



UNIVERSITY OF GOTHENBURG
SCHOOL OF BUSINESS, ECONOMICS AND LAW

GOING CONCERN ASSUMPTION IN A SWEDISH CONTEXT

**DO AUDITORS CHANGE THEIR PROPENSITY TO ISSUE A GOING
CONCERN OPINION IN DIFFERENT STAGES OF THE BUSINESS CYCLE?**

MASTER THESIS 30 HP WITHIN ACCOUNTING

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Abstract

Background

To begin with, there has been a persistent public criticism of auditors in accounting scandals and of particular concern is their inability to forewarn the public of business failures, that is, no going concern opinion has been issued in the audit report. The implication here is that without having received a going concern opinion companies are filing for bankruptcy. Further, there is an uncertainty of how auditors should respond to a recession, as an economic downturn puts an extra pressure on a company's ability to remain in business. Lastly, there is an on-going debate regarding the Big Four audit firms' merits: client firms appear to feel more comforted by choosing one of the Big Four audit firms and the discussion regards whether this is related to their actual merits or if it is just a perception of them being the best.

Aim of study

The overall aim of this thesis is to investigate whether Swedish limited liability companies that have filed for bankruptcy received a going concern opinion in the audit reports in the year prior to bankruptcy and whether it varies with the business cycle, that is, between the years 2007 and 2009. We also examine if there is any material difference in the propensity to issue a going concern opinion between the Big Four audit firms and other smaller audit firms. Finally, we study the relationship between the number of predicted bankruptcies by financial models and the issuance of going concern opinions in order to get a perception of whether relatively more going concern opinion could have been issued when considering financial ratios.

Research design

In order to achieve our aim we are using three hypotheses based on the thesis' theoretical framework. This study has a statistical approach and we examine the first two hypotheses by collecting financial statements and reviewing the related audit reports for 747 companies. The third hypothesis is tested by calculating financial ratios based on the companies' accounting information. Control variables have been used to examine other factors' impact on our results.

Conclusions

Findings show that relatively more going concern opinions are issued in a recession compared to a boom, but not significantly more. It also appears that no evidence is to be found that larger audit firms provide significantly higher audit quality. Yet, there is a tendency of relatively more going concern opinions being issued during an impending recession by auditors from one of the Big Four audit firms or given financial distress. The results also show that financial models are more effective than auditors in predicting future bankruptcies.

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1 Introduction

This chapter will provide necessary background information and introduce the reader to the topic. This will then lead to the problem discussion and aim of study, finishing with the structure of the thesis.

1.1 Background

In the early nineteenth century the number of outside investors increased, which resulted in a separation of ownership and management and consequently an increased demand for auditors and their services (Eilifsen et al., 2009). Auditing is an important activity in today's society and for example, investors and other stakeholders are reliant on the audit profession to ensure the quality of the financial information provided by companies (Öhman, 2007). However, there has been a persistent public criticism of auditors during accounting scandals and of particular concern is their inability to forewarn the public of business failures (e.g. Healy & Palepu, 2003; Öhman, 2007).

In the beginning of the 21st century a number of successful companies went into bankruptcy. In the case of Enron critics asked how it was possible that the company's problems could remain unseen for so long. A part of the responsibility was assigned to the company's auditors, Arthur Andersen, for failing to recognize Enron's financial problems (Healy & Palepu, 2003). At present, we are still facing the same problems. Western economies were in 2007 forced into financial crisis and recession because of the banking failures. One of the banks in the U.S. that went bankrupt, Lehman Brothers, received an unqualified audit report in late January 2008. Months later it was suffering financial problems and filed for bankruptcy in mid-September the same year (Sikka, 2009). In a report regarding the bankruptcy of Lehman Brothers the company's auditors, Ernst & Young, were accused of not having discovered or questioned insufficient and incorrect information in the company's financial statements (Henriksson, 2010).

Corporate failures, reducing confidence in auditors' work, are up for debate also in Sweden, where one of the most recent cases regards HQ Bank. The failure of HQ Bank shows, according to Peter Strömberg, head of the Supervisory Board of Public Accountants (Revisorsnämnden), that an unqualified audit report is no guarantee for a company to remain in business (Lennartsson, 2010a). Moreover, the Swedish Financial Supervisory Authority (Finansinspektionen) revoked HQ Bank's license due to violation of both Swedish accounting and capital requirement regulations (Financial Supervisory Authority, 2010). Auditors were questioned for their inadequate reporting and the Authority argues that confidence in auditors' work is a critical issue for the auditing profession in the future (Lennartsson, 2010b).

As a consequence of the banking failures during the financial crisis the European Commission issued in 2010 a discussion document, Green Paper "Audit policy: lessons from the crisis", in which they among other things debated the role of the auditor. According to the Commission, audit aims to contribute to financial stability and to determine whether the audited company's financial statements give a true and fair view. However, the Commission argues that the gap between users' expectation and auditors' point of view is a matter of concern. Limited liability companies in Sweden are obliged to conform to an overall intention to prepare the financial statements on a going concern basis (ÅRL¹ 2:4). That is, "assets and liabilities are recorded on the basis that the

¹ The Annual Accounts Act (Årsredovisningslagen)

company will be able to realize its assets and discharge its liabilities in the normal course of business” (RS² 570.3; ISA³ 570.2). If any material doubt exists regarding the going concern assumption, the auditor has to question the adequacy of the financial statements and to some extent communicate the uncertainty in the audit report (RS 570.33-38). Although, auditors are only required to provide reasonable assurance that the company will remain in business for the foreseeable future, while investors and stakeholders are expecting the auditor to guarantee its going concern (Öhman, 2007).

Another prevailing discussion within the Commission is to what extent auditors should provide more forward-looking information, especially when it comes to the context of the going concern. According to Öhman (2007) Swedish auditors are of the opinion that it is not their responsibility to provide stakeholders with that kind of future-oriented information. Moreover, studies show that there are several underlying variables explaining auditors’ reluctance to issue a going concern opinion, which in particular are related to the potential costs associated with issuing an opinion (e.g. Kida, 1980). The unwillingness to issue a going concern opinion can be explained by that auditors fear to draw attention to a financial problem due to the reactions from creditors or other stakeholders. If a firm receives a qualified audit report its creditor may not grant new loans and this may turn the potential problem to a real one (e.g. Kida, 1980; Nogler, 2008; Fisher, 2009). The auditor may also feel forced to comply with its client’s requirements because it is the management of the firm who participates in the settlement of choosing the auditor and decides the auditor’s remuneration. The risk of losing the client is therefore another explanatory variable (Kida, 1980; Gavius, 2007; Öhman, 2007).

1.2 Problem discussion

The section above illustrates the research problem of this thesis, that is, companies filing for bankruptcy, without having received a going concern opinion. The International Auditing and Assurance Standards Board (IAASB) issued in January 2009 a practice alert “Audit considerations in respect of going concern in the current economic environment” in order to highlight matters relevant to consider when using the going concern assumption in an economic downturn. The IAASB states that the economic downturn itself should not be considered as a significant uncertainty casting doubt over a company’s ability to continue its operations, but it has to be taken into consideration. The British Auditing Practice Board (2008) has developed guidelines in line with the previous mentioned that implies that that it is of importance to take the economic situation, that is, financial crisis, into consideration when auditing a company’s financial statements. Further, auditors should not judge a company as having going concern problems only because of the overall economic downturn; the company’s situation must be in focus. If the auditor is having unjustified doubts over a company’s ability to remain in business and issues an opinion in the audit report this may lead to numerous ramifications for the company. Fisher (2009) discusses that the going concern assumption during a boom is hardly ever given any significant attention. On the other hand, an economic downturn puts an extra pressure on a company’s ability to remain in business and readers of financial statements are more interested in this kind of disclosures.

² The Swedish Standards on Auditing (Revisionsstandard i Sverige)

³ International Standards on Auditing

Previous discussion shows that the current business cycle is a matter of concern, which consequently raises the question of whether auditors will be able to predict a company's forthcoming financial problems. Given the predicted impending recession, it leads to a second question of whether auditors are able to, or willing to, change their behaviour in the issuance of a going concern opinion. The scope is the uncertainty of how auditors respond to an economic downturn.

Another frequently discussed problem area is the correlation between audit firm size and audit quality. The European Commission is in the Green Paper discussing the structure and the concentration of the market. In October 2010 the total market share of listed companies related to the Big Four⁴ audit firms, counting in revenues or fees exceeded 90%. The Commission argues that companies appear to feel more comforted by choosing one of the Big Four audit firms and is questioning whether this is related to their actual merits or if it is just a perception of them being the best. DeAngelo (1981) shows that when auditors are able to earn client-specific quasi-rents, audit firms with a greater number of clients have higher incentives to report a discovered breach in client's accounts. Moreover, there are several empirical studies providing evidence that auditors from one of the Big Four audit firms issues relatively more going concern opinions compared to other smaller audit firms (e.g. Francis & Krishan, 1999; Ruiz-Barbadillo et al., 2004; Geiger & Rama, 2006). However, the evidence are mixed and there are studies showing that there is no correlation between audit firm size and audit quality (Citron & Taffler, 1992; Nogler, 2008; Blom & Jansson, 2009).

Due to discrepancy amongst different studies and the current discussion within the European Commission, it is of great relevance to study how this relates to the size of the auditing firms in our study. One implication from the previous discussion is the possibility of auditors getting chosen by the company's name and by its reputation and not based on the audit quality of the actual outcome. On the contrary, there may be no necessity of discussing this implication if the Big Four audit firms in fact produce substantially higher audit quality.

1.3 Aim of study

This thesis aims to illustrate the problem with companies filing for bankruptcy without any indication from the auditor. Firstly, this study intends to provide further clarification and provide answer to whether the auditor's propensity to issue a going concern opinion is affected by the prevailing business cycle. This objective is obtained by examining a sample of Swedish limited liability companies that filed for bankruptcy during the financial years 2007 and 2009⁵ to determine whether the auditor has issued a going concern opinion, that is, foreseen the company's ability to remain in business. Secondly, due to the on-going debate regarding the Big Four's merits, this study seeks to investigate if the Big Four audit firms have significantly lower error rates than other audit firms regarding the going concern assumption and whether the number of opinions varies with the business cycle. Finally, we are of the opinion that it is of importance to stress that it may not be possible for the auditor to foresee a forthcoming bankruptcy. For example, the financial ratios may point in a favourable direction but during the forthcoming year market conditions changes.

⁴ PwC, Ernst & Young, KPMG and Deloitte (see methodology 4.3.2)

⁵ The year 2007 represents a boom and 2009 a recession (see 4.3.1)

Although, if the financial ratios indicate a high probability of bankruptcy it is reasonable to assume that auditors to a greater extent are able to issue more opinions. We therefore aim to compare the number of issued going concern opinions with the number of bankruptcies identifiable by financial ratios.

1.4 Structure of the thesis

The remainder of this thesis is organized as follows; in Chapter 2, relevant laws, standards and regulations are provided. Chapter 3 presents the theoretical framework of the thesis followed by development of the hypotheses. Chapter 4 discusses the research design of the study and Chapter 5 provides the reader with the empirical findings. In Chapter 6 empirical findings are analysed with the theoretical framework. The concluding Chapter 7 will sum up the most important aspects to the reader and provide suggestions for further research.

2 Laws, standards and regulations

Swedish auditors and audit firms have to comply with laws and standards when performing their audit assignments. Below is a brief description of the most relevant regulations for this thesis and the auditor's responsibilities when deciding whether the management's use of the going concern assumption is appropriate.

2.1 Fundamental regulations

Generally accepted auditing standards requires the auditor's report to be as detailed as well as comprehensive as possible (the Audit Act (Revisionslagen) §5). The audit must be conducted within the generally accepted auditing standards in order to meet the regulatory quality requirements. It requires the audit to be performed with experience, knowledge and last but not least, professional discretion (Revision: en praktisk beskrivning, 2006). Generally accepted auditing standards are defined in the Swedish Standards on Auditing, which provides the fundamental principles as well as the essential procedures that is required for the audit (RS 200.5SE). These standards have been developed by international adaptation, the Swedish institute of Authorized Public Accountants (Föreningen Auktoriserade Revisorer), the Supervisory Board of Public Accountants and lastly by court practice (Revision: en praktisk beskrivning, 2006).

According to the Auditors Act (Revisorslagen) §19 an auditor shall in their work also observe professional ethics. Professional ethics contains of rules and standards that an auditor should follow in their work, while generally accepted auditing standards gives guidelines on how the audit assignment should be performed (Revision: en praktisk beskrivning, 2006). It is of importance that an auditor follows the ethical rules such as, independence, integrity, objectivity, professional competence and due care, confidentiality, professional behaviour and generally accepted auditing standards, in order to achieve their responsibilities (RS 200.4SE).

In order to regulate auditors' independence of their clients, Swedish auditors have to comply with the Companies Act (Aktiebolagslagen, ABL), the Auditors Act and internal regulation within the auditing firm. The Conflicts of Interest regulation (ABL 9:17) describes under which circumstances an auditor is dependent of the client and according to the Auditors Act §20 an auditor is obliged to refrain from the audit assignment if there are any circumstances that may question the auditor's impartiality or independence. The Auditors Act is based on the analysis model, which is applied within The IFAC Code of Ethics for Professional Accountants (Revision: en praktisk beskrivning, 2006). Circumstances or relationships that may create threats to independence are illustrated in the model and for example, a self-interest threat is created when the auditor has a financial interest in a client, such as provision from non-audit services. Being the auditor for a client over a long period of time is an example of a familiarity threat. Consequently, it is necessary to evaluate the threats to independence before approving the audit engagement (The International Federation of Accountants, 2010).

The internationalization of auditing in recent years has enforced Swedish auditors to act in accordance with international auditing standards as well. For example RS is based on the International Standards on Auditing (ISA), which is issued by the International Federation of Accountants (IFAC). Therefore, *RS 570 Fortsatt drift* is a translation of the international standard *ISA 570 Going Concern* (RS 570).

2.2 Audit report

The audit report is the only official document that an auditor provides and it is also the primary way to communicate the result of the audit, thus it is important how the content of the audit report is presented. A further aspect is that in many cases the only contact investors' and lenders' have with the auditor is through the audit report, which further implies its importance (Carrington, 2010). In order to prevent misunderstandings in the message from the auditor and to assist users of audit reports, the report is significantly standardised (Eilifsen et al., 2009). Standardisation leads to consistency in the audit reports, which for example, helps users to identify unusual circumstances when they occur (ISA 700.4).

Swedish auditors are obliged to conform to RS 709, which is a translated version of ISA 700. Though, several adjustments have been made according to Swedish legislation. The general purpose of RS 709 is to assist auditors in their responsibility to form an opinion on the financial statements (RS 709.1SE). If the auditor concludes that "the financial statements are prepared, in all material respects, in accordance with the applicable financial reporting framework, the auditor issues an audit report with an unmodified opinion" (RS 709.27SE; ISA 700.16). In order to form an unmodified opinion, "the auditor shall conclude as to whether the auditor has gathered sufficient appropriate evidence and concludes that reasonable assurance is obtained that the financial statements as a whole are free from material misstatements" (RS 709.2SE, 13SE; ISA 700.11). Considering the fact that RS 709 has been adapted to Swedish conditions, the auditor shall for example consider whether the annual accounts have been prepared in accordance with generally accepted accounting principles in Sweden and the Annual Accounts Act (ÅRL). The auditor has to examine whether the management of the firm, in any way, has acted in contravention of the Companies Act, the Annual Accounts Act or the Articles of Association (Bolagsordningen) (RS 709.27SE). Swedish auditors are also obliged to control the audited firm's taxes and other state charges, and to report suspected economic crimes to the authorities (ABL 9:34, 9:42).

A modified auditor's report can be expressed in two different ways; one referring to information presented or disclosed in the financial statement and the other one affecting the auditor's opinion.

Circumstances not affecting the auditor's opinion

Emphasis of matter paragraph (s) – If the auditor considers it necessary to draw users' attention to a matter presented or disclosed in the financial statements the auditor includes an Emphasis of Matter paragraph in the auditor's report. Another example is when the auditor finds it necessary to communicate a matter not presented in the financial statements, such as deficiency in the payment of taxes and other state charges (RS 709.29SE; ISA 706.6-7).

Circumstances when a modification to the auditor's opinion is required

Qualified opinion – If the misstatement on the financial statement is material, but not pervasive, or if sufficient appropriate audit evidence is unable to obtain the auditor expresses a qualified opinion. If the auditor, for example, is of the opinion that a part of the annual accounts has not been prepared in accordance with the Annual Accounts Act, the auditor describes the impact of the incorrect accounting and indicates that the financial statements present fairly, *except for* the effects of the deviation (RS 709.37; ISA 705.7).

Disclaimer of opinion – If the possible effects of the misstatement are, due to a scope limitation, both material and pervasive the auditor makes a disclaimer of opinion, that is, no opinion is expressed (RS 709.38; ISA 705.9).

Adverse opinion – If the effects of the misstatement are, due to departure from the applicable financial reporting framework, both material and pervasive the auditor expresses an adverse opinion (RS 709.39; ISA 705.8).

In order to draw attention to the remarks in the audit report, all of the opinions that differ from an audit report with an unmodified opinion shall be italicized, underlined or otherwise typographically different (RS 709 A1.1).

2.3 Going concern assumption

In the preparation of the financial statements the going concern assumption is a fundamental principle. The going concern assumption implies that “assets and liabilities are recorded on the basis that the entity will be able to realize its assets and discharge its liabilities in the normal course of business” (RS 570.3; ISA 570.2). The going concern assumption has to be considered by the management as well as the auditor. The auditor's responsibility is defined in RS 570, while the management has to comply with the applicable financial reporting framework such as, the Annual Accounts Act.

2.3.1 Management's assessment

The management's responsibility regarding the going concern assumption is regulated in the Annual Accounts Act 2:4. It is the management's responsibility to, when preparing the financial statements, take into consideration that the company shall be presumed to continue its operations for the foreseeable future. According to the Swedish Accounting Standards Board's Recommendations (Redovisningsrådets Rekommendationer, RR) the time period to be covered in the assessment must at least extend a twelve-month period after the closing date (RR 22.22). When a company historically has been profitable and access to financial resources exists, management may make its going concern assessment without any detailed analysis (RS 570.6).

In a situation where management intends to liquidate the company, to cease operations, or if material uncertainty exists about the firm's ability to remain in business, the going concern assumption is not appropriate. If the going concern assumption is inappropriate, the management is obliged to disclose information and an explanation regarding the principle that instead has been used when preparing the financial statements (RR 22.21).

2.3.2 Auditor's responsibility

The auditor is responsible for considering whether the management's going concern assumption is appropriate (RS 570.2; ISA 570.12). If events or conditions have been identified that may cast serious doubt about an entity's ability to continue its operations, the auditor has to, for example, obtain information about management's plans to mitigate the going concern problem and consider whether such plans can be successfully implemented (RS 570.26; ISA 570.16). The auditor shall conclude, based on the audit evidence obtained and in the light of management's plans, whether material uncertainty exists regarding the firm's ability to remain in business (RS 570.30; ISA 570.17).

If any serious doubt exists, the auditor has to question the adequacy of the financial statements and to some extent communicate the uncertainty in the audit report.

Conditions or events that may result in doubts about the going concern assumption are for example negative financial trends such as poor results from operations, negative cash flow and inability to meet interest payments. Other conditions or events could be loss of a major customer or a supplier or legal proceedings (RS 570.8; IAS 570 A2). Moreover, when there is a reason to believe that the company's equity is less than half of the registered share capital, there is in accordance with the Companies Act a legal requirement to establish a balance sheet for liquidation purposes (ABL 25:13). Such an event may lead to significant doubt about the going concern assumption.

The auditor's assessment is based on information available when the audit is completed, lack of going concern opinion does not guarantee that a company will remain in business for the foreseeable future. Furthermore, it is not reasonable to expect that the auditor should be able to predict future events or circumstances that in the future may lead to bankruptcy (RS 570.10).

2.3.3 Audit conclusions and reporting

In order to disclose a material uncertainty about the going concern assumption in the audit report the auditor may choose to form different kinds of opinions.

Use of the going concern assumption is appropriate but a material uncertainty exists

If the auditor concludes that the use of the going concern assumption is appropriate, material uncertainty exists and adequate disclosure is made in the financial statements, the auditor shall, in order to highlight the existence of a material uncertainty, express an unmodified opinion and include an Emphasis of Matter paragraph in the audit report (in accordance with the example below) (RS 570.33; ISA 570.19).

Emphasis of matter paragraph – “Without qualifying our opinion, we draw attention to Note X in the financial statements which indicates that (...) These conditions, along with other matters as set forth in Note X, indicate the existence of a material uncertainty that may cast significant doubt about the Company's ability to continue as a going concern.” (ISA 570 A21)

The auditor has to, if adequate disclosure is not made in the financial statement, express a qualified or adverse opinion depending on the degree of uncertainty. The auditor shall state in the audit report that there is a material uncertainty that may cast significant doubt about the company's ability to remain in business (RS 570.34; ISA 570.20).

Qualified opinion – “The Company's financing arrangements expire and amounts outstanding are payable on March 19, 20X1. The Company has been unable to re-negotiate or obtain replacement financing. This situation indicates the existence of a material uncertainty that may cast significant doubt on the Company's ability to continue as a going concern (...) The financial statements (and notes thereto) do not disclose this fact. In our opinion, except for the incomplete disclosure (...) the financial statements present fairly, in all material respects financial position of the Company (...)” (ISA 570 A23)

Adverse opinion – The Company's financing arrangements expired and the amount outstanding was payable on December 31, 20X0. The Company has been unable to re-negotiate or obtain replacement financing and is considering filing for bankruptcy. These events indicate a material uncertainty that may cast significant doubt on the Company's ability to continue as a going concern (...) The financial statements (and notes thereto) do not disclose this fact. In our opinion, because of the omission of the information mentioned (...), the financial statements do not present fairly financial position of the Company (...)" (ISA 570 A24)

Use of the going concern assumption is inappropriate

The auditor is expressing an adverse opinion if the financial statements have been prepared on a going concern basis but, the auditor is of the opinion that management's use of the going concern assumption in the financial statements is inappropriate (RS 570.35; ISA 570.21).

Management is unwilling to make or extend its assessment

If the auditor request management to make or extend its assessment, and if they are unwilling to do so, it may be appropriate for the auditor to express a qualified opinion or a disclaimer of opinion in the auditor's report, as it may not be possible to gather sufficient audit evidence in order to support the going concern assumption (RS 570.37; ISA 570 A27).

3 Theoretical framework and hypotheses development

This chapter presents the hypotheses for this thesis. Firstly, we are of the opinion that it is important for the reader to get an understanding of theories and underlying variables affecting auditors' propensity to issue a going concern opinion, for the reason that they may be used to explain our results. Secondly, we illustrate divergent expectations on auditing and to what extent it is the auditors' responsibility to make this kind of future assessment. Thirdly, a review of theories and previous studies related to our hypotheses are presented and finally, the hypotheses are developed.

3.1 Variables affecting auditors' going concern modifications

As mentioned earlier, the research problem of this thesis is that companies are filing for bankruptcy without having received a going concern opinion. There are a number of underlying variables that may explain why the auditor has not made any statement concerning a company's ability to continue as a going concern. The variables are in particular related to the potential costs associated with a going concern opinion. Kida (1980) argues that the auditor firstly has to assess whether the client is having financial problems and secondly decide whether to issue an opinion. The decision depends on the costs associated with the choice being made.

3.1.1 Utility maximization

A theory useful to conceive an idea of the demand for auditing and to explain auditors' propensity to highlight a material uncertainty regarding the going concern assumption is the principal-agent theory. Jensen and Meckling (1976) define principals as owners who are hiring agents to manage the business. The implication is that managers are primarily acting in their own best interest and thus are utility maximizers. This means, due to the fact that managers' interest will not always correspond to the best interest of the principal, that shareholder returns are not automatically maximized when ownership and control are separated (Jensen & Meckling, 1976). Furthermore, there is a problem with information asymmetry. If principals are not playing an active role in the management of the firm, agents know more about the business and are therefore able to decide what information to be reported (Power, 1997).

The above illustrates the purpose of auditing and the principal-agent theory is thus applicable when analysing the auditors' role. According to Iljiri (1975, in Öhman 2007) principals are able to evaluate the management's performance based on the financial information provided in the public annual reports. Iljiri claims that there is a liability issue between the ones who produce the accounting information and the ones who receive it. In order to reduce the information asymmetry the audit fills a central role. The audit assignment aims to gather evidence to evaluate the fairness of the agent's financial reports and to issue an audit opinion to add credibility and reducing the principal's information risk (Power, 1997; Öhman, 2007; Eilifsen et al, 2009).

Öhman (2007) discusses the auditor's part in the principal-agent relationship. He argues that the auditor may be seen as an agent monitoring another agent, that is, the management of the firm and should thus be considered as an agent with dual principals. One of them is the ownership of the firm who relies on an auditor to ensure the fairness of management's financial reports. The other principal is the company's management who participates in the settlement of choosing auditor and

decides the auditor's remuneration⁶. In the context of the principal-agent theory, Antle (1982) compares auditors with economic agents who try to utility maximize and thus are acting in their own best interest. Gavious (2007) discusses whether auditors decrease information asymmetry or if they work in the interest of the management who pays their remuneration. To avoid discontinuation of the audit engagement auditors may feel forced to comply with their clients' requirements, as a result of which, auditors become dependent upon their audit-clients instead of reducing agency costs.

3.1.2 Auditor independence

As mentioned earlier, auditor independence is an important ethical rule to follow by auditors in the audit assignment. Independence and going concern modifications is frequently discussed and have been examined in several studies (e.g. Bazerman et al., 1997; Ruiz-Barbadillo et al., 2004; Hope & Langli, 2010). Bazerman et al. (1997) argue that there due to a comparatively strong relationship between auditor and management and a rather impersonal relationship with the owner of the company, is a risk that the owner's interest will not be met in the audit assignment. They are questioning whether it is likely for auditors, including the ones with high integrity, to provide creditors, stockholders and the overall society with a completely neutral audit assignment rather than acting in the interest of the ones who pay their salaries. Furthermore, studies show that auditor independence is a matter of concern for both auditors and stakeholders. Beattie et al., (1999) shows in a questionnaire-study that British auditors believe their economic dependence of their clients to be a threat to their independence. Accordantly, Öhman (2007) shows when interviewing Swedish stakeholders that their main concern is the auditor's lack of independence.

In previous empirical studies auditor independence has been illustrated by examining the correlation between audit fees or client firm size and going concern opinions. Ruiz-Barbadillo et al. (2004) finds in an empirical Spanish study of publicly traded companies that the auditor's propensity to issue a going concern modification is not only affected by the degree of financial distress, but also by auditor independence and audit quality. They claim that auditor dependence is determined by audit firm reputation, the auditor's conservatism⁷ and the relative proportion of fees received from the client. The result of the study reveals that auditors may choose not to issue a going concern modification to financially distressed companies even though they are aware of their financial problems. Ruiz-Barbadillo et al. find that the larger the client, the less going concern opinions are issued, which interprets a higher dependency with larger clients. An empirical study performed in the United Kingdom shows that financially distressed companies with high audit fees receive relatively more going concern opinions compared to financially distressed companies with high non-audit fees (Basioudis et al., 2008). On the other hand, a study performed in Norway on private client firms does not point towards a correlation between audit and non-audit fees and going concern modifications, that is, auditors decision-making is not affected by the level of fees received (Hope & Langli, 2010).

⁶ Shareholders at the annual general meeting elect auditors (see ABL 9:8), but in practice the management of the firm is contracting the auditors (Bazerman et al., 1997)

⁷ "Reporting conservatism can protect auditors because qualified audit reports issued prior to bankruptcy reduce both the incidence and magnitude of litigation if bankruptcy subsequently occurs." (Ruiz-Barbadillo et al., 2004 p. 599)

3.1.3 Self-fulfilling prophecy

As mentioned before, the auditor is considering several economic trade-offs when deciding whether to issue a going concern modification. Kida (1980) points out a number of potential costs associated with issuing a going concern modification, such as loss of client, fear of lawsuits from investors and creditors and finally a damaged reputation. Nogler (2008) is discussing that when issuing a going concern modification, auditors are concerned about their relationship with the client and of the risk that the modification itself will become a self-fulfilling prophecy. Fisher (2009) claims that auditors fear to highlight a financial problem due to reactions from for example creditors and suppliers. Their reaction, that is dissociation from the company, may turn the potential problem into a real one. Fisher also discusses that the economic situation, especially a recession, will put additional pressure on auditors to question the going concern assumption.

The above discussion indicates that auditors are put in an ethical and economic dilemma when deciding whether to issue a going concern opinion to a financially distressed firm; the issuance becoming a self-fulfilling prophecy or avoiding to highlight a risk for bankruptcy. However, empirical studies regarding the self-fulfilling prophecy provide mixed evidence. In a Belgian study of bankruptcy and non-bankruptcy companies (both privately held and publicly traded) Vanstraelen (2003) finds support that a going concern modification significantly increases the probability of bankruptcy. She concludes that disclosures about companies' ability to remain in business are important in continental countries, where debt is the main financing source.

In turn, Citron and Taffler (1992; 2001) find no support for a self-fulfilling prophecy, and argues that a qualification does not increase the probability of a bankruptcy. They claim that the majority of companies receiving a going concern modification continue in business. It is the financial problems along with the modification that drives the company into bankruptcy, not the modification itself. Nevertheless, the belief in a self-fulfilling prophecy still exists. They argue that their study (2001) indicates, reflected in the low amount of modifications, that it is auditors' belief that a modification may turn into a self-fulfilling prophecy.

3.2 Different expectations on auditing

The auditors' role and responsibilities have been questioned due to the inability of auditors to forewarn the public of future bankruptcies (e.g. Power, 1997; Henriksson, 2010). In turn, auditors are of the opinion that it is not their responsibility to make judgements about a company's ability to remain in business (Öhman, 2007).

Power (1997) argues that corporate failure is often associated with the auditor while corporate success hardly ever is. This illustrates the problem; there is an uncertainty of what auditing actually produces. Koh and Woo (1998) illustrates that there is an expectations gap in what a company's stakeholders believe are the auditor's responsibilities and what the auditor actually is responsible for. Öhman (2007) point out that the auditor's responsibility is to obtain reasonable assurance about the future prospects of the firm, while investors and stakeholders are expecting the auditor to guarantee its going concern.

Moreover, Öhman (2007) discusses the implications of the expectations gap in Sweden. Results from his study show that auditors' main focus does not correspond with stakeholders' main interests. Investors and creditors perceive auditors to primarily focus on audit based on traditional

tasks where they have good knowledge and are able to provide audit that can be verified. Further, Swedish auditors seem to be less concentrated on providing useful information to accountees compared to the emphasis that is placed on the content of the information. This implies that it is more important for auditors to follow laws and regulations, that is protect themselves, than focusing on protecting investors and other stakeholders by providing them with informative audit reports. Findings from Öhman's study show that the audit assignment mainly focuses on hard, historical and fragmentary information while stakeholders are interested in soft, future-oriented and comprehensive information. Auditors claim that it is their responsibility to relate to historical information, whilst the more future-oriented information, such as a firm's ability to remain in business, should be left to others to judge, for example a financial statement user.

3.3 Hypotheses development

This section discusses previous research and results in three hypotheses contributing to the furtherance of fulfilling the aim of our thesis.

3.3.1 *Going concern opinions and the business cycle*

Given the problem discussion in chapter one the auditor is required to take the current economic environment in consideration when issuing a going concern opinion. The scope is the uncertainty whether auditors will be able to predict a company's forthcoming financial problems and of how their behaviour change in the issuance of going concern opinions in different stages of the business cycle.

There have been several of studies regarding auditors' ability to question the continuance of a company as a going concern. For example, Sikka (2009) highlights in his paper that several financially distressed banks, whether in U.S., UK, and Germany and so on, received an unqualified audit report close to the announcement of the enterprise's financial difficulties. He notes that auditors received a large amount of audit and non-audit fees, which raises a question about auditor independence. Research from the U.S. on publicly traded companies show that auditors in the pre-Enron period issued going concern modifications to 44.5% and in the post-Enron period to 61.9% of the bankruptcy companies (Nogler, 2008). The same study indicates that, given constant standards, auditors became more conservative⁸ in their reporting after the fall of Enron. Geiger et al. (2005) compared the post-Enron period with the year 1991, when U.S. was recovering from a period of recession, and found that auditors issued more going concern opinions in the latter period. The study shows that auditors issued going concern opinions to 48% of the companies in the pre-Enron period and to 73% in the post-Enron period. The explanation given in the previous two American studies was that the increased conservatism was a result of external events, such as headlines in the newspapers after Enron and the introduction of Sarbanes-Oxley-Act.

Going concern modifications and bankruptcy has been examined in several studies from continental countries as well. Hope and Langli (2010) examine a large sample of Norwegian privately owned firms during the years 1996-2005. The result of the study shows that 8% of the financially distressed companies⁹ received a going concern opinion. The authors are arguing that factors explaining the low results may be that Norway is a country with low litigation risk and low

⁸ Resulting in the issuance of more going concern opinions (Nogler, 2008)

⁹ Including both active companies and bankruptcy companies (Hope & Langli, 2010)

reputation risk and the costs associated with a going concern opinion are therefore low. Furthermore, Hope and Langli argues that several American studies are based on publicly traded companies and the agency-problems are for these companies much more complex compared to privately held firms. Vanstraelen (2003) finds in a Belgian study that 37% of the companies filing for bankruptcy received a going concern modification in the latest audit report. Moreover, a previous student thesis from Sweden shows that no more than 48 out of 243 (19.8%) enterprises reviewed received a going concern opinion in the period prior to the bankruptcy.

However, the above studies provide limited insights to whether the auditor's propensity to issue a going concern opinion varies with business cycle, that is, if the auditor is able to recognize market signals and therefore modify their going concern opinions. Venuti (2008), found out in a study of American publicly traded companies that, despite a weaker economy and an increasing rate of bankruptcy filings, auditors failed to warn the market of the financial problems of their clients by not issuing a going concern modification. The author argues that one possible explanation is that there is no clear definition regarding the going concern assumption. A Swedish student thesis examines factors explaining auditors' propensity to issue a going concern opinion and whether it varies with the business cycle. The result shows that the auditors issued going concern opinions to 13.1% of the companies in a recession compared to 12.2% in a year of boom (131 and 168 examined companies). However, they found no statistically significant relationship between time period and the auditor's tendency to issue a going concern opinion (Olsson et al., 2010). Yet, there are some limitations with the previous studies: the former is based on American publicly traded companies and the latter examines only a short period of time. Moreover, there are only a few empirical studies discussing the impact of the business cycle, hence, it is a matter of interest to further examine this relationship.

Statistics shows that there are considerably more companies filing for bankruptcy during a year of recession than a year of boom (Tillväxtanalys, 2011a). Therefore, it is our belief there is a presumably higher degree of uncertainty regarding a firm's ability to remain in business during an impending recession and that auditors therefore will be more cautious in their going concern assessment. Further, there is a reason to believe that auditors will be more conservative in their reporting during a recession. Hence, we are of the opinion that the relative proportion of going concern modifications will increase in a recession. As a result from the above discussion, we aim to examine the following hypothesis.

H1 *Auditors issues relatively more going concern opinions in a recession than in a boom.*

3.3.2 Going concern opinions and audit firm size

To begin with, an important matter to discuss is the possibility that auditors get chosen by the company's name and by its reputation and not based on the audit quality of the actual outcome. DeAngelo (1981) illustrates that audit quality and audit firm size have been discussed for decades and the dilemma is that auditors sometimes are chosen by other factors than audit quality, such as audit firm size. According to DeAngelo audit quality is defined as the joint probability of detecting and reporting a financial statement error. Firstly, the auditor has to discover a breach in the client's accounting system, which in turn among other things depends on the auditor's technological capabilities, the audit procedure and the scope of sampling. Secondly, the auditor has to decide whether to report the error or not, depending on the auditor's independence towards the audited client.

DeAngelo (1981) shows that audit quality is correlated with audit firm size when auditors are able to earn client-specific quasi-rents¹⁰. Due to significant client-specific start-up costs present auditors possess cost advantages over potential competitors. If an auditor discovers a breach in the client's accounting system, the client may try to talk the auditor out of reporting the breach by threats of termination. DeAngelo argues that the auditor's decision is depending on the present value of the quasi-rents, which may be lost if the auditor reports correctly and is terminated by the client. The auditor also has to consider the probability of being caught lowering audit quality, which may lead to termination by other clients. Therefore, the quasi-rents can be seen as collateral and the greater number of clients implies a greater total collateral and thus higher incentive to provide high audit quality. DeAngelo claims that potential clients are aware of the lower incentives for larger auditors and may thus use firm size as an indicator for audit quality.

There are empirical studies providing evidence that audit quality varies with audit firm size. Ruiz-Barbadillo et al. (2004) performed an empirical study on Spanish bankruptcy companies and came to the result that audit quality is not significantly determined by auditor's knowledge or technical ability. Instead, receiving a going concern opinion depends on a company's financial problems and auditor independence. The study shows that larger audit firms are more likely to issue a going concern opinion, due to the volume of quasi-rents obtained from their client's. Other empirical studies show that there is a positive correlation between the firm size and audit quality. For example, Francis and Krishnan (1999) shows that larger firms are more conservative in terms of disclosure than smaller firms, due to a greater reputation to protect. Hence, larger companies have a higher incentive to provide the public interest with accurate statements. Geiger and Rama (2006) examined 710 American financially distressed companies and came to the result that the Big Four were more precise in their going concern modifications compared to other national and regional firms. The authors argue that the findings may be a result of bigger investments in audit technology, audit training, and a larger number of clients. Superior resources may lead to a higher capability to identify companies that in the future are filing for bankruptcy.

However, the evidence are mixed. Citron and Taffler (1992) examines British companies within the manufacturing, construction, wholesale and retail business and find no correlation between audit firm size and the propensity to issue a going concern modification. They argue, "... that concern

¹⁰ The difference between revenues and expenses variable in the short run (Nationalencyklopedin, <http://www.ne.se/kvasiränta>, accessed on 4 March 2011)

regarding the relative degree of independence and audit quality of smaller firms may be overstated” (p. 345). Other studies show that smaller audit firms issue relatively more going concern modifications in the period prior to the bankruptcy compared to the Big Four audit firms, yet these findings are not statistically significant (Nogler, 2008; Blom & Jansson; 2009). There are also some limitations with the previous mentioned studies due to lack of significantly important variables such as, financial distress and client firm size.

For several reasons we are of the opinion that audit firm size is positively correlated with audit quality. Firstly, larger audit firms have superior resources due to big investments in audit technology, internal control systems and greater networks. Secondly, larger firms have greater incentive to protect their reputation because of quasi-rents serving as collateral. Thus, it is our impression that the Big Four audit firms to a greater extent are able to foresee forthcoming bankruptcies and disclose the matter in the audit report.

Given the above discussion, our argument is that

H2 (a) *The relative percentage of going concern opinions for companies filing for bankruptcy will be greater for the group of Big Four audit firms compared to the group of smaller audit firms.*

It is also a matter of interest to relate the size of the auditing firm to their propensity to issue going concern modifications in different stages of the business cycles.

H2 (b) *Auditors from one of the Big Four audit firms issue significantly more going concern opinions in a recession than in a boom compared to auditors from one of the smaller audit firms.*

3.3.3 Going concern opinions and bankruptcy prediction models

According to RS 570 there are several events or conditions that may cast significant doubt about the going concern assumption. Adverse key financial ratios are one example. Therefore, in order to place the number of issued going concern opinions in a perspective we are comparing auditors' propensity or ability to provide warning signals of forthcoming bankruptcies with bankruptcy prediction models.

During the past decades, the capability to identify imminent bankruptcies based on accounting information has been widely examined (e.g. Altman, 1968; Hagberg, 2006). A commonly used bankruptcy prediction model is the Z-score model developed by Altman in 1968. In order to estimate the likelihood of bankruptcy Altman used a weighted combination of five financial ratios (see 4.3.3). The model implies that if a company receives a low Z-score, the risk of bankruptcy is high (Altman, 1968). Prior research on publicly traded companies shows that bankruptcy prediction models are more precise compared to the number of going concern opinions issued by auditors. For example, Altman and McGough (1974, in Kida, 1980) provides evidence that the Z-score model was 82% effective in selecting future bankruptcies for companies that failed, while auditors only issued going concern opinions to 44% of the companies. Koh and Killough (1990) came to similar results, 78% for the model and 21% for the auditors.

The theory section (3.1) indicates that there are several underlying factors, for example fear of losing the client, which may explain the auditor's reluctance to disclose going concern modification in the audit report. That is to say, an unwillingness to issue a modified opinion does not necessarily mean that the auditor is not aware of a company's financial problems. Due to the perceived costs associated with disclosing a going concern uncertainty and previous studies indicating that bankruptcy prediction models are more precise compared to auditors' going concern opinions, it is reasonable to assume that

H3 (a) *Financial models are more effective than auditors in predicting future bankruptcies in the year prior to the bankruptcy.*

Moreover, we aim to test whether the numbers of predicted bankruptcies differ between the given years, 2007 and 2009. It is our perception that financial ratios in a year of recession will be unfavourable in comparison with the ratios for a year in a boom, as a result of which it is reasonable to assume that additional bankruptcies will be predicted in a recession.

H3 (b) *Financial models are predicting relatively more bankruptcies in a recession than in a boom due to adverse key financial ratios.*

4 Research design

This section of the thesis aims at guiding the reader through how the study is designed. Firstly, the gathering of our theoretical framework is discussed. Secondly, the data collection process is presented, followed by the statistical approach of our study. This will then lead to limitations and discussion of our choices.

There are many different ways in designing a research study. Since the objective of this thesis is to determine whether the auditor has been able to foresee a company's ability to remain in business we are using a deductive approach to design our hypotheses. A deductive method is based on frequently used principles and theories (Patel & Davidsson, 1994). This means that we have conformed to existing theories and prior research to empirically test whether our hypotheses can be accepted. We have been able to use this approach since there are a large amount of prior research regarding the going concern assumption and variables affecting the auditors' propensity to issue a going concern opinion.

When using a case study the main emphasis is on details and analysis and a smaller quantity of events or conditions are often selected (Blumberg et al., 2008). However, this thesis aims at examine a large sample of companies that filed for bankruptcy to make it possible to generalize the findings to the overall population. Therefore, it is our opinion that a statistical study is the most suitable approach due to the focus on breadth rather on depth. However, this approach is subject to some limitations because it may be difficult to interpret and explain the results (Blumberg et al., 2008).

4.1 Theoretical framework

The theoretical basis for our hypotheses has been gathered by searching through the databases Web of Science and Business Source Premier to find peer-reviewed articles related to our study. The mark "peer-reviewed" ensures that the article meets the quality standards for scientific research (Blumberg et al., 2008). Scientific articles included in our study are mainly focusing on the going concern assessment and bankruptcy, impact of the business cycle, relation between audit firm size and audit quality, bankruptcy prediction models and variables affecting the auditor's propensity to issue a going concern opinion. Through the relevant articles we have been able to find further references that are cited and referred to in several other scientific studies. The most well cited studies tend to be performed many years ago, however, it is important to stress that recently performed studies may be just as relevant even though they are not well cited. Furthermore, we have gathered information through newspapers and the journal "Balans". These articles are not peer-reviewed and for that reason we have mainly used these articles to conceive an idea the newsworthiness of the subject.

Literature that has been of particular importance to the thesis' theoretical part is "Perspektiv på revision: tankemönster, förväntingsgap och dilemman" (Perspectives on auditing: thought patterns, expectations gap and dilemmas) by Öhman (2007). The study provided us with perspectives on auditing in Sweden, and is thus preferably compared to other international studies. The aim of Öhman's dissertation was to describe, analyse and compare auditors' and stakeholders' different views on auditing. The dissertation presents a thorough literature review followed by empirical findings from interviews with 82 auditors and 73 stakeholders.

In order to find relevant input to our third hypothesis we used a Swedish study “Nyckeltal och konkurs: En studie av svenska företag 1998–2003” (Financial ratios and bankruptcy: A study of Swedish companies 1998–2003) performed in 2006 by Hagberg. The study examines eleven financial ratios based on capital structure, liquidity and profitability. Hagberg also tests Altman’s Z-score model for bankruptcy prediction. The empirical findings show that financial ratios for Swedish companies filing for bankruptcy differ significantly from other active companies.

The Swedish audit profession is to a great extent controlled by laws and mandatory regulations. Consequently, a separate chapter provides the reader with a review of laws and regulations’ affecting the auditor’s going concern assessment. For further points of view regarding references used in our thesis see Discussion of the references (4.6).

4.2 Data collection

By collecting a sample of annual reports it is possible to examine companies’ audit reports from the year prior to the bankruptcy. This research is based on the annual reports for limited liability companies¹¹ that filed for bankruptcy during 2007 and 2009. Companies included in this research are limited to firms that according to the Accounting Act (Bokföringslagen) 6:1 are obliged to end the financial year account with an annual report. Firms such as sole traders and trading or limited partnerships are excluded, since these companies are not required by law to have an auditor ¹² (Bolagsverket, 2011). Swedish economic associations are required to have at least one auditor, but the requirements for qualification as an authorized public accountant or an approved public accountant does not, for a majority of the associations, have to be met¹³ (the Swedish Economic Associations Act 8:5). For that reason, we have excluded economic associations as well.

In order to collect the registration numbers Upplysningscentralen¹⁴ provided us with an excel-document including registration numbers for all the Swedish companies that filed for bankruptcy during the given years. The data was obtained from the Swedish District Court (Tingsrätten) and the Swedish Enforcement Authority (Kronofogden) via Swedish Official Gazette (Post- och inrikes tidningar). The number of bankruptcies amounted to 4,341 in 2007 and 6,432 in 2009 (Upplysningscentralen, 2011). These numbers are consistent with the data provided by Tillväxtanalys¹⁵ (see 4.3.1) and we therefore believe the information has high credibility.

¹¹ According to the Companies Act a Swedish limited liability company is required by law to have at least one auditor. However, from November 1, 2010, auditing is optional for those companies that does not fulfil more than one of the following criteria: 1.5 million SEK in total assets, three million SEK in net sales and an average of three employees, in the previous two fiscal years (ABL 9:1).

¹² If the partnership has other enterprises as co-owners an auditor must be appointed (Bolagsverket, 2011).

¹³ Only if the company fulfils more than one of the criteria’s in the Swedish Economic Associations Act 8:5.

¹⁴ A business and credit information agency owned by the major Swedish Banks.

¹⁵ Tillväxtanalys is a national authority under the direction of the Swedish Ministry of Enterprise, Energy and Communications. Data are included in the Official Statistics of Sweden.

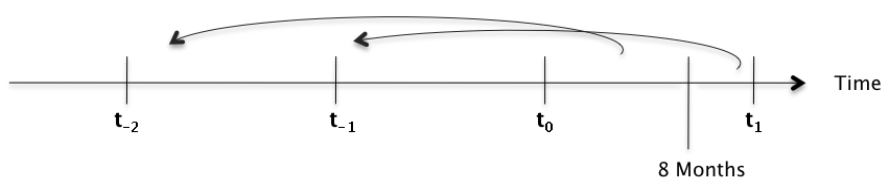
4.2.1 Sampling and selection

In order to obtain reliable results and to be able to make generalizations about the findings a sufficiently large sample is to be chosen. The size of the sample is depending on the variation in the population and the estimated precision needed (Blumberg et al, 2008). Prior research from Sweden (e.g. Ohlsson et al., 2010; Blom & Jansson, 2009) shows a rather large drop off in the sample size. Thus, we used a large sample of 15% of the total population in order to obtain a sufficiently large number of observations.

Our sample was gathered from the total population by using Excel's random number generator. This with an intention of selecting the sample as randomly as possible in order to avoid that, for example, the time of bankruptcy would affect the outcome or that any district would be over-represented. The function generated a random number between 1 and 4,341 respectively 1 and 6,432 for each company in the population. Companies were then arranged in ascending order according to their random number and the first 15% was selected.

Annual reports were gathered from Retriever Business database and the date of bankruptcy determined which year's annual report to use. The annual report for the year prior to the bankruptcy was, if available, always chosen. However, it is not always certain that an annual report is registered during the year of bankruptcy. For that reason we selected a cut-off date that determined the maximal lag that we were willing to accept. According to the Companies Act companies have six months from the closing date to hold the annual general meeting of shareholders and the financial statement is to be sent to Bolagsverket no later than one month after this meeting. Further, we are of the opinion that there is an additional month office turnaround time before the annual report is registered and available to stakeholders. This means that for bankruptcies occurring up to eight months after the financial year-end we used the annual report two years prior to the bankruptcy, if the previous one was not available. For bankruptcies occurring later than eight months after the financial year-end the annual report for the year prior to the bankruptcy has been used. We believe that the annual report for 2005 is not relevant when determining the auditor's capability to foresee a company's ability to continue its operations when, for example, the company is filing for bankruptcy in November 2007.

Figure 1 - Determination of which year's annual report to use



t_{-2} = annual report two years prior to the bankruptcy

t_{-1} = annual report prior to the bankruptcy

t_0 = closing date next to the bankruptcy

t_1 = time when the company is filing for bankruptcy

4.2.2 Missing value analysis

For a number of reasons we have not been able to include all of the companies in our sample. Companies were excluded due to one of the reasons below¹⁶.

Non-registered annual report – These companies were excluded because we have not been able to find any available annual report in the Retriever Business database that we have been using.

Out-dated annual report – The latest registered annual report was disqualified due to the time criteria in 4.2.1.

Non-registered audit report – In some cases the audit report has not been included in the financial statements due to which the company has been excluded.

Intentions to liquidate or to cease operations – These companies have not been considered in the thesis for the reason that there is no uncertainty whether the company will remain in business or not.

Inactive companies – We have chosen to exclude companies that were inactive in the year prior to the bankruptcy. This includes companies with a turnover of zero the previous two financial years and companies that has sold their businesses.

Table 1 – Companies excluded from the study

	2007	2009	Total
Total sample	737	965	1702
Observations excluded:			
Non-registered annual report	146	155	301
Out-dated annual report	206	219	425
Non-registered audit report	1	6	7
Intentions to liquidate or cease operations	22	21	43
Inactive companies	62	111	173
Other	4	2	6
Total number of excluded companies	441 (59.8%)	514 (53.3%)	955 (56.1%)
Observations included	296	451	747

The table shows the number of observations excluded from our study, divided between the years 2007 and 2009. As predicted, the number of observations that were excluded was quite large. Implications of this drop off are discussed in the section Limitations and discussion of our choices (4.5).

¹⁶ In our first sample companies with a financial year not equal to twelve months were excluded. Empirical findings were then calculated based on 662 observations (260 for 2007 and 402 for 2009). At a later stage of the thesis we chose to include these companies as well. Approximately the same results were obtained when including additional 85 companies, which indicate that our findings are reliable and insensitive to changes in the number of observations.

4.3 Descriptive data

Collected data has been constructed in Excel and in SPSS. Descriptive results, financial ratios and results of tests of proportions have been calculated by using Excel, while the correlation between the dependent variable and the independent variables and the logistic regression have been retrieved in SPSS. The following methodology sections present what considerations that have been made for our hypotheses and the control variables included in our study.

4.3.1 *Going concern opinions and the business cycle*

In order to test our first hypothesis we have divided our sample into two groups: 2007 and 2009. The year 2007 represents a boom and 2009 a recession. These years have been chosen because considering a period of the last ten years the lowest number of Swedish companies that went bankrupt occurred in 2007, 4,343 bankruptcies, and during 2009 the number of bankruptcies amounted to 6,428, the highest level in ten years (Tillväxtanalys, 2011a). Furthermore, in accordance with the examples outlined below, we have registered what type of audit reports being issued.

Type of audit reports issued

In chapter two we described that the Swedish audit regulation requires the auditor to determine whether the going concern assumption is appropriate and to what extent adequate disclosure is made in the financial statements. For that reason we chose to divide the examined audit reports into the following three groups:

Unqualified audit report

The financial statements are prepared, in all material respects, in accordance with the applicable financial reporting framework.

Disclosure of going concern uncertainties

Unqualified audit report with an emphasis of matter paragraph – The going concern uncertainty has been correctly disclosed in the financial statements and the auditor highlights the matter in the audit report.

Going concern opinion – We have chosen not to make a distinction between the three types of going concern opinions (qualified, disclaimer of and adverse opinion), because we are of the opinion that the auditor in all of the statements highlights that there is a material uncertainty regarding the company's ability to remain in business. However, distinctions amongst the going concern opinions are shown in Appendix B.

No disclosure of going concern uncertainty

We have noticed that the auditor in some cases disclose events or conditions that according to RS 570.8 may cast significant doubt about the going concern assumption, without referring to the events as a going concern uncertainty¹⁷. Therefore, we have decided to highlight some of these occurrences as well.

¹⁷ Though, it is important to stress that these events or conditions does not always indicate that a material uncertainty exists (RS 570.8).

Qualified audit report “ABL 25:13” – The auditor has not issued a going concern opinion, but has disclosed that the company’s equity is less than half of the registered share capital.

Qualified audit report “RS 570.8” – The auditor has not issued a going concern opinion, but has disclosed several other events or conditions (except for “ABL 25:13”) that may cast significant doubt about the going concern assumption.

Qualified audit report – Other reasons than the above mentioned with no indication of going concern problems. For example, delays in the payment of taxes and other state charges.

4.3.2 Going concern opinions and audit firm size

In order to examine whether the propensity to issue a going concern opinion varies with audit firm size we have chosen to divide the firms into the three following groups: PwC, Ernst & Young, KPMG and Deloitte counted as Big Four audit firms, Grant Thornton, SET and BDO as medium-sized and the remaining as small audit firms. The reason for the classification is that larger audit firms have superior internal control systems to ensure audit quality and may therefore differ from other smaller firms. The choice of a medium-sized group is based on the assumption that this group of audit firms may be comparable to the Big Four in terms of audit procedure and that it is difficult to distinguish whether the medium-sized audit firms belongs to the smaller audit firms or the larger ones.

We would like to point out that in some audit reports it has not been possible to determine which audit firm the auditor works for. In the occurrences of such circumstances we searched for the auditor on the Supervisory Board’s website¹⁸ to verify the audit firm. If no result was obtained, we assumed that the auditor works for one of the smaller audit firms, because the Big Four audit firms and medium-sized are consistently using the company’s logo in the audit report.

4.3.3 Going concern opinions and bankruptcy prediction models

We have applied Altman’s Z-score models to study the difference amongst bankruptcy prediction models and auditors going concern opinions. In the period prior to the bankruptcy Altman’s results showed 91% effectiveness in classifying limited liability companies filing for bankruptcy and 97% in classifying the active companies (Altman, 1993 in Hagberg, 2006). Hagberg (2006) applied Altman’s Z-score models on Swedish limited liability companies from different industries with more than 50 employees. He divided them into two groups: one including bankruptcy companies and one with active ones. The first model considers industry-specific effects and the result shows that the model was 33% effective in predicting future bankruptcies the year prior to the bankruptcy for bankruptcy companies. In the second model industry-specific effects were eliminated resulting in an effectiveness of 62%. Empirical findings from Hagberg’s study shows that the average Z-score for companies filing for bankruptcy differ significantly from other active companies. He claims that even though the result may not be as precise as the ones Altman received, the models are useful when predicting bankruptcies in Sweden due to the significant difference between the groups.

¹⁸ The Supervisory Board of Public Accountants, <http://www.revisorsnamnden.se/rs/revisor/> accessed on 10 March 2011

Since these models are considered applicable on Swedish companies, we have chosen to apply the Z-score models used in Hagberg's dissertation on our sample. The first model includes five financial ratios (noted Z' in our thesis) and it is stated as follows.

$$Z' = 0.717X_1 + 0.847X_2 + 3.107X_3 + 0.420X_4 + 0.998X_5$$

Where,

- X1 = working capital*¹⁹/total assets (WC/TA)
- X2 = retained earnings/total assets (RE/TA)
- X3 = earnings before interest and taxes/total assets (EBIT/TA)
- X4 = book value of equity*/book value of total debt* (BVE/BVD)
- X5 = sales/total assets (S/TA)
- Z' = Overall index including industry-specific effects

The second model eliminates industry-specific effects resulting in the following four financial ratio model

$$Z'' = 6.56X_1 + 3.26X_2 + 6.72X_3 + 1.05X_4$$

Where,

- X1 = working capital*/total assets (WC/TA)
- X2 = retained earnings/total assets (RE/TA)
- X3 = earnings before interest and taxes/total assets (EBIT/TA)
- X4 = book value of equity*/book value of total debt* (BVE/BVD)
- Z'' = Overall index excluding industry-specific effects

The first term, WC/TA, measures the net liquidity and is the difference between current assets and current liabilities, divided by total assets. Altman (1968) believes that companies facing operating losses will decrease their amount of working capital. RE/TA is implicitly reflecting the age of a firm. The implication here is that younger firms may, compared to older firms, be more risky due to lower accumulated profits. Further, EBIT/TA is considered to be an important ratio when studying bankruptcies since "(...) a firm's ultimate existence is based on the earnings power of its assets" (p. 595). The fourth term, BVE/BVD indicates how sensitive the company is to insolvency. Finally, S/TA illustrates the management's ability to operate in competitive conditions and is sensitive for industry-specific effects. Moreover, these ratios were not the most effective ones in predicting impending bankruptcies on an individual basis, but when put together, Altman considered them to be the most effective.

When the Z-score values were calculated we compared the values to the limit values below

Classification (incl. type of industry)	Classification (excl. type of industry)
Z' < 1.23 Bankruptcy	Z'' < 1.1 Bankruptcy
Z' = 1.23 - 2.90 Not possible to classify	Z'' = 1.2 - 2.6 Not possible to classify
Z' > 2.90 No indication of bankruptcy	Z'' > 2.6 No indication of bankruptcy

¹⁹ When calculating the financial ratios we have made some adjustments. Financial ratios marked with * indicates that the input has been adjusted for untaxed reserves. We assume that the tax rate is 28%, which means that 72% of the reserves are related to the company's equity, while the remaining 28% to current liabilities (if the reserves are dissolved, the payment has to be done in less than one year). As a consequence, companies with untaxed reserves will achieve better financial ratios than if not considered. Furthermore, for companies with a financial year shorter or longer than twelve months we have chosen to convert the figures from the income statement to a one-year basis in order to avoid misleading financial ratios.

After calculating the Z-score values we compared the percentage of companies classified as bankruptcy companies with the percentage of companies receiving a going concern opinion in the audit report. The findings are based on both business cycle and audit firm size.

Untabulated financial ratios

As a complement to the bankruptcy prediction models we have applied the eleven financial ratios²⁰ used in Hagberg's study to our sample. Since, the calculated values of the financial ratios shows approximately the same results as the two Z-score models we have chosen not to discuss this any further in this thesis. However, a short summary of the results is presented in the following empirical findings section 5.1.3.

4.3.4 Control variables

In our study the dependent variable is going concern opinions, while the independent variable is the business cycle or audit firm size. In order to highlight whether there are other factors influencing our results we have chosen to test for other control variables, that is, factors that may influence the dependent variable. We have chosen to provide the reader with descriptive data of these variables as well, since this type of information describes the population included in our thesis. Further, the independent variables are also included in Pearson correlation test and in the logistic regression. The choices of independent variables are based on previous research and the variables used in our thesis are presented in more detail below.

Financial distress

Financial distress has been used as an independent control variable in a number of studies and the results show that financial distress is strongly negatively correlated with a going concern opinion (Ruiz-Barbadillo et al., 2004; Geiger & Rama, 2006). Moreover, Nogler (2008) argues that a limitation with his study is that he has not controlled for financial distress, as a result of which we have chosen to include this variable. In this study the variable is based on Altman's Z-score model and in accordance with previous studies we expect this variable to be negatively correlated with a going concern opinion. This means that financially distressed firms (classified as bankruptcy firms) will receive relatively more going concern opinions.

Bankruptcy lag

According to previous studies (Geiger et al., 2005; Geiger & Rama, 2006; Nogler, 2008), another important variable is bankruptcy lag, whereupon we have chosen to test for bankruptcy lag in our thesis. The variable refers to the difference in days between the date of the auditor's report and the company's bankruptcy date. In accordance with the previous mentioned studies, we expect this variable to be negatively correlated with a going concern opinion, that is, the closer to the bankruptcy the auditor issues the audit report, and the more likely a going concern opinion is stated. The reason for this expectation is that when the bankruptcy is occurring close to the issuance of the audit report, it is more likely that there is evidence causing considerable doubts about the company's ability to continue as a going concern.

²⁰ The eleven financial ratios included in Hagberg's study are: total debt to total assets, retained earnings to total assets, total debt to equity, equity to total assets, working capital to total assets, current assets to current liabilities, current assets (excluding stock-in-trade) to current liabilities, sales revenue to total assets, earnings before interest and taxes to total assets, net income to total assets and lastly, net income to total debt.

Client firm size

We are including client firm size because we are of the opinion that client firm size may vary with audit firm size, that is, the larger the client the larger the audit firm. Furthermore, this variable has been included as a control variable in several other empirical studies. Ruiz-Barbadillo et al. (2004) used client's assets to total clients' assets of the auditor as a proxy for client firm size. Results shows that the larger the client, the fewer going concern opinions are issued. Other studies used the logarithm of total assets and/or total sales to define client firm size and came to the result that these variables are negatively correlated with a going concern opinion (Geiger & Rama, 2006; Basioudis et al., 2008; Nogler, 2008). In this thesis we have chosen to use the logarithm of total assets and total sales as a proxy for client firm size and in line with previous studies we expect this variable to be negatively correlated with a going concern opinion.

Type of industry

Hagberg's study shows a rather large variation in the effectiveness of the Z-score model when industry-specific effects were eliminated. This indicates that type of industry may be an important variable. Another reason for including type of industry is that it may indicate whether the predictive ability between industries is different, that is, market conditions for a specific industry may have change. It is our belief that some industries may be more affected by an economic downturn than other business sectors.

Our classification of type of industry is based on SNI Swedish Standard Industrial Classification 2007 (Statistiska Centralbyrån, 2011). Upplysningscentralen provided us with the type of industry codes for our population. However, for a small number of companies the code was missing and in order to find a code for these companies we reviewed the company's business description to make an appropriate classification. Based on the SNI codes there are 21 main groups of industries. In order to present the descriptive results in a more explicit way we chose to divide them into ten groups. All types of industries where the numbers of companies were less than 15 we chose to group into one. This means that remaining group includes companies from a variety of industries.

Furthermore, we have only included five types of industries in our statistical analysis. We have chosen industries where companies most commonly filed for bankruptcy, as we believe that these sectors are the ones having the largest impact on our results. The classification is based on bankruptcy statistics from 2009 (Tillväxtanalys, 2011b) and provides us with the following industries; Construction, Manufacturing, Wholesale and retail trade, Accommodation and food service activities as well as Professional, scientific and technical activities. When taking our sample into consideration these five industries equals to approximately 75% of our observations. This implies that our sample is a good approximation of the total population. For complete classification list see Appendix A.

4.4 Statistical analysis

In order to examine our descriptive results with a more statistical approach we have carried out three additional tests. The tests of proportions have been applied to conclude whether the difference between the proportions in our descriptive data is significant. Pearson correlation test is used to determine the correlation between going concern opinions and each one of the independent variables, while the logistic regression aims to examine how the dependent variable are related to two or more independent variables.

4.4.1 Test of proportions

In addition to the descriptive statistics we chose to use a test of proportions to examine whether the difference is statistically significant between the proportions of two populations, for example to determine whether the rates of going concern modifications is greater in a recession than in a boom. We have used the following formula to calculate a z-value for the difference between the proportions.

$$z = \frac{p_1 - p_2}{\sqrt{(p \times (1-p)) \times (\frac{1}{n_1} + \frac{1}{n_2})}} \quad \text{Where, } p = \frac{n_1 \times p_1 + n_2 \times p_2}{n_1 + n_2}$$

p_x is the sample proportion

n_x is the number of observations in the sample

Thereafter we have applied the standard normal distribution to assess the probability associated with the z-value and then compared the computed p-value to the significance level. The above test is used because it is applicable on large sample proportions. Since we are aiming to determine if one proportion is greater than another we are using one-tailed tests (Anderson et al., 2007).

4.4.2 Correlation

In order to examine the relationship between the dependent variable, that is, going concern opinions and each one of the independent variables we have used Pearson correlation coefficient. Correlations between the variables have been computed in SPSS and to carry out the test we encoded the variables with ones and zeros. For complete encoding see Appendix C. A coefficient of +1 shows a perfect positive linear relationship, while -1 corresponds to a perfect negative linear relationship. If the value becomes close to zero there is no relationship between the variables (Anderson et al. 2007).

4.4.3 Logistic regression

As mentioned earlier the logistic regression is used to estimate the probability that a going concern opinion will be issued given specific values for the independent variables (Anderson et al, 2007). Logistic regression models can, in contrast to multiple regression analysis, be used when the dependent variable is binary. This means that the dependent variable can be coded as either 1 or 0. The dependent variable in this thesis has been coded as 1 if the auditor issues a going concern opinion or 0 if no opinion is issued (Djurfeldt & Barmark, 2009).

According to Djurfeldt and Barmark (2009), there are several ways to evaluate the explanatory power in a logistical regression model. The authors argue that Nagelkerkes R^2 is preferable because it can be interpreted in a comparable way to the determination coefficient R^2 in an ordinary regression analysis. Nagelkerke R^2 illustrates what proportion of the going concern opinions that can be explained by the model. Further, SPSS generates a Chi-square value for the logistic regression. This value shows the significance of the model. A high value indicates that the model is significant and that the included independent variables are better explaining the issuance of going concern opinions, than if they have not been included. For every independent variable an odds ratio is generated. An odds ratio higher than one indicates that the variable is positively related to the amount of going concern opinions issued, while a ratio lower than one indicates that there is a negative relationship (Djurfeldt & Barmark, 2009). Below is a description of the three logistic regressions carried out in this thesis.

Logistic regression model 1

The independent variables in our logistic regression models are based on previous empirical studies discussed in section 4.3.4. The first regression model consists of five independent variables; business cycle, audit firm size, financial distress, bankruptcy lag and client firm size.

Before computing the logistic regression certain assumptions were made. We have used Big Four as an indicator of audit firm size, because of its relevance to the thesis. This approach makes it possible to isolate Big Fours effect on the dependent variable. To determine financial distress, Altman's Z-score model including industry specific effects (Z') has been used. This model is applied since its overall effectiveness is higher, compared to the model excluding type of industry, in predicting future bankruptcies for *both* bankruptcy and active companies (Hagberg, 2006). Further, the results from the correlation test (see 5.2) shows that total assets and total sales are co-varying. Due to this correlation, only one of the proxies for client firm size is used. We have chosen to use the logarithm of total assets because there are companies in the population with zero turnover in the year prior to the bankruptcy. If total sales were selected we would have to exclude these companies. The first logistic regression model is stated below.

Going concern

$$= a + b_1 \text{business cycle} + b_2 \text{big four} + b_3 \text{financial distress} + b_4 \text{bankruptcy lag} + b_5 \text{client firm size}$$

Logistic regression model 2

As our result (see 5.1.2) indicates a tendency of auditors issuing significantly more going concern opinions given Big Four and recession we have included an interaction term involving these variables (also used in Geiger et al., 2005). The implication here is that by including an interaction term it is possible to determine the effect the business cycle has had on auditors from one of the Big Audit firms' issuance of going concern opinions. The interaction term is given by multiplying the two variables with each other.

Going concern

$$= a + b_1 \text{business cycle} + b_2 \text{big four} + b_3 \text{financial distress} + b_4 \text{bankruptcy lag} + b_5 \text{client firm size} \\ + b_6 (\text{business cycle} \times \text{big four})$$

Logistic regression model 3

Our third regression model aims to control for type of industry, that is, if the business sector the client operates in can explain the amount of going concern opinions. We chose to separate type of business from the two first models in order to ease the interpretation of our results.

Going concern

$$= a + b_1 \text{business cycle} + b_2 \text{big four} + b_3 \text{financial distress} + b_4 \text{bankruptcy lag} + b_5 \text{client firm size} \\ + b_6 (\text{business cycle} \times \text{big four}) + b_7 \text{manufacturing} + b_8 \text{construction} + b_9 \text{wholesale} + b_{10} \text{accommodation} \\ + b_{11} \text{professional activities}$$

4.5 Limitations and discussion of our choices

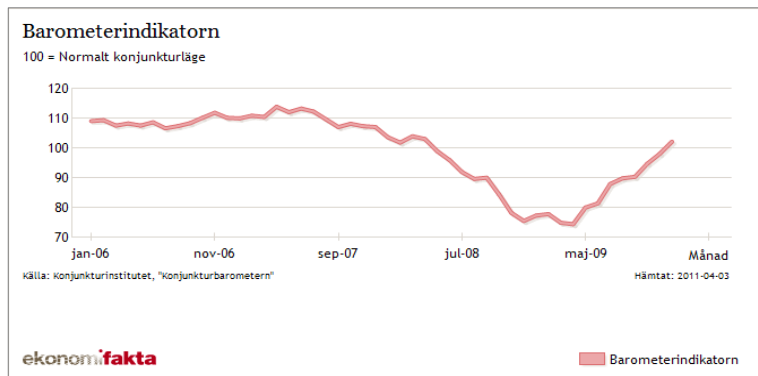
Bankruptcy data – There are some limitations with the bankruptcy data provided by Upplysningscentralen and the primary one is that all of the companies filing for bankruptcy are included. There are other possible reasons why companies are filing for bankruptcy than insolvency, for example, planned bankruptcies to phase out business. Hence, bankruptcy can also be a way to liquidate a company. In order to try to reduce such occurrences we have been reviewing the management report to find indicators of voluntary liquidation and subsequently exclude those companies. Our results are weakened by such limitations and we therefore believe that the relationships could be stronger in reality.

Excluded companies – Table 1 – Companies excluded from the study shows that about 55% of the sample have been excluded from our study. The substantially large drop of may be a limitation to the thesis. For example, reasons for not filing the annual report within the legally required time may be a poorly ran business or a forthcoming bankruptcy. If the auditors were given the opportunity to express an opinion it is possible that these audit reports would have included a disclosure of going concern uncertainty. On the other hand, we have purposely excluded companies. For example, if including companies with an out-dated annual report this could have reduced the relevance of the study, since the going concern assumption refers to a twelve-month period.

The going concern assumption – Guidance, regarding the assessment of a company's ability to remain in business, is to be found in RS 570. However, modifications based on these guidelines may be difficult to interpret due to discrepancy among auditors' way of expressing their opinion. As a result our assessment is partly subjective when for example deciding whether the auditor is expressing a going concern opinion or no more than disclosing an event or circumstance that may cast significant doubt about the going concern assumption. That is, if material uncertainty exists the auditor expresses a going concern opinion in the audit report while in other situations leaving the reader to themselves assess whether the ability to remain in business is to be questioned. We are aware of these limitations and are for that reason presenting our results in such a way that makes it possible for the reader to assess their own categorization (see Table 3 and Appendix B). Furthermore, the number of opinions that is classified as a going concern opinion depends on what requirements is placed on the auditor's statement. Thus, if greater requirements are placed, the result of our study will show fewer going concern opinions from the auditors.

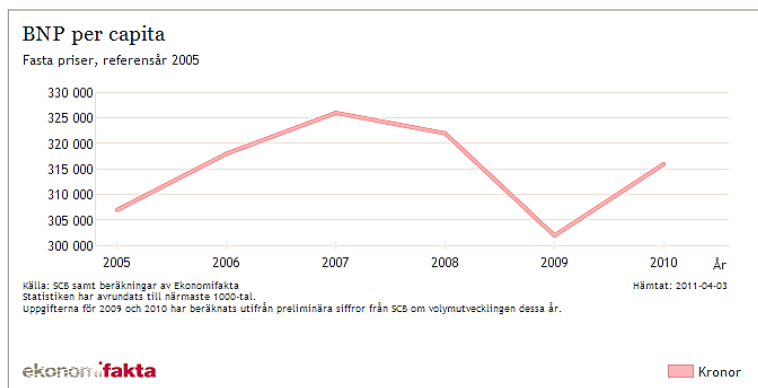
Business cycle – In this study we have chosen the years 2007 and 2009 to reflect the business cycle. However, this classification is subject to some limitations, primarily because there is no clear distinction of when a boom becomes a recession and the other way around. In our thesis, we have primarily based our classification on the bankruptcy data provided by Tillväxtanalys (2011a). The data shows that over a ten-year period the lowest level of bankruptcies was reached in 2007 and the highest in 2009. In order to further support our choice the same conclusion can be draw from the below figures.

Figure 2 – Business cycle indicator



Source: Ekonomifakta (2011a)

Figure 3 - Gross Domestic Product per capita



Source: Ekonomifakta (2011b)

The above figures show that 2006 and 2007 were good years when considering macroeconomic factors such as GDP per capita and business cycle statistics. The figures also show that 2008 and 2009 were years when GDP per capita fell dramatically and the business cycle went down.

Audit firm size – In this thesis we are not considering whether the Big Four office size is small or large. For example, Francis and Yu (2009) have studied the relation between Big Four office size and audit quality. The study shows that larger offices are more likely to issue a going concern opinion to a company filing for bankruptcy and thus have higher audit quality. Although, the authors do not conclude the small Big Four offices have low quality. This means that such differences will not be reflected in our results.

Financial ratios – As previously mentioned, we have only investigated companies that have filed for bankruptcy. However, there may be a point of comparing bankruptcy companies with active companies in order to observe whether the values differ between the two groups. For example, there is reason to believe that financial ratios are favourable for companies that remain in business. Hagberg (2006) shows that the differences between these two groups are extremely significant and we are therefore assuming that if the financial ratios in our study points towards bankruptcy that is a good indicator without having compared the ratios with other active companies. Further, it is important to stress that accounting information is based on historical data and that accounting principles may differ between companies. Therefore, it is important to take into account that financial ratios based on historical data, cannot determine what will happen in the future, but they can be used as an indicator.

Client firm size – It is important to stress that client firm size is relatively difficult to define. We have chosen to use total sales and total assets as indicators. However, we would like to point out that a client could be small although it has high total assets or total sales. For example, great total sales do not necessarily mean that the company has extensive operations. Standard deviations also show a large spread between the companies in each group. The implication here is that the descriptive results (see 5.1.4) indicate that larger audit firms audit larger clients and vice versa, but in accordance with the above discussion it is not possible to definitely conclude that this is the case.

4.6 Discussion of the references

The majority of the prior studies used in this thesis are performed overseas, especially in the United States. However, we find it to be of relevance to use these sources in our study mainly because limited research has been performed in Sweden on the going concern assumption and bankruptcy. Since this study is carried out in Sweden, the reader should be aware of potential differences between countries, such as regulations, influence of the state, degree of self-regulation and auditing practice. For example, several American studies claim that fear of lawsuit is a potential cost associated with the issuance of a going concern opinion (e.g. Kida, 1980). However, litigation rates are, in comparison with Anglo-American countries, rather low in Continental European countries (Vanstraelen, 2003; Hope & Langli, 2009). Martin (2000) argues that American auditors are more likely to make disclosures regarding the going concern assumption compared to more continental countries like Germany and France. Furthermore, a number of studies observe publicly traded companies while this thesis examines limited liability companies. This means that results of these studies are not completely comparable to ours. In addition to the discussion above, it should also be considered that all of the references used in our study are gathered and published for a different purpose than ours.

It is also of importance to pay attention to the fact that there have been many developments within the auditing and accounting area over the years. For example the Swedish auditing practice has for long been subject to self-regulation, but due to accounting scandals it has been tightened by mandatory regulations (Öhman, 2007). In the aftermath of the accounting scandals in the beginning of the 21st century the American Securities and Exchange Commission (SEC) in 2002 introduced the Sarbanes-Oxley-Act. The purpose was to provide shareholders of publicly traded companies and the society with informative, accurate and independent audit reports. For example, Nogler (2008) shows that auditors became more conservative in the post-Enron period resulting in an issuance of more going concern modifications. With the above in mind it is important to stress that literature published before such occurrences does not reflect these changes.

Considering the business cycle and the going concern assumption there are relatively few empirical studies and as a result we are using non-peer-reviewed articles without any empirical evidence, when discussing the impact of the business cycle. Furthermore, we have in some studies not been able to find the original reference and therefore had to use an available secondary source (solely when the secondary source is considered reliable). This is highlighted in the thesis as follows: Iljiri, 1975 in Öhman, 2007.

5 Empirical findings

This chapter presents the empirical findings of our thesis. The first section of this chapter provides the reader with descriptive results and results of the test of proportions. Secondly, findings from Pearson correlation test and results from the logistic regression are presented. Finally, summaries of the results of our hypotheses are outlined.

5.1 Descriptive results and results of test of proportions

The descriptive results of our thesis provide the reader with basic features of the data in our study. Extended results are presented in sections 5.2 and 5.3.

5.1.1 Going concern opinions and the business cycle

The first hypothesis aims to test whether auditors issue relatively more going concern opinions in a recession than in a boom.

Table 2 – Going concern opinions and the business cycle

Type of audit reports	2007		2009		Total		z value
	n	%	n	%	n	%	
Going concern opinion ²¹	38	12.8%	73	16.2%	111	14.9%	1.258
Unqualified audit report	110	37.2%	182	40.4%	292	39.1%	0.875
Qualified no going concern	148	50.0%	196	43.4%	344	46.0%	-1.754 **
Total	296	100%	451	100%	747	100%	-

z value is based on the proportions for each year and type of audit report

** Significant at 95% confidence level

The result of our study shows that 12.8% of the 296 examined companies in 2007 and 16.2% of the 451 examined companies in 2009 received a going concern opinion in the audit report prior to the bankruptcy. This indicates that auditors issue relatively more going concern opinions in a recession than in a boom. We have used a test of proportions to statistically determine whether the rates of going concern opinions are greater in a recession than in a boom. The z value for this test is 1.258, which indicates no significant difference between the proportions. It appears that auditors issued relatively more going concern opinions in a recession than in a boom, but not significantly more. An example of a frequently occurring going concern opinion is when the auditor, due to legal-proceedings that in the future may cause significantly costs for the company, has disclosed that there is a material uncertainty that may cast significant doubt on the company's ability to continue as a going concern.

Further, the percentage of companies receiving an unqualified audit report amounted to 37.2% in 2007 respectively 40.4% in 2009. Our results also show that the auditor issued a qualified audit report without a going concern opinion in 50.0% respectively 43.4% of the observations. Frequently made disclosures in this category were delays in the payment of taxes and other state charges and that the financial statement has not been prepared within the statutory time according to the Annual Accounts Act. Within this category we also find examples where the auditor states

²¹ For further classification see Appendix B

that the financial statements have been prepared in accordance with the financial framework, that is, the going concern assumption is appropriate, even though the auditor points out that the company's equity is less than half of the registered share capital.

Other disclosures

In the light of the above, we would like to point out other types of disclosures that have been made by the auditors.

Table 3 - Other disclosures than going concern opinions

<i>Type of disclosures</i>	<i>2007</i>		<i>2009</i>		<i>Total</i>	
	n	%	n	%	n	%
Qualified audit report "ABL 25:13"	79	53.4%	88	44.9%	167	48.5%
Qualified audit report "RS 570.8"	12	8.1%	12	6.1%	24	7.0%
Qualified audit report	57	38.5%	96	49.0%	153	44.5%
Total	148	100%	196	100%	344	100%

The table illustrates different types of qualified audit reports, excluding those with a disclosure of going concern opinion. Our study shows that the most common way to express an opinion is by referring to the rules in ABL 25:13 (48.5%) and highlighting that the company's equity is less than half of the registered share capital. Such an event may be related to events or circumstances that may cast significant doubt about an entity's ability to remain in business, but the auditor has not issued a going concern modification. Other examples of qualified audit reports were the auditor has disclosed an event or circumstance in line with the previous mentioned is "RS 570.8" (7.0%). Within this group one example of disclosure is when the auditor argues that the company's liquidity is strained, without questioning the going concern assumption. The remaining 44.5% of the qualified audit reports showed no indication of going concern problems.

5.1.2 Going concern opinions and audit firm size

The second hypothesis (a) aims to test whether the relative percentage of going concern opinions for companies filing for bankruptcy will be greater for the Big Four audit firms compared to medium-sized and smaller audit firms and (b) whether auditors from one of the Big Four audit firms issues significantly more going concern opinions in a recession than in a boom compared to auditors from one of the smaller audit firms.

Table 4 - Going concern opinions and audit firm size

<i>Going concern opinions</i>		<i>2007</i>	<i>2009</i>	<i>Total</i>
<i>Big Four</i>	Number	9/86	27/136	36/222
	Percentage	10.5%	19.9%	16.2%
<i>Medium</i>	Number	4/36	11/54	15/90
	Percentage	11.1%	20.4%	16.7%
<i>Small</i>	Number	25/174	35/261	60/435
	Percentage	14.4%	13.4%	13.8%

Our results show that 16.2% of the audit reports issued by one of the Big Four audit firms included a going concern opinion. The percentage of companies receiving a going concern opinion from one of the medium-sized firms amounted to 16.7% and from the one of the smaller audit firms 13.8%. The z value for the test of proportions, based on the total proportion for each group of audit firms, is

-0.097 between the Big Four and medium-sized audit firms, 0.832 between Big Four and smaller audit firms and 0.709 between medium-sized and smaller audit firms. None of the previous z values indicates that there is a statistically significant difference in the propensity to issue a going concern opinion between audit firms.

Furthermore, we were in a comparison between the given years expecting the Big Four audit firms, due to superior resources and an ability to be forward-looking, to issue significantly more going concern opinions in a recession compared to other audit firms. The results show that the percentage of companies receiving a going concern opinion from one of the Big Four audit firms amounted to 10.5% in a boom compared to 19.9% in a recession. The corresponding figures for the medium-sized firms amounted to 11.1% respectively 20.4% and for the smaller audit firms 14.4% and 13.4%. It seems that auditors from one of the Big Four audit firms and from one of the medium-sized firms issue considerably more opinions in a recession than in a boom, while auditors from one of the smaller firms issue slightly less. The z value, based on the proportions for each year and each audit firm, amounted to 1.849 for the Big Four audit firms, 1.155 for the medium-sized and -0.284 for the smaller audit firms. This means that only auditors from one of the Big Four audit firms issues significantly (95% confidence level) more going concern opinions in a recession than in a boom. For the medium-sized it is not possible to conclude that relatively more going concern opinions are being issued in a recession.

5.1.3 Going concern opinions and bankruptcy prediction models

Results from the bankruptcy prediction models

Below is a presentation of the results obtained by using Altman's Z-score models for bankruptcy prediction.

Table 5 – Companies classified as bankruptcy companies

<i>Bankruptcy classified companies</i>		<i>2007</i>	<i>2009</i>	<i>Total</i>	<i>z value</i>
<i>Z'-score</i>	Number	117/296	180/451	297/747	0.105
	Proportion	39.5%	39.9%	39.8%	
<i>Z''-score</i>	Number	202/296	299/451	501/747	-0.554
	Proportion	68.2%	66.3%	67.1%	

Z'-score, including industry-specific effects

Z''-score, excluding industry specific effects

z value is based on the proportions for each year and each model

The findings from the Z-score model shows that when including type of industry the percentage of companies receiving a low Z-score, that is the risk of bankruptcy is high, amounted to 39.5% in 2007 and 39.9% in 2009. When eliminating industry-specific effects the corresponding figures are 68.2% for 2007 and 66.3% for 2009. The implications here is that by excluding type of industry business failures can to a greater extent be predicted. Further, the z values indicate that there is no statistically significant difference between 2007 and 2009 in the number of bankruptcies that can be predicted by the two Z-score models.

A comparison with auditors going concern opinions

Our third hypothesis (a) is based on the assumption that when it comes to predicting future bankruptcies, financial models are more precise than the number of going concern opinions issued by the auditors and (b) that the financial models are predicting relatively more bankruptcies in a recession than in a boom due to adverse key financial ratios.

Table 6 - Predictable bankruptcies compared to the number of going concern opinions

	<i>2007</i>	<i>2009</i>	<i>Average</i>
<i>Predicted bankruptcies</i>	39.5% (68.2%)	40.0% (66.3%)	39.8% (67.1%)
<i>Going concern opinions</i>	12.8%	16.2%	14.9%
<i>z value</i>	7.386***	7.931***	10.800***

Number of observations: 2007 n=296 and 2009 n=451

() excluding industry specific effects (Z'-score)

z value is based on the proportions for the Z'-score model and going concern opinions for each year

*** Significant at 99% confidence level

The results from our study show that there is a substantial difference between the financial model's predictive ability and the number of going concern opinions issued by the auditors. In 2007 the model predicted 39.5% of the business failures while auditors issued going concern opinions to 12.8% of the companies. The corresponding figures in 2009 amounted to 40.0% respectively 16.2%. The z value for the test of proportions shows that there is a statistically significant difference (99% confidence level) between the predictive ability of the Z-score model and the number of going concern opinions issued by the auditors when considering the given years as well as an average. Moreover, the results from Table 5 indicate that there is no considerable difference in the models predictive ability between the years. This means that there is no substantial difference in key financial ratios²².

Table 7 – A comparison between the sizes of audit firms

	<i>Big Four</i>	<i>Medium</i>	<i>Small</i>
<i>Predicted bankruptcies</i>	41.0% (70.7%)	40.0% (63.3%)	39.8% (66.0%)
<i>Going concern opinions</i>	16.2%	16.7%	13.8%
<i>z value</i>	5.776***	3.473***	8.457***

Number of observations: Big Four n=222, Medium n=90 and Small n=435

() excluding industry specific effects (Z'-score)

z value is based on the proportions for the Z'-score model and going concern opinions for each audit firm

*** Significant at 99% confidence level

When considering audit firm size the results show that there is not a substantial difference between the three groups of audit firms in the number of predictable bankruptcies. It appears that it is not possible to conclude that one of the three groups should have been able to, when considering financial ratios, issue relatively more going concern opinions compared to the other groups. However, notable is that the results are depending on which one of the two Z-score models that is applied. The model excluding industry-specific effects shows a greater difference between audit firms than the model including all of the five financial ratios.

²² The results from the calculation of financial ratios indicate that the same conclusion can be drawn, that is, no significant difference between the years. Seven of the eleven ratios included in Hagberg's study (2006) show no difference between 2007 and 2009. Yet, four of the eleven ratios show a significant difference between the years, S/TA appears to be unfavourable in 2009, while TD/TA, WC/TA, CA/CL appears to be slightly favourable in 2009.

5.1.4 Descriptive results for controlled variables

The following section provides the reader with a description of the data obtained when controlling for other independent variables than business cycle and audit firm size. The purpose of this section is to highlight variables that may have affected the results from our hypotheses.

Financial distress

The table below shows the number and percentage of companies receiving a going concern opinion given that the company has financial problems (or not characterised by financial distress).

Table 8 - Financial distress and going concern opinions

		<i>Going concern opinions 2007</i>	<i>Going concern opinions 2009</i>	<i>z value</i>
<i>Financial distress*</i>	Number	18/117	43/180	1.773**
	Percentage	15.4%	23.9%	
<i>No financial distress</i>	Number	20/179	30/271	-0.034
	Percentage	11.2%	11.1%	
z value		1.059	3.620***	

* Classified as bankruptcy companies according to Altman's Z'-score model
z value is based on the proportions for each year and the level of financial distress

** Significant at 95% confidence level

*** Significant at 99% confidence level

The findings show that given the year 2009, financially distressed companies receives substantially more going concern opinions compared to companies characterised by no financial distress. The z values for the test of proportions show significance at the 99% confidence level. Furthermore, auditors issued relatively more going concern opinions to financially distressed companies in a recession than in a boom. These findings are significant at the 0.05 level. On the contrary, it appears that there is no statistically difference between financial distress and no financial distress given the year 2007. Nor is there any difference between the proportions 2007 and 2009 given no financial distress.

Bankruptcy lag

The cross-tabulation below shows the difference in average bankruptcy lag between the three groups of audit firms and between the given years.

Table 9 - Average bankruptcy lag

	<i>Bankruptcy lag 2007</i>	<i>Bankruptcy lag 2009</i>	<i>Average</i>
<i>Big Four</i>	216 (122)	208 (114)	211 (117)
<i>Medium</i>	235 (116)	196 (105)	211 (111)
<i>Small</i>	229 (115)	224 (123)	226 (120)
<i>Average</i>	226 (119)	216 (119)	220 (118)

Number of observations: Big Four n=222, Medium n=90 and Small n=435

In days

() Standard deviation

Findings from the data obtained from our observations shows that the bankruptcy lag is marginally lower in the year 2009 compared to 2007. When calculating an average bankruptcy lag for each group of audit firms the results shows that the lag is slightly longer for smaller audit firms than for the group of Big Four audit firms. On the contrary, the medium-sized firms have the longest

bankruptcy lag of the three groups in the year 2007 and the shortest in 2009. The results also indicate that the average bankruptcy lag is approximately seven months, although there are companies having significantly longer or shorter bankruptcy lag. However, the standard deviations for the bankruptcy lags are substantial, illustrating that conclusions from the above results may be difficult to infer. Significances of the above relationships are shown in the results from correlation between the variables (5.2).

Client firm size

Table 10 shows the mean and the median client firm sizes as well as the standard deviations for each of the three groups of audit firms.

Table 10 - Client firm size and audit firms

Audit firm	Average		Median		Standard deviation	
	Sales*	TA**	Sales	TA	Sales	TA
<i>Big Four</i>	10,146	5,399	3,461	1,582	20,903	14,936
<i>Medium</i>	9,912	8,645	2,454	1,334	45,685	44,083
<i>Small</i>	6,571	3,349	2,219	1,027	15,543	8,918

Number of observations: Big Four n=222, Medium n=90 and Small n=435

In thousands of SEK

* Based on total sales

** Based on total assets

When taking in to account both total sales and total assets, the descriptive data indicates that larger audit firms audit larger clients and smaller audit firms audit smaller clients. The average value for medium-sized audit firms indicates, when based on total assets, that this group has the largest clients. However, when considering total sales the group of Big Four audit firms have the largest. Further, it is important to comment on the standard deviations. The standard deviation for the medium-sized audit firms indicates that the size of their clients varies widely, whereupon it may be difficult to draw conclusions about this control variable's impact on the issuance of going concern opinions. Correlations and significances between audit firm size and client firm size are presented in section 5.2.

Type of industry

The table below shows the number and percentage of going concern opinions issued per industry and year. The results indicate whether there is any material difference between the business sector the client operates in and the number of going concern opinions issued by the auditors. Hence, it is important to emphasise that there are in some industries only a few numbers of observations, which implies that conclusions have to be drawn with carefulness. Moreover, the results are mainly focusing on the five largest groups of industries.

Table 11 - Going concern opinions per type of industry

<i>Type of industry</i>	<i>2007</i>		<i>2009</i>		<i>Average</i>	<i>Significance</i>
	Number ^o	%	Number	%	%	z value
Manufacturing	5/37	13.5%	14/63	22.2%	19.0%	1.072
Construction	3/36	8.3%	10/60	16.7%	13.5%	1.155
Wholesale and retail trade	13/93	14.0%	13/134	9.7%	11.5%	-0.995
Accommodation and food service activities	8/17	47.1%	5/31	16.1%	27.1%	-2.306 **
Professional, scientific, technical activities	2/29	6.9%	12/55	21.8%	16.7%	1.745 **
Transportation and storage	2/15	13.3%	6/26	23.1%	19.5%	0.758
Information and communication	1/16	6.3%	2/13	15.4%	10.3%	0.803
Real estate activities	0/12	0	4/9	44.4%	19.0%	2.567 ***
Administrative and support service activities	2/11	18.2%	2/19	10.5%	13.3%	-0.594
Other industries	2/30	6.7%	5/41	12.2%	9.9%	0.772
Total number/average proportion	38/296	12.8%	73/451	16.2%	14.9%	1.258

^o Going concern opinions/number of bankruptcies within each industry
z value is based on the proportions 2007 and 2009 for each business sector
** Significant at 95% confidence level
*** Significant at 99% confidence level

Based on the companies included in our study, the results show that the majority (74.3%) of bankruptcies occurred within the sectors of Manufacturing, Construction, Wholesale and retail trade, Accommodation and food service activities and Professional activities. Furthermore, the Wholesale and retail trade is the largest business sector and accounts for 30.4% of all companies that filed for bankruptcy.

Auditors appear to have high accuracy in their reporting within the Manufacturing industry. The percentage of going concern opinions issued in 2007 amounted 13.5% respectively 22.2% in 2009. These numbers are over average, 12.8% and 16.2%, which indicates that auditors appear more easily identify going concern problems within this sector. On the contrary, within the Wholesale and retail trade industry auditors issued going concern opinions to 9.7% of the companies in 2009, which is the lowest amount of all industries. This indicates that auditors either are more reluctant of issuing going concern opinions or that they have not been able to recognize going concern problems within this industry.

Two types of industries where auditors have issued relatively more going concern opinions in a recession than in a boom are within the Construction business and the Professional, scientific and technical activities business. The implication here is that auditors may be more forward-looking within one of these industries. However, the relationship is only significant within the Professional, scientific and technical activities business (at the 0.05 level). Noteworthy is also that auditors have issued more going concern opinions in 2007 compared to 2009 to clients within the Accommodation and food service activities, despite the fact that the number of bankruptcies was almost twice as many in 2009. The test of proportions shows that the relationship is significant at the 99% confidence level.

5.2 Results from correlation between the variables

Section 5.1 provides the reader with descriptive data and findings from our hypotheses. The results from this section show the correlations between going concern opinions and the independent variables, but also the correlations amongst different independent variables. In other words, the findings from the previous section are extended.

Table 12 - Correlation between the dependent variable and the independent variables

<i>Independent variables</i>	<i>p-value</i>	<i>Correlation</i>	<i>Expected sign</i>
The business cycle	0.074	0.053 *	+
Big Four audit firms	0.252	0.024	+
Medium audit firms	0.272	0.022	(+)
Small audit firms	0.155	-0.037	-
Financial distress (Z')	0.000	0.137 ***	+
Financial distress (Z'')	0.000	0.165 ***	+
Bankruptcy lag	0.000	-0.282 ***	-
Client firm size log total assets	0.162	0.036	-
Client firm size log total sales	0.418	-0.008	-
Manufacturing	0.107	0.046	No
Construction	0.347	-0.014	No
Wholesale and retail trade	0.041	-0.064 **	No
Accommodation and food service activities	0.007	0.090 ***	No
Professional, scientific and technical activities	0.416	0.008	No
Interaction (Recession and Big Four)	0.022	0.074 **	+

* Significant at 90% confidence level

** Significant at 95% confidence level

*** Significant at 99% confidence level

The results of Pearson correlation show that there is a strong significant correlation, at 99% confidence level, between the issuance of going concern opinions and Bankruptcy lag, Financial distress and the business sector Accommodation and food service activities. Furthermore, the Wholesale and retail trade sector and the Interaction variable recession and Big Four are significantly correlated with going concern opinions at the 95% confidence level. Finally, Business cycle and going concern opinions are correlated at the 90% confidence level. The remaining variables are not significantly correlated with the dependent variable. However, all of the included variables have taken the expected sign except for Client firm size (total assets). The previous mentioned correlations will be explained in more detail in results from logistic regressions.

The results from the correlation between the different independent variables (see Appendix C for complete table) show that Audit firm size is strongly correlated with Client firm size (99% confidence level²³). The implication here is that larger audit firms have larger clients, while smaller clients contract smaller audit firms. When comparing Audit firm size and Bankruptcy lag, it appears that smaller audit firms have longer bankruptcy lag (95% confidence level), that is, longer period of time between issuance and bankruptcy, while larger audit firms have shorter bankruptcy lag (90% confidence level). Furthermore, the correlation table shows that Total sales is co-varying with Total assets.

²³ Medium-sized audit firms are not significantly correlated with client firm size (see Appendix C).

5.3 Results from logistic regressions

The following section shows the results from the logistic regressions. In contrast to Pearson correlation test the logistic regression provides results estimating a probability that a going concern opinion will be issued given a set of chosen independent variables. The implication here is that the logistic regression shows the impact of multiple independent variables on the issuance of going concern opinions.

Table 13 - Results from logistic regression

Independent variables	Regression 1		Regression 2		Regression 3	
	Exp (B)	Sig	Exp (B)	Sig	Exp (B)	Sig
The Business cycle	1.251		0.917		0.882	
Audit firm size (Big Four)	1.032		0.511		0.526	
Financial distress (Z')	2.042	***	2.080	***	2.140	***
Bankruptcy lag	0.993	***	0.992	***	0.993	***
Client firm size (Total assets)	1.118		1.127		1.130	
Manufacturing	-	-	-	-	1.332	
Construction	-	-	-	-	1.078	
Wholesale and retail trade	-	-	-	-	0.855	
Accommodation and food service activities	-	-	-	-	2.190	*
Professional, scientific and technical activities	-	-	-	-	1.196	
Interaction (Recession and Big Four)	-	-	2.830	**	2.932	**
Constant	0.302	**	0.361	**	0.315	*
Chi-square χ^2	75.418***		79.610***		85.274***	
Nagelkerke R ²	0.169		0.178		0.190	

Regression 1 = $a + b_1\text{business cycle} + b_2\text{big four} + b_3\text{financial distress} + b_4\text{bankruptcy lag} + b_5\text{client firm size} + e$

Regression 2 = $a + b_1\text{business cycle} + b_2\text{big four} + b_3\text{financial distress} + b_4\text{bankruptcy lag} + b_5\text{client firm size} + b_6(\text{business cycle} \times \text{big four}) + e$

Regression 3 = $a + b_1\text{business cycle} + b_2\text{big four} + b_3\text{financial distress} + b_4\text{bankruptcy lag} + b_5\text{client firm size} + b_6(\text{business cycle} \times \text{big four}) + b_7\text{manufacturing} + b_8\text{construction} + b_9\text{wholesale} + b_{10}\text{accommodation} + b_{11}\text{professional activities} + e$

Exp (B) Odds ratio

- Variables excluded from the logistic regression

* Significant at 90% confidence level

** Significant at 95% confidence level

*** Significant at 99% confidence level

Three types of logistic regressions

The first logistic regression does not include type of industry or the interaction variable between recession and the Big Four audit firms. In the second model type of industry is the only excluded variable. The third regression includes all of the independent variables in our study. Results of the regressions show that Nagelkerke R² for our first model is 16.9% and it is, when additional variables are included, increasing to 17.8% in the second logistic regression and 19.0% in the third model. It appears that the explanatory power is increasing when the interaction variable and business sectors are included. Furthermore, the Chi-square value indicates that all of the three regression models are significant (99% confidence level), although the explanatory powers are relatively low.

Business cycle

In the first regression model, business cycle has taken the same sign as in the correlation table. That is, business cycle appears to be positively correlated with the amount of going concern opinions issued, which has the implication that relatively more opinions are issued in a recession. These results are supporting the descriptive results of our study. Furthermore, when considering the significance of the correlation between the issuance of going concern opinions and the business cycle the correlation test shows that the variable is significant at the 90% confidence level.

However, when including several other variables, as in the regression model, business cycle is not significant at any level. The second regression model includes the interaction variable between recession and the group of Big Four audit firms. Compared to the first model business cycle changes sign, which indicates that less going concern opinions are issued in a recession. On the other hand, the interaction variable's odds ratio amounts to 2.830 and is significant at the 95% confidence level. The implication here is that, given a recession and the assumption that the client is audited by one of the Big Four audit firms, the odds of receiving a going concern opinion is 2.830 times higher compared to if these variables are not given. Results from the second logistic model are therefore further supporting that auditors from one of the Big Four audit firms issues relatively more going concern opinions in a recession than in a boom. Results from the third logistic regression are approximately the same as the results from the second logistic regression, but the odds ratio is increasing from 2.830 to 2.932.

Audit Firm Size

The first regression model indicates that the correlation between being audited by one of the Big Four audit firms and receiving a going concern opinion is slightly positive. That is, auditors from one of the Big Four audit firms appear to issue relatively more going concern opinions than auditors from smaller firms. This is in line with the results from Pearson correlation test. However, the independent variable is not significant in none of these tests. In accordance with the descriptive results no support is given to the hypothesis that the Big Four audit firms issues relatively more going concern opinions.

In the second model, however, including the interaction variable, audit firm size changes sign and shows a negative relationship. This can, as indicated in the above section, be explained by the interaction variable showing a strong significant relationship between recession, Big Four audit firms and the issuance of going concern opinions. Finally, no material change is noticed when type of industry is included in the third model.

Financial distress

The independent variable financial distress shows a positively significant relationship (99% confidence level) in all of our three logistic regression models as well as in Pearson correlation test. This means that financially distressed companies receive relatively more going concern opinions. Further, the coefficient is slightly increasing from 2.042 to 2.140 when additional variables are included in the second and third regression model. It appears that, given that a company is financially distressed, the odds of receiving a going concern opinion is 2.042 times higher than if not financially distressed (or 2.080 and 2.140).

Bankruptcy lag

Bankruptcy lag is, as indicated in the correlation table, significantly negatively correlated with the number of going concern opinions issued (at 99% confidence level). This indicates that if there is a short period of time between the audit report date and the bankruptcy date, it is more likely that the audit report has been modified with a going concern opinion. The coefficient shows that the probability that a going concern opinion has been issued is decreasing by 0.7% every day after the audit report has been signed.

Client Firm Size

The independent variable client firm size has not taken the expected sign in none of our logistical regression models or in the correlation table above. That is, our empirical findings are not given any support to that auditors should be more unwilling to issue going concern opinions to larger clients. Further, the variable is not significant, whereupon no conclusions should be drawn from these results.

Type of industry

Type of industry is included in our third logistic regression and it leads to a slightly increased explanatory power, Nagelkerke R^2 increases from 17.8% to 19.0%. When considering the correlation between each one of the independent variables and the dependent variable, significant correlations are shown in the wholesale and retail trade sector (95%) and in accommodation and food services activities (99%). However, when including types of industry in our third logistical model no more than the accommodation and food service industry is significant (90% confidence level). It appears that companies within this industry receive modified opinions to a greater extent than other industries. This result is in conformity with the descriptive data, which shows that auditors issued going concern opinions to 27.1% of the companies filing for bankruptcy in this sector (highest proportion of all industries).

5.4 Results from hypotheses

The below table is a summary of our results and the arguments for accepting or rejecting our stated hypotheses.

Table 14 - Summary of our hypotheses

<i>Hypothesis</i>	<i>Argument</i>	<i>Conclusion</i>
H1 <i>Auditors issues relatively more going concern opinions in a recession than in a boom.</i>	Descriptive results: Yes Test of proportions: No Correlation: Yes * Regression: No	The hypotheses can neither be accepted or rejected
H2 (a) <i>The relative percentage of going concern opinions for companies filing for bankruptcy will be greater for the group of Big Four audit firms compared to the group of smaller audit firms.</i>	Descriptive results: Mixed evidence Test of proportions: No Correlation: No Regression: No	Rejected
H2 (b) <i>Auditors from one of the Big Four audit firms issue significantly more going concern opinions in a recession than in a boom compared to auditors from one of the smaller audit firms.</i>	Descriptive results: Yes Test of proportions: Yes ** Correlation: Yes ** Regression ²⁴ : Yes **	Accepted
H3 (a) <i>Financial models are more effective than auditors in predicting future bankruptcies in the year prior to the bankruptcy.</i>	Descriptive results: Yes Test of proportions: Yes ***	Accepted
H3 (b) <i>Financial models are predicting relatively more bankruptcies in a recession than in a boom due to adverse key financial ratios.</i>	Descriptive results: No Test of proportions: No	Rejected

* Significant at 90% confidence level

** Significant at 95% confidence level

*** Significant at 99% confidence level

²⁴ Result from Pearson correlation test and the logistic regressions (2 and 3) shows that there is a significant relationship between business cycle, auditors from the group of Big Four audit firms and the number of going concern opinions issued. However, the results do not show how this relates to the medium-sized and the smaller audit firms.

6 Analysis

6.1 Going concern opinions and the business cycle

To begin with, statistics show that the rate of bankruptcies increased significantly between the years 2007 and 2009, indicating that an economic downturn puts an extra pressure on a company's ability to remain in business. Further, we are of the opinion that there is presumably a higher degree of uncertainty regarding a firm's ability to remain in business during a recession than in a boom due to changes in the business environment. An auditor has to consider these circumstances when performing the audit assignment, whereupon it is reasonable to assume that the rate of going concern opinions will differ between the years.

Empirical results of our thesis indicate that Swedish auditors tend to issue relatively more going concern opinions in a recession than in a boom. The relative proportion of going concern opinions issued in the year 2007 amounted to 12.8% while the amount for 2009 was 16.2%. Yet, the results of our thesis show that there is no statistically significant relationship between the issuance of going concern opinions and the economic situation, upon which it is not possible to determine the impact of the business cycle. Another empirical study from Sweden shows similar results. Olsson et al., 2010 find no correlation between the business cycle and auditors' propensity to issue going concern opinions, the corresponding figures amounts to 12.2% in a boom 13.1% in a recession. However, the relationship between the economic situation and the number of issued opinions seems to be more negatively correlated in our study, which may be explained by the larger number of observations included in this thesis (747 compared to 299). Furthermore, we had the same expectation as Venuti (2004) when we developed this hypothesis, but as the results of Venuti's study and ours indicate the issuance of going concern opinions does not fluctuate significantly in different stages of the business cycle.

On the other hand, when controlling for specific variables there are patterns indicating that the business cycle may have an impact on the number of going concern opinions issued by the auditors. Empirical studies (e.g. Geiger & Rama, 2006) provide evidence that going concern opinions are positively correlated with financial distress. Our results support earlier studies as a result of which it is possible to conclude that financial distress is a significant variable when determining whether to issue a going concern opinion. We were of the opinion that it is reasonable to assume that key financial ratios will be adverse in a recession, upon which financial models are predicting relatively more bankruptcies in a recession than in a boom. But, as our findings indicate there is no statistically significant difference between the proportions of predicted bankruptcies between the given years, as a result of which H3 (b) is rejected. On the other hand, Table 8 shows that given financial distress significantly more going concern opinions are issued in a recession compared to a boom. The implication here is that an increased number of going concern opinions in 2009 cannot be explained by adverse financial ratios during the impending recession. But, since auditors change their going concern assessment in an economic downturn, it may therefore be a result of the recession itself. Additional pattern indicating the impact of the business cycle will be discussed in section 6.2.

Moreover, since there are relatively few empirical studies on the business cycle and going concern opinions other studies has to be discussed. Our results are, when not considering the business cycle, corresponding to the results of previous Swedish research. Blom and Jansson (2009) shows that 19.8% of all companies that filed for bankruptcy received a going concern opinion in the audit report in the year prior to the bankruptcy, compared to 14.9% in our study. However, in an international context, our results seem to be low. A Belgian study (Vanstraelen, 2003) came to the result that 37% of the companies received a going concern opinion in the year prior to the bankruptcy, whilst American studies show that the percentages are in well over 50% (Geiger et al, 2005; Nogler, 2008). Hope and Langli (2010) argue that lower percentages in continental countries and in studies examine privately held client firms can be explained by the fact that the litigation and reputation risks are lower for these auditors.

6.2 Going concern opinions and audit firm size

There are several reasons for believing that larger audit firms produces higher audit quality, that is, issues more going concern opinions to companies filing for bankruptcy than smaller audit firms. The results indicate that seen over a business cycle medium-sized audit firms issue relatively more going concern opinions than the group of Big Four audit firms and smaller audit firms. Yet, our results show that there is no statistically significance between groups of audit firms and the issuance of going concern opinions, whereupon H2 (a) is rejected.

Our results do not correspond to the vast majority of previous research. According to DeAngelo (1981) larger audit firms should provide higher audit quality because of larger quasi-rents serving as collateral. The implication here is that Swedish auditors' capability to (1) detecting a going concern problem and (2) reporting the uncertainty may not differ between the three groups of audit firms. Further, empirical studies (Francis & Krishnan, 1999; Ruiz-Barbadillo, 2004; Geiger & Rama, 2006) point in a direction that is favourable for the Big Four audit firms, which thus is inconsistent with the results of our study. Findings from previous studies are explained by a higher degree of independence, potential litigation costs and larger reputation risk for larger audit firms. However, these studies are based on publicly traded companies as a result of which the findings may not be comparable to ours.

Conversely, Citron and Taffler (1992) give no support for a correlation between audit firm size and audit quality, neither does Nogler (2008) or Blom and Jansson (2009). These findings are in line with our results. Citron and Taffler argue that smaller audit firms' dependency of their clients may be overstated, which may be a potential explanation to our results as well. Hope & Langli (2010) support this conclusion and argue that independence is not an issue for auditors of private client firms. Another possible explanation to our results is that the costs associated with a going concern opinion are not as high as the costs in, for example, Anglo-American countries (Vanstraelen, 2003; Hope & Langli, 2010). This implies that it may not be possible to assume that Swedish auditors from one of the Big Four audit firms have higher incentives to issue relatively more going concern opinions, even if they have superior internal control systems and superior resources. Another possible reason why our results differ from the expected ones is that we have chosen not to make a distinction between the sizes of Big Four offices. Francis and Yu (2009) shows that larger Big Four offices provide higher audit quality than smaller ones. If this is the situation in Sweden as well, the outcome of our study may have turned out differently if this distinction were made.

In spite of the above discussion our results show, when considering the business cycle, that only auditors from one of the Big Four audit firms issue significantly more going concern opinions in a recession than in a boom, 10.5% compared to 19.9%. The test of proportions as well as the two logistic regressions show significance at the 95% confidence level, as a result of which H2 (b) is accepted. Empirical studies provide evidence that auditors' behaviour have changed, that is they have become more conservative in their audit assignment, between different time periods because of external events (Geiger et al., 2005; Nogler, 2008). Fisher (2009) argues that the going concern assumption is given more attention in a recession than in a boom, as a result of which the public interest and headlines in the newspaper may force auditors to provide stakeholders with more accurate disclosures in the audit report. That is to say, due to the public scrutiny of especially larger audit firms and the risk of losing reputation, it is reasonable to expect a change between the time periods since the perceived cost may be higher in a recession than in a boom. Our findings may also be a result of bigger investments in audit technology, audit training, and a larger number of audited clients (Geiger & Rama, 2006). In other words superior resources may lead to an ability to be more forward-looking and a higher capability to identify companies with going concern problems in a recession.

6.3 Going concern opinions and bankruptcy prediction models

Our last hypothesis aims to test if bankruptcy prediction models are more precise in predicting future bankruptcies compared to the number of going concern opinions issued by auditors. Findings of our study indicate that is the situation, whereupon H3 (a) is accepted. For example, in 2007 the Z-score models predicted 39.5% and 68.2% of the business failures while auditors issued going concern opinions to 12.8% of the companies. That is to say, when *only* considering financial ratios, given that financial models are effective in predicting future bankruptcies, auditors should have been able to issue relatively more going concern opinions.

Findings from the bankruptcy prediction models are in line with Hagberg's study (2006), in which the Z-score models correctly predicted 33% respectively 62% of the bankruptcies. Results from previous studies show, in conformity with our findings, that the difference between the financial model and the number of going concern opinions issued by auditors is quite large. Koh and Killough (1990) presented the following findings, 78% for the model and 21% for auditors, whilst the corresponding figures in Altman and McGough's study (1974, in Kida, 1980) amounted to 82% and 44%.

By contrast, there may be several ramifications associated with the issuance of going concern opinions, which in turn may explain the large difference between the model and the number of modified opinions. To begin with, in a situation where the auditor has dual principals it is more likely that the auditor chooses to comply with its client's requirements, when the auditor is considered to be a utility maximizer. The auditor has to make a trade-off between the potential risks and costs when deciding whether to highlight a going concern uncertainty. That is to say, a going concern opinion may lead to discontinuation of the audit assignment, which is not in line with the interest of the auditor (Antle, 1982; Gaviols, 2007; Öhman, 2007). Auditors' dependence of their clients might result in them being not completely neutral in the audit assignment, when the auditee pays the auditors remuneration (Bazerman et al., 2007). Moreover, regardless of whether the self-fulfilling prophecy is given any support, it seems to be the auditors' belief that an opinion may turn a company's potential problem into a real one, upon which auditors are put in an ethical and

economic dilemma when deciding whether to issue a going concern opinion (e.g. Citron & Taffler, 1992; Citron & Taffler, 2001; Vanstraelen, 2003). Additional support for the previous discussion is given by that auditors in our study to a large extent (25.6% of the companies) tend to express an opinion by referring to the rules in ABL 25:13. That is, highlighting that the company's equity is less than half of the registered share capital, without disclose the matter as a going concern uncertainty. The implication of the former discussion is that an unwillingness to issue a going concern opinion does not necessarily mean that the auditor is not aware of a company's financial problems and the perceived costs associated with an issuance may therefore explain the low amount of going concern opinions in our study. Lastly, another possible reason why the amount of issued going concern opinions is quite small is that Swedish auditors are of the opinion that more future-oriented information, such as a firm's ability to continue as a going concern, should be assessed by, for example, the company's stakeholders. (Öhman, 2007).

7 Conclusions and suggestions for further research

7.1 Conclusions

Our results suggest that different stages of the business cycle appears not to substantially affect auditors propensity to issue a going concern opinion in the audit report. Yet, there is a tendency of relatively more going concern opinions being issued during an impending recession. When considering companies with financial distress our findings show that significantly more opinions are disclosed in a recession, whereupon it may be possible to conclude that the business cycle in fact is an important variable. Additionally, it appears that no evidence is to be found that larger audit firms provides higher audit quality, that is significantly more going concern opinions are issued. However, we find support of larger audit firms being superior when controlling for business cycle. The implication of the previous discussion is that, although our main hypotheses cannot be accepted, business cycle and audit firm size appears to be important variables in the assessment of a company's ability to remain as a going concern. We are of the opinion that when a company already is financially distressed an economic downturn puts an extra pressure on the ability to remain in business, as a result of which auditors issues more going concern opinions compared to if the economic situation would have been reversed. Likewise, it is our impression that when stakeholders and the public interest are paying more attention to the future prospects of firms, that is, during a recession, larger audit firms become more conservative in the audit assignment. That is to say, the costs associated with the issuance of a going concern opinion may not be the same for different groups of audit firms. Smaller audit firms may see the loss of a client as the biggest cost, whilst larger audit firms are considering the cost of decreased reputation as the biggest. This implies that it may be less costly for larger firms to disclose a going concern uncertainty in a recession when more attention is drawn to their work. It is also our opinion that the Big Four audit firms have a greater capability to identify potential bankruptcies depending on the current business cycle because of the large number of audited clients and superior internal resources. Specifically, the group of Big Four audit firms may easier foresee the impact of an economic downturn and take this into account when performing the audit assignment. Moreover, we believe that instructions from standard-setting boards are followed more closely by larger audit firms, which may have led to a more conservative reporting.

Noteworthy is also that auditors tendency to issue a qualified audit report seems to be high, although the number of going concern opinions is low. In our view, this indicates that auditors rather disclose events or circumstances, for example that the company's equity is less than half of the registered share capital, than directly questioning the future prospects of the firm. This behaviour may be explained by auditors' fear of losing the client, that is, a going concern opinion might have the impact of discontinuation of the audit assignment. If ABL 25:13 disclosures had been considered as disclosures of going concern uncertainties the amount of opinions would have been much higher. For that reason, we believe auditors to be very cautious in disclosing a going concern modification. Our findings therefore indicate that auditors mainly focus on historical data rather than providing stakeholders with future-oriented information.

To sum up, our findings show that the number of bankruptcies predictable by financial ratios is well over the number of opinions issued by the auditors, there is a large amount of qualified audit reports referring to ABL 25:13 and an average bankruptcy lag of just seven months. Taking all these things together, this means that it is not unreasonable to expect that auditors should have been able to issue relatively more going concern opinions, over a business cycle as well as in a recession. However, it is our opinion that the results of our study are somewhat understandable. When auditors are criticised of their inability to forewarn stakeholders of forthcoming business failures, the focus is placed on whether a going concern opinion is issued or not. In our view the reality is not that black and white. Hence, when considering the extent of the potential ramifications associated with a going concern opinion, for both auditors and their clients, we are questioning whether it is reasonable to expect that auditors should be able to condemn the future of a client firm.

7.2 Suggestions for further research

Our aim was to examine a large sample of companies that filed for bankruptcy to make it possible to generalize the findings to the overall population. However, this approach is subject to some limitations due to the difficulty to interpret and explain the findings of our study. Further research could aim at focusing more on details and analysis. A potential method is to base the study on a more qualitative approach, that is, a case study. We suggest interviews with auditors, from both large and small audit firms, to investigate what upon they base their going concern assessment, especially in times of recession. In our view, this could be an important contribution to more statistically focused studies like ours. Moreover, there is limited research when it comes to the going concern assumption and auditors point of view.

Findings from our study show a tendency of auditors being more able to foresee forthcoming bankruptcies in a recession compared to a boom within the manufacturing industry, while the reverse relationship is shown within the wholesale and retail trade industry. That is to say, this indicates that changes in market conditions may have affected auditors' ability or propensity to highlight a going concern uncertainty in the audit report. Further research could thus aim at investigate bankruptcy companies within these two industries in order to examine whereupon the number of issued going concern opinions differ among the business sectors. Another reason to limit the research is that results of our study, for example when considering client firm size, show rather large standard deviations. We have chosen to include all sizes of limited liability companies within all types of industries, as a result of which large standard deviations are shown. Besides, it might also be easier to identify existing patterns in a narrower scope of study.

Lastly, we are assuming that all Big Four offices are the same in terms of audit procedures and audit quality. However, we are aware of that audit quality may differ between Big Four office of varying sizes, but such differences are beyond the scope of this study. For example, Francis and Yu (2009) show that larger offices are more likely to issue a going concern opinion to a company filing for bankruptcy and thus have higher audit quality. Further research could thus aim at examining differences between Big Four offices in Sweden.

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Appendices

Appendix A

<i>Classifications for types of industries</i>		<i>n</i>	<i>Classification for descriptive data</i>	<i>n</i>	<i>Classification for correlations and logistic regression models</i>	<i>n</i>
	<i>SNI 2007</i>					
A	Agriculture, forestry and fishing	5				
B	Mining and quarrying	1				
C	Manufacturing	100	Manufacturing	100	Manufacturing	100
D	Electricity, gas, steam and air conditioning supply	2				
E	Water supply, sewerage, waste management & remediation activities	1				
F	Construction	96	Construction	96	Construction	96
G	Wholesale and retail trade	227	Wholesale	227	Wholesale and retail trade	227
H	Transportation and storage	41	Transportation	41		
I	Accommodation and food service activities	48	Accommodation	48	Accommodation and food service activities	48
J	Information and communication	29	Information	29		
K	Financial and insurance activities	11				
L	Real estate activities	21	Real estate activities	21		
M	Professional, scientific and technical activities	84	Professional activities	84	Professional, scientific and technical activities	84
N	Administrative and support service activities	30	Administrative activities	30		
O	Public administration and defence; compulsory social security	0				
P	Education	11				
Q	Human health and social work activities	11				
R	Arts, entertainment and recreation	14				
S	Other service activities	15				
T	Activities of households as employers	0				
U	Activities of extraterritorial organisations and bodies	0	Miscellaneous	71		
		747		747		555

Appendix B

<i>Type of going concern disclosures</i>	<i>2007</i>		<i>2009</i>		<i>Total</i>		<i>z value</i>
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	
<i>Adverse opinion</i>	9	23.7%	8	11.0%	17	15.3%	-1.766**
<i>Qualified opinion</i>	6	15.8%	20	27.4%	26	23.4%	1.370
<i>Disclaimer of opinion</i>	3	7.9%	0	-	3	2.7%	-2.434**
<i>Emphasis of matter</i>	20	52.6%	45	61.6%	65	58.6%	0.915
Total	38	100%	73	100%	111	100%	-

z value is based on the proportions for each year and each type of disclosure

** Significant at 95% confidence level

Appendix C

Correlation table		Audit firms			Financial Distress		Bank. lag	Client firm size		Type of Industry					Interaction
		Big	Medium	Small	Z'	Z''		TA	Sales	C	F	G	I	M	
Going concern (1=opinion issued)	0.053*	0.024	0.022	-0.037	0.137***	0.165***	-0.282**	0.036	-0.008	0.046	-0.014	-0.064**	0.090***	0.008	0.074**
Business cycle (1=2009)		0.017	-0.002	-0.014	0.003	-0.019	-0.043	0.132***	0.026	0.020	0.016	-0.019	0.022	0.042	0.384***
Big (1=audited by Big Four)			-0.238***	-0.772***	0.016	0.045	-0.050*	0.103***	0.087***	0.011	-0.084**	0.035	-0.075**	0.077**	0.729***
Medium (1=audited by Medium)				-0.434***	0.008	-0.018	-0.027	0.029	0.008	0.063**	-0.054*	-0.007	0.040	0.003	-0.173***
Small (1=audited by Small)					-0.020	-0.030	0.064**	-0.114***	-0.086***	-0.051*	0.113***	-0.028	0.044	-0.074**	-0.562***
Z' (1=financial distress)						0.402***	-0.074**	-0.101***	-0.422***	0.010	-0.051*	-0.074**	-0.012	0.034	0.010
Z'' (1=financial distress)							-0.129***	-0.037	-0.030	0.008	-0.028	-0.032	0.091***	-0.033	-0.006
Bank. Lag (number of days)								-0.065**	-0.049*	-0.047	0.036	0.010	-0.103***	0.032	-0.049*
Total assets (log TA)									0.635***	0.194***	0.031	-0.040	-0.076**	-0.111***	0.124***
Turnover (log sales)										0.129***	0.047	0.050*	0.038	-0.135***	0.087***
Manufacturing (C) (1=manufacturing)											-0.151***	-0.260***	-0.103***	-0.139***	0.006
Construction (F) (1=construction)												-0.254***	-0.101***	-0.136***	-0.048*
Retail (G) (1=retail)													-0.173***	-0.234***	0.032
Hotel (I) (1=hotel)														-0.093***	-0.068**
Professional (M) (1=professional)															0.096***

n = 747 *Significant at 90% confidence level ** Significant at 95% confidence level ***Significant at 99% confidence level