annual reports from the Companies Registration Office. The information is consequently non-manipulated raw data, increasing the reliability of the material.

3.3. Sample and data collection

The aim for a statistical study is to collect and later compare samples that represent the overall population. The theoretical population for both samples in this thesis equals all small private limited companies in Sweden. However, due to lack of resources we have chosen to limit the theoretical population to Jönköping Country, which will be this study's actual population. To be able to generalize from the sample to the population, the selection must be a reflection of the population (Jacobsen 2002). The share of small business and entrepreneurship in Jönköping County was consistent with the proportion in the whole of Sweden, which enables generalization (Ekonomifakta 2010). Furthermore, the size of the samples assembled equaled all small Swedish private limited companies but also the actual population in Jönköping County. The total selection of the actual population Jönköping County was collected. Since the actual population represents the theoretical population, the sample consequently is generalizable to the theoretical population of Sweden.

Two samples were collected for the study. Sample 1 (newly registered small companies) includes all small companies in Jönköping included in the voluntary audit exemption, registered after 2011-01-01 and had presented financial statements 2011-12-31. In addition, Sample 1 consists of 233 units of limited liability companies. On the other hand, Sample 2 (mature small companies) includes all small companies in the county of Jönköping included in the audit exemption, registered before 1993-01-01 and had presented financial statements 2011-12-31. Sample 2 consists of 264 units of limited liability companies. The sample data was collected via Retriever Business 19 April 2013.

3.4. Data reduction analysis

To be classified as a small company and have the right to dismiss the auditor, the company must fulfill at least two of the following criteria during the two most financial years: maximum 3 million in turnover, up to 1.5 million in total assets and a maximum of 3

employees. In Sample 1 (newly registered small companies), 13 companies exceeded two or more of the criteria for small companies and were consequently removed. An exact interpretation of the criteria for small companies means that *all* newly established companies are classified as small the first two years, regardless of the company's sales, total assets and number of employees. Since the purpose only includes examining small companies, these larger companies were deleted from the sample. Excluding the corporations exceeding the requirements decreased the risk for systematic error or bias in the survey extensively. In order to compare the two samples on the same basis, the companies that surpassed two or more of the requirements were excluded from the sample that consisted of mature limited companies, i.e. Sample 2. Five companies in Sample 2 (mature small companies) exceeded the limitations of classification and were removed.

The SIC code - or generally the SNI code - stands for Swedish Industrial Classification and is based on the EU standard NACE, Classification of Economic Activities in the European Community (SCB 2013). Retriever Business' classification system consists of 30 hierarchal industries (Retriever n/a, p. 4 ff), a refined and simplified system based on the 99 industriesclassification system SIC (SCB 2004). (See Appendix 6) Moreover, to keep an overview of the results, the samples are categorized in accordance with the Retriever Business' simplified classification system. In Sample 1, 37 companies were lacked a SIC code and thus, did not belong to an industry. To avoid manipulating our data by encoding the companies ourselves and to later be able to draw conclusions about the companies' industry affiliation, the noncategorized companies were excluded. In addition, some industries are not represented by any company, making it impossible to draw any conclusions about these specific industries. In Sample 1 (newly registered small company), five industries were not represented: the embassies and international organizations industry; the trade, employers' and professional associations industry; the motor vehicle industry; the public administration and society industry; and the travel agencies and tourism industry (industry 1, 5, 19, 20 and 24). In Sample 2 (mature small company), six industries were not represented by any corporation: the embassies and international organizations industry; sanitations, power and water; the trade, employers' and professional associations industry; the business services industry; public administration and society industry; and travel agencies and tourism industry (industry 1, 2, 5, 10, 20 and 24).

As a main rule, a limited company's board of directors is appointed by the corporation's shareholders in connection with the annual general meeting. The number of members of board of directs and alternate members should be stated in the articles of association. A board of directors may consist of only one member, but when the number of members is one or two, at least one alternate member is mandatory (Aktiebolagslagen 2005:551). Five companies in Sample 2 have only one member of the board of directors. Since the purpose states to investigate which factors affect small companies' choice to appoint an auditor, including these companies, the companies in question are included in the sample. Three companies in Sample 1 have not specified the number of board members and were accordingly removed. In Sample 2, one limited company was excluded since it had not specified the number of board members. Furthermore, two companies in Sample 1 and four companies in Sample 2 had been put into liquidation; these corporations were deleted in the original sample and thus, the tested sample. (See Appendix 4 and 5)

There may also be missing values in the data reports submitted to the Companies Registration Office. In addition, the transfer of data from the Companies Registration Office to Retriever Business could also result in missing data. These errors create distortion and bias in the survey. The risk of missing values in the collected samples is hard to verify, but the risk in this thesis' collections should be small, due to that the transfer of information between the institutions is done with a relatively low risk of bias. In fact, Swedish limited companies are required to submit their annual financial statement to the Companies Registration Office, which later are transferred automatically from the Companies Registration Office to Retriever Business and not by hand.

3.5. Validity and reliability

Validity is a measurement of the correlation between theoretical definition and the chosen empirical indicators. Inadequate indicators cause systematic errors, leading to that the study do not measure what the study is supposed to measure (Esaiasson *et al.* 2012). The limited number of chosen independent variables - turnover, total assets, solidity, board members and industry - can result in missing out on important information. Indeed, there may be additional factors, crucial to the firm's decision to use an auditor's services, which have been excluded involuntarily. The overlooked determinants may lower the validity. Nonetheless, the determinants are based on previous research which to some extent can verify the selected indicators, increasing the validity of the thesis study.

External validity refers to the results of the study's ability to be generalizable. Since the selections only include Jönköping County, there is a risk that some groups systematically fall away from our sample, which would result in an inability to draw any general conclusions about Sweden. Thus, the external validity would decrease. When comparing the entrepreneurship in Jönköping County with the average in Sweden great similarities was found (Ekonomifakta 2010), the external validity should be high.

The size of the sample is elementary for the external validity of a study. A sample of less than 100 units leads to a large margin of error and the result is difficult to analyze. To get a reasonably satisfactory precision of the study and that the data should be manageable a sample between 400 and 600 units is a sufficient sample. (Jacobsen 2002) Since the sample sizes amount to 178 respectively 246, they occur within the acceptable interval. As a result, statistically significant results can be draw: the conclusions should be suitable to generalize on the theoretical population of Sweden.

Non-systematic and random errors leading to lack of reliability is usually caused by random and careless mistakes in data collection and processing. These errors can also lead to over and underestimations (Esaiasson *et al.* 2012). When having completed the data collection, there is always a risk for mistakes and random errors in the assembled data. The degree of reliability can be verified by a test-retest which carries out the same survey again to see that the result is the same once again (Esaiasson *et al.* 2012). Due to lack of time, the reliability has not been tested in a test-retest. Subsequently, it is hard to measure the exact degree of reliability but one can nevertheless conclude that there is a risk for lacking of reliability in the study's results.

3.6. Criticism

Retriever Business is a third-hand source which means information may be missing, lost due to the exchanges of information. Moreover, the source could be biased: the annual report is a public document and reflects what the company wants to convey to the public. Companies could manipulate the presented numbers of the financial statements to appear in a specific way or intentionally account incorrect (Jacobsen 2002). Retriever Business receives the data from the Companies Registration Office in the form of annual reports and thereafter supplements the collection with information from Swedish Tax Agency, Statistics Sweden and UC. Mistakes during this value-adding process might occur but that is very difficult to validate.

Before the execution of this study, a comprehensive literature search was conducted. The literature search was predominantly limited to the databases Business Source Premier (BSP), Emerald, Science Direct, Taylor & Francis Online and Libris. The later selected literature was carefully limited to these databases to increase the scientific level and the thesis general reliability. The main aim of the literature research has been to find the original articles and exclude articles from scholarly publications, including peer-reviews, from the search. To a small degree, we have also conducted searches through Google Scholar. In addition, we found suitable literature through the list of related article or the list of cited articles, stated in connection with each article. In some cases, the starting-point of the information collection has also been references of previous studies and essays. The most frequently searched keywords have been *small companies; micro-companies; voluntary audit; audit; demand; audit quality; agency theory*.

3.7. Research ethics

To the best of our ability, we have tried to act ethically responsible. We have strived towards expressing previous researchers' view without falsifying, copying or deliberately misinterpreting their work. By naming each researcher in question, we have also avoided taken credit for previous research. Furthermore, we have actively taken a stand against withholding information, presenting incorrect or biased material or using a written language which deliberately affects the reader's understanding. Since the collected data is accessible to the public, the classification of our information is not an ethical issue.

4. Empirical findings

In the empirical findings chapter, the result of the statistical analyses is discussed. In general, the results are categorized in accordance with the tested variables for either the newly registered or the mature company. In addition, the corresponding null hypothesis and the empirical findings are presented, resulting in that the null hypothesis is either rejected or not rejected. The variables include auditing, turnover, total assets, solidity, number of board

members and industry affiliation. Furthermore, all variables for newly registered respectively mature limited companies have been tested in one complete model.

The collected selections have purposely been analyzed with aid of the statistical software program SPSS. To investigate if there was a significant difference in the proportion of companies appointing an auditor between small newly registered limited companies and small mature limited companies, a paired sample t-test was carried out. Appropriately, the study included two samples from the same population that were compared in a pared sample t-test.

In addition, via SPSS and a number of logistic regression analyses, the relationship between the independent variables turnover, total assets, solidity, number of board members and industry affiliation and the dependent variable auditor was tested. A logistic regression is preferred when the dependent variable is binary and consequently only can become two values, either hiring an auditor (1) or hiring no auditor (0). The independent variable number of board members assumes a nominal scale, as it can only be measured in integer variables. Turnover, total assets and solidity on the other hand were measured on an interval scale. The 30 industries (see Appendix 6) are classified as dummy variables. The industries are thus binary and can only assume two values: either the company belongs to the industry (1) or the company does not belong to this industry (0). To ensure that there is no correlation between the independent variables were tested in a correlation test. The correlation analyses reveal no correlation between the independent variables.

In a statistical test, the value of p determines the degree of the likelihood that you have done something wrong, i.e. the systematic risk. In case of this study, the decision was made to limit the significance level of p to less than 0.05. Therefore, even though we argue that there is no systematic risk in the population selection, the risk that the hypotheses of the investigated samples are not true equals five per cent (Type-I error). Within the field of social sciences, this highest level of statistical significance is commonly the most acceptable (Bryman & Bell 2003).

4.1. Auditor

 H_0 1: There is no difference in to what extent small, newly registered, limited companies choose to appoint an auditor voluntarily in comparison to small mature limited companies.

 H_1 1: There is a difference in to what extent small, newly registered, limited companies choose to appoint an auditor voluntarily in comparison to small mature limited companies.

A paired sample t-test in SPSS revealed that there is a significant difference between the proportion of newly registered small companies chosen to use the service of an auditor voluntarily respectively the proportion of small mature companies that have preferred to appoint an auditor. The test resulted in a significance of 0.000, which means that the null hypothesis could be rejected at a p of 0.05. Thus, with a probability of 99.99 per cent, there is a significant difference between the proportion of newly registered small companies who have chosen to make use of the auditor and the proportion of small mature companies that have chosen not to dismiss the auditor. With a probability of 0.01 per cent, we can reject the null hypothesis, despite that the null hypothesis is true. (See Appendix 1, Table 1)

Summary of the paired samples t-test

 Hypothesis P		Pair		Sig. > 0,050
H ₀ 1	Sample 1	Sample 2	0,000	Rejected

4.2. Turnover

 H_0 2: The turnover of small newly registered limited companies does not affect the choice to appoint an auditor.

 H_1 2: The turnover of small newly registered limited companies does affect the choice to appoint an auditor.

When comparing the dependent variable auditor with the independent variable turnover, a logistic regression analysis is calculated to a significance of 0.574. Since this value is higher than the chosen significance level, the null hypothesis could not be rejected: the fact that turnover of small newly registered limited companies does not affect their choice to use the auditor at a p of 0.05 could not be proved false. With a probability of 57.40 per cent, one can conclude that there is no relationship between turnover and the firm's choice to use the services of an auditor. (See Appendix 1, Table 2)

 H_0 3: The turnover of small mature limited companies does not affect the choice to appoint an auditor.

 H_1 3: The turnover of small mature limited companies does affect the choice to appoint an auditor.

Moreover, Sample 2 (the mature companies) was tested in a logistic regression analysis where the dependent variable equaled the auditor and the independent variable referred to the company's turnover. The result of the analysis proved a significance of 0.796, which means the null hypothesis could not be rejected at a p of 0.05. Furthermore, with a probability of 79.60 per cent, the regression analysis shows no connection between small mature companies' turnover and their choice to appoint an auditor. (See Appendix 1, Table 3)

4.3. Total assets

 H_0 4: The total assets of small newly registered limited companies do not affect the choice to appoint an auditor.

 H_1 4: The total assets of small newly registered limited companies do affect the choice to appoint an auditor.

A logistic regression analysis was conducted with the independent variable referred to the newly registered company's total assets and the dependent variable referred to auditor. The regression analysis demonstrated a significance of 0.000. Consequently, the null hypothesis could be rejected with a p of 0.05. In addition, with a certainty of 99.99 per cent, one can conclude that there is a clear correlation between small newly registered limited company's total assets and the choice to appoint an auditor. The coefficient of the independent variable total assets is positive; there is a positive relation between total assets and the choice to use an auditor. Therefore, the greater the newly registered company's total assets are, the greater likelihood to appoint an auditor. In contrast, the results also indicated that small newly

registered companies with less total assets have a lower probability of using the service of an auditor. The probability of rejecting the null hypothesis, even though it is true, is less than 0.01 per cent. (See Appendix 1, Table 4)

 H_0 5: The total assets of small mature limited companies do not affect the choice to appoint an auditor.

 H_1 5: The total assets of small mature limited companies do affect the choice to appoint an auditor.

On the other hand, the corresponding logistic regression analysis with mature companies' total assets in relation to the company's likelihood to appoint an auditor differs. Now, the results show a significance of 0.217. That number means that, with a probability of 21.70 per cent, there is no relationship between small mature company limited total assets and the choice to employ an auditor. (See Appendix 1, Table 5)

4.4. Solidity

 H_0 6: The solidity of small newly registered limited companies does not affect the choice to appoint an auditor.

 H_1 6: The solidity of small newly registered limited companies does affect the choice to appoint an auditor.

In short, the logistic regression analysis shows no connection between solidity and the newly registered company's decision to appoint an auditor. In fact, when the independent variable solidity in relationship with the dependent variable of audit was analyzed, the significance of 0.942 shows that the null hypothesis above could not be rejected at a p of 0.05. With a probability of 94.20 per cent, there is no connection between the solidity of small newly registered companies and their choice to appoint an auditor. (See Appendix 1, Table 6)

 H_0 7: The solidity of small mature limited company does not affect the choice to appoint an auditor.

 H_1 7: The solidity of small mature limited company does affect the choice to appoint an auditor.

In case of mature companies, there is no likely relationship between solidity and the decision to use an auditor's service voluntarily. Specifically, the connection is certain with a 87 per cent probability. Having measured the relation between the independent variable of solidity and the dependent variable auditor, the logistic regression resulted in a significance level of 0.87. Thus, the null hypothesis that the solidity does not affect the company's choice to appoint an auditor could not be rejected. (See Appendix 1, Table 7)

4.5. Number of board members

 H_0 8: The number of board members of small newly registered limited companies does not affect their choice to appoint an auditor.

H_1 8: The number of board members of small newly registered limited companies does affect their choice to appoint an auditor.

In a logistic regression analysis, when analyzing the number of board members as the independent variable and auditor as the dependent variable, it resulted in a significance of 0.030. That means that with a probability of 97 per cent, there is a correlation between small newly registered limited companies number of board members and the choice to use the auditor. This level of significance meant that the null hypothesis can be rejected at a p of 0.05. The probability of rejecting the null hypothesis although its true is 3 per cent. The coefficient of the number of board members is positive. Consequently, there is a positive correlation between small newly registered limited companies and their choice to appoint an auditor. In conclusion, more board members increase the likelihood that small newly registered limited companies decide to appoint an auditor. The opposite states that fewer board members in a newly registered company lower the probability of using the service of an auditor voluntarily. (See Appendix 1, Table 8)

 H_0 9: The number of board members of small mature limited companies does not affect the choice to appoint an auditor.

 H_1 9: The number of board members of small mature limited companies does affect the choice to appoint an auditor.

Next, when testing whether small mature limited companies number of board members influenced the choice to use the auditor's service via a logistic regression analysis, result was a significance of 0.440. In other words, the null hypotheses could not be rejected at a p of 0.05. With a probability of 44 per cent, there are no signs of a relationship between small mature limited companies number of board members and the choice to dismiss the auditor. (See Appendix 1, Table 9)

4.6. Industry affiliation

 H_0 10: The company's industry affiliation of small newly registered limited companies does not affect the choice to appoint an auditor.

 H_1 10: The company's industry affiliation of small newly registered limited companies does affect the choice to appoint an auditor.

Aided by a logistic regression analysis with forward stepwise conditional method, the independent dummy variables industries (industry 1 to 30) and the dependent variable auditor were tested. Accordingly with the SPSS forward stepwise conditional method, the program tests each significant independent variable after another until all the significant variables are included in the model. The results proved that two industries could reject the null hypotheses at a p of 0.05: industry 3 (the banking, finance and insurance industry) with a significance of 0.036 respectively industry 9 (the real estate industry) with a significance of 0.025. With 96.4 per cent probability, there is a link between the small newly registered companies belonging to the banking, finance and that they choose to use an auditor's services. The connection exists with a 97.5 per cent probability. Moreover, in case of industry 3, there

is a probability of 3.6 per cent that the null hypothesis can be rejected even though it is true. In terms of industry 9 (the real estate industry), there is a probability of 2.5 per cent that the corresponding situation can occur. The coefficients for the independent variables in both industry 3 and industry 9 are positive, which means that the probability that the small newly registered limited companies choose to appoint an auditor voluntarily is greater if the corporation belonged to industry 3 or 9. (See Appendix 1, Table 10)

 H_0 11: The company's industry affiliation of small mature limited companies does not affect the choice to appoint an auditor.

 H_1 11: The company's industry affiliation of small mature limited companies does affect the choice to appoint an auditor.

A logistic regression analysis, using the method forward stepwise conditional with industry affiliations as independent dummy variables and auditor as the dependent variable, results in two significant industries. In fact, the results proved a significance of 0.001 for industry 11 (the hotel and restaurant industry) and a significance of 0.030 for trade 6 (the construction, design and interior design industry). Hence, the null hypothesis of these industries can be rejected at a p of 0.05. In fact, with a probability of 99.9 per cent affected small mature companies' choice to not exempt the auditor voluntarily if the corporation belonged to the hotel & restaurant industry. With a probability of 97 per cent, the industry affiliation of construction, design and interior design industry affected the small mature companies' decision to appoint an auditor. Moreover, the probability of rejecting the null hypothesis although it is true is 0.1 per cent for industry and 11 respectively 3 per cent for industry 6. Additionally, the coefficients for the independent variables of industry 11 and industry 6 are positive, which means that the probability that small mature company chooses to use the auditor increases if the enterprise belonged to the industry 11 or 6. (See Appendix 1, Table 11)

4.7. All variables relative to each other

 H_0 12 - Test of the complete model: Small newly registered limited companies turnover, total assets, solidity, number of board members and industry affiliation does not affect the choice to appoint an auditor.

 H_1 12 - Test of the complete model: Small newly registered limited companies turnover, total assets, solidity, number of board members and industry affiliation does affect the choice to appoint an auditor.

To be able to answer the above null hypothesis, a logistic regression analysis was conducted, containing all independent variables of turnover, total assets, solidity, the number of board members and industry affiliation as well as the dependent variable auditor. The results proved a significance of 0.000 for the independent variable total assets, a significance of 0.044 for the variable solidity and a significance of 0.017 for the variable number of board members. Therefore, the null hypothesis could be rejected at a p of 0.05. The null hypothesis stated that small newly registered limited companies choice to use the auditor is affected by the variables, total assets, solidity and number of board members. With a probability of 99.99 per cent, the results proved a correlation between small newly registered company's balance sheet

total and the decision to appoint an auditor voluntarily. Since the coefficient for the variable total assets was positive, it meant that the larger the total assets the enterprise has, the greater probability that small newly registered companies choose not to dismiss the auditor. Furthermore, the probability of total assets does not affect the choice of auditing equaled 0.01 per cent. On the other hand, the probability that the solidity of small newly registered limited companies should affect the choice to use the auditor's service was 95.60 per cent.

The coefficient for the variable solidity is positive which means that greater equity in relation to total assets gives a higher probability of small newly registered company using auditor. In addition, the degree of solidity's significance depended on the tested model. The independent variable solidity did not show a significant relationship for H0 6, but becomes significant when the entire model were tested. One possible underlying reason could be that as the total model adds independent variables with lower significance than solidity, the significance of the variable solidity increases. (See Appendix 1, Table 12)

By doing a logistic regression analysis with forward stepwise method conditional, one can illustrate the independent variables that affect small newly registered companies' decision to appoint an auditor voluntarily. The result of the investigated samples indicated four determinants; total assets has a significance of 0.000; solidity has a significance of 0.032; sector 8 (retail) has a level of significance of 0.041; and sector 12 (Health & Medical) has a significance of 0.032. As mentioned, the significance of the independent variables is affected by which variables are included in the complete model and each variable's degree of significance. (See Appendix 1, Table 13).

Nagelkerke R Square is a measurement of how well the model of the samples describes the relationship between the dependent variable auditor and the independent variables total assets, equity, sector 8 and sector 12. Nagelkerke R Square assumes a value between 0 and 1, where a higher value indicates a stronger correlation in the model. The conducted model has a calculated Nagelkerke R Square of 0.351; the independent variables were total assets, equity, sector 8 and sector 12 and the dependent variable auditor. (See Appendix 1, Table 14)

 H_0 13 - Test of the complete model: Small mature limited companies turnover, total assets, solidity, number of board members and industry affiliation does not affect the choice to appoint an auditor.

 H_1 13 - Test of the complete model: Small mature limited companies turnover, total assets, solidity, number of board members and industry affiliation does affect the choice to appoint an auditor.

The test of the complete model for small mature limited companies concludes that the null hypothesis could not be rejected. In fact, all variables exceeded the significance level of 0.05: all independent variables of turnover, total assets, solidity, board members, and industry affiliation in relation to the dependent variable auditor. (See Appendix 1, Table 15)

A logistic regression analysis with forward stepwise method conditional including all the independent variables indicate that industry 6, with a significance of 0.030 level, and industry 11, with a significance level of 0.001, affect small mature limited companies choice to use the auditor. To conclude, the mature companies' determinants industry 6 and 11 are in line with the previous results presented in the hypotheses above. However, the significance of the total number of independent variables is affected by which specific independent variables are

included in the model. Additionally, the extent of each independent variable's significance is also a determinant factor. (See Appendix 1, Table 16)

Table 17 points out that the model's ability to describe the relationship between the dependent variable auditor and the independent variables industry 6 and industry 11 are rather low. Nagelkerke R Square equals 0,288. (See Appendix 1, Table 17)

Hypothesis	Dependent variable	Independent variable	Sig.	Sig. > 0,050
H ₀ 2	Auditor	Turnover	0,574	Not rejected
H ₀ 3	Auditor	Turnover	0,796	Not rejected
H ₀ 4	Auditor	Total assets	0,000	Rejected
H ₀ 5	Auditor	Total assets	0,217	Not rejected
H ₀ 6	Auditor	Solidity	0,942	Not rejected
H ₀ 7	Auditor	Solidity	0,870	Not rejected
H ₀ 8	Auditor	Board Members	0,030	Rejected
H ₀ 9	Auditor	Board Members	0,440	Not rejected
H ₀ 10	Auditor	Industry 3	0,036	Rejected
	Auditor	Industry 9	0,025	Rejected
H ₀ 11	Auditor	Industry 11	0,001	Rejected
	Auditor	Industry 6	0,030	Rejected
H ₀ 12	Auditor	Total assets	0,000	Rejected
	Auditor	Solidity	0,032	Rejected
	Auditor	Industry 8	0,041	Rejected
	Auditor	Industry 12	0,032	Rejected
H ₀ 13	Auditor	Industry 6	0,030	
	Auditor	Industry 11	0,001	Rejected

Summary of the logistic regression analyses

5. Analysis

The analysis chapter compares the extent of newly registered and mature companies and the corresponding determinants of each group of company's decision to appoint an auditor. The intention is to combine the previously presented conceptual framework and the empirical findings, supplementing the discussion with the authors' ideas. As in previous chapters, the chapter is structured in accordance with the investigated determinants: auditor, turnover, total assets, solidity and industry affiliation as well as an all determinants combined.

5.1. Auditor

The result of the conducted study shows that there is a statistically significant difference between the extents newly registered small limited companies that choose to appoint an auditor in comparison to small mature limited companies. (See Appendix 1, Table 1) The proportion of small newly registered limited companies which choose to appoint an auditor is significantly larger than the proportion of mature small limited companies. In accordance with the agency theory, Svernlöv (2012) claims that the higher the risk the shareholders have taken, the more incentives they have to monitor the agent's management. The agency theory can thereby explain the difference in extent between the two groups. It entails a much greater risk to invest in a newly registered company than in a mature company.

According to Svanström (2008), it is more probable that small companies lack stable sales revenue than large corporations. The same statement could be applied to mature companies, which is confirmed by the assembled data. The data states that mature small limited companies have a significantly higher turnover than the equivalent newly registered corporations. Consequently, the pecking-order theory in combination with the stakeholder theory can explain why newly registered companies choose to appoint an auditor to a higher extent.

In addition, companies in the early stages of its business cycle usually have higher costs because of large investments. Similarly, it may take time to break into a new market and build their customer base. Furthermore, it is also common for companies to put sales price below the market price to enter the market and thereby lower profitability in start-up phase. The mature small limited companies have lower costs in the mature stage of the life cycle, as well as higher revenues and are therefore in less need of external financing. Consequently, small mature limited companies have lower incentives to appoint an auditor to reduce the information asymmetry between the management and the bank. Moreover, the mature small limited companies have had time to create a long-term relationship with their bank. In alignment with the stakeholder theory and the pecking-order theory, this can explain why newly registered companies choose an auditor to a higher extent.

According to Svanstöm (2008), not only shareholders and lenders have an interest in the presented financial information, i.e. in the decision of auditing. Other stakeholders can also have an interest in the companies' financial statement. Thorell & Norberg (2005) claims that the most influential internal and external stakeholders are the shareholders; the employees; the lenders; the suppliers; the customers; the society; and the public. The mature limited companies have been able to build longer-term relations with its stakeholders. The problem of the information asymmetry could thereby be reduced because of the stakeholders' confidence in the management of the business. The newly registered companies in this study, on the other hand, could use audited accounts to create reliability and transparency towards the stakeholders. Thereby, the stakeholder theory can explain the difference in to what extent small newly registered limited companies and small mature limited companies choose to appoint an auditor.

According to Collis (2012) and Svanström (2008), the auditor's expertise might increase the quality of the management of the firm, the personnel's performance and possibly improve the processes in the firm. Auditing might also develop the small company's financial performance in the long perspective. Soew (2001) and Niemi *et a*l (2012) claim that appointing an auditor could be one way of assessing the quality of the financial statements and the firm's credibility as well as avoid making decisions based on biased or incorrect financial information. In addition, the business management of the small newly registered limited companies has possibly less experience in running a business than the equivalent mature small limited companies. Newly registered companies may therefore see greater benefit in the use of an auditor's service. There is also reason to believe that a company that has been active for twenty years has good knowledge of how to run their business to survive and is already considered credible. However, managers of small limited companies newly registered might

have extensive experience in running companies despite that their current company is newly established and the demand of an auditor could be equally low.

5.2. Turnover

This study shows that turnover has no significant impact on small limited companies choice to appoint an auditor, either for newly registered small limited companies or for mature small limited companies. This conclusion is not consistent with previous researchers such as Tauringana & Clark (2000) and Collis *et al.* (2004) amongst others. They claim that turnover is an influential determinant of the decision to appoint an auditor. Later research presented by Collis (2010) show that turnover itself is not an independent factor of affecting the costs-and-benefit analysis of appointing an auditor or not, which is more in line with the result of this study.

In alignment with the pecking-order theory, Sjögren & Zackrisson (2005) claims that small companies firstly try to use generate revenue in order to cover the demand of capital. In combination with the stakeholder theory and the agency theory one can assume that companies with high turnover have lower incentives to appoint an auditor. The result of this study proves no relation between the two variables.

According to Collis *et al.* (2004), the cost and the time required for preparing an audit might be a comparatively heavier burden for a small company with relatively small sales revenue. A higher turnover may result in a less noticeable cost of audit; the margin of cost decreases. One can therefore assume that companies with a high turnover are more likely to choose to appoint an auditor. However, our study shows that there is no correlation between turnover and the choice to appoint an auditor.

5.3. Total assets

Total assets have a statistically significant impact on the small newly registered companies' choice to appoint an auditor. There is a positive relation, who means that if the total assets increases, so does the probability that the small newly registered limited companies choose to appoint an auditor. This result contradicts prior research presented by Tauringana & Clark (2000) and Collis *et al.* (2004), which states that the demand to use the service of an auditor is not affected by that the company's size is measured in terms of total assets.

According to Svernlöv (2012), the higher the risk the shareholders have taken, the higher incentives they have to monitor the agent's management of the shareholder's invested capital. A comprehensive balance sheet indicates that shareholders and external funders have invested a substantial capital in the company and therefore have a great interest in the management of the company. This applies in particular for newly registered companies since they involve a greater risk. Subsequently, these stakeholders may demand proof that the company is managed in a responsible manner. Revised financial statements can provide assurance to shareholders and other funders. The agency theory in combination with the stakeholder theory can therefore explain why total assets have an impact when the small newly registered limited companies choose to appoint an auditor.

In line with the stakeholder theory, Svanström (2008) claim that the auditor's external check of the financial statements can increase the reliability of the company's ability to pay the

invoice from the supplier, increasing the suppliers willingness to extend the period of credit. Granting the paying company extra time to pay can tie additional capital to the company and thereby improve the company's financial state, i.e. the total assets. This can be especially important for newly registered companies in the initial stages of the business cycle since they are in dire need of liquidity. Therefore, the stakeholder theory can demonstrate the relation between total assets and the choice to appoint an auditor.

For the mature small limited companies, the study shows no significant relation between total assets and the choice to appoint an auditor. One can assume that the mature companies already have a well-established relationship with their shareholders and other stakeholders: the information asymmetry therefore decreases. Additionally, it involves a lower risk to invest in a mature company in comparison to a newly registered company. Consequently, the small mature limited companies do not have great incentives for appointing an auditor.

5.4. Solidity

Solidity has no significant impact on the examined small limited companies' decision to use the services of an auditor voluntarily. The result is equal among both groups of corporations; neither of the newly registered small limited companies or for the mature small limited companies is affected.

In line with the agency theory, Svanström (2008) claim that when the share of debt grows, the demand of auditing increases because of higher risk for the shareholders. Additionally, Thorell & Norberg (2005) claim that choosing not to appoint an auditor might be considered lack of orderliness in the financial reports among external financiers. Consequently, a high solidity ought to result in a greater likelihood of appointing an auditor. The results of this study state the contrary. According to Collis (2012) in small companies, external financiers could also be included in the definition of principal. This could explain why solidity is not a determinant when small limited companies choose to appoint an auditor. Shareholders and external financiers have equal incentives to monitor the agent's management.

In alignment with the pecking-order theory, Berger & Udell (1995) and Collis (2012) claim that the bank has a greater indirect influence on the decision of appointing an auditor than the shareholders. Therefore, a low solidity ought to result in a greater likelihood of employing an auditor. On the other hand, newly registered companies might not have established a good long-lasting relationship of trust with other stakeholders than the shareholders, who already have shown commitment though the investment of share capital. For example, customers, suppliers and public authorities might at first be suspicious and not willing to invest trust in the newly founded company, in comparison to a mature company.

Conversely, it is more likely that a mature company of 20 years have established a relationship of trust with more stakeholders, because of a higher probability of financial stability and financial performance, long-term relationships and experience in the industry. According to Voordeckers & Steijver (2006), frequent communication between the bank and the firm decreases the information asymmetry between the manager and the bank considerably until almost extinction. Additionally, Gianuzzi (2010) claim that the bank could get the financial statements audited themselves if needed. Our results suggest that the type of funding - equity or debt - has no effect on the decision to use the auditor.

5.5 Number of members of the board of directors

The result of this study shows that the number of board members of small newly registered limited companies' have a significant influence on their decision to appoint an auditor. There is a positive correlation, which means that the more board members now have the greater the likelihood that the company chooses to appoint an auditor. According to Norashikin, Zubaidah & Smith (2012), the main aim for auditing is to decrease the information asymmetry between the principal and the representing agent. The agency theory can thereby explain the relationship between number of board members and the decision to appoint an auditor. Through the audited financial statements, board members can obtain reliable information about how the company is managed and thus are the communication gap reduced. Today's legislation, where board members can be held personally liable for corporate tax, VAT and social contributions, provides incentives for having audited financial statements. The directors must ensure that the company complies with laws and regulations in order to avoid sanctions. According to the conducted study, the number of mature companies' board members has no significant influence on their choice to appoint an auditor. Additionally, the participating board members of mature limited companies may already have established a deep-rooted trust for their way of management. Consequently, revised financial statements may be more inconsequential to the stakeholders, in terms of the financial statements' ability to confirm that the corporation's accounting complies with the Swedish law.

5.6. Industry affiliation

The study of small newly registered companies illustrated a significant correlation between the independent variables industry affiliation to the banking, finance & insurance industry, and real estate activities and the dependent variable to appoint an auditor. Moreover, it is important to emphasize that companies under the supervision of Finansinspektionen (FI) are still required to employ an auditor. That would clarify why the banking, finance and insurance industry has a significant effect on the choice to appoint an auditor. Furthermore, companies in the real estate industry, which is a capital intensive industry, may require higher initial capital assets than the shareholders might be willing to invest. In addition, the agency theory and stakeholder theory can explain the relationship between the companies engaged in real estate activities and the choice to use the auditor's service voluntarily. According to Svanström (2008), audited information might facilitate the company's chances of being granted a loan.

Mature limited companies associated with the hotels and restaurants industry respectively construction, design and interior design industry are more likely to use the auditor. Among other industries, companies in these sectors are mandatory or would be mandatory (SRF 2006:575; Finansdepartementet 2012) to exert a *Personalliggare*. The companies have a tradition of employing illicit workers. Consequently, companies to affiliate these industries have additional incentives not dismiss the auditor. In line with the stakeholder theory, the managers could thereby demonstrate the corporations' reliability to the stakeholders, especially the Swedish Tax Agency.

Svanström (2008) points out that there is difficult to draw any statistically significant conclusions about the relationship between industry affiliation and the decision to not dismiss the auditor. In fact, it is hard to determine if the industry affiliation variable is a causal variable, or if there are other underlying factors indicating the results rather than industry affiliation. Then, stating that a certain industry affiliation affect the decision to use the auditor could be hazardous: there is a high risk of drawing the wrong conclusions.

According to Collis (2012), industry affiliation is considered a risk indicator in the bank assessment methodology. Audit could improve the companies' image and thereby improve their credit ratings. This can explain why companies in high credit risk industries, such as restaurant industry and construction industry, choose to appoint an auditor to a larger extent than other industries (SRF 2006:575; Finansdepartementet 2012).

A company's success could depend on the general economic state of the market. The number of newly registered companies is also affected by the economic situation and the demand of society, nationally and globally. The industry affiliation will thereby vary over time. Consequently, the premises of the two samples will aggravate the comparability of industry affiliation of the companies.

5.7. All determinants relative to each other - small newly registered limited companies

In the context of social science, a company is included in an environmental context (Esaiasson *et al.* 2012). Consequently, in order to draw accurate conclusions, one factor cannot be isolated from its environmental context. The collected data has been inserted in a complete model to compare all determinants relative to each other. The complete model has created context and shown which determinants influence the newly registered companies' decision to appoint an auditor. The model also illustrated each factor's degree of influence in comparison to each other. The result of the complete model of small newly registered companies indicated that the variables total assets, solidity and number of board members is of significant importance to the decision of appointing an auditor.

As Esaiasson et al. (2012) indicated, the significant variables in a greater context differ from the determining variables in the analysis of each factor individually. The phenomenon of the complete model could explain by that factors with a stronger connection becomes significant and thereby reduce the level of significances of the factors with weaker relationships. In fact, small newly registered companies affiliated to banking, finance and insurance (industry 3) or the real estate industry (industry 9) have no longer a significant association with the use of the auditor. Furthermore, solidity on the other hand turns out to be a significant determinant of a newly registered companies' decision to appoint an auditor. In addition, the relationship is positive: a higher equity to total assets results in a higher probability that the small newly registered limited companies should appoint an auditor. As stated by Svanström (2008) in connection with the stakeholder theory, the information asymmetry between banks and the managers of the business can increase the managers' incentives to employ an auditor. In addition, high solidity influences likelihood of using an auditor's service (Collis 2012).

The next step was to test the variables in the adjusted model. (See Appendix 1, Table 15) The adapting the model to only include those factors of significance, the complete model indicates that the four independent variables retail industry (industry 8) and the health and healthcare industry (industry 12), the newly registered company's total assets and its solidity are of significant importance.

Which determinants included in the model affects the factors' level of significance. Possibly, some determinants may have been overseen in the conducted analysis. If that would be the case, there is a high risk for that the results incorrectly will present some determinants as more significant than if the other determinants would have been included as well. Subsequently, one should examine the result with caution. Moreover, there may be reason to believe that there is a correlation between solidity and total assets. The correlation would affect the model which would thereby present misleading results. In addition, underlying elements may also exist, leading to a correlation between determinants such as industry affiliation. A correlation analysis between all the factors in the study has been conducted, to reduce the risk of drawing incorrect conclusions.

5.8. All determinants relative to each other - small mature limited companies

By adding all the factors in a model, you may get an overview of the factors that affect small mature limited companies in their choice to appoint an auditor, and how much impact the indicators have in relation to each other. The combined results of the model describe that none of the factors affecting small companies mature in their decision to appoint an auditor.

The next step was to conduct a test of the adjusted model. (See Appendix 1, Table 16) The adjusted model only include the previously proven variables of significance to the choice of appointing an auditor, the construction, design and interior industry (industry 6) and the hotels and restaurants industry (industry 11). However, as mentioned, it may be difficult to draw any conclusions about the relationship between industry affiliation and the choice to use the auditor's service. In fact, Sample 2 only consists of small mature companies that have not dismissed the auditor. Based on the low number of observations in that particular population, it is difficult to obtain a significant result at all. Hence, we are cautious about which conclusions that could be drawn from the results of the adjusted model.

6. Conclusion

The conclusion of the bachelor thesis is presented below.

Our study shows that there is a significant difference between the proportions of newly registered small companies that choose to make use of the auditor in relation to small mature companies. There are a larger proportion of small newly registered companies that choose to make use of the auditor.

The result of this thesis shows that the determinants affecting the company's decision to appoint an auditor diverge between newly registered and mature companies. Total assets, solidity, and the industry affiliation to the retail industry or the health care industry are determinant to the small newly registered companies' choice to appoint an auditor voluntarily. The number of board members and industry affiliation to the banking, finance and insurance industry or the real estate industry has some impact on small newly registered companies in their decision to appoint an auditor voluntarily. Turnover is not a determinant for small newly registered limited companies in their choice to appoint an auditor voluntarily.

Industry affiliation to the construction, design and interior design industry or the hotels and restaurants industry are determinants affecting small mature limited companies' decision to use the services of an auditor voluntarily. Therefore, turnover, total assets, solidity and number of board members are not determining when small mature limited companies choose to appoint an auditor voluntarily.

7. The study's contribution

The main purpose of conducting research is to add to the accumulated knowledge in the field of study. Below, the thesis' contribution is illuminated.

In 2011, the audit exemption became reality for small Swedish limited companies. Consequently, the collected samples have investigated the actual effects of the audit exemption. In addition, as far as we know, this is the only study examining the Jönköping County.

The chosen method document study also indicates the actual relationship between the decision to use the service of an auditor and several variables. The results of the thesis are more generalizable on Swedish small companies than in a qualitative study with fewer respondents.

As conclusions drawn from prior research have indicated, there is a significant difference between newly registered companies and mature companies' decision to appoint an auditor. Newly registered companies appoint an auditor to a higher degree than mature companies.

The major contributions to the field of study are related to newly registered companies. Some results are aligned with previous research, others are different or divergent. The matching variables are solidity which had some influence and industry affiliation. Both the theoretical framework and the empirical findings are divergent to if the variables affect the company's decision to appoint an auditor. However, the variable of number of board directors (i.e. number of shareholders) have arguments are both pro and con the connection and not as clear as previous research states. Finally, the variable total assets is contradictory to previous research and do affect the choice of appointing an auditor.

In case of mature companies, in the complete model, none of the determinant was proven to have a significant impact on the decision to appoint an auditor. Therefore, additional studies are required to prove the connection.

8. Proposal for further studies

The thesis' field of study had to be limited down. Not all new interesting issues could be covered by this particular paper; future subjects are proposed further down.

The scope of the study is limited. In order to gain a deeper understanding about why these determinants affect the company's choice to employ an auditor and if there are any additional factors that are crucial, a qualitative study would be necessary. The study would include doing depth interviews with the companies in question. Furthermore, do the presented conclusions correspond with reality?

The selection of this thesis is only circumscribed to limited companies. It would have been interesting to investigate how other types of businesses such as trading partnerships and economic association have been affected by the deregulation of the statutory audit.

Another possibility would be to investigate companies' in industries included in the statutory law of *Personalliggare*, attitude towards voluntary audit. Since these companies have a history of illicit work and thereby tax evasion, to voluntary appoint an auditor could increase the company's financial statements' reliability.

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10. Attachments

Appendix 1

Table 1 – Auditor, Sample 1 and Sample 2

A paired samples t-test comparing the mean of the variable auditor between Sample 1 and Sample 2, to answer the hypothesis:

 H_0 1: There is no difference in to what extent small, newly registered, limited companies choose to appoint an auditor voluntarily in comparison to small mature limited companies.

				Faire	a Samples	Test			
		Paired Differences					t	df	Sig. (2-tailed)
	Mean Std. Std. Error 95% Confidence Interval of								
			Deviatio	Mean	the Difference				
			n		Lower Upper				
Pair 1	Sample1 -	,281	,487	,036	,209 ,353		7,698	177	,000
I all I	Sample2								

Paired Samples Test

 H_0 1: can be rejected.

Table 2 – Turnover, Sample1

A logistic regression analysis of Sample 1 with auditor as the dependent variable and turnover as the independent variable, to answer the hypothesis:

 H_0 2: The turnover of small newly registered limited companies does not affect their choice to appoint an auditor.

	Variables in the Equation										
Sample 1		В	S.E.	Wald	df	Sig.	Exp(B)				
Turnover		,000	,000	,317	1	,574	1,000				
Step 1 ^a	Constant	-,901	,207	18,992	1	,000	,406				

 H_0 2: cannot be rejected.

Table 3 – Turnover, Sample 2

A logistic regression analysis of Sample 2 with auditor as the dependent variable and turnover as the independent variable, to answer the hypothesis:

 H_0 3: The turnover of small mature limited companies does not affect their choice to appoint an auditor.

	Variables in the Equation										
Sample	2	В	S.E.	Wald	df	Sig.	Exp(B)				
Step 1 ^a	Turnover	,000	,001	,067	1	,796	1,000				
Step 1	Constant	-3,779	,570	43,913	1	,000	,023				

 H_0 3: cannot be rejected.

Table 4 – Total Assets, Sample 1

A logistic regression analysis of Sample 1 with auditor as the dependent variable and total assets as the independent variable, to answer the hypothesis:

 H_0 4: The total assets of small newly registered limited companies do not affect their choice to appoint an auditor.

	Variables in the Equation											
Sample 1		В	S.E.	Wald	df	Sig.	Exp(B)					
Step 1 ^a	Total assets	,001	,000	15,803	1	,000	1,001					
Step 1	Constant	-1,521	,223	46,494	1	,000	,219					

 H_0 4: can be rejected.

Table 5 – Total Assets, Sample 2

A logistic regression analysis of Sample 2 with auditor as the dependent variable and total assets as the independent variable, to answer the hypothesis:

 H_0 5: The total assets of small mature limited companies do not affect their choice to appoint an auditor.

variables in the Equation										
Sample 2		В	S.E.	Wald	df	Sig.	Exp(B)			
Step 1 ^a	Total assets	-,001	,001	1,521	1	,217	,999			
Step 1	Constant	-3,052	,621	24,123	1	,000	,047			

Variables in the Equation

 H_0 5: cannot be rejected.

Table 6 – Solidity, Sample 1

A logistic regression analysis of Sample 1 with auditor as the dependent variable and solidity as the independent variable, to answer the hypothesis:

 H_0 6: The solidity of small newly registered limited companies does not affect their choice to appoint an auditor.

Variables in the Equation										
Sample 1		В	S.E.	Wald	df	Sig.	Exp(B)			
Step 1 ^a	Solidity	,000	,003	,005	1	,942	1,000			
Step 1	Constant	-,840	,199	17,728	1	,000	,432			

 H_0 6: cannot be rejected.

Table 7 – Solidity, Sample 2

A logistic regression analysis of Sample 2 with auditor as the dependent variable and solidity as the independent variable, to answer the hypothesis:

 H_0 7: The solidity of small mature limited company does not affect their choice to appoint an auditor.

Variables in the Equation											
Sample 2		В	S.E.	Wald	df	Sig.	Exp(B)				
Step 1 ^a	Solidity	,001	,005	,027	1	,870	1,001				
Step 1	Constant	-3,907	,529	54,469	1	,000	,020				

 H_0 7: cannot be rejected.

Table 8- Board Members, Sample 1

A logistic regression analysis of Sample 1 with auditor as the dependent variable and board members as the independent variable, to answer the hypothesis:

 H_0 8: The number of board members of small newly registered limited companies does not affect their choice to appoint an auditor.

Sample 1		В	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	Board members	,347	,160	4,710	1	,030	1,415
	Constant	-1,754	,450	15,176	1	,000	,173

Variables in the Equation

 H_0 8: can be rejected.

Table 9 – Board Members, Sample 2

A logistic regression analysis of Sample 2 with auditor as the dependent variable and board members as the independent variable, to answer the hypothesis:

 H_0 9: The number of board members of small mature limited companies does not affect their choice to appoint an auditor.

	Variables in the Equation										
Sample	2	В	S.E.	Wald	df	Sig.	Exp(B)				
Step 1 ^a	Board members	-,972	1,258	,597	1	,440	,378				
	Constant	-1,848	2,559	,522	1	,470	,157				

 H_0 9: cannot be rejected.

Table 10 – Industry Affiliation, Sample 1

A logistic regression analysis of Sample 1 with auditor as the dependent variable and industry affiliation as the independent variable, to answer the hypothesis:

 H_0 10: The industry affiliation of small newly registered limited companies does not affect their choice to appoint an auditor.

	Variables in the Equation												
Sample 1		В	S.E.	Wald	df	Sig.	Exp(B)						
	Industry 3	1,582	,755	4,394	1	,036	4,865						
Step 1 ^a	Industry 9	,991	,443	4,999	1	,025	2,694						
	Constant	-1,071	,190	31,623	1	,000	,343						

Table 11 – Industry Affiliation, Sample 2

A logistic regression analysis of Sample 2 with auditor as the dependent variable and industry affiliation as the independent variable, to answer the hypothesis:

 H_0 11: The industry affiliation of small mature limited companies does not affect their choice to appoint an auditor.

	Variables in the Equation										
Sample 2		В	S.E.	Wald	df	Sig.	Exp(B)				
a 13	Industry 11	3,449	1,019	11,464	1	,001	31,467				
Step 1 ^a	Constant	-4,365	,581	56,448	1	,000	,013				
	Industry 6	2,698	1,241	4,727	1	,030	14,857				
Step 2 ^b	Industry 11	4,421	1,306	11,466	1	,001	83,200				
	Constant	-5,338	1,002	28,353	1	,000	,005				
	Industry 6	18,564	2971,150	,000	1	,995	115391065,595				
G. 26	Industry 11	20,287	2971,150	,000	1	,995	646189967,333				
Step 3 ^c	Industry 21	17,984	2971,150	,000	1	,995	64618996,733				
	Constant	-21,203	2971,150	,000	1	,994	,000				

 H_0 11: can be rejected.

Table 12 – Test of the complete model, Sample 1

A logistic regression analysis of Sample 1 with auditor as the dependent variable and turnover, total assets, solidity, board members and industry affiliation as the independent variable, to answer the hypothesis:

 H_0 12 - Test of the complete model: Small newly registered limited companies turnover, total assets, solidity, number of board members and industry affiliation does not affect their choice to appoint an auditor.

Variables in the Equation										
Sample	1	В	S.E.	Wald	df	Sig.	Exp(B)			
	Turnover	,000	,000	,684	1	,408	1,000			
	Total assets	,001	,000	13,821	1	,000	1,001			
	Solidity	,015	,008	4,046	1	,044	1,016			
	Industry 2	-4,840	56841,861	,000	1	1,000	,008			
	Industry 3	-20,249	40193,561	,000	1	1,000	,000			
	Industry 4	-20,782	40193,561	,000	1	1,000	,000			
	Industry 6	-21,400	40193,561	,000	1	1,000	,000			
	Industry 7	-20,227	40193,561	,000	1	1,000	,000			
	Industry 8	-20,097	40193,561	,000	1	1,000	,000			
	Industry 9	-21,798	40193,561	,000	1	1,000	,000			
	Industry 10	-40,550	46051,995	,000	1	,999	,000			
	Industry 11	-41,647	42447,717	,000	1	,999	,000			
	Industry 12	-19,356	40193,561	,000	1	1,000	,000			
	Industry 13	-41,927	56841,861	,000	1	,999	,000			
Step 1 ^a	Industry 14	-41,319	43963,498	,000	1	,999	,000			
Step 1	Industry 15	-21,630	40193,561	,000	1	1,000	,000			
	Industry 16	-23,683	40193,561	,000	1	1,000	,000			
	Industry 17	-43,937	44238,848	,000	1	,999	,000			
	Industry 18	2,403	56841,861	,000	1	1,000	11,062			
	Industry 21	-20,291	40193,561	,000	1	1,000	,000			
	Industry 22	-40,420	56841,861	,000	1	,999	,000			
	Industry 23	-20,587	40193,561	,000	1	1,000	,000			
	Industry 25	-21,357	40193,561	,000	1	1,000	,000			
	Industry 26	-40,447	44791,697	,000	1	,999	,000			
	Industry 27	-41,533	44688,823	,000	1	,999	,000			
	Industry 28	-40,708	56841,861	,000	1	,999	,000			
	Industry 29	-20,335	40193,561	,000	1	1,000	,000			
	Board	,660	,277	5,694	1	,017	1,935			
	members									
	Constant	16,751	40193,561	,000	1	1,000	18832059,624			

Variables in the Equation

 H_0 12: can be rejected.

Table 13 – The adjusted model, Sample 1

A logistic regression analysis of Sample 1 with auditor as the dependent variable and turnover, solidity, industry 8 and industry 12 as the independent variable, to answer the hypothesis:

 H_0 12 - Test of the complete model: Small newly registered limited companies turnover, total assets, solidity, number of board members and industry affiliation does not affect their choice to appoint an auditor.

	Variables in the Equation									
Sample	1	В	S.E.	Wald	df	Sig.	Exp(B)			
	Total assets	,001	,000	17,475	1	,000	1,001			
	Solidity	,013	,006	4,594	1	,032	1,013			
Step 1 ^a	Industry 8	1,128	,552	4,183	1	,041	3,090			
	Industry 12	2,057	,961	4,580	1	,032	7,826			
	Constant	-2,532	,482	27,632	1	,000	,079			

 H_0 12: can be rejected.

Table 14 – The fit of the adjusted model, Sample 1

A statistical measure of how well the independent variables total assets, solidity, industry 8 and industry 12, explains the outcome in the dependent variable auditor in the logistic regression analysis.

	Model Summary								
Step	-2 Log likelihood	Cox & Snell R	Nagelkerke R						
		Square	Square						
1	167,629 ^a	,248	,351						

Table 15 - Test of the complete model, Sample 2

A logistic regression analysis of Sample 2 with auditor as the dependent variable and turnover, total assets, solidity, board members and industry affiliation as the independent variable, to answer the hypothesis:

 H_0 13 - Test of the complete model: Small mature limited companies turnover, total assets, solidity, number of board members and industry affiliation does not affect their choice to appoint an auditor.

			Variables in th	ne Equation			
Sample	2	В	S.E.	Wald	df	Sig.	Exp(B)
	Turnover	,000	,001	,110	1	,741	1,000
	Total assets	-,003	,003	,857	1	,355	,997
	Solidity	,012	,010	1,622	1	,203	1,012
	Industry 3	-9,413	41443,704	,000,	1	1,000	,000
	Industry 4	-11,057	47389,266	,000,	1	1,000	,000
	Industry 6	6,687	40192,943	,000,	1	1,000	801,815
	Industry 7	-12,430	43784,524	,000,	1	1,000	,000
	Industry 8	-11,631	40872,270	,000	1	1,000	,000
	Industry 9	-10,168	40822,604	,000	1	1,000	,000
	Industry 11	10,490	40192,942	,000	1	1,000	35960,936
	Industry 12	-10,478	42020,012	,000	1	1,000	,000
	Industry 13	-12,126	46030,353	,000	1	1,000	,000
	Industry 14	-11,222	42054,068	,000	1	1,000	,000
	Industry 15	-11,355	40705,996	,000	1	1,000	,000
Step 1 ^a	Industry 16	-11,660	44166,528	,000	1	1,000	,000
	Industry 17	-11,216	49186,031	,000	1	1,000	,000
	Industry 18	-11,651	47333,189	,000	1	1,000	,000
	Industry 19	-6,464	56841,424	,000	1	1,000	,002
	Industry 21	6,297	40192,943	,000	1	1,000	542,805
	Industry 22	-11,129	43453,666	,000	1	1,000	,000
	Industry 23	-11,473	41804,996	,000	1	1,000	,000
	Industry 25	-11,621	43174,552	,000	1	1,000	,000
	Industry 26	-11,298	40757,263	,000	1	1,000	,000
	Industry 27	-12,041	41658,505	,000	1	1,000	,000
	Industry 28	-11,905	42706,958	,000	1	1,000	,000
	Industry 29	-12,726	49152,266	,000	1	1,000	,000
	Board	-3,217	4,125	,608	1	,436	,040
	members						
	Constant	-2,721	40192,946	,000	1	1,000	,066

 H_0 13: cannot be rejected.

Table 16 – The adjusted model, Sample 2

A logistic regression analysis of Sample 2 with auditor as the dependent variable and industry 6 and industry 11 as the independent variable, to answer the hypothesis:

 H_0 13 - Test of the complete model: Small mature limited companies turnover, total assets, solidity, number of board members and industry affiliation does not affect their choice to appoint an auditor.

Variables in the Equation								
Sample 2	В	S.E.	Wald	df	Sig.	Exp(B)		
Industry 6	2,698	1,241	4,727	1	,030	14,857		
Industry 11	4,421	1,306	11,466	1	,001	83,200		
Constant	-5,338	1,002	28,353	1	,000	,005		

 H_0 13: cannot be rejected.

Table 17 – The fit of the adjusted model, Sample 2

A statistical measure of how well the independent variables industry 6 and industry 11, explains the outcome in the dependent variable auditor in the logistic regression analysis.

	Model Summary								
Step	-2 Log likelihood	Cox & Snell R	Nagelkerke R						
		Square	Square						
1	35,751 ^a	,052	,288						

Board members		Total assets	Employees	Auditor	Solidity	Industry
(min 2)			(max 3 employees)		%	code
2	2 811	1 331	7	1	18,41	8
3	2 461	5 309	2	1	8,06	6
2	2 378	708	2	1	58,6	12
4	1 992	764	2	0	15,16	6
5	1 838	1 035	0	1	37,71	6
2	1 795	574	1	0	29,27	6
2	1 642	871	1	1	5,05	7
3	1 627	1 112	2	0	7,65	27
2	1 625	1 185	1	0	46,53	14
2	1 569	632	0	0	23,58	15
2	1 469	487	2	0	34,6	6
2	1 411	523	2	0	36	23
2	1 326	233	1	0	49,11	6
2	1 251	449	3	1	16,48	15
2	1 245	1 578	3	0	52,53	15
4	1 182	451	2	1	23,21	6
4	1 165	268	2	0	-18,66	11
2	1 140	746	1	0	14,02	27
2	1 116	446	2	0	40,62	8
2	1 110	70	2	0	-37,14	8
3	1 096	437	4	0	15,33	7
2	1 077	146	2	0	21,92	10
3	1 074	1 703	0	1	12,87	30
2	1 063	496	2	0	36	6
2	1 007	1 248	2	0	65,52	9
2	1 006	3 530	1	1	3,4	6
2	1 000	1 007	1	0	65,3	9
2	979	404	2	1	12,38	8
3	952	451	5	1	39,18	12
2	947	368	2	0	90,49	7
2	933	473	2	0	32,09	9
2	868	930	0	0	70,97	21
2	859	488	1	1	54,72	8
2	818	1 370	1	0	69,59	6
2	785	185	0	0	58,92	8
2	762	453	0	0	1,55	6
2	744	60	2	0	73,33	11
4	722	466	2	0	36,05	13
2	701	148	1	1	45,41	12
2	699	218	2	0	59,37	9
2	683	561	1	0	59,18	7
2	662	1 840	3	0	-24,02	11
2	654	2 037	1	0	6,14	27
2	616	235	1	0	48,49	6
2	605	140	1	0	54,62	15
		-		_	,	
Companies whic	h has chosent	o appoint an a	uditor voluntaily			
			t an auditor volunto	nily		

Appendix 2 Table of Sample 1

Board members	Turnover	Total assets	Employees	Auditor	Solidity	Industry
(min 2)	(max 3 000K)	(max 1 500K)	(max 3 employees)	1	%	code
2	645	201	1	0	66	25
2	577	237	0	0	66,24	26
3	577	460	1	0	7,17	8
3	560	5 922	0	1	17,81	9
4	560	551	0	1	18,55	23
2	529	209	1	0	46,89	22
2	527	7 639	1	1	1,07	16
3	523	245	3	1	48,64	8
2	523	328	1	0	54,57	4
2	522	1 078	1	0	15,33	14
2	522	74	1	0	97,3	6
3	519	2 798	1	1	30,63	3
2	477	155	2	0	23,87	26
2	477	173	1	0	69,36	28
2	468	199	1	0	4,52	9
2	449	217	3	0	68,91	11
2	437	2 982	1	0	0,94	9
2	422	282	2	1	24,11	7
2	415	173	0	0	8,67	23
3	402	78	1	0	61,54	6
2	394	158	0	0	67,72	8
3	389	270	1	0	25,61	23
3	384	670	0	0	31,73	14
2	379	174	1	0	67,24	6
2	365	92	1	0	54,35	4
2	303	301	1	1	16,61	8
2	302	4 940	0	1	2,59	9
2	302	375	0	0	-76	17
2	300	200	1	0	19,5	25
4	295	201	0	0	0	8
2	288	364	1	1	36,09	4
2	271	34	0	0	100	16
4	271	297	1	0	29,63	12
2	261	264	0	0	80,3	15
3	254	137	1	0	55,21	21
2	240	61	1	0	81,97	6
2	238	113	1	0	29,2	26
4	227	345	1	0	-30,14	8
2	223	319	0	1	19,12	18
2	221	209	1	0	18,66	15
3	219	1 707	0	0	6,27	15
3	215	309	0	0	65,37	15
2	204	60	1	0	, 81,67	25
2	195	290	0	0	64,83	15
4	194	935	0	0	6,74	29
Companies whic	h has chosent	o appoint an a	uditor voluntaily			
-			t an auditor volunto			

Board members	Turnover	Total assets	Employees	Auditor	Solidity	Industry
(min 2)	(max 3 000K)	(max 1 500K)	(max 3 employees)	1	%	code
2	189	256	2	0	19,92	8
2	175	87	1	0	21,84	8
3	160	151	2	0	20,53	15
2	148	311	0	0	14,47	8
3	147	5 304	0	1	0,58	9
2	147	300	1	0	18,82	8
2	144	1 607	0	1	59,85	3
3	133	6 005	0	1	0,43	9
2	133	7 397	0	1	1,03	9
2	130	353	0	0	15,27	12
2	107	158	1	0	75,95	6
2	103	713	0	0	7,15	23
3	95	2 014	0	1	12,02	15
2	77	119	0	0	82,18	9
2	77	1 166	0	0	4,37	9
3	77	101	1	0	58,42	9
3	77	135	0	0	57,51	15
2	77	26	0	0	-484,62	16
2	74	91	1	0	0,88	11
7	74	3 131	0	1	1,69	9
2	73	132	0	0	-175	8
3	73	193	0	1	26,94	7
2	67	113	0	0	76,11	25
2	67	57	0	0	49,12	8
4	64	154	0	0	25,97	6
2	55	271	0	0	33,33	15
2	48	82	1	0	68,29	15
3	46	150	0	1	81,26	9
2	46	151	0	0	29,14	21
2	46	68	0	0	88,24	15
2	45	8	0	0	-175	17
4	38	690	1	1	40	25
3	35	68	2	0	97,06	9
3	34	55	0	0	76,36	7
2	33	81	0	0	80,25	15
4	32	141	0	0	35,46	14
3	26	62	0	0	82,26	10
2	24	56	1	0	82,14	4
3	12	25	2	0	64	14
4	8	623	0	0	89,09	15
2	5	307	0	0	9,45	9
2	4	202	1	0	-29,21	4
2	3	254	0	0	86,61	9
2	3	119	2	0	36,05	15
3	2	54	0	1	51,85	21
					,	
ompanies whic	h has chosent	o appoint an a	uditor voluntaily			
-			t an auditor volunta			

Board members	Turnover	Total assets	Employees	Auditor	Solidity	Industry
(min 2)	(max 3 000K)	(max 1 500K)	(max 3 employees)	1	%	code
2	0	42	0	1	100	21
2	0	42	0	1	100	15
2	0	125	1	0	20,8	10
3	0	26 314	0	1	0,44	9
4	0	60	0	0	83,33	16
2	0	6 008	0	1	0,83	2
4	0	131	0	0	53,44	21
2	0	39	0	0	89,74	21
3	0	51 886	0	1	4,47	9
3	0	43	0	0	79,07	6
2	0	30 760	0	1	4,04	6
2	0	50	0	1	100	8
2	0	50	0	0	100	15
4	0	41	0	0	100	23
2	0	50	0	0	100	8
4	0	50	0	1	82	6
9	0	500	0	1	100	21
3	0	50	0	0	100	17
5	0	50	0	1	100	8
3	0	50	0	1	100	9
2	0	50	0	0	98	11
2	0	50	0	0	100	26
3	0	50	0	0	100	7
4	0	50	0	1	100	29
2	0	3 057	0	0	68,92	4
2	0	1 026	0	0	99,03	29
9	0	500	0	1	100	23
2	0	4 894	0	1	99,69	3
4	0	50	0	1	100	29
2	0	831	0	1	5,05	6
4	0	100	0	1	100	4
2	0	1 138	0	0	100	11
2	0	382	0	0	86,91	25
2	0	4 084	0	1	1,22	9
2	0	202	0	1	95,05	3
2	0	100	0	0	50	3
2	0	115	0	0	82,61	3
3	0	52	0	1	98,08	9
2	0	44	0	0	100	9
2	0	302	0	0	89,74	3
2	0	8 051	0	1	0,57	3
2	0	88	0	0	56,82	6
2	0	50	0	0	100	27
Companies whic	h has chosent	o appoint an a	uditor voluntaily	·	Ī	
			t an auditor volunto	nily		

loard members	Turnover	Total assets	Employees	Auditor	Solidity	Industr
(min 2)	(max 3 000K)	(max 1 500K)	(max 3 employees)	1	%	code
2	3 780	1 032	1	0	41,38	8
2	3 674	585	3	0	-49,57	8
2	3 471	946	2	0	9,09	23
2	3 310	483	1	0	12,42	21
2	3 069	978	2	0	21,47	21
2	2 983	2 441	3	0	65,59	15
2	2 978	1 326	3	0	80,49	23
4	2 872	3 705	2	0	79,98	27
2	2 836	3 244	0	0	67,61	25
1	2 826	1 220	3	0	54,84	8
2	2 716	1 723	3	0	74,38	8
2	2 671	4 020	2	0	85,62	12
2	2 656	719	2	0	53,55	23
2	2 619	8 854	3	0	88,28	14
3	2 551	1 453	3	0	35,31	8
2	2 539	2 241	2	0	73,13	8
2	2 537	1 207	3	0	43,18	6
2	2 454	312	2	0	-66,03	8
2	2 423	3 440	2	0	-4,33	6
2	2 281	10 773	2	0	84,78	28
2	2 216	717	1	1	37,52	11
2	2 214	837	2	0	24,67	21
2	2 081	5 833	0	0	98,63	3
2	2 001	1 046	2	0	66,37	9
3	1 969	6 349	1	0	79,1	9
2	1 943	1 531	3	0	52,51	15
2	1 941	1 535	2	0	24,76	26
3	1 941	6 496	3	0	74,61	6
2	1 799	606	3	0	18,48	21
2	1 786	10 987	1	0	82,6	9
3	1 783	10 987	1	0		21
2					29,25	
2	1 778	1047	2	0	13,47	21
	1 772	226	3	0	-34,07	23
2	1 737	1034	4	0	90,11	8
4	1 703	339	2	0	59,31	11
5	1 673	1 358	0	0	76,14	18
3	1 631	532	2	0	61,27	12
3	1 584	953	3	0	43,86	26
2	1 506	420	2	0	63,5	12
2	1 504	1 500	2	0	85,72	6
2	1 439	275	3	0	47,64	13
2	1 413	541	1	0	27,15	6
2	1 362	1 386	1	0	65,59	8
2	1 312	867	3	0	67,94	26
2	1 278	899	1	0	53,09	15

Appendix 3 Table of Sample 2

Board members	Turnover	Total assets	Employees	Auditor	Solidity	Industr
(min 2)	(max 3 000K)	(max 1 500K)	(max 3 employees)	1	%	code
3	1 275	681	2	0	33,48	26
5	1 263	1 395	0	0	75,54	21
2	1 258	823	0	0	35,24	6
2	1 400	713	2	0	40,09	23
2	1 245	844	2	0	22,84	8
1	1 227	1 240	0	0	92,66	27
2	1 144	629	4	0	16,38	17
4	1 109	495	2	0	52,32	11
2	1 100	2 477	2	0	94,39	12
2	1 090	451	1	0	66,3	6
2	1 049	179	1	0	-22,91	16
3	1 000	2 231	1	0	81,04	26
2	981	2 012	2	0	58,37	15
2	964	1 464	1	0	85,1	23
2	960	1 372	1	0	25,66	6
2	934	608	2	0	47,08	17
2	916	607	1	0	64,74	14
2	892	197	3	0	-109,14	8
5	885	462	1	0	50,64	4
2	874	980	2	0	64,46	25
2	869	1 894	0	0	81,29	9
2	869	5 199	1	0	86,67	9
5	858	677	2	0	76,37	22
2	855	140	2	0	-82,14	13
2	850	1 541	1	0	26,54	27
2	843	605	1	0	22,15	22
2	838	418	2	0	44,74	26
1	833	1 644	1	0	80,55	26
2	831	2 950	1	0	65,61	15
2	829	2 325	1	0	1,55	19
2	802	853	0	0	27,4	27
2	800	5 170	0	0	53,42	9
2	799	275	1	0	45,45	26
2	772	2 756	2	0	63,68	20
4	757	961	2	0	56,72	26
2	736	1 065	1	0	61,41	15
2	730	348	0	0	55,46	21
2	723	2 490	1	0	6,18	15
2	715	802	0	0	70,37	26
3	713	1 046	1	0	57,02	20
2	707	1 750	1	0	88,73	15
2	707	1730	2	0	-2,42	27
2	699	2 904	0	0	6,27	16
2	683	4 122	2	0	87,98	21
2	667	565	1	0	87,98 41,77	6
۷.	007	505	L T	U	41,77	U
			voluntaily			

(min 2)		Total assets	Employees	Auditor	Solidity	Industr
	(max 3 000K)	(max 1 500K)	(max 3 employees)	1	%	code
2	655	393	1	0	49,11	27
2	647	468	1	0	45,3	26
2	643	2 575	0	0	25,9	26
2	622	790	1	0	58,35	15
2	605	454	1	0	78,85	26
2	604	598	2	0	59,36	16
3	593	2 085	2	0	52,04	21
2	585	482	1	0	52,28	23
2	582	739	1	0	84,81	23
2	571	4 335	1	0	72,59	15
2	566	170	1	0	64,71	13
2	542	686	1	0	55,25	8
2	540	174	2	0	35,06	26
2	540	456	0	1	42,37	6
2	527	144	0	0	12,07	4
2	527	1 487	1	0	46,01	9
2	497	2 134	2	0	63,8	6
2	491	240	1	0	37,92	21
2	490	574	2	0	44,25	11
2	429	10 500	0	0	92,66	3
3	429	1 404	0	0	98,72	9
2	420	1 702	0	0	11,75	
2	404	424	0	0	47,88	26
2	404	629	1	0	35,77	20
2	620	76	0	0	132,44	6
2	396	157	1	0	,	6
3					45,86	
2	389	1 102	0	0	77,59	26
	377	590	1	0	66,95	27
2	368	1 102	1	0	12,89	14
2	323	395	0	0	76,8	26
2	319	1 712	1	0	11,62	26
2	315	784	1	0	31,89	22
2	311	2 651	1	0	9,36	23
2	306	1 171	1	0	93,77	6
2	304	464	1	0	77,59	6
2	297	381	1	0	45,41	12
2	297	234	1	0	42,74	8
2	288	194	1	0	62,89	29
3	282	911	2	0	26,02	26
2	271	375	1	0	54,13	6
2	263	1 706	1	0	93,79	26
2	259	461	1	0	64,12	15
2	250	164	0	0	71,34	14
3	250	928	0	0	98,38	9
2	249	14 535	0	0	93,8	3

Board members	Turnover	Total assets	Employees	Auditor	Solidity	Industry
(min 2)	(max 3 000K)	(max 1 500K)	(max 3 employees)	1	%	code
2	243	554	0	0	72,92	15
2	237	626	0	0	70,91	6
2	230	130	1	0	60,77	8
2	229	1 143	0	0	-219,42	21
2	212	195	1	0	81,14	15
2	206	112	0	0	94,64	26
3	203	694	1	0	86,79	14
2	193	1 126	0	0	65,49	15
2	188	100	0	0	55	22
2	182	868	0	0	80,95	6
2	179	1 125	0	0	5,07	9
2	176	154	0	0	35,71	28
2	173	862	1	0	54,59	12
2	172	1 075	0	0	16,18	15
2	167	295	76	0	75,59	6
2	152	2 129	0	0	16,02	9
2	152	839	0	0	90,82	15
2	149	707	2	0	89,73	26
2	149	134	0	0	99,25	21
2	149	101	0	0	72,28	14
2	145	2 022	1	0	93,67	21
1	136	2022	1	0	-650	11
2	133	570	0	0	65,44	7
2	133	140	0	0	68,57	6
2	127	140	1	0	-	6
3	120		2	0	74,56	26
		1 503			64,2	
3	120	1 236	1	0	98,06	9
	120	426	0	0	11,5	6
3	115	298	0	0	86,58	9
2	115	189	0	0	93,65	16
2	113	119	0	0	72,27	15
2	108	231	0	0	87,45	23
2	107	108	1	0	-68,52	15
2	101	166	0	0	51,2	26
2	100	200	0	1	89	21
2	96	392	2	0	21,93	6
2	91	137	1	0	83,94	15
2	89	29	0	0	41,38	9
2	85	288	0	1	-1,39	11
4	82	704	0	0	18,47	9
2	76	1 051	1	0	72,88	15
4	76	3 795	0	0	81,03	3
2	74	3 180	0	0	68,24	15
5	74	1 445	0	0	98,89	30
2	74	61	0	0	54,08	28
mpanies which h						

Board members	Turnover	Total assets	Employees	Auditor	Solidity	Industr
(<i>min 2</i>)	(max 3 000K)	(max 1 500K)	(max 3 employees)	1	%	code
1	74	1 176	0	0	98,13	8
2	74	540	1	0	0,64	7
2	73	492	0	0	-16,46	8
2	71	65	0	0	46,15	23
2	71	850	0	0	16,81	14
2	68	1 296	0	0	93,26	3
3	67	211	1	0	-266,35	26
2	58	184	1	0	90,76	28
2	49	1 643	1	0	59,89	15
2	45	104	2	0	84,52	25
2	45	2 409	1	0	73,06	15
2	44	47	1	0	-2,13	15
2	41	83	1	0	95,18	7
2	40	270	0	0	96,3	15
3	40	9 060	1	0	97,39	9
3	37	116	1	0	90,65	15
2	36	134	0	0	83,58	6
2	36	877	0	0	92,06	8
2	34	207	0	0	38,65	6
2	30	146	0	0	75,34	25
2	30	71	0	0	92,96	26
2	29	549	0	0	24,77	26
2	26	104	0	0	95,19	29
3	25	1	0	0	100	22
2	25	176	1	0	88,35	28
3	25	733	0	0	99,59	21
2	25	125	0	0	98,4	27
2	25	26	0	0	50	7
2	22	143	0	0	65,03	8
2	19	11	0	0	-436,36	12
2	18	119	0	0	68,91	21
2	14	1 237	0	0	97,58	21
2	13	150	0	0	98,67	6
4	12	169	0	0	95,27	6
2	8	1	0	0	-14000	28
2	8	83	0	0	61,45	18
2	8	199	1	1	91,96	6
3	7	349	0	0	83,09	15
2	5	141	0	0	88,65	21
2	3	0	0	0	0	8
2	1	61	0	0	96,72	27
2	1	130	0	0	95,38	15
3	1	791	0	0	99,62	9
2	1	3 070	1	0	98,71	25
2	1	0	0	0	0	23
۲	-	, V	, <u>v</u>	0	0	<u> </u>

Board members	Turnover	Total assets	Employees	Auditor	Solidity	Industry
(min 2)	(max 3 000K)	(max 1 500K)	(max 3 employees)	1	%	code
2	1	181	0	0	58,56	21
2	1	1	0	0	-3700	8
4	1	1 989	0	0	86,87	3
2	1	123	0	0	99,19	15
2	1	780	1	0	95,64	27
2	1	16	1	0	56,25	15
2	1	150	0	0	98,67	21
2	1	0	0	0	0	3
2	1	4	0	0	-8650	11
2	1	2 787	0	0	87,19	21
2	1	77	0	0	87,01	9
2	1	597	0	0	95,48	15
2	1	947	0	0	99,37	6
2	1	6	0	0	-650	8
2	1	945	1	0	85,93	9
2	1	1 893	0	0	23,51	3
2	0	274	0	0	87,96	6
2	0	504	0	0	97,42	8
2	0	709	0	0	76,45	26
2	0	297	0	0	82,83	21
2	0	78	0	0	93,59	7
Companies which he	as chosento app	oint an auditor	r voluntaily			
Companies which ho	as chosen not to	o appoint an au	uditor voluntaily			

Appendix 4 Table of data reduction, Sample 1

Board members	Turnover	Total assets	Employees	Auditor	Solidity	Industry
(min 2)	(max 3 000K)	(max 1 500K)	(max 3 employees)	1	%	code
4	147 424	166 961	66	1	38,32	3
2	15 864	10 020	12	1	20,87	26
2	9 686	3 064	1	1	14,78	2
2	9 162	2 882	25	1	3,82	4
3	7 738	2 454	0	0	59,37	11
3	6 210	81 303	0	1	0,78	9
3	4 035	3 749	6	1	1,41	11
2	3 620	387	0	0	1,5	19
3	3 577	2 462	4	0	10,6	11
3	3 520	5 784	2	1	1,61	15
2	3 100	1 057	4	0	12,58	14
2	2 770	4 167	7	1	2,4	27
4	2 268	2 136	6	1	12,73	8
	229	235	0	0	55,74	15
3	157	1 423	0	0	3,16	
3	33	877	0	0	3,88	
3	22	1078	0	1	4,64	
1	0	50	0	0	96	7
1	0	42	0	0	100	9
2	0	32 319	0	1	99,13	
2	0	1 836	0	1	99,13	
2	0	50	0	0	100	
	0		0	1		
4		2 051			5,22	
3	0	50	0	1	100	
2	0	1 823	0	1	64,23	
3	0	50	0	1	100	
3	0	1 488	0	0	21,51	
3	0	820	0	1	78,05	
2	0	943	0	0	95,02	
3	0	42	0	1	100	
2	0	636	0	0	97,96	
2	0	943	0	0	62,46	
2	0	1 000	0	0	99,7	
2	0	50	0	1	100	
2	0	636	0	0	97,96	
2	0	2 666	0	0	95,65	
2	0	18 250	0	1	0,27	
2	0	150	0	1	100	
2	0	636	0	0	97,96	
2	0	385	0	0	96,62	
2	0	7 935	0	1	99,53	
4	0	3 601	0	1	1,17	
3	0	50	0	0	100	
Companies exceedi	ng the requirem	ents of being a s	small company			
Companies which h						
Companies with a li						
Companies not cate						

Board members	Turnover	Total assets	Employees	Auditor	Solidity	Industry
(min 2)	(max 3 000K)	(max 1 500K)	(max 3 employees)	1	%	code
2	0	50	0	1	94	
2	0	5 066	0	1	2,35	
2	0	100	0	0	50	
	0	50	0	1	100	8
2	0	19 840	0	1	96,41	
3	0	50	0	1	100	
2	0	329	0	0	75,94	
2	0	48	0	0	100	
2	0	519	0	1	5,59	
3	0	1 440	0	1	100	
2	0	100	0	0	100	
	0	114	0	0	39,47	15
Companies exceedin	Companies exceeding the requirements of being a small company					
Companies which he	Companies which has not specified the number of board members					
Companies with a lid	quidator instea	d of board mem	bers			
Companies not cate	gorised into an	industry affiliati	ion			

Board members	Turnover	Total assets	Employees	Auditor	Solidity	Industry
(min 2)	(max 3 000K)	(max 1 500K)	(max 3 employees)	1	%	code
3	7 403	8 638	5	1	33,53	6
2	6 044	5 627	1	0	56,75	9
2	5 294	5 585	3	0	63,53	27
2	3 840	5 889	2	0	78,84	6
1	2 224	5 004	4	0	93,87	6
1	359	555	1	0	80,36	27
	200	194	1	0	75,51	19
1	158	210	0	0	71,9	6
3	22	45	0	0	-442,22	
2	20	921	0	0	68,4	
2	7	14	0	0	57,14	
1	2	244	0	0	66,8	
2	1	66	0	0	96,97	
1	1	504	0	0	97,62	9
2	1	2 595	0	0	65,01	
2	1	7	0	0	28,57	
3	0	353	0	0	33,99	
1	0	73	0	0	80,82	9
Companies exceed	Companies exceeding the requirements of being a small company					
Companies which	has not specified	d the number of	board members			
Companies with a	liquidator instea	nd of board men	nbers			
Companies not car	tegorised into ar	n industry affilia	tion			

Appendix 5 Table of data reduction, Sample 2

Appendix 6 Table of Industry categorisation	Appendix	Table of Industry ca	ategorisation
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		Sa	mple 1	Sample 2		
Code	Industy	Number	Percentage	Number	Percentage	
1	Embassies and international org.	0	0,00%	0	0,00%	
2	Sanitation, power & water	1	0,53%	0	0,00%	
3	Banking, Finance & Insurance	11	5,85%	8	3,19%	
4	Staffing & Employment	7	3,72%	2	0,80%	
5	Trade, employers' and professional associations	0	0,00%	0	0,00%	
6	Construction, design & interior design business	23	12,23%	31	12,35%	
7	Computer, it & telecommunication	9	4,79%	5	1,99%	
8	Retail	22	11,70%	22	8,76%	
9	Real estate activities	28	14,89%	21	8,37%	
10	Business Services	3	1,60%	0	0,00%	
11	Hotel & restaurant	7	3,72%	7	2,79%	
12	Health and care	5	2,66%	7	2,79%	
13	Hair & Beauty Care	1	0,53%	3	1,20%	
14	Agriculture, forestry, fishing and hunting	5	2,66%	8	3,19%	
15	Law, Finance & Consultancy	22	11,70%	31	12,35%	
16	Arts, entertainment & recreation	4	2,13%	4	1,59%	
17	Manufacture of food products	3	1,60%	2	0,80%	
18	Media	1	0,53%	2	0,80%	
19	Trading with motor vehicles	0	0,00%	2	0,80%	
20	Public Administration & Society	0	0,00%	0	0,00%	
21	Wholesale	8	4,26%	26	10,36%	
22	Advertising, public relations and market research	1	0,53%	5	1,99%	
23	Repair & Installation	7	3,72%	11	4,38%	
24	Travel agencies & tourism	0	0,00%	0	0,00%	
25	Consulting engineering	6	3,19%	5	1,99%	
26	Manufacturing & Industry	4	2,13%	28	11,16%	
27	Transportation & warehousing	4	2,13%	12	4,78%	
28	Education, research & development	1	0,53%	6	2,39%	
29	Rental & Leasing	4	2,13%	2	0,80%	
30	Other consumer services	1	0,53%	1	0,40%	
	Total:	188	100,00%	251	100,00%	