

Sormunen, Nina

Doctoral Thesis

Auditor's going-concern reporting: Reporting decision and content of the report

PhD Series, No. 27.2012

Provided in Cooperation with:

Copenhagen Business School (CBS)

Suggested Citation: Sormunen, Nina (2012) : Auditor's going-concern reporting: Reporting decision and content of the report, PhD Series, No. 27.2012, ISBN 9788792842817, Copenhagen Business School (CBS), Frederiksberg,
<https://hdl.handle.net/10398/8490>

This Version is available at:

<https://hdl.handle.net/10419/208823>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by-nc-nd/3.0/>

COPENHAGEN BUSINESS SCHOOL
HANDELSHØJSKOLEN
SOLBJERG PLADS 3
DK-2000 FREDERIKSBERG
DANMARK

www.cbs.dk

Auditor's going concern reporting



Auditor's going-concern reporting

Reporting decision and content of the report

Nina Sormunen

PhD Series 27-2012

ISSN 0906-6934

Print ISBN: 978-87-92842-80-0

Online ISBN: 978-87-92842-81-7

LIMAC PhD School
Department of Accounting and Auditing

PhD Series 27-2012

AUDITOR'S GOING-CONCERN REPORTING
REPORTING DECISION AND CONTENT OF THE REPORT

NINA SORMUNEN

Supervisor:

Kim K. Jeppesen

LIMAC PhD School

Department of Accounting and Auditing

Nina Sormunen
Auditor 's going-concern reporting
Reporting decision and content of the report

1st edition 2012
PhD Series 27.2012

© The Author

ISSN 0906-6934

Print ISBN: 978-87-92842-80-0

Online ISBN: 978-87-92842-81-7

LIMAC PhD School is a cross disciplinary PhD School connected to research communities within the areas of Languages, Law, Informatics, Operations Management, Accounting, Communication and Cultural Studies.

All rights reserved.

No parts of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage or retrieval system, without permission in writing from the publisher.

CONTENTS

Acknowledgements	4
Summary	7
Article 1: <i>Late Financial Distress Process Stages and Financial Ratios: Evidence for Auditor's Going-Concern Evaluation</i>	30
Article 2: <i>Harmonization of Audit Practice: Empirical Evidence from Going-Concern Reporting in Scandinavia</i>	80
Article 3: <i>Bank Officers' Perceptions and Uses of Qualified Audit Reports</i>	136
Sammendrag (summary in Danish)	179

Acknowledgements

It is almost impossible for me to adequately thank all those who provided their guidance, support, and encouragement in the preparation of this dissertation. Writing my dissertation has been one of the most challenging, exciting, and personally rewarding journeys of my life. There are several contributors without whom I would not have been able to complete this study.

To begin with, I want to thank my supervisor at CBS, Professor Kim K. Jeppesen for his support during my studies. I truly appreciate his optimistic encouragement and guidance during my PhD project. Secondly, I want to thank the assessment committee: Professor Anne Loft, Professor Reiner Quick and Associate Professor Thomas R. Johansen. I highly value their comments and advice on this manuscript. I am also grateful to Dr. Thomas Carrington for his insightful comments at my pre-defense.

There are a number of other people who have provided valuable input on my work. First and foremost, I owe a great debt of gratitude to my co-authors. It has been a pleasure to work with them throughout this process. I am particularly grateful to Professor Stefan Sundgren for his constructive comments, suggestions, support and unwavering belief in me during my whole PhD project. Furthermore, I would like to thank Professor Teija Laitinen for believing in me and convincing me I had the capabilities to do this in the first place, without which I may have never embarked on this journey at all. Second, I am also indebted to Professor Erkki K. Laitinen and Professor Stuart Turley for their comments and discussions in the Auditing and Financial Accounting Research (AFAR) PhD workshop

(Vaasa, 2010) and the European Auditing Research Network (EARNet) PhD Workshop (Bergen, 2011), respectively. Finally, I would like to thank Professor Iris Stuart for not only the feedback that benefitted this dissertation, but also for her optimistic and positive support during this project.

Special recognition is due to all my colleagues at the Department of Accounting and Auditing. I am thankful to those who sacrificed their precious free time to answer questions, participate in discussions, and provide emotional support. Moreover, I truly feel fortunate to be around such wonderful colleagues who were incredibly welcoming when I arrived in Denmark and were a significant factor in making my stay permanent.

This dissertation has been financially supported by a number of foundations and organizations. I would like to express my gratitude to the Academy of Finland (Grant No. 126630), the Foundation for Economic Education, the Finnish Foundation for Economic and Technology Sciences (KAUTE), the Marcus Wallenberg Foundation, the Foundation for Promoting Equity Markets in Finland, the Evald and Hilda Nissi Foundation, the Eemil Aaltonen Foundation, Oskar Öflund Foundation and the Finnish Concordia Fund. I gratefully acknowledge the generous funding from the above mentioned organizations and foundations. Without their financial support, this dissertation process would not have been possible. Also, I wish to thank all the 18 respondents who participated in the interviews conducted in Article 3.

At a personal level, I owe my deepest gratitude to my family and good friends who have been with me throughout this project. Very special thanks

to my long-time friend, Virva, who has been supportive, understanding and loyal friend for as long as I can remember. Also, a very big thanks goes to Eero whose humor kept me smiling along the way. Most importantly, I thank him for always being positive, supportive and patient when I needed it the most. Finally, I would like to express my gratitude to amazing girls, Dominyka and Emma, who I got to know through my PhD journey. I am truly happy about our friendship and would like to thank them for sharing with me all the unavoidable ups and downs.

The last paragraph goes to my dearest family. I cannot even describe how grateful I am to my mom and dad, Eija and Teijo, and sister Petra. Without their continual love, support, encouragement and patience throughout my life, this dissertation would cease to exist. I owe you this.

Copenhagen, August 2012

Nina Sormunen

SUMMARY

Background, motivation and objective

The going-concern context has been the subject of much research and discussion for many years at both academic and professional levels. The International Standard on Auditing (ISA) 570 stipulates that the auditor should consider the appropriateness of managements' use of the going-concern assumption and to evaluate whether there are material uncertainties with respect to entity's ability to continue as a going concern. Regardless of what is stated in the financial statement, the auditor should comment on going-concern uncertainty in the audit report if there is a doubt about firm's ability to continue as a going concern. There is strong evidence that the auditor's going-concern decision is a complex task with extensive consequences. The primary purpose of this thesis is to empirically provide significant basis to get better understanding of the challenging nature of the auditor's going-concern reporting. This thesis deals with different aspects of auditor's going-concern reporting and contributes mainly to the line of auditing research.

The focus on the outcome of the audit process, namely the audit report, is important because the audit report has a significant role in signaling to outsiders about the prospects of the firm; providing a potential source of loss recovery for investors (insurance); and reducing agency costs (Dye 1993). First of all, if the auditor does not issue a going-concern opinion and the business encounters financial difficulties within the next fiscal year, the auditor will be increased risk of being held responsible to the stakeholders for the economic consequences of not having issued a going-concern

opinion. Moreover, qualified audit report should not be a matter of negotiation between auditor and business organization. Principle-based auditing standards allow auditors to train their judgment in the design of audit procedures and despite the different procedures used by auditors, the audit should arrive at the same audit opinion, given the principles laid down in the auditing standards (Trønnnes 2011). Finally, the setting of auditors' assessment of the going-concern modification is chosen because issuance of a going-concern opinion is the most frequent alternative to an unmodified audit report (Francis 2004), and accordingly represents the only viable option for research regarding the outcome of the audit process (Trønnnes 2011).

In sum, this thesis will provide new information, which has significant scientific and empirical value for regulators and standard setters, audit profession and academic community. Three empirical articles are provided to support auditor's going-concern evaluation and also to get better understanding of auditor's going-concern reporting in terms of harmonization and utility of the qualified audit report. The findings are also valuable for the owners, managers and financiers of the business firm. Next, this chapter provides a brief overview of the background and motivation of each article.

The first article generates new information to support auditor's going-concern decision-making. In the past years the number of distressed firms filing for reorganization and bankruptcy has significantly increased and auditors are aware of the very difficult worldwide economic crisis. There is a concern about auditors' awareness of matters relevant to the consideration of the use of the going-concern assumption in the

preparation of financial statements. Firms are faced with the challenge of evaluating the effect of the credit crisis and economic downturn on the entity's ability to continue as a going concern. It is questioned whether these effects on the entity ought to be described, or otherwise reflected, in the financial statements. These are the key messages in the international newsletter "AUDIT Considerations in respect of Going-concern in the Current Economic Environment", issued by The International Auditing and Assurance Standards Board (IAASB) in January 2009. The first article of this thesis is motivated to contribute to the IAASB newsletter by providing evidence on the challenging nature of the auditor's task to determine whether a company is able to continue as a going concern.

The second article investigates the consistency in auditor's going-concern reporting behavior. Much emphasis has been placed on the benefits of having similar rules across countries and at the moment over hundred countries are using or are in the process of implementing ISAs into their national auditing standards (IFAC 2011a). Despite the fact that ISAs have come a long way since they were developed, still it is not clear whether the adoption and implementation of globally consistent auditing standards has been successful. Particularly, the IAASB is concerned that the local implementation of the ISA does not ensure the development of a consistent practice (IAASB's strategy and work program 2009-2011) and thus, the second article of this thesis is motivated to provide evidence on this issue in terms of auditor's going-concern reporting before bankruptcy in the Scandinavian countries (Denmark, Finland, Norway and Sweden).

The third article investigates the insights into users' perceptions and uses of qualified audit reports, i.e. going-concern reports. Academics,

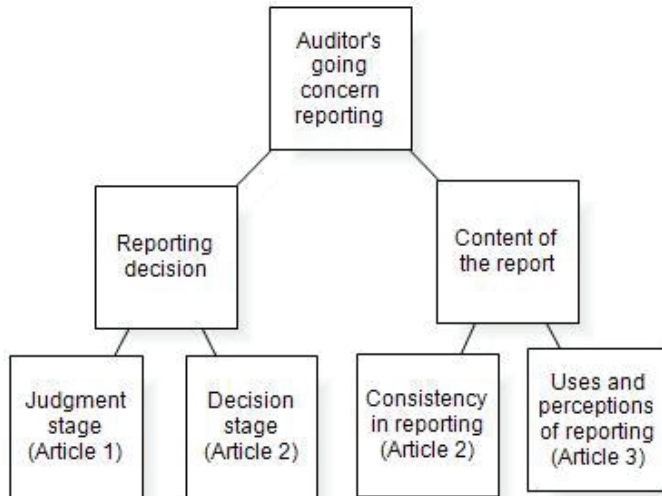
practitioners and regulatory bodies have considered changes to the auditor's report to enhance the auditor's reporting (e.g. Asare & Wright 2009) and indeed, for more than half a century, the relevance and utility of audit reports has been the subject of much research. The audit report is often criticized for failing to provide information content to users of financial statements (Church et al. 2008; Mock et al. 2009) and also, the IAASB and the PCAOB have taken action to changing the auditor's reporting model to increase its transparency and relevance to financial statements users.¹ Taken this together, the third article of this thesis is motivated to provide evidence on this issue by investigating the factors affecting the use and perceptions of qualified audit reports.

Structure and role of the individual articles

Figure 1 presents the structure of the current thesis as well as the role of individual articles in relation to the overall guiding objective of this thesis. This thesis examines the auditor's going-concern reporting and two overarching themes are investigated: (1) auditor's going-concern reporting decision; and (2) content of the report.

The first step in my process was to provide evidence on the challenging nature of the auditor's task to determine whether the company is able to continue as a going concern. As mentioned earlier, there is evidence that the auditor's going-concern decision is a complex task with extensive consequences for both the firm being audited and the auditors, who are likely to welcome any systems that support them in making the decision (Louwers 1988; Martens et al. 2008).

FIGURE 1
Role of individual articles



Moreover, it has been shown that more often than not, when it comes to predicting bankruptcy filings with audit opinions, going-concern opinions are rarely issued and the auditor is often criticized of letting users down when it comes to predicting failure events with audit opinions (see e.g. Sikka et al. 1988; Miller 1999; Casterella et al. 2000; Arnold et al. 2001; Citron and Taffler 2001). According to Asare (1992), auditor's decision-making can be viewed as a two-stage process; first a judgment stage in which the auditor form an initial belief about the client's financial distress or stability. Here the auditor collects and evaluates evidence in the form of ratios, contrary information and mitigating factors, as many different factors may influence the firm's possibility to continue as a going concern. At last,

in the second stage (decision stage) the auditor finally decides on the type of report to issue. Taken this together, Article 1 generates information to support auditor's decision making and Article 2 provides evidence of the type of the report which auditor decides to issue.

The second step of my process was to investigate the outcome of the audit process, namely the audit report. To begin with, going-concern reporting is one example where the auditing standards seem to be fairly consistent across countries, but the extant practice might vary (Martin 2000). Moreover, there is still a concern of the quality, relevance and value of auditor's reporting on international basis and the auditor's report is criticized, largely because it does not provide informational value (see e.g. Church et al. 2008). In light of the content of the audit report, Article 2 investigates the consistency of auditors' assessment of the going-concern report in the Scandinavian countries and Article 3 provides evidence of the users' perceptions and uses of qualified audit reports with particular focus on going-concern reports.

Contributions and implications

Each of the research paper in the current dissertation constitutes independent contributions to the previous literature and accordingly, all three articles can be read separately.

Article #1

Late Financial Distress Process Stages and Financial Ratios: Evidence for Auditor's Going-Concern Evaluation

The current study adds to our understanding and knowledge of financial distress predictions regarding the usefulness of financial ratios' in the latter stages of the financial distress process. The empirical research on the late stages of the financial distress process is very scarce and our study is one of the first attempts to consider auditors' support requirements for short-term predictions. This research is important because the points of time at which auditors' going-concern decisions are made can vary significantly, and in cases of short-term prediction this variation can have more severe effects on financial ratios and statistical models than in cases of long-term prediction. Understanding the behavior of financial ratios during the late stages of these financial distress processes is therefore important, and this study highlights the importance of that behavior. In sum, our contribution to the previous literature is to generate information concerning: (1) the behavior and usefulness of single financial ratios in short-term financial distress prediction when the effect of each different financial distress process stage is considered and; (2) the effects of recognition of the financial distress process stage on the financial distress prediction model.

Our study has implications for general understanding of the behavior of financial ratios during the late stages of a financial distress process. According to the IAASB's newsletter 2009, the IAASB is concerned about matters relevant to the consideration of the use of the going-concern assumption in the preparation of statements in the current environment. In this context, the study findings indicate that the auditor's going-concern

task of assessing the severity of financial distress for the ongoing year could be supported by paying attention to the financial distress process stages. That is, certain changes in the financial ratios indicate at which stage the firm is. If the company's financial statement indicates that in addition to decreased profitability (early stage) and increased leverage (late stage) also the liquidity (final stage) is poor, the company should be considered to be at the final stage. However, it is possible that the auditor should not issue a going-concern opinion if the business is not at risk of liquidation during the next fiscal year. To avoid the increased risk of being held responsible to the stakeholders for the financial consequences of not having issued a going-concern opinion when needed, or on the other hand having issued one without justification, an auditor should, as part of the decision-making process, examine liquidity ratios when the company is at the final stage. The decision to issue a going-concern opinion will then be based on the auditor's evaluation and judgment of the adequacy of the company's liquid assets for the next fiscal year.

Article #2

Harmonization of Audit Practice: Empirical Evidence from Going-Concern Reporting in Scandinavia

The prior international accounting research contains substantial research into similarities and differences of accounting practices and disclosures across countries but still little seem to be known about the international aspects of auditing. While ISAs have come a long way since they were developed, still it is not certainly clear whether the adoption and implementation of globally consistent auditing standards has been

successful. The purpose of our paper is to study harmonization of audit reporting behavior in terms of auditor's going-concern reporting in Scandinavia (Denmark, Finland, Norway, Sweden). Particularly, our paper investigates bankrupt companies and we ask and empirically investigate whether there are differences in the going-concern reporting practice across the Scandinavian countries. Moreover, previous studies provide evidence that Big 4 auditors perform higher quality audits than non-Big 4 auditors and we investigate as our second research question whether going-concern reporting across the Scandinavian countries is more homogenous for Big 4 audited firms than for non Big 4 audited firms.

The study findings indicate that, despite the similar standards, there are cross-country differences in audit reporting behavior. Moreover, the cross-country variation in reporting behavior seems to be smaller for Big 4 audited companies than for non Big 4 audited companies, implying that large international audit firms have been significant factor in consistent audit reporting behavior. We argue that the explanations for the variation in practice are to be found primarily in differences in culture regarding going-concern reporting which are likely caused by differences in the timing of regulation. Thus, the longer going-concern reporting according to ISA 570 rules has been obligatory in the countries, the higher the proportion of going-concern modifications of the auditors' reports. The study thus indicates that it takes relatively long to fully implement the ISAs in practice. An additional explanation for the variance in practice may be found in differences in auditor education, indicating that the countries with the longest education also have the highest proportion of going-concern modifications. Disciplinary sanctions may also affect reporting practice, but we are not able to show a link between the severity of potential or actual

sanctions and reporting practice. Finally, the observed differences ultimately decrease the development of international business activity and most importantly, the study clearly demonstrates the need for improvement of going-concern reporting practices. The study also indicates that users of financial statements should be careful not to interpret a going-concern opinion in the same way in all national contexts. This could lead users to misestimate the level of uncertainty associated with the going-concern assumption when evaluating company risk and prospects.

Article #3

Bank Officers' Perceptions and Uses of Qualified Audit Reports

The current article contributes to the line of auditing research by developing a users' oriented model of the banks' uses and perceptions of qualified audit reports provided by SMEs in the context of auditor's going-concern reporting. The main contribution lies in investigating qualitative data, and the purpose is to go beyond the initial question whether users find the audit reports that have been modified for going-concern reasons to be useful. Through interviews with bank industry officers, the current study seeks to identify and conceptualise the pattern arising from the users' perceptions and uses of qualified audit reports in the banking industry. It is important to explore what factors affect the uses of information and how and why audit reports can provide the information. Unfortunately little is known about these issues, and in addition, previous studies have produced mixed results regarding the utility of going-concern reports. By focusing on qualitative data and developing a model of patterns of the

perceptions and uses of audit reports, this study makes a contribution to this under-researched area.

The main conclusion of this study is that there is a 'less decision usefulness' perspective of qualified audit reports. Despite the fact that banks were considered to be one of the main users of financial reports, the findings of the study suggest that the audit report holds limited interest to bank officers. This study demonstrated that bank officers examined the qualified report as a first-order filter that served as an early warning system, but otherwise qualified audit reports were seen to be of limited use. The main factor affecting the utility of the information is the use of a great variety of other information sources. Moreover, low quality of information, accounting expertise and attitude towards auditing were found to be important factors that influenced how information was used. Finally, the findings give credence to the notion that sophisticated and informed groups such as finance industry officers are not completely aware what the audit report is intended to communicate. In the Finnish context, the findings encourage the auditing profession and standard setters to enhance the public's awareness of the nature, meaning and implications of the audit report. There is a need for the audit profession to be more proactive to meet the needs of all users of their reports rather than merely serving boards of directors. Finally, consistent with the IAASB consultation paper and the PCAOB's concept release, further work to enhance the content and transparency of auditor's report is needed.

Data and research methods

The current thesis applies various data sources and research methods to investigate auditor's going-concern reporting. These are described as follows and as in the previous section, each article is discussed separately.

Article #1

Late Financial Distress Process Stages and Financial Ratios: Evidence for Auditor's Going-Concern Evaluation

In the current article empirical data consist of financial statement information from 106 distressed Finnish reorganization firms and their matched counterparts for 2003-2007. For the reorganization firms, the last accounting year before filing the petition for reorganization is considered. The sample is split into two groups according to the date of reorganization filing to analyze the effect of distress process stage: 1) 1-182 days and 2) 183-365 days after the closing of accounts. That is, the firms that had filed their application for reorganization during the first 1 to 182 days after the date of last financial statements are considered as being in the final stage of distress process at the time of last closing of accounts and this sub-sample is called Group 1 (final stage). Correspondingly, firms that had filed their application for reorganization during the last 183 to 365 days after the date of last financial statements were considered as being in the late but not final stage of distress process at the time of last closing of accounts. This sub-sample is called Group 2 (late but not final stage).

The current research studies two hypotheses and we analyze twelve financial ratios of Group 1 and Group 2 separately against the ratios of their viable matched pairs. In the present study both binary univariate LRA based on conditional (default) probability and multivariate LRA are applied to test hypotheses. Every financial ratio is tested separately by LR to find out its ability to classify the reorganization and viable firms. In the multivariate analysis the stepwise LR analysis is applied to test which variable or combination of variables are significant in its (their) ability to discriminate between reorganization and viable firms. Finally, for the stability of financial ratios it is essential that the ratios keep their information content during the whole post-accounting period (1-365 days after the closing of accounts) and this stability was assessed by the Z-test to test the differences between the correct classification rates for the sub-periods.

Article #2

Harmonization of Audit Practice: Empirical Evidence from Going-Concern Reporting in Scandinavia

The data available for the study include financial statement and background information for 2943 Danish, Finnish, Norwegian and Swedish companies having filed for bankruptcy within 365 days after the balance sheet date. The Danish dataset consists of 291 limited companies declared bankrupt in the period 1 June – 30 September 2009. The Finnish data consist of 104 companies that filed for bankruptcy in 2007-2011. The Norwegian data set consists of 1173 limited companies that were declared bankrupt during 2008 and 2009. Finally, the Swedish data consists of 1387

companies that filed for bankruptcy between October 2008 and October 2009.

We use the propensity to issue going-concern opinions in our examination of differences in practices between the countries. In our multivariate analyses logistic regression model is used to study our research questions and the model controls for the facts that audit firm size, the financial health, the size of the company and the time between the balance sheet date and bankruptcy may influence the reporting. We are also interested in whether auditor reporting is more homogenous between countries in firms audited by Big 4 auditors than non Big 4 auditors. In our study of research question 2, we drop BIG 4 from the model and we estimate the model on the sub-samples with Big 4 audited firms and non Big 4 audited firms.

Article #3

Bank Officers' Perceptions and Uses of Qualified Audit Reports

This study investigates on the qualitative data. The data used for the purposes of this study was collected in November 2010 and in January 2011 through semi-directed individual interviews with bank industry officers. The main reason for focusing on banks was that bank industry officers are one of the main users of financial information (see e.g. Dang-Duc *et al.* 2006) who, in no small part, base their decisions on the financial health and stability of a company (Anandarajan *et al.* 2002). Accordingly, the bank industry officers who were in a position to make appropriate judgments on lending facilities and associated issues in relation to a loan

application were interviewed. All interviews were conducted in Finnish and the interviews took place mostly in Helsinki. Majority of the interviews lasted between from half hour to one hour and the average length of interviews was 40 minutes. Several steps were taken to improve the reliability of the data collection.

First, an interview guide was used to ensure a consistent framework and coverage of topics. Second, all of the respondents were given assurance of anonymity to encourage open and honest responses. Third, each interview was recorded with the respondents' permission and little note taking was undertaken in order to promote an open dialogue on the matters being discussed. The recorded interviews were transcribed and NVivo was used to help the qualitative analysis process. The coding process was also a way of grouping summaries into a smaller numbers of sets, themes or constructs. This feature was useful in identifying the patterns arising from the interviews. Accordingly, the coding process helped to construct coding models (Strauss 1987; Berg 2004) and to serve as a tool for identifying and analyzing new themes arising from the interviews (Dang-Duc *et al.* 2006).

Future research directions

While I believe that the articles contained in the current dissertation shed an interesting light on auditor's going-concern reporting, there are still several things that we do not know.

The first article adds to our understanding and knowledge of financial distress prediction regarding financial ratios' usefulness in the late stages of financial distress process. However, the study is limited in several ways and the empirical results led us to find important research directions in the future. First, the empirical research in recognizing different financial distress processes can highlight the changes in the ability of financial ratios to classify viable and non-viable businesses at different financial distress process stages. In this study we have not made any assumptions concerning different financial distress processes but concentrated only on the two last stages of the process. Accordingly, a further study focusing on more than just two stages of the financial distress process seems merited. Second, we were only able to include a limited amount of financial dimensions and financial ratios in the analysis. The careful examination of different financial distress processes will probably expand the necessary set of financial dimensions and financial ratios to be examined. This research would be very relevant, especially due to its potential to support going-concern evaluations made by auditors. Finally, the present study has been unable to investigate the outcome of businesses filing a reorganization application, the study findings are based on a relatively small sample of reorganization companies, and the paper lacks the information on ownership structure that might have an effect on the ability to continue as a going-concern in the face of financial difficulties.

In the second article there are some potential limitations relevant to this study and further research is needed. To begin with, the findings indicate that inconsistent going-concern reporting practice is likely to be found elsewhere, and the Scandinavian study may thus serve as a benchmark for future research into this issue. Moreover, our study does not show

whether the lack of consistency in practice is limited to this particular standard or if it is a more general phenomenon, but it certainly indicates the need for further comparative research. Future research could also investigate the nature and magnitude of those differences, as well as whether identified cross-country differences are temporary or permanent. Moreover, it is possible that variances in reporting practice might decrease over time as auditors in all Scandinavian countries get wholly familiar with reporting on going-concern reporting in accordance with ISA 570. Finally, as our findings support IFAC's concerns that local implementation of the ISA does not ensure the development of consistent practice, it indicates the need for research into how a consistent practice may be promoted by means of for instance education, compliance measures or normative best practice benchmarks.

Finally, the third article suggests also some perspectives for future research. Firstly, further experimental investigation is needed to examine whether users of financial information would behave differently if auditor's reporting were changed. It is an important matter since all possible changes are associated with risks and costs. In particular, the main question is: why take risks and costs if no real benefits are going to be derived in terms of user behaviour? Secondly, since the study findings are based on 18 participants from one stakeholder group, the generalisation of the research findings is limited. Bank officers are only one of several groups using financial statements and future research should examine other groups' reaction to the qualification in the auditor's report. Thus, the next logical step in future research would be to collect data from a much larger, more representative sample from stakeholder groups to attain more quantifiable and generalised findings. The current study points out factors

that may have an impact on how the information is used, and based on these findings, statistical analyses could be performed with larger samples and hypotheses tested to verify the findings of this study. In addition, the focus on SMEs' qualified audit reports suggests that more research should be conducted into the utility of larger companies' qualified reports in order to arrive at appropriate conclusions.

Notes

1. In May 2011 the IAASB released a consultation paper 'Enhancing the Value of Auditor Reporting: Exploring Options for Change' and moreover, in June 2011 the PCAOB published a concept release on 'Possible Revision to PCAOB Standards Related to Reports on Audited Financial Statements'.

References

- Anandarajan, A., C. Viger & A.P. Curatola (2002). An Experimental Investigation of Alternative Going-Concern Reporting Formats: A Canadian Experience. *Canadian Accounting Perspectives* 1;2, pp. 141-162.
- Arnold, V., P.A. Collier, S.A. Leech & S.G. Sutton (2001). The Impact of Political Pressure on Novice Decision Makers: Are Auditors Qualified to Make Going-concern Judgments? *Critical Perspectives on Accounting* 12, pp. 323-338.
- Asare (1992). The Auditor's Going-Concern Decision: Interaction of Task Variables and the Sequential Processing of Evidence. *Accounting Review* 67:2, pp. 379-393.
- Asare, S.K. & A. Wright (2009). Investor's, Auditors' and Lender's Understanding of the Message Conveyed by the Standard Audit Report.
- Berg, B.L. (2004). *Qualitative Research Methods for the Social Science*. Pearson Education, Boston, MA.
- Bessell, M., A. Anandarajan & A. Umar (2003). Information Content, Audit Reports and Going-Concern: an Australian Study. *Accounting & Finance* 43, pp. 261-282.
- Casterella, J.R., B.L. Lewis & P.L. Walker (2000). Modeling the Audit Opinions Issued to Bankrupt Companies: A Two-stage Empirical Analysis. *Decision Sciences* 31:2, pp. 507-530.
- Church, B., S. Davis & S. McCracken (2008). The Auditor's Reporting Model: A Literature Overview and Research Synthesis. *Accounting Horizons* 22:1, pp. 69-90.

- Citron, D.B. and R.J. Taffler (2001). Ethical Behaviour in the U.K. Audit Profession: The Case of the Self-Fulfilling Prophecy Under Going-Concern Uncertainties. *Journal of Business Ethics* 29, pp. 353-363.
- Dang-Duc, S., N. Marriott and P. Marriott (2006). Users' Perceptions and Uses of Financial Reports of Small and Medium Companies (SMCS) in Transitional Economies. Qualitative Evidence from Vietnam. *Qualitative Research in Accounting and Management* 3:3, pp. 218-235.
- Dang-Duc, S., N. Marriot and P. Marriot (2008). The Banks' Uses of Smaller Companies' Financial Information in the Emerging Economy of Vietnam: A User's Oriented Model. *Research in Accounting in Emerging Economies*, Vol. 8, pp. 519-548.
- Dye, R.A. (1993). Auditing Standards, Legal Liability and Auditor *Wealth*. *Journal of Political Economy* 101:5, pp. 3-38.
- Francis, J. (2004). What do We Know about Audit Quality? *The British Accounting Review*, 36:4, pp. 345-368.
- IAASB (2009). International news letter. Audit Considerations in Respect of Going-concern in the Current Environment. Available from World Wide Web:
http://web.ifac.org/download/IAASB_Staff_Audit_Practice_Alerts_2009_01.pdf
- Louwers, T.J. (1998). The Relationship between Going-Concern Opinions and the Auditor's Loss Function. *Journal of Accounting Research* 36:1, pp. 143-156.
- Martens, D., L. Bruynseels, B. Baesens, M. Willekens & J. Vanthienen (2008). Predicting Going-concern Opinion with Data Mining. *Decision Support Systems* 45, 765-777.

- Martin, R.D. (2000). Going-concern Uncertainty Disclosures and Conditions: A Comparison of French, German and U.S. Practices. *Journal of International Accounting, Auditing & Taxation*, 9:2, pp. 137-158.
- Miller, M.C. (1999). Auditor Liability and the Development of A Strategic Evaluation of Going Concern. *Critical Perspective on Accounting* 10, pp. 355-375.
- Mock, T.J., J.L. Turner, G.L. Gray & P.J. Coram (2009). The Unqualified Auditor's Report: A Study of User Perceptions, Effects on User Decisions and Decision Processes, and Directions for Further Research. A Revision of the Summary Report Presented to the Auditing Standards Board and the International Auditing and Assurance Standards Board. New York.
- Nobes, C. & R. Parker (2010). *Comparative International Accounting*. Eleventh Edition. London. ISBN 978-0-273-72562-6.
- O'Dwyer, B. (2004). Qualitative Data Analysis: Illuminating a Process for Transforming a 'Messy' but 'Attractive' 'Nuisance'. In Humphrey, C. and B. Lee (Eds), *The Real Life Guide to Accounting Research: A Behind the Scenes View of Using Qualitative Research Methods*, Elsevier, Oxford, pp. 391-407.
- Sikka, P., H. Willmott & T. Lowe (1988). Guardians of Knowledge and Public Interest: Evidence and Issues of Accountability in the UK Accountancy Profession. *Accounting, Auditing & Accountability Journal* 2:2, pp. 47-71.
- Strauss, A.L. (1987). *Qualitative Analysis for Social Scientists*, Cambridge University Press, New York, NY.
- Tesch, R. (1990). *Qualitative Research: Analysis Types and Software Tools*, The Falmer Press, London.

- Trønnes, P.C. (2011). Consistency in Audit Reporting Behavior: Evidence from Going-concern Modifications. Ph.D. dissertation. The University of New South Wales, School of Accounting.
- Zarzeski, M.T. (1996). Spontaneous Harmonization Effects on Culture and Market Forces on Accounting Disclosure Practices. *Accounting Horizons* 10, pp. 18-37.

Article # 1

Late Financial Distress Process Stages and Financial Ratios: Evidence for Auditor's Going-Concern Evaluation

Nina Sormunen¹ & Teija Laitinen²

*¹Copenhagen Business School, Department of Accounting and Auditing
Sobjerg Plads 3, DK-2000 Frederiksberg, Denmark*

*²University of Vaasa, Department of Accounting and Finance
P.O. Box 700, FI-65101 Vaasa, Finland*

This article is published in The Finnish Journal of Business Economics
special issue about bankruptcy and reorganizations (1/2012)

Abstract

The present study adds to our understanding and knowledge of financial distress predictions regarding the usefulness of financial ratios in the late stages of the financial distress process. The study contributes to previous research by generating information concerning: (1) the behavior and usefulness of single financial ratios in short-term financial distress prediction when the effect of each different financial distress process stage is considered; (2) the effects of recognition of the financial distress process

stage on the financial distress prediction model. The time horizon for prediction is less than one year, and the empirical data consist of financial statement information from 106 distressed firms undergoing reorganization and their matched counterparts for 2003–2007. To analyze the effects of the specific distress process stage, the sample has been divided into two groups according to the date of application for reorganization: the first group of businesses applied for reorganization between 1 and 182 days after the closing of accounts, and the second group between 183 and 365 days after that point. The study findings provide evidence that the financial distress process stage affects the classification ability of single financial ratios and financial distress prediction models in short-term financial distress prediction. The study shows that the auditor's GC task could be supported by paying attention to the financial distress process stage. The implications of these findings for auditors and every stakeholder of business firms are considered.

Keywords: financial distress process; going-concern evaluation; financial ratios; classification accuracy and reorganization

1. Introduction

The basic assumption in preparing financial statements is that a business is considered as a going-concern (GC). This means that the business will usually be in operation for the following 12 months or for the following accounting period. If a business is a GC, the risk that it will enter liquidation in the foreseeable future is very small. If there is a considerable risk that the company will not be in business at the end of the following fiscal year, an auditor should report a GC opinion, which is one of the most difficult tasks an auditor faces (Martens et al. 2008). To justify a GC opinion, material uncertainties about the business must exist. If the auditor does not issue a GC opinion and the business encounters financial difficulties within the subsequent fiscal year, the auditor risks being held responsible to the stakeholders for the financial consequences of not having issued a GC opinion. The most severe forms of financial difficulties in business are reorganization and bankruptcy, because in both cases stakeholders can suffer considerable financial losses.

Recently the number of distressed companies filing for reorganization and bankruptcy has significantly increased. Auditors and all stakeholders in businesses are aware of the very severe worldwide economic crisis. In other words, there is concern about auditors' awareness of matters relating to the consideration of applying the going-concern assumption when preparing financial statements. Furthermore, businesses are faced with the challenge of evaluating the effect of the credit crisis and economic downturn on the entity's ability to continue as a going concern. Questions have been raised as to whether such effects on the entity ought to be described or otherwise reflected in the financial statements. Those are the

key messages in the international newsletter “AUDIT Considerations in respect of Going-concern in the Current Economic Environment”, issued by The International Auditing and Assurance Standards Board (IAASB) in January 2009. In the light of the current situation, our study provides evidence of the challenging nature of the auditor’s task of determining whether a company is a GC and the related assessment of the severity of financial distress the company might experience in the coming year. Several reasons underpin the decision to undertake the current research.

First of all, while the GC assessment reflected by financial distress has a long history, most of the previous research has focused on the needs and points of view of creditors. In other words, this focus has led researchers to extend the time span underlying the failure prediction as much as possible. The importance of the time span in distress prediction models is emphasized by the instability of financial ratios (Balcaen and Ooghe 2006: 74), and in order that their predictive ability may be maintained, distress prediction models require that the relationships between predictors are stable over time. However, the statistical significance of financial ratios will change at different stages, and this implies that optimal cross-sectional models vary for different stages (see e.g. Zavgren 1983; Zavgren and Friedman 1988). Accordingly, the optimal models for creditors differ from those for auditors and moreover, the quicker the changes in the financial situation of the distressed firm happen, the greater the need for a short-term model (Laitinen 1991). This study is one of the first attempts to consider auditors’ support requirements for short-term predictions, and it thus shifts the emphasis from the previous creditor-based long-term financial distress predictions to auditor-based short-term predictions.

Second, previous studies have mainly based their empirical analysis on an auditors' GC evaluation, and little seems to be known about statistical models to support auditors' GC decision-making. There is evidence that the GC decision is a complex task that has comprehensive consequences for both the business being audited and the auditors, who are likely to welcome any systems that may support them in making the decision (Louwers 1988; Martens *et al.* 2008).¹ An auditor's GC evaluation can be viewed as a two-stage process: First a judgment stage in which the auditor forms an initial opinion about the client's financial distress or stability, and second a decision stage in which the auditor finally decides on the type of report to issue (Asare 1992). Taking this into consideration, this study presents evidence of the first stage of GC evaluation to support auditors' decision-making and uses the GC concept in the context of the financial distress process. The use of a corporate distress model may help the auditor identify high-risk firms in the planning stages of the audit and assist the auditor in planning specific audit procedures aimed at evaluating the appropriateness of a GC opinion (Koh and Brown 1991).²

Finally, it has been stated that when studying auditors' decision-making, the samples of very distressed businesses (such as those in the bankruptcy process) and viable firms should be considered separately. This is because the auditors' decision-making problems are different in very distressed and viable firms respectively (Martens *et al.* 2008; Hopwood *et al.* 1994). In earlier financial distress research, the different groups compared in classifications have traditionally consisted of bankrupt and viable firms. This is due to a creditor-based approach where the main purpose is to identify a bankrupt firm to avoid losses from defaults. Typically, bankrupt firms have been very deeply distressed before the

event. However, in an auditor-based approach this kind of setting cannot be justified. As a result, rather than focusing on bankrupt firms, the current article uses empirical data from reorganization firms.

To conclude, the present study adds to our understanding and knowledge of financial distress predictions regarding the usefulness of financial ratios in the late stages of the financial distress process. Our contribution to the previous literature is to provide an alternative to the classic long-term financial distress prediction that is based on the creditor-based approach. Hence, our study builds on previous research by generating information concerning: (1) the behavior and usefulness of single financial ratios in short-term financial distress prediction when the effect of each different financial distress process stage is considered; (2) the effects of recognition of the financial distress process stage on the financial distress prediction model.

The paper is organized as follows: Following this introduction of the motivation behind the study and its purpose, the second section includes a short review of earlier studies followed by a definition of the research hypotheses. In addition, a short description of the Finnish reorganization process is presented. The third section details the data and statistical methods of the empirical analysis before the empirical results are presented and discussed in the fourth section, and finally, the last section presents the findings of the study and limitations of the approach. Several suggestions for further research are also presented.

2. Reorganization and financial distress

2.1. Earlier studies

The present study focuses on the financial distress concept; in this context, traditional financial distress prediction research has focused on failed and non-failed firms one to five years prior to the event, and the fundamental issue has been the same in almost every study: to distinguish between financially viable and financially distressed firms as early in the financial distress process as possible. In this research, Altman's Z model (Altman 1968), the ZETA model (Altman, Haldeman and Narayanan 1977), Ohlson's (1980) logit model, and Zmijewski's (1984) probit model are well-known early models. Later, a number of novel statistical estimation methods for distress modeling have been suggested: the artificial neural network (ANN) model (Altman, Marco and Varetto 1994; Tam and Kiang 1992), Bayesian network models (Sarkar and Sriram 2001; Sun and Shenoy 2007), and data envelopment analysis (DEA) (Cielen, Peeters and Vanhoof 2004). Moreover, it is argued that a mixed logit model outperforms a standard binary logit model in financial distress prediction (Shumway 2001), and hazard models are applied (Shumway 2001; Beaver, McNichols and Rhie 2005).

There are many different approaches to improving the performance of the statistical models. Indeed, in spite of the existence of a theory, the predictors of financial distress prediction models are mainly chosen on empirical grounds (Balcaen and Ooghe 2006). However, Beaver (1966), Altman (1986), Scott (1981), Jones (1987), Karels and Prakash (1987), Laitinen and Kankaanpää (1999), and Balcaen and Ooghe (2006) indicate

financial determinants of financial distress (bankruptcy) on theoretical and empirical grounds. Dimensions supported by bankruptcy theory and related empirical evidence are leverage, profitability, liquidity, cash flow, and size (Scott 1981; Jones 1987; Laitinen 1991). Furthermore, research shows that it is possible to predict bankruptcy with relatively high (classification) accuracy at least 5 years before the event when financial ratios are used as predictors (Beaver *et al.* 2005). Accordingly, a large number of financial distress prediction models are traditionally based on the systematic deterioration of financial ratio values (Beaver 1966; Beaver *et al.* 2005), since as firms move closer to the event of financial distress, they take on more unusual characteristics (Salehi 2009).

However, failing firms may have different financial distress processes since the first symptoms and the timing of financial symptoms vary between financially distressed firms (Laitinen 1991; D'Aveni 1989). In other words, it is obvious that all failing firms do not behave in the same way in terms of financial ratios, and accordingly the identification of specific processes may considerably improve understanding of the financial distress prediction (Laitinen 1991). Indeed, in the financial distress prediction, financial indicators will maintain their significance throughout the process, but as the symptoms of financial distress become more apparent, the relative significance of the indicators may diminish (Laitinen 2005). As a result, a situation has arisen where the usefulness of distress prediction models is limited due to the instability of models (Balcaen and Ooghe 2006: 74). To maintain their predictive ability, traditional prediction models require that relationships between predictors remain stable over time. In addition, they are stationary, which implies a stable relationship between the event measure and predictors. However, the statistical significance of predictors

will vary in different years prior to distress (Zavgren 1983; Zavgren and Friedman 1988; Laitinen 2005). This means that one single cross-sectional model cannot be optimal for every year.

Different stages of the financial distress process have been identified (see e.g. Laitinen 1991). These stages can be summarized as follows:

1. Early stage

- financial statements indicate decreased profitability

2. Late stage

- financial statements indicate decreased profitability and increased leverage

3. Final stage

- financial statements indicate decreased profitability, increased leverage and decreased liquidity

The current study focuses on stages 2 and 3, the late and final stages.

Zavgren and Friedman (1988: Table 2) outline the significance of different predictors in their models estimated separately for five years prior to failure (but post filing for bankruptcy). The evidence shows that the operating performance ratios (inventory turnover and capital turnover) were significant 4–5 years prior to failure but not in subsequent years. The short-term liquidity ratio was significant only in years 1–3, while the debt ratio (financial leverage) was significant in each of the five years. The profitability ratio (return on investment) was not statistically significant in any year. The insignificance of profitability has also been noted by Ohlson (1980). This evidence indicates that it is important to pay attention to the

time span allowed for prediction when developing a model. In order to study this phenomenon empirically we identify different financial distress process stages to find out whether financial ratios (univariate analysis) and financial prediction models (multivariate analysis) in short-term financial distress prediction are affected by the different stages (univariate analysis).

For these analyses, the following research hypotheses are proposed:

H1: the financial distress process stage affects the prediction ability of a single financial ratio in short-term predictions (Univariate analysis)

H2: the financial distress process stage affects the statistical financial distress prediction model in short-term predictions (Multivariate analysis)

To conclude, this study generates new evidence for financial distress prediction research by testing whether the explanatory power of alternative ratios and models based on these ratios differs in short-term prediction when the effect of the stage of financial distress process is considered. In these analyses, we apply univariate analysis, stepwise logistic regression, and a Z-test to test the two research hypotheses.

2.2. The reorganization process in Finland

In Finland, the reorganization proceedings of a business are stipulated by the Reorganization of Enterprises Act (REA) (47/1993; amendments up to 247/2007 included) that came into force on 8 February 1993. The legislation sets out that reorganization proceedings may be undertaken in

order to rehabilitate a distressed debtor's viable business, to ensure its continued viability, and to facilitate debt arrangements. In the proceedings, a court may approve a restructuring program with instructions regarding measures on the activities, assets and liabilities of the debtor as provided by the Act (247/2007). Consequently, the main objective of the REA is to assist the recovery of a business having temporary financial difficulties but otherwise being financially viable. Furthermore, reorganization proceedings may be instigated to avoid bankruptcy. When the application for reorganization has been filed with the court, the business can be protected from creditor demands. If the business does not get court approval for reorganization, it may be declared bankrupt under the Finnish Bankruptcy Act (FBA). Therefore, reorganization proceedings may be a way of avoiding bankruptcy liquidation, at least temporarily, even if the business is unviable (Laitinen 2009).

The application for reorganization proceedings may be filed by the debtor or a creditor or several creditors jointly, but not, however, by a creditor stating a claim which is contested in terms of its basis or its amount or a claim that is otherwise unclear, or by a party for whom the insolvency of the debtor would probably cause financial loss on a claim, on grounds other than partnership or shareholding. Reorganization proceedings may be commenced if:

1. At least two creditors whose total claims represent at least one fifth of the debtor's known debts and who are not related to the debtor file a joint application with the debtor or declare that they support the debtor's application;
2. The debtor faces imminent insolvency; or

3. The debtor is insolvent and no other outcome ensues from the application of section (247/2007).

In the Act, insolvency is defined as being other than a temporary inability of the debtor to repay its debts when they become due, and the definition of imminent insolvency is that the debtor is at risk of insolvency. Reorganization proceedings are not to be commenced if the debtor is insolvent and it is probable that the reorganization program will not remedy the insolvency or prevent its occurrence for more than a short period (247/2007).

REA has enabled the recovery of thousands of distressed businesses. In total, during the years 1993—2007, 4842 reorganization petitions were filed (Statistics Finland). In the research period 2003—2007 respectively 332, 317, 269, 302, and 306 petitions for reorganization were filed. The data used in this study only include limited companies that are not publicly traded and which have published financial statements. Thus, all non-incorporated companies which are not obliged to publish financial statements have been excluded.

The majority of businesses filing for reorganization do not recover. On average, the court approves about 60 % of the applications for reorganization, and of those applications about 75 % lead to an approved restructuring plan. Many of these businesses, however, are unsuccessful in implementing the reorganization plan and go bankrupt during the program. Reorganization statistics show that on average only 50–60 % of the businesses prove able to carry out the reorganization plan

successfully. Consequently, the failure rate of reorganization firms is high (Laitinen 2009:186).

3. Empirical data and statistical methods

3.1. Empirical data

3.1.1. Sample of firms

The data used in this study include published annual financial statements of private Finnish limited companies relating to the research period, which stretches over the accounting years 2003—2007. The sample consists of 106 businesses that filed a petition for reorganization and 106 viable businesses that did not register public payment defaults during the period in question. Furthermore, every reorganization business is matched with a viable business in terms of industry, size (i.e. total assets), and accounting period. In this way, the effects of size, industry, and accounting period (business cycles) have been eliminated from the results (see Beaver 1966). The number of reorganization businesses in the population is very small compared to the number of viable businesses. This means that using equal groups of reorganized and viable businesses leads to an oversampling of reorganization businesses. This oversampling may lead to a choice-based bias in the results. However, this bias is relatively weak and does not appear to affect the statistical inferences (Zmijewski 1984). The data include financial statements (income statement and balance sheet) and the date of the petition filed for reorganization proceedings. The financial statements are gathered from the last accounting year prior to the

petition being filed. This study includes all available limited companies that filed an application for reorganization during the research period in the current dataset obtained from the largest Finnish credit information company Suomen Asiakastieto Oy for research purposes (see <http://www.asiakastieto.fi>).

3.1.2. Descriptive statistics

Tables 1 and 2 present the descriptive statistics of the sample. Table 1 shows the industrial distribution of the sample companies in this study. This distribution is the same for reorganization and viable companies because of paired sampling. The proportion of industries such as electricity, gas, steam, and air conditioning supply is 31.13 %. Furthermore, a majority of the companies represent industries such as construction and wholesale and retail trade with shares of 21.7 % and 19.81 %, respectively. The size distribution in the sample is presented in Table 2. The size of a company is estimated using the amount of its total assets, and this gives the same distribution for reorganization and viable companies. The majority of the companies have total assets of between EUR 100,000 and EUR 1 million. Only a few companies in the sample have total assets of over EUR 10 million. Thus, the size distribution is skewed by including only a few large companies.

TABLE 1
Industry classification of the sample companies

Industry	Amount	%
Electricity, gas, steam, and air conditioning supply	66	31.13
Construction	46	21.70
Wholesale and retail trade	42	19.81
Transportation and storage	18	8.49
Administrative and support service activities	12	5.66
Accommodation and food service activities	10	4.72
Professional, scientific, and technical activities	8	3.77
Information and communication	6	2.83
Mining and quarrying	2	0.94
Other service activities	2	0.94
Total	212	100.00

TABLE 2
Size distribution of the sample companies

Balance sheet	Amount	%
0 – 99,999 €	22	10.38
100,000 – 499,999 €	70	33.02
500,000 – 999,999 €	56	26.42
1 – 5 million €	46	21.70
6 – 10 million €	12	5.66
over 10 million €	6	2.83
Total	212	100.00

3.2. Financial distress process and financial ratios

In this study, the effect of the stage of the financial distress process is analyzed by classifying the sample into two parts according to the period extending from the last closing of accounts to the filing of the petition for

reorganization. This time period varied in the sample firms between 1 and 365 days. While the financial statement and auditor's report must be completed no later than 4 months after the closing of accounts, for an auditor it is less challenging to study GC problems during the four months immediately following the closing of the accounts. The two following months are easily foreseeable because of the short time period, and accordingly the most challenging months are the last six months of the fiscal year. However, the auditor needs to consider the going-concern assumption for the entire fiscal year. Even though the first six months of the fiscal year are less challenging compared to the last six months, they must also be carefully analyzed for professional reasons. As a result we have divided the accounting period into two equally long periods, and the main issue is whether there are differences in the information content of alternative financial ratios between these two sub-samples. The companies that filed their application for reorganization in the first six months (i.e. 1–182 days after the date of the last financial statements) are considered as being in the final stage of the distress process at the time of the last closing of their accounts. This sub-sample is here called Group 1 (final stage). Correspondingly, companies that filed their application for reorganization in the last six months (i.e. 183 – 365 days after the date of the last financial statements) were considered as being in the late but not final stage of the distress process at the time of the last closing of their accounts. This sub-sample is called Group 2 (late stage). The cut-off point of 182 days was selected because of a need to divide the accounting period into two equal time periods. Group 1 includes 45 reorganization and viable companies, and Group 2 includes 61 of each.

The selection of financial ratios in this study is based on a long history of prior studies. In most studies, financial ratios are classified according to the dimensions they measure, and the choice of financial variables (predictors) is related to the symptoms of financial distress. The traditional classification of financial ratios encompasses three broad classes: profitability, solidity, and liquidity. In most previous studies this set of financial dimensions has been used to design a model leading to the best classification or prediction result. Consequently, this study also uses those three traditional dimensions (profitability, liquidity and solidity) as its preferred explanatory variables. They have been found to be the most successful predictors of company failure in earlier research (Zmijewski 1984; Karels and Prakash 1987; Chen *et al.* 2006; Balcaen and Ooghe 2006). However, the significance of the profitability ratios has been questioned especially in the models for the last stages of distress (Zavgren and Friedman 1988; Ohlson 1980). In addition to the traditional financial ratios, the company's growth may serve as an important indicator of failure (Laitinen 1991; Laitinen and Laitinen 2004: 242-244). Together with profitability, growth is the main determinant of income finance that may have a significant effect on the likelihood of financial distress. In many cases, financial distress is caused by growth that is too strong compared to profitability. Therefore, the present study includes a measure of company growth.

This study also reviews previous going-concern studies (see Appendix 1) and lists all the traditional financial ratios that have been used to predict financial distress. The number of previously used financial ratios was huge. In our study we included financial ratios that represented the three focused financial dimensions (profitability, liquidity, and solidity) and which had

given the best results in previous studies. In all, six liquidity ratios, three profitability ratios, and two solidity ratios were selected. In addition, percentage change in net revenue was selected to measure growth. The twelve financial predictors are presented in Table 3.

TABLE 3
Financial ratios used in the present study

Liquidity
Quick ratio (Liquid assets/Current liabilities)
Current ratio (Current assets/Current liabilities)
Working capital/total assets
Operating cash flow (OCF) ratio (Cash flow from operations/Total liabilities)
Net working capital % (Net working capital/Revenue)
Accounts payable turnover ((Accounts payable/Purchases) *365))
Profitability
Return on invested capital, ROI (Net income + financial expenses + taxes/Invested capital)
Return on equity, ROE (Net income/Average equity)
Return on assets, ROA (Net income/Total assets)
Solidity
Net worth/Total liabilities
Total debt ratio (Total liabilities/Total assets)
Growth
Change in revenue (Change in revenue/Revenue in the beginning)

Table 4 presents descriptive statistics of the independent variables for reorganization and viable companies in the sample. Panel A shows statistics for the reorganization companies in Group 1. This group includes 45 companies that filed reorganization petitions between 1 and 182 days

after the date of the last financial statements (the annual closing of accounts). These ratios thus describe the financial situation of companies in the final stage of the financial distress process (the period before filing is less than six months). Panel B shows statistics for the distressed companies in Group 2. This group includes 61 companies that filed reorganization petitions between 183 and 365 days after the date of the last financial statements. These companies are in the very late but not final stage of the financial distress process at the point of the last financial statement. Finally, the last panel C lists statistics for the viable companies and records 106 observations. These viable companies did not experience registered (official) payment defaults during the research period of this study.

When comparing the descriptive statistics across panels A, B, and C in Table 4 it can be observed that there are differences in the statistics between the distressed and the viable companies. In addition, panels A and B show obvious differences in the statistics between distressed companies (i.e. Group 1 and Group 2). The reorganization companies in Group 1 tend to show lower or poorer figures for profitability, liquidity, solidity, and growth than do the companies in Group 2. This is intuitively reasonable, since the companies in Group 2 may be categorized as 'healthier' than those in Group 1. The time lag between the date of the last financial statements and the event of filing the petition for reorganization is longer for the companies in Group 2 than for those in Group 1. These results overall support our expectations regarding the effect of the stage of distress process on the financial ratios. The financial ratios of the companies in Group 1 have deteriorated more than have those of the companies in Group 2. Thus, at the date of the annual closing of accounts,

the companies in Group 2 are not yet in the final stage of the distress process. Moreover, there are remarkable differences in the financial ratios between the distressed companies (Groups 1 and 2) and the viable companies (panel C). The statistics of the financial ratios in panel C on average refer to good performance in the group of viable companies.

TABLE 4
Descriptive statistics

Panel A. Summary statistics for distressed companies, Group 1 (n=45 observations)					
Variable	Mean	Min	Max	Median	Std.dev.
LIQUIDITY					
Quick ratio	0.4	0	2.5	0.3	0.4
Current ratio	0.6	0.1	1.6	0.6	0.4
Working capital/Total assets	6%	-77%	62%	7%	33%
OCF ratio	-18%	-66%	14%	-13%	19%
Net working capital %	-21.50%	-109.40%	21%	-16.60%	23.20%
Accounts payable turnover (days)	441	15	7753	125	1315
PROFITABILITY					
ROI	-37%	-204%	26%	-31%	44%
ROE	-20%	-101%	14%	-17%	23%
ROA	-46%	-274%	11%	-21%	60%
SOLIDITY					
Net worth/Total liabilities	-24%	-87%	60%	-24%	31%
Total debt ratio	158%	63%	768%	127%	114%
GROWTH					
Change in revenue	7%	-65%	335%	-6%	63%

Panel B. Summary statistics for distressed companies, Group 2 (n= 61 observations)					
Variable	Mean	Min	Max	Median	Std.dev.
LIQUIDITY					
Quick ratio	0.7	0	10.4	0.5	1.3
Current ratio	1	0.1	10.4	0.8	1.3
Working capital/Total assets	14%	-102%	79%	14%	31%
OCF ratio	7%	-71%	586%	1%	77%
Net working capital %	-9.17%	59.30%	27.10%	-7.20%	19.47%
Accounts payable turnover (days)	288	0	3145	88	618
PROFITABILITY					
ROI	-9%	-98%	53%	-0.50%	30%
ROE	-4%	-56%	48%	-0.30%	19%
ROA	-13%	-218%	100%	-5%	37%
SOLIDITY					
Net worth/Total liabilities	19%	-121%	1629%	-4%	212%
Total debt ratio	123%	6%	700%	99%	88%
GROWTH					
Change in revenue	45%	-47%	1308%	11%	174%
Panel C. Summary statistics for healthy companies (n=106 observations)					
Variable	Mean	Min	Max	Median	Std.dev
LIQUIDITY					
Quick ratio	2.3	0.1	25.6	1.3	2.9
Current ratio	3	0.3	29.1	1.7	4
Working capital/Total assets	25%	-54%	99%	21%	25%
OCF ratio	39%	-73%	271%	21%	61%
Net working capital %	39.43%	-34.70%	955%	15.70%	114%
Accounts payable turnover (days)	53	5	417	34	64
PROFITABILITY					
ROI	20%	-42%	164%	17%	29%
ROE	14%	-41%	124%	13%	21%
ROA	8%	-50%	65%	9%	16%
SOLIDITY					
Net worth/Total liabilities	257%	-104%	6059%	77%	687%
Total debt ratio	54%	2%	119%	56%	27%
GROWTH					
Change in revenue	58%	-100%	4593%	8%	449%

3.3. Statistical modeling approach and method

To test our hypotheses, we analyze the twelve financial ratios of Group 1 and Group 2 separately against the ratios of their viable matched pairs. We use matched pairs because the aim is to mitigate the effects of industry, size, and accounting period, but also to give the same weight to reorganized and viable companies in statistical analyses. Although the number of reorganization companies in the population is small compared to that of viable companies, the misclassification cost of a reorganization company (Type 1 error) is extremely high compared to that of a viable company (Type 2 error). This fact gives support to the use of equal sample sizes for the groups. For statistical analyses, a large number of previous studies have used a logistic regression (LR) analysis to test the GC predictor variables (see Appendix 1). According to Kuruppu *et al.* (2003), statistical models such as probit and logit analyses, which are types of conditional probability models, provide a good evaluation of the probability of when the auditor's client might fail. Therefore, in the present study, binary univariate LRA based on conditional (default) probability is applied when testing Hypothesis 1. In the same way, multivariate LRA is used to test Hypothesis 2. The equal group sizes result in a cut-off probability of reorganization of 50%. Technically, this situation is desirable since LRA assumes that midranges of probability are more sensitive to changes of values in independent variables to minimize the grey area (the area of ignorance).

LRA can be used to describe the relationship between a response variable and one or more explanatory variables. Therefore, cause-effect relationships are reflected in regression analyses, and the purpose is to

examine how well the independent variable (financial ratios) explains the dependent variable (probability of reorganization). Logistic regression analysis does not require independent variables to be multivariate normal or groups to have equal covariance matrices, contrary to what is the case in linear discriminant analysis. This analysis creates a score, a logit L , for every company by weighting the ratio of independent variables. It is assumed that the independent variables are linearly related to L . The score is used to determine the probability of membership of a group where the reorganization probability is computed. The logistic curve determines the probability of the occurrence of the event as follows:

$$\text{Probability of reorganization (p(i,X))} = \frac{1}{1 + e^{-L}} = \frac{1}{1 + e^{-(b_0 + b_1x_1 + \dots + b_nx_n)}}$$

where b_i ($i=0,1,\dots, n$) are the regression coefficients and n is the number of independent variables x_i ($i=0,1,\dots, n$).

In the univariate analysis to test Hypothesis 1, every financial ratio is tested separately by LR to establish its ability to classify businesses into reorganization and viable companies. In the multivariate analysis to test Hypothesis 2, a stepwise LR analysis is applied to test which variable or combination of variables is significant in their ability to discriminate between reorganization and viable companies. The LR models are estimated by the maximum likelihood method in SAS, and the significance of the coefficients is tested by the Wald test statistic. The strength of association is assessed by the standard Nagelkerke's R-Square (R^2) test. Nagelkerke's R^2 applied here is a modification of the Cox and Snell R-Square test, and consequently, R^2 measures the strength of association.

R^2 describes how well the regression equation fits the data. The goodness of fit of the model is also tested by the Hosmer-Lemeshow Chi-square test. This test divides the predicted probabilities into deciles and then computes a Chi-square to compare predicted and observed frequencies. A higher p -value indicates a good fit to the data. In fact, this is a test of the linearity of the logit. The performance of the financial ratios and the LR models being predicted, the rates of correct classification are calculated. In addition, the ROC (Receiver Operating Characteristic) curve is used to assess the accuracy of the multivariate models.

To ensure stability of the financial ratios it is essential that their information content remain unchanged during the whole post-accounting period (from 1 to 365 days after the closing of accounts). This stability was assessed by the Z-test to test the differences between the correct classification rates for the sub-periods (1–182 days and 183 – 365 days). The Z-test is determined for the two groups as follows:

$$Z = \frac{P_1 - P_2}{\sqrt{P(1-P) \times (\frac{1}{n_1} + \frac{1}{n_2})}}, \text{ where}$$

$$P = \frac{n_1 P_1 + n_2 P_2}{n_1 + n_2}$$

p_1 = correct classification rate for Group 1

p_2 = correct classification rate for Group 2

n_1 = size of the Group 1

n_2 = size of the Group 2

The p -value of these statistics is the observed level of significance of the difference between the correct classification rates in Groups 1 and 2.

4. Results

4.1. Logistic regression results for the financial ratios (univariate analysis)

The first research hypothesis (Hypothesis 1) suggests that the financial distress process stage affects the prediction ability of single financial ratios in short-term predictions (univariate analysis). Table 5 presents the estimated results of the univariate LR analysis for each of the twelve financial ratios. In these analyses, a model is estimated for each financial ratio to predict the probability of a reorganization petition being filed. The estimation results in the table show that most financial ratios can be used to predict reorganization in both Groups 1 and 2. In general, financial ratios have high classification rates to discriminate between viable and distressed companies correctly. In addition, it can be ascertained that when the time distance to the event of filing the petition is only 1–182 days in Group 1, the correct classification rates are higher than in Group 2 when the distance to the event is longer (183 – 365 days). This result again demonstrates that the previously discussed reckoning of financial distress process stages is rational, and to sum up, the findings support the criteria of late and final stages. According to significantly higher correct classification rates for liquidity ratios, the companies in Group 1 are clearly at a later stage of financial distress (i.e. the final stage) than companies in Group 2. This can also be observed from the higher correct classification rates across all twelve ratios without exception.

The main interesting feature of Table 5 is found in the *p*-value (the rightmost column), which refers to the changes between the examined

sub-groups and equates to the first hypothesis of the present study. The findings indicate that financial distress process stages have an effect on the classification ability of financial ratios. The *p*-values in the table show that only four of the twelve ratios (i.e. current ratio, working capital/total, accounts payable ratio, and total debt ratio) retain their classification ability at the same level irrespective of the stage of financial distress process. Most of the ratios lose their classification ability to a statistically significant extent when the prediction time span increases from 1–182 days (final stage) to 183 – 365 days (late stage). This result provides strong empirical evidence of the acceptance of our first research hypothesis that the financial distress process stage affects the prediction ability of single financial ratios in short-term predictions.

The last column in Table 5 illustrates that out of the liquidity ratios included in the study, the current ratio, the working capital to total assets ratio, and the accounts payable turnover did not change their predictive ability to any statistically significant extent when the financial distress process moved from the late stage to the final stage. It can be noted from the correct classification rates that each of these ratios improves its classification accuracy when the time span is shorter; however, the difference in accuracy does not statistically differ from zero. Thus, the financial distress process stage in this analysis does not statistically affect the prediction ability of these ratios.

TABLE 5
Results from the logistic regression analysis based on individual financial ratios

Liquidity	R²(1)	R²(2)	p(1)	p(2)	Correct1	Correct2	p
Quick ratio	0.55	0.29	<.0001	<.0001	83.3 %	74.6 %	0.064*
Current ratio	0.67	0.29	<.0001	<.0001	82.2 %	78.7 %	0.264
Working capital/Total assets	0.17	0.03	0.0024	0.1023	62.2 %	54.1 %	0.119
Operating cash flow ratio	0.61	0.10	<.0001	0.0141	85.6 %	77.0 %	0.059*
Net working capital %	0.62	0.46	<.0001	<.0001	85.6 %	73.0 %	0.014**
Accounts payable ratio	0.34	0.27	0.0003	0.0009	74.7 %	74.5%	0.487
Profitability	R²(1)	R²(2)	p(1)	p(2)	Correct1	Correct2	p
Return on invested capital	0.67	0.29	<.0001	<.0001	84.4 %	70.5 %	0.009***
Return on equity	0.67	0.27	<.0001	<.0001	83.3 %	73.8 %	0.049**
Return on assets	0.70	0.22	<.0001	0.0002	86.7 %	76.2%	0.028**
Solidity	R²(1)	R²(2)	p(1)	p(2)	Correct1	Correct2	p
Net worth/Total liabilities	0.76	0.23	<.0001	0.0011	88.8 %	76.2 %	0.010**
Total debt ratio	0.77	0.68	<.0001	<.0001	87.8 %	87.7 %	0.491
Growth	R²(1)	R²(2)	p(1)	p(2)	Correct1	Correct2	p
Change in revenue	0.0171	0.0032	0.3073	0.6114	55.6 %	43.0 %	0.035**

(1) = Group 1, 1–182 days from the date of financial statements to the reorganization petition vs. matched viable companies (n = 90 observations)

(2) = Group 2, 183–365 days from the date of financial statements to the reorganization petition vs. matched viable companies (n = 122 observations)

R² = the goodness of fit, p = p-value, Correct = correct classification

*, **, and ***) denotes the significance at the 0.10, 0.05, and 0.01 levels, respectively.

In addition, it can be observed from the last column in Table 5 that the quick ratio, the operating cash flow ratio, and the net working capital ratio

do not maintain their classification ability when the temporal distance to the event increases. They lost their ability to statistically significantly classify at the levels of 0.10, 0.10, and 0.01, respectively. Thus, they will provide a significantly less reliable prediction about the event when the time before filing the petition is between 183 and 365 days rather than between 1 and 182 days.

It is worth noting that all three profitability ratios lose their classification ability when the time span of the prediction increases from the 1–182 day range to the 183–365 day range. Indeed, according to the last column in Table 5, profitability ratios lost their ability to classify to any statistically significant extent when the prediction time span increased. According to the column labeled ‘Correct2’, the return on investment capital (ROI) gives the most inaccurate classification when the time span is 183–365 days or when the late stage of the distress process is considered. It loses its classification ability at a significance level of 0.01 whereas the return on equity and the return on assets lose their classification ability at a significance level of 0.05. It can thus be concluded that the predictive ability of all three profitability ratios in the present analysis is affected by the financial distress process stages.

In the final stage of the financial distress process the two solidity ratios tested performed very well, and the classification accuracy was almost 90 percent. However, in the late but not final stage of the process the classification accuracy of the net worth to total liabilities decreased dramatically by over 10 percent at the 0.05 significance level. The total debt ratio also shows relatively good performance in the late stage when compared to the net worth to total liabilities ratio. It maintains its

classification ability well when the time distance to the event increases from 1–182 days in the final stage to 183 – 365 days in the late stage. The change in revenue ratio reflecting the growth of a company performs poorly in both stages of the financial distress process. Even though the accuracy of growth was not much better than 55 % in classification during the final stage of the financial distress process, it still loses its ability to classify statistically significantly at a level of 0.05 when the time span increases.

4.2. Stepwise logistic regression results (multivariate analysis)

The second research hypothesis suggests that the financial distress process stage affects the statistical financial distress prediction model in short-term prediction (multivariate analysis). Accordingly, the present study investigated stepwise logistic regression analysis, i.e. automatic variable selection via a stepwise process, to select the most significant set of predictors that are most effective in predicting the probability of reorganization in both financial distress process stages. Table 6 presents estimated results for the stepwise LR model when predicting the reorganization event on the basis of all 12 financial ratios included in the study. Indeed, in the stepwise LR analysis the variables are individually added to the logistic regression, and after entry of each variable, each of the included variables is tested to see if the model would be more effective if the variable were excluded. The main purpose of this is to remove insignificant variables from the model before adding a significant variable to it, and so to ensure that the final variables included in the model are the most significant predictors. The process of adding more variables into the model ends when all of the variables have been added into the model and

when it is not possible to make a statistically significant better model using any of the predictors not yet included.

In Table 6, panel A describes the regression results for Group 1 where the companies are in the final stage of the financial distress process. The best combination to measure the probability of filing a reorganization petition is based on the current ratio and the operating cash flow to total liabilities ratio. These financial ratios both measure the liquidity of the firm. The most significant coefficient is found for the operating cash flow to total liabilities ratio with a Wald statistic of 10.5. However, both of these ratios equally dominate the information contained in the model. The Nagelkerke R-square for the model is 0.88, which is very good. The Hosmer & Lemeshow test also indicates a good overall model fit to the data (linearity of the logit).

Panel B describes the stepwise LR results for Group 2 where companies are in the late but not final stage of the financial distress process. For this model, the -2 Log likelihood is higher and the Nagelkerke R^2 slightly lower. In addition, the Hosmer & Lemeshow test also indicates a weaker overall model fit to the data with a p -value of 0.4086. The best model to predict the probability of reorganization includes three financial ratios. The model first includes the accounts payable turnover ratio measuring the liquidity of the company; however, the other two ratios in the model, the total debt ratio and the net worth to total liabilities, measure the company's solidity. The most significant coefficient is found for the total debt ratio with a Wald statistic of 17.4. This financial ratio clearly dominates the information contained in the model, but in addition the net worth to total liabilities has a very significant parameter with a Wald statistic of 12.8.

The estimation results for the whole sample are shown in Panel C of Table 6. In this analysis all reorganized companies and their matched viable pairs are included in the sample data. The -2 Log likelihood is again high and the Nagelkerke R^2 is low at 0.77; and furthermore, this ratio is the lowest of all the models presented in Table 6. However, the Chi-square associated with the Hosmer & Lemeshow test indicates an improved fit to the data compared to the results in panel B when the p -level for it is 0.94. There are now four significant financial ratios included in the model: the current ratio, the total debt ratio, the return on total assets, and the net worth to total liabilities ratio. The most significant coefficient is found for the total debt ratio with a Wald statistic of 28.9. It is obvious that this financial ratio is the dominant power in the model. Furthermore, the net worth to total liabilities ratio has quite a high power with a Wald statistic of 14.1. These two most powerful ratios measure the solidity of the company. The current ratio (a liquidity measure) and the return on assets ratio (a profitability measure) are both statistically significant with Wald statistics of 6.3 and 6.7, respectively.

To conclude, the study findings are consistent with the previously discussed criteria of late and final stages of the financial distress process. In Group 1, liquidity ratios tend to be the most significant predictors, which supports the criteria of the final stage of distress process, whereas in Group 2, solidity ratios are found to be the most dominant predictors, which support the criteria of the late stage of distress process. Finally, when the effect of financial distress stage is not considered, the best model to predict the financial distress includes liquidity, solidity, and profitability ratios.

TABLE 6

Stepwise logistic regression model for the restructuring probability

Panel A. Results for the Group 1 (n=90 observations)				
Model summary		Hosmer & Lemeshow Test		
-2 Log L	Nagelkerke R ²	Chi-square	p-value	
116.258	0.8814	2.3148	0.9698	
Parameters of the regression model				
Variable	Coefficient	STD	Wald	p-value
Current ratio	4.2628	1.6104	7.0066	0.0081
OCF/Total liabilities	19.1156	5.9031	10.4861	0.0012
Panel B. Results for the Group 2 (n=122 observations)				
Model summary		Hosmer & Lemeshow Test		
-2 Log L	Nagelkerke R ²	Chi-square	p-value	
151.181	0.8082	8.2586	0.4086	
Parameters of the regression model				
Variable	Coefficient	STD	Wald	p-value
Accounts payable ratio	-0.0148	0.00531	7.7300	0.0054
Total debt ratio	-18.2662	4.3816	17.3790	<.0001
Net worth/Total liabilities	-1.0230	0.2856	12.8324	0.0003
Panel C. Results for the Group 1 and Group 2 together (n=212 observations)				
Model summary		Hosmer & Lemeshow Test		
-2 Log L	Nagelkerke R ²	Chi-square	p-value	
267.620	0.7663	2.8120	0.9456	
Parameters of the regression model				
Variable	Coefficient	STD	Wald	p-value
Current ratio	1.3096	0.5192	6.3628	0.0117
Total debt ratio	-10.7996	2.0085	28.9118	<.0001
Return on total assets	5.1393	1.9783	6.7484	0.0094
Net worth/Total liabilities	-1.5092	0.4021	14.0870	0.0002

Group 1 = 1–182 days from the date of financial statements to the reorganization petition vs. matched viable companies (n = 90 observations)

Group 2 = 183–365 days from the date of financial statements to the reorganization petition vs. matched viable companies (n = 122 observations)

The classification accuracies of the estimated stepwise LR models are presented in Table 7. The binary classification accuracy is estimated for the leaving-one-out data using the Lachenbruch validation method. It is observed that all three regression models for Group 1, Group 2, and Group 1 and 2 together (the pooled group) perform well in the sample of viable and reorganization companies with correct classification rates of 90.5 %, 90.0 %, and 85.6 % respectively. As expected, the model estimated for the final stage (Group 1) has the highest classification accuracy. The differences in the classification accuracy again support the idea that our reckoning of financial distress process stages is rational.

TABLE 7
Classification accuracy of the LR models

	Healthy companies	Restructuring companies	Correct, %
Group 1	45	45	90.5
Group 2	61	61	90.0
Entire sample	212	212	85.6

Figures 1, 2, and 3 illustrate the ROC curve for both sub-samples, Group 1 and Group 2, and for the entire sample. The x-axis shows the percentage of viable companies where reorganization was incorrectly predicted when the cut-off value changed. The y-axis describes the percentage of companies where reorganization was correctly predicted. In figure 1 the ROC curve for Group 1 is presented. The area under the ROC curve (AUC) is 0.98, which refers to a very high accuracy in classification and gives an accuracy ratio (AR) of 0.97 (value of 1 refers to a perfect model). The curve shows that almost 90 % of the reorganization companies were

correctly predicted to become so when approximately 0 % of the viable companies are incorrectly classified as reorganization companies.

FIGURE 1
The ROC curve for estimated restructuring probability (Group 1)

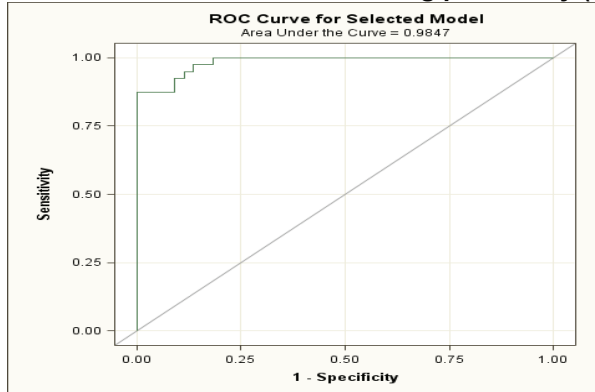


Figure 2 illustrates the ROC curve for Group 2. The area under the ROC curve is 0.97, which is also very good and indicates a high accuracy classification with an AR of 0.94. However, the ROC curve indicates graphically in this case that only close to 50 % of the reorganization companies are correctly classified when approximately 0 % of the viable companies are incorrectly classified as reorganization companies. This percentage of Group 1 was about 90%, which means that the difference in classification is remarkable although the difference in AR is not very significant. Figure 4 presents the ROC curve for the total sample. The AUC of the ROC curve is about 0.95 – lower than the AUC in Group 1 and Group 2. However, this value indicates highly accurate classification with an AC of 0.91, and the curve shows about 60 % accuracy in classification of the reorganized companies when none of the viable companies is misclassified.

FIGURE 2
The ROC curve for estimated restructuring probability (Group 2)

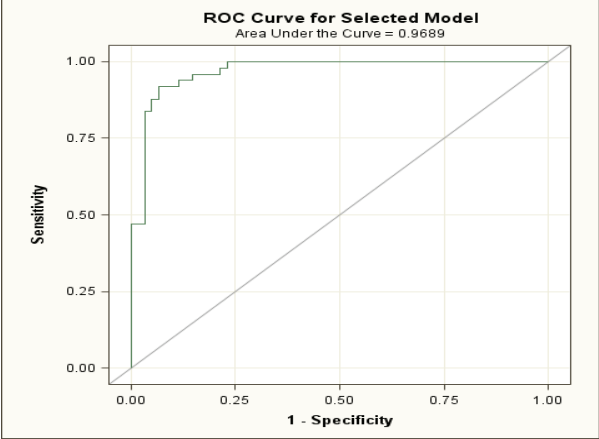
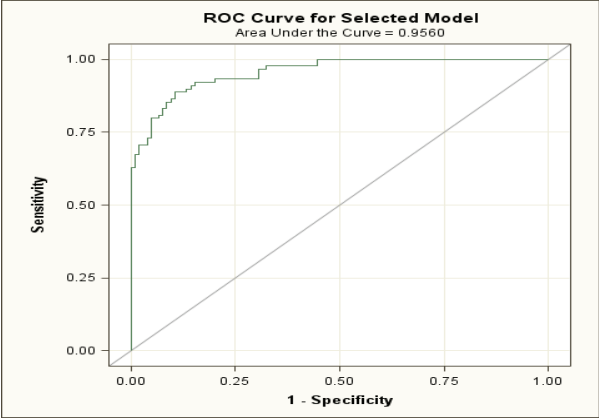


FIGURE 3
The ROC curve for estimated restructuring probability (Group 1 and Group 2)



In summary, the results of the stepwise LR analysis strongly support our second research hypothesis (Hypothesis 2) suggesting that the financial distress process stage at which a company is found affects the (optimal) statistical financial distress prediction model in short-term predictions. In Group 1, where companies are at the final stage of the financial distress process, the LR model included two liquidity ratios, the current ratio and the operating cash flow per total liabilities ratio. In Group 2, where companies are at the late but not final stage of the financial distress process, the resulting LR model consisted of three ratios, the accounts payable turnover (liquidity), the total debt ratio (solidity), and the net worth to total liabilities ratio (solidity). For the whole sample, where the financial distress stage was not considered, the LR model included four ratios, namely the current ratio (liquidity), the total debt ratio (solidity), the return on total assets (profitability), and the net worth to total liabilities (solidity). The resulting ROC curves show that these models lead to different results in classifying reorganization and viable companies. Thus, the results provide strong empirical evidence for the acceptance of our second research hypothesis, since the models projected for different stages of the distress process differed and focused on different financial dimensions. These results have obvious implications that are discussed in more detail below.

5. Summary and conclusions

This study was motivated by the recognition of the fact that the GC decision task faced by auditors is a complex and demanding one. This task has been widely discussed in previous research, and the need for

information to support auditors' decision-making has been documented in several studies (Martens *et al.* 2008). Nevertheless, previous research on the topic has mainly examined the elements of an auditor's decision-making process. This study contributes to the previous research by generating information to support auditors' challenging decision-making. The purpose of the present study is to investigate the effect of the financial distress process stages on financial ratios and financial distress prediction models in short-term GC predictions.

The study focuses on auditors' information needs when planning the research framework. First, the results of previous research suggests that in studies of auditors' decision-making samples of distressed and viable companies should be kept separate, because the issues affecting an auditor's decision-making are different from one case to the next (Martens *et al.* 2008; Hopwood *et al.* 1994). Consequently, we included viable companies as well as companies that have temporary financial difficulties but have not failed in our data set to meet this condition. In this framework, companies with temporary financial difficulties are represented by those that have filed a petition for reorganization. These reorganization companies can be regarded as having more in common with viable companies than with those in financial distress that eventually go bankrupt.

Secondly, instead of predicting qualified audit opinions, this study concentrates on financial ratios and their usefulness in supporting auditors' going-concern evaluations. Previous research indicates that financial ratios have an explanatory power to distinguish financially distressed firms from viable companies between 5 years and 1 year prior to the event. Instead of working on a comparison of financial ratios during this extensive time

period, we examined the latter stages of the financial distress process during the last accounting period of a company, so mimicking auditors' short-term GC decision-making.

The study results indicate that the financial distress process stage has an effect on the classification ability of financial ratios. Liquidity ratios such as the quick ratio, the operating cash flow ratio, and the net working capital ratio lost their ability to classify to any statistically significant extent when the distance from the date of closing of accounts to the date of filing a reorganization petition increased. In other words, when companies moved away from the final stage of the distress process to the late but not final one, liquidity ratios lost their predictive ability. Along the same lines, the three profitability ratios, one of the solidity ratios (the net worth to total liabilities), and the rate of growth lost their predictive ability when the time span of the prediction increased.

This study also applied stepwise logistic regression analysis to select the most significant variables for predicting the probability of reorganization in both financial distress process stages. The results indicate that when the period between the date of the last financial statements and the date of filing a reorganization petition is extended, the best explanatory variables also change. When the reorganization event is very close and the financial distress process is in its final stage, the financial ratios that measure a company's liquidity tend to be the most significant predictors. When the time to the reorganization event is extended, solidity ratios are found to be the best predictors. Moreover, when the effect of the financial distress stage was not considered, solidity ratios tended to be the most significant measures, but liquidity and profitability ratios also mattered.

To conclude, our study has implications for general understanding of the behavior of financial ratios during the late stages of a financial distress process. According to the IAASB's newsletter 2009, the IAASB is concerned about matters relevant to the consideration of the use of the going-concern assumption in the preparation of statements in the current environment. Our study findings indicate that the auditor's GC task could be supported by paying attention to the financial distress process stage. In sum, certain changes in the financial ratios indicate at which stage the firm is. If the company's financial statement indicates that in addition to decreased profitability (early stage) and increased leverage (late stage) also the liquidity (final stage) is poor, the company should be considered to be at the final stage. However, it is possible that a GC opinion should not be issued by the auditor if the business is not at risk of liquidation during the next fiscal year. To avoid the increased risk of being held responsible to the stakeholders for the financial consequences of not having issued a GC opinion when needed, or on the other hand having issued one without justification, an auditor should, as part of the decision-making process, examine liquidity ratios when the company is at the final stage. The decision to issue a GC opinion will then be based on the auditor's evaluation and judgment of the adequacy of the company's liquid assets for the next fiscal year.

The current study is limited in several ways, and the empirical results have uncovered important research directions for the future. First, the empirical research in recognizing different financial distress processes can highlight the changes in the ability of financial ratios to classify viable and non-viable businesses at different financial distress process stages. In this study we

have not made any assumptions concerning different financial distress processes but concentrated only on the two last stages of the process. Accordingly, a further study focusing on more than just two stages of the financial distress process seems merited. Second, we were only able to include a limited amount of financial dimensions and financial ratios in the analysis. The careful examination of different financial distress processes will probably expand the necessary set of financial dimensions and financial ratios to be examined. This research would be very relevant, especially due to its potential to support GC evaluations made by auditors. Finally, the present study has been unable to investigate the outcome of businesses filing a reorganization application, the study findings are based on a relatively small sample of reorganization companies, and the paper lacks the information on ownership structure that might have an effect on the ability to continue as a going-concern in the face of financial difficulties.

Notes

1. The assessment of an entity's ability to continue as a GC is the responsibility of the entity's management, and the role of the auditor is to consider the appropriateness of applying the GC assumption. However, the task of commenting on the GC assumption goes somewhat beyond the traditional role of the auditors, which is to verify historical transactions and check the existence of inventory etc. In sum, in comparison with other reporting requirements, GC reporting involves a large degree of subjectivity.
2. Furthermore, International Standard on Auditing (ISA) 570 establishes the relevant requirements and guidance with regard to the auditor's consideration of the appropriateness of management's use of the GC assumption and auditor reporting.

References

- Altman, E. (1983). *Corporate Distress: A Complete Guide to Predicting, Avoiding and Dealing with Bankruptcy*. 3rd ed., John Wiley & Sons, New York, NY.
- Altman, E. (1968). Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy. *Journal of Finance* 23:4, 589-609.
- Altman, E. & T. McGough (1974). Evaluation of a Company as a Going Concern. *Journal of Accountancy* 138:6, 50-57.
- Altman, E., R. Haldeman & P. Narayanan (1977). Zeta Analysis: A New Model to Identify Bankruptcy Risk of Corporations. *Journal of Banking & Finance* 10, 29-54.
- Altman E., G. Marco & F. Varetto (1994). Corporate Distress Diagnosis: Comparisons Using Linear Discriminant Analysis and Neural Networks. *Journal of Banking & Finance* 18, 505-529.
- Asare, S. (1990). The Auditor's Going-concern Decision: A Review and Implications for Future Research. *Journal of Accounting Literature* 9, 39-64.
- Asare, S. (1992). The Auditor's Going-Concern Decision: Interaction of Task Variables and the Sequential Processing of Evidence. *Accounting Review* 67:2, pp. 379-393.
- Balcaen, S. & H. Ooghe (2006). 35 years of studies on business failure: an overview of the classic statistical methodologies and their related problems. *The British Accounting Review*. 38. 63–93.
- Beaver, W.H. (1966). Financial Ratios as Predictors of Failure. *Empirical Research in Accounting: Selected Studies*. 4. Supplement. 71-111.

- Beaver, W., M. McNichols & J. Rhie (2005). Have Financial Statements Become Less Informative? Evidence from the Ability of Financial Ratios to Predict Bankruptcy. *Review of Accounting Studies* 10:1, 93-122.
- Behn, B.K, S.E. Kaplan & K.R. Krumwiede (2001). Further Evidence on the Auditor's Going-Concern Report: The Influence of Management Plans. *Auditing: A Journal of Practice & Theory* 20:1, 13-29.
- Bell, T.B. & R.H. Tabor (1991). Empirical Analysis of Audit Uncertainty Qualifications. *Journal of Accounting Research* 29:2, 350-370.
- Carcello, J.V., D.R. Hermanson & H.F. Huss (1995). Temporal Changes in Bankruptcy-Related Reporting. *Auditing: A Journal of Practice and Theory* 14:2, 133-143.
- Carcello, J.V., D.R. Hermanson & H.F. Huss (2000). Going-Concern Opinions: The Effects of Partner Compensation Plans and Client Size. *Auditing: A Journal of Practice and Theory* 19:1, 67-77.
- Carcello, J. & T. Neal (2000). Audit Committee Composition and Auditor Reporting. *The Accounting Review* 75:4, 453-467.
- Carey, P. & R. Simnett (2006). Audit Partner Tenure and Audit Quality. *The Accounting Review* 81:3, 653-676.
- Chen, K.C.W. & B.K. Church (1992). Default on Debt Obligations and the Issuance of Going-Concern Opinions. *Auditing: A Journal of Practice & Theory* 11:2, 30-50.
- Chen, Y., D.L. Senteney & A. Gupta (2006). Predicting Impending Bankruptcy from Auditor Qualified Opinions and Audit Firm Changes. *Journal of Applied Business Research* 22:1, 41-56.
- Cielen, A., L. Peeters & K. Vanhoof (2004). Bankruptcy Prediction Using a Data Envelopment Analysis. *European Journal of Operational Research* 154:2, 526-532.

- Constable, J. & D. Woodliff (1994). Predicting Corporate Failure Using Publicly Available Information. *Australian Accounting Review* 4:1, 13-27.
- Cornier, D, M. Magnan & B. Morard (1995). The Auditor's Consideration of the Going-concern Assumption: A Diagnostic Model. *Journal of Accounting, Auditing & Finance* 10:2, 201-221.
- D'Aveni (1989). The Aftermatch of Organizational Decline: A Longitudinal Study of the Strategic and Managerial Characteristics of Declining Firms. *Academy of Management Journal* 32, pp. 577-605.
- DeFond, M.L., K. Raghunandan & K.R. Subramanyam. Do Non-Audit Service Fees Impair Auditor Independence? Evidence from Going-concern Audit Opinions. *Journal of Accounting Research* 40:4, 1247-1274.
- Dopuch, N., R.W. Holhausen & R.W. Leftwich (1987). Predicting Audit Qualifications with Financial and Market Variables. *The Accounting Review* 62:3, 431-455.
- Gaeremynck, A. & M. Willekens (2003). The Endogenous Relationship between Audit-Report Type and Business Termination: Evidence on Private Firms in a Non-Litigious Environment. *Accounting and Business Research* 33:1, 65-79.
- Geiger, M.A. & K. Raghunandan (2001). Bankruptcies, Audit Reports, and the Reform Act. Auditing: *Journal of Practice and Theory* 20:1, 187-197.
- Geiger, M.A. & K. Raghunandan (2002). Auditor Tenure and Audit Reporting Failures. *Auditing: A Journal of Practice and Theory* 21:1, 67-80.

- Geiger, M.A., K. Raghunandan & D.V. Rama (2005). Recent Changes in the Association between Bankruptcies and Prior Audit Opinions. *Auditing: A Journal of Practice and Theory* 24:1, 21-35.
- Geiger, M.A. & D.V. Rama (2003). Audit Fees, Nonaudit Fees and Auditor Reporting on Stressed Companies. *Auditing: A Journal of Practice and Theory* 22:2, 53-69.
- Hopwood, W., J. McKeown & J. Mutchler (1994). A Reexamination of Auditor versus Model Accuracy within the Context of the Going-concern Opinion Decision. *Contemporary Accounting Research* 10:2, 409-431.
- IAASB (2009). International news letter. Audit Considerations in Respect of Going-concern in the Current Environment. Available from World Wide Web:
http://web.ifac.org/download/IAASB_Staff_Audit_Practice_Alerts_2009_01.pdf
- Jones, F. (1987). Current Techniques in Bankruptcy Predicting. *Journal of Accounting Literature*, 6, pp. 131-164
- Karels, G.V. & A.J. Prakash (1987). Multivariate Normality and Forecasting of Business Bankruptcy. *Journal of Business Finance and Accounting* 14:4, 573-593.
- Koh, C. & R. Brown (1991). Probit Predictions of Going and Non-going Concerns. *Managerial Auditing Journal* 6:3, 18-23.
- Koh, C. & L.N. Killough (1990). The Use of Multiple Discriminant Analysis in the Assessment of the Going-concern Status of an Audit Client. *Journal of Business Finance & Accounting* 17:2, 179-192.
- Kuruppu, N., F. Laswad & P. Oyelere (2003). The Efficacy of Liquidation and Bankruptcy Prediction Models for Assessing Going Concern. *Managerial Auditing Journal*, 577-590.

- Laitinen, E.K. (1991) Financial Ratios and Different Failure Process, *Journal of Business Finance & Accounting* 18:5, pp. 649-673.
- Laitinen, T. & M. Kankaanpää (1999). Comparative Analysis of Failure Prediction Methods: The Finnish Case. *The European Accounting Review*, 8:1, pp. 67-92.
- Laitinen, E.K. (2005) Survival Analysis and Financial Distress Prediction: Finnish Evidence. *Review of Accounting & Finance* 4:4, pp. 76-90.
- Laitinen, E.K. (2009). Do Reorganizing and Bankrupt Firms Differ From Viable Firms? In: Proceedings of the IASK (International Association for the Scientific Knowledge) International Conference, Global Management 2009. Pedro Soto Acosta & Fernando Alberto Freitas Ferreira. ISBN 978-989-95806-9-5.
- Laitinen, E.K. & T. Laitinen (2004). Yrityksen rahoituskriisin ennustaminen. Helsinki: Talentum Media Oy. 405 p. ISBN 952-14-0771-9.
- Levitan, A.S. & J.A. Knoblett (1985). Indicators of Expectations to the Going-Concern Assumption. *Auditing: A Journal of Practice & Theory* 5:1, 26-39.
- Louwers, T.J. (1988). The Relationship between Going-Concern Opinions and the Auditor's Loss Function. *Journal of Accounting Research* 36:1, pp. 143-156.
- Louwers, T.J., F.M. Messina & M.D. Richard (1999). The Auditor's Going-Concern Disclosure as a Self-Fulfilling Prophecy: A Discrete-Time Survival Analysis. *Decision Sciences* 30:3, 805-824.
- Martens, D., L. Bruynseels, B. Baesens, M. Willekens & J. Vanthienen (2008). Predicting Going-concern Opinion with Data Mining. *Decision Support Systems* 45, 765-777.

- Menon, K. & K.B. Schwartz (1987). An Empirical Investigation of Audit Qualification Decisions in the Presence of Going-Concern Uncertainties. *Contemporary Accounting Research* 3:2, 302-315.
- Mutchler, J.F. (1985). A Multivariate Analysis of the Auditors Going-concern Opinion Decision. *Journal of Accounting Research* 23:2, 668-682.
- Mutchler, J.F. & D.D. Williams (1990). The Relationship between Audit Technology, Client Risk Profile, and the Going-Concern Opinion Decision. *Auditing: A Journal of Practice and Theory* 9:3, 39-54.
- Mutchler, J.F., W. Hopwood & J.C. McKeown (1997). The Influence of Contrary Information and Mitigating Factors on Audit Opinion Decision on bankrupt companies. *Journal of Accounting Research* 35:2, 295-310.
- Ohlson, J.A. (1980). Financial Ratios and the Probabilistic Prediction of Bankruptcy. *Journal of Accounting Research* 18, 109-131.
- Raghunandan, K. & D.V. Rama (1995). Audit Reports for Companies in Financial Distress: Before and After SAS no. 59. *Auditing: A Journal of Practice & Theory* 14:1, 50-63.
- Restructuring of Enterprises Act (47/1993; amendments up to 247/2007 included).
- Reynolds, J. & J. Francis (2000). Does Size Matter? The Influence of Large Clients on Office-Level Auditor Reporting Decisions. *Journal of Accounting and Economics* 30:3, 375-400.
- Salehi, M. (2009). Relationship between Going-concern Concepts and P/E Ratio in Emerging Market: Case Iran. *Journal of Management Research* 1:1, 1-21.
- Sarkar, S. & R. Sriram (2001). Bayesian Models for Early Warning of Bank Failures. *Management Science* 47:11, 1457-1475.

- Scott, J. (1981). The Probability of Bankruptcy. *Journal of Banking & Finance*. 5, pp. 317-344
- Sharma, S. & V. Mahajan (1980). Early Warning Indicators of Business Failure. *Journal of Marketing* 44, 80-89.
- Shumway, T. (2001). Forecasting Bankruptcy More Accurately: A Simple Hazard Model. *The Journal of Business* 74, 101-124.
- Sun, L. & P. Shenoy (2007). Using Bayesian Networks for Bankruptcy Prediction: Some Methodological Issues. *European Journal of Operational Research* 180:2, 738-753.
- Suomen Asiakastieto. Further information available from World Wide Web: <http://www.asiakastieto.fi>
- Tam, K. & M. Kiang (1992). Managerial Applications of Neural Networks: The Case of Bank Failure Predictions. *Management Science* 38:7, 926-947.
- Winakor, A. & R. Smith (1935). Changes in Financial Structure of Unsuccessful Industrial Corporations. Bulletin No. 51, University of Illinois, Bureau of Business Research: Urbana, Illinois.
- Zavgren, C.V. (1983). The Prediction of Corporate Failure: The State of the Art. *Journal of Accounting Literature*. 1. 1-38.
- Zavgren, C.V. and G.E. Friedman (1988). Are Bankruptcy Prediction Models Worthwhile? An Application in Securities Analysis. *Management International Review*. 1. 34-44.
- Zmijewski, M.E. (1984). Methodological Issues Related to the Estimation of Financial Distress Prediction Models. *Journal of Accounting Research* vol. 22, 59-86.

APPENDIX 1

Literature table of previous studies on going-concern prediction (Martens *et al.* 2008; Kuruppu *et al.* 2003)

Study	Sample	Technique	Sampling
Altman & McGough (1974)	Bankrupt: 33 Non-bankrupt: 33	MDA	Other
Altman (1983)	Failed: 40	MDA	Other
Mutchler (1985)	Going concern: 119 Distressed: 119	MDA	Balanced
Levitan & Knoblett (1985)	Going concern: 32 Non-going concern: 32	MDA	Matched
Menon & Schwartz (1987)	Bankrupt: 89 Going concern: 37 Non-going concern: 52	Logit	Other
Dopuch <i>et al.</i> (1987)	Qualified: 275 Non-qualified: 411	Probit	Other
Koh & Killough (1990)	Failed: 35 Non-failed: 35	MDA	Other
Mutchler & Williams (1990)	Going concern: 87 Distressed: 612 Healthy: 1171	Logit	Other
Bell & Tabor (1991)	Qualified: 131 Non-qualified: 1217	Logit	Other
Koh & Brown (1991)	Failed: 40 Non-failed: 40	Probit	Other
Chen & Church (1992)	Going concern: 127 Distressed: 127	Logit	Matched
Hopwood <i>et al.</i> (1994)	Bankrupt: 134 Distressed: 80 Healthy: 80	Logit	Other
Carcello <i>et al.</i> (1995)	Bankrupt: 446 Going concern: 231 Non-going concern: 215	Logit	Other
Raghunandan & Rama (1995)	Bankrupt: 175 Going concern: 90 Non-going concern: 85 Non-bankrupt: 362 Going concern: 105 Non-going concern: 257	Logit	Other
Cornier <i>et al.</i> (1995)	Failed: 138 Non-failed: 112	Logit MDA RP	Other

Study	Sample	Technique	
Mutchler et al. (1997)	Bankrupt: 208 Going concern: 107 Non-going concern: 101	Logit	Other
Carcello et al. (2000)	Going concern: 52 Distressed: 264	Logit	Other
Carcello & Neal (2000)	Going concern: 83 Distressed: 140	Logit	Balanced
Reynolds & Francis (2000)	Going concern: 224 Distressed: 2215	Logit	Balanced
Geiger & Raghunandan (2001)	Bankrupt: 365 Going concern: 198 Non-going concern: 167	Logit	Other
Behn et al. (2001)	Going concern: 148 Distressed: 148	Logit	Matched
Geiger & Raghunandan (2002)	Bankrupt: 117 Going concern: 59 Non-going concern: 56	Logit	Other
DeFond et al. (2002)	Going concern: 96 Distressed: 1158	Logit	Other
Geiger & Rama (2003)	Going concern: 66 Distressed: 66	Logit	Matched
Gaeremynck & Willekens (2003)	Terminated firms: 114 Continued firms: 114	Logit	Matched
Geiger et al. (2005)	Bankrupt: 226 Going concern: 121 Non-going concern: 105	Logit	Other
Carey & Simnett (2006)	Going concern: 66 Distressed: 493	Logit	Other

Article # 2

Harmonization of Audit Practice: Empirical Evidence from Going-Concern Reporting in Scandinavia

Nina Sormunen¹, Kim K. Jeppesen², Stefan Sundgren³ & Tobias Svanström⁴

¹*Copenhagen Business School, Department of Accounting and Auditing
Sobjerg Plads 3, DK-2000 Frederiksberg, Denmark*

²*Copenhagen Business School, Department of Accounting and Auditing
Sobjerg Plads 3, DK-2000 Frederiksberg, Denmark*

³*University of Vaasa, Department of Accounting and Finance
P.O. Box 700, FI-65101 Vaasa, Finland*

&

*Umeå School of Business and Economics
Biblioteksgränd 6, SE-90187 Umeå, Sweden*

⁴*BI Norwegian Business School, Department of Accounting, Auditing and
Law*

Nydalsveien 37, NO-0484 Oslo, Norway

&

*Umeå School of Business and Economics
Biblioteksgränd 6, SE-90187 Umeå, Sweden*

Abstract

The study uses a sample of 2,943 bankrupt firms from Denmark, Finland, Norway and Sweden in the period 2007 to 2011, and investigates harmonisation of audit behaviour in terms of going-concern reporting. Even though the Scandinavian countries have similar legal systems and, for all practical purposes, identical audit requirements regarding going-concern reporting, the study findings show significant differences in going-concern reporting before bankruptcy between the Scandinavian countries. One key result is that Danish companies more frequently get a going-concern opinion prior to bankruptcy than do companies in Norway, Sweden and Finland. The observed differences between the countries correlate with the period that going-concern reporting based on ISA standards has been mandatory in the respective countries. The study also finds that differences in audit reporting behaviour are moderated by international audit firm networks. The observed differences show that audit standards are implemented and interpreted differently in different countries.

Keywords: Going-concern opinion; International Auditing Standards; International Auditing Practices; Harmonisation; Scandinavian Countries

1. Introduction

Much emphasis has been placed on the benefits of having similar rules across countries, and harmonisation is supported as a means to improve comparability of financial statements in different countries. Harmonisation will make the expansion of financial markets easier (Schweikart *et al.*, 1996; Zarzeski, 1996; Martin, 2000). However, differences in the implementation of similar standards between countries may lead to differences in extant practice (see e.g. Martin, 2000), and the purpose of the current study is to investigate harmonisation of audit reporting behaviour before bankruptcy with respect to going-concern opinions across the Scandinavian countries: Denmark, Finland, Norway and Sweden.

The International Federation of Accountants (IFAC) and the International Auditing and Assurance Standards Board (IAASB) have strongly influenced the global audit profession. These bodies have played a significant role in developing, adopting and implementing International Standards on Auditing (ISAs), and at the moment, more than one hundred countries are using or are in the process of implementing ISAs into their national auditing standards (IFAC 2011a). Despite the fact that ISAs have come a long way since they were developed, it is still not absolutely clear whether the adoption and implementation of globally consistent auditing standards have been successful. Regulated international harmonisation is difficult to achieve in the business world because of the varying unique cultural political, legal and economic factors of different countries (Smith *et al.*, 2008). International accounting research includes substantial research into similarities and differences of accounting practices and disclosures

across countries (Doupnik & Salter, 1995; Baker & Barbu, 2007), but still little seems to be known about similarities in the ways auditing is enforced.

However, some evidence suggests that similarity of standards and rules does not necessarily ensure similar audit reporting and disclosure of results (Needles, 1989; Martin, 2000; Hegarty *et al.*, 2004; Trønnnes *et al.*, 2011). The existing evidence is still very limited, and there is a complete lack of knowledge about any cross-national consistency of ISA implementation in private firms. According to the IAASB's strategy and work program 2009-2011, the IAASB is concerned that local implementation of the ISA does not ensure development of a consistent practice. From the point of view of users of financial statements, harmonisation of auditing practice will be achieved when clients sharing similar characteristics receive the same audit report regardless of period, auditor firm or country domicile (Trønnnes *et al.*, 2011). Although limited to a single standard (ISA 570), the current study provides evidence of this issue in terms of auditors' going-concern reporting in Scandinavia (Denmark, Finland, Norway and Sweden). Since the national standards applied in the Scandinavian countries at the time of the study were a near-direct translation of ISA, with only minor national adjustments, this study captures the cross-national implementation practices of ISA.

Countries are broadly categorised as English common-law countries or Roman civil-law countries (LaPorta, 1998); the main differences being that laws and enforcement are generally stronger in common-law countries than in civil-law countries. Civil-law countries are divided into three families of legal systems; German, French and Scandinavian.¹ This study investigates whether audit practices are comparable (i.e. similar) within

one family of legal systems, namely the 'Scandinavian' one. Denmark, Norway, Sweden and Finland have been chosen also because accounting practices in these four countries have often been classified as one group (Doupnik & Salter, 1995; Aisbitt, 2001). Based on the similarities in auditing standards and legal systems in Scandinavia, users of audited financial information may expect comparable practices across the Scandinavian countries. From a cross-national perspective, the Scandinavian countries provide the best possible chances for finding evidence of similar practices.

The issue of a going-concern opinion is an important object of investigation since it serves as an example of where auditing standards seem to be fairly consistent across countries, but practice may vary (Martin, 2000). Furthermore, the auditor's going-concern opinion plays a significant role in warning users of financial statements of a firm's ability to continue as a going concern. Accordingly, international investors, who potentially have limited access to information about a foreign entity's financial health, need to be able to understand the financial statements of foreign companies whose shares they might buy. Consistency in auditor reporting is, however, not only an issue for investors of publicly traded companies. Creditors and trade partners represent stakeholders that have an interest in consistent auditor reporting in both private and public firms across Scandinavia. Reporting consistency is important since business relationships across these four countries are fairly intensive.

Importantly, and in contrast to related studies on implementation of auditing standards (Martin, 2000; Trønnes *et al.*, 2011), our sample consists of small private firms. Small and medium-sized enterprises

represent the vast majority of all firms in the Scandinavian countries, and it is reasonable to expect comparative variation in auditor reporting practices for this segment. Small private firms represent a heterogeneous group of companies where the level of uncertainty typically is high, and compared to public firms they are much less scrutinised by investors and other outside stakeholders. As a result, auditors have a challenging task in evaluating and reporting on going-concern uncertainty, but it also means that the risk of litigation and loss of reputation for failing to report accurately is low in comparison with public firm assignments.

In addition, our study investigates bankruptcy companies, which led us to compare and evaluate audit practices/quality within and between the Scandinavian countries. The reliability of financial information reported by foreign companies not only depends on the extent of disclosure, but also on the quality of the audit (Nobes & Parker, 2010), and in previous literature audit quality is often related to auditors' going-concern reporting. Bankruptcies not preceded by going-concern audit reports are widely viewed as audit failures (Francis, 2004), and consequently, audit quality and audit failure rates are negatively correlated.

In order to study going-concern reporting practices in Scandinavia, we use a sample of 2,943 companies from Denmark, Finland, Norway and Sweden that were declared bankrupt between 2007 and 2011. Results show that there are significant differences in auditors' reporting behaviour between the countries. Specifically, we found that Danish companies were significantly more likely to receive a going-concern opinion prior to bankruptcy than were companies in Sweden, Finland and Norway. The study findings indicate that similar auditing standards do not necessarily

lead to comparable (similar) practices. We explain our findings based mainly on the fact that Denmark was the first Scandinavian country to introduce national standards on going-concern reporting, and also the first to adopt ISA. Moreover, it was also found that the differences in going-concern reporting between countries are moderated by Big 4-membership.

The findings of this study underpin the understanding of auditors' going-concern reporting, the quality of auditing and harmonisation across Scandinavian countries. Particularly, observed differences in implementing auditing standards may substantially limit the development of international business activity, and users of financial statements need to be able to understand that even though rules and standards are similar across the countries, they can be implemented differently.

The remainder of the paper is organised as follows: The next section presents previous studies on accounting harmonisation followed by a derivation of testable research questions. The data and descriptive statistics are described in section 3, and section 4 reports the findings of the study. Finally, the conclusions of the study are detailed in section 5.

2. Background and literature

2.1. Previous studies

From the point of view of international accounting harmonisation, the previous literature has a long history, and differences in financial reporting

are the norm. Previous studies report on various potential causes why accounting harmonisation has not been successful across countries, and the causes include historical, cultural, economic, social, legal, tax, professional and political differences (Baker & Barbu, 2007; Bode, 2007). Auditing does not occur in a vacuum, and the environment in which the audit takes place is part of the context that shapes auditors' incentives and reasoning with respect to the interpretation and application of auditing standards (Nobes and Parker, 2006; 2010). Audit environments are not static, but rather dynamic in nature and changing over time (Trønnes *et al.*, 2011). The environment also seems to have an impact on auditor behaviour and auditor reporting. For example, auditors in the US became more willing to issue going-concern opinions after the introduction of SOX in 2002 (Geiger *et al.*, 2005).

It is important to distinguish between adoption of standards and convergence with standards (Nobes & Zeff, 2008).² Moreover, the differences across countries in terms of culture, legal system and litigation risk, as well as changes in the latter over time, have an impact on how auditing standards are interpreted and applied (Krishnan and Krishnan, 1997; Francis, 2004; 2011; Trønnes, 2011). The factors that operate in the audit environment, and the interaction between them, would influence both general expectations about auditors' roles and how auditors themselves interpret and define their audit requirements. Accordingly, both differences across and changes within audit environments might give rise to obstacles to international audit harmonisation, and an understanding of these influences is significant in a globalised world (Trønnes, 2011). These are briefly discussed in the following.

To begin, research has taken an interest in the role that culture plays in financial reporting. Social norms and culture have an influence on the value judgments and attitudes of accountants and auditors, which in turn will impact how accounting and auditing systems have developed and been practiced in different countries (Gray, 1988). To get a better understanding of the link between culture and financial reporting, previous studies report on the association between culture and firm disclosure (see e.g. Wingate, 1997; Hope, 2003). However, they have produced mixed findings (Trønnnes, 2011). Hope *et al.* (2008) argue that both financial reporting decisions as well as a company's choice of auditor relate to national culture, and in this context differences in auditor's reporting behaviour between different cultural contexts may occur (Trønnnes, 2011). Common-law countries have stronger investor protection laws and more developed financial markets than do civil-law countries (La Porta *et al.*, 1998). In general, countries with weaker legal environments demand lower quality audits (Francis *et al.*, 2003), and moreover, there is evidence that auditors have a more important governance function in countries where legal institutions are weak (Choi & Wong, 2007). Litigation risk is one important feature of the audit environment and may impact how standards are interpreted and applied, just as they may provide an incentive for strengthened auditor independence (Krishnan and Krishnan, 1997; Francis, 2004; 2011; Trønnnes, 2011). Without litigation risk the auditor would have little incentive to put in the necessary effort or to report truthfully (Dye, 1993). Lack of evidence of quality differentiation between Big 4 auditors and non-Big 4 auditors has been attributable to the level of litigation risk and loss of reputation (Vander Bauwede and Willekens, 2004). In general, the risk of litigation is low in all the Scandinavian countries. For example, Norway has had a total of 40 court cases against

auditors during the period 1945-2005 (Hope and Langli, 2010). There are also few court cases in Sweden, Finland and Denmark.

There is a lot of evidence that Big 4 auditors perform higher quality audits than do non-Big 4 auditors in the (US) public firm market (Kim *et al.*, 2003, Choi and Doogar, 2005, Choi *et al.*, 2010). Evidence also indicates that Big 4 auditors have lower thresholds of issuing a modified audit report (Francis and Krishnan, 1999), they report more accurately or conservatively on bankrupt firms (Lennox, 1999, DeFond, *et al.* 2002), and their clients have lower abnormal accruals (Becker *et al.*, 1998, Francis *et al.*, 1999, Choi *et al.*, 2010). In a European context, Vanstraelen and Maijor (2006) found that Big 4 auditors in the UK constrain earnings management in UK public firms to a significantly higher extent than their non-Big 4 counterparts. However, no such quality differences were identified in the German and French samples. Cross-national variances in audit quality were also found in Van Tendeloo and Vanstraelen (2008). They found evidence that in countries with a high tax-book alignment (Belgium, Finland, France and Spain), private firms audited by a Big 4 auditor engaged less in earnings management, although no such evidence could be found in low tax-book alignment countries (UK and Netherlands).

In sum, earlier findings indicate that the current audit environment is important for auditor reporting behaviour and the way standards are applied in extant practice. However, we do not know if and potentially how reporting practices in private firms vary between countries in a (relatively) homogenous region. Martin (2000) compares accounting and auditing standards for going-concern uncertainty and their implementation across three countries; France, Germany and the United States. Martin (2000)

showed that although country-specific standards were essentially the same across the three countries, the going-concern disclosure rates for US firms were significantly higher, even when controlling for firm-specific characteristics that may be associated with going-concern uncertainty. More recently, in the study of Trønnnes *et al.* (2011), consistency across the common-law countries the United States, the United Kingdom and Australia was investigated over a period of nine years; 2001-2009. By focusing on the auditors' reporting behaviour with respect to going-concern modifications, the study findings show that there is a lack of consistency in audit reporting behaviour between these three countries. However, the differences between the countries were found to decrease over time.

Choi *et al.* (2008) and Francis and Wang (2008) have researched the gap in earnings quality between Big 4 and non-Big 4 audit clients in weak versus strong legal regimes. However, while Choi *et al.* (2008) found that the gap between Big 4 and non-Big 4 clients decreases with the strictness of the legal regime, the opposite was found in Wang and Francis (2008). Trønnnes *et al.* (2011) found evidence that the variance in going-concern reporting across countries is moderated by membership of international global audit firm networks. The national Big 4 audit firms are all members of large audit networks, and if network members do not meet certain quality standards, the reputation of the whole network is at risk. Affiliates of those networks are subject to quality assurance and internal quality reviews, and they share common methodology and practice rules (Lenz and James, 2007). Cross-national differences could therefore be expected to be minor for a sample of Big 4 auditors, since large audit firms belonging to international networks are expected to uphold a more homogenous quality level.

2.2. Similarities and differences in institutional settings and research questions

Going-concern reporting

In each country, the going-concern assumption is a fundamental precondition of financial statements, and the national standard for going-concern reporting applied by auditors is similar to ISA 570 in all relevant aspects. At the time of the study, standards equivalent to ISA 570 had also been in practice for at least four years in all countries.³ In order to understand current auditor reporting practice, it is relevant to consider when ISA standards as well as past national going-concern requirements were first implemented. Table 1 presents auditing standards on the auditor's assessment of the going-concern assumption in each country.

TABLE 1
Auditing standards on the auditor's assessment of the going-concern assumption

Country	Standard	Valid	Remarks
DK	Revisions-vejledning nr. 6 (Auditing Guideline No. 6)	1981-2003	The first national auditing guideline on going-concern was issued in 1981 and was a translation of the UEC Auditing Standard on going-concern from 1978. Auditing Guideline no. 6 was revised in 1997 to bring it in accordance with Danish regulation and ISA 570.
	RS 570	2003 – 2010	Danish translation, in all aspects identical with ISA 570, but with adjustments in

	ISA 570	2010-	<p>section 33 and 34 regarding the audit opinion.</p> <p>Identical translation of ISA 570, no adjustments</p>
FIN	ISA 570	1998 - 2007	<p>The first national recommendation came in 1996. Going-concern was mentioned for the first time in auditing standards in 1998.</p> <p>In 2000, standards that were a direct translation of the ISA standards came into force. In 2007, it was included in the Finnish Auditing Act that ISA standards need to be followed.</p>
NO	RS 570	1994 - 2009	<p>In all qualitative aspects identical with ISA 570, but with four minor adjustments.</p> <p>The first national recommendation came in December 1987 (NSRF 1988, section 1.7.3.4). This recommendation was updated in 1993. The terminology <i>going-concern</i> was used already in the 1987 version, and from 1993 going-concern uncertainty was the name of the recommendation.</p>
SWE	RS 570	2004 - 2009	<p>In accordance with ISA 570 but with one minor adjustment.</p> <p>Prior to the introduction of ISA there were no national recommendations or standards on going-concern reporting. The practice among auditors was to only report on loss of shareholder capital.</p>

In Denmark, the auditors' going-concern reporting appears to have been in focus for a relatively longer period than is the case in the other countries. The first major going-concern qualification was issued in 1971 by the

auditors of the Burmeister & Wain Shipyard in Copenhagen. The qualification and its potentially detrimental consequences were debated in the press at the time, but the qualification eventually resulted in management's attention to the problems; the company was restructured and continued operations.⁴ The awareness of the need for the auditor to address going-concern problems was given further impetus by the recession following the energy crisis in the 1970s. The *Union Européenne des Experts Comptables, Economiques et Financiers* (UEC) Auditing Standard Board issued its first going-concern audit standard in 1978, which was translated into Danish and published as Danish Auditing Standard No. 6 (Revisionsvejledning nr. 6) in 1981. The debate and the guideline apparently made Danish auditors aware of the need to qualify the audit report relatively early.⁵ A research report investigating audit opinions on a sample of 982 bankrupt companies in 1989-1991 thus concluded that 50 % of them had a qualified audit report in its last financial statements (Laursen, 1995). Going-concern reporting following ISA 570 was introduced in 1996 by governmental order, following which Auditing Standard no. 6 was amended in 1997. The standard was replaced with ISA 570 in 2003 when Denmark formally adopted ISA as a replacement for locally developed auditing standards.

In Norway, the full adoption of ISA came into force only in 2010, but the national auditing standards issued between 1994 and 2009 were to a large extent based on ISA. Despite national adjustments, the applied standard was qualitatively similar to ISA 570. Moreover, a number of national recommendations on auditor's going-concern reporting have been made in Norway since 1987 (NSRF 1988, section 1.7.3.4).

In Finland, the auditor's institute made a decision in 1996 to harmonise the national auditing rules as much as possible with the international standards. Going-concern was mentioned for the first time in the Finnish auditing standards in 1998, and despite the fact that the rules were still national, the essential elements were similar to the international standards. In July 2000, standards that were a direct translation of the ISA standards came into force. However, the preface to the standards includes some interesting features. First, it was pointed out that an auditor may depart from the standards if he/she thinks this is justified. In such a case, the auditor must also motivate the decision. Moreover, the standards were only to be followed in 'material issues'. Starting from 2007, it was included in the Finnish Auditing Act that ISA standards must be adhered to.

In Sweden, the national auditing standards issued from 2004 until 2009 were based on ISA, just like it was the case in Norway. Consequently, a going-concern standard was adopted in 2004. Importantly, no national standards on going-concern reporting existed prior to 2004. During the period 2004 to 2009, the standards included a small number of modifications to the ISA standards, but no significant differences existed between ISA 570 and the Swedish going-concern standard. Outright translations of ISAs were adopted in 2011.

To conclude, the implementation of ISA standards as well as past national going-concern requirements vary somewhat across the countries (see also Table 1). Going-concern reporting following ISA 570 was introduced in Denmark in 1996, in Norway in 1994, in Finland in 1998/2007 and in Sweden in 2004.⁶ Furthermore, national standards on going-concern reporting were introduced early in Norway and particularly in Denmark. As

a result, Danish and Norwegian auditors have more experience with going-concern reporting than do their colleagues in Sweden and Finland. The more extensive experience with going-concern reporting should improve reporting accuracy and thus make it more likely that the auditor will issue a going-concern opinion prior to bankruptcy. The complexity of going-concern reporting suggests that experience is important for the accuracy in auditor reporting.

The institutional setting

As highlighted in the introduction, Scandinavian countries were selected because of their being defined as a single group (Doupnik and Salter 1995; Aisbitt 2001). Denmark, Finland, Norway and Sweden are all highly consistent with respect to language⁷, culture and legal systems. All four countries belong to the same legal family according to the classification by La Porta *et al.* (1998). Auditors in all four countries have also been expected to conduct an audit of the administration of the company, meaning that violations against rules in the Company Law are reported. The Company Laws in the Scandinavian countries were based on collaboration between the countries in the 70s that resulted in highly similar laws (e.g. Kyläkallio *et al.*, 2002 p. 40). EU regulations have more recently been a source of changes to the laws.

All four countries have two-tier systems of auditor qualifications, in the following named *approved* and *authorised* auditors. However, the countries are not identical in all respects. In the following we present some differences and discuss how they might impact auditors' reporting.

The extent and direction of auditors' education could arguably have some impact on the conduct. The formal education requirements vary to some extent between the countries. In Norway a master's degree in accounting and auditing from Norwegian School of Economics or Norwegian Business School is required for becoming an authorised auditor. The master's programme should take at least 1.5 years, and the Financial Supervisory Authority of Norway requires that students achieve the grade C or higher on the ECTS scale on all exams taken in the master's programme. Specific courses in auditing are required. Denmark has a similar requirement for a master's degree in accounting and auditing followed by a trainee period and an entry exam held by the state to get auditor authorisation, but there are no grade requirements. Approved auditors (registered auditors) follow the same requirements, except they only need to pass the first year of the two year master's programme.

Education requirements are less demanding in Finland and particularly in Sweden. In Sweden, studies in business administration are required, but there are no specific requirements to the quantity of studies in accounting and auditing. Furthermore, having a master's degree is not a formal requirement for becoming an approved or authorised auditor. In Finland, a master's degree is required for becoming an authorised auditor, and the degree must include accounting and auditing studies and six months of law studies. However, although the educational requirements are somewhat less stringent in Sweden, it is possible that this is compensated for by courses during the three year period of practical experience, a period that is required in all four countries.

Continuing education arguably increases audit quality. There are minor differences in the extent to which auditors are required to participate in continuing education. Auditors in Norway are required to take continuing education in order to keep their certification. Starting from four years after the approval, the auditor needs to document a minimum of 105 hours of continuing education over the preceding three calendar years. According to rules in force from 2007, at least 35 hours of the continuing education must be in auditing, 14 hours in ethical principles, 21 hours in accounting and 21 hours in tax law. Denmark has similar legal requirements, except that 120 hours are required over a period of three years, with a minimum of at least 24 hours in auditing, 24 hours in accounting, and 12 hours in tax law. In Sweden, the code of ethics for professional accountants states that continuing education equivalent to 120 hours is required over a three-year period. 60 of those hours need to be documented, and the minimum requirement for each year is 20 hours. The requirement of continuing education for auditors was made statutory in July 2009. Continuing education is also required in Finland, but no specific rules exist about the number and contents of courses. An evaluation of whether continuing education is satisfactory is made on a case-by-case basis.

The incentive to accomplish audit assignments carefully may vary with the risk and penalties for being caught by overseers of the auditing system. The Eighth Directive (2006/43/EC) states that the monitoring system of auditors must rest on two pillars: effective sanctions and public disclosure of sanctions. However, there is considerable freedom in terms of how the monitoring is conducted in the EU.

The Financial Supervisory Authority of Norway (FSAN), *Finanstilsynet*, licenses, supervises and takes disciplinary actions against auditors in Norway. FSAN performs document-based inspections every second year that cover all auditors and audit firms (FSAN report 2010; p.4), and conducts (on-site) inspections based on own risk assessments, complaints received or other signals, for example media attention. At least every sixth year, a quality check is conducted on all active auditors that perform (statutory) audits. During 2005-2009 the FSAN withdraw the licenses of 42 qualified auditors (14 authorised and 28 approved), which corresponds to 2.8 % of the average number of active auditors.⁸ A total number of 706 disciplinary cases were investigated during this period, which averages 141 cases per year.

In Sweden, the Supervisory Board of Public Accountants (SBPA) is responsible for monitoring accountants. The board carries out regular inspections every third year of auditors dealing with publicly traded clients. Inspection of auditors without public assignments has been delegated to FAR, the professional institute for public accountants. However, SBPA is involved in designing the investigations and decides on the required qualifications for individuals conducting the inspections. SBPA also conducts inspections following complaints by taxation authorities or other parties. According to Sundgren and Svanström (2012b), disciplinary sanctions were issued against approximately 6.9 % of all auditors during the 2005-2009 period. 41 auditors or 1 % of all certified auditors were stripped of their certification during this period. This is a much lower proportion than in Norway.

In Finland, the major part of the supervision is conducted by the Auditing Board at the Chamber of Commerce. The board is supervised by a department at the Ministry of Employment and Economy. The proportion of auditors having received a disciplinary sanction is much lower than in Sweden and Norway. During the 2005 to 2009 period, sanctions were issued against 12 authorised auditors (about 1.8 %), and 4 auditors were stripped of their authorisation during the period 2005 to 2009.

In Denmark, auditor supervision is regulated by law and conducted by *Revisortilsynet*, an independent board established by the state. The auditor supervision board can issue reprimands, but in cases where harder sanctions may be needed, the auditor supervision board can refer the cases to the state's independent auditor disciplinary board, *Revisornævnet*. The disciplinary board can sanction warnings, fines and, in severe or repeated cases, also strip auditors of their authorisation. In the period 2004-2009, 4,028 audit firms were selected for quality checks by the supervision board. As a result of the quality checks, 122 cases were submitted to the disciplinary board, which resulted in 9 warnings and 100 fines. No Danish auditors have been stripped of their authorisation in this period, but as a direct result of the quality checks, 771 audit firms have voluntarily been deleted in *Revireg*, the audit firm register, and are thus no longer allowed to conduct audits.

Finally, the tax authorities may also indirectly monitor auditors. The extent of this type of monitoring is likely to depend on the extent to which accounting records are used as a basis for calculating tax. In countries with a high alignment between financial reporting and tax accounting, tax authorities review the financial reporting carefully when determining

taxable income. This creates incentives for auditors to maintain quality levels and thus avoid the tax authorities filing complaints against them and causing damage to their reputation. Van Tendeloo and Vanstraelen (2008) also present empirical evidence that is consistent with this view. They found that high-quality auditors reduced earnings management more in countries with a high tax-book alignment than in countries with a lower alignment. The level of tax-book alignment is high in Sweden and Finland, but much lower in Norway and in Denmark. In Sweden, it is quite common that disciplinary inspections are conducted after complaints by tax authorities (see Sundgren and Svanström 2012b).⁹

Research questions

Earlier studies indicate that there are cross-national variations in the implementation of going-concern reporting (Martin, 2000; Trønnes *et al.*, 2011). Our review of the Scandinavian setting shows that perhaps the most important difference between the countries is the point in time at which going-concern reporting according to rules largely similar to ISA 570 became obligatory in the countries. Denmark and Norway developed going-concern standards in the 1980s and followed ISA 570 practice from the mid-1990s, while Sweden and Finland only followed this practice a decade later. Assuming that it takes time to adopt new rules, this suggests that reporting would be better in Denmark and Norway than in Finland and Sweden. The formal requirement for becoming an authorised or approved auditor, the demand for continuing education and the risk of disciplinary sanctions could further drive national variance in reporting quality in favour of higher quality in Denmark and Norway compared with Sweden and Finland. However, we also note that the level of tax book alignment in the

Scandinavian countries suggests that auditors in Finland and Sweden in particular have incentives to report accurately.

Considering these factors, we ask and empirically investigate the following research question:

RQ1: *Are there differences in going-concern reporting practice across the Scandinavian countries?*

An important difference between Big 4 and non-Big 4 audit firms is that Big 4 audit firms have more resources for internal education and that they are part of international networks. Trønnnes *et al.* (2011) point out that Big 4 audit firms have strong incentives to maintain quality standards, because if network members in one country do not meet quality standards, the reputation of the whole network is at risk. Trønnnes *et al.* (2011) also found that the variance in going-concern reporting across countries is moderated by Big 4 membership. The Scandinavian setting is much more homogenous than the setting in the study by Trønnnes *et al.* (2011), so we ask as our second research question:

RQ2: *Is going-concern reporting across the Scandinavian countries more homogenous for Big 4 audited firms than for non-Big 4 audited firms?*

3. Data and descriptive statistics

3.1. Samples

The data available for our study include financial statements and background information of 2,943 Swedish, Norwegian, Finnish and Danish companies having filed for bankruptcy within 365 days after the balance sheet date. The sample was composed as follows:

The Danish data set consists of all limited companies declared bankrupt in the period 1 June – 30 September 2009, a total population of 1,452 companies. 291 of these companies had published their latest annual report less than 12 months before the date of bankruptcy. We excluded 9 companies that had opted out from auditing, 2 companies with zero assets and 1 company with missing data, which left us with 279 companies. The audit reports were retrieved as pdf files from the Danish company registry and entered into the database manually.

The Finnish data consist of 104 companies that filed for bankruptcy in 2007-2011. The bankrupt companies and their financial statements were obtained from the largest Finnish credit information company Suomen Asiakastieto Oy (<http://www.asiakastieto.fi>). Their records include financial statements filed with the National Board of Patents and Registration of Finland (PRH). The audit reports were retrieved directly from PRH and entered manually into the categories needed for this study. The sample was composed as follows: With Finnish companies, financial statements and audit reports are very frequently missing for the year prior to bankruptcy. We were able to identify audit reports and financial data for

127 companies with a financial statement dating less than 365 days before the date of filing for bankruptcy. The sample covers the period 2007 to 2011. Of these companies, non-certified auditors, i.e. individuals without any formal qualification in auditing, had audited 21. Non-certified auditors are not allowed to conduct audits in Finland anymore, and we excluded these observations from our main analysis, which left 106 companies. Finally, 2 observations with missing variables were excluded, which gives us a final total of 104 firms.¹⁰

The Norwegian data set consists of 1,173 limited companies that were declared bankrupt during 2008 and 2009. We received a list of all bankrupt companies from Experian AS (which gathers information directly from The Brønnøysund Register). From the total number of 5,440 bankrupt companies, we excluded those that did not file an annual report during the 12 months prior to bankruptcy, which left 1,203 firms. Furthermore, we excluded 5 companies that did not have any assets according the database and 30 firms with missing independent variable values, which left us with 1,173 firms. Financial data and categorised information in the audit report were received from the data provider Experian AS. The database included the information needed to identify going-concern opinions and modified audit reports.

The Swedish data consists of 1,387 companies that filed for bankruptcy between October 2008 and October 2009. The bankrupt companies were identified from the database *Affärsdata*, which contains information about all bankruptcy filings in Sweden. This resulted in an initial sample of 6,092 bankruptcy filings.¹¹ For companies to be included in the sample we required access to an audited annual report with fiscal year end less than

12 months prior to the bankruptcy filing, which excluded 4,659 companies. Furthermore, we excluded 16 companies that did not have any assets according to the database and 30 companies with missing variables, which left 1,387 firms for further analysis. The audit reports of the companies were retrieved from Affärsdata and entered manually into the categories needed for the study.

3.2. Model

We use the propensity to issue going-concern opinions in our examination of differences in practice between the countries. In our multivariate analysis, the following logistic regression model is used in our study of research question one:

$$GC = \beta_0 + \beta_1 * NORWAY + \beta_2 * SWEDEN + \beta_3 * FINLAND + \beta_4 * BIG4 + \beta_5 * LOSS + \beta_6 * SOLVENCY + \beta_7 * ROA + \beta_8 * CACL + \beta_9 * BANKRTIME + \beta_{10} * LNASSETS + \varepsilon$$

where:

GC =	is an indicator variable taking the value 1 if the company has received a going-concern opinion and zero otherwise
NORWAY =	1 if the company is from Norway
SWEDEN =	1 if the company is from Sweden
FINLAND =	1 if the company is from Finland
BIG 4 =	1 if the company is audited by PWC, KPMG, Deloitte or Ernst & Young

LOSS =	1 if net income is negative and zero otherwise
SOLVENCY =	shareholders' equity to total assets
ROA =	net income before interest and taxes to total assets
CACL =	current assets to current liabilities
BANKRTIME =	time in days between balance sheet date and date of bankruptcy filing
LNASSETS =	natural logarithm of assets (in Euros)

The model controls for the facts that audit firm size, financial health, size of the company and time between the balance sheet date and date of bankruptcy may influence the reporting. Based on DeAngelo's (1981) seminal study, a large number of studies have explored whether Big 4 audit firms provide higher quality audits than do non-Big 4 audit firms. The results are generally consistent with the prediction (e.g. Robinson, 2008), although some studies of privately held companies in Europe suggest that there are no significant differences between Big 4 and non-Big 4 auditors (e.g. VanderBauwhede and Willekens, 2004). We include BIG 4 to control for possible differences in the proportions of companies audited by Big 4 and non Big 4 auditors in the countries compared. We are also interested in whether auditor reporting is more homogenous between countries in companies audited by Big 4 auditors than in those audited by non-Big 4 auditors. Furthermore, as it could be expected that it is easier to identify financially weak failing firms, we include controls for performance, liquidity and solvency. Bankruptcy prediction studies generally suggest that ratios from these three categories give a good description of the probability of bankruptcy (e.g. Ohlson, 1980; Zmijewski, 1984). We include ROA, LOSS, SOLVENCY and CACL in the models. Finally we include BANKRTIME and LNASSETS into the model. BANKRTIME controls for the fact that it is likely

to be easier for auditors to predict bankruptcies which take place a short time after the balance sheet date than bankruptcies that occur close to a year after the balance sheet date. Some previous studies of publicly traded companies suggest that the likelihood of a going-concern opinion decreases with the size of the company (e.g. Li, 2009). However, one reason for a positive association between privately held companies is that somewhat large companies are more visible, and thus the cost of incorrectly issuing a clean opinion is higher (Sundgren and Svanström, 2012a).¹² The calculations of the variables are presented in Table 2.

TABLE 2
Variable definitions

ASSETS	Total assets in million Euro. Amounts in Danish, Norwegian and Swedish kronor are converted to Euro using end-of-year exchange rates
LNASSETS	The natural logarithm of assets (in Euro)
BIG 4	An indicator variable taking the value one if the firm is audited by Deloitte, Ernst&Young, KPMG or PWC
LOSS	An indicator variable taking the value one if the company made a loss
SOLVENCY	Shareholders' equity to total assets
ROA	Return on assets
CACL	Current ratio
BANKRTIME	Time in days between balance sheet date and bankruptcy

In our study of research question 2, we exclude BIG 4 from the model and estimate the model on the sub-samples with Big 4 audited firms and non-Big 4 audited firms.

3.3. Descriptive statistics

Table 3 includes descriptive statistics on the companies. First of all, the table shows that the average time in days between the balance sheet dates and bankruptcy filing dates range from 265.42 days (Denmark) to 293.00 days (Norway). Furthermore, the table shows that the Danish companies are somewhat larger than the companies from particularly Sweden and Norway, although the differences are small. The mean (median) assets of the Danish companies are 1.98 (0.43) million Euro. The corresponding means and medians are 0.71 and 0.17 million Euro for the Norwegian companies, and 0.55 and 0.12 million Euro for the Swedish companies. The mean (median) assets of the Finnish companies are 1.64 (0.40) million Euro.

As could be surmised, the performance of the companies is poor. The proportions of companies in the sample that make a loss vary between 70.58 % (Sweden) and 83.80 % (Norway). The average return on assets is also negative for the companies in all four countries. The solvencies of the companies are also low: the average solvency is negative for the companies from all countries, and the median is negative for all countries except Sweden.

TABLE 3
Descriptive statistics

	DK Mean (Median)	NO Mean (Median)	SWE Mean (Median)	FIN Mean (Median)	P-value
ASSETS (million €)	1.98 (0.43)	0.71 (0.17)	0.55 (0.12)	1.64 (0.40)	<0.001
LNASSETS	12.95 (12.97)	12.06 (12.03)	11.68 (11.68)	12.97 (12.91)	<0.001
BIG4	0.22 (0.00)	0.15 (0.00)	0.34 (0.00)	0.16 (0.00)	<0.001
BANKRTIME (days)	265.42 (258.00)	293.00 (304.00)	266.46 (278.00)	269.88 (285.50)	<0.001
ROA	-0.38 (-0.10)	-0.21 (0.00)	-0.32 (-0.07)	-0.20 (-0.13)	<0.001
LOSS	0.80 (1.00)	0.84 (1.00)	0.71 (1.00)	0.87 (1.00)	<0.001
SOLVENCY	-0.68 (-0.05)	-0.68 (-0.12)	-0.39 (0.07)	-0.57 (-0.15)	<0.001
CACL	0.97 (0.76)	1.03 (0.81)	1.31 (1.02)	0.79 (0.70)	<0.001
Number of observations	279	1173	1387	104	

Notes: P-values for the continuous variables result from tests that the averages are the same across the countries. A Pearson chi-square is used to for the indicator variables BIG4 and LOSS.

Table 3 also includes information indicating whether the companies were audited by Big 4 auditors. The proportions vary between 15.00 % in Norway and 34.25 % in Sweden. Probably as a consequence of selection effects, the proportions tend to be lower than that of the overall population in the countries. For example, in Sweden 48.23 % of all certified auditors worked at Big 4 firms at the end of 2009. The corresponding percentage in Denmark is 38.9. Of the Danish sample, BIG 4 auditors audited 22 % of

the firms, and the corresponding percentage of the Finnish sample is 16 %.

All four countries have two-tier systems of auditor qualifications. In Denmark, 61.29 % are audited by the auditors with the higher “state-authorised” authorisation. The proportion of auditors having the higher qualification is 58.54 % in Sweden and 49.04 % in Finland. Information about auditor qualifications is not available for the Norwegian companies in the sample.

4. Analysis and findings

4.1. Univariate evidence

Panel A in Table 4 shows significant differences in going-concern reporting between the countries. It can be seen from the table that the Danish auditors modified their audit opinion regarding the going-concern issue for 48.03 % of the companies audited. The corresponding percentages in Norway, Sweden and Finland are 25.58 %, 18.10 % and 20.19 %, respectively. The proportion of bankrupt companies with going-concern opinions has increased significantly over time in Finland. As described in section 4.1, we also collected information about going-concern opinions for companies whose balance sheet date was before 2007. Only 2 out of 38 (5.26 %) of these firms received a going-concern opinion.¹³

The going-concern opinions were also classified into the categories “emphasis of matter” and “qualified opinion”. An opinion is classified as “emphasis of matter” if auditors have issued an unqualified opinion but

included an additional paragraph in the audit opinion referring to uncertainties related to the going-concern issue (i.e. an opinion based on circumstances similar to clauses 18–20 in the 2009 version of ISA 570). The opinions are classified as “qualified opinions” if the auditor has concluded that the information about the going-concern issue in the financial statements is inadequate or incorrect and the auditor consequently has expressed a qualified or adverse opinion in the audit report.

Danish auditors have issued a qualified going-concern opinion for a much higher proportion of the companies than have auditors in the other countries: Danish auditors issued a qualified opinion in 19.35 % of the cases, while the corresponding percentages are 4.69 % in Norway, 0.87 % in Sweden and 0 % in Finland.

In research question two we asked whether the variance in going-concern reporting varies with audit firm size. To obtain univariate evidence, we compared the proportion of going-concern opinions for the Big 4 audited firms and non-Big 4 audited firms. Among the Big 4 audited companies, the proportion of companies without a going-concern opinion in Denmark, Norway, Sweden and Finland are 51.6 %, 70.5 %, 76.8 % and 76.4 %, respectively. The corresponding figures for non-Big 4 audited companies are 52.1 %, 75.1 %, 84.5 % and 80.5 % (not reported in tables). Using a Pearson chi-square test, the zero hypothesis that there are no differences in the proportions between the countries could be rejected at the 0.001 level for both the sub-sample with Big 4 audited companies and non-Big 4 audited companies. Thus, the univariate results suggest a considerable

variation between the countries for both Big 4 audited and non-Big 4 audited companies.

TABLE 4
Frequency of going-concern modified audit opinions prior to bankruptcy

Panel A: All companies				
	DK	NO	SWE	FIN
No going-concern opinion	145 (51.97 %)	873 (74.42 %)	1136 (81.90 %)	83 (79.81 %)
Emphasis of matter	80 (28.67 %)	245 (20.89 %)	239 (17.23 %)	21 (20.19 %)
Qualified opinion	54 (19.35 %)	55 (4.69 %)	12 (0.87 %)	0 (0.00 %)
Total	279 (100.00 %)	1173 (100.00 %)	1387 (100.00 %)	104 (100.00 %)
Pearson chi-square (6) = 242.94 (p-value < 0.001)				

Panel B: Companies with balance sheet date in 2008				
	DK	NO	SWE	FIN
No going-concern opinion	140 (51.80 %)	418 (73.20 %)	811 (80.30 %)	19 (76.00 %)
Emphasis of matter	80 (28.78 %)	122 (21.37 %)	182 (19.01 %)	6 (24.00 %)
Qualified opinion	54 (19.42 %)	31 (5.43 %)	7 (0.69 %)	0 (0.00 %)
Total	278	571	1010	25
Pearson chi-square (6) = 242.94 (p-value < 0.001)				

Notes: P-values results from Pearson chi-square tests for the null hypothesis that the observed frequencies of going-concern opinion are equal to the overall frequencies in the data.

4.2. Logistic regression results

As can be seen from Table 3, the averages of assets, performance, solvency and time between the balance sheet dates and dates of bankruptcy filing vary significantly between the countries. As suggested in section 3.2, these factors are likely to be associated with auditors' reporting, and in Tables 5 and 6 we control for the effects of financial health, time between balance sheet date and date of bankruptcy, size and auditor type by regressing country and control variables on the probability of a going-concern opinion. The dependent variable is given the value of one if the auditor has added an emphasis-of-matter paragraph, or issued a qualified opinion, and the value of zero if the audit report does not contain any comments related to the going-concern audit standards in the countries. Danish companies are in the reference category in the regressions. Thus, a positive (negative) sign against a country variable suggests that the probability that the auditor has added a paragraph related to the going-concern issue is higher (lower) in the corresponding country than in Denmark. In Table 5 we study differences in going-concern reporting for our entire sample. In Table 6, we analyse Big 4 audited companies and non-Big 4 audited companies separately in order to gain some insight related to the second research question of our study.

TABLE 5
Logistic regressions of country and control variables on going-
concern opinions

Panel A: All companies (N=2,943)

	Coeff.	T-value	P-value
NORWAY	-0.892	-6.100	0.000
SWEDEN	-1.295	-8.590	0.000
FINLAND	-1.413	-5.020	0.000
BIG 4	0.290	2.710	0.007
LOSS	1.060	7.290	0.000
SOLVENCY	-0.081	-2.820	0.005
ROA	-0.111	-1.490	0.137
CACL	-0.220	-3.800	0.000
BANKRTIME	-0.003	-3.940	0.000
LNASSETS	0.076	2.460	0.014
CONSTANT	-1.132	-2.280	0.023
MODEL CHI-SQUARE	230.480		0.000
PSEUDO R-SQUARE	0.085		
<i>Tests of coefficients:</i>	<i>Chi-square</i>	<i>P-value</i>	
NORWAY=SWEDEN	3.930	0.000	
NORWAY=FINLAND	3.970	0.046	
SWEDEN=FINLAND	0.200	0.658	

Panel B: Companies with balance sheet date in 2008 (N=1,884)

	Coeff.	T-value	P-value
NORWAY	-0.798	-4.760	0.000
SWEDEN	-1.212	-7.510	0.000
FINLAND	-1.016	-2.010	0.044
BIG 4	0.295	2.260	0.024
LOSS	0.931	5.520	0.000
SOLVENCY	-0.087	-2.490	0.013
ROA	-0.205	-2.080	0.038
CACL	-0.242	-3.440	0.001
BANKRTIME	-0.002	-1.910	0.056
LNASSETS	0.085	2.290	0.022
CONSTANT	-1.481	-2.510	0.012
MODEL CHI-SQUARE	162.940		0.000
PSEUDO R-SQUARE	0.091		
<i>Tests of coefficients:</i>	<i>Chi-square</i>	<i>P-value</i>	
NORWAY=SWEDEN	8.020	0.005	
NORWAY=FINLAND	0.190	0.664	
SWEDEN=FINLAND	0.150	0.697	

TABLE 6
Factors associated with going-concern opinions before
bankruptcy in companies audited by Big 4 and non-Big 4
auditors

Panel A: Big 4 audited companies (n=730)

	Coeff.	T-value	P-value
NORWAY	-0.604	-1.830	0.067
SWEDEN	-0.705	-2.290	0.022
FINLAND	-1.223	-2.050	0.040
LOSS	1.301	4.380	0.000
SOLVENCY	-0.150	-2.480	0.013
ROA	-0.162	-1.020	0.306
CACL	-0.118	-1.210	0.225
BANKRTIME	-0.001	-1.180	0.239
LNASSETS	0.142	2.450	0.014
CONSTANT	-2.855	-2.760	0.006
MODEL CHI-SQUARE	53.060		0.000
PSEUDO R-SQUARE	0.081		
<i>Tests of coefficients:</i>	<i>Chi-square</i>	<i>P-value</i>	
NORWAY=SWEDEN	0.210	0.645	
NORWAY=FINLAND	1.240	0.266	
SWEDEN=FINLAND	0.890	0.346	

Panel B: Non-Big 4 audited companies (n=2213)

	Coeff.	T-value	P-value
NORWAY	-0.975	-6.040	0.000
SWEDEN	-1.505	-8.610	0.000
FINLAND	-1.481	-4.660	0.000
LOSS	0.990	5.890	0.000
SOLVENCY	-0.065	-1.990	0.047
ROA	-0.099	-1.180	0.236
CACL	-0.259	-3.610	0.000
BANKRTIME	-0.004	-4.280	0.000
LNASSETS	0.054	1.490	0.137
CONSTANT	-0.449	-0.790	0.430
MODEL CHI-SQUARE	182.080		0.000
PSEUDO R-SQUARE	0.089		
<i>Tests of coefficients:</i>	<i>Chi-square</i>	<i>P-value</i>	
NORWAY=SWEDEN	17.070	0.000	
NORWAY=FINLAND	2.940	0.087	
SWEDEN=FINLAND	0.010	0.939	

Panel A in Table 5 contains results for all companies in the four countries. As the samples extend over slightly different time periods, we report results for the sub-set of companies with a balance sheet date ending in 2008 in Panel B of Table 5.

The results show that the coefficients of NORWAY, SWEDEN and FINLAND are all negative and significantly different from zero, at least at the 0.05 level in both panels. Thus the logistic regression results confirm the univariate evidence in Table 3 that companies from Denmark are more likely to receive a going-concern opinion before bankruptcy than are companies from the other countries in the sample.

The more negative coefficients for Sweden and Finland than those for Norway indicate that Norwegian companies are more likely to receive a going-concern opinion than are Finnish and Swedish companies. We use a chi-square test to formally test whether the coefficients are significantly different. It can be seen that the differences between Sweden and Norway are significant at the 0.01 level in both Panel A and Panel B. The difference between Norway and Finland is significant at the 0.05 level in Panel A and insignificant in Panel B. However, it should be noted that a contributing reason to the insignificant difference in Panel B is that only 25 Finnish companies had a balance sheet date ending in 2008. A final conclusion to be made from the table in relation to differences between the countries is that there are no significant differences in the reporting between Finland and Sweden. Thus, the

order of the countries with respect to the incidence of going-concern opinions are Denmark, Norway and Sweden / Finland.¹⁴

In research question two, we asked whether the variance in going-concern reporting varies with audit firm size. Table 6 includes evidence related to this issue. Panel A in Table 6 includes results for the sub-samples with 730 Big 4 audited companies, and Panel B includes the analysis of 2,213 non-Big 4 audited companies. The coefficients of Norway, Sweden and Finland have negative signs in Panel A and are significant at the levels of 0.10, 0.05 and 0.05 respectively. Thus, Big 4 audited companies in Denmark more frequently get a going-concern opinion than do Big 4 audited companies in the other countries studied. However, the differences between the coefficients of Norway, Sweden and Finland are insignificant.

Panel B includes results for the sub-sample with non-Big 4 audited companies. The coefficients of Norway, Sweden and Finland have negative signs and are all significant at the 0.01 level in this regression, which shows that Danish non-Big 4 auditors are more likely to issue a going-concern opinion than are non-Big 4 auditors from the other countries. The difference between the coefficients of Norway and Sweden is significant at the 0.01 level, and the difference between the coefficients of Norway and Finland is significant at the 0.10 level. However, the difference between the coefficients of Sweden and Finland is insignificant.

In conclusion, the separate analyses of Big 4 audited and non-Big 4 audited companies show that Big 4 auditors in Denmark are more likely to issue a going-concern opinion than are auditors in the other countries. Furthermore, the results show that the differences in going-concern reporting between Norway, Sweden and Finland are driven by non-Big 4 audited companies. The cross-country variation in reporting appears to be smaller for Big 4 audited companies than for non-Big 4 audited companies, which implies that auditor reporting is more homogenous within the Big 4 group. However, the lack of consistency in reporting across countries appears to be general phenomena that are not attributed to only a category of (small) auditors.

Of the other variables in the regressions in Table 5 and 6 it can be seen that the likelihood of a going-concern modified opinion decreases with SOLVENCY, ROA and CACL. These variables are associated with the bankruptcy risk of companies, and the results show that auditors fail to issue a going-concern modified opinion more frequently as the firm appears to be financially healthier. LOSS is also positively associated with a higher probability of bankruptcy. LOSS and SOLVENCY are significant at the 0.05 level in all regressions in the tables.

Furthermore, it can be seen from Table 5 that BIG 4 auditors are significantly more likely to issue a going-concern modified opinion than are non-Big 4 auditors. This finding is consistent with previous studies which suggest that Big 4 auditors conduct higher quality audits and/or that they are more conservative (see e.g. Francis and

Krishnan, 1999; Lennox, 1999; Weber and Willenborg, 2003). It can also be seen from the table that BANKRTIME is negatively associated with the likelihood of a going-concern opinion, and that LNASSETS is positively associated with the likelihood of a going-concern opinion.

4.3. Supplementary tests

A number of additional analyses were run to test the robustness of the results in Tables 5 and 6 as well as to gain additional insight into the drivers of the reporting differences.

There is some variation in firm size across the countries, and we tried to re-estimate the model in Panel A of Table 5 excluding the quartile of the smallest firms. These results were qualitatively similar to those in Table 5, with the exception that the difference between Norway and Sweden was significant only at the 0.10 percent level (significant at the 0.01 level in Table 5). We also re-ran the model in Panel A omitting the quartile of the largest companies from the analyses. These results were qualitatively similar to those reported in Table 5.

We also re-ran the regressions in Table 6 after omitting the quartile of the largest and smallest companies. For the sub-sample with Big 4 audited companies, both the country coefficients and the differences between the countries were mostly insignificant. The only coefficient significant at the 0.05 level in these regressions was that of Finland in the regression omitting the quartile of the largest

companies. The analysis of the sub-sample with non-Big 4 audited companies showed large differences between the countries, also after omitting the quartiles of the largest or smallest companies. The coefficients of Norway, Sweden and Finland were negative and significant at the 0.01 level in both regressions, which indicates that the result that Danish non-Big 4 auditors are more likely to issue a going-concern opinion is not driven by differences in the size of the companies in the sub-samples. Previous studies have used the probability of bankruptcy as a control for default risk (e.g. Robinson, 2008). ROA, SOLVENCY and CACL control for the probability of failure in the main analyses. In order to test if results are sensitive to how we control for failure risk, we tried to replace the ratios with PROBZ. PROBZ is the probability of bankruptcy according to Shumway's (2001) estimates of Zmijewski's model. The results were qualitatively similar to the results in Panel A of Table 5. The difference between the coefficients of Norway and Sweden was no longer significant in Panel B (significant at the 0.01 level in Table 5). The other results were qualitatively similar. The results in Table 6 were also with only minor exceptions qualitatively similar when SOLVENCY, ROA and CACL were replaced with PROBZ. The binary regressions reported in Tables 5 and 6 do not differentiate between emphasis of matter and qualified going-concern opinions.

In order to provide a more in-depth analysis of reporting practices between the countries, a multinomial, logistic regression was estimated in which the dependent variable has been given three different values, namely no comments relating to the going-concern issue, emphasis-of-matter going-concern opinions, and qualified

going-concern opinions (not reported in tables). Finnish companies were excluded from these regressions because no qualified opinion reports had been issued (see Table 4). These results confirm variation in reporting practice in that Swedish and Norwegian auditors are less likely to issue an emphasis-of-matter paragraph or a qualified opinion than is the case of Danish auditors.

Finally, following a number of previous studies in which the likelihood of a modified audit opinion has been used as an indicator of audit quality (e.g. Chen *et al.*, 2010; Chi *et al.*, 2011), we re-estimated the model in Panel A of Table 5 using an indicator variable of the value 0 if the company had received a standard unqualified audit opinion, and 1 if this was not the case. The results were qualitatively different from those having going-concern opinions in Table 5 in several respects. First, the results showed that auditors from Norway are significantly more likely to modify the opinion than area auditors from the other countries. The differences between Norway and Denmark, Sweden and Finland were significant at the levels of 0.10, 0.01 and 0.05, respectively. The results also show that auditors in Denmark are more likely to issue a modified opinion than are auditors in Finland and Sweden. The difference between Denmark and Sweden was significant at the 0.05 level. Finally, as with going-concern opinions as the dependent variable, these results also suggest that there are no significant differences in the reporting between Finland and Sweden. The finding when analysing standard versus non-standard audit reports further suggest the existence of differences in reporting practice across the Scandinavian countries.

5. Discussion and conclusion

Much emphasis has been placed on the benefits of having similar auditing standards across countries since this is believed to enhance consistence of practice and thus improve comparability of financial statements across borders. The purpose of this paper is to study the harmonisation of audit reporting behaviour in bankrupt companies, where going-concern modifications of the auditors' reports are expected. Accordingly, the study empirically examines going-concern modifications using a sample of 2,943 bankrupt firms from Scandinavia (Denmark, Finland, Norway and Sweden). Since the Scandinavian countries have similar legal systems and, for all practical purposes, identical audit requirements regarding going-concern reporting, we expect to find a rather homogeneous reporting practice. However, the study shows that there are significant differences in going-concern reporting before bankruptcy across the Scandinavian countries.

Going-concern modifications and in particular going-concern qualified audit reports are significantly more frequent in Denmark than is the case in Norway, Sweden and Finland. Our study also shows that Big 4 auditors are significantly more likely to issue going-concern audit opinions than are non-Big 4 auditors, just as cross-country differences in auditor reporting is found to be smaller among Big 4 than among non-Big 4 auditors. Another interesting finding is that although going-concern reporting was inconsistent, the differences between the countries were much smaller for modifications of the audit report related to other issues than going-

concern uncertainty, which indicates that auditors of bankrupt companies in some of the countries seem to replace a going-concern modification by a modification for other reasons. We argue that the explanations for the variation in practice are to be found primarily in differences in culture regarding going-concern reporting which are likely caused by differences in the timing of regulation. Thus, the longer going-concern reporting according to ISA 570 rules has been obligatory in the countries, the higher the proportion of going-concern modifications of the auditors' reports. The study thus indicates that it takes relatively long to fully implement the ISAs in practice. An additional explanation for the variance in practice may be found in differences in auditor education, indicating that the countries with the longest education also have the highest proportion of going-concern modifications. Disciplinary sanctions may also affect reporting practice, but we are not able to show a link between the severity of potential or actual sanctions and reporting practice.

The inconsistent going-concern reporting practice in the Scandinavian countries may be of wider research interest for at least three reasons. First, the findings indicate that inconsistent going-concern reporting practice is likely to be found elsewhere, and the Scandinavian study may thus serve as a benchmark for future research into this issue. Second, although our study is limited to a particular standard, it may be an indication that ISAs in general are inconsistently implemented. This calls for further research investigating the nature and magnitude of those differences, as well as whether identified cross-country differences are temporary or permanent. Third, as our findings support IFAC's concerns that local

implementation of the ISA does not ensure the development of consistent practice, it indicates the need for research into how a consistent practice may be promoted by means of for instance education, compliance measures or normative best practice benchmarks.

In addition to the research perspectives, the study also has perspectives for practice. Most importantly, the study clearly demonstrates the need for improvement of going-concern reporting practices. We have looked at audit opinions of companies that have been declared bankrupt within one year from the last audit opinion, and we would thus ideally expect to see going-concern qualifications (or at least going-concern emphasis of matters) in the audit opinion of all these companies. However, the number of going-concern qualifications varied from 19.4 % (Denmark) to 0 % (Finland), and there is consequently plenty of room for improvement of practice. The study also indicates that users of financial statements should be careful not to interpret a going-concern opinion in the same way in all national contexts. This could lead users to misestimate the level of uncertainty associated with the going-concern assumption when evaluating company risk and prospects.

Although going-concern reporting is not a novel research subject, our study thus shows the need for continuous research, in particular to promote a better and more uniform reporting practice.

Notes

1. LaPorta (1998) reported higher investor protection in German and Scandinavian countries compared to France.
2. Adoption indicates that international standards are used instead of domestic financial reporting rules and in contrast to adoption; convergence with international standards is a process through which domestic standards and international standards are gradually aligned.
3. Despite the fact that at the time of this study, these four countries have made some national adjustments regarding going-concern reporting, they have, for all practical purposes similar audit requirements regarding going-concern reporting.
4. The company was split in two. The engine factory MAN B&W Diesel is still in operation, whereas the B&W Shipyard finally went bankrupt in 1996, 25 years after its first going-concern qualification. Thus, the case proved a publicly visible falsification of the 'self-fulfilling prophecy' theory.
5. The guideline required the auditor to modify the audit opinion stating the conditions that needed to be met for the company to continue its operations in cases where the auditor was in doubt as to the going-concern precondition.
6. As discussed earlier, the full adoption of ISA came later in the different countries. However, the starting year for using a national translation of ISA 570 is likely to have had a more significant impact on going-concern reporting practice.

7. Despite the fact that Scandinavian languages are entirely unrelated to Finnish, Finland is officially bilingual, with Finnish and Swedish having the same status at the national level.
8. The number of qualified auditors with at least one audit assignment was on average 1,494 during 2005-2009.
9. During 2005-2009 a total of 674 disciplinary cases were opened. 145 or 21.5 % of them were opened as a result of tips from the tax authorities.
10. We also collected data for the period 2001 to 2006 and found the required data for 49 companies.
11. Only limited liability companies were included. The total number of bankruptcies in Sweden was 6,626 in 2008 and 7,933 in 2009 according to statistics prepared by Kronofogden, the Swedish Enforcement Authority (KFM Rapport 2/2010 p. 5).
12. The choice of control variables is based on earlier literature. The present study also recognised that the age of the data on the firms and industrial distribution might influence the reporting. Despite the fact that the required information is not available for all countries in the sample, we had industry variables for Norway and Sweden, and we added these industry dummies to the models using the Norwegian data. However, the dummy variables were insignificant. Moreover, the age variable for the Swedish data was also insignificant.
13. This difference is not driven by firm characteristics. We estimated a logistic regression with GC as the dependent variable, an indicator variable taking the value one if the balance sheet date was before 2007 and the same control variables as in Table 5 on the sub-sample with Finnish firms, the indicator variable taking the value

one if the balance sheet date had a negative coefficient significant with a p-value equal to 0.093. The odds-ratio of the coefficient was 0.27 suggesting that for each going-concern opinion after 2007 there was only 0.27 going-concern opinions before 2007.

14. The variables had a number of extreme values and were winsorised. The only difference in the main results that were identified as we ran the model on non-winsorised data was that the difference in the coefficient between Norway and Finland was then significant only at the 0.10 level in Panel A (significant at the 0.05 level in Table 5).

References

- Aisbitt, S. (2001), 'Measurement of Harmony of Financial Reporting within and between Countries: The Case of the Nordic Countries', *The European Accounting Review*, Vol. 10, No. 1, pp. 51-72.
- Baker, C.R. & Barbu, E.M. (2007), 'Trends in Research on International Accounting Harmonization', *The International Journal of Accounting*, 42, pp. 272-304.
- Becker, C.L., DeFond, M.L., Jiambalvo, J. & Subramanyam, K.R. (1998), 'The effect of audit quality on earnings management', *Contemporary Accounting Research*, Vol. 15, No. 1, pp. 1-24.
- Bode, S. (2007), *The Problems of International Auditing Harmonisation*, Scholarly Paper, University of Glamorgan.
- Chen, S., Sun, S.Y.J. and Wu, D. (2010), 'Client Importance, Institutional Improvements, and Audit Quality in China: An Office and Individual Auditor Analysis', *Accounting Review*, Vol. 85, No.1, pp. 127-158.
- Chi, W., Douthett, E. & Lei, L. (2011), 'Client importance and auditor independence: A partner-level analysis', Forthcoming in *Journal of Accounting and Public Policy*.
- Choi, J. and Doogar, R. (2005), 'Auditor tenure and audit quality: Evidence from going-concern qualification issued during 1996-2001', Working Paper.
- Choi, J. and Wong, T. (2007), 'Auditors' Governance Functions and Legal Environments: An International Investigation', *Contemporary Accounting Research*, Vol. 24, No. 1, pp.13-46.

- Choi, J., Kim, J., Liu, X. & Simunic, D. (2008), 'Audit Pricing, Legal Liability Regimes, and Big 4 Premiums; Theory and Cross-Country Evidence', *Contemporary Accounting Research*, Vol. 11, No. 2, pp. 30-50.
- Choi, J., Kim, C., Kim, J. & Zhang, Y. (2010), 'Audit Office Size, Audit Quality, and Audit Pricing', *Auditing: A Journal of Practice and Theory*, Vol. 29, No. 1, pp. 73-98.
- DeAngelo, L.E. (1981), 'Auditor Size and Audit Quality', *Journal of Accounting and Economics*, Vol. 3, No. 3, pp. 183-199.
- DeFond, M.L., Raghunadan, K. & Subramanyam, K. (2002), 'Do non-audit services fees impair auditor independence? Evidence from some going-concern audit opinions', *Journal of Accounting Research*, Vol. 40, No. 4, pp.1247-1275.
- Doupnik, T.S. & Salter, S.B. (1995), 'External Environment, Culture, and Accounting Practice: A preliminary Test of a General Model of International Accounting Development', *International Journal of Accounting*, 30, pp. 189-207.
- Dye, R.A. (1993), 'Auditing Standards, Legal Liability and Auditor Wealth', *Journal of Political Economy*, Vol. 101, No. 5, pp. 3-38.
- Francis, J.R. (2004), 'What Do We Know about Audit Quality?', *The British Accounting Review*, 36, pp. 345-368.
- Francis, J.R. (2011), 'A Framework for Understanding and Researching Audit Quality', *Auditing: A Journal of Practice and Theory*, Vol. 30, No. 2, pp. 125-153.
- Francis, J.R., Khurana, I. & Pereira, R. (2003), 'The Role of Accounting and Auditing in Corporate Governance and the Development of Financial Markets Around the World', *Asia*

- Pacific Journal of Accounting and Economics*, Vol. 10, No. 1, pp.1-30.
- Francis, J.R. & Krishnan, J. (1999), 'Accounting Accruals and Auditor Reporting Conservatism', *Contemporary Accounting Research*, Spring, pp. 135-165.
- Francis, J.R. and Wang, D. (2008), 'The Joint Effect of investor protection and BIG4 Audits on Earnings Quality around the World', *Contemporary Accounting Research*, Vol. 25, No. 1, pp. 1-39.
- Geiger, M.A., Raghunandan, K. & Rama, D.V. (2005), 'Recent Changes in the Association between Bankruptcies and Prior Audit Opinions', *Auditing: A Journal of Practice and Theory*, Vol. 24, No. 1, pp. 21-35.
- Gray, S. (1988), 'Towards a Theory of Cultural Influence on the Development of Accounting Systems internationally', *Abacus*, Vol. 24, No. 1, pp.1-15.
- Hegarty, J., Gielen, F. and Barros, A. (2004), 'Implementation of International Accounting and Auditing Standards: Lessons Learned from the World Bank's Accounting and Auditing ROSC Program', *World Bank*, viewed 17 Nov 2011, available at:
http://www.worldbank.org/ifa/LessonsLearned_ROSC_AA.pdf
- Hope, O. (2003), 'Firm-Level Disclosures and the Relative Roles of Culture and Legal Origin', *Journal of International Financial Management and Accounting*, Vol. 14, No. 3, pp. 218-248.
- Hope, O.K., & Langli, J.C. (2010), 'Auditor independence in a private firm and low litigation setting', *Accounting Review*, Vol. 85, No. 2, pp. 573-605.

- Hope, O.K., Kang, T., Thomas, W. & Yoo, Y. (2008), 'Culture and Auditor Choice: A Test of the Secrecy Hypothesis', *Journal of Accounting and Public Policy*, Vol. 27, No. 5, pp. 357-373.
- IFAC 2011a, *International Auditing and Assurance Standards Board Fact Sheet*, International Federation of Accountants, viewed on 17 Nov 2011, available at: <http://www.ifac.org/About/>
- Kim, J.-B., Chung, R. & Firth, M. (2003), 'Auditor conservatism, asymmetric monitoring and earnings management', *Contemporary Accounting Research*, 20, pp. 323-360.
- Krishnan, J. and Krishnan, J. (1997), 'Litigation Risk and Auditor Resignations', *The Accounting Review*, Vol. 72, No. 4, pp. 539-560.
- Kyläkallio, J., Iirola, O. & Kyläkallio, K. (2002), *Osakeyhtiö*, Edita Prima OY, Helsinki.
- Laursen, J.B. (1995), 'Revisors rapportering om virksomheden som going concern', Copenhagen Business School.
- La Porta, R., Lopez-de-Silanes, F., Schleifer, A. & Vishny, R. (1988), 'Law and Finance', *Journal of Political Economy*, Vol. 106, No. 6, pp. 1113-1155.
- Lennox, C. (1999), 'Are Large Auditors more Accurate than Small Auditors?', *Accounting and Business Research*, Summer, pp. 217-227.
- Lenz, H. & James, M. (2007), 'International Audit Firms as Strategic Networks: The Evolution of Global Professional Service Firms', In: Cliquet, G., Hendriksen, G., Tuunanen, M., and Windspreger, J. (ed.), *Economics and Management of Networks; Franchising, Strategic Alliances, Cooperatives*, Physica-Verlag, New York.

- Li, C. (2009), 'Does Client Importance Affect Auditor Independence at the Office Level? Empirical Evidence from Going-concern Opinions', *Contemporary Accounting Research*, 26, pp. 201-230.
- Maijoor, S.V. and Vanstraelen, A. (2006), 'Earnings management within Europe: The effect of Member States audit environment, audit firm quality and international capital markets.', *Accounting and Business Research*, Vol. 36, No. 1. pp. 33-52.
- Martin, R.D. (2000), 'Going-concern Uncertainty Disclosures and Conditions: A Comparison of French, German and U.S. Practices', *Journal of International Accounting, Auditing & Taxation*, Vol. 9, No. 2, pp. 137-158.
- Needles, B.E. (1989), 'International Auditing Research: Current Assessment and Future Direction', *The International Journal of Accounting*, 24, pp. 1-20.
- Nobes, C. and Parker. R. (2006), *Comparative International Accounting*. Ninth Edition, Pearson Education Limited, Harlow
- Nobes, C. and Parker. R. (2010), *Comparative International Accounting*. Eleventh Edition. London.
- Nobes, C. and Zeff, S.A. (2008), 'Auditors' Affirmations of Compliance with IFRS around the World: An Exploratory Study', *Accounting Perspective*, Vol. 7, No. 4, pp. 279-292.
- Ohlson, J.A. (1980), 'Financial Ratios and the Probabilistic Prediction of Bankruptcy', *Journal of Accounting Research*, 18, pp. 109-131.
- Robinson, D. (2008), 'Auditor Independence and Auditor-Provided Tax Service: Evidence from Going-Concern Audit Opinions

- prior to Bankruptcy Filings', *Auditing: A Journal of Practice and Theory*, 27, pp. 31-54.
- Shumway, T. (2001), 'Forecasting bankruptcy more accurately: a simple hazard model', *Journal of Business*, Vol. 74, No. 1, pp. 101–124.
- Schweikar, J.A., Gray, S.J. & Salter, S.B. (1996), 'An Interview with Sir Bryan Carsberg, Secretary-General of the International Accounting Standards Committee', *Accounting Horizons*, 10, pp. 110-117.
- Smith, L.M., Sagafi-Nejad, T. & Wang, K. (2008), 'Going International: Accounting and Auditing Standards', *Internal Auditing*, July/August, pp. 3-12.
- Sundgren, S. & Svanström, T. (2012a), 'Auditor-in-Charge Characteristics and Going-concern Reporting', Working paper.
- Sundgren, S & Svanström, T. (2012b), 'Audit Office Size, Audit Quality and Audit Pricing: Evidence from Small and Medium Sized Enterprises', Working paper.
- Trønnes, P.C. (2011), '*Consistency in Audit Reporting Behavior: Evidence from Going-concern Modifications*', PhD Thesis, The University of New South Wales, Australia.
- Trønnes, P.C., Carson, E. & Simnett, R. (2011), 'International Consistency in Audit Reporting Behavior: Evidence from Going-concern Modifications', Working paper.
- Van Tendeloo, B. and Vanstraelen, A. (2008), 'Earnings Management and Audit Quality in Europe: Evidence from the Private Client Segment Market', *European Accounting Review*, Vol. 17, No. 3, pp. 447-469.

- Vander Bauwhede, H. & Willekens, M. (2004), 'Evidence on (the Lack of) Audit-Quality Differentiation in the Private Client Segment of the Belgian Audit Market', *European Accounting Review*, Vol. 13, No. 3, pp. 501-522.
- Weber, J. & Willenborg, M. (2003), 'Do Expert Informational Intermediaries Add Value? Evidence from Auditors in Microcap IPOs', *Journal of Accounting Research*, September, pp. 681-720.
- Wingate, M. (1997), 'An Examination of Cultural Influence on Audit Environments', *Research in Accounting Regulation*, 11, pp. 129-148.
- Zarzeski, M.T. (1996), 'Spontaneous Harmonization Effects on Culture and Market Forces on Accounting Disclosure Practices', *Accounting Horizons*, 10, pp. 18-37.
- Zmijewski, M.E. (1984), 'Methodological Issues Related to the Estimation of Financial Distress Prediction Models', *Journal of Accounting Research*, 22, pp. 59-86.

APPENDIX 1

Country-specific audit requirements

Statutory audit requirement¹			
Finland The company has to be audited if at least two of these circumstances exist: 1) Balance sheet total > 100.000 € 2) Net sales > 200.000 € 3) Average no of employees > 3	Sweden The company has to be audited if at least two of these circumstances exist: 1) Balance sheet total > 163.934 € ² 2) Net sales > 327.869 € 3) Average no of employees > 3	Norway The company has to be audited if the following circumstances exist: 1) Balance sheet total > 2.503 million € ³ 2) Net sales > 625.782 € 3) Average no of employees > 10	Denmark The company has to be audited if at least two of these circumstances exist: 1) Balance sheet total > 196.850 € ⁴ 2) Net sales > 393.700 € 3) Average no of employees > 12
Content of auditing			
Finland Audit of accounting records, Board of the Directors' report, financial statements and the governance report of the firm	Sweden Audit of annual report, accounting records and management's stewardship.	Norway Audit of financial statement, proper registration of accounting information and tax related information.	Denmark Audit of the annual report, including compliance with generally accepted accounting principles and (national) rules.
Audit report			
Finland Unqualified, unqualified with modified	Sweden Unqualified, unqualified with	Norway Unqualified, unqualified with modification or	Denmark Unqualified, emphasis of matter,

¹ Audit exemptions in Sweden and Norway were not introduced at the time of the study

² 1 Euro = 9.15 SEK, December 13, 2010

³ 1 Euro = 7.99 NOK, February 8, 2011

⁴ 1 Euro = 7.62 DKK, February 8, 2011

wording or qualified	modification or qualified (least severe departure from an unqualified report), adverse	explanatory paragraph, qualified, adverse disclaimer or	qualified
The auditor expresses an opinion			
Finland On the financial statements (annual report), the Board of Directors' report and issues of governance	Sweden On the financial statement (annual report) and whether the Board of Directors and the CEO should be granted discharge from liability	Norway On the financial statement (annual report) including the going-concern assumption. Whether management has fulfilled its duty of proper registration and documentation of accounting information.	Denmark On the annual report, including the conceptual framework applied by management.
Types of approved auditors			
Finland HTM-auditor KHT-auditor Maallikko-auditor	Sweden Approved auditors Authorised auditors	Norway Approved auditors State - authorised auditors	Denmark Registered auditors State-authorised auditors

Article # 3

Banks Officers' Perceptions and Uses of Qualified Audit Reports

Nina Sormunen¹

*¹Copenhagen Business School, Department of Accounting and Auditing
Sobjerg Plads 3, DK-2000 Frederiksberg, Denmark*

Abstract

Purpose – The purpose of this study is to provide insights into perceptions and uses of qualified audit reports in financial statements of small and medium-sized enterprises. In particular, there is a long-standing debate on the usefulness of auditor's going-concern reports, and this study is based on a focus on the factors affecting how banks perceive and use qualified audit reports.

Design/methodology/approach – Semi-structured interviews with bank lending officers were conducted.

Findings – Banks were considered to be one of the main users of financial reports. This study demonstrated that bank officers examined the qualified report as a first-order filter that served as an early warning system, but otherwise qualified audit reports were seen to be of limited use. The main factor affecting the utility of the information is the use of a great variety of other information sources. Moreover, low quality of information, accounting

expertise and attitude towards auditing were found to be important factors that influenced how information was used.

Practical implications – Regulators have taken the action to improve the auditor's reporting model, and the model provided by this study is important since it clarifies users' understanding and the factors that affect the utility of qualified audit reports.

Originality/value – This is one of the first studies that uses a qualitative approach to examine factors that affect the use of qualified audit reports with particular focus on qualified going-concern reports.

Keywords: Auditing; Audit report information content; Loan officer; Going-concern opinions

1. Introduction

For more than half a century, the relevance and usefulness of audit reports has been the subject of much research, and the audit report is often criticised of failing to provide informative content to users of financial statements (Church *et al.*, 2008). From a theoretical point of view, , as an independent second opinion the audit report should provide additional information on the perceptions and decisions of financial statements users (see e.g. Guiral and Ruiz, 2011), but the message conveyed by audit reports has been questioned by regulators and academics alike (Church *et al.*, 2008). The main concern is that the exact message or messages communicated by the audit report are less apparent to financial statements users (see e.g. Church *et al.*, 2008; Mock *et al.*, 2009), and indeed, most studies conclude that users do not give additional credence to the qualification/modification in the auditor's report (Bessel *et al.*, 2003). In this context, the IAASB and the PCAOB have taken action to change the auditor's reporting model to increase its transparency and relevance to financial statements users.¹ Yet, there is still a concern of the quality, relevance and value of auditor reporting on an international basis, and academics, practitioners and regulatory bodies have considered changes to the auditor's report to enhance the auditor's reporting (see e.g. Asare and Wright, 2009). There is also a long-standing debate on the usefulness of auditors' going-concern reports, and this study is based on a focus on the factors that affect how banks use qualified going-concern audit reports. The purpose of the current study is to provide insight into perceptions and uses of qualified audit reports in financial statements of small and medium-sized enterprises.

From the point of view of auditors' going-concern reporting, previous research has shown that auditors' going-concern reporting is one good example of where the audit report could serve users of financial information better (Sormunen *et al.*, 2012). Furthermore, the auditing profession has been subject to much criticism following the financial crises, and indeed, while sending a signal to outsiders about the prospects of the firm has been proposed as one of the main incentives for hiring auditing services (see e.g. Dye, 1993; O'Reilly, 2010), it has been demonstrated that more often than not, many observers have been dissatisfied with the ability of the accounting professions to warn against threats of client failure (see e.g. Citron and Taffler, 2001; Bellowary, *et al.* 2006). There is a long-standing debate on the usefulness of going-concern reporting (Menon and Williams, 2010), and in turn, this situation has generated a notable feeling of distrust towards the social function that the auditing profession should fulfill (McEnroe and Martens, 2001; Guiral-Contreras, 2007).

From the perspective of a user of financial statements, financial institutions lend large sums to companies on a daily basis, partly relying on financial statement information, and they are among the main users of private companies' financial statements (Guiral-Contreras, 2007; Niemi and Sundgren, 2011). The primary concern of loan officers is to obtain useful, reliable and comparable information, i.e. a guarantee that payments will be made on schedule (Rodger and Johnson, 1988; Guiral-Contreras, 2007; Niemi and Sundgren, 2011). If these aspects are considered together, studies investigating the impact of the audit report in credit decisions are important (Niemi and Sundgren, 2011).

This study complements previous research by developing a model of the banks' uses and perceptions of qualified audit reports provided by SMEs in the context of auditors' going-concern reporting. The main contribution lies in investigating qualitative data, and the purpose is to go beyond the initial question whether users find the audit reports that have been modified for going-concern reasons to be useful. Through interviews with bank industry officers, the current study seeks to identify and conceptualise the pattern arising from the users' perceptions and uses of qualified audit reports in the banking industry. It is important to explore what factors affect the uses of information and how and why audit reports can provide the information. Unfortunately little is known about these issues, and previous archival and experimental studies have produced mixed results regarding the perceptions and uses of going-concern reports. By focusing on qualitative data and developing a model of patterns of the perceptions and uses of audit reports, this study makes a contribution to this under-researched area.

This study employs a purely qualitative approach. 18 semi-structured interviews were conducted with bank officers in Finland. A content analysis method was employed to analyse the qualitative data and to interpret the study findings. The study findings reveal that the main factor affecting how information is used is the use of a large variety of other sources of information. Direct contacts with companies and auditors were extensively used, which had a significant effect on the utility of information. Also, the quality of information, accounting expertise and general attitude towards auditing were found to be significant factors that influenced the use of information.

The remainder of the paper is structured as follows: Firstly, a user perspective of auditor's reporting is discussed as a theoretical framework for the study. Secondly, the sample and the process of collecting and analysing data are outlined. Thirdly, the Finnish institutional setting is discussed. Finally, findings and implications for future research are discussed.

2. Banks' uses of qualified audit reports

The theoretical framework of this study proceeds from the decision-usefulness theory. Decision-usefulness theory describes accounting as a process of providing relevant information to relevant decision makers (Gray, *et al.* 1996). The development of this theory can be dated to the middle of the twentieth century when financial statements were criticised for not providing adequate information to the user for his decision-making (Edwards, 1989). Staubus (2000) introduced the theory as a basis for making accounting choices. In other words, the usefulness of financial information was assessed in terms of how it helps users make rational decisions, and a user perspective of the purpose of financial reporting also made it easier to choose accounting treatments. The theoretical and practical implications play a significant role in the history of financial accounting and standard-setting (Staubus, 2000; Sharma and Iselin, 2003). (Dang-Duc *et al.*, 2006; 2008).

As banks are the main external source of finance for small and medium-sized businesses, they are one of the main users of company financial information (see e.g. Dang-Duc *et al.*, 2008; Niemi and Sundgren, 2011).

Accordingly, there has been increasing interest in users' needs and uses of audit reports, and a number of experimental studies have examined the effects of qualified audit reports on lenders' credit decisions. From a theoretical perspective, as an indicator of the credibility of financial statements, the audit report should be an important informative resource in credit decisions (Guiral and Ruiz, 2011), but so far, previous research employing experimental methods to investigate the usefulness of the auditor's report (e.g. going-concern opinions) in the loan granting process have provided inconclusive results (Guiral-Contreras *et al.*, 2007).

Some earlier studies find no effect of the audit report on loan officers' judgments (see e.g. Estes and Reimer, 1977; Libby, 1979; Houghton, 1983; Abdel-Khalik *et al.*, 1986), whereas later, more refined studies indicate that the message of the report appears to affect the financial conditions imposed by the lender (see e.g. Gul, 1987,1990; Firth, 1979; Bamber and Stratton, 1997; LaSalle and Anandarajan, 1997). In spite of all this, Lin, *et al.* (2003) and Bessel, *et al.* (2003) suggest that the information content in qualified audit reports is too limited to help loan officer's understanding and use of financial statements. Bessel, *et al.* (2003) argue that financial statement users do not give additional credence to the qualification in the auditor's report, and furthermore, for a company in a state of financial distress the going-concern modification does not appear to significantly enhance either perceptions of risk or decision-making.

On the other hand, a number of studies indicate that financial statement users who received going-concern reports in the "subject to" qualified (Firth, 1979; Gul, 1987) and in the current modified format (Bamber and Stratton, 1997) perceive the company to be more risky. Some studies

argue that uncertainty qualifications are unnecessary if the contingency is properly reported in the notes to the financial statements (Libby, 1979; Houghton, 1983; Abdel-Khalik *et al.*, 1986; LaSalle and Anandarajan, 1997; Elias and Johnston, 2001). However, Guiral-Contreras *et al.* (2007) find that the audit report has information content only when it is contrary to favourable financial expectations and when this is not the case, the audit report is only perceived as corroborating the underlying financial information.

More recently, Guiral and Ruiz (2011) study lenders' perception of how auditor financial independence affects audit report information content, and they find that loan officers view a qualified audit report as a first-order mechanism/filter that serves as an early warning system. Guiral and Ruiz (2011) find that auditor financial dependence is viewed as a second-order mechanism that only activates loan officers' professional skepticism when the first-order mechanism has not released a warning signal. Moreover, Niemi and Sundgren (2011) investigate whether modified opinions have an adverse effect on the availability of credit institutional lenders outside a laboratory setting, and their overriding conclusion is that modified audit opinions provide supplementary information for lenders.

To conclude, it can be argued that research and other work published in the area do not attempt to provide answers to what factors affect the utility of qualified audit reports, and also, little seems to be known about the information relationship between banks and smaller companies.² In this context, this study addresses the question of what factors affect bank officers' perceptions and uses of qualified audit reports. While the information utility of audit reports between lenders and companies has

been a topic of discussion for a long time, the mixed results seem to suggest that to deepen our understanding of the information utility of the audit report in credit decisions, the subject deserves further investigation. The inconclusive results of previous studies may be attributable to differences in the quantity of information provided to subjects, different cultural/auditing environments and differences in experimental designs (Bamber and Stratton, 1997; Guiral and Ruiz, 2011). It is also possible that the impact of qualified opinions is different in a real decision setting when the information load is probably much higher than is the case in an experimental setting (Niemi and Sundgren, 2011). In sum, this is one of the first studies that investigate qualitative data to study perceptions and uses of qualified audit reports in financial statements of small and medium sized enterprises.

3. Research design and method

The current study integrates the research on bank officers' uses and perceptions of the utility of qualified audit reports. This study investigates only on the basis of qualitative data. Specifically, the research question of this study explores what factors affect the perceptions and uses of qualified audit reports, with particular focus on going-concern opinions. As described in the introduction, previous studies have mainly focused on experimental data to study banks' reaction to going-concern reports. Although several published studies have used experimental data to study users' reaction to going-concern reports (see e.g. Abdel-Khalik *et al.*, 1986; LaSalle and Anandarajan, 1997; Bessel *et al.*, 2003; Lin *et al.*, 2003; Guiral-Contreras *et al.*, 2007), some major elements in experimental

research have been criticised. As discussed by Libby (2002), the major elements of experiment research criticism have been: (i) the irrelevance of individual behaviour in market settings in which competitive forces will eliminate individual “errors”; (ii) poor matching of research methods to research questions; (iii) the lack of psychological or economic theory to predict effects and specify the mechanism through which they occur; and (iv) failure to capture relevant aspects of the decisions of interest, in particular, decision-maker attributes and institutional features (Maines, 1995; Berg, *et al.* 1995; Libby, *et al.* 2002). The experimental research could be criticised as being excessively hermetic, given that subjects were not allowed the opportunity to seek complementary information themselves (Kida, 1984; Guiral-Contreas, *et al.* 2007; O'Reilly, 2010). In addition, in the case of experiments that are conducted by mail, it cannot be known whether participants worked through the task in the order intended (O'Reilly, 2010).

The qualitative approach is a result of the nature and context of the study, and this is relevant when researchers seek to understand the context of the research matter in terms of how and why it occurs (Cassell and Symon, 1994; Dang-Duc *et al.*, 2006) and when the research event is emergent rather than prefigured (Creswell, 2003; Dang-Duc *et al.*, 2006). Thus, qualitative research concentrates on the details, context and nuances of a specific phenomenon. This increases the depth of the resulting analysis by situating human action within the specific context of its occurrence (Chua, 1986; Patton, 2002). Qualitative research is fitted to the cases for which knowledge is fragmentary or inadequate for the purposes of conducting valid and reliable quantitative studies (Eisenhardt, 1989).

For this exploratory study, semi-structured interviews were used to collect qualitative data from bank industry officers. Accordingly, bank officers was the general term that the current study focused on, and the main reason for focusing on banks was that bank industry officers are some of the main users of financial information (see e.g. Dang-Duc *et al.*, 2006) who, in no small part, base their decisions on the financial health and stability of a company (Anandarajan *et al.*, 2002). That is, since the interpretation of these reports is a key factor in the proper allocation of credit, banks are the most affected by the credibility of audit reports (Rodgers and Johnson, 1988; Guiral-Contreras *et al.*, 2007), and thus, studies investigating the usefulness of audit reports in credit decisions are important.

The bank industry officers who were in a position to make appropriate judgments on lending facilities and associated issues in relation to a loan application were interviewed. All the interviews were carried out with 18 respondents who routinely worked mainly with SMEs. The main characteristics of the respondents are presented in Table 1 below.

TABLE 1
Profile of interview respondents

Nr.	Position	Total experience in the current job (years)	City	Gender
1	Second Manager	Relationship 3	Helsinki	M
2	Second Manager	Relationship 21	Helsinki	M
3	Bank Manager	11	Vaasa	M
4	Analyst	3	Helsinki	F
5	Analyst	20	Helsinki	F
6	Credit Manager	16	Helsinki	M
7	Investment Manager	4	Helsinki	M
8	Analyst	6	Helsinki	M
9	Second Manager	Relationship 30	Helsinki	M
10	Second Manager	Relationship 4	Helsinki	M
11	Manager	5	Helsinki	M
12	Bank Manager	20	Helsinki	F
13	Second Manager	Relationship 6	Espoo	M
14	Second Manager	Relationship 17	Espoo	M
15	Loan Manager	2	Karjaa	M
16	Analyst	1	Helsinki	F
17	Investment Manager	2	Espoo	M
18	Second Manager	Relationship 5	Espoo	M

The data used for the purposes of this study was collected in November 2010 and January 2011 through semi-directed individual interviews. A semi-structured approach ensures flexibility in interview design and conduct, which results in a rich data set for later analysis (Horton *et al.*,

2004; Dang-Duc *et al.*, 2006). Moreover, interviews offered a unique opportunity to explore the many points of view on the topic (Miller and Glassner, 1997). The interviews started with general questions regarding the interviewee's professional characteristics. These questions were based on the career of the interviewee and serve to break the ice by discussing a neutral subject before moving into the heart of the interview (Patton, 2002). Questions based on the role of the audit report were then presented to get a general view of the respondents' use and understanding of an audit report. The purpose of these questions was to allow respondents to answer the questions freely, express their own ideas and reduce the risk of response bias (Dicken, 1987; Marriott and Marriott, 1999; Dang-Duc *et al.*, 2006), and follow-up questions were then presented to address the main objectives of this study. The themes are listed below:

- the message communicated by a qualified going-concern report
- level of understanding the message
- experience in dealing with qualified going-concern reports
- frequency of usage
- purpose of using information
- access to information
- perceptions regarding the quality of information (reliability, relevance, timely, comparability)
- example of a situation in which a qualified going-concern report was particularly useful
- other sources of information
- perceptions about the role of auditor and auditing standards

All interviews were conducted in Finnish, and the interviews took place mostly in Helsinki, the capital of Finland. Most of the interviews lasted between 30 minutes and one hour, and the average length of interviews was 40 minutes. Several steps were taken to improve the reliability of the data collection. First, an interview guide was used to ensure a consistent framework and coverage of topics. The order of the subjects indicated and the research questions asked might vary from one interview to the next, and some interviews might focus more on a given question than others depending on the answer given by the interviewee. However, generally the interview guide served as a basic checklist to ensure that all relevant themes were covered during the interview. Second, all of the respondents were given assurance of anonymity to encourage open and honest responses. Third, each interview was recorded with the respondents' permission, and only a few notes were made in order to promote an open dialogue on the matters being discussed. The recorded interviews were transcribed, and NVivo was used to help the qualitative analysis process. It is recognised that the meaning of the information imparted by the transcribed words is relevant rather than the words themselves (Miles and Huberman, 1994; Dang-Duc *et al.*, 2006), so the coding process was performed as a 'looking-for-information' process rather than a mere breakdown of paragraphs. The coding process also served as a way of grouping summaries into a smaller number of sets, themes or constructs. This feature was useful in identifying the patterns arising from the interviews. Accordingly, the coding process helped to construct coding models (Strauss, 1987; Berg, 2004) and served as a tool for identifying and analysing new themes arising from the interviews (Dang-Duc *et al.*, 2006).

4. Regulation on auditing in Finland

4.1. The influence of the Finnish institutional environment

Traditionally a distinction has been made between code law countries and common law countries. As other Nordic countries, Finland is classified as a Continental European country, which means that Finland has a code-law system and a bank-based finance system. Unlike what is the case in common-law countries with a market-oriented finance system, the most common sources of external finance in code-law countries are loans from banks and other financial institutions. Moreover, in code-law countries financial reporting, auditing, and company governance in general are based on legislation, and the important objective of this legislation is to protect creditor rights. For SMEs, the impact of these institutional differences is likely to be less significant, and although some national idiosyncrasies in auditing may exist, the main objectives of financial statement audits are the same in common-law as in code-law countries: to provide an opinion on the fairness of the presentation of the company's financial position. Because of single market differences in business environments between the EU countries should be less significant compared with those between EU states and other countries. Moreover, the EU report 'SMEs and Access to Finance' indicates that trade credit is an important source of finance for SMEs, and differences in the use of trade credit between EU countries are attributable mainly to different payment practices, i.e. the amounts owed to trade creditors are larger in countries with longer payment periods (European Commission, 2003: 29-30). Payment periods in e.g. Italy are considerably longer than they are in Finland and Sweden and therefore, there is comparatively less use of

trade credit in Finland and Sweden than is the case in some other European countries.³ (Niemi and Sundgren, 2011).

In the context of auditing, several characteristics make Finland a unique setting in which to study perceptions and uses of qualified audit reports. To begin with, until recently, virtually all limited liability companies, regardless of size, were required by law to have their financial statements audited in the Nordic countries, whereas the company size threshold is set at the upper limit of the EU directive in many other EU countries.⁴ However, The Finnish Auditing Act stipulates that virtually all businesses, regardless of size or capital structure, are required to prepare public financial statements that are subject to audit. Furthermore, unlike in many other countries there are no alternative assurance services such as reviews, i.e. companies must have a 'full' statutory financial statement audit as stipulated by Auditing Act, and companies may choose between four distinct categories of auditor.⁵ Finally, in Finland there is relatively low auditor exposure to litigation risk. (Niemi, 2005; Knechel *et al.*, 2008).

4.2. Auditor's going-concern reporting

The Finnish standard about the auditor's evaluation of a company's ability to continue as a going-concern is similar to the ISA 570 in all relevant aspects, and the going-concern assumption is a fundamental principle in the preparation of financial statements. According to the ISA 570, the auditor has to consider the appropriateness of managements' use of the going-concern assumption and to evaluate whether material uncertainties exist about the company's ability to continue as a going concern. The time span for evaluating the company's ability to continue as a going-concern is

the same as for management, i.e. 12 months from the fiscal year end. Regardless of what is stated in the financial statement, the auditor must comment on going-concern uncertainty in the audit report. If there is significant doubt about the company's ability to continue as a going concern, the appropriate reporting in the audit reports depends on the different circumstances and ranges from an explanatory paragraph to an adverse opinion. That is, the auditor is to issue an unqualified audit report with an emphasis-on-matter paragraph if the going-concern issue has been appropriately dealt with in the financial statement and qualify the audit report when the disclosure is inadequate. Some examples of the factors that may raise doubts as to a company's going-concern status are listed in the ISA 570. These factors are classified into financial, operating and other circumstances. The actual time span for the auditor to evaluate the company's ability to continue as a going-concern is 12 months from the fiscal year end, which is the same as for management.

Finally, as is the case in most of the Scandinavian countries, going-concern reports are relatively uncommon in Finland (Sormunen *et al.*, 2012), and this makes Finland an interesting setting in which to study perceptions and uses of audit reports.⁶ Accordingly, it is possible that in a country in which going-concern reports are fairly rare, more adverse reactions to these kinds of reports might be expected when they occurred. Also, a more adverse attitude towards auditing and auditors is possible.

5. Results and discussion

This section reports the results of the present study. As mentioned before, most of the banks were located in Helsinki, and the respondents had work experience ranging from 2 to 30 years (see Table 1 for demographic details). All respondents worked routinely with financial statements and were in a position to make appropriate judgments on lending facilities or associated issues in relation to a loan application. The respondents mainly worked with SMEs, but some of the interviewees had experience with large companies as well.

Inspired by the study of Dang-Duc *et al.* (2006), coding frames were constructed for identifying and analysing themes arising from the interviews. These frames were used in all cases (i.e. transcribed interviews) to produce model of patterns of users' perceptions of information. Later, similar opinions about the same problems issued by the participants and the major issues were collected. These are discussed in the following sections and provide deeper insight into the views of the respondents.

5.1. The information needs

To begin with, consistent with previous studies (Dang-Duc *et al.*, 2006; Niemi and Sundgren, 2011), it can be argued that banks are one of the main users of financial reports. However, evidence from the study showed that the respondents interviewed gave only little consideration to the audit report. The respondents highlighted the financial importance of audit reports and moreover, none of them would accept unaudited financial

statements. However, it was frequently stressed that the information content of the audit report is fairly limited. One respondent commented:

'Sure the audit report is important in the sense that it's a guarantee of quality. But the content of the report tells us more about how the audit is done, rather than goes into details about what is auditor's opinion of the audited company' (Second Relationship Manager, 2011, January).

Interestingly, none of the respondents actually read the audit report. When asked about the purpose of the audit report, the most common response was that the bank loan officers looked at the third paragraph to see whether the audit report is unqualified or qualified:

'We check that the audit report is not qualified. If the audit report is unqualified, it is fine and we will leave it like that. It is more or less like an OK stamp.' (Analyst, 2010, November)

Moreover, the respondents may look at what audit firm had signed the audit report. Indeed, if the audit report was unqualified and signed by a Big 4 audit firm, the participants did not consider the report again – a finding that also made by previous studies (Gray *et al.* 2011). All participants stressed that they appreciated the positive role of Big 4 firms: a signature by a Big 4 firm was seen as a significant mark of quality which communicated something positive to the bank officers, and also, in some cases the audit firm had an influence on the bank officers' decisions:

'When the audit is done by a Big 4 firm, I don't put that much value on the auditor itself. I know that Big 4 companies have good quality standards and they do a good job. I know we can look at them more seriously' (Loan Manager, January, 2011)

'Sure we have to mention in the credit proposal who has audited the company. In the bigger cases we certainly notice that the auditor is a first tier auditor and preferably someone from those big audit firms' (Investment Manager, November, 2010)

If a Big 4 audit firm did not sign the audit report, the bank officers might or might not seek to assess the reputation of the audit firm and the auditor. A few of the interviews were conducted in smaller towns, and one interesting finding was that respondents in these towns seemed to know most of the local auditors, and based on their name, they knew the quality of the audit. One manager explained:

'Generally, banks probably trust all audit reports but I personally pay attention to who has signed the audit report and with what kind of qualification. In fact in this town you know people and you know who does good job' (Manager, 2011, January)

After discussing the overall perspectives of the auditor's report, the discussion shifted to the more detailed elements included in the auditor's report. With particular focus on qualified going-concern reports, most respondents stressed that auditors' going-concern reporting is important, and they appreciated the role of the auditors in evaluating a company's going-concern status. However, none of the bank officers actually used

this source of information due to other methods of communication. That is, the utility of the information varied significantly according to the use of alternative sources of information – a finding also made by others (see e.g. Song-Duc *et al.*, 2008). In fact, direct contact with the company was one of the most significant factors affecting the use of information:

'These local companies are fairly small and pretty often we have very close collaboration with the clients. The companies come voluntarily to tell us about their problems before they end up in the critical stage. Sure, we are very often aware of clients' problems before anything ends up in the audit report.' (Manager, 2011, January)

'Sure, we are following and analysing companies' financial statements. We go through many different kinds of things with the company to establish why some things are how they are.' (Second relationship manager, 2011, January)

Accordingly, as discussed by Church *et al.* (2008), in the current environment users have a rich set of information from which to choose, and the information contained in a qualified going-concern report was of limited use since respondents felt that the going-concern report did not convey new information that was particularly relevant. It can be argued that bank officers attribute a significantly higher value to their own analysis of the information than on the auditor's analysis, i.e. the auditor's report. Moreover, it appeared from the interviews that direct contact with the auditor, financial advice, database, colleagues and the Internet were also used as sources of information. It was also noted that the general view

was that going-concern reports could be predicted by using public information; one respondent emphasised:

'It's very hard to see that the auditor could provide some beneficial information regarding company's going-concern status. If we get fundamental information regarding a company's going-concern status, it indicates that we haven't followed things very well' (Second Relationship Manager, 2011, January)

Moreover, another interviewee commented:

'But many people are otherwise also interested in the company and they read annual reports and make their own analyses. So the audit report doesn't bring too much information to the user. The message is fairly close to either a red or a green light.' (Bank Manager, January, 2011).

5.2. The access to and uses of information

All participants mentioned the statutory submissions as the main method of access to audit reports. That is, companies were expected to submit their financial statements to the bank. However, in line with the study of Page (1984) and Dang-Duc *et al.* (2006), the intensity of use of financial reports differed between small and large companies. With respect to the access to audit reports, some of the respondents emphasised that especially with small companies, audit reports were sometimes missing for one reason or another.

'Sure it is stated in the law that financial statements need to be audited. However, sometimes we don't get the audit reports. Also when we are talking about small clients, it may be that we won't even get the official financial statements. Basically we demand audited reports, but with small companies we cop out of this a bit. Of course we should not.' (Loan Manager, 2011, January)

In addition, it came up from the interviews that in few cases when a company runs into troubles, the access to audit reports may become more difficult. That is, the auditor will not issue the audit report before the company has organised the financing, but bank officers will not provide finance to the company before they have seen the audit report. One of the respondents explained:

'When there problems related to the company's going-concern status occur, normally we won't get the audit reports. We are in the dilemma that the auditor won't give the report before we have given the finance. And we won't give the finance, when we don't know how things are with the company' (Analyst, November, 2010)

As discussed in the previous section, the respondents mainly addressed alternative methods of communication between banks and companies. As an example one manager emphasised the significance of having direct contact with the company and auditor:

'I will rather call them if I notice something dubious. I cannot contact the auditor without the company's permission, and normally the company wants me to call the auditor since we talk the same language. Then I get the information that I want and this helps the situation a lot.' (Bank Manager, 2010, November)

All respondents stressed that the main use of audit reports were to meet basic requirements for making lending and investment decisions. The interviews revealed that auditors' reports make the documents valuable to users, and one of the main purposes of the audit report was to make the users comfortable with the figures:

'The role of the audit report is to increase confidence. I put more trust in the financial statements when they are audited. I read the financial statements two or three times more carefully if the audit report is missing' (Second relationship manager, 2010, December)

It was obvious that the audit report did not have a significant purpose unless it complemented the financial statements, and the main purpose of audit reports involved identifying organisations with qualified audit reports. As some of the previous studies discuss (see e.g. LaSalle and Anandarajan, 1997), qualified audit reports had an influence on the perceptions of risk. That is, the perceptions of the ability of a company to service its debts were poor and consisted with the study of Guiral and Ruiz (2011), all respondents examined qualified report as a first-order filter which served as an early warning system. That is, once the auditor issued

a qualified report, the respondents automatically refused to lend money to a business organisation:

'If I get a new case and the audit report is qualified, I will rather get rid of the case. If things aren't well from the beginning, there has to be some really good reason why I should even bother the bank or myself with the case' (Bank Manager, 2011, January)

'Of course we don't want to start playing with the firms who are not even able to get a clean audit report' (Loan Manager, 2010, November)

Accordingly, a qualified audit report reduced the willingness to grant a loan and moreover, it negatively affected the respondents' assessment of the company's ability to service their debt. However, consistent with the findings of Guiral-Contreras *et al.* (2007), the respondents felt that the qualified audit report had information content when it was contrary to favourable financial expectations, and when the audit report was not contrary, it was perceived as corroboration of the underlying financial information, i.e. the users mainly reacted when the issuance of a qualified opinion was unexpected. One of the respondents explained:

'Going-concern reporting doesn't influence on decision-makings since we already know the situation. Then we just state that finally the auditor has highlighted the situation as well.' (Second Relationship Manager, 2011, January)

In the line with the study of Song-Duc *et al.* (2006), one interesting finding was that the respondents' accounting expertise was also one factor that affected the information utility. It was commented:

'I could imagine that an ordinary person who reads an unqualified audit report would appreciate it more than a specialist. An ordinary person would read the audit report very carefully and conclude afterwards that everything is all right. But I know what's behind the report. In this kind of job, you notice that it's enough when the audit report just exists. I don't think that the audit report is informative. Someone else may think something else, but this may be because the person doesn't know how auditing works. The auditor may have several different kinds of opinion regarding the financial status of the organisation, but he/she won't write them in the report'
(Manager, 2011, January)

Finally, respondents were also asked whether auditor's reporting should be changed to make the reporting more usable for the users. The respondents mainly highlighted the poor occurrence of going-concern reports, but most respondents expressed doubts whether it would be even possible to expand the auditor's communication to the users. The majority of the respondents felt that auditor's disclosures might increase the likelihood of impending risk, and one manager highlighted:

'The words that the auditor puts in the audit report need to be considered very carefully since they may have significant

consequences if all the sources of financing are going to be terminated after the disclosure' (Manager, 2011, January)

It was also noted that the general knowledge on auditors' going-concern reporting seemed to be fairly limited. For instance, one of the respondents commented:

'I don't even know what duty the auditor has to issue a going-concern opinion. So I don't know whether they should report better. It seems like auditors don't report very well about a company's going-concern problems; they don't even have this kind of responsibility.' (Second relationship manager, 2011, January)

5.3. Quality of information

There was a general consensus among the respondents that regarding the characteristics of information provided, timeliness was seen as the most significant variable affecting the utility of information. Accordingly, the late submission of audit reports was highlighted by all the respondents:

'My experience of audit reports is that they come too late. Audit reports are history for us' (Analyst, 2011, January)

'Because of the lag of audit reports, we don't appreciate them so much. Banks live here and now. Every day we need to be updated about the current situation so we don't get any surprises' (Manager, 2010, November)

As a result, respondents highlighted that it is not the audit report that leads to decisions. That is, decisions had to be made earlier since it was too late for significant decision-making after the issuance of a qualified audit report. One loan manager explained:

'If we are so lucky that we are still able to make some decisions when the auditor issues a going-concern opinion, then it has an influence on the decision-making. But in practice, the situation is different. When the auditor reports about going-concern problems, we are already aware of the situation and we definitely haven't invested money in the company. However, the money is already there and we won't get it back no matter what the auditor would say' (Loan Manager, 2011, January).

Furthermore, another emphasised:

'From a practical point of view, I guess it does not matter whether the auditor issues a going-concern report, since at that point we are already in deep trouble' (Loan Manager, 2011, January).

The reason for the late issuance was discussed, and the respondents felt that there is a link between going-concern reports and bankruptcy. Interestingly, most of the respondents seemed to agree that bankruptcy is a consequence of a self-fulfilling prophecy. One manager explained:

'It may be that also the auditor understands that if he/she issues a going-concern report, it's kind of going to be the last nail in the coffin.' (Loan Manager, 2011, January)

However, more research is needed to examine the actual consequences of auditors' going-concern reporting. Some solutions were offered to remedy the problems, which on the other hand showed that it was not clear what the unqualified audit report is intended to communicate:

'It should be explicitly stated in the law that the auditor should write an opinion regarding a company's going-concern status.' (Second Relationship Manager, 2011, January)

5.4. The role of auditors

One interesting finding was that bank officers perceived the company to be more risky when either a second tier auditor or non-Big 4 auditor had issued a going-concern report. One manager explained:

'I would say that first-tier auditors report about going-concern problems more easily because I know they have more responsibility. There is a slight difference between first and second tier auditors when they issue a going-concern report because first-tier auditor will do it earlier.' (Loan Manager, January 2011).

Furthermore, another commented:

'I do believe that auditors who audit large companies know their job. However auditors who audit smaller companies may make exceptions when they are doing the audit' (Second Relationship Manager, 2011, January)

Accordingly, it came up from the interviews that the attitude towards auditors' independence was seen as one of the factors affecting the utility of information. In other words, respondents' perceptions of audit competence and audit firm affected the information content. Both Big 4 auditors and first tier auditors were considered as a mark of quality and accordingly, this influenced how the information content of going-concern reporting was perceived. The manager supplemented his comment by stressing that second-tier and non-Big 4 auditors could be classified as client-friendly, and therefore, to keep their clients they will postpone the issuance of a going-concern opinion as much as possible. Moreover, one respondent commented:

'It also depends on the courage of the auditor whether he/she is brave enough to issue a going-concern report.' (Investment Manager, 2011, January)

In the context of auditors' going-concern reporting, the general view of the respondents was that auditors make no attempt to increase the quality of information for investors. That is, there was evidence that the purpose of the auditor is to serve the board of directors:

'Auditors' may have many different kinds of opinion of the financial status of the company, but this information won't end

up in the audit report. The information belongs to the board of directors. I'm 100% sure that the auditor serves the shareholders. But someone may think that if the auditors have issued an unqualified report, then everything is guaranteed.' (Loan Manager, 2011, January).

6. Conclusions

The current paper reports the findings of the first qualitative study to analyse users' perceptions and uses of qualified audit reports, i.e. going-concern reports. From a theoretical point of view, the usefulness of the audit in such cases where the auditor decides to diverge from the standard report would seem obvious (Ittonen, 2009), but despite this, previous experimental and archival studies have produced fragmentary, inadequate and mixed results of information content of going-concern reports. Accordingly, the primary contribution of the current study is to investigate qualitative data to identify the factors that affect the use of qualified audit reports in financial statements of small and medium sized enterprises. In particular, inspired by the study of Dang-Duc *et al.* (2006; 2008), the current study is based on the decision usefulness theory of accounting and is conducted in the form of semi-structured interviews with bank industry officers in Finland in order to provide in-depth explanations of their perceptions and uses of auditor's reports with particular focus on qualified going-concern reporting.

A model of the patterns of bank officers' perceptions and uses of information emerged from the interviews conducted. Figure 1 shows this model.

FIGURE 1
Model of patterns of users' perceptions and use of audit reports



The study findings demonstrated that the use of alternative methods of communication between banks and companies were cited as the main reason for the limited interest in audit reports. Bank officers tended to use a great variety of sources of information, and direct contact with the company was widely used. It was also found that one of the main factors affecting the information utility was the low quality of information. The main issue was the timeliness of the information, and as a result, the respondents felt that it was too late for decision-making after the issuance

of qualified audit report. They also had a negative perception of auditors' attempts to improve the quality of information.

Consistent with the study of Guiral and Ruiz (2011), this study found that bank officers examined the qualified report as a first-order filter that served as an early warning system. That is, qualified reports reduced the willingness to grant a loan, and they decreased the respondents' assessment of a company's ability to service its debts. One interesting finding was that the reaction to the qualified report was more adverse when either a second tier auditor or non-Big 4 auditor had signed the report. This was due to the fact that second-tier and non Big 4 auditors were viewed as client-friendly, and to keep their clients, they will postpone the issuance of a qualified opinion as much as possible. In other contexts, the qualified audit reports were seen to be of limited use. Despite the fact that the findings of the current study indicate that bank officers considered themselves as main users of financial statements, there was also a general consensus among the respondents that auditors were mainly there to serve the board of directors. Thus, it was noted that accounting expertise and attitude towards auditors had an influence on the utility of information. Finally, it was also found that the general knowledge on auditor's going-concern reporting and on unqualified reports seemed to be fairly limited among the respondents.

The main conclusion of this study is that there is a 'less decision usefulness' perspective of audit reports. As a tool to shed new light on improving auditors' communication to financial statement users, the model of the current study clarifies the issue of how audit reports of small companies are used. In sum, the findings of the study suggest that the

audit report holds limited interest to users. The respondents rarely relied upon the audit report in their daily work, and the overall message conveyed by the audit report represented mainly a red or a green light (i.e. pass or fail). Accordingly, the findings give credence to the notion that sophisticated and informed groups such as finance industry officers are not completely aware what the audit report is intended to communicate. In the Finnish context, the findings encourage the auditing profession and standard setters to enhance the public's awareness of the nature, meaning and implications of the audit report. There is a need for the audit profession to be more proactive to meet the needs of all users of their reports rather than merely serving boards of directors. Moreover, consistent with the IAASB consultation paper and the PCAOB's concept release, further work to enhance the content and transparency of auditor's report is needed.

Finally, some perspectives for future research are suggested as well. Subject to the above, further experimental investigation is needed to examine whether users of financial information would behave differently if auditor's reporting were changed. It is an important matter since all possible changes are associated with risks and costs. In particular, the main question is: why take risks and costs if no real benefits are going to be derived in terms of user behaviour? Accordingly, consistent with the study of Gray *et al.* (2011), this paper suggests future research to determine if potential changes to the auditor's report would change users' behavior and if any resulting benefits outweigh the additional risks and costs. Moreover, since the study findings are based on 18 participants from one stakeholder group, the generalisation of the research findings is limited. The next logical step in future research would be to collect data

from a much larger, more representative sample from stakeholder groups to attain more quantifiable and generalised findings. The current study points out factors that may have an impact on how the information is used, and based on these findings, statistical analyses could be performed with larger samples and hypotheses tested to verify the findings of this study. Finally, the focus on SMEs' qualified audit reports suggests that more research should be conducted into the utility of larger companies' qualified reports in order to arrive at appropriate conclusions.

Notes

1. In May 2011 the IAASB released a consultation paper 'Enhancing the Value of Auditor Reporting: Exploring Options for Change', and moreover, in June 2011 the PCAOB published a concept release on 'Possible Revision to PCAOB Standards Related to Reports on Audited Financial Statements'.
2. There is evidence that the intensity of use of financial reports is likely to be different between small and large companies (Page, 1984; Song-Duc et al., 2006; 2008). The quality of accounting data of small business borrowers is inconsistent and sometimes of limited use to lenders (Danos et al., 1989), and moreover, the quality of information tends to increase in accordance with the size of the business.
3. According to European Commission report (2003), payment periods differ in different countries, and in Italy, for instance, it takes 87 days before payment is made, while Finnish firms collect their debts after between 14-34 days, which is closer to Sweden. In Sweden the typical contractual payment period is 34 days. (Niemi and Sundgren, 2011).
4. Now Finland has exempted the smallest companies from the audit requirement.
5. Finland allows the smallest firms to choose from four types of audit firms: first tier of international firms, first tier national firms, second tier local auditors and non-certified auditors.
6. Sormunen *et al.* (2012) studied auditor's going-concern reporting before bankruptcy in Scandinavian countries, and based on the findings of the study, Danish auditors added a paragraph related to the going-concern issues in 48% of the cases, whereas the corresponding percentages in Norway, Finland and Sweden were 26%, 20% and 18%, respectively.

References

- Abdel-Khalik, A.R., Graul, P.R. and J.D. Newton (1986), "Reporting Uncertainty and Assessment of Risk: Replication and Extension in a Canadian Setting", *Journal of Accounting Research*, Vol. 24, pp. 372-382.
- Anandarajan, A., Viger, C. and Curatola, A.P. (2002), "An Experimental Investigation of Alternative Going-Concern Reporting Formats: A Canadian Experience", *Canadian Accounting Perspectives*, Vol. 1 No. 2, pp. 141-162.
- Asare, S.K. and Wright, A. (2009), "Investor's, Auditors' and Lender's Understanding of the Message Conveyed by the Standard Audit Report", available at:
http://www.ifac.org/sites/default/files/downloads/Study_3_AICPA_IAASB_Paper.pdf (accessed 13 April 2012).
- Bamber, E.M. and Stratton, R.A. (1997), "The Information Content of the Uncertainty-modified Audit Report: Evidence from Bank Loan Officers", *Accounting Horizons*, Vol. 11, pp. 1-11.
- Bellovary, J.L., Giacomino, D.E. and Akers, M.D. (2006), "Weighting the Public Interest: Is the Going Concern Opinion still Relevant?", *The CPA Journal*, Vol. 76, pp. 16-21.
- Berg, J., Dickhaut, J. and McCae, K. (1995), "The Individual versus the Aggregate", In R. H. Ashton, and A.H. Ashton (Eds.), *Judgment and decision-making research in accounting and auditing* (pp. 102-134). New York: Cambridge.
- Berg, B.L. (2004), *Qualitative Research Methods for the Social Science*, Pearson Education, Boston, MA.

- Bessell, M., Anandarajan, A. and Umar, A. (2003), "Information Content, Audit Reports and Going-Concern: an Australian Study", *Accounting and Finance*, Vol. 43 No. 3, pp. 261-282.
- Casterella, J.R., Lewis, B.L. and Walker, P.L. (2000), "Modeling the Audit Opinions Issued to Bankrupt Companies: A Two-stage Empirical Analysis", *Decision Sciences*, Vol. 31 No. 2, pp. 507-530.
- Chua, W.F. (1986), "Radical Developments in Accounting Thought", *The Accounting Review*, Vol. 61 No. 4, pp. 601-632.
- Citron, D.B. and Taffler, R.J. (2001), "Ethical Behaviour in the U.K. Audit Profession: The Case of the Self-Fulfilling Prophecy Under Going-Concern Uncertainties", *Journal of Business Ethics*, Vol. 29 No. 4, pp. 353-363.
- Church, B., Davis, S. and McCracken, S. (2008), "The Auditor's Reporting Model: A Literature Overview and Research Synthesis", *Accounting Horizons*, Vol. 22 No. 1, pp. 69-90.
- Cresswell, J.W. (2003), *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*, Sage, London.
- Dang-Duc, S., Marriott, N. and Marriott, P. (2006), "Users' Perceptions and Uses of Financial Reports of Small and Medium Companies (SMCS) in Transitional Economies. Qualitative Evidence from Vietnam", *Qualitative Research in Accounting and Management*, Vol. 3 No. 3, pp. 218-235.
- Dang-Duc, S., Marriot, N. and Marriot, P. (2008), "The Banks' Uses of Smaller Companies' Financial Information in the Emerging Economy of Vietnam: A User's Oriented Model", *Research in Accounting in Emerging Economies*, Vol. 8, pp. 519-548.

- Danos, P., Holt, D.L. and Imhoff, E.A. (1989), "The Use of Accounting Information in Bank Lending Decisions", *Accounting, Organisation and Society*, Vol. 14 No. 3, pp. 235-246.
- Dicken, J. (1987). *Use of Qualitative Research as Part of a Consumer Research Programme*, Wiley, Chichester.
- Dye, R.A. (1993), "Auditing Standards, Legal Liability and Auditor *Wealth*", *Journal of Political Economy*, Vol. 101 No. 5, pp. 3-38.
- Edwards, J.R. (1989). *A History of Financial Accounting*, Routledge, London.
- Eisenhardt, K.M. (1989), "Building Theories from Case Study Research", *The Academy of Management Review*, Vol. 14 No. 4, pp. 532.
- Elias, R.Z. and Johnston, J.G. (2001), "Is there incremental information content in the going concern explanatory paragraph?", *Advances in Accounting*, Vol. 18, pp. 105-117.
- Estes, R. and Reimer, M. (1977), "A Study of the Effect of Qualified Auditor's Opinions on Officers' Lending Decisions", *Accounting and Business Research*, pp. 250-259.
- Firth, M. (1979), "Qualified Audit Reports and Bank Lending Decisions. Journal of Bank Research", Vol. 9, pp. 237-241.
- Gray, R., Owen, D. and Adams, C. (1996), *Accounting and Accountability*, Prentice-Hall, London.
- Gray, G.L., Turner, J.L., Coram, P.J. and Mock, T.J. (2011), "Perceptions and Misperceptions Regarding the Unqualified Auditor's Report by Financial Statement Preparers, Users, and Auditors", *Accounting Horizons*, Vol. 24 No. 4, pp. 659-684.
- Guiral, A. and Ruiz, E. (2011), "Audit Report Information Content and Auditor Economic Independence in Credit Decisions: An

- Experimental Investigation”, *Working paper*. Electronic copy available at: <http://ssrn.com/abstract=1600643> (accessed 13 April 2012)
- Guiral-Contreras, A., Gonzalo-Angulo, J.A. and Rodgers, W. (2007), “Information Content and Recency Effect of the Audit Report in Loan Rating Decisions”, *Accounting and Finance*, Vol. 47 No. 2, pp. 285-304.
- Gul, F.A. (1987), “The Effects of Uncertainty Reporting on Lending Officers’ Perceptions of Risk and Additional Information Required”, *A Journal of Accounting, Finance and Business Studies*, Vol. 23 No. 2, pp.172-181.
- Gul, F.A. (1990), “Qualified Audit Reports, Field Dependence Cognitive Style, and Their Effects on Decision Making”, *Accounting and Finance*, Vol. 30 No. 2, pp. 15-27.
- Horton, J., Macve, R. and Struyven, G. (2004), “Qualitative Research: Experiences in Using Semi-Structured Interviews”, In Humphrey, C. and B. Lee (Eds), *The Real-life Guide to Accounting Research – A Behind the Scenes Views of Using Qualitative Research Methods*, Elsevier, London, pp. 359-370.
- Houghton, K.A. (1983), “Audit Reports: Their Impact on the Loan Decisions Process and Outcome: An Experiment”, *Accounting and Business Research*, Vol. 14 No. 53, pp. 15-20.
- Ittonen, K. (2009), “Audit Reports and Stock Markets”, *Acta Wasaensia, Business Administration*, No. 200, *Accounting and Finance*, Vaasa, Doctoral Dissertation.
- Knechel, W.R., Niemi, L. and Sundgren, S. (2008), “Determinants of Auditor Choice: Evidence from a Small Client Market”, *International Journal of Auditing*, Vol. 12 No. 1, pp. 65-88.

- LaSalle, R.E. and Anandarajan, A. (1997), "Bank Loan Officers' Reactions to Audit Reports Issued to Entities with Litigation and Going Concern Uncertainties", *Accounting Horizons*, Vol. 11 No. 2, pp. 33-40.
- Libby, R. (1979), "The Impact of Uncertainty Reporting on the Loan Decision", *Journal of Accounting Research*, Vol. 17, pp.35-57.
- Libby, R., Bloomfield, R. and Nelson, M.W. (2002), "Experimental Research in Financial Accounting", *Accounting, Organizations and Society*, Vol. 27, pp. 775-810.
- Lin, Z.J., Tang, Q. and Xiao, J. (2003), "An Experimental Study of Users' Responses to Qualified Audit Reports in China", *Journal of International Accounting, Auditing and Taxation*, Vol. 12 No. 1, pp. 1-22.
- Maines, L.A. (1995), Judgment and decision-making research in financial accounting: a review and analysis. In R.H. Ashton, and A.H. Asthon (Eds.), *Judgments and decision-making research in accounting and auditing* (pp.76-101). New York: Cambridge.
- Marriott, N. and Marriott, P. (1999), *The Provision of Financial Information to Smaller Companies*, Institute of Chartered Accountants in England & Wales.
- McEnroe, J. and Martens, S. (2001), "Auditors' and Investors' Perceptions of the Expectation Gap", *Accounting Horizons*, Vol. 15 No. 4, pp. 345-358.
- Menon, K. and Williams, D.D. (2010), "Investor Reaction to Going Concern Audit Reports", *The Accounting Review*, Vol. 85 No. 6, pp. 2075-2105.
- Miles, M.B. and Huberman, A.M. (1994), *Qualitative Data Analysis*. Sage, Beverly Hills, CA.

- Miller, J. and Glassner, B. (1997), "The 'inside' and the 'outside' Finding in Realities in Interviews", in Denzin, N.K. and Lincoln, Y.S. (Eds), *Handbook of Qualitative Research*, Sage, Thousand Oaks, CA, pp. 99-100.
- Mock, T.J., Turner, J.L., Gray, G.L. and Coram, P.J. (2009), "The Unqualified Auditor's Report: A Study of User Perceptions, Effects on User Decisions and Decision Processes, and Directions for Further Research. Electronic copy available at: http://www.ifac.org/sites/default/files/downloads/Study_1_ASB_Summary_Report.pdf (accessed 13 April 2012).
- Niemi, L. (2005), "Audit Effort and Fees under Concentrated Client Ownership: Evidence from Four International Audit Firms", *The International Journal of Accounting*, Vol. 40 No. 4, pp. 303-323.
- Niemi, L. and Sundgren, S. (2011). Are Modified Audit Opinions Related to the Availability of Credit? Evidence from Finnish SMEs. *Working paper*.
- O'Reilly, D.M. (2010), "Do Investors Perceive the Going-Concern Opinion as Useful for Pricing Stocks?", *Managerial Auditing Journal*, Vol. 25 No. 1, pp.4-16.
- Page, M.J. (1984), "Corporate Financial Reporting and the Small Independent Company", *Accounting & Business Research*, Vol. 12 No. 47, pp. 271-282.
- Patton, M.Q. (2002), *Qualitative research and evaluation methods* (Sage Publications, Thousand Oaks, Calif).
- Rodgers, W. and Johnson, L. (1988), "Integrating Credit Models Using Accounting Information with Loan Officers' Decision Processes", *Accounting and Finance*, Vol. 28 No. 2, pp. 1-22.

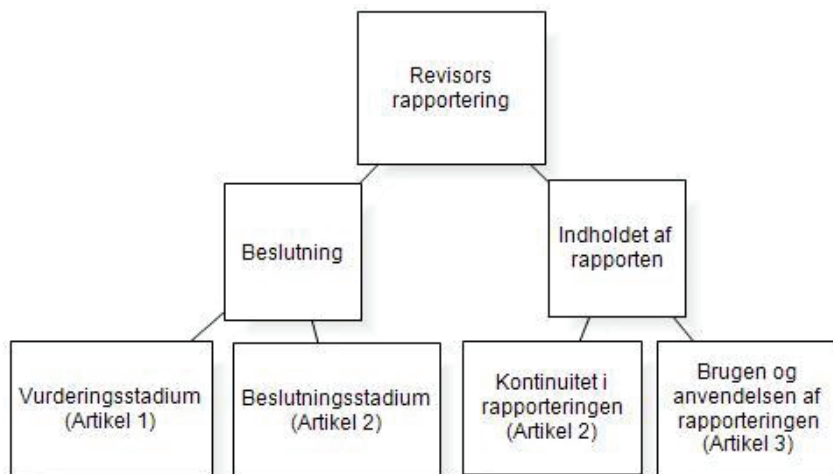
- Sharma, D.S. and Iselin, E.R. (2003), "The Decision-Usefulness of Reported Cash Flow and Accrual Information in a Behavioral Field Experiment", *Accounting and Business Research*, Vol. 33, No. 2, pp. 123-135.
- Sormunen, N., Jeppesen, K.K., Sundgren, S. and Svanström, T. (2012), "Harmonisation of audit practice: Empirical evidence from going-concern reporting in Scandinavia", *Working paper*.
- Staubus, G.J. (2000), *The Decision-Usefulness Theory of Accounting: A Limited History (New Works in Accounting History)*, Garland Publishing, New York, NY.
- Strauss, A.L. (1987), *Qualitative Analysis for Social Scientists*, Cambridge University Press, New York, NY.

SAMMENDRAG

Denne afhandling beskæftiger sig med forskellige aspekter af revisors påtegning i forhold til going concern (dvs. fortsat drift), og bidrager derfor primært til den del af revisionsforskningen. Afhandlingen omfatter tre empiriske artikler, som dels undersøger revisors going concern evaluering, og dels øger forståelsen af revisors going concern rapportering i forhold til harmonisering og nytten af en revisionspåtegning med forbehold. Overordnet set bidrager denne afhandling med nye resultater, der har betydelige videnskabelig og empirisk værdi for myndigheder, standardsættere, revisorprofessionen samt i akademiske kredse.

Figur 1 viser strukturen i afhandlingen, samt hvilken rolle de individuelle artikler har i forhold til det overordnede formål med afhandlingen. To overordnede temaer er undersøgt: (1) Revisors beslutning i forhold til going concern rapporteringen, og (2) indholdet af revisionspåtegningen.

FIGUR 1
De individuelle artiklers rolle



Hver artikel i den aktuelle afhandlingen udgør uafhængige bidrag til den eksisterende litteratur, og kan derfor læses separat.

Artikel # 1

Late Financial Distress Process Stages and Financial Ratios: Evidence for Auditor's Going Concern Evaluation

Den første artikel bidrager til vores forståelse og viden om nært forestående finansielle problemer, når nøgletal inddrages i slutningen af perioden, hvor virksomheder oplever finansielle vanskeligheder. Vores bidrag til den tidligere litteratur er at generere oplysninger om: (1) Adfærd

og nytten af de enkelte nøgletal til kortsigtede forudsigelser om finansielle vanskeligheder, hvor der tages højde for effekten af hvert niveau i en finansiell krise, og (2) virkningerne ved at indarbejde hvert niveau i en finansiell krise i en forudsigelsesmodel.

Undersøgelsens resultater indikerer, at revisors opgave med at vurdere, hvor store virksomhedens finansielle vanskeligheder har været i det indeværende år ud, kan forbedres ved at være opmærksom på niveauerne i en finansiell krise. Dvs. ændringer i de økonomiske nøgletal giver en god indikation på virksomhedens finansielle tilstand. Hvis virksomhedens finansielle årsregnskab viser, at udover faldende rentabiliteten (tidligt i forløbet), øget finansiell gearing (sent i forløbet) og dårlig likviditet (sidst i forløbet), så bør selskabet anses for at være finansielt usundt. Imidlertid er det ikke sikkert, at revisor bør udstede en going concern udtalelse, selvom virksomheden ikke er i umiddelbar fare for at gå konkurs i løbet af det næste regnskabsår. Men for at undgå den øgede risiko for at blive holdt økonomisk ansvarlig af virksomhedens interessenter (stakeholders), hvis revisor ikke at have udstedt en going-concern meddelelse rettidigt (eller omvendt, hvis revisor har udstedt en going-concern meddelelse uden begrundelse), så bør revisor som en del af beslutningsprocessen undersøge likviditetsnøgletallene, når virksomheden virker finansiell usund. Beslutningen om at udstede en going concern påtegning vil herefter være baseret på revisors evaluering og vurdering af, om virksomhedens likvide aktiver er tilstrækkelige i forhold til det næste regnskabsår.

Article #2

Harmonization of Audit Practice: Empirical Evidence from Going Concern Reporting in Scandinavia

Formålet med den anden artikel er at undersøge, hvor ensartet revisors adfærd er, når de udsteder going concern påtegninger i Skandinavien (dvs. i Danmark, Finland, Norge og Sverige). I artiklen sætter vi særligt fokus på konkursramte virksomheder, hvor vi empirisk undersøger, om der er forskel på going concern påtegningen i de skandinaviske lande. Derudover undersøger vi, hvorvidt going concern påtegningen på tværs af de skandinaviske lande er mere ensartet blandt de store revisorer (the "Big 4") end blandt de mindre revisorer.

Undersøgelsen viser, at der på trods af (stort set) identiske revisionsstandarder på tværs af de skandinaviske lande er forskel på revisorernes adfærd. Denne forskel er dog mindre markant blandt de store revisorer (the "Big-4") sammenlignet med de mindre revisorer på tværs af de skandinaviske lande, hvilket betyder, at store internationale revisionsfirmaer har været en væsentlig faktor i ensretningen af virksomhedernes revisionspåtegning. Vi argumenterer for, at mulige forklaringer på variationen i revisionspraksis primært skyldes forskelle i kulturen vedrørende going concern rapportering, der sandsynligvis er forårsaget af tidsmæssige forskydninger i implementeringen af revisionsstandarder nationalt. En yderligere forklaring på variationen i going-concern praksis kan skyldes forskelle i revisorernes uddannelse, hvilket indikerer, at lande med den længste uddannelse også har den højeste andel af going concern påtegninger med forbehold. De observerede forskelle vil (muligvis) i sidste ende mindske udviklingen af

internationale aktiviteter, og brugere af årsregnskabet skal passe på med at fortolke en going concern påtegning på samme måde i alle lande. Det kan medføre, at brugerne får en forkert opfattelse af usikkerheden, der er forbundet med forudsætningen for going concern påtegningen, når de evaluerer virksomhedens risiko og fremtidsudsigter. Endelig viser undersøgelsen, at der er et øget behov at forbedre praksis omkring going concern rapportering.

Article #3

Bank Officers' Perceptions and Uses of Qualified Audit Reports

Den tredje artikel udvikler en bruger orienteret model, som ser på bankernes anvendelse og opfattelse af en revisionspåtegning med forbehold i små og mellemstore virksomheder. Det væsentligste bidrag er, at vi undersøger kvalitative data for at studere nytten af revisionspåtegninger med forbehold. Formålet er at gå ud over det indledende spørgsmål om, hvorvidt brugerne betragter de revisionspåtegninger, hvor der er forbehold for going concern, som nyttige. Gennem interviews med ledende medarbejdere i banksektoren forsøger vi at identificere og forstå det mønster, som disse brugere tillægger revisionspåtegninger med forbehold.

Vores hovedkonklusion er, at revisionspåtegningen har begrænset interesse for brugerne i banksektoren. Til trods for at banker bliver anset for at være en af de vigtigste brugere af finansielle rapporter, så anvender medarbejderne i bankerne sjældent revisionspåtegningen i deres daglige arbejde. Overordnet fungerer revisionspåtegningen blot som et rødt/grønt

lys (dvs. et signal med "bestået" eller "ikke bestået"), og bankens medarbejdere anvender i højere grad revisionsrapporter med forbehold som et første ordens filter, der blot udgør en simpel indikator for virksomhedens sundhedstilstand. Med andre ord tillægges en revisionspåtegning med forbehold begrænset nytte. Den vigtigste faktor, der påvirker nytten af informationen i en revisionspåtegning med forbehold, er anvendelsen af en bred vifte af andre informationer. Derudover dokumenterer vi, at lav informationskvalitet, dårlig regnskabsmæssig forståelse samt en slap holdning til revision er vigtige faktorer, der påvirker, hvordan finansielle informationer bliver brugt. Samlet giver resultaterne belæg for, at sofistikerede og informerede grupper såsom medarbejdere banksektoren ikke er helt klar over, hvad formålet med revisionspåtegningen er. Særligt i Finland viser resultaterne, at revisorprofessionen og standardsættere bør øge offentlighedens bevidsthed om indholdet, betydningen og virkningen af revisionspåtegningen. Der er et stort behov for, at revisorprofessionen er mere proaktiv for at imødekomme behovene hos alle brugere af deres rapporter.

TITLER I PH.D.SERIEN:

– *a Field Study of the Rise and Fall of a Bottom-Up Process*

2004

1. Martin Grieger
Internet-based Electronic Marketplaces and Supply Chain Management
2. Thomas Basbøll
*LIKENESS
A Philosophical Investigation*
3. Morten Knudsen
*Beslutningens vaklen
En systemteoretisk analyse af moderniseringen af et amtskommunalt sundhedsvæsen 1980-2000*
4. Lars Bo Jeppesen
*Organizing Consumer Innovation
A product development strategy that is based on online communities and allows some firms to benefit from a distributed process of innovation by consumers*
5. Barbara Dragsted
*SEGMENTATION IN TRANSLATION AND TRANSLATION MEMORY SYSTEMS
An empirical investigation of cognitive segmentation and effects of integrating a TM system into the translation process*
6. Jeanet Hardis
*Sociale partnerskaber
Et socialkonstruktivistisk casestudie af partnerskabsaktørers virkelighedsopfattelse mellem identitet og legitimitet*
7. Henriette Hallberg Thygesen
System Dynamics in Action
8. Carsten Mejer Plath
Strategisk Økonomistyring
9. Annemette Kjærgaard
Knowledge Management as Internal Corporate Venturing
10. Knut Arne Hovdal
*De professionelle i endring
Norsk ph.d., ej til salg gennem Samfundslitteratur*
11. Søren Jeppesen
*Environmental Practices and Greening Strategies in Small Manufacturing Enterprises in South Africa
– A Critical Realist Approach*
12. Lars Frode Frederiksen
*Industriel forskningsledelse
– på sporet af mønstre og samarbejde i danske forskningsintensive virksomheder*
13. Martin Jes Iversen
*The Governance of GN Great Nordic
– in an age of strategic and structural transitions 1939-1988*
14. Lars Pynt Andersen
*The Rhetorical Strategies of Danish TV Advertising
A study of the first fifteen years with special emphasis on genre and irony*
15. Jakob Rasmussen
Business Perspectives on E-learning
16. Sof Thrane
*The Social and Economic Dynamics of Networks
– a Weberian Analysis of Three Formalised Horizontal Networks*
17. Lene Nielsen
Engaging Personas and Narrative Scenarios – a study on how a user-centered approach influenced the perception of the design process in the e-business group at AstraZeneca
18. S.J Valstad
*Organisationsidentitet
Norsk ph.d., ej til salg gennem Samfundslitteratur*

19. Thomas Lyse Hansen
Six Essays on Pricing and Weather risk in Energy Markets
 20. Sabine Madsen
Emerging Methods – An Interpretive Study of ISD Methods in Practice
 21. Evis Sinani
The Impact of Foreign Direct Investment on Efficiency, Productivity Growth and Trade: An Empirical Investigation
 22. Bent Meier Sørensen
Making Events Work Or, How to Multiply Your Crisis
 23. Pernille Schnoor
*Brand Ethos
Om troværdige brand- og virksomhedsidentiteter i et retorisk og diskursteoretisk perspektiv*
 24. Sidsel Fabech
*Von welchem Österreich ist hier die Rede?
Diskursive forhandlinger og magtkampe mellem rivaliserende nationale identitetskonstruktioner i østrigske pressediskurser*
 25. Klavs Odgaard Christensen
*Sprogpolitik og identitetsdannelse i flersprogede forbundsstater
Et komparativt studie af Schweiz og Canada*
 26. Dana B. Minbaeva
Human Resource Practices and Knowledge Transfer in Multinational Corporations
 27. Holger Højlund
*Markedets politiske fornuft
Et studie af velfærdens organisering i perioden 1990-2003*
 28. Christine Mølgaard Frandsen
*A.s erfaring
Om mellemværendets praktik i en transformation af mennesket og subjektiviteten*
 29. Sine Nørholm Just
The Constitution of Meaning – A Meaningful Constitution? Legitimacy, identity, and public opinion in the debate on the future of Europe
- 2005**
1. Claus J. Varnes
Managing product innovation through rules – The role of formal and structured methods in product development
 2. Helle Hedegaard Hein
Mellem konflikt og konsensus – Dialogudvikling på hospitalsklinikker
 3. Axel Rosenø
Customer Value Driven Product Innovation – A Study of Market Learning in New Product Development
 4. Søren Buhl Pedersen
*Making space
An outline of place branding*
 5. Camilla Funck Ellehave
*Differences that Matter
An analysis of practices of gender and organizing in contemporary work-places*
 6. Rigmor Madeleine Lond
Styring af kommunale forvaltninger
 7. Mette Aagaard Andreassen
Supply Chain versus Supply Chain Benchmarking as a Means to Managing Supply Chains
 8. Caroline Aggestam-Pontoppidan
*From an idea to a standard
The UN and the global governance of accountants' competence*
 9. Norsk ph.d.
 10. Vivienne Heng Ker-ni
An Experimental Field Study on the

- Effectiveness of Grocer Media Advertising*
Measuring Ad Recall and Recognition, Purchase Intentions and Short-Term Sales
11. Allan Mortensen
Essays on the Pricing of Corporate Bonds and Credit Derivatives
12. Remo Stefano Chiari
Figure che fanno conoscere
Itinerario sull'idea del valore cognitivo e espressivo della metafora e di altri tropi da Aristotele e da Vico fino al cognitivismo contemporaneo
13. Anders McIlquham-Schmidt
Strategic Planning and Corporate Performance
An integrative research review and a meta-analysis of the strategic planning and corporate performance literature from 1956 to 2003
14. Jens Geersbro
The TDF – PMI Case
Making Sense of the Dynamics of Business Relationships and Networks
15. Mette Andersen
Corporate Social Responsibility in Global Supply Chains
Understanding the uniqueness of firm behaviour
16. Eva Boxenbaum
Institutional Genesis: Micro – Dynamic Foundations of Institutional Change
17. Peter Lund-Thomsen
Capacity Development, Environmental Justice NGOs, and Governance: The Case of South Africa
18. Signe Jarlov
Konstruktioner af offentlig ledelse
19. Lars Stæhr Jensen
Vocabulary Knowledge and Listening Comprehension in English as a Foreign Language
- An empirical study employing data elicited from Danish EFL learners*
20. Christian Nielsen
Essays on Business Reporting
Production and consumption of strategic information in the market for information
21. Marianne Thejls Fischer
Egos and Ethics of Management Consultants
22. Annie Bekke Kjær
Performance management i Process-innovation
– belyst i et social-konstruktivistisk perspektiv
23. Suzanne Dee Pedersen
GENTAGELSENS METAMORFOSE
Om organisering af den kreative gørem i den kunstneriske arbejdspraksis
24. Benedikte Dorte Rosenbrink
Revenue Management
Økonomiske, konkurrencemæssige & organisatoriske konsekvenser
25. Thomas Riise Johansen
Written Accounts and Verbal Accounts
The Danish Case of Accounting and Accountability to Employees
26. Ann Fogelgren-Pedersen
The Mobile Internet: Pioneering Users' Adoption Decisions
27. Birgitte Rasmussen
Ledelse i fællesskab – de tillidsvalgte fornyende rolle
28. Gitte Thit Nielsen
Remerger
– skabende ledelseskrafter i fusion og opkøb
29. Carmine Gioia
A MICROECONOMETRIC ANALYSIS OF MERGERS AND ACQUISITIONS

30. Ole Hinz
Den effektive forandringsleder: pilot, pædagog eller politiker?
Et studie i arbejdslederens meningstilskrivninger i forbindelse med vellykket gennemførelse af ledelsesinitierede forandringsprojekter
31. Kjell-Åge Gotvassli
Et praksisbasert perspektiv på dynamiske læringsnettverk i toppidretten
Norsk ph.d., ej til salg gennem Samfundslitteratur
32. Henriette Langstrup Nielsen
Linking Healthcare
An inquiry into the changing performances of web-based technology for asthma monitoring
33. Karin Tweddell Levinsen
Virtuel Uddannelsespraksis
Master i IKT og Læring – et casestudie i hvordan proaktiv proceshåndtering kan forbedre praksis i virtuelle læringsmiljøer
34. Anika Liversage
Finding a Path
Labour Market Life Stories of Immigrant Professionals
35. Kasper Elmquist Jørgensen
Studier i samspillet mellem stat og erhvervsliv i Danmark under 1. verdenskrig
36. Finn Janning
A DIFFERENT STORY
Seduction, Conquest and Discovery
37. Patricia Ann Plackett
Strategic Management of the Radical Innovation Process
Leveraging Social Capital for Market Uncertainty Management
2. Niels Rom-Poulsen
Essays in Computational Finance
3. Tina Brandt Husman
Organisational Capabilities, Competitive Advantage & Project-Based Organisations
The Case of Advertising and Creative Good Production
4. Mette Rosenkrands Johansen
Practice at the top
– how top managers mobilise and use non-financial performance measures
5. Eva Parum
Corporate governance som strategisk kommunikations- og ledelsesværktøj
6. Susan Aagaard Petersen
Culture's Influence on Performance Management: The Case of a Danish Company in China
7. Thomas Nicolai Pedersen
The Discursive Constitution of Organizational Governance – Between unity and differentiation
The Case of the governance of environmental risks by World Bank environmental staff
8. Cynthia Selin
Volatile Visions: Transactons in Anticipatory Knowledge
9. Jesper Banghøj
Financial Accounting Information and Compensation in Danish Companies
10. Mikkel Lucas Overby
Strategic Alliances in Emerging High-Tech Markets: What's the Difference and does it Matter?
11. Tine Aage
External Information Acquisition of Industrial Districts and the Impact of Different Knowledge Creation Dimensions

2006

1. Christian Vintergaard
Early Phases of Corporate Venturing

- A case study of the Fashion and Design Branch of the Industrial District of Montebelluna, NE Italy*
12. Mikkel Flyverbom
*Making the Global Information Society Governable
On the Governmentality of Multi-Stakeholder Networks*
 13. Anette Grønning
*Personen bag
Tilstedevær i e-mail som interaktionsform mellem kunde og medarbejder i dansk forsikringskontekst*
 14. Jørn Helder
*One Company – One Language?
The NN-case*
 15. Lars Bjerregaard Mikkelsen
*Differing perceptions of customer value
Development and application of a tool for mapping perceptions of customer value at both ends of customer-supplier dyads in industrial markets*
 16. Lise Granerud
*Exploring Learning
Technological learning within small manufacturers in South Africa*
 17. Esben Rahbek Pedersen
*Between Hopes and Realities:
Reflections on the Promises and Practices of Corporate Social Responsibility (CSR)*
 18. Ramona Samson
*The Cultural Integration Model and European Transformation.
The Case of Romania*
- 2007**
1. Jakob Vestergaard
*Discipline in The Global Economy
Panopticism and the Post-Washington Consensus*
 2. Heidi Lund Hansen
*Spaces for learning and working
A qualitative study of change of work, management, vehicles of power and social practices in open offices*
 3. Sudhanshu Rai
*Exploring the internal dynamics of software development teams during user analysis
A tension enabled Institutionalization Model; "Where process becomes the objective"*
 4. Norsk ph.d.
Ej til salg gennem Samfundslitteratur
 5. Serden Ozcan
*EXPLORING HETEROGENEITY IN ORGANIZATIONAL ACTIONS AND OUTCOMES
A Behavioural Perspective*
 6. Kim Sundtoft Hald
*Inter-organizational Performance Measurement and Management in Action
– An Ethnography on the Construction of Management, Identity and Relationships*
 7. Tobias Lindeberg
*Evaluative Technologies
Quality and the Multiplicity of Performance*
 8. Merete Wedell-Wedellsborg
*Den globale soldat
Identitetsdannelse og identitetsledelse i multinationale militære organisationer*
 9. Lars Frederiksen
*Open Innovation Business Models
Innovation in firm-hosted online user communities and inter-firm project ventures in the music industry
– A collection of essays*
 10. Jonas Gabrielsen
Retorisk toposlære – fra statisk 'sted' til persuasiv aktivitet

11. Christian Moldt-Jørgensen
Fra meningsløs til meningsfuld evaluering.
Anvendelsen af studentertilfredsheds-målinger på de korte og mellemlange videregående uddannelser set fra et psykodynamisk systemperspektiv
12. Ping Gao
Extending the application of actor-network theory
Cases of innovation in the telecommunications industry
13. Peter Mejlby
Frihed og fængsel, en del af den samme drøm?
Et phronetisk baseret casestudie af frigørelsens og kontrollens sam-eksistens i værdibaseret ledelse!
14. Kristina Birch
Statistical Modelling in Marketing
15. Signe Poulsen
Sense and sensibility:
The language of emotional appeals in insurance marketing
16. Anders Bjerre Trolle
Essays on derivatives pricing and dynamic asset allocation
17. Peter Feldhütter
Empirical Studies of Bond and Credit Markets
18. Jens Henrik Eggert Christensen
Default and Recovery Risk Modeling and Estimation
19. Maria Theresa Larsen
Academic Enterprise: A New Mission for Universities or a Contradiction in Terms?
Four papers on the long-term implications of increasing industry involvement and commercialization in academia
20. Morten Wellendorf
Postimplementering af teknologi i den offentlige forvaltning
Analyser af en organisations kontinuerlige arbejde med informations-teknologi
21. Ekaterina Mhaanna
Concept Relations for Terminological Process Analysis
22. Stefan Ring Thorbjørnsen
Forsvaret i forandring
Et studie i officerers kapabiliteter under påvirkning af omverdenens forandringspres mod øget styring og læring
23. Christa Breum Amhøj
Det selvskabte medlemskab om managementsstaten, dens styringsteknologier og indbyggere
24. Karoline Bromose
Between Technological Turbulence and Operational Stability
– An empirical case study of corporate venturing in TDC
25. Susanne Justesen
Navigating the Paradoxes of Diversity in Innovation Practice
– A Longitudinal study of six very different innovation processes – in practice
26. Luise Noring Henler
Conceptualising successful supply chain partnerships
– Viewing supply chain partnerships from an organisational culture perspective
27. Mark Mau
Kampen om telefonen
Det danske telefonvæsen under den tyske besættelse 1940-45
28. Jakob Halskov
The semiautomatic expansion of existing terminological ontologies using knowledge patterns discovered

- on the WWW – an implementation and evaluation*
29. Gergana Koleva
European Policy Instruments Beyond Networks and Structure: The Innovative Medicines Initiative
 30. Christian Geisler Asmussen
Global Strategy and International Diversity: A Double-Edged Sword?
 31. Christina Holm-Petersen
*Stolthed og formidling
Kultur- og identitetsarbejde ved skabelsen af en ny sengeafdeling gennem fusion*
 32. Hans Peter Olsen
*Hybrid Governance of Standardized States
Causes and Contours of the Global Regulation of Government Auditing*
 33. Lars Bøge Sørensen
Risk Management in the Supply Chain
 34. Peter Aagaard
*Det unikkes dynamikker
De institutionelle mulighedsbetingelser bag den individuelle udforskning i professionelt og frivilligt arbejde*
 35. Yun Mi Antorini
*Brand Community Innovation
An Intrinsic Case Study of the Adult Fans of LEGO Community*
 36. Joachim Lynggaard Boll
*Labor Related Corporate Social Performance in Denmark
Organizational and Institutional Perspectives*
 3. Marius Brostrøm Kousgaard
*Tid til kvalitetsmåling?
– Studier af indrullingsprocesser i forbindelse med introduktionen af kliniske kvalitetsdatabaser i speciallægepraksissektoren*
 4. Irene Skovgaard Smith
*Management Consulting in Action
Value creation and ambiguity in client-consultant relations*
 5. Anders Rom
*Management accounting and integrated information systems
How to exploit the potential for management accounting of information technology*
 6. Marina Candi
Aesthetic Design as an Element of Service Innovation in New Technology-based Firms
 7. Morten Schnack
*Teknologi og tværfaglighed
– en analyse af diskussionen omkring indførelse af EPJ på en hospitalsafdeling*
 8. Helene Balslev Clausen
Juntos pero no revueltos – un estudio sobre emigrantes norteamericanos en un pueblo mexicano
 9. Lise Justesen
*Kunsten at skrive revisionsrapporter.
En beretning om forvaltningsrevisionsens beretninger*
 10. Michael E. Hansen
The politics of corporate responsibility: CSR and the governance of child labor and core labor rights in the 1990s

2008

1. Frederik Christian Vinten
Essays on Private Equity
2. Jesper Clement
Visual Influence of Packaging Design on In-Store Buying Decisions
11. Anne Roepstorff
Holdning for handling – en etnologisk undersøgelse af Virksomheders Sociale Ansvar/CSR

12. Claus Bajlum
Essays on Credit Risk and Credit Derivatives
 13. Anders Bojesen
The Performative Power of Competence – An Inquiry into Subjectivity and Social Technologies at Work
 14. Satu Reijonen
*Green and Fragile
A Study on Markets and the Natural Environment*
 15. Ilduara Busta
*Corporate Governance in Banking
A European Study*
 16. Kristian Anders Hvass
*A Boolean Analysis Predicting Industry Change: Innovation, Imitation & Business Models
The Winning Hybrid: A case study of isomorphism in the airline industry*
 17. Trine Paludan
*De uvidende og de udviklingsparate
Identitet som mulighed og restriktion
blandt fabriksarbejdere på det aftayloriserede fabriksgulv*
 18. Kristian Jakobsen
Foreign market entry in transition economies: Entry timing and mode choice
 19. Jakob Elming
Syntactic reordering in statistical machine translation
 20. Lars Brømsøe Termansen
*Regional Computable General Equilibrium Models for Denmark
Three papers laying the foundation for regional CGE models with agglomeration characteristics*
 21. Mia Reinholdt
The Motivational Foundations of Knowledge Sharing
 22. Frederikke Krogh-Meibom
*The Co-Evolution of Institutions and Technology
– A Neo-Institutional Understanding of Change Processes within the Business Press – the Case Study of Financial Times*
 23. Peter D. Ørberg Jensen
OFFSHORING OF ADVANCED AND HIGH-VALUE TECHNICAL SERVICES: ANTECEDENTS, PROCESS DYNAMICS AND FIRMLEVEL IMPACTS
 24. Pham Thi Song Hanh
Functional Upgrading, Relational Capability and Export Performance of Vietnamese Wood Furniture Producers
 25. Mads Vangkilde
*Why wait?
An Exploration of first-mover advantages among Danish e-grocers through a resource perspective*
 26. Hubert Buch-Hansen
*Rethinking the History of European Level Merger Control
A Critical Political Economy Perspective*
- 2009**
1. Vivian Lindhardsen
From Independent Ratings to Communal Ratings: A Study of CWA Raters' Decision-Making Behaviours
 2. Guðrið Weihe
Public-Private Partnerships: Meaning and Practice
 3. Chris Nøkkentved
*Enabling Supply Networks with Collaborative Information Infrastructures
An Empirical Investigation of Business Model Innovation in Supplier Relationship Management*
 4. Sara Louise Muhr
Wound, Interrupted – On the Vulnerability of Diversity Management

5. Christine Sestoft
*Forbrugeradfærd i et Stats- og Livs-
formsteoretisk perspektiv*
6. Michael Pedersen
*Tune in, Breakdown, and Reboot: On
the production of the stress-fit self-
managing employee*
7. Salla Lutz
*Position and Reposition in Networks
– Exemplified by the Transformation of
the Danish Pine Furniture Manu-
facturers*
8. Jens Forssbæck
*Essays on market discipline in
commercial and central banking*
9. Tine Murphy
*Sense from Silence – A Basis for Orga-
nised Action
How do Sensemaking Processes with
Minimal Sharing Relate to the Repro-
duction of Organised Action?*
10. Sara Malou Strandvad
*Inspirations for a new sociology of art:
A sociomaterial study of development
processes in the Danish film industry*
11. Nicolaas Mouton
*On the evolution of social scientific
metaphors:
A cognitive-historical enquiry into the
divergent trajectories of the idea that
collective entities – states and societies,
cities and corporations – are biological
organisms.*
12. Lars Andreas Knutsen
*Mobile Data Services:
Shaping of user engagements*
13. Nikolaos Theodoros Korfiatis
*Information Exchange and Behavior
A Multi-method Inquiry on Online
Communities*
14. Jens Albæk
*Forestillinger om kvalitet og tværfaglig-
hed på sygehuse
– skabelse af forestillinger i læge- og
plejegrupperne angående relevans af
nye idéer om kvalitetsudvikling gen-
nem tolkningsprocesser*
15. Maja Lotz
*The Business of Co-Creation – and the
Co-Creation of Business*
16. Gitte P. Jakobsen
*Narrative Construction of Leader Iden-
tity in a Leader Development Program
Context*
17. Dorte Hermansen
*“Living the brand” som en brandorien-
teret dialogisk praksis:
Om udvikling af medarbejdernes
brandorienterede dømmekraft*
18. Aseem Kinra
*Supply Chain (logistics) Environmental
Complexity*
19. Michael Nørager
*How to manage SMEs through the
transformation from non innovative to
innovative?*
20. Kristin Wallevik
*Corporate Governance in Family Firms
The Norwegian Maritime Sector*
21. Bo Hansen Hansen
*Beyond the Process
Enriching Software Process Improve-
ment with Knowledge Management*
22. Annemette Skot-Hansen
*Franske adjektivisk afledte adverbier,
der tager præpositionssyntagmer ind-
ledt med præpositionen à som argu-
menter
En valensgrammatisk undersøgelse*
23. Line Gry Knudsen
*Collaborative R&D Capabilities
In Search of Micro-Foundations*

- | | | | |
|-----|--|----|--|
| 24. | Christian Scheuer
<i>Employers meet employees
Essays on sorting and globalization</i> | | <i>End User Participation between Processes of Organizational and Architectural Design</i> |
| 25. | Rasmus Johnsen
<i>The Great Health of Melancholy
A Study of the Pathologies of Performativity</i> | 7. | Rex Degnegaard
<i>Strategic Change Management
Change Management Challenges in the Danish Police Reform</i> |
| 26. | Ha Thi Van Pham
<i>Internationalization, Competitiveness Enhancement and Export Performance of Emerging Market Firms: Evidence from Vietnam</i> | 8. | Ulrik Schultz Brix
<i>Værdi i rekruttering – den sikre beslutning
En pragmatisk analyse af perception og synliggørelse af værdi i rekrutterings- og udvælgelsesarbejdet</i> |
| 27. | Henriette Balieu
<i>Kontrolbegrebets betydning for kausalalternationen i spansk
En kognitiv-typologisk analyse</i> | 9. | Jan Ole Similå
<i>Kontraktsledelse
Relasjonen mellom virksomhetsledelse og kontraktshåndtering, belyst via fire norske virksomheter</i> |
- 2010**
- | | | | |
|----|---|-----|--|
| 1. | Yen Tran
<i>Organizing Innovation in Turbulent Fashion Market
Four papers on how fashion firms create and appropriate innovation value</i> | 10. | Susanne Boch Waldorff
<i>Emerging Organizations: In between local translation, institutional logics and discourse</i> |
| 2. | Anders Raastrup Kristensen
<i>Metaphysical Labour
Flexibility, Performance and Commitment in Work-Life Management</i> | 11. | Brian Kane
<i>Performance Talk
Next Generation Management of Organizational Performance</i> |
| 3. | Margrét Sigrún Sigurdardóttir
<i>Dependently independent
Co-existence of institutional logics in the recorded music industry</i> | 12. | Lars Ohnemus
<i>Brand Thrust: Strategic Branding and Shareholder Value
An Empirical Reconciliation of two Critical Concepts</i> |
| 4. | Ásta Dis Óladóttir
<i>Internationalization from a small domestic base:
An empirical analysis of Economics and Management</i> | 13. | Jesper Schlamovitz
<i>Håndtering af usikkerhed i film- og byggeprojekter</i> |
| 5. | Christine Secher
<i>E-deltagelse i praksis – politikernes og forvaltningens medkonstruktion og konsekvenserne heraf</i> | 14. | Tommy Moesby-Jensen
<i>Det faktiske livs forbindelse
Følsomt informeret, ny-aristotelisk
ἦθος-tænkning hos Martin Heidegger</i> |
| 6. | Marianne Stang Våland
<i>What we talk about when we talk about space:</i> | 15. | Christian Fich
<i>Two Nations Divided by Common Values
French National Habitus and the Rejection of American Power</i> |

16. Peter Beyer
Processer, sammenhængskraft og fleksibilitet
Et empirisk casestudie af omstillingsforløb i fire virksomheder
17. Adam Buchhorn
Markets of Good Intentions
Constructing and Organizing Biogas Markets Amid Fragility and Controversy
18. Cecilie K. Moesby-Jensen
Social læring og fælles praksis
Et mixed method studie, der belyser læringskonsekvenser af et lederkursus for et praksisfællesskab af offentlige mellemledere
19. Heidi Boye
Fødevarer og sundhed i sen-modernismen
– En indsigt i hyggefænomenet og de relaterede fødevarerpraksisser
20. Kristine Munkgård Pedersen
Flygtige forbindelser og midlertidige mobiliseringer
Om kulturel produktion på Roskilde Festival
21. Oliver Jacob Weber
Causes of Intercompany Harmony in Business Markets – An Empirical Investigation from a Dyad Perspective
22. Susanne Ekman
Authority and Autonomy
Paradoxes of Modern Knowledge Work
23. Anette Frey Larsen
Kvalitetsledelse på danske hospitaler
– Ledelsernes indflydelse på introduktion og vedligeholdelse af kvalitetsstrategier i det danske sundhedsvæsen
24. Toyoko Sato
Performativity and Discourse: Japanese Advertisements on the Aesthetic Education of Desire
25. Kenneth Brinch Jensen
Identifying the Last Planner System
Lean management in the construction industry
26. Javier Busquets
Orchestrating Network Behavior for Innovation
27. Luke Patey
The Power of Resistance: India's National Oil Company and International Activism in Sudan
28. Mette Vedel
Value Creation in Triadic Business Relationships. Interaction, Interconnection and Position
29. Kristian Tørning
Knowledge Management Systems in Practice – A Work Place Study
30. Qingxin Shi
An Empirical Study of Thinking Aloud
Usability Testing from a Cultural Perspective
31. Tanja Juul Christiansen
Corporate blogging: Medarbejderes kommunikative handlekraft
32. Malgorzata Ciesielska
Hybrid Organisations.
A study of the Open Source – business setting
33. Jens Dick-Nielsen
Three Essays on Corporate Bond Market Liquidity
34. Sabrina Speiermann
Modstandens Politik
Kampagnestyling i Velfærdsstaten.
En diskussion af trafikcampagners styringspotentiale
35. Julie Uldam
Fickle Commitment. Fostering political engagement in 'the flighty world of online activism'

36. Annegrete Juul Nielsen
Traveling technologies and transformations in health care
37. Athur Mühlen-Schulte
Organising Development Power and Organisational Reform in the United Nations Development Programme
38. Louise Rygaard Jonas
Branding på butiksgulvet Et case-studie af kultur- og identitets-arbejdet i Kvickly
8. Ole Helby Petersen
Public-Private Partnerships: Policy and Regulation – With Comparative and Multi-level Case Studies from Denmark and Ireland
9. Morten Krogh Petersen
'Good' Outcomes. Handling Multiplicity in Government Communication
10. Kristian Tangsgaard Hvelplund
Allocation of cognitive resources in translation - an eye-tracking and key-logging study

2011

1. Stefan Fraenkel
Key Success Factors for Sales Force Readiness during New Product Launch A Study of Product Launches in the Swedish Pharmaceutical Industry
2. Christian Plesner Rossing
International Transfer Pricing in Theory and Practice
3. Tobias Dam Hede
Samtalekunst og ledelsesdisciplin – en analyse af coachingsdiskursens genealogi og governmentality
4. Kim Pettersson
Essays on Audit Quality, Auditor Choice, and Equity Valuation
5. Henrik Merkelsen
The expert-lay controversy in risk research and management. Effects of institutional distances. Studies of risk definitions, perceptions, management and communication
6. Simon S. Torp
Employee Stock Ownership: Effect on Strategic Management and Performance
7. Mie Harder
Internal Antecedents of Management Innovation
11. Moshe Yonatany
The Internationalization Process of Digital Service Providers
12. Anne Vestergaard
Distance and Suffering Humanitarian Discourse in the age of Mediatization
13. Thorsten Mikkelsen
Personlighedens indflydelse på forretningsrelationer
14. Jane Thostrup Jagd
Hvorfor fortsætter fusionsbølgen ud-over "the tipping point"? – en empirisk analyse af information og kognitioner om fusioner
15. Gregory Gimpel
Value-driven Adoption and Consumption of Technology: Understanding Technology Decision Making
16. Thomas Stengade Sønderskov
Den nye mulighed Social innovation i en forretningsmæssig kontekst
17. Jeppe Christoffersen
Donor supported strategic alliances in developing countries
18. Vibeke Vad Baunsgaard
Dominant Ideological Modes of Rationality: Cross functional

- integration in the process of product innovation*
19. Throstur Olaf Sigurjonsson
Governance Failure and Iceland's Financial Collapse
 20. Allan Sall Tang Andersen
Essays on the modeling of risks in interest-rate and inflation markets
 21. Heidi Tscherning
Mobile Devices in Social Contexts
 22. Birgitte Gorm Hansen
Adapting in the Knowledge Economy Lateral Strategies for Scientists and Those Who Study Them
 23. Kristina Vaarst Andersen
Optimal Levels of Embeddedness The Contingent Value of Networked Collaboration
 24. Justine Grønbæk Pors
Noisy Management A History of Danish School Governing from 1970-2010
 25. Stefan Linder
Micro-foundations of Strategic Entrepreneurship Essays on Autonomous Strategic Action
 26. Xin Li
Toward an Integrative Framework of National Competitiveness An application to China
 27. Rune Thorbjørn Clausen
Værdifuld arkitektur Et eksplorativt studie af bygningers rolle i virksomheders værdiskabelse
 28. Monica Viken
Markedsundersøkelser som bevis i varemerke- og markedsføringsrett
 29. Christian Wymann
Tattooing The Economic and Artistic Constitution of a Social Phenomenon
 30. Sanne Frandsen
Productive Incoherence A Case Study of Branding and Identity Struggles in a Low-Prestige Organization
 31. Mads Stenbo Nielsen
Essays on Correlation Modelling
 32. Ivan Häuser
Følelse og sprog Etablering af en ekspressiv kategori, eksemplificeret på russisk
 33. Sebastian Schwenen
Security of Supply in Electricity Markets
- 2012**
1. Peter Holm Andreasen
The Dynamics of Procurement Management - A Complexity Approach
 2. Martin Haulrich
Data-Driven Bitext Dependency Parsing and Alignment
 3. Line Kirkegaard
Konsulent i den anden nat En undersøgelse af det intense arbejdsliv
 4. Tonny Stenheim
Decision usefulness of goodwill under IFRS
 5. Morten Lind Larsen
Produktivitet, vækst og velfærd Industrirådet og efterkrigstidens Danmark 1945 - 1958
 6. Petter Berg
Cartel Damages and Cost Asymmetries
 7. Lynn Kahle
Experiential Discourse in Marketing A methodical inquiry into practice and theory
 8. Anne Roelsgaard Obling
Management of Emotions in Accelerated Medical Relationships

9. Thomas Frandsen
Managing Modularity of Service Processes Architecture
10. Carina Christine Skovmøller
*CSR som noget særligt
Et casestudie om styring og menings-
skabelse i relation til CSR ud fra en
intern optik*
11. Michael Tell
*Fradragsbeskæring af selskabers
finansieringsudgifter
En skatteretlig analyse af SEL §§ 11,
11B og 11C*
12. Morten Holm
*Customer Profitability Measurement
Models
Their Merits and Sophistication
across Contexts*
13. Katja Joo Dyppel
*Beskatning af derivater
En analyse af dansk skatteret*
14. Esben Anton Schultz
*Essays in Labor Economics
Evidence from Danish Micro Data*
15. Carina Risvig Hansen
*"Contracts not covered, or not fully
covered, by the Public Sector Directive"*
16. Anja Svejgaard Pors
*Iværksættelse af kommunikation
- patientfigurer i hospitalets strategiske
kommunikation*
17. Frans Bévort
*Making sense of management with
logics
An ethnographic study of accountants
who become managers*
18. René Kallestrup
*The Dynamics of Bank and Sovereign
Credit Risk*
19. Brett Crawford
*Revisiting the Phenomenon of Interests
in Organizational Institutionalism
The Case of U.S. Chambers of
Commerce*
20. Mario Daniele Amore
Essays on Empirical Corporate Finance
21. Arne Stjernholm Madsen
*The evolution of innovation strategy
Studied in the context of medical
device activities at the pharmaceutical
company Novo Nordisk A/S in the
period 1980-2008*
22. Jacob Holm Hansen
*Is Social Integration Necessary for
Corporate Branding?
A study of corporate branding
strategies at Novo Nordisk*
23. Stuart Webber
*Corporate Profit Shifting and the
Multinational Enterprise*
24. Helene Ratner
*Promises of Reflexivity
Managing and Researching
Inclusive Schools*
25. Therese Strand
*The Owners and the Power: Insights
from Annual General Meetings*
26. Robert Gavin Strand
*In Praise of Corporate Social
Responsibility Bureaucracy*
27. Nina Sormunen
*Auditor's going concern reporting
Reporting decision and content of the
report*

TITLER I ATV PH.D.-SERIEN

1992

1. Niels Kornum
Servicesamkørsel – organisation, økonomi og planlægningsmetode

1995

2. Verner Worm
*Nordiske virksomheder i Kina
Kulturspecifikke interaktionsrelationer
ved nordiske virksomhedsetableringer i Kina*

1999

3. Mogens Bjerre
*Key Account Management of Complex Strategic Relationships
An Empirical Study of the Fast Moving Consumer Goods Industry*

2000

4. Lotte Darsø
*Innovation in the Making
Interaction Research with heterogeneous Groups of Knowledge Workers
creating new Knowledge and new Leads*

2001

5. Peter Hobolt Jensen
*Managing Strategic Design Identities
The case of the Lego Developer Network*

2002

6. Peter Lohmann
The Deleuzian Other of Organizational Change – Moving Perspectives of the Human
7. Anne Marie Jess Hansen
To lead from a distance: The dynamic interplay between strategy and strategizing – A case study of the strategic management process

2003

8. Lotte Henriksen
*Videndeling
– om organisatoriske og ledelsesmæssige udfordringer ved videndeling i praksis*
9. Niels Christian Nickelsen
Arrangements of Knowing: Coordinating Procedures Tools and Bodies in Industrial Production – a case study of the collective making of new products

2005

10. Carsten Ørts Hansen
Konstruktion af ledelsesteknologier og effektivitet

TITLER I DBA PH.D.-SERIEN

2007

1. Peter Kastrup-Misir
Endeavoring to Understand Market Orientation – and the concomitant co-mutation of the researched, the researcher, the research itself and the truth

2009

1. Torkild Leo Thellefsen
*Fundamental Signs and Significance effects
A Semeiotic outline of Fundamental Signs, Significance-effects, Knowledge Profiling and their use in Knowledge Organization and Branding*
2. Daniel Ronzani
When Bits Learn to Walk Don't Make Them Trip. Technological Innovation and the Role of Regulation by Law in Information Systems Research: the Case of Radio Frequency Identification (RFID)

2010

1. Alexander Carnera
*Magten over livet og livet som magt
Studier i den biopolitiske ambivalens*