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OCCUPATIONAL FRAUD – AUDITORS' PERCEPTIONS OF RED FLAGS AND INTERNAL CONTROL

By

Jesper Fagerberg



Department of Management and Engineering
Linköpings universitet
SE-581 83 Linköping
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ABSTRACT

The overall purpose of this thesis is to increase the understanding of auditors' perceptions of occupational fraud. The focus is limited to red flags and internal control, i.e. to the indications or symptoms of occupational fraud and the internal control systems which are implemented in order to detect and prevent such actions from being carried out.

The thesis is based on 33 interviews with auditors and experts. In order to increase confidence, triangulation was applied which implied both a qualitative as well as a quantitative methodological approach. The collected data was in turn analysed through two models of analysis – an adjusted version of the so called fraud triangle and the so called COSO-model. The analysis was carried out on the group of auditors as a whole (including subgroups of auditors) as well as compared to a group of experts on fraud and occupational fraud.

The results from the study indicate several aspects of interest regarding auditors' perceptions of occupational fraud. First, the results indicate a tendency among auditors to emphasise “harder” aspects stronger than “softer” aspects. Seen from the fraud triangle, this was manifested by an emphasis on *opportunity*; when concerning internal control of *control activities* in the COSO model, this was emphasised relatively stronger. Second, the results indicate a rather strong heterogeneity among auditors in their perceptions of occupational fraud. Third, all subparts of the applied models were seldom covered on an individual basis. Fourth, the interconnection between harder and softer sides, both concerning red flags and internal control, were not very strongly emphasised. The results were given additional strength from the comparison with the group of experts.

The study also included a comparison among different subgroups of auditors. The subgroups were constructed based on accumulated working experience as well as whether the respondents primarily audit larger or smaller companies. The results that were based on years of experience indicate a tendency among older auditors with more accumulated working experience to emphasise softer aspects relatively stronger, than auditors with less working experience. This tendency was present for red flags as well as for internal control. More

experienced auditors also demonstrated a tendency to emphasise a relatively larger part of the two applied models of analysis. The division based on size of audited companies indicated similar tendencies as were found for both more and less experienced auditors. Hence, auditors who mainly audit larger companies showed a tendency to emphasise softer aspects relatively stronger compared to auditors who mainly audit smaller companies.

SAMMANFATTNING

Studien i denna avhandling belyser hur revisorer ser på oegentligheter. Syftet har emellertid inte varit att utröna hur revisorer ser på de skyldigheter som föreligger att även beakta ekonomisk brottslighet inom ramen för den lagligt reglerade revisionsplikten. Mer specifikt syftar istället studien på att se vad revisorer lägger mest vikt vid beaktande av indikationer eller s.k. red flags på oegentligheter samt intern kontroll.

Studiens empiriska material utgörs av totalt 33 intervjuer med såväl revisorer som experter. Metodmässigt har triangulering tillämpats för att på så sätt uppnå en bättre bild av respondenternas syn på oegentligheter. Detta har inneburit att de intervjuer som har genomförts har innehållit såväl kvalitativa som kvantitativa delar. Den insamlade datan har i sin tur analyserats genom två analysmodeller, dels en modifierad variant av Brottstriangeln, dels COSO-modellen. Analysen har gjorts såväl av revisorerna (för total grupp samt mellan olika subgrupper av revisorer) som jämfört med en grupp av experter.

Resultaten från studien indikerar flera intressanta aspekter av revisorers syn på oegentligheter. För det första tycks det finnas en tendens hos revisorer att framhäva hårda och mer konkreta aspekter mer än mjukare aspekter. Avseende indikationerna visades detta genom att den del av Brottstriangeln som betonades mest var *möjligheter*, samtidigt som *kontrollåtgärder* i COSO-modellen avseende intern kontroll betonades relativt sett mer. För det andra indikerade svaren att det finns en betydande heterogenitet inom gruppen revisorer för hur man ser på oegentligheter, såväl för indikationer som för intern kontroll. För det tredje fanns en tendens att de tillämpade modellernas samtliga delar sällan täcktes på individuell nivå. För det fjärde lades liten vikt vid kopplingen mellan hårda och mjuka delar. De erhållna resultaten förstärktes vid en jämförelse med den grupp av experter som också ingick i studien.

En jämförelse inom gruppen revisorer företogs också där gruppen uppdelades baserat på ackumulerad erfarenhet av revision samt på vilken sorts klienter (storlek) dessa normalt arbetar med. Resultaten från uppdelningen utifrån erfarenhet indikerade att de mer erfarna revisorerna lade en relativt större vikt vid mjukare aspekter än yngre, såväl för indikationer som för intern kontroll.

De erfarenhetsmässigt äldre revisorerna tenderade även att täcka in en större andel av de två tillämpade analysmodellerna. I det fall då fördelningen baserades på storleken på de klienter som revisorerna granskar framkom liknande tendenser som mellan erfarenhetsmässigt äldre respektive yngre revisorer. Med andra ord fanns det en tendens till att revisorer som framför allt reviderar större bolag betonade mjukare aspekter relativt sett mer än revisorer som framför allt reviderar mindre och medelstora bolag.

Preface

The division of Economic Information Systems engages in research and education in the borderland between management and IT. More specifically, the subject area relates to the transmission of information from, between and to people. Of special interest is the role of strategies and information systems when people work together in different kinds of organizations (companies, public authorities and associations), but also when they interact with customers and citizens. Our research is concentrated in the following areas:

- * IT and productivity
- * Strategic use of IT, with a focus on organization for the use of IT
- * Strategy and management control
- * Financial accounting, auditing and economic crime

Most doctoral candidates in the division of Economic Information Systems are enrolled in either the Swedish Research School of Management and Information Technology (MIT) or the Research Programme for Auditors and Consultants (RAC). MIT is a joint endeavour involving some ten colleges and universities. Within the structure of this network, a doctoral programme is offered with a focus on issues arising in the borderland between management and IT. The RAC is a graduate education programme focused on accounting and auditing, with an emphasis on the processing of information. It combines internships at auditing firms with graduate courses and work toward a licentiate degree.

This thesis, *Occupational Fraud – Auditors’ Perceptions of Red Flags and Internal Control*, is presented by Jesper Fagerberg for the degree of Licentiate of Economics – in the subject area of Economic Information Systems – at the Department of Management and Engineering, Linköping University. Fagerberg is currently enrolled in RAC and holds The Master of Science, M.Sc. (Economics and Business) Degree, a Degree of Master of Laws (LL.M.), and a Degree of Bachelor of Social Science with a Major in Political Science.

Linköping, April 2008

Fredrik Nilsson
Professor
Economic Information Systems

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Writing a thesis can be tough. Moments of glory and joy from the discovery of new insights and increased understanding are interchangeably mixed with moments of doubt and despair over the seemingly never ending drawbacks. It is therefore with an ambiguous sigh of relief that I now close this chapter of my academic studies.

Writing a thesis is also in many ways a solitary work. However, it is far from made in a complete vacuum. Hence, the possibility to write this thesis has been dependant on the support from and devotion of several people to whom I am deeply indebted.

First of all I would like to express my deepest gratitude to my employer Öhrlings PricewaterhouseCoopers. Without the openness and employee focused culture which characterises the City Office of Local Business in Stockholm, this opportunity would never have been given me. Hence, I would like to thank Öhrlings PricewaterhouseCoopers for its financial and moral support as well as the flexible and professional handling of practical aspects behind the project.

I am also very grateful to all of the respondents who have contributed to this thesis. It is on their answers which the empirical data of the thesis is based. Thank you very much for giving me some of your valuable time even during periods of great audit stress.

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Jesper Fagerberg,

Stockholm, April 2008

TABLES OF CONTENTS

TABLES	4
1. INTRODUCTION	5
1.1 BACKGROUND	5
1.2 PURPOSE AND RESEARCH QUESTIONS	12
1.2.1 PRE-KNOWLEDGE BEHIND THE RESEARCH QUESTIONS	13
1.2.2 EXPECTED PRACTICAL CONTRIBUTIONS OF THE STUDY	14
1.2.3 EXPECTED SCIENTIFIC CONTRIBUTIONS OF THE STUDY	15
1.3 READING GUIDE	16
2. AN INSTITUTIONAL FRAMEWORK FOR AUDITING AND FORENSIC AUDITING	19
2.1 INTRODUCTION	19
2.2 THE PURPOSE OF AN AUDIT AND AUDIT INDEPENDENCE	20
2.3 FORENSIC/FRAUD AUDITING	23
2.4 SUBSTANTIVE TESTING AND INTERNAL CONTROL	26
2.4.1 GENERAL ASPECTS OF SUBSTANTIVE TESTING AND INTERNAL CONTROL	26
2.4.2 AN INTERNATIONAL MODEL FOR EVALUATING INTERNAL CONTROL	28
2.4.3 AN ALTERNATIVE MODEL OF INTERNAL CONTROL	30
2.5 AUDIT OF THE MANAGEMENT'S ADMINISTRATION	32
2.6 RS 240 AND THE LEGAL OBLIGATION OF AN AUDITOR TO REPORT ON ECONOMIC CRIME	33
2.7 CHAPTER SUMMARY	38
3. FRAUD AND OCCUPATIONAL FRAUD	41
3.1 INTRODUCTION	41
3.2 CONFUSION OF LABELS	41
3.3 AN OVERVIEW OF FRAUD ON A GLOBAL AND SWEDISH LEVEL	42
3.4 THE COLEMAN MODEL OF EXPLANATION OF OCCURRENCE OF FRAUD	43
3.5 WHY DO PEOPLE COMMIT FRAUD AND OCCUPATIONAL FRAUD?	44
3.6 SIGNS OF WEAK AND STRONG INTERNAL CONTROL	46
3.7 WHO COMMITS OCCUPATIONAL FRAUD?	47
3.8 HOW IS FRAUD AND OCCUPATIONAL FRAUD NORMALLY DISCOVERED?	48
3.9 COMMON INDICATORS (RED FLAGS) OF FRAUD AND OCCUPATIONAL FRAUD	50
3.10 WHERE IN A COMPANY CAN FRAUDULENT BEHAVIOUR BE EXPECTED?	53
3.11 CHAPTER SUMMARY	54
4. PREVIOUS RESEARCH AND PUBLICATIONS ON RED FLAGS AND INTERNAL CONTROL	57
4.1 INTRODUCTION	57
4.2 RED FLAGS OF FRAUD	58
4.3 THE IMPORTANCE OF INTERNAL CONTROL	68
4.4 THE DETECTION AND PREVENTION OF FRAUD AND OCCUPATIONAL FRAUD	74
4.5 MODELS OF ANALYSIS	77
4.5.1 MODEL 1 – RED FLAGS OF OCCUPATIONAL FRAUD	78
4.5.2 MODEL 2 – CRITERIA OF INTERNAL CONTROL	79
4.6 CHAPTER SUMMARY	81
5. METHOD	83
5.1 INTRODUCTION	83

5.2 METHODOLOGICAL CONSIDERATIONS	83
5.3 LIMITATIONS	85
5.3.1 COMPANIES – SIZE, BUSINESS ETC.	85
5.3.2 OCCUPATIONAL FRAUD	85
5.4 COLLECTION OF EMPIRICAL DATA	87
5.4.1 SELECTION OF RESPONDENTS	87
5.4.2 SELECTION OF INDICATORS AND CRITERIA FOR THE INTERVIEW GUIDE	91
5.4.3 INTERVIEW GUIDE	92
5.4.4 PROCEDURE DURING THE INTERVIEWS	94
5.5 THE ANALYSIS OF THE DATA	95
5.6 VALIDITY AND RELIABILITY	100
5.6.1 VALIDITY	100
5.6.2 RELIABILITY	101
5.7 CHAPTER SUMMARY	102
6. ANALYSIS	105
6.1 INTRODUCTION	105
6.2 AUDITORS	106
6.2.1 GENERAL ASPECTS	106
6.2.2 RED FLAGS	108
6.2.3 INTERNAL CONTROL	119
6.2.4 SUMMARY AND CONCLUSIONS	126
6.3 SUBGROUPS OF AUDITORS – OLDER VS. YOUNGER AUDITORS	131
6.3.1 GENERAL ASPECTS	131
6.3.2 RED FLAGS	132
6.3.3 INTERNAL CONTROL	142
6.3.4 SUMMARY AND CONCLUSIONS	147
6.4 SUBGROUPS OF AUDITORS – AUDITORS WHO MAINLY AUDIT LARGER COMPANIES VS. AUDITORS WHO MAINLY AUDIT SMALLER COMPANIES	151
6.4.1 GENERAL ASPECTS	151
6.4.2 RED FLAGS	152
6.4.3 INTERNAL CONTROL	161
6.4.4 SUMMARY AND CONCLUSIONS	166
7. DISCUSSION	171
7.1 INTRODUCTION	171
7.2 AUDITORS AND EXPERTS	171
7.3 REFLECTIONS ON THE DIFFERENCES BETWEEN THE STUDIED SUBGROUPS OF AUDITORS	175
7.4 AUDITORS’ ABILITY TO COMBAT OCCUPATIONAL FRAUD	177
7.5 GENERAL METHODOLOGICAL REFLECTIONS ON THE STUDY	180
7.6 COMPARISON WITH EARLIER RESEARCH	184
7.7 CHAPTER SUMMARY	189
8. CONCLUSIONS AND PROPOSALS FOR FURTHER RESEARCH	191
LITERATURE AND SOURCES	199
BOOKS, REPORTS AND ARTICLES	199
LEGAL STATUTES AND OTHER REGULATIONS	208
ELECTRONIC SOURCES	208
APPENDIX 1 – LIST OF REGULATIONS	209
APPENDIX 2 – DAVIES’ MODEL OF ANALYSIS OF CAUSES OF FRAUD	210

APPENDIX 3 – MORRIS’ FRAUD CHECKLIST	211
APPENDIX 4 – INTERVIEW GUIDE	215
APPENDIX 5 – DEFINITIONS OF KEY TERMS.....	222
APPENDIX 6 – RED FLAGS AND CRITERIA OF INTERNAL CONTROL	226
APPENDIX 7 – ANALYSIS OF EXPERTS	230
APPENDIX 8 – RESPONDENTS’ EXPERIENCES OF OCCUPATIONAL FRAUD	250
APPENDIX 9 – LIST OF RESPONDENTS	251
APPENDIX 10 – QUANTITATIVE ANALYSIS OF RED FLAGS	253
APPENDIX 11 – QUANTITATIVE ANALYSIS OF INTERNAL CONTROL	260
APPENDIX 12 – QUANTITATIVE RESULTS FOR RED FLAGS	265
APPENDIX 13 – QUANTITATIVE RESULTS FOR CRITERIA OF INTERNAL CONTROL	271

TABLES

Table 1: Division of interviewed auditors with respect to applied subcategories	90
Table 2: Top five red flags according to auditors	115
Table 3: Comparisons of groups of red flags between auditors and experts	116
Table 4: Comparisons of subgroups of red flags between auditors and experts.....	118
Table 5: Top five criteria of internal control according to auditors	125
Table 6: Comparisons of groups of criteria between auditors and experts.....	125
Table 7: Comparisons of groups of red flags between older and younger auditors .	138
Table 8: Comparisons of subgroups of red flags between older and younger auditors.....	139
Table 9: Comparisons of groups of criteria of internal control between older and younger auditors.....	146
Table 10: Comparisons of groups of red flags between auditors who mainly audit larger and smaller companies.....	157
Table 11: Comparisons of subgroups of red flags between auditors who mainly audit larger and smaller companies.....	158
Table 12: Comparisons of groups of criteria of internal control between auditors who mainly audit larger and smaller companies	164
Table 13: Comprehensive comparisons of the views on red flags between the different groups studied.....	194
Table 14: Comprehensive comparisons of the views of internal control between the different groups studied	194
Table 15: Top five red flags according to experts.....	240
Table 16: Top five criteria of intern control according to experts.....	247
Table 17: Respondents' experiences of occupational fraud	250

1. INTRODUCTION

1.1 BACKGROUND

Auditing can be seen as an important part of today's society. Its purpose can be viewed from the perspective of a number of different stakeholders, whose interests auditors are supposed to protect. Auditing also has a long history. For example, it is believed that Swedish companies were audited on a continual basis as early as the 17th century. The first legal obligation of companies to undergo an audit in Sweden began in 1895 (Wallerstedt, 2005). Since that time, a number of additional legal statutes have been imposed. The legal regulations are also complemented with a responsibility within the profession to take responsibility. (Gometz, 2005)

The need for auditing arose in large part, as a result of the continued separation of ownership from the operative management in conjunction with an increased demand for venture capital. Distrust towards management to administer for the good of the owners developed, which created the need for a neutral and independent party to supervise the business conducted and the accounting presented by the appointed CEO and Board of Directors (Power, 1997). To serve as protection for investors and over time, other stakeholders' interests as well, became part of the main purpose for the audit (Lee, 1995).

During the course of history, a number of incidents have occurred which have emphasised the role auditors should play and thereby the expectations placed upon auditors to serve as guarantors for the accounting presented by companies, as well as correct management of the CEO and Board of Directors. Examples of such crises include the Kreuger debacle in the early 1930s as well as more current failures such as Enron and Worldcom in America. Different crises and business failures have, however, not only emphasised the role played by auditors, but have also resulted in criticism of auditors for not discovering the misstatements (Power, 1997 and Porter et al. 2003). They have also served as a driving force for increased regulations (Wallerstedt, 2005). The business failures which have directed a great deal of attention and pressure on auditors often have originated in fraudulent behaviour on the part of the CEO, members of the Board of Directors or other individuals who were

entrusted to manage the companies for their legal owners. The role of auditors concerning fraud and especially occupational fraud¹ has become an increasingly important issue for auditors to cope with.

Auditing – main assignments and specific regulations concerning auditing of fraud

Auditors' main assignments are to conduct an audit of accounts and an audit of management's administration. These assignments and how they are to be carried out are regulated in a number of legal statutes and other regulations.² An audit of accounts covers the auditing actions carried out in order to verify, with reasonable assurance, that the accounts presented by the company are correct. An auditor is, however, also obligated to audit the management's administration in order to suggest to the general meeting of shareholders whether or not to grant the CEO and members of the Board of Directors discharge of liability. An important aspect of the audit is also the evaluation of the system of internal control of the company audited. Although an audit of internal control is one of two existing auditing strategies (the other being substantive testing) and may be performed at any time, it is often carried out at the time of the audit of management's administration. The auditing of the accounts and the management's administration is, however, to be carried out with respect to materiality and risk. Hence, misstatements which do not influence the evaluation of an external stakeholder are not intended to be captured by a normal statutory audit.

However, misstatements resulting from fraudulent activities are given extra focus as a result of legal requirements for auditors to be aware of the signs of such frauds. The requirements in Sweden facing auditors concerning fraud are stipulated primarily in RS 240 (or ISA 240 which, without some of the national amendments of RS, is its international equivalent) and in the so

¹ The term occupational fraud refers to a fraudulent activity which is carried out by someone who is employed by the company which is defrauded. See further Appendix 5 concerning terminology used in the thesis.

² See Appendix 1 for a complete list of regulations concerning auditing. A more comprehensive presentation of the institutional framework surrounding auditors is presented in chapter 2. The institutional framework is considered important to be aware of in order to understand and interpret the focus and purpose of this thesis.

called Catalogue of Crime (Brottskatalogen), 9th Chapter 42-44 §§ Swedish Companies Act (Aktiebolagslagen), which also is a part of RS 240 (clause 19SE).³

In order to fulfil these requirements, auditors not only have to know the requirements as such, but also must be able to assess the risk of fraud and economic crime being committed. In order to assess this risk, some understanding and awareness of the indicators of occupational fraud is essential. These indicators are referred to as "red flags" within the field of forensic accounting.⁴ In addition, in order to analyse the preparedness of a company to detect and prevent fraud, an assessment of the company's internal control is crucial. These two aspects, red flags of fraud and the internal control to detect and prevent occupational fraud, are the focus of this thesis. As will be seen in the chapter on previous research, both of these two aspects are essential to understand in order to be able to combat occupational fraud in companies. Consequently, these two aspects are important considering the legal requirements of auditors to detect and prevent occupational fraud.

The extent of the problem of occupational fraud

In Frank (2004), a study from 2002 is presented which was carried out by the Association of Certified Fraud Examiners (ACFE), *Report to the Nation on Occupational Fraud and Abuse*. The ACFE study suggests that fraud might amount to as much as about six percent of an average company's annual revenues. Likewise, according to Frank (2004); each dollar spent on compliance saves organisations, on average, USD 5.21 in improved avoidance of legal liabilities, damage to the organisation's reputation and lost productivity. In addition, Scott (2002) presents additional results from the ACFE study from 2002, which showed that the median loss from frauds committed by managers or executives amounts to approximately USD 250,000, while the median loss from employee fraud is approximately USD 60,000. The average fraud scheme in small businesses is said to result in a loss of approximately USD 127,500. The average scheme of the most costly of frauds, financial

³ RS 240 is the Swedish standard on auditing which stipulates how to audit for fraud. See further description of RS in chapter 2.

⁴ A more comprehensive presentation of the area of forensic auditing and occupational fraud is given in chapter 3.

statement fraud, amounts to USD 4.25 million. Finally, according to the 1999 Business Fraud Survey, 50 percent of the respondents point to occupational fraud as the greatest risk to their organisations (see Algier, 1999). It is also noted in the Association of Certified Fraud Examiners' *2002 Report to the Nation on Occupational Fraud and Abuse* that the per-employee losses from occupational fraud in the smallest businesses are 100 times the amount of their largest counterparts (see Wells, 2003). In Wells (2002, p. 108), it is noted that in "*1999 Committee on Sponsoring Organisation of the Treadway Commission (COSO) study found the CEO and/or CFO directed the fraud in at least 82% of the cases examined.*"

Another interesting study which examines the extent and characteristics of occupational fraud is Wells (2004). According to the study, almost half of the occupational frauds in the study took place in businesses with fewer than 100 employees. The author also enumerates the following conclusions from the study: First, large financial statement frauds receive the most attention, but are relatively uncommon compared to asset misappropriations and corruption. Second, small businesses remain the most vulnerable to occupational fraud due to three factors: they are the least likely to have an audit, a hotline (such as a whistleblower function) or adequate internal controls. Third, audits, both internal and external, are not the most effective means of detecting occupational frauds. Fourth, hotlines and other reporting mechanisms are an important part of any organisation's prevention efforts but should also extend beyond employees to vendors and customers. Fifth, occupational fraud cannot be eliminated but organisations that use hotlines as well as auditors can greatly reduce the occurrence of these occupational frauds. Finally, it is important to realise that occupational fraud schemes can take on many forms, from that as simple as pilferage of company supplies to complex and sophisticated financial statement frauds.

According to the ACFE study of 2002, frauds are normally detected through tips from employees, vendors, customers, and anonymous sources. Companies applying a fraud hotline reported a cut in losses from fraud of approximately 50 percent per scheme. The second most common method of detection is by accident (18.8 percent), followed by internal audits (18.6 percent), internal controls (15.4 percent) and external audits (11.5 percent). Other

findings include that: the typical perpetrator of occupational fraud is a first time offender, losses caused by perpetrators who are over 60 years of age are 27 times greater than losses caused by employees of 25 years of age and younger, and the average scheme lasts 18 months before it is discovered.

As seen above, losses from occupational fraud are estimated to amount to significant amounts for companies and should be taken seriously.⁵ In addition, there are many other aspects of occupational fraud which should act as a wake-up call for many owners of companies, both of smaller and larger businesses. The rather insignificant role played by external auditors in preventing and detecting occupational fraud should not be seen as a reason to surrender to the problems of occupational fraud.⁶ Instead, as will be seen in the previous research covered in chapter 4, an increased awareness of the red flags of occupational fraud and how occupational fraud most effectively can be detected and prevented by internal control can make the role of external auditors more beneficial in fighting occupational fraud.

Red flags and internal control concerning occupational fraud

Occupational fraud can be investigated from several different perspectives. One important question is whether it is possible to detect fraudulent activities in a company. One way to proceed in detecting occupational fraud is to be aware of and gain experience of the symptoms of the occurrence of such actions. Just like a medical doctor looks for symptoms of a disease in a patient, someone looking for occupational fraud can look for the symptoms of such activities in a company. This is normally what is meant by red flags within the area of forensic accounting. This approach can be described by the following:

⁵ Of course the results are collected from an international setting which might not exactly apply to a Swedish context. However, according to the *Global Economic Crime Survey 2005* (PricewaterhouseCoopers, 2005) the situation of fraud in Sweden is a serious matter as well.

⁶ It is estimated that external auditors discover fraud in a company in about 10 percent of the discovered fraud cases according to Bologna and Lindquist (1995, p.35). However, this percentage only refers to the actual cases of discovered fraud and does not take into account the preventive effect of external auditors which might be of larger importance in combating fraud than in the actual discovery of fraud.

For years, it has been argued that one of the most effective ways to detect fraud is to use the “red flag” approach which involves identifying indicators of fraud and following up on them to determine whether they represent fraud or are the result of other factors. (Albrecht et al., 2001, p.1)

In short, in order to gain a deeper understanding of how to detect fraudulent activities, it is essential to pay attention to the red flags present in companies. Red flags can be almost anything which indicates a risk of fraudulent activities being carried out in a company. Examples of red flags include great financial pressure on management in a company, deficient internal controls, and questionable ethical and moral opinions of management. However, red flags can also include indicators which normally might not be viewed as signs of fraudulent activities such as employees persistently staying late or arriving early at work.

Another aspect of occupational fraud concerns not just how to detect fraudulent activities but how to prevent them from taking place. This aspect is more directed towards the internal control systems which companies set up in order to detect and prevent different misstatements and mistakes from occurring. Internal control systems, just as red flags, have received great attention within research conducted on fraudulent behaviour (see for example Cunningham, 2004; Frank, 2004; Gallagher and Radcliffe, 2002; Jacka, 2002; Jennings, 2003; Roth and Marks, 2004; Wells, 2002).

The research conducted on internal control related to fraudulent behaviour is often directed to only some specific areas of internal control. For example, some studies have focused on the importance of a good tone-at-the-top and other ethical aspects of internal control (for example Holmes et al., 2002; Hooks et al., 1994; Irvine and Lindsay 1994; Vinten, 1992), while other studies have focused on more concrete aspects of internal control such as continuing reconciliations or separation of duties (for example Jacka, 2002; Thompson and Loescher, 2001).

Focus of the thesis

As mentioned above, auditors are obliged to audit financial reports in order to verify that no material misstatements exist. Consequently, in most cases auditors can be viewed as not being responsible for non-material misstatements regardless of whether this is due to fraudulent behaviour or not. However, as will be shown in chapter 2, in accordance with Swedish auditing statutes, auditors have a responsibility to report on economic crime when a certain degree of suspicion is at hand. In addition, auditors in Sweden, according to RS 240, are obliged to assess the risk of material misstatements due to fraud. Despite the focus on material misstatements, it is still of interest to acquire an increased understanding of auditors' *view* or *perception* of situations of occupational fraud and their views on how to detect and prevent such activities from being carried out.

An increased understanding of how auditors view red flags and internal control can facilitate the fight against occupational fraud as well as the discussion regarding the legal obligation of auditors to combat occupational fraud. This understanding can benefit from a comparison of the auditors' perceptions with the perceptions of a group which daily focuses on fraudulent issues. Hence, the focus of this thesis will aim at answering questions dealing with the *view* or *perception* of auditors as well as how these views stand in relation to the view of experts on occupational fraud *without* the limitation of materiality.

This thesis deals with the red flags which are present when fraudulent activities are committed *and* with the internal control systems which are implemented to detect and prevent such activities from taking place. In other words, the focus of this thesis is the “red flags” in conjunction with the internal control systems of companies, which are supposed to prevent and detect fraud. The focus in this thesis is, however, directed to cases where employees defraud the company in which they are employed, i.e. the focus in this thesis is on what is normally known as *occupational fraud*.

Focus will also be placed on potential differences in views within the group of auditors. A comparison with an external group, experts, will also be conducted. However, the view of experts is not of interest per se, but is mainly

studied in order to acquire an increased understanding of those potential differences which are of interest in understanding the view of auditors. A reason why experts are used as a group for comparison is that the investigative nature which characterises the working assignments of experts is also characteristic of some of the work of auditors; hence the similarity in the approach to problems makes it interesting to compare these two groups. In addition, few groups can be found which work with fraud, which limits the possible alternative groups to compare auditors with. Finally, practical difficulties in gaining access to other groups made it difficult to compare the view of auditors with the view of other groups (such as internal auditors).

The comparisons within the group of auditors are expected to reveal conclusions regarding how differences in years of experience and working assignments affect the views on occupational fraud. Such possible differences could be of interest in how to handle questions of occupational fraud in the audit teams, as well as concerning the designing of regulations which stipulate how auditors should audit concerning occupational fraud.

1.2 PURPOSE AND RESEARCH QUESTIONS

The overall purpose of the thesis is to increase the understanding of auditors' perceptions of occupational fraud. More specifically, the purpose is to increase the understanding of auditors' perceptions of red flags and criteria of internal control specifically pertaining to occupational fraud.

The following two research questions will be examined:

1. What categories of red flags are perceived as the best by auditors (for auditors as such, as well as compared to experts) in order to detect occupational fraud?
2. What is perceived by auditors (for auditors as such, as well as compared to experts) as the most crucial aspects of the internal control of companies to detect and prevent occupational fraud?

The answers of the two research questions will make it possible to evaluate whether there are any indications of differences between the views of auditors and experts as well as between different groups of auditors on red flags and internal control. Thus, the main purpose will be to outline the views as such

and the possible differences in views between the groups of auditors and experts as well as within the group of auditors on red flags as well as internal control and thereby generate interesting angles of incidences for further research. The comparisons between different groups are deemed as beneficial for understanding the views of the main group of study (i.e. the auditors).

It is important to emphasise that no normative aspects are present in the research questions above. Thus, whether one view is better or worse than another is not focused on in the thesis. Of course, the possible differences between the two groups will be discussed and analysed, but an evaluation of the normative aspects of these will not be conducted. Consequently, the differences as such are of interest, which means that auditors and experts will be able to be just as "right" as the other. For definitions and clarification of the terms stated above, see Appendix 5.

1.2.1 PRE-KNOWLEDGE BEHIND THE RESEARCH QUESTIONS

During the course of my work as an auditor, a pre-knowledge of the characteristics of auditors has developed. This pre-knowledge has been an important inspiration to study the view of auditors on occupational fraud. The pre-knowledge is basically based on three different perceived aspects of auditors.⁷ First, due to the fact that intentional misstatements comprise a relatively small part of the misstatements which an auditor faces in his everyday work, the knowledge and experience of auditors in their view of crucial red flags of occupational fraud will be relatively limited compared to their knowledge and experience of auditing unintentional misstatements.

Second, due to the fact that intentional misstatements comprise a relatively smaller part of the everyday work of an auditor, auditors' knowledge of which aspects of internal control best detect and prevent occupational fraud, compared to their knowledge and experience of internal control of unintentional misstatements, is limited.

⁷ These views are based on my personal reflections from the point of view of a practicing auditor. The points are however mainly inspirational and are not connected to previous research. Concerning the connection to previous research, see chapter 7 *Discussion*.

Finally, differences are present between auditors and experts in their view of red flags of occupational fraud and which aspects of internal control best detect and prevent occupational fraud. This difference can possibly be derived from differences in how members of the two groups work, their previous education and training, how long they have worked within their different professions etc. For example, it is possible that older (measured as years of experience) auditors and auditors who mainly audit larger companies will place a relatively stronger emphasis on “soft” causes of occupational fraud and factors of internal control, such as culture and control environment.⁸

The results of the study will most likely reveal interesting insights on the likelihood that auditors are able to detect and prevent occupational fraud from being carried out in companies. Since the focus of the thesis is on auditors’ view of red flags and criteria of internal control, the views of auditors are not only compared to the views of a group of experts, but are compared within the group of auditors as well. The division of subgroups of the total group of auditors is made with respect to years of experience and whether the auditors mainly work with larger or smaller companies. This division aims at shedding further light on possible differences within the group of auditors. Such differences could have important practical implications and may generate interesting angles for further research. The results will be discussed at the end of the thesis.

1.2.2 EXPECTED PRACTICAL CONTRIBUTIONS OF THE STUDY

As mentioned above, a legally based obligation exists for auditors to assess the risk of fraud when auditing a company in order to comply with generally accepted auditing standards. Ever since the acceptance of the regulations clarifying the obligation of auditors to report on economic crime (came into effect January 1st 1999) the question of auditors’ role in fighting economic crime has been given increased attention. Swedish National Economic Crimes Bureau (Ekobrottsmyndigheten) has published reports where the new regu-

⁸ See D’Aquila (2004), commented below in the chapter on previous research, see chapter 4.

lations have been evaluated and which have shown that auditors view the new regulations as difficult to cope with.⁹

A debate among auditors concerning the new regulations has also taken place.¹⁰ Thus, there is an interest among practicing auditors to gain increased knowledge of fraud as well as occupational fraud. This study will provide increased understanding on how auditors view occupational fraud, which can facilitate a more profound debate concerning the demands placed upon auditors to report on economic crime as well as what difficulties, knowledge wise, exist in handling the problems of occupational fraud during audits.

1.2.3 EXPECTED SCIENTIFIC CONTRIBUTIONS OF THE STUDY

Systematic studies of fraud and economic crime are rare in the Swedish scientific literature, especially concerning occupational fraud. See for example:¹¹

- BRÅ 1999:7, *Forskning om ekonomisk brottslighet (Research on economic crime)*, p. 49.
- BRÅ 2003:1, *Förebygga ekobrott – Behov och metoder (Prevent economic crime – Requirements and methods)*, p. 38.
- BRÅ (2004), *Bokslut – BRÅ:s satsning på ekobrottsforskning 1998-2002 (Final evaluation – BRÅ's programme on research on economic crime 1998-2002)*, p. 6.

In short, the previous research on how auditors perceive occupational fraud conducted in Sweden is very limited. As is shown in the chapter on previous research (see chapter 4) some relevant international research exists. This previous research has been covered in order to evaluate the possible contributions to the understanding of auditors' perceptions in an international context. Despite the existence of a number of relevant previous studies, the

⁹ See Ekobrottsmyndigheten (2004).

¹⁰ See for example Andersson and Johansson (2000); Engerstedt and Korsell (2004); Ljung and Stetler (2000), and Wennberg (2003).

¹¹ See also chapter 4. Previous research within the area of auditing is as such scarce in Sweden, for example Johansson et al. (2005, pp. 209-210). Translations into English are made by author.

question of the relative emphasis on categories of red flags and internal control is limited. Hence, it is concluded that more exploratory research is needed to shed further light on what the view of auditors looks like compared to an external group (experts) as well as within the group of auditors as such.

The connection to previous research as well as how this study contributes to increased scientific and practical knowledge and understanding is discussed and outlined in greater detail in the chapters *Discussion* and *Conclusions and Proposals for Further Research*.

This study is expected to contribute to an increased understanding of occupational fraud from an auditor's perspective in Sweden. This will most likely facilitate the understanding of how auditors can play a part in the fight against occupational fraud. The study will also serve to outline hypotheses concerning how auditors view red flags and internal control.

1.3 READING GUIDE

This thesis is divided into eight chapters. The first four chapters consist of an introduction and a framework for the rest of the thesis. In the introduction chapter, background, purpose, and the expected contributions of the study are presented. The second, third and fourth chapters include an institutional presentation of the area of auditing, an overview of fraud and occupational fraud and finally a presentation of previous research. The purpose of the first four chapters is largely to clarify the purpose of the thesis and provide the reader with an understanding of the subject of the thesis. The framework also contributes to the methodological choices made as well as the choice of the angle of the study. One important part of the chapter on auditing, chapter 2, is the description of internal control, which is one of the two areas of focus in the thesis.

An important part of the second chapter is the description of the main fraud triangle model, which, although adjusted, is applied as a model of analysis for the analysis of red flags (next to internal control, which is the second focus of the thesis). The specific purpose of the third chapter is to provide the reader with an understanding of the causes behind fraudulent behaviour and how these causes can be understood. The first four chapters end with the descrip-

tion of the two models of analysis applied in the thesis. Readers who are familiar with auditing and general aspects of fraud can skip the second and third chapter.

In the next four chapters, chapter 5, 6, 7 and 8, the method chosen for the study is presented as well as analysis of the empirical data collected during the study. The chapter on method describes the methodological choices made through out the thesis as well as how the empirical material was collected and analysed.

The analysis is based on two models of analysis, one for red flags and one for criteria of internal control. The chapter is structured into three main sections, one for each of the different groups studied (auditors, and the two pairs of subgroups of auditors). The group of auditors is also compared with a group of experts. In order to facilitate the reading of this thesis, the presentation and analysis of the group of experts is placed in Appendix 7. The last two chapters contain a discussion of the results as well as a presentation of the results together with suggestions for future research.

2. AN INSTITUTIONAL FRAMEWORK FOR AUDITING AND FORENSIC AUDITING

2.1 INTRODUCTION

In order to understand the role played by auditors in detecting and preventing occupational fraud, it is important to have a picture of the role and the work carried out by an auditor.¹² In this chapter of the thesis, the role played by an auditor will be presented. However, the presentation below is limited to the institutional setting in which an auditor is active and to the working assignments of the auditor. The purpose is to present the environment of an audit and how an audit is carried out in order to understand the role of occupational fraud in an audit and what auditors are expected to do to detect and prevent such fraudulent activities from being carried out. In other words, this chapter is described through the perspective of a practicing auditor. A deeper understanding of fraud and occupational fraud is presented in chapter 3. It is important to notice that the presentation below aims at describing the role from a Swedish perspective alone, even though the role of an auditor in Sweden of course also to some extent, coincides with the role played by auditors in other countries.¹³

This chapter presents the regulations which stipulate the role of auditors in combating fraudulent behaviour. These regulations were introduced against the will of the auditors (Larsson et al., 2002 and Wallerstedt, 2005) and it has

¹² An auditor in Sweden can either be an assistant or a qualified auditor. A qualified auditor is either “godkänd” or “auktoriserad”, where “godkänd” is a title acquired after passing a test which can be taken after concluding an academic education in business administration and three years of practice at an auditing firm. In the case of “auktoriserad”, the same qualifications are required except that additional academic studies are needed in conjunction with five years of practice at an auditing firm. Other examples of auditors are non professional auditors (common in non-profit organisations) and internal auditors. However, the focus of this thesis is on external auditors, which means that only the first of the three forms of auditors stated above is relevant for further presentation.

¹³ As described later in this chapter, the regulatory audit framework (ISA (International Standards on Auditing)) which auditors are obliged to apply, is to a large extent equivalent in different countries. Further, according to paragraph 7 of the foreword of RS/ISA, the international trend which is characterised by increased harmonisation and interdependence, is also present in the auditing profession.

also been shown that auditors view these regulations as difficult to apply in practice (Larsson et al., 2002). A related question concerns the ability of these regulations to increase auditors' possibilities of detecting and preventing occupational fraud. According to Jönsson (2005), this possibility is limited due to the focus on risk and materiality combined with the fact that the CEO, whom the auditors are dependent upon in order to keep the audit engagement, is often involved in the fraudulent activities carried out. In other words, an audit has a tendency to miss the target as a result of the limitation of the audit and the dependency upon a good relation with the CEO in order not to lose a profitable client.

Finally, Öhman (2006) has shown that auditors are not inclined to increase the scope of their audit concerning fraudulent activities. In other words, there is a tendency among auditors to rather audit "right/correctly" than to audit "right things" (Öhman, 2005 and Öhman, 2006).

Much of the rest of this chapter is based on FAR (2005) and chapter 8 on auditing in Öhrlings PricewaterhouseCoopers (2004), which are recommended for additional information about the role of an auditor.

2.2 THE PURPOSE OF AN AUDIT AND AUDIT INDEPENDENCE

The purpose of the audit, from an auditor's perspective, is, in short, to assess whether the income statement together with the supplementary disclosures give a true and fair view of the result of the company. An auditor is also supposed to assess whether the stated assets and liabilities exist, whether they belong to the company and are correctly evaluated and that the income statement and the balance sheet are in accordance with the accountancy. Finally, the auditor shall assess whether the information provided in the statutory administration report gives a true and fair view of the result and situation together with the income statement, the balance sheet and the supplementary disclosures and that the statutory administration report corresponds with statutory regulations and generally accepted accounting principles.

The purpose of an audit can also be described from the perspective of the stakeholders of an audited company. All companies, regardless of legal form, have stakeholders. Examples of stakeholders are owners, creditors, banks,

suppliers, employees, customers and the government. In order for the stakeholders to be able to rely upon the information concerning the economic situation as well as the governance presented by a company, all limited liability companies in Sweden are required by law to undergo a yearly audit.¹⁴ The role of the auditor is to guarantee the quality of the information presented.

Through the work of an independent auditor, the stakeholders will not need to undertake controls of their own (at least not to the same extent) to verify the information presented by a company in which they have a specific interest. For example, banks and other creditors can, with greater confidence, evaluate the information presented by the company and thereby the prospects of the company to be able to repay its loans. Furthermore, even though the governance undertaken by the CEO and the members of the Board of Directors is one aim of the audit, the CEO and the members of the Board of Directors can often have great use of the evaluations and viewpoints of the auditor and through the auditor, the CEO and the members of the Board of Directors can have a qualified partner to discuss various economic issues of interest. Finally, the government is, through the work of an auditor, provided with an additional control mechanism concerning the levying of taxes as well as combating irregularities, embezzlements and other economic crimes. This final example highlights the main area of interest of this thesis.

Audit independence and objectivity

In addition to the role as an examiner, the auditor also often acts as advisor in issues relating to the examination portion of the audit. The role as advisor places extra strain upon the auditor in terms of objectivity. In order to uphold a position of objectivity in relation to the audited company, a Swedish auditor is required to apply a specific procedure called “Analysmodellen”.¹⁵ *Analysmodellen* is a model that stipulates different situations, which an

¹⁴ An official report is currently, in 2007, made in order to evaluate whether or not small limited liability companies should be required to undergo a yearly statutory audit. The results of the investigation were presented in April 2008 and suggested a rather radical change in the legal obligation of limited liability companies in Sweden to undergo an audit.

¹⁵ According to ethical regulations of FAR-SRS.

auditor is to avoid or handle in an appropriate manner in order to maintain objectivity.¹⁶

Analysmodellen is intended to counteract a number of threats which could put the auditor in compromising situations. These threats include: the threat of self interest, the threat of self examination, the threat of being partial in a situation characterised as a legal matter, the threat of friendship and finally, the threat of fright and other circumstances.

An auditor is, according to 21 § The Auditors Act (Revisorslagen), obligated to apply Analysmodellen before every engagement in order to test his independence and objectivity.¹⁷ To avoid the above stated threats, an auditor either needs to prevent the threat from ever occurring or the auditor needs to handle the threat in a manner that the threat and its effects are eliminated. Further, an auditor is obligated to pay attention to ethical aspects in his exercise of the auditing profession. For example, an auditor is not to engage in extensive business activities outside his work as an auditor.

The various roles in which an auditor may act are regulated by several legal statutes.¹⁸ The Swedish Companies Act stipulates that which the elected auditor shall and shall not do. The Auditor Act (Revisorslagen), The Auditors Ordinance (Revisorsförfordningen) and Auditors Regulations (Revisorsnämndens föreskrifter) regulate what qualified auditors (“godkända” and “auktoriserade”) shall do and are permitted to do. FAR-SRS, through their professional ethical rules, stipulate what their members shall and are permitted to do. General civil law statutes stipulate what rights and obligations professional auditors are to follow when they conduct operations, which are not directly regulated by the above mentioned enactments.

¹⁶ Exercising the right to give advice is, however, not only a problem (in terms of objectivity) but it also has positive preventive effects in terms of guiding the company in how to better follow and apply legal statutes.

¹⁷ In order to follow 21 § The Auditor Act, an auditor needs to pay attention to “Analysmodellen för prövning av revisorers opartiskhet och självständighet” (Analysmodellen for testing the impartiality and independence of auditors (translation by author)) as well.

¹⁸ For a complete list of regulations concerning the work of auditors, see Appendix 1.

2.3 FORENSIC/FRAUD AUDITING

In general terms, forensic auditing is the process through which an auditor can

deliver a finding as to accounts, inventories, or the presentation thereof that is of such quality that it would be sustainable in some adversarial legal proceeding, or within some judicial or administrative review. Findings are based upon the scientific detection and interpretation of the evidences of phenomena introduced into the books and records of an accounting system (expansively defined) and the effects of such phenomena upon the accounts, inventories, or the presentation thereof. (Crumbley, 2006)

It can also be described as:

Forensic accounting is the application of accounting knowledge and investigative skills to identify and resolve legal issues. It is the science of using accounting as a tool to identify and develop proof of money flow. Fraud and forensic accounting is a broad area that includes occupational fraud, corruption and abuse, financial statement fraud and civil litigation matters. Forensic accounting includes the use of accounting, auditing, and investigative skills to assist in legal matters. (Houck et al., 2006, p. 68)

In other words, forensic auditors use explanatory analysis (cause and effect) of phenomena and the effects of such phenomena. Objective verification is considered the main methodology. In general, the work of a forensic auditor has two sides of focus – the evidence of economic transactions and reporting *and* the legal framework which allows such evidence to be suitable to the purposes of establishing accountability and/or valuation. It is also important to recognise the differences in engagements between an auditor and a forensic auditor. While an auditor audits material misstatements, a forensic auditor audits misstatements which may be immaterial in size. A forensic auditor is often engaged either to investigate alleged or suspected cases of occupational

fraud or as a consultant in order to provide advice on how to combat or prevent occupational fraud from occurring in an organisation.

Differences between an external auditor and a forensic accountant

As noted above, the work of a forensic auditor seems to differ from the work of a normal auditor. The work of a forensic auditor can be described more as to discourage, discern and document incidences of occupational fraud, theft, embezzlement, and commercial bribery. Bologna and Lindquist (1995, p. 32-33), mention the following two aspects of forensic auditing, which serve to differentiate it from normal auditing. *Firstly*, forensic auditing can be described more as a mind-set than a methodology. *Secondly*, during the course of the audit, forensic auditors focus on exceptions, oddities, accounting irregularities, and patterns of conduct, not on errors and omissions. In other words, a forensic auditor focuses on deliberate mistakes while an auditor focuses on material mistakes. Bologna and Lindquist (1995) state a number of questions that a forensic auditor asks himself and which distinguishes him from normal auditing practice:¹⁹

- Where are the weakest links in this system's chain of controls?
- What deviations from conventional good accounting practices are possible in this system?
- How are the off-line transactions handled, and who can authorise such transactions?
- What would be the simplest way to compromise this system?
- What control features in this system can be bypassed by higher authorities?
- What is the nature of the work environment?

In addition, Bologna and Lindquist (1995) emphasise the fact that an audit for occupational fraud is more of an intuitive process than a formal, analytic methodology, i.e. it is more an art than a science. All patterns of oddities and exceptions are to be paid attention to – *“the things do not fit in an organized scheme because they seem too large, too small, too frequent, too rare, too*

¹⁹ See Bologna and Lindquist (1995, p. 32).

high, too low, too ordinary, too extraordinary, too many, or too few, or feature odd times, odd places, odd hours, odd people, and odd combinations." (Bologna and Lindquist, 1995, p. 32-33) In short, the forensic auditor looks for the unusual rather than the usual. It is a matter of mind-set more than a methodology.²⁰

In other words, it is important to acknowledge the difference between an auditor and a forensic auditor in the approach of their investigation/audit. Thus, while the forensic auditor focuses on oddities which can lead to the discovery of a crime (or a potential perpetrator of a crime), the auditor focuses on material misstatements which result from deliberate or non-deliberate actions taken. Further, the forensic auditor's training also includes the accumulation of mental templates for the many variations of transaction fraud, while an auditor focuses on the possible material misstatements in the financial reports without focusing on the single transactions as such (if there is no further reason to do so).²¹ However, the auditor is, according to RS 240 (and the *Brottskatalogen* since it is a part of RS 240), obliged to react to signs of fraud and report any arising suspicion of fraud being committed.

It is generally difficult to overcome misunderstandings concerning the differences between an auditor and a forensic auditor. Or as Davia et al. (1992) put it: *"It is difficult for auditors to explain to the lay public that to expect a CPA to discover fraud in a customary audit effort is like expecting a person to go both north and south at the same time. The required audit techniques and methodology are so unlike that to do both would be tantamount to performing two audits."* (Davia et al., 1992, p. 25) The difference concerns *transaction fraud* vs. *fraudulent financial reporting*.

²⁰ It is interesting to note that there seem to be differences in how fraud experts work in different countries. According to Labelle (2004), it is recognised *"that the shaping of the emerging investigative and forensic accounting specialty differs between countries whose legal system is based on common law and those whose legal system is based on codified or civil law"* (p. 491).

²¹ See Davia et al. (1992, p. 26).

2.4 SUBSTANTIVE TESTING AND INTERNAL CONTROL

2.4.1 GENERAL ASPECTS OF SUBSTANTIVE TESTING AND INTERNAL CONTROL

The strategies of the audit can, broadly, be divided into two parts – substantive testing *and* testing of internal control. Substantive testing refers to procedures when the income statement and the balance sheet as well as the transactions behind those reports are being audited more directly. More specifically, substantive testing can include examining single transactions and balances, transactions and balances conducted with external parties and physical inventory taking. However, substantive testing can also refer to analysis of trends, comparisons through different business ratios, which are altogether referred to as an analytical review. Different comparisons during an analytical review include comparisons with previous periods' figures, budgets, and business ratios for different years or for different companies within the same line of business. The application of business ratios often results in a focus on potential areas of risk which require further examination. In addition, statistical methods are often used in order to select which transactions to audit.

The term internal control refers to senior management's control over, firstly, that the accounting of the company is accurate and complete and, secondly, that the resources are managed in line with the intentions of the CEO and the Board of Directors. Or in other words, internal control can be described as:

the process by which an entity's board of directors, management and/or other personnel obtain reasonable assurance as to achievement of specified objectives; it consists of nine interrelated components, with integrity, ethical values and competence, and the control environment, serving as the foundation for the other components, which are: establishing objectives, risk assessment, information

*systems, control procedures communication, managing change and monitoring.*²²

Internal control can also be defined as:

*A system of internal control means all the guidelines and routines (internal controls) which the senior management imposed in order to achieve the goal to, as far as possible, ensure that the business is well managed and efficient. This includes routines to ensure that the guidance which is decided is followed, that assets are protected, that fraud and misstatements are prevented and detected, that the accounting is correct and complete and that reliable financial information is prepared on time. A system of internal control covers more than the matters which directly concern the functions of an accounting system.*²³

In other words, through the internal control, the senior management attempts to direct the company towards its goals and manage the risks present in doing so. A well functioning internal control can enhance the possibilities of the company to use its resources wisely, protect its assets, and provide reliable financial information as well as obeying legal statutes and other regulations. This control, or possibly lack of control, is of vital importance for auditors in order to evaluate the accuracy of the accountancy as well as the management in general of the CEO and the Board of Directors. Furthermore, through an assessment of internal control, the auditor can assess the need and extent of substantive testing in order to achieve sufficient confidence regarding the accountancy as well as the management of the CEO and the Board of Directors.

Generally speaking, the stronger the internal control in a company, the less substantive testing is required in order to gain enough confidence from the audit. Further, generally speaking, the larger the company audited, the greater

²² The definition of the Treadway Commission entitled *Internal Control – Integrated Framework*, quoted in Davia et al. (1992, p. 35).

²³ RS p. 294. (in the 2005 year edition of FAR II 2005). Translation from Swedish by author.

the focus on examining and testing the status of the internal controls, since it can be very time consuming to examine the substantive audit evidence of companies that carry out large numbers of transactions. However, not only does size play a role, but also business, IT-functions, possibilities of the owners of the company to exercise personal control, the geographical division of the company's operations etc. play a significant role in determining the importance of internal control. However, irrespective of business etc, the auditor is to choose the audit strategy which in the most efficient way provides him with enough comfort to write an unqualified audit report.

It is important to realise that a well functioning system of internal control can not only decrease the risk of mistakes in the daily operations of the company but also decrease the possibility of intentional mistakes from being committed. Thus, the internal control of a company can play a crucial role in fighting fraudulent behaviour in a company.²⁴ However, internal control systems cost money. Hence senior management must always make a trade off between control and the cost of such control.

What then are the common forms of internal control? Morris (2005) lists five aspects of commonly applied forms of internal control (p. 456). *First*, that the assignment of responsibilities and the division of duties is well planned and managed. This implies that no person should be able to conduct all steps of a transaction. It is appropriate that accountancy, payments and control are managed by different people or divisions. *Second*, the system of approval and reporting must be appropriate. *Third*, clear organisational structures, which provide for an appropriate degree of supervision and independent review. *Fourth*, physical controls over the security of assets. *Finally*, reconciliations, control of totals and other arithmetical checks and budgetary controls.

2.4.2 AN INTERNATIONAL MODEL FOR EVALUATING INTERNAL CONTROL

In order to improve the applicability of internal control, a model has been constructed by an American committee. The model has been successfully

²⁴ In Coleman's model (one of the models of analysis applied in this thesis, see further chapter 3) of why economic crime is conducted, the internal control could be said to decrease the third factor of explanation, opportunity, but also the motive/incentive factor of explanation.

accepted internationally. The model, known as the COSO-model,²⁵ defines internal control as a process through which the Board of Directors, management and other employees gather reasonable comfort that the goals of the company are achieved within the following three areas: the appropriateness and efficiency of the business conducted, the reliability of the financial reports and the conformity of legal statutes and regulations. Focus is on internal control as an integrated process through which management exercises control. In addition, the model recognises that it can only provide reasonable assurance.²⁶

The COSO definition consists of five parts²⁷: control environment, risk assessment, control activities, information and communication, and monitoring of controls. The five components can, in short, be described as follows:²⁸

- *Control environment* is the part of the internal control in which the tone of an organisation is set. The control environment influences the control perception of its people. It is also the basis for the other four parts of the internal control framework and provides discipline and structure in the organisation. Typical components of the control environment are ethics, integrity, leadership, division of duties, organisational structure and the commitment and management of the senior management.
- *Risk assessment* is the company's process for identifying and analysing relevant risks to achieve its objectives. As a result of the risk assessment, a basis for determining how the risks should

²⁵ Committee of Sponsoring Organisations of the Treadway Commission.

²⁶ The demand for efficient and reliable internal control has received increased attention after the financial shenanigans and misappropriations that took place at Enron, Worldcom etc. The result, in America, is the Sarbanes Oxley Act which puts great pressure on companies in America or listed on one of the stock exchanges in the USA to conform to the new regulations. However, the focus in this thesis is on Swedish experiences of fraudulent behaviour and therefore the discussion of Sarbanes Oxley Act etc. will not be presented any further.

²⁷ There is also a version of the COSO-model which contains six components. This model has for example been applied by The Swedish National Audit Office (Riksrevisionen) in an analysis of corruption (see Riksrevisionen, 2006).

²⁸ Definitions are collected from www.coso.org.

be managed is formed. Risks are both of internal as well as external origin.

- *Control activities* are the policies and procedures that help ensure that management directives are carried out. Typical control activities are the division of duties and assignment of responsibilities, routines of approvals, matching, follow up of results and protection of assets.
- *Information and communication* systems serve to identify, capture, and exchange information that enables individuals to carry out their responsibilities. The main technical component of a company's information and communication is normally its IT-system which the company often is very dependent upon and vulnerable to disruptions in.
- *Monitoring of controls* is a process where an assessment of the quality of internal control performance over time is made. This is achieved by ongoing follow up activities, separate evaluations or a combination of the two.

During the course of the audit, an auditor should conduct an overview of the five components above within each of the audit areas which are deemed as material. In doing so, an auditor needs to be aware of the fact that internal control almost always varies between different areas of a company as well as between different companies. Based on the assessment of the internal control components in the COSO-model (with respect to materiality), the auditor documents an overall auditing plan. Important aspects to consider when constructing such a plan are: knowledge of the business, understanding of the accountancy system and the system of internal control, risk and materiality, scope and nature of the audit steps and coordination, management, supervision and control.

2.4.3 AN ALTERNATIVE MODEL OF INTERNAL CONTROL

Even though the COSO-model dominates the area of internal control, other models also exist.²⁹ One such model is the Criteria of Control (CoCo)

²⁹ See Spencer Picket (2005, p. 93-94).

framework. CoCo was developed by the Canadian Institute of Chartered Accountants (CICA) and is now an international standard just as is the case with the COSO-model. The CoCo-model places emphasis on the inter-relationship between the different criteria of internal control. Thus, according to CoCo, control elements can not be designed or evaluated in isolation from each other. In addition, control should be seen just as much a function of people's ethical values and beliefs as it is of standards and compliance mechanisms. According to Spencer Picket (2005, p. 93-94) the risks which need to be identified and mitigated include two more fundamental risks to the viability and success of the organisation: *"failure to maintain the organisation's capacity to identify and exploit opportunities"* and *"failure to maintain the organisation's capacity to respond and adapt to unexpected risks and opportunities, and make decisions on the basis of telltale indications in the absence of definitive information"*.

The different components of the CoCo-model are *Purpose*, *Commitment*, *Capability*, *Action* and *Learning Monitoring* (see Spencer Picket, 2005, p. 94 for more extensive explanations).

- *Purpose* – that a requirement exists for a clear direction and sense of purpose of objectives, mission, vision and strategy, risks and opportunities, policies, performance targets and indicators.
- *Commitment* – that people within the organisation must understand and support the organisation's identity and values. This includes for example ethical values, integrity, human resource policies, authority, responsibility and accountability as well as mutual trust. In other words, good internal control requires getting people to feel part of the arrangements of the organisation.
- *Capability* – that people must be equipped with the resources and competence to understand and set free the requirements of the control model. This should include skills and tools, communication processes, information, co-ordination, and control activities. In other words, making the staff capable of achieving the control requirements.
- *Action* – the act of performing the activity that is being controlled.

- *Learning monitoring* – this part of the model includes not only hard controls such as inspection, checking, supervising and examining but also soft controls such as challenging the assumptions of the employees within the organisation. Each activity undertaken should also be seen as a learning process which carries an organisation to a higher dimension.

2.5 AUDIT OF THE MANAGEMENT’S ADMINISTRATION

Above, two strategies of auditing have been described, i.e. substantive testing and test of internal control. In this section, another aspect of the auditing process will be presented. The statutory audit in Sweden is normally divided into an audit of accounts and an audit of the management’s administration. Hence, substantive testing and internal control can both be applied to the accounting records as well as to the management of the company.

An audit of the accounts covers the audit of accountancy, the annual report and the consolidated financial statements. Since this part is what most people normally view as typical audit work, this aspect will not be described any further.³⁰ Instead, the focus will be on the audit of the management’s administration since this part of the audit constitutes a special feature of the statutory audit in Sweden.³¹ An understanding of the audit of management’s administration is important since, the testing of internal control is normally carried out during this phase of the audit.

What is an audit of management’s administration?

During the audit of management’s administration, the auditor shall appraise whether any actions or omissions of the CEO or members of the Board of

³⁰ See FAR (2005) for further information concerning *audit of accounts*.

³¹ Only the statutory audit in Sweden and Finland requires audits of management’s administration. However, audits of accounts and audits of management’s administration are not two parts which are completely separated from each other. Consequently, some parts of the “typical” audit of management’s administration are also conducted during the course of the audit of accounts which makes the difference between the statutory audit in Sweden (and Finland) less atypical than it first appears. See further Chapter 4 in FAR (2005).

Directors can result in a liability to pay damage compensation to the company. The auditor also needs to pay attention to several legal statutes during the audit. In other words, the auditor shall evaluate other infractions of the Swedish Companies Act, the Swedish Annual Accounts Act and the articles of incorporations. Finally, the auditor also needs to evaluate whether the company has fulfilled its obligation to maintain accounting records.

The audit of management's administration is a prerequisite for the auditor to express an opinion concerning discharge from liability of the CEO and the members of the Board of Directors. Further, findings from the audit can even obligate the auditor to report his suspicion of economic crime to a public prosecutor.³² As mentioned above, the line between an audit of management's administration and an audit of accountancy is thin. For example, findings from the audit of accountancy can be used when conducting the audit of management's administration and vice versa.

Main auditing steps during the audit of management's administration are to review the planning and control of the senior management. In addition, it is important to assess other management measures in order to examine whether the CEO or the members of the Board of Directors have violated The Swedish Companies Act, the articles of incorporation, or caused any other damages to the company through omissions or inappropriate measures. The auditor also needs to take into consideration whether essential decisions made have been based on sufficient supporting documentation. In cases when the CEO or the members of the Board of Directors have caused economic harm through deliberate actions or negligence, a liability for damages resulting from this may arise.

2.6 RS 240 AND THE LEGAL OBLIGATION OF AN AUDITOR TO REPORT ON ECONOMIC CRIME

The Swedish auditing standards, which cover fraud and occupational fraud, RS 240, states an obligation for an auditor to take into account the risk of material misstatements in the annual report as a result of fraudulent conduct in

³² See further the section 2.6 below concerning the legal obligation of auditors to report on economic crime.

the audited company. Fraudulent conduct refers for example, according to RS 240 paragraph 3, to the accountancy or documents being manipulated, altered or counterfeited, assets being embezzled, effects of transactions being suppressed or omitted from the accountancy or documents, transactions without substance being entered in the books, and the accounting principles being inaccurately applied. All of these stated examples are, in order to be classified as fraudulent conduct, cases involving deliberate actions undertaken by individuals inside a company.³³

According to paragraph five, the management of the company is responsible to prevent and detect fraud and occupational fraud through implementing and maintaining appropriate accounting systems and systems for internal control. Such systems decrease, but do not eliminate the risk of fraud. Further, according to paragraph six, the auditor is not responsible for preventing fraud, but is merely acting as a deterrent to fraudulent conduct.

However, the responsibility of the auditor in planning the audit, according to paragraphs seven and nine, is to assess the *risk* of fraud which can result in material misstatements in the annual report as well as report to the senior management every case of fraud or material misstatements discovered during the audit. Circumstances indicating a greater risk of fraud and material misstatements are a deficient accounting system and internal controls. Other indicators include issues concerning the integrity and competence of senior management, unusual strain on or within the company, unusual transactions or problems relating to acquiring sufficient and appropriate audit evidence. Based on his risk assessment, the auditor shall construct an audit which provides him with sufficient assurance that fraudulent behaviour and material misstatements will be discovered during the scope of the audit.

However, irrespective of how well the accounting system and the internal control in a company works, such systems can still render themselves ineffective to fraudulent conduct carried out by employees in collusion with

³³ Fraud is, however, not easy to define, which is shown through an overview of the international literature. According to the Oxford Legal Dictionary fraud is defined as “*a false representation by means of a statement or conduct made in order to gain a material advantage*”, but the definition applied in the literature in general can vary. See further Croall (2001, pp. 26).

the senior management (paragraph 14). Such circumstances, combined with the inherent limitations of an audit, will always make fraudulent conduct or material misstatement possible in a company.

In case the audit steps outlined in the planning of the audit have been carried out and signs of fraud or material misstatements have been noticed, the auditor is required to evaluate the potential effects of fraud on a company's annual report. If the auditor in such cases assesses that those circumstances can have a material effect on the annual report, he must adjust or increase the extent of the audit in an appropriate way. In the Swedish version of ISA 240 (RS 240), an extended audit is required if the suspicion of fraud has not been possible to dismiss through the additional audit steps carried out. The extension, RS 17SE, states that the auditor in such a case, must discuss the issue with senior management and evaluate whether the issue has been corrected in an accurate way in the annual report or not. In addition, in such a situation, the auditor is also required to pay attention to and act in accordance with the legal obligations stated in the Swedish Companies Act (see further below).

*The legal obligation of an auditor to report on economic crime*³⁴

In accordance with *generally accepted auditing standards*, auditors are obliged to apply RS 240 (Fraud).³⁵ Furthermore, according to Chapter 9, 42-44 §§, of the Swedish Companies Act an auditor is obliged to act when he suspects that certain economic crimes have been committed. However, not all crimes obligate the auditor to act. Instead, a specific catalogue stating the specific crimes has been created which 42-44 §§ specifies.³⁶ The crimes referred to in 42-44 §§ are, in short:³⁷

³⁴ This thesis neither primarily deals with the legal obligation of auditors to report on economic crime, nor with auditors' perception of these regulations. However, the legal obligation is of great importance when studying occupational fraud in connection to the work of auditors. Furthermore, some of the crimes included in the legal obligation are chosen for further study in the thesis.

³⁵ The Swedish version of ISA 240 is called *RS 240 Oegentligheter och fel*.

³⁶ According to Larsson (2005), the obligation to report suspicions of crime, which was enacted in 1999, was not, like earlier regulation attempts in this direction, a reaction to major frauds or scandals, but a part of broader social-democratic policies

1. Fraud/deception and swindle/scams
2. Criminal (monetary) receiving
3. Embezzlement, fraudulent conversion and other breaches of trust
4. Fraud against creditors, including accounting fraud
5. Bribes and bribery
6. Tax fraud

It is important to recognise that *suspicion* only concerns the CEO as well as members of the Board of Directors of a company.³⁸ In cases of suspicion of criminal acts committed by the CEO or a member of the Board of Directors within the boundaries of the business of the company, the auditor is obligated to report the suspicion to the Board. Furthermore, no later than four weeks after the Board of Directors has been notified of the suspicion, the auditor is obligated to resign from his engagement and notify The Swedish Companies Registration Office (Bolagsverket) of his notification to the Board of Directors. At the same time, the auditor shall report his suspicion to a public prosecutor. If actions have been taken by the company to repair the damage or the criminal act has been reported to public prosecutor, no further actions need to be taken by the auditor.

However, the auditor is not obligated to act in cases of uncompleted action, i.e. neither in cases of attempt nor at the preparatory stage. But cases of com-

during the period. In short, it was meant to develop industrial democracy, to fight economic crime, and to improve economic markets.

³⁷ See FAR (2006).

³⁸ However, even though the range of individuals of suspicion is limited to the CEO and members of the Board of Directors, a criminal act committed by another employee still can require the auditor to act in accordance with 42-44 §§. The reason stems from the fact that the CEO or the members of the Board of Directors may be charged as accomplices as a result of their lack of response if they, after being notified by the auditor of the crime, do not take actions to prevent the employee from committing further crimes. The criminal acts found by the auditor during the audit and which are committed by employees other than the CEO or members of the Board of Directors, require the auditor to report to the Board of Directors even though it does not require the auditor to act in accordance with 42-44 §§. This is a result of generally accepted auditing standards, stated in RS 240. FAR (2006), p. 41.

plicity in crime as well as instigation of crime both require the auditor to act in accordance with the above stated regulations.

An additional question is the level of suspicion which must be present in order to require the auditor to act in accordance with 42-44 §§. The legal term used is “suspicion”.³⁹ However, the legal regulation which requires the auditor to act in cases of suspicion of crime has not altered the auditing process as such. Thus, the auditor is not required to conduct a greater and more far reaching audit in order to fulfil the requirements of 42-44 §§. *Generally accepted auditing standards*, according to RS, are still what determine the scope of an audit (FAR, 2006, p. 44). However, as soon as the auditor suspects criminal actions taking place within the company, he is required to take the steps described above (42-44 §§). The term “suspicion” is normally viewed as a low degree of evidence requirement. FAR (2006, p. 45) describes it as, above the level at which a public prosecutor is required to launch a preliminary investigation but below the level of suspicion of good reason. Thus, the level of required suspicion is low. However, the auditor is not required to evaluate whether the suspected crime will actually lead to a conviction or not.

The Swedish National Economic Crimes Bureau (Ekobrottsmyndigheten), has published a memorandum which states several examples of “warning signals” which include, for example, an unjustified large amount of cash, a negative cash balance, use of journal vouchers in cases where supporting vouchers should be accessible/used, meagre or incomplete supporting vouchers, and incorrect classifications of business transactions (Ekobrottsmyndigheten, 2004).

Comparison between the two frameworks of regulation

As described above, the Swedish version of ISA 240 (RS 240) requires the auditor to pay attention to the legal obligations stipulated in Chapter 9, 42-44 §§ of the Swedish Companies Act (paragraph 17SE RS of RS 240). In this sense, the 42-44 §§ can be said to be included within the framework of generally accepted auditing standards according to RS. Further, according to

³⁹ The Swedish term is “misstanke”.

RS 250, an auditor is obligated to pay attention to legal statutes and directions during the course of an audit.

However, as described above, the examples of fraud only partly fit into the catalogue of economic crimes stated in Chapter 9, 42-44 §§ Swedish Companies Act. This indicates some differences in the general purport of fraud according to RS 240 and meaning of economic crimes according to 42-44 §§. Further, the foreword of RS, paragraph 17-18, states, partly, that RS is only meant to be applied to material circumstances, partly that it is unfeasible to create standards which comprise generally accepted auditing standards for all possible situations of auditing. Consequently, auditors shall, according to paragraph 18, regard the RS as fundamental principles to follow during the course of an audit. Subsequently, from this perspective, RS 240 seems to take on a different view than in 42-44 §§. The conclusion drawn from the discussion above can be summarised as that the obligations stated in 42-44 §§ are either part of the RS 240 *or* RS 240 and 42-44 §§ reflect different aspects of fraudulent behaviour. In any case, RS 240 and 42-44 §§ are both part of the Swedish generally accepted auditing standards.

A further difference concerns who the perpetrator of a crime is. According to RS 240, anyone within the audited company can be a perpetrator whose crime results in an obligation of an auditor to take actions. According to 42-44 §§, it is only the crimes committed by the CEO or a member of the Board of Directors which obligates the auditor to file a report to the public prosecutor, resign from the engagement, etc. Again, the regulations of 42-44 §§ seem to be included within the RS 240.⁴⁰

2.7 CHAPTER SUMMARY

This chapter has brought attention to several topics of relevance for this thesis. Focus has been on the role of an auditor, how an audit is structured, requirements for auditors concerning economic crimes, and that which distinguishes auditing from forensic auditing. An important part of the chapter has also been the presentation of internal control which is one of the two

⁴⁰ See also RevU 4 Revisorns åtgärder vid misstanke om brott (The auditor's proceedings in cases of suspicion of crime (translation by author)).

strategies applied during an audit. The presentation of internal control is also of special interest since it covers one of the two models of analysis applied in this thesis (the COSO-model).

The goal of the chapter has been to shed light upon some features which are specific to the work of auditors in order to better understand the institutional framework of an audit and the specific strategies which are applied during an audit as well as those obligations facing auditors concerning fraud and occupational fraud. For example, it has been shown that an auditors' main purpose is not to audit for fraud or occupational fraud, but to audit for non-deliberate misstatements and errors.

3. FRAUD AND OCCUPATIONAL FRAUD

3.1 INTRODUCTION

This chapter provides a general overview of fraud and occupational crime. The aim is *not* to give any further description of previous research (see chapter four below) but to provide the reader with a better understanding of the topic in general and more specifically, of red flags and internal control. A large part of the chapter is based on the influential textbooks written by Bologna and Lindquist (1995) and Davia et al. (1992).

An important aim of this chapter is to present an overview of the area of study and to exemplify the diversity of fraud and occupational fraud in order to better understand the analysis conducted in chapter 6. The chapter also aims at presenting one of the key models applied in this thesis (the Coleman model). In addition, the chapter connects occupational fraud to the importance of internal control, hence linking the general description of internal control in the previous chapter with occupational fraud presented in this chapter. In short, this chapter is an additional step towards motivating the choice of method and the models applied in the thesis.

3.2 CONFUSION OF LABELS

The international literature on economic crime is vast. However, despite the vastness of the literature, not only is there broad international research as such regarding the *definition* of “economic crime” but the term itself is a source of confusion. Widely used labels of the research area include *white-collar crime* (Sutherland, 1949), *corporate crime* (Shapiro, 1990), *occupational crime* (Clinard & Quinney, 1973) and *business crime*.⁴¹

As the different labels indicate, the area of research of economic crime has been conducted from different perspectives. Each perspective has focused its attention on different aspects of the field. In this thesis, focus is placed on the area called occupational fraud/occupational crime which, in short, focuses on

⁴¹ The Swedish confusion of labels is great as well with terms and labels as ”manschettbrott”, ”ekonomisk brottslighet”, ”företagsbrottslighet”, etc. See further, BRÅ (2000:23).

the employees as perpetrators and with the company they work for as the victim. Any deeper analysis of the terminology will not be conducted. Further description of the area of occupational fraud is provided below.

3.3 AN OVERVIEW OF FRAUD ON A GLOBAL AND SWEDISH LEVEL

The Global Economic Crime Survey 2005 conducted by Pricewaterhouse-Coopers presents a broad overview of fraud within companies world-wide.⁴² According to the survey, 45 percent of the included companies had fallen victim to fraud in the past two years. In addition, the larger the company, the more likely it is to have experienced fraud. The results are relevant to all industries, whether regulated or unregulated. The average cost to companies from tangible frauds (i.e. asset misappropriation, false pretences, and counterfeiting) was USD 1.7 million.

The general picture presented by the study acknowledged that most frauds involve a lack of adequate internal controls (opportunity), the need to maintain an expensive lifestyle (incentive), and the perpetrator's lack of awareness that his actions were wrong (Neutralisation/Attitude).⁴³ In addition, the typical perpetrators of fraud were male (87 percent), and many were between the ages of 31 and 40 (38 percent). Half of the perpetrators were employed by the defrauded company and approximately one quarter of them held senior management positions.

According to the study, most frauds identified are detected by chance (e.g. through tip-offs) (34 percent). The internal audit is the single most successful control/process for detecting incidents of fraud (26 percent of all cases). In addition, companies which employ a range of fraud detection measures uncover significantly more cases than those who rely on internal controls and audit processes alone to detect fraud.

The study emphasises that the larger and more complex the organisations are, and the more complex the transactions taking place in a company are, the more anonymity among staff is created which furthers fraudulent behaviour. In larger companies, fraudsters often also view the fraud as a victimless crime.

⁴² The survey is based on 3.634 interviews in 34 countries with senior executives.

⁴³ Compare Coleman's model of explanation presented below.

However, more than 10 percent of smaller companies reported losing more than USD 1 million in the past two years due to tangible fraud. In many of these cases, fraud is likely to constitute a threat to their commercial success. In dynamic periods, the likeliness of fraud increases by approximately 20 percent. Misappropriation of assets is the most prevalent fraud occurring in companies. Of the people committing fraud, senior management constitutes about 23 percent (in smaller companies alone, 35 percent) of reported fraud.

3.4 THE COLEMAN MODEL OF EXPLANATION OF OCCURRENCE OF FRAUD

The Coleman model is based on three factors of explanation of the occurrence of fraud: Motive/incentive, Neutralisation/attitude (incentive driven rationalisations), and Opportunity (Coleman, 2001 and BRÅ, 2003). In order to devise the model, James Coleman screened the theories mentioned in the economic crime literature in order generate his model.⁴⁴ The model's aspects are presented below.

The driving force when individuals commit economic crime is called their *Motive/incentive*. According to Weisburd et al. (2001) individuals who commit economic crime can, in general, be divided into two categories: crisis reactors and opportunity takers.

The first category, *crisis reactors*, reacts to some sort of crisis. The crisis can take almost any form, but the common denominator is that the perpetrator takes advantage of his position of confidence. In other words, the perpetrator responds to a crisis or threat by committing a crime. In general, the perpetrator “*corresponds to images of respectability and conformity rather than instability and deviance*” (Weisburd et al., 2001, p. 59). An economic crisis, generated by hard competition, can in some cases, trigger the crisis reaction.⁴⁵

⁴⁴ It should be noted that the Coleman model originally is a broad criminological model which has become a common and trusted model to apply when analysing cases of economic crime.

⁴⁵ An interesting parallel can be drawn to what is normally referred to as the Kahneman-Tversky principle (BRÅ, 2003). The principle states that a person

The *opportunity takers* do not react to a situation characterised by crisis; instead, these perpetrators take advantage of a specific situation (the situation can either be coincidental or actively sought out by the perpetrator). According to Coleman, the character traits which engender criminal behaviour are often either risk inclination or greed. Many perpetrators also fear failure or loss of social respectability, which explains why more economic crimes are committed during economic slow downs than during economic booms.

Finally, *motives/incentives* are also generated by culture, which both can be in society in general as well as in the specific company where or by which the crime is committed.

The second category, *neutralisation/attitude*, means the ability to rationalise one's behaviour to justify actions taken. The importance of neutralisation can be derived from the fact that individuals who commit fraud normally share the values of the society in general. For example, one often applied rationalisation is that "everybody else is doing it", which enables the perpetrator to still view himself as a law abiding citizen. In addition, neutralisation plays its most important role before, rather than after the crime is committed.

The third and final factor, *opportunity*, means that the possibility to commit a criminal act is present. In addition, the opportunity is also closely related to the threat from controls present to prevent crimes from being carried out. Thus, a weak internal control system often creates the possibility to commit fraud. (BRÅ, 2003)

3.5 WHY DO PEOPLE COMMIT FRAUD AND OCCUPATIONAL FRAUD?

According to the Global Economic Crime Survey 2005 conducted by Price-waterhouseCoopers, the following reasons for committing fraud were prevalent (categorised according to Coleman's model, in order of importance):

evaluates changes in one's business differently. According to the principle, the utility of increasing profits is strongly declining while the experienced utility loss from economic losses is proportionately greater, i.e. a bias exists toward committing crime in cases of threat of economic losses. See also Wahlund (1989).

Incentive:

1. Expensive lifestyle to maintain
2. Dissatisfaction with the company
3. Career disappointment
4. Layoff/redundancy

Opportunity:

1. Insufficient controls
2. External collaboration
3. Management override
4. Internal collaboration
5. Anonymity within the company
6. Foreign business customs

Neutralisation/Attitude (Self-rationalisation)

1. Lacking awareness of wrongdoing
2. Low temptation threshold
3. Self-denial of consequences to company

According to Davia et al. (1992, pp.10-11) causes of fraudulent financial reporting include “*incentives such as the desire to drive up the price of the company’s stock, to satisfy investor’s expectations, to postpone dealing with existing financial difficulties, or for a variety of personal gain schemes such as compensation and promotion*”. In addition, “*pressures such as sudden declines in market share or sales, unrealistic budgets, or short-term economic performance objectives*”. Finally, “*opportunities that are too tempting to ignore, such as an inattentive board of directors, weaknesses in the internal control system or internal control staff, complex transactions, or accounting estimates*” is another important factor of explanation according to the author.

The causes behind fraudulent behaviour stated above all follow the Coleman model of explanation. It is interesting to notice not only the mixture of reasons as such but also that the reasons constitute red flags which one can

pay attention to in order to detect fraudulent activities in a company. For example, ‘expensive lifestyle to maintain’ is a typical red flag which can be concretised through luxurious cars and vacations etc. which might not match the expected living standard of an employee. Furthermore, it is also important to recognise the comprehensive nature of the reasons, i.e. how they are divided along the three “corners” of the Coleman model and that the presence of several reasons (representing the whole model of explanation) considerably increases the risk of fraud or occupational fraud of being committed. The Coleman model of explanation is one of the models of analysis applied in this thesis and this model is described in detail below.

3.6 SIGNS OF WEAK AND STRONG INTERNAL CONTROL

The Integrated Framework as presented by the Treadway Commission recognises five weaknesses/deficiencies that have frequently been found in organisations which have experienced control malfunction (Davia et al., 1992, p. 36):⁴⁶

1. Lack of integrity, or ignoring ethical values, on the part of top management.
2. A weak or negative control environment.
3. Failure to link top-level objectives with objectives for operating and support units.
4. Poor communication within the organisation.
5. Inability to understand and react to changing conditions.

However, as Davia et al. (1992) recognise, there is no simple formula for determining an adequate system of internal control. Each organisation requires a different system of internal control. According to Davia et al. (1992, p. 38), such systems are dependent upon, for example, the size of the organisation, the degree of automation of its activities, the vulnerability of its assets, its geographical dispersion, and its employee turnover rate. The systems should not in themselves be designed to prevent fraud. However, a number of key ingredients of how to design a system of internal control do

⁴⁶ See also www.coso.org.

exist. They include: *“making it difficult to commit fraud, making it easier to detect fraud when it occurs, being cost-effective, have a fixed accountability, and being a deterrent to fraud by making its discovery likely”* (p. 38).

The above mentioned ingredients of a system of internal control can be supplemented with the key ingredients of a system of internal control which is designed more specifically as a defence against fraud. Such ingredients often emphasise the need of systems to be cost effective. (Davia et al., 1992)⁴⁷

Davia et al. (1992, pp. 44) also lists a number of different aspects to consider when designing such a system. For example, the design should include flow charting to facilitate the analysis of potential weaknesses, the most essential assets should be carefully reviewed, liabilities should be reviewed and evaluated for ways that a dishonest employee could manipulate them for his own gain and a hotline should be established which facilitates employees' reporting on any wrongdoing they detect. In addition, operating accounts should be reviewed for clues of possible opportunities of fraud. Finally, a responsive financial management system is needed, which combines accounting and information systems, i.e. a system that recognises that all parts of an organisation cost money and need to be viewed per se.

In short, in order to design a well functioning internal control system to detect and prevent fraud, one needs to recognise that the system not only needs to have strong internal controls as such, but also must be proactive in response to the changing risks of fraud which are present in an organisation. The COSO-model of internal control is a good example of such a comprehensive system in detecting as well as deterring and preventing fraud from being committed.

3.7 WHO COMMITS OCCUPATIONAL FRAUD?

The primary perpetrators of fraudulent financial reporting are, according to Davia et al. (1992, p. 49), sales personnel, accountants, decision-making middle managers, and top management. According to the author, these persons commit their schemes as a result of a soft ethical climate.

⁴⁷ According to Davia et al. (1992) combating fraud is always also a matter of justifying the costs of the preventive actions taken.

There are a number of stereotypes concerning occupational fraud. Generally, the offender is described as an elite individual and the opposite of the normal criminal. Often the stereotypes derive from media attention, which however normally focuses on high profile cases which results in a biased picture of the typical fraud offender (Levy, 1999).

However, research has shown that perpetrators of occupational fraud encompass a wide variety of offenders. In a British survey of companies, it was found that approximately one-third of occupational fraud was committed by employees who were associated with managers, one-fifth with accounting personnel and one-tenth were associated with directors or partners. The rest was attributed to lower-level employees such as sales or shop floor personnel, computer operatives and distributors and drivers. Even in cases where a higher proportion of the elite would be suspected, many offenders can be characterised as mavericks rather than people of the establishment. In terms of age, the typical offender according to the study is middle-aged and male. However, concerning age and gender, research also shows that it is to a large degree, the structural position rather than socialisation or cultural factors that accounts for differences in gender and age. In other words, middle-aged male offenders are overrepresented since they also are overrepresented in the positions where they have a possibility to commit fraudulent activity (Croall, 2001).⁴⁸

3.8 HOW IS FRAUD AND OCCUPATIONAL FRAUD NORMALLY DISCOVERED?

According to the Global Economic Crime Survey 2005, conducted by Price-waterhouseCoopers, the following means by which fraud was originally detected were found (in order of importance)⁴⁹:

⁴⁸ In a study by Weisburd et al. (1991), it has also been shown that Jews accounted for 33 percent of fraud committed in the securities and anti-trust business. However the overrepresentation of Jews committing fraud was equated with the overrepresentation of Jews in the securities and anti-trust business as such.

⁴⁹ Measured on a global level.

Accident/chance

1. Internal tip-off
2. External tip-off
3. Other chance means/accident

Controls/processes

1. Internal audit
2. Law enforcement investigations
3. Corporate security
4. Whistle-blowing hotline
5. Change of personnel/duties
6. Risk management

Although chance does play an important role in discovering fraud, the study still emphasises a critical need for companies to have strong risk management policy and assessment and to develop proactive procedures, etc. to combat the risk of fraud. Chance is not necessarily pure chance since the tendency to give tip-offs is likely to be dependent on how one believes the response to the tip-off will be. For example, a culture which is conducive to honesty and orderliness is more likely to stimulate tip-offs than a culture which is not characterised by honesty and orderliness. As will be shown later in the thesis, cultural aspects are considered as a part of the internal control framework of the COSO-model. Hence, the division of chance and controls is probably not as clear as it appears above, i.e. the controls and control environment are likely to be, at least partly, causes of “chance”. This also plays a part in how to evaluate the role of auditors (external) in combating fraud and occupational fraud.

If the work of auditors facilitates a more open and honest culture, the role of auditors in combating fraud and occupational fraud might not be as insignificant as it appears above. The role of auditors might also be indirect as a result of the attitude of the management towards the work of auditors. If management is open and views the audit as a tool for better orderliness in the

company, this attitude towards audits might strengthen the control environment in the company. Again, the line between chance and controls is probably not as clear as it appears above.

3.9 COMMON INDICATORS (RED FLAGS) OF FRAUD AND OCCUPATIONAL FRAUD

Just as there are many ways to commit a crime, there are also a great number of different red flags. In this section, examples of red flags will be presented. However, it should be noted that the below enumerated red flags are not in any case all encompassing of possible red flags. Further, it should be noted that the lists below do also focus on the broad definition of indicators of occupational crime. First, the theory of red flag and fraud detection will be described.

The red flag theory of fraud detection can briefly be described as follows (Albrecht et al., 2001, p.1): *“Every fraud involves three elements: (1) theft act, (2) concealment, and (3) conversion. The theft act involves taking assets such as cash, inventory, or even information. Theft acts can occur manually, electronically, or in other ways. Concealment involves the steps taken by the perpetrator to hide the fraud from others. Concealment can involve altering financial records, miscounting cash or other assets, or destroying evidence. Conversion involves benefiting from the stolen goods. Usually stolen assets are sold for cash and the cash is spent.”*

In case of misstatement of financial statements the theory states, according to the author: *“If the fraud involves misstatement of financial statements, the theft act often involves overstating assets and revenues or understating expenses and liabilities, concealment involves manipulating the accounting records to support the over- or understatements and conversion involves having a higher net income or stock price that results in larger bonuses, increased stock options or prices, or an ability to meet restrictive or other covenants.”* (Albrecht et al., 2001, p.1)

In short, the focus on red flags in detecting fraud needs to pay attention to the three above described elements encompassing all frauds.

Red flags and the detection of fraud

Bologna and Lindquist (1995) summarise the main experiences of red flags and circumstances which are beneficial for a fraudulent environment in a company. Concerning the main internal environment *red flags*, the authors list the following aspects to consider (pp. 131-132):

1. Do employees have an economic reason to cheat?
 - a. Are salaries and fringe benefits equitable and competitive with other similar firms in the same market?
 - b. Are pressures for production and profitable performance so great that people are burning out or becoming disgruntled?
 - c. Are employee evaluations and salary reviews based on fair and objective criteria?
 - d. Are promotions based on merit and contribution, and administered fairly, impartially, and openly?
 - e. Are job-related goals and objectives imposed on subordinates rather than negotiated with them?
2. Does the company suffer from a “we-they” syndrome: Management versus non-management personnel or middle management versus top management?
3. Do conflicts thrive among the top-management group over issues that involve corporate philosophy, purpose, direction, or ethics?
4. Is there evidence of spite, hate, hostility, or jealousy among the firm’s senior-management group?
5. Do employees feel oppressed, abused, exploited, or neglected by senior management?
6. What is the company’s past history with respect to:
 - a. Labour-management relations?
 - b. Turnover of top executives?
 - c. Moonlighting and conflict of interest by employees and executives?

- d. Vandalism, theft, and sabotage by employees?
 - e. Corruption of customers?
 - f. Corruption by vendors or competitors?
 - g. Corruption of labour leaders, regulatory authorities, and political officials?
 - h. Association of executives with organised-crime figures?
 - i. High living by executives?
 - j. Lack of concern for truth in advertising or marketing its products or services?
 - k. Convictions for business-related crimes?
7. What is the history of the firm and the industry regarding regulatory compliance?
 8. What is the past, current, and future profitability of the firm?
 9. Are there litigation and complaints pending against the firm by regulatory authorities, vendors, customers, creditors, and competitors?

The authors also recognise that the detection of fraud and fraudulent behaviour often comes from signs of small errors and irregularities, which are more like oddities, i.e. something which is different from what to expect as to time, place, personality, or amount. Some examples of exceptions to look for according to the authors are transactions that are odd, concerning time, frequency, places, amount and parties or personalities, internal controls which are not enforced or are too often compromised by higher authorities, employee motivation, morale, and job satisfaction levels which are chronically low, and finally, a corporate culture and reward system that supports unethical behaviour towards employees, customers, competitors, lenders, and shareholders (pp. 133-134).

In order to evaluate the risk of fraud, a number of internal factors need to be paid attention to according to Bologna and Lindquist (1995, pp.146-148) since they can enhance the risk of fraud. These include: inadequate rewards, inadequate management controls, lack of inadequate reinforcement and performance feedback mechanisms, inadequate support, inadequate operational

reviews, lax enforcement of disciplinary rules and fostering hostility. In addition, other internal factors that reduce the risk of fraud, theft and embezzlement can be divided into three groups – prevention measures, detection measures and intelligence gathering. The first of these groups includes internal measures (separation of duties, rotation of duties, periodic internal audits and surprise inspections and development of documentation of policies, procedures, systems etc.) and computer access controls.

The second group includes so called logging of exceptions which is said to focus on transactions that are too high, too low, too many, too few etc., attempted access without authorisation and improper attempts to gain access. The group also includes so called variance reporting, which includes monitoring operational performance levels, deviations from past quantitative relationships and deviations from accepted policies.

Finally, the third group includes monitoring of employee attitudes, values, and job satisfaction levels and gather feedback from customers, vendors, and suppliers for evidence of employee dissatisfaction inefficiency, inconsistency of policies, corruption, or dishonesty.

3.10 WHERE IN A COMPANY CAN FRAUDULENT BEHAVIOUR BE EXPECTED?

There are mainly two groups of possible ways to commit occupational fraud in a company. The first group encompasses purchases, payables, and the payment system, while the second group encompasses sales, receivables, and receipts system. Frequently occurring occupational frauds relating to each of these two groups are false expense reports, false supplier invoices, and other false information in the first group, and front-end fraud, lapping, and false sales invoices in the second group. (Bologna and Lindquist, 1995, pp.92-93)

The fraudulent behaviour of the first group can be divided into additional specific parts. As shown above, the first group normally encompasses false expense reports, false supplier invoices and false information. According to the authors, in the case of false expenses, these often contain non-business items, overstated items, fictitious things and/or duplicate items. False supplier invoices normally relate to situations when no goods have been delivered or

services rendered, the quantity or price is overstated, or when the quality has been compromised. Finally, false information often includes false financial statements, overstated accounts receivable listings, overstated statements of income and net worth, false general journal entries, altered internal company records, fictitious customer credit information, or false asset valuations.

In the second group which encompasses sales, receivables and receipts systems, frequent fraudulent activities include front-end fraud, false sales invoices and lapping. Front-end fraud concerns when revenue is handled outside the books, i.e. situations when revenue never reaches the sales, receivables, and receipt system. A typical situation is when a company's products or services are sold for cash and the cash is diverted. According to the authors, front-end fraud often is committed through management override of internal controls.

False sales invoices occur when a company's sales invoices are altered to show a lower sale amount than was actually the case. To combat such activities, a good knowledge of the accounting system as well as an understanding of the perpetrator's position within the system are two crucial factors. The final situation is lapping, which occurs when receipts from one customer are misappropriated and the misappropriation is subsequently covered up by recording the receipt from another customer to the credit of the first customer. Again, the key strategy according to the authors is to understand the accounting system for receiving customer payments, making bank deposits, and preparing entries to customer accounts. These are crucial factors in detecting such occupational frauds.⁵⁰

3.11 CHAPTER SUMMARY

In this chapter an overview of fraud and occupational fraud has been presented. It has been shown that many terms exist concerning fraud which makes it somewhat confusing to understand the different angles of research on the topic. The chapter has also focused on why fraud is committed. According to a survey conducted by PricewaterhouseCoopers, a number of reasons exist. In general, the reasons can be described as being a result of three main con-

⁵⁰ See Alalehto (2003, p. 26-27), for further information on lapping.

curing factors – *Motive/incentive*, *Neutralisation/attitude* (incentive driven rationalisations), and *Opportunity*, as formalised in the Coleman model. This model, the fraud triangle, has become widely known and applied and is also one of the models used in this thesis (although somewhat modified).

The chapter has also covered different signs of strong and weak internal control concerning fraud and occupational fraud, which relate to one part of the focus of this thesis, i.e. the internal control formalised through the COSO-model. In addition, the chapter has given an overview of how fraud is detected. In general, chance stands out as the most common way fraud is detected, albeit controls also play a part.

Finally, different red flags and areas where fraud and occupational fraud normally occurs have been presented. In short, many of the red flags of fraud relate to the culture of a company, how communication in a company is handled, surveillance and controls, the incentive of employees to defraud the company, as well as the personal characteristics among employees. Common areas where fraud occurs are purchases, payables, payment systems, sales, receivables, and receipts systems.

The above presentation exemplifies the diversity of fraud and occupational fraud which is important to have a basic understanding of in order to effectively comprehend the analysis of this thesis. The many examples of red flags and areas where one can expect fraud and occupational fraud are also important in order to grasp one of the key models applied in the thesis and which is presented in detail earlier in the chapter, i.e. the Coleman model.

This chapter has also exemplified what is meant with weak internal control with respect to fraud and occupational fraud. In that respect, this chapter serves to complement the previous chapter on the institutional setting of auditing. The previous chapter presented how internal control can be understood as well as one of the key models of this study, the COSO-model. Through this chapter on weaknesses in internal control relating to occupational fraud, the previous description of internal control including the COSO-model has been linked together in order to better understand the analysis conducted in chapter 6.

4. PREVIOUS RESEARCH AND PUBLICATIONS ON RED FLAGS AND INTERNAL CONTROL

4.1 INTRODUCTION

Case studies of fraud constitute much of the previous research conducted within the field of fraud and occupational fraud. However, studies which attempt to capture the perceptions of auditors are rare, especially concerning research within a Swedish context.⁵¹ In addition, many studies of fraud and occupational fraud are presented in journals and magazines whose main audience is internal auditors, which also reflect the limited research conducted through an external audit perspective. The studies presented below describe the current research situation.

The aim of this chapter is to present the research conducted on the topic of this thesis. It is also meant to show how the research conducted in this thesis can contribute to present research. There is also a connection between this chapter and chapter 3 *Fraud and occupational fraud*. Whereas this chapter of the thesis aims at presenting the current research conducted on the topic, chapter 3 is meant to give the reader a better understanding of fraud and occupational fraud. The overview presented in chapter 3 is based on highly influential textbooks on the topic which are written mostly for practitioners in the field of fraud auditing. The presentation of previous research is divided into four parts: *Red flags of fraud*; *The importance of internal control*; *The detection and prevention of occupational fraud*; and *Summary of previous research*.

The coverage of previous research was conducted the following way: first general literature was studied in order to acquire an understanding of the

⁵¹ See Berggren et al. (2006), *Fyra ögon ser bättre än två*, which deals with auditors' perception of internal control (not specifically concerning fraud or occupational fraud though) and which emphasises the lack of previous research. See also BRÅ-rapport 1999:7, *Forskning om ekonomisk brottslighet*, p. 49, BRÅ-rapport 2003:1, *Förebygga ekobrott – Behov och metoder*, p. 38, and BRÅ 2004, *Bokslut – BRÅ:s satsning på ekobrottsforskning 1998-2002*, p. 6. These reports emphasise the lack of previous research concerning occupational fraud conducted on Swedish data. Finally, Öhman (2006, pp. 7-9) recognises the lack of previous Swedish research in his dissertation.

topic. Reports published by The Swedish National Council for Crime Prevention (Brottsförebyggande rådet) were also studied.⁵² Second, the database Business Source Premier⁵³ was used to find relevant articles. Search words included; “fraud + auditor”, “forensic + auditing”, “red flags + auditing”, “fraud + perceptions”, “internal control + fraud”.⁵⁴ Relevant references from the articles found were followed up on. Third, abstracts from the last years’ issues of Journal of Forensic Accounting and Internal auditor (the two journals which included most relevant articles from the conducted search) were studied in order to cover additional articles of interest which for some reason might have been missed during the database search. The choice of articles to include was made from a more in depth study of articles which appeared to be relevant from the title and abstract of the article. The final choice of articles was made with respect to the relevance to the preliminary research questions specified at the time of the search as well as the relevance to the two models of analysis which were chosen for the study. The studies presented in this chapter are almost exclusively internationally based studies.

4.2 RED FLAGS OF FRAUD

In general terms, some basic characteristics are often present for companies which are exposed to a high probability of fraud. These characteristics are often present in companies where the risks are high such as in organisations of high-risk companies (poor internal control) with high-risk employees (compulsive personalities) or high-risk management (loose ethics) (Bologna and Lindquist, 1995, p. 50).

⁵² The reports are published on the home page of BRÅ (www.bra.se).

⁵³ The database Business Source Premier is a database which covers management, economics, finance, accounting, international business etc. The database contains full text scholarly journals and business periodicals. The database also includes country economic reports from the EIU, Global Insight, ICON Group, CountryWatch, substantial company profiles and industry reports from Datamonitor are also included.

⁵⁴ At the time of the search (December 2006), each conducted search generated (in specified order) 369, 41, 16, 61, and 123 articles. A new search was conducted in September 2007 in order to capture additional articles published during 2007. The search was also limited to “academic journals”, which was specified in the search engine. However, it should be noted that the journal Internal Auditor, although classified as an academic journal, also includes articles which are mainly practically oriented and in some cases based on authors’ own experiences as practicing auditors etc.

In LaSalle (2007) a study was conducted based on the results presented by Bailey (2004). The study investigates, through two quasi-experiments, whether students' risk assessment is affected by the type of model presented to them immediately preceding their risk assessments. The study is interesting since it highlights the importance of the framework or perspective used when assessing the risk of fraud and occupational fraud. Further, the study applies the COSO-model as well as the fraud triangle in order to test whether the participants of the experiments were relatively more or less positively affected by the different models. The results indicate that participants who were provided with an overview of the fraud triangle model committed fewer assessment mistakes compared to the group of participants who were provided an overview of the COSO-model. The study shows the importance played by both of the two models applied in this thesis. It also shows how different points of reference and pre-knowledge can influence how people assess the risk of occupational fraud, i.e. an interesting and relevant aspect for the study in this thesis.

In Webber et al. (2006) 89 external, internal, and governmental auditors were asked to make fraud risk assessments based on four versions of two hypothetical cases concerning the presence or absence of motivation and opportunity risk factors. The results indicate that *“the three groups of auditors (1) increase their fraud risk assessment when either motivation or opportunity risk factors are present, and (2) increase their fraud risk assessments when both motivation and opportunity are present”* (p. 411). It is noted, however, that fraud risk assessments, when both motivation and opportunity risk factors were present, were not in all cases statistically significantly higher than when motivation *or* opportunity risk factors were present. The study provides important insights into how auditors view indicators of fraud and occupational fraud and their understanding of how these factors relate to an essential model of fraud explanation as well.

According to Meiners (2005), the median recovery in all fraud cases was only about 20 percent of the defrauded amount and it was estimated that in almost 40 percent of the cases, nothing was recovered at all. It is emphasised that any company can fall victim to occupational fraud. However, according to the author, a few highly significant red flags exist to pay attention to. These are:

fast growth, mergers and acquisitions, outside vendors, high-value inventory, and expense accounts. The five red flags all share the same issues: lack of control of the company's assets and activities. It is also noted that strong internal controls, explicitly implemented and rigidly followed, provide a company with the best possible defence against occupational fraud. According to the author, these internal controls should cover payroll falsification, collections by outside employees, fraudulent refunds, kick-backs, cash-register theft, bank account reconciliation and fictitious vendors. Even though there are a wide variety of effective controls, the author emphasises that a common theme is to have a separation of duties whenever employees handle money.

In Smith et al. (2005), a study was conducted in order to study auditors' perceptions of red flags. The aim of the study was to identify the most important red flags as individually perceived by auditors. The study also wanted to study whether auditors' demographic factors might influence their perception of the relative importance of red flags in Malaysia. This study applied a survey which was mailed to the respondents as the method of data collection. The respondents to the survey were practicing auditors from audit firms in Kuala Lumpur. The sample of auditors was taken from the domestic listed audit firms with the Malaysian Institute of Accountants. The sample was constructed using a simple random technique. The findings of the study were that the respondents indicated that the operating and financial stability category was considered the most important, followed by management characteristics and influence over the control environment and, finally industry characteristics. The study is interesting since it highlights how auditors emphasise various categories differently. In addition, the results of the study underline the importance of management characteristics and influence over the control environment which are two categories similar to *Incentive* and *Opportunity* according to the Coleman model of explanation of the occurrence of fraud used in this thesis.

An important article concerning indicators of occupational crime is Moyes et al. (2005). The article describes a study in which internal auditors were asked (in a survey) to place red flags in order of precedence of their effectiveness in discovering occupational fraud in companies. The study was made from the model used in this thesis, i.e. the model by Coleman in which the causes of

fraud can be explained from a combination of *Incentive*, *Neutralisation/attitude* and *Opportunity*.⁵⁵ According to the study, indicators relating to the second category – *Neutralisation/attitude* – were, on average, deemed to be the most effective, while indicators relating to the first category – *Incentive* – were, on average, deemed as the least effective.

Signs of fraud in the financial statements are studied in Guan et al. (2005). The authors apply Benford's law⁵⁶ and extend previous research, which indicates that managers of U.S. firms have a tendency to engage in manipulative earnings activities such as rounding earnings numbers to achieve accounting goals. The results of the study indicate that the first digit of earnings numbers is often emphasised by the management. However, the results of the study also indicate that reference points are not limited to the first digit, i.e. the second, third, or even fourth digits were also found to, sometimes, be used as the reference points of the rounding earnings behaviour.

In Marczewski and Akers (2005) a study of the perceptions of CPAs is made. The results of the study indicate that partners have a more positive assessment about SAS 99's effect on auditors' perceived responsibility to detect fraud in a financial statement audit than managers do. However, both partners and managers acknowledge that the overall audit responsibility has increased, along with accountability and liability exposure. The authors conclude that *"the overall assessment indicates that the changes to audit procedures due to SAS No. 99 will somewhat increase the effectiveness of audits, but may not increase the public's confidence in audits"* (p. 40).

In Hansen and Klamm (2004) a study was conducted to investigate how experts and students classified fraud risk factors according to SAS No. 82 as *motivation* or *opportunity*. The authors then compared the students' and experts' classifications to the classifications in SAS No. 99, which includes the three factors necessary for fraud (i.e. motivation, opportunity and rationalisation). It was found that the experts classified 21 of 22 risk factors

⁵⁵ The American standard – *Statement on Auditing Standard (SAS) No. 99: Consideration of Fraud in a Financial Statement Audit* – also divides indicators of fraud from this model.

⁵⁶ Benford's law claims that fraud can be detected by studying the probability of amounts based on statistical/mathematical facts of nature of such amounts.

correctly while students classified 17 of 22 risk factors correctly. The ability to correctly classify risk factors of fraud to each of the three factors necessary for fraud was seen as an important capability in order to discover fraud.

The above described study (Hansen and Klammm, 2004) is based on a previous article by Apostolou et al. (2000). Apostolou et al. (2000) recognises that motivation, opportunity, and rationalisation to commit fraud must coexist for fraud to occur and that professional auditing standards indicate that auditors should be alert to the presence of both motivation and opportunity fraud risk factors. Based on these facts, the authors conducted a survey of 35 forensic experts employed by four of the, at the time, Big Five accounting firms who classified the management fraud risk factors from SAS No. 82 as either “motivation” or “opportunity.”⁵⁷ The results of the study yield that in the case of 24 of 25 risk factors, a majority of respondents agreed on the classification as motivation or opportunity. The respondents also agreed to quite a high degree for most of the risk factors. The results were deemed as being beneficial to the improvement of the fraud risk assessment process of auditors.

A case study by Jacka (2004) describes the decisions of Walter Pavlo, a former MCI manager sentenced to 41 months in prison for wire fraud and money laundering, which led to him hiding the bad-debt expenses of the company. The article describes the scheme of the perpetrator and the pressure and incentive which were present to push him into carrying out his fraudulent activities. The *tone at the top* was considered an important factor in his decision to defraud the company he worked for, as well as the possibility to have power over the internal controls of the company. Consequently, the article is an interesting study in how the model by Coleman⁵⁸ works in practice.

Dunn (2003) examines the association between management control philosophy and the releasing of false financial statements. Four factors were identified that contribute to poor management control philosophy and how they influence financial statement reporting. The study was conducted using a sample of 113 firms that were convicted of fraudulent financial reporting,

⁵⁷ Both of these categories relate to one of the two models applied in this thesis. See chapter 2 and chapter 3 for further description of these two models.

⁵⁸ See section 3.4 regarding the Coleman model.

during the period 1992 to 1996. The results showed that fraud is more likely to occur when a company has a poor management control philosophy, weak control structures, and a strong motive for engaging in financial statement fraud (to compare the three main parts of the Coleman model, see chapter 3 and section 4.6 below). The author conclude that indicators of a poor management control philosophy include a large number of related party transactions, the continuing presence of the firm's founders, and the absence of a long-term institutional investor. The results suggest that auditors should be sensitive not only to a firm's control structures but management control philosophy as well. The study not only emphasises the need of a comprehensive view of factors relating to fraud but also the appropriateness of applying the Coleman model of analysis when investigating auditors' perceptions of occupational fraud.

In Urbancic and Hubbard (2003) a study was conducted concerning related-party transactions, i.e. transactions with *"an affiliate, owner, management, or any other party with which an organisation deals in situations where one of the parties can influence the management or operation policies of the other"* (p. 23). According to the authors, there is an increased likelihood of fraud when one or more of the listed indicators are present in an organisation. The indications listed include, for example, shortage of sufficient working capital or credit to continue operations, urgency on the part of management to have a favourable earnings record to support the company's stock-market price, an earnings forecast that is overly optimistic and dependence on one or few products, customers or transactions for the continued success of the company.

According to Rezaee (2002) the reasons behind occupational fraud can be divided into three broad categories (the three Cs): *conditions*, *corporate structure*, and *choice*. The three Cs do, in large part, correspond to the three criteria in the model of Colemans, i.e. incentive (conditions), opportunity (corporate structure) and rationalisation (choice). *Conditions* refer to the pressure and motivations to engage in financial statement fraud. *Corporate structure* refers to an environment which increases the likelihood of occurrence of financial statement fraud, which is normally the case in irresponsible and ineffective corporate governance (i.e. an environment which is aggressive, arrogant, cohesive, loyal, blind trust, control ineffectiveness, and

gamesmanship). Finally, *choice*, refers to whether or not management choose to adhere to ethical business strategies. The author applies the three Cs in a case study analysis of the demise of Enron and WorldCom. The author stresses the need of auditors to evaluate an organisation with respect to irresponsible governance, lack of a watchful and effective Board of Directors or audit committee, and ineffective internal control structure (*corporate structure*). Auditors also need to assess *choices* made by management. Finally, the author stressed the need of auditors to pay attention to factors such as high-risk accounting, inappropriate transactions which relate to conflict of interest, excessive executive compensation, and extensive use of undisclosed off-balance sheet financial instruments and derivatives (*conditions*).

In Thompson (2002), a case is presented which shows how a conspicuous lifestyle (one of the most common and indicative red flags of management fraud) together with extended leases at short term rates (a common fraud symptom according to the author) revealed a fraud in which misuse of company resources were for the personal gain of a company district president were carried out. Another similar study, Thompson (2000), concerning indicators of fraud and specifically behavioural indicators (relating to excessive lifestyle and spending of employees), lists a number of indicators. The indicators listed are: living beyond your means, never taking a vacation, arriving at work early and staying late, and using drugs or alcohol excessively. However, the author also urge not to place too much trust in those indicators. The study also emphasises the need of auditors to follow up on missing or unusual details since fraud is said to be in the details.

Church et al. (2001) investigate internal auditors' concern of fraudulent financial reporting as an explanatory factor for an unexpected difference in operating income. The authors conducted an experiment in which 127 internal auditors were asked to list potential explanations for the unexpected difference. The result showed that the factors listed by the respondents affect internal auditors' concern of fraudulent financial reporting. Thereafter the authors examined whether such concern is affected by the direction of the difference, the use of earnings-based bonus plans, and the restrictiveness of debt covenants. The results of the examination showed that internal auditors

assign a larger proportion of explanations involving fraud (1) when income is greater than expected, and (2) when debt covenants are restrictive, conditioned on income being greater than expected. The results also showed that *“internal auditors assign a higher risk of fraud when (1) income is greater than expected, and (2) when an earnings-based bonus plan is used and debt covenants are restrictive”* (p. 65). The implication of the study is that specific factors can affect internal auditors’ concern of fraudulent financial reporting and potentially may have implications on audit plans.

In Bell and Carcello (2000) a study was conducted in order to test the likelihood of fraudulent financial reporting for an audit client, in cases of the presence or absence of several fraud-risk factors. The test was based on a sample of 77 fraud engagements and 305 non-fraud engagements. The significant risk factors included in the *final model* were: weak internal control environment, rapid company growth, inadequate or inconsistent relative profitability, management places undue emphasis on meeting earnings projections, management lied to the auditors or was overly evasive, the ownership status (public vs. private) of the entity, and an interaction term between a weak control environment and an aggressive management attitude toward financial reporting. The authors found that the logistic model used was significantly more accurate than practicing auditors in assessing the risk of fraud. Further, the study did not show any significant difference between model assessments and those of practicing auditors for the sample of non-fraud cases. The results indicate that a relatively simple decision aid performs quite well in distinguishing between fraud and non-fraud observations. The study indicates that practicing auditors can have a somewhat incorrect view of indicators of fraud.

Thompson (1999) describes a few important facts that auditors need to pay attention to. First, performance based compensation may corrupt otherwise honest employees. Second, wilful blindness is typically a contributing factor in major cases of fraudulent financial reporting. Third, fraud is always in the details. Another article by the same author, Thompson (1998), investigates the importance of background checking of employees in order to avoid occupational fraud. According to the author, the best indication that someone will commit occupational fraud is normally that they have done so in the past.

Consequently, the author argues that background checks are the first line of defence against fraudulent activity. Furthermore, contractors and temporary employees should also always be screened. Finally, according to the author, the view that background checks are not cost-effective is often missing the real fraud risk exposure, which includes litigation costs for careless hiring of employees.

An important article concerning the perceptions of auditors on indicators of fraud is Heiman-Hoffman et al. (1996). The article is based on a survey of 130 practicing auditors who were asked to list their perceptions of the relative importance of some commonly cited fraud indicators. The auditors perceived client dishonesty to be the most important red flag. They also perceived *“clients that placed undue emphasis on meeting quantitative targets, engaged in opinion shopping and were very aggressive in their financial reporting”* (p. 75) as particularly risky. In addition, auditors considered a weak internal control environment to be another very important indicator. In general, auditors perceived “attitude” factors to be more important warning signs than “situational” factors. The three most important red flags according to the authors are:⁵⁹

1. Managers have lied to the auditors or have been overly evasive in response to audit inquiries
2. The auditor’s experience with management indicates a degree of dishonesty
3. Management places undue emphasis on meeting earnings projections or other quantitative targets

According to Albrecht (1996) there are basically six categories of fraud indicators which auditors should be alerted to concerning occupational fraud: (1) accounting anomalies, (2) internal control symptoms, (3) analytical anomalies, (4) lifestyle symptoms, (5) behavioural symptoms, and (6) tips and complaints. The author analyses the case of John McNamara, Long Island Car dealer, who, as it was discovered in 1992, had defrauded General Motors Acceptance Corporation of approximately \$436 million. McNamara was not

⁵⁹ The entire list is presented in Appendix 6 together with other findings from the articles presented from previous research.

an employee of GMAC, but his fraud had all the typical symptoms (of the categories stated above) that are associated with occupational fraud. In another article by Pomeranz (1995) the causes behind fraud are studied. The causes are largely connected to red flags of fraud. Crucial causes of fraud include, according to the author, economic recession, employee disaffection, indifference to internal control, a possible erosion of ethics, inability of obsolete systems to accommodate new transaction types and volumes, and often a time lag while organisational rules catch up with new ways of committing offences.

In a theoretical study by Wells (1990) several myths concerning fraud are discussed. Several of the myths can be seen as crucial in analysing and evaluating indicators of fraud. For example, the notion that most people are immune to the temptation to commit fraud is said to be, probably, one of the biggest myths of all concerning fraud. A second myth, according to the author, about fraud is that it is not material. According to the author *“even though it may start out that way, immaterial frauds have a way of turning into material ones”* (p. 83). Finally, one myth about internal crime is that most of it goes undetected. Since fraud by its nature is concealed different professions (such as sociologists) often have a difficult time measuring its extent. But as the author explains, in its initial stages, most fraud probably does go unnoticed but will sooner or later be noticed. The main conclusion of the article is that most clues of fraud do not come from the books but from the perpetrator, which is important to remember when analysing red flags of fraud.

In Levy (1985) a broad review is conducted of different schemes and indicators of occupational fraud. The author emphasises that the list should not be viewed as complete and the author also underlines the importance of an auditor to gain knowledge and experience of the business of the company audited. Three of the listed red flags include high rates of employee turnover, destruction of documents or refusal to use serially numbered documents and excessive and unjustified cash transactions. In large part, any finding which is not in line with the basic motive of business, i.e. to make a profit, should be viewed with suspicion. It is interesting to note that the list presented by the author strongly emphasises red flags, which are relatively “hard” in nature.

Summary of red flags of fraud

The above presentation of previous research concerning red flags reveals several interesting aspects of relevance for this thesis. *First*, no study is made with the same aim and methodological approach as this thesis in order to understand the view of auditors on occupational fraud. *Second*, several of the studies in which auditors have been asked to list indicators of red flags have involved internal auditors and have only focused on the actual listing of red flags, not how auditors actually view the red flags from a broader perspective. *Third*, the previous research puts a strong focus on softer factors such as culture and environment as factors to pay attention to as important red flags. *Fourth*, the importance of the fraud triangle in understanding fraud and red flags of fraud is also showed in the previous research and especially the importance of the attitude/neutralisation part of the model.

4.3 THE IMPORTANCE OF INTERNAL CONTROL

Kurniwanti and Setiabudi (2006) present an occupational fraud case at an Indonesian automotive dealer. The author argues that based on the case, segregating responsibilities among employees is an important component in establishing an efficient occupational fraud prevention program. Business enterprises should also, according to the authors, conduct regular cash reviews and reconciliations. In another article by McNeal (2006) a case of fraud in a corporation is studied. It is noted that auditors can assist organisations in order to increase the potential of their reporting mechanisms by making sure that procedures exist for handling complaints from both internal and external whistleblowers. Thus, according to the article, meaningful, high-value fraud investigations often depend on effective communication with whistleblowers. Another article on the same topic is by Slovin (2006) which takes on a more practical perspective on the effectiveness of a whistle blowing function. Thompson (2003) also covers the topic of problems for the person who decides to step forward and act as a whistle-blower.

In Pacini and Brody (2005) a list of seven steps to fight fraud is presented. According to the authors, a company should apply the following steps: perform employee background checks, increase the use of analytical review, perform contract reviews, conduct an economic espionage threat analysis,

increase internal control evaluation and testing, improve information system security, and create and maintain a fraud policy.

In Cunningham (2004) it is claimed that too much is being expected from corporate internal controls in fighting fraud. The study presents a historical overview which shows a move from “*controls bearing positive aspirational qualities to controls promising negative preventive capability*” (p. 270). Through the increasing legal pressure and focus on internal controls, too high expectations, it is claimed, have arisen concerning the usefulness of internal controls.

A theoretical study conducted by Roth and Marks (2004) states that meaningful evaluation of the *control environment* of the COSO-model is the real key to preventing financial reporting fraud. The authors argue, in accordance with the view of the Committee of Sponsoring Organisations of the Treadway Commission, that the control environment is the most important component of internal control. Thus, all efforts towards testing the internal control of companies by focusing on detailed financial control activities miss the crucial point, i.e. to investigate the control environment. In addition, the detailed testing of financial control activities does not only miss the crucial point as such, but is also inefficient due to the time and resource consuming activities it requires.

In Jennings (2003) the importance of ethics as a significant factor is stressed, as is a strong focus on soft or qualitative factors in combating fraud. According to the author, demise in company ethics precedes the actual fraud. The role of ethics is also studied in D’Aquila (2004). The author bases her study on the results of a study sponsored by COSO which indicates that most firms committing financial statement fraud are relatively small in size. The COSO study emphasised that integrity and ethical values of an organisation’s management are critical to the integrity of financial reporting. In the present article, the author conducted a survey of 188 CPAs to determine whether organisations of different sizes and ownership type vary in their emphasis on integrity and ethical values through the organisational culture and a written code of conduct. The results show a perception that managers in large and publicly held organisations place more emphasis on integrity and ethical values than is done in smaller ones. According to the author “*these findings*

have important implications for both external auditors and internal auditors in both the planning of audits and in advising management on how to create environments that promote ethical decisions” (p. 393). Further, the results also emphasise a greater need for more attentiveness by managers in smaller organisations, regarding the importance of an organisational culture that promotes ethical decisions.

An article by Frank (2004) focuses on the efforts of corporate executives and audit committees to develop effective antifraud programs, controls and risk assessment processes. According to the author, it is important to realise that risk assessments of fraud differ from traditional risk assessment which is linked to the company's key objectives. Fraud risk assessments concentrate on fraud schemes and scenarios, and aim to identify activities that can significantly impact the company's reputation, cause a criminal or civil liability to the company or a financial loss.

In Johnson and Wright (2004) the importance of an anonymous reporting mechanism is presented. The study is partly based on a report written by the accounting firm KPMG in 2003. The KPMG study showed that 63 percent of fraud discoveries resulted from notifications of employees. In the current study, Johnson and Wright emphasise the need to train employees to recognise and act in accordance with an established code of ethics in order to achieve a stronger motivation among employees to report cases of suspicion of fraud in the organisation.

In Thompson and Loescher (2001) a case of loan fraud is analysed. In the case, a bank branch manager was able to hide her embezzlement activity for years without being detected. The fraud was possible due to lack of internal control concerning segregation of duties (the bank manager was able to control all steps in the handling of the loans). The fraud was finally discovered when the woman was on maternity leave. Conclusions from the case include that missing documentation is a crucial symptom of fraud, and that internal controls easily break down. Breakdowns of internal control are claimed to be particularly common in small organisations. Furthermore, friendship, trust, and multiple roles for key employees combine to counteract controls.

Jacka (2002) describes a case in which occupational fraud was carried out by a temporary employee. The author presents several basic measures which should be taken in order to cope with the risk of occupational fraud. The steps include: complete bank reconciliations on a timely basis, examining the quality of the reconciliation process, tracing items to see how they are actually cleared from the reconciliation, keep up a constant vigilance concerning reconciliations, review reconciliation practices outside the mainstream, and finally, conduct criminal background screening of new employees.

In Gallagher and Radcliffe (2002) a case of occupational fraud in a non-profit organisation is studied. The authors conclude that a well-functioning internal control system should include several elements in order to detect and prevent occupational fraud from being carried out. These elements include for example, conducting background checks of all employees, a system of separation of duties, authorisation, custody, and record-keeping functions should be assigned to separate individuals, a system of authorisations, an audit committee, removing over reliance on one individual, and a fraud response plan.

The focus and importance placed on internal control is studied in Wells (2002). The author recognises that the audit process is not designed to detect fraud. In addition, it is noted that, historically, CPAs have relied on internal controls as the main defence against fraud. According to the author *“although there is no question that controls are a vital part of any organisation’s risk management program, their preventive effect on fraud is questionable for two reasons. First, internal controls provide only reasonable assurance against fraud. Second, if upper management is strongly focused on showing increased earnings, it can find ways to override controls”* (p. 106). Therefore, it is concluded, that to catch fraudsters, CPAs must start to think like fraudsters, which means recognising what fraudsters care about – getting caught (i.e. the perception of detection of the fraudster is crucial).

The important question of how stronger ethical cultures influence the presence of fraudulent activities is studied in Ziegenfuss (2000). The study was based on data collected by a questionnaire from internal auditors employed by local governments. The study found that the strength of a local government’s

ethical environment is negatively related to its incidence of fraud. Consequently, the findings of the article corroborate results of earlier studies.

Holzinger (1999) reviews a study which investigates the relationship between internal control and fraud. The study was conducted using a sample of 204 companies of those being accused of financial reporting fraud by the Security and Exchange Commission (SEC) between 1987 and 1997. The study concluded that *“companies accused of financial reporting fraud had a Board of Directors which was inexperienced and dominated by a combination of insiders and outsiders with close ties to the organisation or its management”* (p. 14). Further, the study concluded that the internal control contained significant deficiencies, especially concerning the function of their audit committees.

In an overview article by Barnett et al. (1998) the *control environment* is claimed to set the tone of an organisation, influencing the control consciousness of its people. The tone at the top is principally responsible for shaping both the attitude and performance expectations of the people within the organisation. The author claims that *“a management that takes its responsibility seriously and establishes a positive control environment mitigates fraud risk. Conversely, fraud risk generally increases when management conveys the impression that internal control is unimportant or just a necessary evil or that it provides only minimal benefits.”* (p. 69)

An early article which gives a broad overview of crucial aspects of preventing and detecting fraud is Deck (1985). First, the author recognises the basic model of Coleman in how to analyse factors explaining the occurrence of fraud in a company. In addition, the article presents a study (Albrecht et al., 1984) in which an analysis of 212 fraud cases was conducted in order to locate organisational weaknesses for fraud to be committed. The three most common weaknesses according to the study were: too much trust in employees, lack of proper procedures for authorisations, and lack of personal investment income disclosures.

Albrecht et al. (1984) also recognise that there are mainly two key elements in a preventive strategy of controlling for fraud; the establishment of a sound organisational environment *and* the implementation of a strong system of

internal control. According to the authors, in order to succeed in creating a sound organisational environment, management should adhere to three main organisational aspects: make honesty an essential part of the organisation, maintain open communication with employees, for example application of an open door policy. According to the authors it is also of importance to hire and promote trustworthy personnel, and check the work of employees regularly and thoroughly. In short, not put too much trust in employees.

Finally, Deck (1985) recognises that in order to succeed in creating a strong system of internal control, management needs to ensure that the main aspects of internal control aspects are in place. Such main aspects of internal control include, according to the author, competent personnel, adequate separation of duties, proper procedures of authorisation, adequate documents and records, physical control over assets and records, and independent checks on performance.

In Holmes et al. (2002) the importance of a good tone-at-the-top is investigated. It is acknowledged that previous studies have pointed to lax management attitudes, particularly towards internal controls, as linked to fraud and its detection (Hooks et al., 1994; Irvine and Lindsay 1994; Vinten, 1992). The research questions of the study are:

1. Does the relationship of the fraud perpetrator to the victim organisation differ between lax organisations and supportive organisations?
2. Does the nature of fraud schemes differ between lax organisations and supportive organisations?
3. Does the source of fraud detection differ between lax organisations and supportive organisations?
4. Does the outcome for the perpetrator differ between lax organisations and supportive organisations?

The general results indicate that employees will be less likely to engage in fraudulent activities if top management is firm in its expectation of ethical behaviour of all employees, including themselves. In addition, the authors conclude that *“internal perpetrators and fraud pervasiveness are less likely in*

companies in which top management firmly supports internal controls” (p. 97). Consequently, the authors stress the importance of management to pay increased attention to internal controls but also to promote ethical behaviour. In short, management should strive to build corporate trust.

In order to underline the importance of internal control, Lee (1971), has conducted a study of the research which describes the historical development of internal control. The author emphasises that the concept of internal control is not a new one, but has a long history dating back to the earliest times of human civilisation.

Summary of the importance of internal control

The above presentation of previous research concerning criteria of internal control shows several interesting aspects relevant for this thesis. First, the importance of internal control in detecting and preventing fraud and occupational fraud is emphasised in several studies. However, the emphasis on what constitutes the most crucial parts of internal control is not always clear from the articles covered. In general, the importance of softer controls such as culture, ethics, tone-at-the-top etc. seems to prevail, but some case studies also emphasise the importance of harder controls such as continuous reconciliations, segregation of duties etc. Second, the previous research does not yield a clear picture of how auditors view internal control concerning fraud and occupational fraud, although some articles indicate that auditors focus on traditional internal controls (often harder controls) and fail to realise the dynamic characteristics of fraud and occupational fraud. The importance of a mixture between hard and soft controls is also important. In general, the previous research indicates an existing need to investigate how auditors view internal control concerning fraud and occupational fraud.

4.4 THE DETECTION AND PREVENTION OF FRAUD AND OCCUPATIONAL FRAUD

An interesting parallel concerning detection and prevention of fraud can be found from the research by Granhag (Granhag, 2000), in which an overview of the psychological area of *lying* is outlined. The article presents research results based on experiments conducted in order to evaluate how well

different groups can differentiate a lie from the truth. According to the author, people in general as well as trained professionals (such as police, prosecutors etc.) all score very poorly when trying to detect lies (in less than six out of ten cases do people, on average, succeed in detecting a lie, i.e. not much better than just guessing).

In Bierstaker et al. (2006) a study is conducted which aimed to examine the extent to which accountants, internal auditors, and certified fraud examiners use fraud prevention and detection methods, and how effective they perceive these methods to be. The study was completed through the survey of 86 accountants, internal auditors and certified fraud examiners. The results indicate that firewalls, virus and password protection, and internal control review and improvement are often used in order to fight fraud. However, despite receiving high ratings of effectiveness, discovery sampling, data mining, forensic accountants, and digital analysis software are not often used. The study indicates a tendency in organisations to rely on traditional means to combat fraud despite the limited effectiveness of such methods.

In Legoria and Pendley (2004) the correlation between audit independence and instances of earnings management (i.e. when improvements in earnings are achieved through accounting technicalities) is investigated. Results of comparisons between an aggressive reporting group (i.e. a group which applied earnings management) and a pair-matched control group indicate that the aggressive reporting group, on average, shows lower independence levels. The results give support to assertions that a more proactive stance on clients' management of earnings by auditors would improve the quality of earnings reported to the investing public.

In Higson (2004) thirteen interviews with senior auditors/forensic accountants based in the UK regarding whether their clients report suspected fraud externally were conducted. The results indicate that *"the main problems encountered were the imprecise definition of the word "fraud", the vagueness of directors' responsibilities and confusion over the reason for reporting suspected fraud"* (p. 365). In addition, it was concluded, that although the word "fraud" may be viewed as a useful umbrella term its lack of precision might also limit its usefulness.

In Wells (2001) issues related to fraudulent disclosures in financial statements of business enterprises were studied. It is argued that fraudulent disclosures fall into a number of recognisable patterns and that knowing how these schemes work very much can assist the auditor to detect them. According to the author, most fraudulent disclosures involve purposeful omissions. These omissions normally fall into one of five categories: liabilities, significant events, management fraud, accounting changes, and related party transactions. Further, it is argued that even if management fraud involves immaterial amounts, it is always significant. Such fraud is usually detected through tips and complaints, i.e. as a result of whistleblowers in organisations. In order to uncover fraud, an auditor can consider several approaches. For example, one very effective approach is to use the search capabilities of the Internet.

The results found by Bonner et al. (1998) indicate that in cases of financial statement frauds, which are of a common variety or when the frauds arise from fictitious transactions, the auditors are more likely to be sued. The authors examined companies with SEC *Accounting and Auditing Enforcement Releases* and categorised each fraud from their financial statements as to whether the fraud was of a common variety or occurred from fictitious transactions. Finally, the authors examined whether the different types of fraud could be related to auditor litigation in cases where factors such as client, auditor and case characteristics were controlled for. The results have important implications for the pressure on auditors to handle the risk of fraud.

In Rose and Rose (2003) two experiments were conducted using a sample of 258 auditors. The aim of the study was to outline the effects of fraud risk assessment. Further, the study tried to find an automated decision tool on auditors' evaluation of evidence and judgment. The results indicate that auditors' evaluation of evidence is affected by the assessed level of fraud risk. According to the authors "*auditors facing high levels of assessed fraud risk evaluate audit evidence more thoroughly than auditors facing low levels of assessed fraud risk. In addition, auditors facing high risk assessments exhibit an unexpected bias in their decision processes.*" (p. 312). The results also indicate that auditors have a tendency to focus on the last evidence received during decision making, and if the order of evidence change their decisions change as well. In short, the study shows how auditors can make biased and

inconsistent decisions when auditing potential fraud cases. An introduction of a computer-based decision aid could be beneficial in counteracting bias and inconsistency.

Summary of the detection and prevention of fraud and occupational fraud

The previous research concerning detection and prevention of fraud and occupational fraud shows that auditors fail to apply techniques which are often used by forensic auditors although these techniques could easily be applied by auditors as well. The research also shows that audit independence is important in fraud cases. In addition, an increased use of computer based audit tools and awareness of financial ratios also play an important role in fighting fraud and occupational fraud. Finally, the vagueness of the term “fraud” is often a cause of confusion in how to handle cases of fraud and occupational fraud. The previous research on the detection and prevention of fraud and occupational fraud shows the role an auditor can play in combating fraud and occupational fraud, which is relevant for the discussion in chapter 7.

4.5 MODELS OF ANALYSIS

The framework presented in chapter 2, 3 and 4 has served to shape the outline of this study. One important result of the framework has been the selection of two models of analysis. As presented in the chapter on the institutional setting and description of auditing and the chapter on fraud and occupational fraud, two well known models exist to analyse the occurrence of fraud and internal control systems. These two models are the Coleman model and the COSO-model. Both of these models have also been used, directly or indirectly, in the various articles presented above (see for example Dunn, 2003; Hansen and Klammer, 2004; Jacka, 2004; Moyes et al., 2005; Smith et al., 2005 concerning the Coleman model and D'Aquila, 2004; Roth and Marks, 2004 concerning the COSO model). This has strongly influenced the choice of the two models applied in the thesis, albeit the model of red flags is combined with another model of explanation in order to gain a deeper understanding of possible differences between the different groups and subgroups in the thesis.

4.5.1 MODEL 1 – RED FLAGS OF OCCUPATIONAL FRAUD

The model which concerns red flags is based on the well known fraud triangle which is presented by Coleman (2001).⁶⁰ The triangle encompasses the three main explanatory factors of why occupational fraud is committed. Coleman's model is described in more detail in chapter 3.

The three categories of Coleman's model:

1. Motive/incentive
2. Neutralisation/Attitude (incentive driven rationalisations)
3. Opportunity

However, in order to achieve a model which allows for a deeper analysis of the collected data, I have chosen to combine the model of Coleman with the model of Davies (2000).⁶¹ This was done by taking each of the explanatory groups of Davies' model and attaching them to each of the three "corners" of the fraud triangle where they best belong. More specifically, this combination was undertaken by linking the group which concerns how employees are as people, i.e. factors linked to their personality, *People*, to the *Motive/incentive* part of the fraud triangle. The next "corner", *Neutralisation/Attitude* concerns factors which affect the attitude towards the employer, hence the groups *Reward management*, *Culture and ethics*, and *Communication* were connected to this part of the fraud triangle. Finally, the groups which concern the possibility to commit occupational fraud, i.e. the *Structure*, *Performance measures*, *Risk assessment*, *Fraud response*, and *Controls*, were linked to *Opportunity*. The resulting model is presented below.

1. Motive/incentive
 - a. People

⁶⁰ The fraud triangle was originally described by a pioneering criminologist Donald Cressey from interviews that he conducted in the early 1950s with imprisoned bank embezzlers. The model has since then been given great attention and is today a well used model in analysing fraud and economic crime. See O'Gara (2004, pp. 155).

⁶¹ See *Appendix 2* for the whole model of Davies (2000).

2. Neutralisation/Attitude (incentive driven rationalizations)
 - a. Reward management
 - b. Culture and ethics
 - c. Communication
3. Opportunity
 - a. Structure
 - b. Performance measures
 - c. Risk assessment
 - d. Fraud response
 - e. Controls

As seen above, the different parts of the model of Davies are sorted into the main three parts of Coleman's model. The two levels of the model, i.e. the main three "corner" model and the more specific model including the particular categories from the Davies model, makes it possible to analyse the data in two steps, one for each level of the model.

The parts of Davies' model were sorted as to how well they correspond to each part of Coleman's model. However, some of the parts of Davies' model are not specific to each category in Coleman's model. Nevertheless, the grouping is part of the limitations of the thesis and is therefore accepted as a good model of analysis of greater value than the original fraud triangle of Coleman. In addition, since the model was not directly visible to the respondents, the problems of division of parts to one category or the other did not influence the responses. Instead, the responses, qualitative as well as quantitative, were sorted into the combined model above, i.e. the problem of division was mainly a problem of analysis, not a problem in the process of data collection. The choice of indicators for each of the categories and parts of the combined model is described in further detail in chapter 5.

4.5.2 MODEL 2 – CRITERIA OF INTERNAL CONTROL

The second model used in the thesis concerns internal control. In this case, the well known COSO-model is applied. The choice of the COSO-model was

motivated by the importance played by the model among practitioners as well as its theoretical importance in previous studies on internal control and fraud mentioned above. Just as in the first model described above, the COSO-model serves as an instrument when analysing the answers generated by the conducted interviews. Thus, the five different parts of the COSO-model might be emphasised differently by the respondents in terms of importance, which will render it possible to draw interesting conclusions concerning the view of auditors as such, as well as compared with the view of experts (and between subgroups of auditors).

The five components of the COSO-model.⁶²

1. Control environment
2. Risk assessment
3. Control activities
4. Information and communication
5. Monitoring of controls

For example, an analysis of the respondents' answers might show that auditors emphasise separation of duties, physical controls and a risk focused approach to analyse the risk of occupational fraud. That would in turn imply that control activities and risk assessment are viewed as the most important parts of the model. This would also indicate an emphasis of a mixture of harder controls (control activities) and softer controls (risk assessment).

⁶² For an additional description of the model, see chapter 2.

4.6 CHAPTER SUMMARY

The above overview of previous research has aimed at presenting the area of interest of this thesis. Despite several relevant studies, the exposition in this chapter has showed that auditors' perceptions of red flags and internal control are not very well investigated in previous research. This is even more evident concerning previous research in Sweden which is hardly present at all above.⁶³

In the case of red flags, the overview shows the importance of different parts of the fraud triangle. It also shows the fact that red flags always seem to be present in cases of fraud and occupational fraud. Both of these facts are significant aspects for the purpose of this thesis. The results presented by Heiman-Hoffman et al. (1996) as well as Moyes et al. (2005) indicate that red flags related to *attitude* were deemed as most important in detecting fraud. The results are interesting in order to see how the groups of auditors participating in this thesis view red flags, as well as whether their view differs compared to the view of a group of experts. Other parts of the research presented above also indicate that differences in views of red flags exist between different groups in companies which could indicate that differences within the group of auditors exists as well. Finally, previous research indicates that auditors have problems in recognising red flags.

As regards internal control, the previous research points to the *softer* sides of the COSO-model (especially the control environment) as more important in detecting and preventing fraud. The previous studies also underline the importance of *ethics* in combating fraud and occupational fraud and that views concerning the importance of ethics differs within companies. The tone-at-the-top is also emphasised as crucial in detecting and preventing fraud and occupational fraud in companies. In short, the different emphases placed on different parts of the COSO-model as well as softer vs. harder parts of internal control, indicates that inclinations towards certain parts of internal control within the group of auditors exists as well. Inclinations towards

⁶³ Interesting comparisons can however be made with previous research in Sweden, for example, Öhman (2005) and Öhman (2006) and the discussion of auditors' tendency to rather audit "right/correctly" than audit "right things". See chapter *Discussion* for a comparison of the results of the thesis with previous research.

certain parts of internal control as well as differences in view between auditors are of interest in order to understand how auditors *can* play a part in detecting and preventing occupational fraud. It is also of interest when discussing what role auditors *should* play in combating occupational fraud.

The previous research has also indicated some differences in how to handle fraud due to differences in the perception of the term *fraud*. Hence, this was also covered during the interviews conducted in the thesis in order to outline whether the definition used by different auditors or experts seemed to play a significant role in explaining the views found.

The results of the previous research in combination with the lack of previous research conducted within a Swedish context of auditors' views on red flags and internal control indicate a need of further research. It should also be recognised the potential difficulties arising in a comparison with the previous research presented above. First, the context in which the above presented research is conducted is possibly different from the context on which the data in this thesis is based. Variations in focus found in different countries are likely to affect the view of auditors concerning fraud and occupational fraud. For example, the literature covered above is in many cases, based on American data. The attitude and stance on fraud and occupational fraud is likely to be harder than the situation in Sweden, not only on a regulatory basis but for culturally based reasons as well (scandals such as Enron and Worldcom a few years ago as well as the Savings and Loan scandal in the 1980s have had a profound effect in America and even abroad). Second, the literature covered above is in several cases, based on case studies which make the total picture somewhat difficult to grasp. Third, the previous research does not to any deeper extent cover the view of auditors concerning fraud and occupational fraud since the most relevant studies are mainly studies in which auditors were asked to list red flags, hence the studies do not analyse the view any deeper through the use of qualitative analysis.

5. METHOD

5.1 INTRODUCTION

This second part of the thesis investigates empirical data in order to try to fulfil the previously stated purposes of the thesis. The empirical data is analysed through the two main models described in the previous chapter.

This second part of the thesis is divided into four main chapters – *Method*, *Analysis*, *Discussion*, and *Conclusions and Proposals for Further Research*. The first chapter, *Method*, describes how the empirical data (qualitative and quantitative) was collected and selected. It also discusses some methodological considerations made during the study. The second chapter comprises the analysis of the empirical data. The analysis, of red flags and internal control, is carried out on qualitative and quantitative data, with the aim of outlining the view of the different groups from two different empirical perspectives, hence arriving at a more complete and deeper understanding of the views of the groups studied. Finally, the last two chapters, *Discussion* and *Conclusions and Proposals for Further Research*, present and discuss the results from the analysis as well as the main findings of the study.

5.2 METHODOLOGICAL CONSIDERATIONS

The purpose of this thesis is to achieve a greater understanding of auditors' perceptions of red flags and internal control. Different alternatives exist on how to investigate these perceptions. According to Bryman and Bell (2005), either a qualitative or a quantitative research strategy can be applied. Quantitative research is characterised by greater amounts of data which is collected, structured and standardised so that the results can be generalised. In the case of the qualitative method, fewer units of data are normally collected and analysed for the sake of the single units as such. Hence, qualitative methods are better applied when qualities which are difficult to measure are studied and when the results are interpreted in order to achieve a deeper understanding of the object.

According to Cassell (2004), the purpose of qualitative research interviews is to gather descriptions of the perceptions of the respondent with respect to the

interpretation of the meaning of the described social phenomena. Furthermore, according to Cassell (2004), in the exploratory interview the perspective of the respondent is of greater significance. In order to achieve a better understanding of the auditors' perceptions of red flags and internal control, a qualitative research strategy was seen as the most appropriate. However, in order to gain greater confidence in the qualitative strategy, the choice to apply triangulation was made. The quantitative approach was used in order to complement the qualitative analysis in order to achieve greater confidence in the qualitative results. The research can however better be described as qualitative rather than quantitative since it is difficult to measure the views of the respondents.⁶⁴

The data collection in this thesis is conducted through interviews which are described further in the sections below. A complete quantitative approach would probably need to be limited to a number of red flags and criteria of internal control which respondents would have to rank (compare the articles by Moyes et al., 2005 and Heiman-Hoffman et al., 1996). As noted above, a quantitative approach is also applied in this thesis, but only as a *complement* to the qualitative analysis. The reason is that a pure quantitative approach is by necessity limited to a number of red flags and criteria of internal controls which exclude some possible red flags and criteria of internal control, which might yield biased conclusions of the auditors' view of occupational fraud. These reasons have played a role in the choice of applying triangulation in which a qualitative research strategy is applied *combined* with a complementary quantitative method.⁶⁵

All together, the methodological position of the thesis can be described as open and combines a qualitative and quantitative strategy. This is also a reason why both a qualitative and a quantitative part are used. Thus, even though the main focus is to investigate the views of auditors, which is deemed

⁶⁴ Since it is normally difficult to clearly separate qualitative and quantitative research from each other I will not discuss the character of these any further. See further Lundahl and Skärvad (1999) and Svenning (2000). According to Johannessen and Tufte (2003), it is also often fruitful to combine qualitative and quantitative methods of research.

⁶⁵ See also section 5.6.1 for a discussion about validity and the chapter *Discussion* for a discussion about alternative methodological choices.

to be best studied with open qualitative questions, the quantitative part still serves a purpose as a complement to the open-ended questions. In other words, the quantitative part is mainly used to see whether any contradictory results are found compared to the results of the qualitative part. Consequently, despite the length of the quantitative analysis in the thesis, the main focus is on the qualitative part of the thesis.

5.3 LIMITATIONS

5.3.1 COMPANIES – SIZE, BUSINESS ETC.

The focus of the thesis is on auditors' perceptions of internal control and red flags in relation to irregularities committed by people inside a company and against the company (occupational fraud). In other words, an important limitation is that the committed irregularities studied are directed towards a company in which the perpetrator is employed. Thus, only cases in which a company (and indirectly its owners) is hurt by the irregularities is of interest in the thesis (i.e. the stakeholder is limited to the company and does not include creditors, the government etc.).

Since internal control is part of the main focus of the thesis, the study will be limited to companies where most aspects of management are delegated from the owner to employees (i.e. to senior management). Thus, ownership governed companies (i.e. companies in which management is not clearly delegated from the owners to employed managers) will not be of interest in the study. Furthermore, financial companies (banks, insurance companies etc.), due to their special regulations that require more specialised auditors, will not be included either.

5.3.2 OCCUPATIONAL FRAUD

Fraud is a very broad term and a single accepted definition does not exist. Often the term fraud is used rather broadly in the literature. Examples of commonly used definitions include:

All those activities involving dishonesty and deception that can drain value from a business, directly or indirectly, whether or not there is personal benefit to the fraudster. (Davies, 2000, p. 2)

Any illegal acts characterised by deceit, concealment or violation of trust. These acts are not dependent upon the application of threats of violence or physical force. Frauds are perpetrated by individuals, and organisations to obtain money, property or services; to avoid payment or loss of services; or to secure personal or business advantage. (Spencer Picket, 2005, p. 164)

The applied definition of fraud can be said to accept both of the definitions above. However, in order to facilitate the analysis as well as the collection of data, some additional divisions and limitations of the term are made and applied during the conducted interviews:

1. Fraud as stated in Swedish criminal law (according to the 9th Chapter of the Swedish Penal Code)⁶⁶
2. Embezzlement (as stipulated in 10th Chapter of the Swedish Penal Code)⁶⁷
3. Fraudulent financial reporting

Generally speaking, number one and two concern *misappropriation of assets* while the third one concerns *fraudulent financial reporting*. It is important to notice the limitation concerning the three parts of the term stated above. For all of those parts, several different stakeholders can suffer damages due to fraud. However, in this thesis, only the company in which the fraudster is employed⁶⁸ is of interest, i.e. attention is only paid to fraud from which the owners of a company suffer. This is also what is meant by the term *occupational fraud* in this thesis. In other words, the study conducted in this thesis is limited to occupational fraud as defined above. However, the term *fraud* is often used in the literature and previous research, which is then a somewhat

⁶⁶ This corresponds to the Swedish term "bedrägeri".

⁶⁷ These correspond to the Swedish term "förskingring".

⁶⁸ An employee in this thesis covers both employees in general as well as management and senior management. Thus, the term occupational covers all of those employed by the defrauded company. For example, external contractors which exclusively deliver products or services are not included.

broader definition than the one used in this thesis. The term fraud is used when referring to research which applies a broader definition than the one used in this thesis. In other cases, the term occupational fraud is used.

Fraudulent financial reporting covers not only intentional actions of financial misstatements which are criminalised according to the Swedish Penal Code (even though they can be so) but also acts which are fraudulent (i.e. not in line with generally accepted accounting principles) but not necessary penalised. The term relates to situations when management or other employees intentionally use accounting in order to mislead the stakeholders (in this case, the owners) of the true financial situation of the company. These situations include actions such as overestimating assets, recording revenue too soon, recording bogus revenues, shifting current expenses to a later period, shifting future expenses to the current period etc.⁶⁹ The reason behind the deliberate financial misstatements can be anything from hiding another irregularity committed to receiving a larger bonus.

In addition, the variation in viewpoints between different auditors as well as between auditors and experts is possibly also dependent on how each group defines *irregularities*. In other words, the definition of irregularities is also investigated and discussed during the course of the interviews.

5.4 COLLECTION OF EMPIRICAL DATA

5.4.1 SELECTION OF RESPONDENTS

The selection of respondents was made in line with the above mentioned limitations of the thesis. In other words, concerning auditors, the selection has been limited to the geographical area of Stockholm. In addition, almost all of the respondents are employed at Öhrlings PricewaterhouseCoopers, the main reason being that auditors at this firm have been easier to gain access to. Its city office of is also very large and employs a substantial number of auditors with different amounts of years of experience as well as specialisation.

⁶⁹ See Schilit (2002) for additional examples.

Despite the fact that auditors from Öhrlings PricewaterhouseCoopers have been the main group of respondents, this has not been deemed as a methodological problem because of the variety of auditors present within the firm, the fact that all practicing auditors are obliged to apply the Swedish Generally Accepted Auditing Standards, and that audit programmes are similar in the scope between the larger auditing firms.

Furthermore, the selection of respondents was made with the aim of achieving a differentiated sample in terms of years of experience of auditing and the main clients audited. A total of 34 personal interviews were conducted of which nine respondents are experts and 24 respondents are auditors. Each interview lasted approximately one to one and a half hours. Regarding the quantitative portion, one respondent did not answer the part on red flags and internal control and one respondent did not answer the part on red flags.

One interview was a test interview which was not included in the final analysed data, hence the total (used) interviews were 33. The test interview was made during the thesis with a respondent who represents fraud experts within the police department and public prosecutor's office. The test interview revealed that the investigational approach of the police and public prosecutor differs compared to the investigation of auditors. While auditors audit the risk of fraud in an unbiased manner, the investigations conducted by the police and public prosecutors are conducted *after* a report to the police is filed. Hence, auditors' as well as to a certain extent, experts' work is risk focused while the work of the police or public prosecutor is done post discovery of the fraud. Consequently, questions concerning red flags and internal control are not of specific interest to the police or public prosecutor, but are of interest to auditors as well as to experts.

The first interview conducted was also in some sense, a test interview although the results from this interview were used for the part of the qualitative data since the interview only affected the design of the quantitative part of the interview guide. The quantitative part of the interview was initially designed as subgroups which the respondent was supposed to grade with respect to their relative importance. However, the first interview revealed some difficulties in how to grade the different groups. It was also found to be better to use a scale which the respondent could grade both with respect to

relative and absolute importance. Hence, the first design of the quantitative part of the interview guide was modified to the final design used in the thesis.

The total group of 24 auditors were selected with the aim of achieving two subgroups of similar size. One subgroup is based on years of experience; the other is based on whether the respondent mainly audits large or small companies. Both of these criteria of dividing the groups of auditors were based on my personal, previous pre-knowledge from working as an auditor in combination with the lack of previous research to motivate other choices of division.

In the case of years of experience only auditors who were “godkända” or “auktoriserade” were included since it was only meant to include auditors who by law are entitled to sign auditors’ reports. Further, it was considered to be an acceptable division to divide the older and younger auditors based on a ten year experience division. This was due to the fact that most auditors acquire the title “godkänd” or “auktoriserad” after approximately five years of practice and thereafter need a few years as “godkänd” or “auktoriserad” before they can be viewed as “older”. In addition, a clear division was achieved due to the fact that the younger auditors divided themselves between five to ten years of experience, while the older auditors all had clearly attained more than ten years of experience. Hence, the division based on years of experience did not result in any problem of interpretation as a result of possible indistinctiveness between the two subgroups.⁷⁰

The division based on company size was based on the respondent’s perception of which kind of company he or she normally audits or normally have been auditing. Thus, the division was not based on a detailed account of the number of hours the respondent spent on a typical sized company but on the spontaneous estimation of the respondent. This was made for practical reasons. Large businesses were defined as companies in which a clear division of ownership and management normally is at hand and where the number of employees is large enough to make it possible to design typical internal control systems (for example division of duties). Middle sized companies and

⁷⁰ For practical reasons the terms “older” and “younger” auditors are used for the two groups of more and less experienced auditors.

smaller companies were combined since the typical division of ownership from management and internal control systems were deemed to be more similar to each other compared to larger companies.

Additional divisions, for example based on sex, were not chosen due to practical limitations as well as lack of personal pre-knowledge that other divisions could be of importance or interest.

Concerning the selection of respondents for the group of experts, the population is clearly smaller than the potential group of auditors. It is mainly the larger auditing firms which employ forensic experts. The choice was therefore made to capture as many of the forensic experts employed at the Big 4 auditing firms as possible. Contact was made with the Big 4 auditing firms as well as with The Institute of Internal Auditors in order to locate the existing experts in the field. The contact was made through e-mail either directly to the person responsible for the department or to the general information of the firm. The e-mail used explained the purpose of the study, the role played by experts and the time needed for a possible interview. Most of the experts asked agreed to take part in an interview. A criterion during the selection was that the respondent had acquired a thorough experience of forensic investigation.

Table 1: Division of interviewed auditors with respect to applied subcategories

	Auditors who mainly audit <i>larger</i> companies	Auditors who mainly audit <i>smaller</i> companies
<i>Older</i> auditors (>10 years of audit experience)	8	4
<i>Younger</i> auditors (≤ 10 years of audit experience)	6	6

The division of respondents in different groups of auditors was made from how they would describe themselves (as mainly working with larger or smaller (or middle sized) companies) and from the number of years of audit experience (ten years or less of audit experience was classified as “younger”). The interviewed auditors are distributed according to Table 1.

5.4.2 SELECTION OF INDICATORS AND CRITERIA FOR THE INTERVIEW GUIDE

The selection of red flags for the quantitative part was made in the following way: first, RS 240 was reviewed in order to capture important indicators of occupational fraud. Second, the model of Morries (see Appendix 3) was reviewed in order to include a wide number of important indicators. The choice of red flags was divided into one of the models applied in the study. Third, even though the red flags mentioned in the RS 240 and by Morries encompass a large number of red flags, previous research was studied as well. The work by Heiman-Hoffman et al. (1996) especially provided inspiration when choosing red flags, but the studies by Albrecht (1996), Pomeranz (1995), Thompson (2002), Thompson (2000), Thompson (1999), Thompson (1998), and Urbancic and Hubbard (2003) were also reviewed for additional inspiration.

The selection of criteria of internal control for the quantitative part was made in the following way: first, an overview was conducted of literature on the COSO-model and the criteria included in this model. Secondly, the homepage of COSO was reviewed.⁷¹ Pacini and Brody (2005) also provided further inspiration for the choice of model of analysis.

The aim of the choice of red flags and criteria of internal control was to include examples of red flags and criteria, but at the same time select a large enough number to cover the red flags and criteria which are mentioned in the studied literature.

⁷¹ www.coso.org.

5.4.3 INTERVIEW GUIDE

The interviews conducted in the thesis have followed a pre-specified guide, which is described below and included in Appendix 4. The interviews contained both open and closed questions and were put together with the aim to first apply broad questions and thereafter narrow down the questions. This was achieved through the division of the guide into three separate parts. The first part covers questions which aimed at providing background information of the respondent's view of issues relating to irregularities and auditing. Since several of the questions of part one were specific to auditors, experts were only asked those questions which were relevant to them (otherwise the same questions were asked in the same manner for the two main groups of respondents).

The second part of the interview guide includes open questions which more directly relate to the topics of the thesis. Despite the openness of the questions of part two, the questions were formulated with the purpose of being analysed with the models used in the thesis. Further, follow up questions, during the interview, were asked repeatedly depending on the answers given. It is important to recognise that the main focus was on the qualitative data since the purpose and nature of the study is best analysed through the answers from open-ended questions.

Finally, the third part of the interview guide contains specified lists of red flags and criteria of internal control. In this part, the respondent was asked to grade the different indicators and criteria on a Likert scale numbered 1-7 (with the highest grade being of highest importance). The order in which the indicators and criteria were presented was randomly mixed to avoid that indicators or criteria, which relate to a certain group in the models of analysis, would be given a biased amount of time and attention by the respondent. The results of the third part of the interview were then analysed statistically as well as through applying the models of analysis.

All questions in the interview guide are in some way connected to the research questions of the thesis. However, as seen above, the first part contains broader questions relating to the view of definitions of irregularities, whether the respondent had experienced cases of irregularities or not etc. This

part was added in order to facilitate the interpretation of the provided answers. The first part was also included with respect to previous research in which definitions of fraud as well as personal experiences seemed to play a crucial role. See chapter 4 for an overview of previous research.

The second and third parts of the interview guide are more directly related to the research questions of the thesis. They too, however, are based on previous research conducted in the studied area. For the second part, in which the questions are open-ended and directly aim at capturing the view of the respondent, inspiration was collected from several previous research articles. Albrecht (1996) shows different categories of red flags which are important in detecting fraud. Webber et al. (1996) describes how different factors relating to *opportunity* and *motivation* affect auditors. In addition, previous research is conducted by Moyes et al. (2005), in which internal auditors were asked to list red flags with respect to how efficient they believed the red flags were in detecting fraud.

The study mentioned above is related to the work of Apostolou et al. (2000), Hansen and Klamm (2004), and Rezaee (2002) which deal with the questions of how to classify red flags with respect to *motivation* and *opportunity* as well as the importance of all the “corners” in the Coleman model. Concerning the criteria of internal control, the work conducted by Barnett et al. (1998), D’Aquila (2004), Holmes et al. (2002) and Roth and Marks (2004), were other important sources of inspirations. The last mentioned articles all emphasise the need to focus on aspects relating to the *control environment* (in the COSO-model). Finally, Albrecht et al. (1984) and Deck (1985) both pointed to weaknesses in the internal control which relate to Coleman’s model of analysis.

The two models of analysis, the original internal control model (the COSO-model) and the combined fraud model, were used both in terms of how the interview guide is constructed as well as how the results of the interviews are analysed. Hence, the questions in the interview guide are based on the models in order to achieve a strong connection between data collection and the model of analysis.

The questions of the interview guide are inspired by the previous research listed above. The results of the research and how it contributes to the previous research stated above is discussed in the chapters *Discussion* and *Conclusions and Proposals for Further Research* at the end of the thesis.

5.4.4 PROCEDURE DURING THE INTERVIEWS

Contact was made with a large number of respondents, both through e-mail and through direct contact when possible. A time was set when to conduct the interview and the respondent was told it would deal with auditors' view of fraud with special emphasis on red flags and internal control. No other preparation of the respondents was made before the actual interview. The choice of not sending out any questions in advance was made in order to avoid the problem that some auditors might prepare themselves in advance while others would not. It was also considered to be beneficial to receive spontaneous answers from the respondents.

At the time of the interview a short introduction of the study was given and the disposition of the interview was presented. Each question was then gone through with additional follow up questions being asked when deemed necessary or beneficial. Each interview was documented directly on the computer, i.e. no tape-recorder was used in order to respect the need for anonymity considering the sensitive nature of the study. In cases where the respondent, concerning the quantitative part, hesitated between two grades, an average between the two grades has been used (e.g. hesitation between a "4" and a "5" has rendered a grade of "4.5").

Questions of confirmation, i.e. questions in order confirm the answers given by the respondents, were asked repeatedly during the interviews. The way the questions asked during the conducted interviews were constructed, the answers provided were rather short and distinct. Combined with the repeatedly asked follow up questions, which were asked in order to ensure a correct understanding of the answers, no need of structured feed back after the interviews to the respondents was considered necessary. Thus, no need of further correspondence after the conducted interviews with any of the respondents was deemed necessary.

5.5 THE ANALYSIS OF THE DATA

The study focuses on two different groups, auditors (and subgroups of auditors) and experts. The collection of the empirical data was conducted both qualitatively as well as quantitatively through the combination of open and specific questions. The combination of both qualitative and quantitative questions was considered to facilitate the possibility to compare the answers from the two groups since the two sorts of questions complement each other. Thus, a comparative analysis was chosen to investigate the perceptions of auditors. In addition, the comparison with the experts sheds additional light on the peculiarities of auditors' perceptions of occupational fraud and is thereby a good ground for generating hypotheses.

It should, however, be noted that the qualitative data collected during the interviews was collected with the aim of achieving a comprehensive view of the different red flags and criteria of internal control which came to mind for the respondents. This implies that the qualitative data has a more quantitative character than might be the case with qualitative data collected from other interviews with open questions. Consequently, the qualitative data analysis is not as interpretive as might have been the case with more "pure" qualitative questions. The reason for the choice of questions was mainly to make the most out of every interview despite the limited time which the respondents could spare and still achieve a comprehensive picture of the respondents' perceptions.

The analysis of the qualitative data was done in the following way: first the collected data of each question asked during the interviews was summarised. The answers from the most important (i.e. model relevant) questions were then put together in separate documents. This was done for each of the different groups analysed, i.e. for auditors as a whole, for experts, and for each of the subgroups of auditors. For example, in order to analyse the view of the term irregularities, all answers of the question concerning the definition of fraud were put together in a separate document. The answers were then summarised and analysed through the two models of analysis in order to reach a picture of how well the answers fit to each model (i.e. to evaluate whether

some parts of the models were emphasised⁷² relatively stronger than other parts). Quotations which are illuminating to the general picture were presented. A comparison of the summarised answers was thereafter conducted between the opposite groups studied (e.g. auditors vs. experts).

Through the application of the models, it was possible to analyse the answers of the respondents and thereby see what parts of the models received greater focus than other parts. In addition, through the application of the models, it was also possible to differentiate between the two groups studied in the thesis. It is important to recognise the intimate relationship between the interview guide, the models applied and the analysis of the empirical data. The questions of the interview guide are all connected to the models of analysis applied. However, this was done in a very covert manner in order to prevent the respondents to be directly influenced by the models of the thesis. For example, nothing was explicitly mentioned of the models during the interview and none of the questions asked contain any terms which might indicate the underlying choice of models of analysis. In addition, during the course of the data analysis, the answers of each main question are separately analysed. For example the answers to the question of how to investigate for occupational fraud are analysed separately for each category of respondents and with the models of analysis.

The fact that the models are directly linked to the questions asked during the interviews affect the results of the study. First, since the models are linked to red flags and criteria of internal control, the views generated through the interviews cannot be generalised to other aspects of occupational fraud. Second, the limitations of the models imply that other models could possibly generate other conclusions than the conclusions drawn from this study. Third, the two models (the COSO-model and the basic fraud triangle) are sometimes applied by auditors during audits. Hence, auditors who normally apply these models can possibly structure their answers in accordance with the two models. This is however not deemed to be a problem since that is in any case their view which is presented, whether connected to the applied models or not.

⁷² *Emphasised* refers to cases where aspects of the applied models of analysis were mentioned by several of the respondents within the studied group as well as emphasised by the respondents as very important or given a lot of attention during the interviews.

Second, the main questions asked during the interviews were directly connected to the two models of analysis applied in the thesis (i.e. the (modified) fraud triangle and the COSO-model). The summaries of the questions connected to the two models were made in line with the different parts of the specific model. For example, a question of typical red flags was analysed by listing the red flags which were mentioned several times (by several respondents). It also mattered how much emphasis was given to certain red flags whether or not they were brought to the list.

The resulting list of red flags was in turn divided with respect to the different parts of the model (e.g. *Incentives* or *Opportunity* and their respective subparts such as *People*, *Controls* etc.). The resulting division of red flags in the model applied was then compared between the opposite group explored (e.g. auditors vs. experts). The results were also reflected upon from the general impression received from the interviews. For example, the tendency of experts to present wider and more model-suited perceptions became clear during the interviews and the final results were in turn compared to this general impression received during the interviews. Three questions can be seen as key questions in the interview guide for the analysis of the data. These are:

1. In brief: How do you proceed in order to investigate whether irregularities are present in a firm? (labelled as “How to investigate the possibility of occupational fraud” in the analysis)
2. What (which) indicators/red flags of occupational frauds (of the ones listed below) would you view as typical in a company (defined as recently committed, being committed or which with significant probability will be committed)? List in order of precedence! (labelled as “Typical red flags” in the analysis)
3. How would you describe a good internal control concerning the possibility to detect and prevent the below listed occupational frauds from being committed? (labelled as “Good internal control in order to detect and prevent occupational fraud” in the analysis)

These three questions relate directly to the models applied. The first question encompasses both red flags and internal control while the second question concerns red flags and the third one internal control. In the first question the respondents were asked to describe how they would proceed in order to “investigate” whether any irregularities are present in a firm. The term “investigate” was used instead of “audit” since the same question was asked to the experts as well as the auditors. This term was used in order to avoid terminological confusion between the respondents. It was also emphasised that the respondent was expected to only describe how he or she in general would proceed in order to investigate whether any occupational fraud was present or not. This open question made it possible to analyse which aspects the respondents focused on in terms of the fraud triangle and internal control.

In the second and third questions, the respondents were asked to list red flags and criteria of internal control which they viewed as the most typical signs of occupational fraud (red flags) and criteria of internal control in order to detect and prevent occupational fraud (internal control). These two questions were asked in order to achieve a list of red flags and criteria of internal control emphasised by the respondents for each of the two questions. The list of the answers to each of the two questions was in turn divided with respect to the different models applied (red flags on the fraud triangle and criteria of internal control on the COSO-model) in order to see what parts of the models were emphasised the most. The results from these two questions together with the first question above and the general picture of the respondents’ view, conclusions could be drawn on how the different groups view occupational fraud.

The *analysis* of the quantitative data was conducted the following way: first, each red flag and criteria was referred back to its original place in the models of analysis. Then, averages for the grades given by the respondents were calculated, both for the red flags and criteria of internal control, the subgroups of red flags and criteria of internal control and, in the case of red flags, for the three main groups of the model (*Opportunity*, *Neutralisation/Attitude*, and *Incentive/Motive*). The calculations were made separately for the two groups studied, i.e. auditors and experts as well as the subgroups within the group of

auditors. The results were then analysed for the two separate groups as well as compared between the two groups.

Calculations of averages and standard deviations were made for each group and subgroup of the models as well as for each group and subgroup of respondents. This rendered it possible to compare the parts of the model for each group and subgroup of respondents in order to evaluate what parts of the models were given the strongest emphasis. In addition, the calculation of standard deviations made it possible to investigate the spread within each group and subgroup of the respondents, thus making it possible to draw complementary conclusions of the degree of agreement of each group and subgroup studied. Finally, relative calculations of the groups and subgroups were made in order to better compare the results of the different groups. In the case of the modified fraud triangle, the results were calculated for both the main parts of the model as well as for the subparts of the model. The conclusions were in turn compared to the conclusions drawn in the analysis of the qualitative data.

It is however important to emphasise that in the case of the quantitative data, this data is mainly analysed in order to provide strength to the conclusions drawn from the qualitative data analysis. Thus, the main use of the quantitative data is to complement the qualitative data in order to see that no diametrically opposed results appeared compared to the conclusions drawn from the qualitative data. The statistical analysis of the quantitative data is also only descriptive in nature and not intended to test hypotheses. Considering the limited number of respondents (e.g. the group of experts' totals nine respondents) and the importance of the qualitative data, use of statistical testing was not deemed as beneficial to the study as a whole. The results of the quantitative analysis were instead used as a complement to the qualitative analysis in order to see whether any indications of contradicting results appeared between the two different analyses. Thus, the results of the quantitative part are merely indications and should be read in the light of the results presented in the qualitative part.

It is also noted that since the lists of red flags and criteria of internal control are not complete, the grading is mainly an investigation of the relative importance of different parts of the models applied on the different groups of respondents. For instance, if the strongest emphasis is placed on *Opportunity* (in

the fraud triangle-model) by two opposite groups, it is not necessarily the emphasis as such but the *relative* emphasis in relation to the conclusions drawn from the qualitative data analysis which are of importance.

The results of part three of the interview guide were then compared and put together with part one and two of the interview guide, i.e. the qualitative parts, in order to draw conclusions from the entire empirical data.

5.6 VALIDITY AND RELIABILITY

5.6.1 VALIDITY

Validity means the ability of a study to measure what it is supposed to measure (Svenning, 2000). In this thesis, the views of auditors and experts are studied. In addition, the study is exploratory and aims at generating hypotheses which can be tested in a larger quantitative study. The choice of interviews is deemed to be the best way to approach the problem when investigating the views of the two groups and subgroups studied.⁷³ In order to achieve a comparison between the groups as well as an analysis of the groups individually (although with emphasis on auditors), two models are applied. The models are also closely linked to the questions of the interview guide, i.e. to further strengthen validity.

The study investigates the perceptions of auditors concerning red flags and criteria of internal control. In order to operationalise the concept of perception or view, two models of analysis were chosen. The models are presented more in detail in chapter 4. Both models are well-known in the area of fraud and occupational fraud, albeit the final model used to analyse red flags is a combination of the traditional fraud triangle and the model of Davies (2000), see Appendix 2.

⁷³ Other methodological alternatives include studying auditors' behaviour in real cases or a survey from which statistical analysis could be made. It is also possible to apply different models of analysis or different prerequisites in the interviews. These different methodological alternatives and other validity related problems of the study are discussed in detail in chapter 7, *Discussion*.

5.6.2 RELIABILITY

Reliability refers to how well a study withstands temporary external strains. In other words, if two studies are made with the same purpose and methods within an unchanged population the results shall, if having high reliability, generate the same results. If the results differ, this can be a result of problems of interpretation or wrongful samples. (Bryman, 2002 and Svenning, 2000)

In the thesis, the choice of respondents was made from a narrow population (larger auditing firms, in larger cities (Stockholm) etc.). The study is also mainly a qualitative study, which can occasionally limit the reliability of a study. In order to increase the reliability, the questions asked during the conducted interviews have been relatively specific. It is also the connection between the respondents' answers and the models applied which are of importance in the study. Thus, the reliability of the study is considered to have increased due to the specific character of the questions asked and the models of analysis used to analyse the answers. In addition, in order to additionally increase the reliability, a section in the interview guide consists of specific questions where the respondent was asked to grade different red flags and criteria of internal control. The strong connection to the two models also adds additional reliability to the study.

A problem with the applied method of data collection is the problem of interviewer effects. It is likely that some effect, positive as well as negative, has occurred during the course of the interviews. One reason is that the interviewer learns what answers to expect and is prepared with follow up questions. This would imply that the interviews conducted at a later stage of the period of data collection would have resulted in more specific information. Another effect could be that the interviewer starts to see patterns after a certain number of interviews and tends to increase this tendency by emphasising the questions differently depending on the respondent. It is possible that some of these effects have been present, due to the fact that an interviewer does learn how to improve the questions asked during the course of the data collection period and because subjective influences are difficult or perhaps impossible to completely eliminate.

The method to deal with the above mentioned problems and other related problems which can be present during interviews was the use of a pre-specified interview guide. The questions were also set up with the aim of completing the questions in approximately one hour (the average interview took longer than an hour but the extra time was mostly dependent on how much social conversation took place before and after the actual interview). Thus, the pre-specified questions of the interview guide limited the negative interviewer effects. Finally, in order to mitigate what Jacobsen (2000) calls context effect, the interviews all took place at the working place of each respondent. The choice of interview location was considered to make the respondent feel more comfortable and hence limit the risk of receiving influenced and laboured answers.

5.7 CHAPTER SUMMARY

This chapter has presented the methodological choices made in the thesis. The data collection has been made through a number of interviews with auditors as well as experts. Each interview was divided into two main parts, one with qualitative questions and one with quantitative questions. Hence, the data is both qualitative and quantitative in nature. However, the main focus is placed on the qualitative part of the empirical data because it is deemed as the best way to capture the perception of red flags and criteria of internal control. Consequently, the quantitative part serves mainly as a complement to the qualitative part. Because of the limited number of interviews in each subgroup of respondents, no statistical tests of significance were carried out from the collected quantitative data.

The analysis is based on two models; an adjusted fraud triangle, and the COSO-model. Both models have been applied in several previous studies, although not the adjusted fraud triangle model applied in this particular study. The reason behind the construction of an adjusted fraud triangle model is to achieve a deeper understanding of the auditors' view and especially facilitate a comparison between auditors and experts as well as between different subgroups of auditors.

The two groups of respondents are all practicing auditors or fraud experts and are located in Stockholm. All of the interviewed auditors are employed at

Öhrlings PricewaterhouseCoopers, while the experts are employed at other auditing and consultancy firms as well. The auditors were chosen in order to constitute four different subgroups – two groups based on years of experience, and two groups based on what kind of companies they normally audit.

6. ANALYSIS

6.1 INTRODUCTION

In this chapter the empirical data is presented as well as analysed, i.e. the presentation of results is integrated with the analysis. The chapter is divided into two main parts – red flags and internal control. Further, each main part is divided into an analysis of auditors and the subgroups of auditors. Finally, for each category of respondents, an analysis of the qualitative as well as the quantitative data is conducted which is finally summarised and from which conclusions are drawn. Comparisons between the different categories of respondents are carried out in each category respectively. For each category, the structure looks like this:

Category

- a) General aspects
- b) Red flags
 - i. Qualitative part
 - ii. Quantitative part
- c) Internal control
 - i. Qualitative part
 - ii. Quantitative part
- d) Summary and conclusions of red flags and internal control

The analysis follows a selection of the most important questions of the interview guide. Hence, except for the main questions of red flags and internal control, answers concerning the definition of irregularities and internal control, reasons as to why people commit fraud, and potential differences in view in the definition of internal control are also summarised since they are important in understanding the potential differences between the various groups studied. Concerning the question of how to investigate for occupational fraud, the question covers both red flags and internal control but the summary and analysis of the answers is placed under Red flags. Finally, comparisons between different groups (auditors vs. experts and between the

different subgroups of auditors) are made in each relevant section (i.e. under *Auditors*, and within each of the two sections of subgroups of auditors).

The analysis will start out with the auditors which also includes a comparison with the experts. An analysis, with the same structure and outline as the other analysis, is also made of the experts. The analysis of the experts is however placed in Appendix 7 in order to facilitate the reading the chapter. It is however recommended that the reader takes part of the analysis of the group of experts as well in order to better understand the integrated comparison between auditors and experts in the section *Auditors*.

As mentioned previously in the thesis, it is important to recognise the hierarchical status of the qualitative and quantitative parts. Thus, the main focus is put on the qualitative part while the quantitative part merely serves as a complement to the qualitative part. This is important to remember since the analysis of the quantitative data extends over a relatively large number of pages (mainly due to the inclusion of several tables). Discussion of the results and conclusions are presented in chapter 7 and chapter 8, in which implications of the study as well as its importance in relation to previous research are discussed.

6.2 AUDITORS

6.2.1 GENERAL ASPECTS

Definition of irregularities

The general view of the term *irregularities* among the interviewed auditors is broad in scope. However, a few characteristics can be outlined from the provided answers. First, the term incorporates in most cases a violation from which an organisation/company suffers an injury and that the perpetrator is employed in the organisation subjected to the irregularities. In other words, most interviewed auditors viewed irregularities as actions committed against an organisation or company and *not* something committed against a third party (i.e. third parties such as organisations or companies in which the perpetrator is not employed or against the government).

Second, the interviewed auditors paid much attention to criminal acts such as imposture, embezzlement, breach of trust etc. compared to criminal acts of a civil legal nature. Furthermore, the focus on breaches of criminal statutes also means that it is the external regulations which first came to mind to the group of auditors and not internal regulations.

Third, no special attention was given to the position that the perpetrator holds in the organisation or company in which he is employed (and which suffers the loss from the punishable offence).

The last two of the above stated characteristics do in some sense distinguish auditors from experts. Thus, the interviewed experts, compared to the interviewed auditors, paid stronger attention to breaches of regulations which were internal and/or external, i.e. not only regulations which were determined by the government, *and* they focused more on the position of the perpetrator (especially the fact that the acts would be committed by people higher up in the victimised organisations which in turn meant that they focused on the people who, according to PricewaterhouseCoopers (2005), cause the most extensive losses for organisations from irregularities).

Reasons why people commit irregularities

The perception of *why* people commit irregularities was rather homogeneous for the group of interviewed auditors. The main reason was said to be the need to acquire money – either due to pure greed, personal financial problems, personal problems (e.g. drug related problems etc.) etc. Pressure was considered to stem from many different causes. A second reason mentioned was the *opportunity* to commit the irregularities, i.e. that opportunity makes the thief. These two reasons, *incentive* and *opportunity*, correspond well with two thirds of the fraud triangle-model which is applied in this thesis.

The third “corner” of the model, the *Neutralisation/Attitude*, was however not mentioned as strongly as a reason among the interviewed auditors as in the case of the experts. This distinguishes the interviewed auditors from the interviewed experts, since the latter, to a much larger extent, viewed *attitude* (driven by the culture of the organisation which suffers a loss due to the committed irregularities) as an important reason as to why people commit

irregularities. This difference seems to be connected to the stronger emphasis that the interviewed experts placed on members of senior management as typical perpetrators of irregularities, which further distinguishes experts' and auditors' view of the term irregularities.

6.2.2 RED FLAGS

Qualitative results

How to investigate the possibility of occupational fraud

The picture outlined from the auditors' answers is rather heterogeneous in nature. Some auditors suggested a deep and thorough analysis in which cultural and ethical aspects were viewed as important, in combination with a well conducted risk analysis of sensitive parts of a company as well as the incentives which drive the people employed in the company. In short, some of the interviewed auditors presented an approach which covered all three parts of the fraud triangle as well as more or less all parts of the COSO-model (although no one explicitly mentioned any of the two models at this stage of the interviews). Typical aspects to pay attention to during the investigation were said to be culture, business environment, rumours, segregation of duties, presence of bonus systems, divergences in the earnings trend etc.

At the same time, however, some auditors outlined a more narrow approach on how to deal with the potential risk of occupational fraud being present in an investigated company. This latter approach was mainly directed to either no particular effort beyond a normal, statutory, audit or to measures which encompass typical control activities (such as tests of segregation of duties, approvals lists, physical controls, reconciliations, attention to strange and diverging transactions etc.).

In short, the view presented by the interviewed auditors is very heterogeneous indeed. To generalise the view presented during the interviews of how to investigate the possibility of occupational fraud in a company, it can be claimed that a stronger focus was generally put on the *Control activities* of the COSO-model (since more or less everyone mentioned these parts as important) in combination with whether there are any incentives present in the

investigated company to commit occupational fraud. In addition, the view can be described as *risk focused* in most cases.

This generalised picture, compared to the two models of analysis applied, emphasised *Incentive* and *Opportunity* of the fraud triangle (partly *Neutralisation/Attitude*) and in the case of the COSO-model, *Control activities* and partly *Risk analysis* and partly *Control environment*. The importance of their (i.e. the respondents') gut feeling was also often emphasised when encountering people (as possible perpetrators) in a company. Compared to the view presented by the experts, the view presented by the auditors is less homogenous. The auditors' view was also less focused on *Neutralisation/Attitude* (in terms of the fraud triangle) and *Information and communication* in the COSO-model. No emphasis was placed on differences between "hard" and "soft" controls among the auditors and that was an important distinction which was emphasised among several of the experts.

A couple of quotations illustrate the presented view:⁷⁴

"[It] is connected with the routine of approval, i.e. how easy it is to include things [costs] which should not be included. How strong the control of the financial statement is, over viewing control, so that nobody can hide [anything]".

"It is important to get an overview of the company. Look at the internal control (approvals list, jointly payments, segregations of duties), is it satisfactory?"

"Try to analyze in advance where the risks are in the company, i.e. if incentives exist among the staff to embezzle, presence of bonus systems [which encourage] to cook the result, or that they are close to bankruptcy."

"1. Internal control environment (how people are, orderliness, what feeling do you get from discussions with them etc.). These are the basics and if these are good, the risk of occupational fraud is clearly smaller. 2. Routines – map, verify and test of these. The ones who are in charge are the big risks. 3. Audit the large entries and transactions which deviate since these are not

⁷⁴ All quotations from the interviews are translated from Swedish by the author.

discovered in the routine control if it is the people at the top who do them. ... Check transactions where managers have been alone and approved and transactions which deviate.”

The above quotations show the broad nature of answers provided during the interviews. In some cases, the answers were well structured and emphasised the complexity of the problem of analysing for occupational fraud, while in other cases a strong focus was put on the more traditional hard controls in the company (such as approvals list, jointly payments, segregations of duties etc.).

Typical red flags

A number of red flags were mentioned as important indicators of fraud and embezzlement (misappropriation of assets) and fraudulent financial reporting. Several red flags were also the same for fraud and embezzlement as they were for fraudulent financial reporting. Taken together for misappropriation of assets and fraudulent financial reporting, the following red flags were brought up and emphasised on several occasions:

- Presence of bonus systems.
- Changes in lifestyle and the lifestyle as such of employees.
- Lack of delegation of responsibilities and work assignments.
- A culture which is characterised by greed, immoral behaviour, lack of responsibility, strong personalities.
- Disarray in the company, especially concerning accounting issues.
- Deficient routines.
- Strong pressure on management and employees due to high expectations on earnings.
- Opaque circumstances in a company (unclear structures, shady transactions, shady entries in the accounting etc.).
- Too even growth rates/earnings or sudden, unexpected, changes in growth rates.

- Vague and ambiguous answers from management.

Taken all together, the list of red flags brought up followed the three corners of the fraud triangle quite well (although never explicitly mentioning the fraud triangle during any of the interviews). However, individually the answers varied significantly and only a few respondents presented a view in which red flags covered the model well. Especially strong recognition was given to the lifestyle of management and other employees. A lifestyle characterised by luxurious living or a lifestyle which does not seem to correspond with expected income, was particularly viewed as a strong red flag of fraudulent activities.

Almost half of the respondents viewed the personal lifestyle as important. This factor, the lifestyle of management and employees, also overlaps another factor mentioned, namely culture. Cultural aspects, such as immoral behaviour, greed, lack of responsibility etc., were also, even though not as strongly, viewed as important red flags by about 20 percent of the respondents. Obscurity (opaque circumstances concerning structures, transactions, entries etc.) was, by approximately 30 percent of the respondents, also viewed as an important red flag. Finally, deficiencies in the control activities as part of internal control were also mentioned as strong red flags.

However, only a few of the respondents viewed a *mixture* of the above mentioned red flags as important, i.e. only a few respondents gave a comprehensive view of the fraud triangle. This mixed view of the total sample of respondents, together with a lack of emphasis on the interconnectedness of red flags between misappropriation of assets and fraudulent financial reporting, were the two strongest factors which distinguished auditors' view from the view presented by the experts.

A couple of quotations illustrate the answers given:

“Disarray in documentation/papers etc. and that they cannot answer questions etc. indicate the presence of occupational frauds. That it is an indifferent attitude towards orderliness.”

“Inexplicable increase in sales, of margins etc. which are inconsistent or cannot be explained. Inexplicable changes in the company’s accounting. If somebody who has access to cash flow suddenly starts to change lifestyle.”

“[I] get suspicious if I ask distinct questions and receive shady answers when the respondent should be able to answer clearly, i.e. has something to hide.”

“The people who hold important positions [in a company] have financial problems or the character of those people.”

“The owner is immoral. Deficient routines i.e. that planned routines are missing for how things should be done. That few people control too much increases the risk. The personal financial situation among those who have the possibility to cheat.”

The above quotations show the variety in answers given by the interviewed auditors. In some cases, the control aspect is prevailing while in other cases the attitude or incentive of the perpetrator is more prominent. As described above, the answers taken as a whole do cover the three “corners” of the fraud triangle rather well but on an individual bases the answers are often limited to particular aspects of one “corner” of the fraud triangle. The tendency to rely on gut feeling is also evident.

When viewing the mentioned red flags in the light of the complete applied model of analysis, the results were the following (bold factor in the model implies covered/emphasised):

Analysis of red flags (model applied)

1. Motive/incentive

a. People

- Presence of bonus systems.
- Changes in lifestyle and the lifestyle as such of employees.
- Strong pressure on management and employees due to high expectations on earnings.

2. Neutralisation/attitude (incentive driven rationalisations)

a. **Reward management**

- Presence of bonus systems.

b. **Culture and ethics**

- A culture which is characterised by greed, immoral behaviour, lack of responsibility, strong personalities.
- Strong pressure on management and employees due to high expectations on earnings.

c. **Communication**

3. Opportunity

a. **Structure**

- Opaque circumstances in a company (unclear structures, shady transactions, shady entries in the accounting etc.).

b. **Performance measures**

c. **Risk assessment**

d. **Fraud response**

e. **Controls**

- Lack of distribution of responsibilities and work assignments.
- Opaque circumstances in a company (unclear structures, shady transactions, shady entries in the accounting etc.).
- Deficient routines.
- Disarray in the company, especially concerning accounting issues.
- Vague and ambiguous answers from management.

As seen above, the parts of the complete model which were given stronger emphasis were *People*, *Reward management*, *Culture and ethics*, *Structure* and *Controls*. Just as described above, the main focus was put on *People*, *Culture and ethics*, and *Controls*. Compared with the traditional fraud

triangle, all three “corners” were represented. However, when the results are analysed in the light of the complete model of analysis, it becomes clear that some parts of the model were given scant attention, while the part given the most recognition was *Opportunity (Control)*. This accentuates the difference in view between the interviewed auditors and the interviewed experts. The experts presented a more diversified picture covering all parts of the model which the auditors did not. The auditors also put a relatively stronger emphasis on controls, i.e. on *Opportunity*, both compared to the group of experts as well as compared to the other two parts of the model in absolute terms. The individual mixture between the different parts of the model was also clearly stronger for the experts than for the auditors.

Quantitative results

The findings of the quantitative questions concerning red flags are found in Appendix 10. As is shown in Appendix 10, the calculations of the red flags are made according to the applied model of analysis. Seen from the general fraud triangle model of analysis, the results are divided the following way (average followed by standard deviation⁷⁵ within parenthesis):

- 1. Motive/incentive (4.38; 1.35)**
 - a. People (4.38; 1.35)
- 2. Neutralisation/attitude (incentive driven rationalisations) (4.49; 1.46)**
 - a. Reward management (3.89; 1.49)
 - b. Culture and ethics (5.06; 1.33)
 - c. Communication (3.95; 1.69)
- 3. Opportunity (4.89; 1.66)**
 - a. Structure (4.61; 1.32)

⁷⁵ The average standard deviation is calculated as the average of the sum of standard deviations. The resulting average degree of standard deviation can be influenced by the fact that a scale with a limited number of alternatives is used. The effect is technical in nature and implies that very low and very high grades result in a lower standard deviation.

- b. Performance measures (5.30; 1.08)
- c. Risk assessment (4.41; 1.40)
- d. Fraud response (3.89; 1.56)
- e. Controls (5.63; 1.00)

The results indicate that the total group of auditors viewed *Opportunity* as most important overall category in the model and *Motive/incentive* as least important category (from the applied list of red flags). It is also shown that the lowest degree of concordance is found for *Opportunity* and the highest for *Motive/incentive*.

The top five red flags (highest received average) for auditors are (category and subcategory in the fraud triangle within parenthesis):

Table 2: Top five red flags according to auditors

Number	Red flag (auditors, total)	Average	Standard deviation
1	Possibilities of the same person to initiate, authorise, carry out and enter transactions (<i>Opportunity, Control</i>)	6.43	0.58
2	Private economic pressure on top/senior management (<i>Incentive, People</i>)	6.25	0.69
3	Reluctance to cooperate with the auditor (<i>Attitude, Culture and ethics</i>)	6.14	0.77
4	Senior management and management do not set good examples concerning ethical values (<i>Attitude, Culture and ethics</i>)	6.02	1.35
5	Hard pressure on senior management to meet financial targets (<i>Incentive, People</i>)	5.91	1.23

In the case of the more specific model, *Controls* together with *Culture and ethics* received, on average, the highest grading. Furthermore, the subparts with the lowest standard deviation, i.e. the subparts where the strongest concordance is found, are *Controls*, *Performance measures*, *Structure* and *Culture and ethics*. *Controls* received the lowest standard deviation of all subparts, i.e. was the subpart which was viewed most homogenously by the auditors.

Table 2 shows that a mixture of red flags encompasses the “top five” list of indicators of occupational fraud for the group of auditors. It is interesting to compare the list with the top five list of experts. The top red flag and the third most important red flag for auditors are inverse compared to experts. Despite the otherwise substantial similarities between the lists, the difference is illustrative for the general impression from the conducted interviews and the results from the qualitative analysis. For the complete list of red flags see Appendix 12.

The group of auditors’ view of red flags are put in relation to the same for experts in Table 3 (standard deviation within parenthesis):⁷⁶

Table 3: Comparisons of groups of red flags between auditors and experts

	Auditors	Experts	Ratio auditors/ experts
Incentive	4.38 (1.35)	5.10 (0.93)	0.86
Neutralisation/attitude	4.49 (1.46)	5.14 (0.90)	0.87
Opportunity	4.89 (1.23)	5.30 (0.93)	0.92

A comparison between the results of the quantitative data analysis between experts and the total group of auditors indicate that both auditors and experts grade *Opportunity* higher. Further, experts, generally, grade all parts of the model higher. The range of views between the three parts of the model seems to be smaller for the group of experts compared to the group of auditors

⁷⁶ See Appendix 7 for the analysis and results for the group of experts.

(range of 0.2 compared to 0.51, or 4 percent compared to 11.6 percent). In addition, the concordance within the two groups differs with a tendency for a higher degree of concordance for the group of experts (measured as the standard deviations). These conclusions confirm (do not contradict) the conclusions drawn from the qualitative data analysis, i.e. the group of auditors shows a lower degree of concordance and varies more within the model of analysis.⁷⁷

Table 3 also shows a comparison on a relative basis. The ratios in the table indicate that the two groups differ most concerning their view of *Incentive* and *Neutralisation/attitude*, and the least concerning *Opportunity*. This indicates that auditors are closer to the view of the experts concerning *Opportunity* than for *Incentive* and *Neutralisation/attitude*. Thus, auditors put a relatively, compared to experts, stronger emphasis on *Opportunities* than on *Incentive* and *Neutralisation/attitude*. A relatively stronger focus on *Opportunity* is also in line with the conclusions drawn from the qualitative analysis.

As is seen in Table 4, the group of experts grade all subcategories of the fraud triangle model higher than the group of auditors. It is also shown that the group of experts, for all subgroups, shows a higher degree of concordance. The spread⁷⁸ within the two groups of the model (*Incentive* only contains one subgroup) is 1.17 (auditors) compared to 0.81 (experts) for *Neutralisation/attitude* and 1.74 (auditors) compared to 0.79 (experts) for *Opportunity*, i.e., once again, a seemingly larger spread for the group of auditors compared to the group of experts which again indicates a more even view of

⁷⁷ Calculations are made by dividing the results for the group of experts with the results for the group of auditors for each of the part of the model applied. It is important to recognise that no tests of significance have been carried out on the differences generated from the quantitative part. This also implies that the differences presented in the quantitative part can not be interpreted as significant differences (the differences are in several cases also very small). Hence, it is important to remember the purpose of the quantitative part, i.e. to serve as a *complement* to the qualitative part by generating indications of possible inconsistencies in the qualitatively drawn conclusions.

⁷⁸ The spread is calculated as the difference between the highest and lowest result within a specific part of the model. For example, for auditors *Neutralisation/attitude* the spread is $5.06 - 3.89 = 1.17$.

the importance of the three main factors which explain the presence of occupational fraud.

Table 4: Comparisons of subgroups of red flags between auditors and experts

		Auditors	Experts	Ratio auditors /experts
Incentive	People	4.38 (1.35)	5.10 (0.93)	0.86
Neutralisation/attitude	Reward management	3.89 (1.49)	4.58 (1.27)	0.85
	Culture and ethics	5.06 (1.33)	5.39 (0.73)	0.94
	Communications	3.95 (1.69)	5.19 (0.89)	0.76
Opportunity	Structure	4.61 (1.32)	4.91 (0.96)	0.94
	Performance measures	5.30 (1.08)	5.67 (1.03)	0.93
	Risk assessment	4.41 (1.40)	5.44 (1.33)	0.81
	Fraud response	3.89 (1.56)	4.89 (1.24)	0.80
	Controls	5.63 (1.00)	5.68 (0.63)	0.99

Table 4 also shows the relation between auditors and experts for the different subgroups of red flags. The closer the ratio is to 1.00, the more even are the results between the two groups. Hence, the ratio of *Controls* indicates the strongest similarity between the two groups. The ratio of *Culture and ethics* together with *Structure* and *Performance measures* are close to 1.00 as well. Despite the ratio of *Culture and ethics*, the results, taken as a whole, indicate a stronger emphasis on subgroups which belong to *Opportunity* within the fraud triangle, i.e. the results are in line with the results from the qualitative analysis.

6.2.3 INTERNAL CONTROL

Qualitative results

Definition of internal control

A number of different aspects were put forward for the group of auditors when defining the term "internal control". In general, three aspects dominated: a function which allows management to follow up on how the business works; that someone controls someone else's work; and that the Board of Directors understands the balance sheet and income statement; a set of systems and processes for the Board of Directors which are to ensure the protection of the company's assets, in order to ensure an accurate accounting and reach the goals set out by the Board of Directors.

In comparison with the definition presented by the group of interviewed experts, a couple of differences crystallise. First, the experts emphasise the need of internal control to ensure that internal *and* external regulations are followed. This could in some sense also be alleged to be included in the definitions of the auditors but with a less strong focus on the two sides (internal and external) of regulations. Second, the experts emphasise the need of the internal control to achieve *efficiency* in the company. Finally, the experts' view includes the COSO-model as a whole which the definition of the auditors' only partly does. A rather typical response from the interviewed auditors can be illustrated by the following quotation:

"Systemized orderliness. A company's system to ensure the accuracy of the financial control and to guarantee the accuracy of the accounting."

The quotation above indicates the strong importance paid to orderliness and control over the accounting which summarises the description above rather well. Thus, the view of auditors of internal control is in some sense narrowed compared to the experts with a stronger focus on one part of the definition presented by the experts (i.e. a definition which includes a mechanism which guarantees that regulations are followed, that efficiency is ensured, *and* that the financial reporting is accurate).

Difference between the common definition of internal control and the definition of internal control specifically concerning occupational fraud

The typical answer of the group of auditors was:

“It is part of the general definition, i.e. it is a way to make it work as intended which also includes occupational fraud. Albeit more specialized.”

This view partly corresponds with the view of the experts, albeit the experts put a stronger emphasis on the definition of internal control concerning occupational fraud as more of a different system rather than a specialised part of the same system. Thus, there is a slight tendency to view the internal control systems as separate among the experts while the auditors view the internal control systems as more integrated.

Good internal control in order to detect and prevent occupational fraud

The views of what encompasses “good” internal control include numerous aspects. In general, two parts of internal control stand out compared to other parts. These two parts are, in terms of the COSO-model, *Control activities* (especially including approval routines and lists, segregation of duties, continuous reconciliations, and good routines) and *Control environment* (especially including good culture/ethics/moral, openness, policy, active Board of Directors, tone-at-the-top, integrity among senior management). All together, some or all parts of the control activities stated above were mentioned in more or less all conducted interviews (with the auditors). In the case of *Control environment*, this factor was, through the mentioning of some of the above stated parts, mentioned by approximately 60-70 percent of the respondents.

Concerning other mentioned aspects of “good” internal control, the presented picture is heterogeneous. In short, all parts of the COSO-model were mentioned, however only vaguely for some parts of the model. In sum, the following aspects were mentioned and emphasised during several of the conducted interviews (for both misappropriation of assets as well as for fraudulent financial reporting): approval lists/routines, segregation of duties, reconciliations, orderliness, good competence among manager, senior management,

and the Board of Directors, good routines, analysis of changes, follow up (on routines, controls etc.), good culture/ethics/moral, good integrity of management, openness in the organisation, policy on occupational fraud, active Board of Directors, the tone-at-the-top, communications and IT, and good/balanced systems of rewards (bonuses).

As stated above, the mentioned parts of good internal control enumerated above do, in large, cover the COSO-model well. However, just as mentioned above, mainly two parts – the *Control activities* and the *Control environment* – are very well represented. It is also important to mention that although some agreement was reached for the two factors of *Control activities* and *Control environment*, the overall picture was a mixed view of which factors and aspects should be included in “good internal control” concerning occupational fraud. When applying the COSO-model on the received answers, the above stated factors are distributed in the following manner:

1. Control environment

- Good/balanced systems of rewards (bonuses).
- The tone-at-the-top.
- Active Board of Directors.
- Policy on occupational fraud.
- Openness in the organisation.
- Good integrity of management.
- Good culture/ethics/moral.
- Good competence among managers, senior management, and the Board of Directors.
- Orderliness.

2. Risk assessment

Analysis of changes.

3. Control activities

- Good routines.

- Reconciliations.
- Segregation of duties.
- Approval lists/routines.

4. Information and communication

- Communications and IT.

5. Monitoring of controls

- Follow up (on routines, controls etc.).

Again, the two parts of internal control given the most attention are *Control activities* and *Control environment*. However, the general impression during the conducted interviews was not that *Control environment* was as strongly emphasised as it appears above (in terms of number of factors). Instead, despite the relatively fewer number of criteria of internal control compared to *Control environment*, the focus on *Control activities* was strongly emphasised. The other three parts only received limited attention, both in terms of number of factors as well as how strongly and often the factors were mentioned during the interviews. *Monitoring of controls* did however distinguish itself partly from the other two subgroups *Risk assessment* and *Information and communication* since it was emphasised relatively stronger than the other two subgroups.

The differences compared to the view presented by the interviewed experts are the following:

1. The view of the experts is more evenly spread out and stronger emphasised over all parts of the COSO-model.
2. Even though the two parts given the most attention by the auditors can be seen as soft and hard controls, the view still differs compared to the view of the experts. In the case of the experts, they strongly emphasised the need to have a good mix of hard and soft controls and that the balance between hard and soft control compose a crucial part of internal control. Such emphasis on a mixture between hard and soft controls was not often emphasised by the auditors.

3. The group of auditors emphasised hard controls such as *Control activities* relatively stronger both in absolute terms as well as compared to the group of experts (although the difference was strongest for the relative comparison with the group of experts).
4. The integration of different parts of the COSO-model. Not only did the experts view hard and soft controls (such as *Control environment* and *Control activities*) as important, but they also emphasised the importance of *integration* of the different parts. Thus, interpreted in terms of the COSO-model, the experts emphasised that all five parts build on each other and are in that respect, mutually enforcing. This emphasis hardly presented itself during the interviews with the auditors.

Despite the differences stated above, it is also clear that an important similarity between the view of the auditors and the experts was evident during the conducted interviews. This similarity is due to the fact that both groups emphasised the *Control environment* and *Control activities* as stronger than the other parts of the COSO-model. The relation between *Control activities* and *Control environment* is however inverse between the two groups – the experts did in general pay slightly stronger attention to *Control environment* than to *Control activities* while vice versa applied for the group of auditors.

Quantitative results

The findings of the quantitative questions concerning internal control are found in Appendix 11. As is shown in Appendix 11 the calculations of the internal control are made according to the applied model of analysis. Seen from the COSO-model of analysis, the results are divided in the following way (average followed by standard deviation within parenthesis):

- 1. Control environment** (6.07; 0.94)
- 2. Risk assessment** (3.94; 1.77)
- 3. Control activities** (5.82; 1.04)
- 4. Information and communication** (4.81; 1.51)
- 5. Monitoring of controls** (5.04; 1.31)

The results indicate that the total group of auditors viewed *Control environment* followed by *Control activities* as the most important parts of the COSO-model and *Risk assessment* as least important (from the applied list of internal control criteria). It is also indicated that the lowest degree of concordance is found for *Risk assessment* and the highest for *Control environment* and *Control activities*.

Table 5 shows that the top five criteria of internal control are mainly included in the two categories *Control environment* and *Control activities*. It is interesting to notice that the list presented in Table 5 is very similar to the list of the experts and that a relatively stronger emphasis is put on *Control environment* compared *Control activities*. However, the differences between the results for the criteria are small and it is as previously recognised difficult to draw any clear conclusions. Consequently, the individual results do not contradict the general picture from the qualitative analysis. For the complete list of criteria of internal control see Appendix 13.

The top five criteria of internal control (highest received average) for auditors are presented in Table 5 (part of the COSO-model within parenthesis). The group of auditors' view of criteria are put in relation to the same for experts in Table 6 (standard deviation within parenthesis). A comparison between the results of the quantitative data analysis between experts and the total group of auditors indicates that both auditors and experts give higher grades to *Control environment*. Further, experts give higher grades for *Control environment*, *Risk assessment*, and *Information and communication*, while auditors give higher grades for the other two parts of the model. It seems that the range of views between the five parts of the model is smaller for the group of experts compared to the group of auditors (range of 1.82 compared to 2.14, or 29 percent compared to 35 percent). It also seems that the concordance within the two groups differs with a higher degree of concordance for the group of experts for all parts of the model (measured as the standard deviations). These conclusions confirm (do not contradict) the conclusions drawn from the qualitative data analysis, i.e. the group of auditors shows a lower degree of concordance and vary more within the model of analysis.

Table 5: Top five criteria of internal control according to auditors

Number	Criteria (auditors, total)	Average	Standard deviation
1	The control system of senior management and management, including the internal audit, staff policy, employee administration and the distribution of work (<i>Control environment</i>)	6.50	0.56
2	Compare the outcomes from inventory of cash, securities, and stock-in-trade with the accountancy (<i>Control activities</i>)	6.24	1.13
3	The company's organisation and way of distributing authority and liability (<i>Control environment</i>)	6.09	0.72
4	The philosophy, ethics, culture and way to run business of senior management (<i>Control environment</i>)	6.07	1.26
5	Check IT based routines and adherent system environment, e.g. to create controls for: 1. Changes in computer programs; 2. Access to computer directory (<i>Control activities</i>)	6.04	1.21

Table 6: Comparisons of groups of criteria between auditors and experts

	Auditors	Experts	Ratio auditors/ experts
Control environment	6.07 (0.94)	6.28 (0.53)	0.97
Risk assessment	3.94 (1.77)	4.58 (1.37)	0.86
Control activities	5.82 (1.04)	5.55 (1.01)	1.05
Information & communication	4.81 (1.51)	5.07 (1.28)	0.95
Monitoring of controls	5.04 (1.31)	4.46 (1.00)	1.13

Table 6 also shows that the two groups seem to differ most concerning their view of *Risk assessment*. It is interesting to notice how the two parts emphasised the most in the qualitative data analysis, *Control environment* and *Control activities*, differ between the two groups. First, the group of auditors viewed *Control activities* stronger than experts in absolute numbers and vice versa for *Control environment*. Second, the differences become somewhat clearer when compared on a relative basis, in which *Control activities* (and *Monitoring of controls*) differ compared to the general relative view of the two groups. In short, the results indicate, that the group of auditors put a relatively stronger focus on hard controls than the group of experts. A relatively stronger focus on *Control activities* (and hard controls) is also in line with the conclusions drawn from the qualitative analysis.

6.2.4 SUMMARY AND CONCLUSIONS

A summary of the analysis conducted in the *qualitative* part reveals the following conclusions:

- The view of the term “irregularities” showed that focus was put on an action committed by a perpetrator who is employed in the victimised company or organisation. It also showed that focus was put on criminal regulations but not civil legal statutes. In addition, no special focus was put on the position of the perpetrator in the company.
- Concerning the question of why people commit occupational fraud, the auditors emphasised *Incentive* and *Opportunity* but not *Neutralisation/Attention* seen through the fraud triangle model.
- When asked how to investigate the possibility of occupational fraud in a company the auditors’ view was:
 - Heterogeneous.
 - Strongest focus on *Incentive* and *Opportunity* (analysed through the fraud triangle).
 - Strongest focus on *Control activities* and, partly, on *Control environment* and on *Risk assessment* (analysed through the COSO-model).

- No special focus was put on difference between “hard” and “soft” controls.
- Red flags:
 - All together, the fraud triangle was, for the most part, well covered, although few respondents covered all of the three corners of the model.
 - A relatively stronger focus was put on *Opportunity*, both relatively (compared to the group of experts) as well as in absolute terms (i.e. within the group of auditors).
 - When applying the *detailed* model of the fraud triangle, it was noted that nobody covered the whole model and all together the model was not completely covered.
 - Integration between asset misappropriation and fraudulent financial accounting was not emphasised.
- Definition of “internal control”:
 - Covered partly the parts of the COSO-model.
 - *Efficiency* was not included in the definition.
 - Internal *and* external regulations were not emphasised.
- Good internal control:
 - Heterogeneous view.
 - *Control activities* and *Control environment* (not as strongly as for *Control activities*) were given the most emphasis.
 - No special focus was put on differences between “hard” and “soft” controls.
 - No special focus was put on the importance of the integration between the different components of the COSO-model.

A summary of the analysis conducted in the *quantitative* part reveals the following conclusions:

Red flags:

- Relatively even spread between the different parts of the model of analysis.
- Stronger focus on *Culture and ethics (Neutralisation/attitude)* and *Controls (Opportunity)*.
- Differences compared to the group of experts:
 - Auditors' answers were not as homogeneous (higher standard deviation).
 - Larger spread within the model for the group of auditors, i.e. a less even view of the factors explaining the presence of occupational fraud.
 - Auditors put a relatively stronger focus on hard controls although both groups viewed *Opportunity* as the strongest factor of the model.
 - Lower grades were generally given by auditors.

Internal control:

- Relatively even spread between the different parts of the model of analysis.
- Stronger focus on *Control environment* and *Control activities*
- Differences compared to the group of experts:
 - Auditors' answers were not as homogenous (higher standard deviation).
 - Larger spread within the parts of the model of auditors, i.e. a less even view of the factors explaining the presence of occupational fraud.
 - Auditors put a relatively stronger focus on hard controls although both groups viewed *Control environment* as the strongest part of the model.

In short, the picture generated from the quantitative data analysis did not contradict the conclusions drawn from the qualitative analysis.

Reflections upon the results

The general picture from the conducted interviews with the auditors can be summarised by the word heterogeneous. This tendency was apparent both during the qualitative part of the conducted interviews as well as from the complementary results of the quantitative analysis. In short, the views presented by the auditors did vary significantly between different respondents. Some respondents presented broad and profound perceptions of red flags and criteria of internal control, while other respondents gave a more narrow view. Some general characteristics were, however, found.

In terms of red flags, the focus was on *Opportunity* and *Incentive* while concerning internal control, *Control activities* together with *Control environment* were emphasised relatively stronger. Altogether, the auditors seemed to think in terms of how they proceed during different stages of an audit rather than thinking in terms of text book answers. This could be seen from the examples repeatedly referred to both from their own experience as well as from how they believe a situation with occupational fraud would look like and what measures would be appropriate to counteract such situations. The impression that the respondents showed a tendency to reason in terms of practical reality rather than from text book answers, makes the results interesting when considering the practical implications of the study.

The noticed tendency described above is an interesting aspect when compared with the perceptions from the group of experts. The group of experts showed a stronger tendency to think in terms of structured models than the group of auditors. As mentioned in the analysis of the experts (see Appendix 7), it is difficult to conclude whether the experts' perceptions are based on their practical experiences or on acquired text book knowledge. The source of the perceptions presented by experts is however possibly not very important since it is rather how these perceptions stand in relation to the views presented by the group of auditors that matters.

It has been shown that auditors' perceptions are, in general, biased towards hard controls and single aspects of indications of occupational fraud and internal control. For example, there was a tendency to mention aspects of internal control without emphasising the integral part of internal control which, according to the group of experts, is vital in order to capture the dynamic behaviour which characterises occupational fraud. A similar example for the perception of red flags showed a limited tendency to emphasise a wide range of indications which altogether generate a situation where occupational fraud is likely to occur. The tendency which the Coleman model is based on, i.e. that a *combination* of factors generates a high risk of fraud, was not very well emphasised compared to the group of experts. Similar results were found for internal control in which the different parts of the COSO model were not very well covered on an individual basis.

6.3 SUBGROUPS OF AUDITORS – OLDER VS. YOUNGER AUDITORS

6.3.1 GENERAL ASPECTS

Definition of irregularities

The general view of older auditors of the term *irregularities* is cheating and criminal acts committed against the company in which the perpetrator is employed. This was not found to differ compared with the view of the younger auditors.

Reasons to why people commit irregularities

The main reasons why people commit irregularities according to the interviewed older auditors are greed, personal financial problems, pressure (personal problems and pressure to live up to business targets) etc., i.e. reasons which are connected to the *Incentive*-corner of the fraud triangle. To some extent, culture and attitude (even jealousy within the company) of the perpetrators are also mentioned as reasons. Finally, opportunity is mentioned in a couple of cases (“opportunity makes the thief”) but not as strongly as incentive and cultural/attitude driven reasons.

The view presented by younger auditors differs somewhat from the view presented by older auditors. While *Incentive* and to a lesser extent, *Neutralisation/Attitude* and *Opportunity* were mentioned among older auditors, *Incentive* and, partly, *Opportunity* (much in terms of having the opportunity or wanting to cheat the system) were the two strongest factors mentioned among younger auditors. *Neutralisation/Attitude* (culture, personal moral etc.) was almost never mentioned by the group of younger auditors at this stage of the interview. In terms of *Incentive*, personal problems clearly were the strongest reason mentioned. The strongest factor of explanation for both groups was however the personal greed and need for money (i.e. *Incentive* in the fraud triangle).

6.3.2 RED FLAGS

Qualitative results

How to investigate the possibility of occupational fraud

In general, *older* auditors presented a somewhat different view than the view presented by the group of younger auditors. Older auditors put more emphasis on factors relating to culture (orderliness, business culture, tone-at-the-top etc.), risk analysis, internal control and test of details and, finally, gut feeling when encountering the employees of the company they audit. At the same time younger auditors who were interviewed put strong emphasis on internal control and test of details, risk analysis and employee incentives (such as bonus systems). More specifically, the following aspects were emphasised (i.e. mentioned by several of the respondents) by the older auditors when describing their approach to investigate for occupational fraud: tests of detail and internal control (such as approvals, segregation of duties etc.), gut feeling for the company and its employees, risk assessment, and control environment – culture, business ethics, moral and tone-at-the-top. When analysing the aspects above with the fraud triangle and the COSO-model, the results look like the following (emphasised parts which were covered are marked in bold):

Older auditors according to the fraud triangle:

1. Motive/incentive

- Tests of detail and internal control (such as approvals, segregation of duties etc.).
- Gut feeling for the company and its employees.

2. Neutralisation (incentive driven rationalisations)

- Control environment – culture, business ethics, moral and tone-at-the-top.

3. Opportunity

- Tests of detail and internal control (such as approvals, segregation of duties etc.).

Older auditors according to the COSO-model:

1. Control environment

- Control environment – culture, business ethics, moral and tone-at-the-top.

2. Risk assessment

- Risk assessment.

3. Control activities

- Tests of detail and internal control (such as approvals, segregation of duties etc.).

4. Information and communication

5. Monitoring of controls

As shown above, all parts of the fraud triangle were emphasised (analysed as a group) by the respondents while the first three parts of the COSO-model were emphasised. The strongest emphasis was given to *Control activities* and *Control environment* in the COSO-model and partly *Risk assessment*. In the case of the fraud triangle, the view can be described as well distributed over the model.

When comparing the view presented above with the view of *younger* auditors the following aspects were emphasised: tests of detail and internal control (such as approvals, segregation of duties etc.), risk assessment, incentives and bonus systems (partly, i.e. not as strongly emphasised as the other two aspects above), and consider how well the controls are followed up. Analysed through the models above, the picture looks like the following.

Younger auditors according to the fraud triangle:

1. Motive/incentive

- Incentives and bonus systems.

2. Neutralisation (incentive driven rationalisations)

3. Opportunity

- Tests of detail and internal control (such as approvals, segregation of duties etc.).

Younger auditors according to the COSO-model:

1. Control environment

2. Risk assessment

- Risk assessment.

3. Control activities

- Tests of detail and internal control (such as approvals, segregation of duties etc.).

4. Information and communication

5. Monitoring of controls

- Consider how well the controls are followed up.

As seen above, the view presented by younger auditors does not include (at least not emphasised) *Attitude/Neutralisation* and *Control environment*. The difference concerns the cultural/moral aspect of the approach when investigating the presence of occupational fraud. Thus, while older auditors emphasised a stronger mix of hard and soft controls (although not explicitly mentioned), the younger auditors put more emphasis on hard controls (such as *Control activities*) as well as *Risk assessment*, and *Monitoring of control*, which taken as a whole, indicate a bias towards harder controls. In the case of the fraud triangle, the older auditors applied a more complete analysis of the causes of occupational fraud compared to the younger auditors.

Typical red flags

A number of red flags were mentioned as important indicators of fraud and embezzlement (misappropriation of assets) and fraudulent financial reporting for the group of *older* auditors. Several red flags were also the same for fraud and embezzlement as they were for fraudulent financial reporting. Taken all together for misappropriation of assets and fraudulent financial reporting, the following red flags were brought up on several occasions: presence of bonus systems, changes in lifestyle and the lifestyle as such of employees, financial

problems of managers or that managers have a luxurious living which seems to exceed their income, lack of distribution of responsibilities and work assignments etc., a culture which is characterised by greed, immoral behaviour, lack of responsibility, strong personalities, disarray in the company, especially concerning accounting issues, too even growth rates or sudden, unexpected, changes in growth rates, and values in the company, especially when the culture is outspokenly money-focused.

When analysed the view of the group of *older* auditors with the fraud triangle, the distribution looks like the following:

1. Motive/incentive

a. People

- Presence of bonus systems.
- Changes in lifestyle and the lifestyle as such of employees.
- Financial problems of managers or that managers have a luxurious living which seems to exceed their income.

2. Neutralisation (incentive driven rationalisations)

a. Reward management

- Presence of bonus systems.

b. Culture and ethics

- Changes in lifestyle and the lifestyle as such of employees.
- A culture which is characterised by greed, immoral behaviour, lack of responsibility, strong personalities.
- Disarray in the company, especially concerning accounting issues.
- Values in the company, especially when the culture is outspokenly money-focused.

c. Communication

3. Opportunity

- a. Structure
- b. Performance measures
- c. Risk assessment
- d. Fraud response
- e. Controls**
 - Lack of distribution of responsibilities and work assignments etc.
 - Disarray in the company, especially concerning accounting issues.

The following red flags were emphasised by the *younger* auditors: shady transactions and entries, disarray in the company, especially concerning accounting issues, lack of distribution of responsibilities and work assignments, deficient reconciliations etc., strong pressure on management and employees due to high expectations on earnings, lack of moral and ethics, personal characteristics of employees, such as financial problems or luxurious living, and dominating managers.

When analysed with the fraud triangle, the distribution for the *younger* auditors looks like below.

1. Motive/incentive

a. People

- Strong pressure on management and employees due to high expectations on earnings.
- Personal characteristics of employees, such as financial problems or luxurious living.

2. Neutralisation (incentive driven rationalisations)

- a. Reward management

b. Culture and ethics

- Disarray in the company, especially concerning accounting issues.
- Strong pressure on management and employees due to high expectations on earnings.
- Lack of moral and ethics.
- Dominating managers.

c. Communication

3. Opportunity

a. Structure

- Shady transactions and entries.

b. Performance measures

c. Risk assessment

d. Fraud response

e. Controls

- Disarray in the company, especially concerning accounting issues.
- Lack of distribution of responsibilities and work assignments, deficient reconciliations etc.

The results are similar to the results when the two groups of auditors were asked to describe how they would investigate the presence of occupational fraud. Thus, the group of *older* auditors emphasised all parts of the fraud triangle but with a relatively stronger focus on *Attitude/Neutralisation* compared to the group of younger auditors. For the later group, a relatively stronger focus was put on *Opportunity*.

The results are also confirmed by the general impression received from the answers, i.e. that older auditors put a relatively stronger focus on factors such as culture, moral, the tone-at-the-top etc. while younger auditors put a

relatively stronger focus on factors which relate to controls such as segregation of duties, approvals, reconciliations etc. However, a difference compared to the picture outlined for the question of how to investigate the presence of occupational fraud is that the group of younger auditors now puts a stronger emphasis on *Attitude/Neutralisation* although the general impression from the conducted interviews is that the emphasis is still weaker as for the older auditors, despite the number of aspects relating to this part of the model.

Quantitative results

The findings of the quantitative questions concerning red flags are found in Appendix 10. As is shown in Appendix 10 the calculations of the red flags are made according to the applied model of analysis.

The results are summarised in Table 7 and Table 8. Table 7 shows how the results for each group as well as compared on a relative scale for the general fraud triangle model (average followed by standard deviation within parenthesis). Table 8 shows the results when analysed with the adjusted fraud triangle model.

Table 7: Comparisons of groups of red flags between older and younger auditors

	Older auditors	Younger auditors	Ratio older auditors/younger auditors
Incentive	4.63 (1.18)	4.13 (1.37)	1.12
Neutralisation/attitude	4.95 (1.12)	4.03 (1.55)	1.23
Opportunity	5.17 (1.21)	4.62 (1.16)	1.12

Table 8: Comparisons of subgroups of red flags between older and younger auditors

		Older auditors	Younger auditors	Ratio older auditors/ younger auditors
Incentive	People	4.63 (1.18)	4.13 (1.37)	1.12
Neutralisation/attitude	Reward management	4.05 (1.46)	3.73 (1.50)	1.20
	Culture and ethics	5.58 (0.97)	4.55 (1.37)	1.23
	Communications	4.59 (1.10)	3.32 (1.94)	1.38
Opportunity	Structure	4.92 (1.40)	4.30 (1.19)	1.14
	Performance measures	5.41 (1.11)	5.18 (1.08)	1.04
	Risk assessment	5.27 (1.27)	3.55 (0.93)	1.48
	Fraud response	4.45 (1.40)	3.32 (1.53)	1.34
	Controls	5.64 (0.99)	5.63 (1.02)	1.00

The results in Table 7 and Table 8 indicate that the group of *older* auditors viewed *Opportunity* as the most important and *Motive/incentive* as least important (from the applied list of red flags). However, it is also shown that the lowest degree of agreement is found for *Opportunity* and the highest for *Neutralisation/Attitude*). This indicates that although the *Opportunity* is given stronger emphasis, the agreement was stronger for the *Neutralisation/attitude*. The differences are however small and any clear conclusions are hard to draw.

In the case of the more specific model (Table 8), *Controls* together with *Culture and ethics* received, on average, the highest grading for the group of

older auditors. In addition, the subparts with the lowest standard deviation, i.e. the subparts where the strongest concordance is found, are also *Culture and ethics* and *Controls*. *Culture and ethics* received the lowest standard deviation of all subparts, i.e. was the subpart which was viewed most homogenously by the auditors. In short, it is hard to draw any clear conclusions from the small differences showed above. However, the results do not seem to contradict the general results from the qualitative analysis presented above.

Table 7 also indicates that the group of *younger* auditors viewed *Opportunity* as the most important and *Neutralisation/Attitude* as least important (from the applied list of red flags). Furthermore, it is also shown that the highest degree of concordance is found for *Opportunity* and the lowest for *Neutralisation/Attitude*).

In the case of the more specific model (Table 8), *Controls* together with *Performance measures* received, on average, the highest grading by the group of younger auditors. In addition, the subparts with the lowest standard deviation, i.e. the subparts where the strongest concordance is found, are *Risk assessment* and *Controls*.

The results for the younger auditors lend support to the picture outlined from the qualitative results presented above. Although not tested for significance, the quantitative results indicate that younger auditors have a bias towards red flags which relate to *Opportunity* in the fraud triangle.

A comparison between the results of the quantitative data analysis between the two groups indicates that both groups give higher grades to *Opportunity*. Furthermore, the group of older auditors give, generally, higher grades for all parts of the model. It is also noticed that the range in views between the three parts of the model is smaller for the group of older auditors compared to the other group of auditors (range of 0.54 compared to 0.59, or 10 percent compared to 13 percent). Further, the concordance within the two groups differ with a generally higher degree of concordance for the group of older auditors (measured as the standard deviations), except for *Opportunity*. These conclusions do in general confirm (do not contradict) the conclusions drawn from the qualitative data analysis.

Table 7 also indicates that the two groups differ most concerning their view of *Neutralisation/attitude*, and the least concerning *Incentive* and *Opportunity*. This indicates that the view of younger auditors differs the most concerning *Neutralisation/attitude*. Thus, younger auditors put a relatively, compared to the other group of auditors, stronger emphasis on *Opportunities* than on *Neutralisation/attitude*. A relatively stronger focus on *Opportunity* is also in line with the conclusions drawn from the qualitative analysis.

The results in Table 8 also indicate that the group of older auditors grade all subcategories of the fraud triangle model higher than the group of younger auditors. However, the concordance, measured as the standard deviation of each group and subcategory, is in some cases lower for the group of older auditors but not for all subcategories. In general, the group of older auditors shows a higher degree of concordance for the subcategories of *Incentive* and *Neutralisation/attitude*, while the group of younger auditors shows a relatively higher degree of concordance for the subcategory of *Opportunity*. The spread within the two groups of the model (*Incentive* only contains one subgroup) is 1.53 (older) compared to 1.23 (younger) for *Neutralisation/attitude* and 1.19 (older) compared to 2.31 (younger) for *Opportunity*, i.e. a seemingly larger spread for the group of older auditors compared to the group of younger concerning *Neutralisation/attitude* and the inverse for *Opportunity*.

Finally, the comparison of the ratios of the two groups for the specific model (Table 8) indicates that the group of younger auditors puts a relatively stronger emphasis (compared to the ratios of the other subgroups) on *Controls* than other subcategories compared to the other group of auditors. For the group of older auditors, *Communications*, *Risk assessment*, *Fraud response*, and *Culture and ethics* seem to differ relatively more than other subgroups compared to the group of younger auditors. The results confirm rather well the results of the general fraud triangle model applied above.

6.3.3 INTERNAL CONTROL

Qualitative results

Definition of internal control

The general conclusion from comparing the two groups of auditors is that no clear difference can be seen in how “internal control” is defined. Instead, for both groups, the same three aspects as for auditors as a whole were dominating: a function which allows management to follow up on how the business works, that someone controls someone else’s work and that the Board of Directors understands the balance sheet and income statement, and, finally, a set of systems and processes for the Board of Directors to ensure the protection of the company’s assets, to ensure an accurate accounting and reach the goals set out by the Board of Directors.

Difference between common definition of internal control and definition of internal control specifically concerning occupational fraud

The two groups do not show any real difference in their view of whether there is a difference between the definition of internal control and an internal control more specifically constructed to prevent and detect occupational fraud. For both groups, the answers were rather evenly divided between “no difference” and “no difference but more specific”.

Good internal control in order to detect and prevent occupational fraud

A systematic analysis of the two groups’ view of what constitutes “good internal control” to detect and prevent occupational fraud reveals that a number of aspects of internal control were emphasised (i.e. mentioned and emphasised by several respondents composing a significant number of the respondent of the specific group). These are for older auditors: control activities (segregation of duties, approvals and reconciliations), communicating the stand on occupational fraud, good routines, follow up (on routines, controls etc.), (partly), culture (such as moral values, openness, competence, tone-at-the-top, active Board of Directors), and risk analysis (partly).

For the case of the younger auditors, the following criteria were emphasised: control activities (segregation of duties, approvals and reconciliations), good routines, follow-up (on routines, controls etc.), and culture (such as policy, integrity, competence, tone-at-the-top, active Board of Directors). The results of the analysis of the two groups with the COSO-model are presented below.

Older auditors according to the COSO-model:

1. Control environment

- Culture (such as values, openness, competence, tone-at-the-top, active Board of Directors).

2. Risk assessment

- Risk analysis (partly).

3. Control activities

- Control activities (segregation of duties, approvals and reconciliations).
- Good routines.

4. Information and communication

- Communicating the stand on occupational fraud.

5. Monitoring of controls

- Follow up (on routines, controls etc.), (partly).

Younger auditors according to the COSO-model:

1. Control environment

- Culture (such as policy, integrity, competence, tone-at-the-top, active Board of Directors).

2. Risk assessment

3. Control activities

- Good routines.
- Control activities (segregation of duties, approvals and reconciliations).

4. Information and communication

5. Monitoring of controls

- Follow-up (on routines, controls etc.).

The first obvious difference is the differences in how much of the model is covered by each of the two groups' answers. For the older auditors, all parts of the COSO-model were emphasised (although not very strong indeed for *Risk assessment* and *Monitoring of controls*) for the group (although only in a few cases on an individual basis). For the younger group, *Information and communication* and *Risk assessment* were hardly emphasised at all. Although a difference, the difference in how much of the model is covered by the two groups' answers is not as strong as it seems. This is since, although emphasised, the *Information and communication* and *Risk assessment* were relatively less emphasised by the group of older auditors. A second difference concerns how strong an emphasis on *Control environment* was mentioned. Both groups emphasised the importance of *Control environment*. However, in the case of the older auditors, the emphasis was clearly stronger. For the group of younger auditors, a very, relatively seen, strong focus was put on hard control activities. This is also in line with how the group viewed the red flags as analysed above through the fraud triangle.

It is concluded in the analysis for the group of auditors in large part that the answers seemed to be based mainly on practical situations and experiences rather than on text book answers. This is interesting when considering the results of the analysis above. A relatively stronger emphasis on hard controls as well as less coverage of the model applied characterises the view of the younger auditors. This would imply that younger auditors have a more narrow perspective on factors of internal control. In addition, younger auditors put stronger emphasis on factors which are closer to the every day work of younger auditors and which are easier to test for. A reason behind this ten-

dency is possibly that younger auditors focus relatively more on details in the audits and on concrete controls than older auditors. This is a reasonable conclusion since it captures a difference between the two groups which concerns their different team roles during an audit. Hence, younger auditors do, relative to older auditors, have more detailed work assignments and less of an overview of the audit engagement.

The results from the analysis of auditors who mainly audit larger companies compared to the results from the analysis of auditors who mainly audit smaller companies also show that auditors who mainly audit smaller companies resemble the view of the group of younger auditors, i.e. they put a relatively stronger focus on concrete audit evidence than the group of auditors who mainly audit larger companies. Thus, the role of the auditor and the actual work carried out by an auditor seems to matter in how they perceive criteria of internal control concerning occupational fraud.

Quantitative results

The findings of the quantitative questions concerning internal control are found in Appendix 11. As is shown in Appendix 11 the calculations of the internal control are made according to the applied model of analysis. Seen from the COSO-model of analysis, the results are divided as presented in Table 9 (average followed by standard deviation within parenthesis).

The results in Table 9 indicate that the total group of older auditors views *Control environment* as most important followed by *Control activities* as the second most important component of the COSO-model. *Risk assessment* is viewed as least important (from the applied list of internal control criteria). In the case of younger auditors, Table 9 indicates that *Control environment* is given the most emphasis followed by *Control activities*, i.e. the results in terms of most emphasised components of the COSO-model are the same for the two groups compared. In terms of concordance within the two groups, the group of older auditors receive the lowest standard deviation for *Control environment*, *Information and communication*, and *Monitoring of controls*. For the group of younger auditors the highest degree of concordance is found for *Control environment* and *Control activities*.

Table 9: Comparisons of groups of criteria of internal control between older and younger auditors

	Older auditors	Younger auditors	Ratio older auditors/younger auditors
Control environment	(6.08; 0.85)	(6.06; 1.04)	1.00
Risk assessment	(4.43; 1.58)	(3.41; 1.88)	1.30
Control activities	(5.86; 0.87)	(5.77; 1.20)	1.02
Information & communication	(5.19; 1.16)	(4.39; 1.74)	1.18
Monitoring of controls	(5.42; 1.13)	(4.63; 1.33)	1.17

Table 9 also shows the view of the group of older auditors of the criteria of internal control when put in relation to the same for the group of younger auditors (standard deviation within parenthesis). The comparison between the results of the quantitative data analysis between the two groups of auditors yields that both groups of auditors grade *Control environment* as the most important component of internal control. Furthermore, the group of *older* auditors seemingly give higher grades for all categories. It is also clear that the range of views between the five parts of the model is smaller for the group of older auditors compared to the other group of auditors (range of 1.65 compared to 2.65 or 27 percent compared to 44 percent). It also seems that the concordance within the two groups differs with a higher degree of concordance for the group of older auditors for all parts of the model (measured as the standard deviations). These conclusions confirm the conclusions drawn from the qualitative data analysis, i.e. the group of younger auditors seemingly shows generally a lower degree of concordance and vary more within the model of analysis.

Table 9 also indicates that the two groups differ the most concerning their view of *Risk assessment*. It is interesting to notice how the two parts of the COSO-model emphasised the most in the qualitative data analysis, *Control*

environment and *Control activities*, differ. For these two parts, a relatively stronger emphasise is given by the group of younger auditors. In short, the group of younger auditors put a relatively stronger focus on hard controls (*Control activities*) than the group of older auditors (although also *Control environment* also is relatively stronger emphasised). A relatively stronger focus on *Control activities* (and hard controls) is also in line with the conclusions drawn from the qualitative analysis.

6.3.4 SUMMARY AND CONCLUSIONS

A summary of the analysis conducted in the *qualitative* part reveal the following conclusions:

- No clear difference between the two groups in their perception of the term “irregularities”.
- On the question of why people commit occupational fraud, the older auditors mainly covered, relatively the group of younger auditors, *Incentive* and *Neutralisation/Attitude* of the general fraud triangle while the younger auditors put a relatively stronger focus on *Incentives* and *Opportunity* (in the fraud triangle-model).
- On the question of how to investigate the presence of occupational fraud, the older auditors covered, in the general fraud triangle-model, all corners and showed a perception of a relatively stronger mix of hard and soft controls. For the case of the group of younger auditors a relatively stronger focus was put on harder controls.
- In the case of red flags (interpreted through the fraud triangle-model), the older auditors put a relatively stronger focus on *Neutralisation/Attitude* compared to the group of younger auditors. The latter group put a relatively stronger emphasis on *Opportunity* compared to the older auditors.
- No clear difference between the two groups in their perception of neither the term “internal control” nor whether a difference exists between the definition of internal control in general and a definition of internal control which more specifically focuses on detection and prevention of occupational fraud.

- On the question of what constitutes good internal control, the older auditors covered, in large, all the parts of the COSO-model (although not as strongly) with special focus on *Control environment* compared to the group of younger auditors. For the group of younger auditors, the coverage of the COSO-model was not as good and a relatively stronger focus was put on *Control activities*.

A summary of the analysis conducted in the *quantitative* part reveals the following conclusions:

Red flags:

- Both groups give their highest grades to *Opportunity*.
- Generally higher grades are given by the group of older auditors.
- No clear difference seems to be present in spread within the model of analysis between the two groups of auditors.
- The degree of concordance seems to be higher for older auditors concerning *Incentive*, and *Neutralisation/attitude*, while the group of younger auditors shows a higher degree of concordance for *Opportunity*.
- The group of younger auditors put a *relatively* stronger focus on *Opportunity* and *Controls*, and *Incentive*.
- The group of older auditors put a relatively stronger focus on *Culture and ethics*, *Reward management*, and *Communications* in the specific model, i.e. an indication of a relatively stronger focus towards *Neutralisation/attitude*.
- The group of younger auditors put a relatively stronger focus on *Controls*, *Performance measures*, and *Structure* in the specific model, i.e. a relatively stronger focus towards *Opportunity*.

Internal control:

- Both the group of older as well as the group of younger auditors put strongest emphasis on *Control environment*.

- The group of older auditors generally have less spread within the subparts of the model as well as a higher degree of concordance compared to the group of auditors who mainly audit smaller companies.
- A relatively stronger focus on hard controls (i.e. *Control activities*) was given by the group of younger auditors.

Reflections upon the results

The comparison between older and younger auditors has revealed some interesting results. The most apparent differences concern the relatively stronger focus on harder controls and *Opportunity* among the younger auditors. A more comprehensive view among older auditors of red flags as well as criteria of internal control has also been an interesting difference between the two groups. It is also interesting to notice that the heterogeneity which was found for the total group of auditors was smaller when the group was divided into older and younger auditors, i.e. the two groups were each found to be clearly more homogenous compared to the total group of auditors.

Just as discussed in the analysis, it is possible that the noticed differences relate to the differences in roles between older and younger auditors. Whereas older auditors' working assignments are likely to be relatively more directed to overall audit issues, younger auditors' assignments are likely to be more related to audit issues which also concern more basic auditing (such as tests of details etc.). Although many auditors who have worked as auditors for more than five years also deal with overall questions in larger audit engagements, the younger auditors still have relatively more to do with the basic audit work such as collecting concrete audit evidence and test the internal control of companies. Even in the cases where younger auditors have advanced above the more basic audit assignments, they are likely to be more affected by this kind of work than older auditors due to the fact that they more recently dealt with that kind of assignments compared to older auditors. In other words, if one or two years earlier you carried out certain working assignments, you are likely to remember these tasks better and be more affected by these assignments

than if you had done the same assignments ten years ago. The same logic is likely to apply for auditors as it does for everybody else.

More years of experience is likely to yield a more comprehensive picture of causes behind different auditing issues such as occupational fraud. It is therefore also plausible that the number of years of accumulated experience yields a broader view of signs of occupational fraud and factors relating to internal control. Hence, the broader view found for older auditors is possibly a result of the longer experience these auditors have accumulated during their auditing careers. The logic behind such a claim is that if you have met many different cases, you are likely to realise that factors behind problems can have many causes which then affect how you view problems. Problems relating to fraud and occupational fraud are also specific since they are dependent on the dynamic nature of human behaviour (the dynamic character of fraud and occupational fraud can be seen as a result of the very nature of humans as creatures which adapt to different situations and problems they face). In addition, it is often the assignment of engagement leaders to bring up fraud related issues to clients which additionally increases the experience based advantage of older auditors over younger auditors concerning occupational fraud.

Another interesting question is whether the answers by younger auditors are more text book kind of answers compared to the answers by the older auditors. For the total group of auditors it was concluded that the view seemed to be based on practical considerations at least to a larger extent than for the experts. It could be argued that younger auditors who more recently left their university education behind them would be more inclined to view red flags and criteria of internal control in light of models they recently have studied. However, no clear tendency was evident during the conducted interviews that younger auditors would base their answers on more theoretical considerations than the group of older auditors. Hence, the number of years of experience does seem to play an important role in how the perceptions of red flags and criteria of internal control concerning occupational fraud are shaped among auditors.

6.4 SUBGROUPS OF AUDITORS – AUDITORS WHO MAINLY AUDIT LARGER COMPANIES VS. AUDITORS WHO MAINLY AUDIT SMALLER COMPANIES

6.4.1 GENERAL ASPECTS

Definition of irregularities

The general view of auditors who mainly audit larger companies of the term *irregularities* is cheating and criminal acts committed against the company in which the perpetrator is employed. This does not differ significantly compared to the view of auditors who mainly audit smaller companies.

Reasons as to why individuals commit occupational fraud

The main reasons why individuals commit irregularities according to the interviewed auditors (who audit larger companies) are greed, personal financial problems, pressure (personal problems) etc., i.e. reasons which are connected to the *Incentive*-corner of the fraud triangle. To some extent, culture and the attitude of the perpetrators are also mentioned as reasons. Finally, opportunity is mentioned in a few cases (“opportunity makes the thief”).

The view presented by auditors who mainly audit larger companies differs somewhat from the view presented by auditors who mainly audit smaller companies. While *Incentive* and partly *Attitude* and partly *Opportunity* were mentioned among auditors of larger companies, *Incentive* and *Opportunity* were the two strongest factors mentioned by the group of auditors who mainly audit smaller companies (*Attitude* (culture, personal moral etc.) was hardly ever mentioned). The strongest factor of explanation for both groups was however the personal greed and need of money (i.e. *Incentive* in the fraud triangle).

6.4.2 RED FLAGS

Qualitative results

How to investigate the possibility of occupational fraud

In general, auditors who mainly audit *larger* companies presented a broader view than the view presented by auditors who mainly audit smaller companies. More specifically, the following aspects were emphasised (i.e. mentioned by several of the respondents) by auditors who mainly audit *larger* companies when describing their approach to investigate for occupational fraud: presence of bonus systems, presence of segregation of duties, approval, physical controls, how moral the employees and managers seem to be, gut feeling for the company, risk assessment, routines, control environment (culture, business ethics, moral), shady transactions, and structure.

In analysing the aspects above with the fraud triangle and the COSO-model, the following parts were covered (market in bold):

Auditors who mainly audit larger companies according to the fraud triangle:

- 1. Motive/incentive**
- 2. Neutralisation (incentive driven rationalisations)**
- 3. Opportunity**

Auditors who mainly audit *larger* companies according to the COSO-model:

- 1. Control environment**
- 2. Risk assessment**
- 3. Control activities**
4. Information and communication
5. Monitoring of controls

As shown above, almost all parts of the models were emphasised by the respondents, although *Information and communication* not as strongly in the COSO-model as the first three parts of model. The strongest emphasis was given to *Control activities* and *Control environment* in the COSO-model and

partly *Risk assessment*. In the case of the fraud triangle, the view can be described as well distributed over the model.

When comparing the view presented above with the view of auditors who mainly audit *smaller* companies it is noted that the view of the latter is more narrow and pays more attention to how employees and management are as persons (integrity, moral), tests of details of the accounting, presence of bonuses and general risk analysis. Analysed through the models above, the picture looks like this (bolded text implies emphasised by several respondents):

Auditors who mainly audit *smaller* companies according to the fraud triangle:

- 1. Motive/incentive**
2. Neutralisation (incentive driven rationalisations)
- 3. Opportunity**

Auditors who mainly audit smaller companies according to the COSO-model:

1. Control environment
- 2. Risk assessment**
- 3. Control activities**
4. Information and communication
- 5. Monitoring of controls**

As seen above, the view presented by auditors who mainly audit smaller companies does not include (was not emphasised) *Neutralisation/Attitude* and *Control environment* (and not *Information and communication*). The difference concerns the cultural/moral aspect of the approach when investigating the presence of occupational fraud.

Typical red flags

A number of red flags were mentioned as important indicators of fraud and embezzlement (misappropriation of assets) and fraudulent financial reporting for auditors who mainly audit large companies. Several red flags were also the

same for fraud and embezzlement as they were for fraudulent financial reporting. Taken all together for misappropriation of assets and fraudulent financial reporting, the following red flags were brought up on several occasions: presence of bonus systems, changes in lifestyle and the lifestyle as such of employees, financial problems of managers or that managers have a luxurious living which seems to exceed their income, lack of distribution of responsibilities and work assignments etc., a culture which is characterised by greed, immoral behaviour, lack of responsibility, strong personalities, disarray in the company, especially concerning accounting issues, deficient routines; strong pressure on management and employees due to high expectations on earnings, growth rates that are too even or sudden, unexpected, changes in growth rates, and values in the company, especially when the culture is outspokenly money-focused.

When analysing the view of the auditors who mainly audit *larger* companies with the fraud triangle, the distribution looks like the below:

1. Motive/incentive

a. People

- Presence of bonus systems.
- Changes in lifestyle and the lifestyle as such of employees.
- Financial problems of managers or that managers have a luxurious living which seems to exceed their income.
- Strong pressure on management and employees due to high expectations on earnings.

2. Neutralisation (incentive driven rationalisations)

a. Reward management

- Presence of bonus systems.

b. Culture and ethics

- Changes in lifestyle and the lifestyle as such of employees.

- A culture which is characterised by greed, immoral behaviour, lack of responsibility, strong personalities.
- Disarray in the company, especially concerning accounting issues.
- Strong pressure on management and employees due to high expectations on earnings.
- Values in the company, especially when the culture is outspokenly money-focused.

c. Communication

3. Opportunity

a. Structure

b. Performance measures

c. Risk assessment

d. Fraud response

e. Controls

- Lack of distribution of responsibilities and work assignments etc.
- Disarray in the company, especially concerning accounting issues.
- Deficient routines.

The following red flags were emphasised for the auditors who mainly audit *smaller* companies: shady transactions and entries, disarray in the company, especially concerning accounting issues, lack of distribution of responsibilities and work assignments etc., strong pressure on management and employees due to high expectations on earnings, lack of moral and ethics, personal characteristics of employees, such as financial problems or luxurious living, and dominating managers.

When analysed with the fraud triangle, the distribution for the group of auditors who mainly audit *smaller* companies looks like the below:

1. Motive/incentive

a. People

- Strong pressure on management and employees due to high expectations on earnings.
- Personal characteristics of employees, such as financial problems or luxurious living.

2. Neutralisation (incentive driven rationalisations)

a. Reward management

b. Culture and ethics

- Disarray in the company, especially concerning accounting issues.
- Strong pressure on management and employees due to high expectations on earnings.
- Lack of moral and ethics.
- Dominating managers.

d. Communication

3. Opportunity

a. Structure

- Shady transactions and entries.

b. Performance measures

c. Risk assessment

d. Fraud response

e. Controls

- Disarray in the company, especially concerning accounting issues.

- Lack of distribution of responsibilities and work assignments etc.

The results are similar to the results when the two groups of auditors were asked to describe how they would investigate the presence of occupational fraud. Thus, the group of auditors who mainly audit larger companies emphasised all parts of the fraud triangle but with a relatively stronger focus on *Attitude/Neutralisation* compared to the group of auditors who mainly audit *smaller* companies. For the latter group, a relatively stronger focus was put on *Opportunity*. This also confirms the general impression from the answers taken as a whole, i.e. that auditors who mainly audit larger companies put a relatively stronger focus on factors such as culture, moral, tone-at-the-top etc. while auditors who mainly audit smaller companies put a relatively stronger focus on factors which relate to controls such as segregation of duties, approvals, reconciliations etc.

Quantitative results

The findings of the quantitative questions concerning red flags are found in Appendix 10. As is shown in Appendix 10, the calculations of the red flags are made according to the applied model of analysis.

Table 10: Comparisons of groups of red flags between auditors who mainly audit larger and smaller companies

	Auditors who mainly audit <i>larger</i> companies	Auditors who mainly audit <i>smaller</i> companies	Ratio auditors who mainly audit <i>larger</i> companies/auditors who mainly audit <i>smaller</i> companies
Incentive	4.55 (1.14)	4.13 (1.55)	1.10
Neutralisation/attitude	4.81 (1.34)	4.03 (1.52)	1.19
Opportunity	4.97 (1.07)	4.78 (1.43)	1.04

Table 11: Comparisons of subgroups of red flags between auditors who mainly audit larger and smaller companies

		Auditors who mainly audit <i>larger</i> companies	Auditors who mainly audit <i>smaller</i> companies	Ratio auditors who mainly audit <i>larger</i> companies/auditors who mainly audit <i>smaller</i> companies
Incentive	People	4.55 (1.14)	4.13 (1.55)	1.10
Neutralisation/ attitude	Reward management	4.23 (1.40)	3.39 (1.48)	1.25
	Culture and ethics	5.36 (1.19)	4.64 (1.44)	1.16
	Communications	4.31 (1.59)	3.44 (1.72)	1.25
Opportunity	Structure	4.83 (1.15)	4.30 (1.47)	1.12
	Performance measures	5.50 (1.04)	5.00 (1.12)	1.10
	Risk assessment	4.46 (1.13)	4.33 (1.80)	1.03
	Fraud response	3.96 (1.09)	3.78 (2.08)	1.05
	Controls	5.58 (1.00)	5.71 (1.04)	0.98

The results are summarised in Table 10 and Table 11. Table 10 shows how the results for each group as well as compared on a relative scale for the general fraud triangle model (average followed by standard deviation within

parenthesis). Table 11 shows the results when analysed with the adjusted fraud triangle model.

The results for the three main categories (Table 10) indicate that the group of auditors who mainly audit *larger* companies viewed *Opportunity* as most important and *Motive/incentive* as least important (from the applied list of red flags). It is also indicated that the highest degree of concordance is found for *Opportunity* and the lowest for *Neutralisation/Attitude*. For the group of auditors who mainly audit smaller companies, *Opportunity* and *Motive/incentive* are given the highest grades in the general fraud triangle.

In the case of the more specific model (Table 11), *Controls* together with *Performance measures*, and *Culture and ethics* received, on average, the highest grading for the group of auditors who mainly audit *larger* companies. In addition, the subpart with the lowest standard deviation, i.e. the subparts where the strongest concordance is found, is also *Controls* and *Performance measures*, i.e. they are the subparts which were viewed most homogenously by the auditors who mainly audit larger companies. For the group of auditors who mainly audit smaller companies, *Controls* together with *Performance measures* received the highest grades. The differences between the averages are, however, rather small, hence any clear conclusions are difficult to draw. Nevertheless, the results presented do not clearly contradict the results from the qualitative analysis.

A comparison between the results of the quantitative data analysis between the two groups for the general fraud triangle indicates that both groups give their highest grades to *Opportunity*. Further, the group of auditors who mainly audit larger companies generally give higher grades for all parts of the model. It also seems that the spread in view between the three parts of the model is smaller for the group of auditors who mainly audit larger companies compared to the other group of auditors (range of 0.42 compared to 0.75, or 8 percent compared to 16 percent). The concordance within the two groups also seems to differ with a higher degree of concordance for the group of auditors who mainly audit larger companies (measured as the standard deviations). These conclusions do, in general, confirm the conclusions drawn from the qualitative data analysis.

Table 10 also indicates that the two groups differ most concerning their view of *Incentive* and *Neutralisation/attitude*, and the least concerning *Opportunity*. This indicates that auditors who mainly audit larger companies were closer to the view of the auditors who mainly audit smaller companies concerning *Opportunity* than for *Incentive* and *Neutralisation/attitude*. Thus, auditors who mainly audit smaller companies seemingly put a relatively, compared to the other group of auditors, stronger emphasis on *Opportunities* than on *Incentive* and *Neutralisation/attitude*. A relatively stronger focus on *Opportunity* is also in line with the conclusions drawn from the qualitative analysis.

Seen from the specific model (Table 11), the group of auditors who mainly audit larger companies seemingly grade all but one (*Controls*) subcategories of the fraud triangle model higher than the other group of auditors. It is also indicated that the group of auditors who mainly audit larger companies, for all subgroups, shows a higher degree of concordance. The spread within the two groups of the model (*Incentive* only contains one subgroup) is 1.13 (larger) compared to 1.25 (smaller) for *Neutralisation/attitude* and 1.54 (larger) compared to 1.93 (smaller) for *Opportunity*, i.e. a seemingly larger spread for the group of auditors who mainly audit larger companies compared to the group of auditors who mainly audit smaller companies. This indicates a more even view of the importance of the three main factors explaining the presence of occupational fraud.

Finally, the comparison of the ratios of the two groups (Table 10 and 11) indicates that the group of auditors who mainly audit smaller companies put a relatively stronger emphasis (compared to the ratios of the other subgroups of the model) on *Controls* than the group of auditors who mainly audit larger companies. For the group of auditors who mainly audit larger companies, *Culture and ethics*, *Reward management*, and *Communications* differ relatively more than other subgroups. The results confirm rather well the results of the general fraud triangle model applied above.

6.4.3 INTERNAL CONTROL

Qualitative results

Definition of internal control

The general conclusion from comparing the two groups of auditors is that no clear difference can be seen in how “internal control” is defined. Instead, for both groups, the same three aspects as for auditors as a whole were dominating: a function which allows management to follow up on how the business works, that someone control someone else’s work and that the Board of Directors understand the balance sheet and income statement, and, finally, a set of systems and processes for the Board of Directors which are to ensure the protection of the company’s assets, to ensure accurate accounting and reach the goals set out by the Board of Directors.

Difference between the definition of internal control and definition of internal control specifically concerning occupational fraud

The two groups did not show any clear differences in their view of whether there is a difference between the definition of internal control and an internal control more specifically constructed to prevent and detect occupational fraud. For both groups, the answers were rather evenly divided between “no difference” and “no difference but more specific”.

Good internal control in order to detect and prevent occupational fraud

The general impression from the two groups is that a small difference does exist between them in how they emphasise the different parts of the COSO-model. A systematic analysis of the two groups reveals that the following aspects of internal control were emphasised (i.e. mentioned and emphasised by several respondents encompassing a significant number of the respondents of the specific group) for auditors who mainly audit *larger* companies: control activities (segregation of duties, approvals and reconciliations), communicating the stand on occupational fraud, good routines, follow up (on routines, controls etc.), culture (such as values, openness, competence, tone-at-the-top,

active Board of Directors), systems for bonuses and incentives (especially directed to internal control), and risk analysis

For auditors who mainly audit *smaller* companies the emphasised criteria were: control activities (segregation of duties, approvals and reconciliations), good routines, follow up (on routines, controls etc.), active Board of Directors, presence of policy, and adequate systems for rewarding employees (incentive balanced).

When analysing the aspects above with the the COSO-model, the results look like the below (emphasised parts which were covered are marked in bold):

Auditors who mainly audit *larger* companies according to the COSO-model:

1. Control environment

- Culture (such as values, openness, competence, tone-at-the-top, active Board of Directors).
- Systems for bonuses and incentives (especially directed towards internal control).

2. Risk assessment

- Risk analysis.

3. Control activities

- Control activities (segregation of duties, approvals and reconciliations).
- Good routines.

4. Information and communication

- Communicating the stand on occupational fraud.

5. Monitoring of controls

- Follow up (on routines, controls etc.).

Auditors who mainly audit *smaller* companies according to the COSO-model:

1. Control environment

- Active Board of Directors.
- Presence of policy.
- Adequate systems for rewarding employees (incentive balanced).

2. Risk assessment

3. Control activities

- Control activities (segregation of duties, approvals and reconciliations).
- Good routines.

4. Information and communication

5. Monitoring of controls

- Follow up (on routines, controls etc.).

The first obvious difference is the variation in how much of the model is covered by the answers of the two groups. For the auditors who mainly audit larger companies, all parts of the COSO-model are emphasised. For the other group, *Information and communication* and *Risk assessment* are not emphasised at all. Although a difference, the difference in how much of the model which is covered by the two groups is not as strong as it seems at first glance. This is since, although emphasised, the *Information and communication* and *Risk assessment* are relatively less emphasised within the model by the group of auditors who mainly audit larger companies.

A second difference concerns with how strong an emphasis *Control environment* was given. Both groups emphasised the importance of *Control environment*. However, in the case of the auditors who mainly audit larger companies, the emphasis was clearly stronger (even though the number of bullets above is less than for the auditors who mainly audit smaller companies (the number of aspects in parenthesis needs to be included)). For the group of auditors who mainly audit smaller companies, a very, relatively seen, strong focus was put on the *Control activities* (i.e. on the “hard” controls of the

COSO-model). This is also in line with how the group viewed the red flags as analysed above through the fraud triangle.

Quantitative results

The findings of the quantitative questions concerning internal control are found in Appendix 11. As is shown in Appendix 11 the calculations of the internal control are made according to the applied model of analysis. Seen from the COSO-model of analysis, the results are divided as shown in Table 12 (average followed by standard deviation within parenthesis).

Table 12: Comparisons of groups of criteria of internal control between auditors who mainly audit larger and smaller companies

	Auditors who mainly audit <i>larger</i> companies	Auditors who mainly audit <i>smaller</i> companies	Ratio auditors who mainly audit <i>larger</i> companies/auditors who mainly audit <i>smaller</i> companies
Control environment	6.27 (0.73)	5.76 (1.10)	1.09
Risk assessment	4.37 (1.55)	3.28 (1.95)	1.33
Control activities	5.74 (1.07)	5.94 (0.99)	0.97
Information & communication	4.85 (1.44)	4.76 (1.66)	1.02
Monitoring of controls	5.18 (1.15)	4.82 (1.40)	1.07

The results in Table 12 indicate that the group of auditors who mainly audit *larger* companies viewed *Control environment* as most important followed by *Control activities* as the second most important parts of the COSO-model. *Risk assessment* was viewed as least important (from the applied list of internal control criteria). In the case of auditors who mainly audit *smaller* companies, Table 12 shows that *Control activities* were given the most emphasis followed by *Control environment*, i.e. the inverse results in terms of most emphasised parts of the COSO-model compared to the other group. It also

seems that the highest degree of concordance is found for the same parts of the COSO-model as were emphasised the most for both groups. Hence, the lowest agreement was found for *Risk assessment* and the highest for *Control environment* and *Control activities*.

A comparison of the results from the quantitative data analysis between the two groups of auditors indicates that auditors who mainly audit larger companies graded *Control environment* as the most important component of internal control while the auditors who mainly audit smaller companies emphasised *Control activities* as the most important component. Additionally, auditors who mainly audit larger companies gave higher grades for all categories except *Control activities*. It also seems that the spread in view between the five parts of the model is smaller for the group of auditors who mainly audit smaller companies compared to the other group of auditors (range of 1.9 compared to 2.66, or 30 percent compared to 33 percent).

Table 12 also seems to indicate that the concordance within the two groups differs with a higher degree of concordance for the group of auditors who mainly audit larger companies for all parts of the model except for *Control activities* (measured as the standard deviations). These conclusions confirm the conclusions drawn from the qualitative data analysis, i.e. the group of auditors who mainly audit smaller companies shows a generally lower degree of concordance and vary more within the model of analysis.

The ratios in Table 12 also indicate that the two groups differ most concerning their view of *Risk assessment*. It is interesting to notice how the two parts of the COSO-model emphasised the most in the qualitative data analysis, *Control environment* and *Control activities*, differ between the two groups. *First*, the group of auditors who mainly audit smaller companies view *Control activities* stronger than auditors who mainly audit larger companies in absolute numbers and vice versa for *Control environment*. *Second*, the differences become somewhat clearer when compared on a relative basis, in which *Control activities* differ compared to the general, relative, view of the two groups.

In short, the group of auditors who mainly audit smaller companies seems to put a relatively stronger focus on hard controls than the group of auditors who

mainly audit larger companies. A relatively stronger focus on *Control activities* (and hard controls) is also in line with the conclusions drawn from the qualitative analysis.

6.4.4 SUMMARY AND CONCLUSIONS

A summary of the analysis conducted in the *qualitative* part reveals the following conclusions:

- No clear difference between the two groups in their perception of the term “irregularities”.
- On the question of *why* people commit occupational fraud, the auditors who mainly audit larger companies covered, relative to the other group, all “corners” of the general fraud triangle while the auditors who mainly audit smaller companies put a relatively stronger focus on *Incentives* and *Opportunity* (in the fraud triangle-model).
- On the question of how to investigate the presence of occupational fraud, the auditors who mainly audit larger companies covered, in the general fraud triangle-model, all corners. In the case of the COSO-model the same group mainly covered the *Control environment*, *Risk assessment*, and *Control activities*. For the case of auditors who mainly audit smaller companies, a relatively stronger focus was put on *Incentives* and *Opportunity* for the fraud triangle and *Risk assessment* and *Control activities* in the COSO-model.
- In the case of red flags (interpreted through the fraud triangle-model), the auditors who mainly audit larger companies put a relatively stronger focus on *Neutralisation/Attitude* compared to the auditors who mainly audit smaller companies. The latter group put a relatively stronger emphasis on *Opportunity* compared to the auditors who mainly audit larger companies.
- No clear difference was present between the two groups in their perception of neither the term “internal control” nor whether a difference exists between the definition of internal control in general and a definition of internal control which more specifically focuses on detection and prevention of occupational fraud.

- On the question of what constitutes good internal control, the auditors who mainly audit larger companies covered, in large, all the parts on COSO-model while the auditors who mainly audit smaller companies did not cover the parts of *Information and communication* and *Risk assessment* (although the difference was not very strong). The auditors who mainly audit larger companies did also put a relatively stronger focus on *Control environment* compared to the other group of auditors.

A summary of the analysis conducted in the *quantitative* part reveals the following conclusions:

Red flags:

- Both groups gave their highest grades to *Opportunity*.
- Generally higher grades were given by auditors who mainly audit larger companies.
- Less spread between the parts of the model as well as within the group of respondents for auditors who mainly audit larger companies.
- The auditors who mainly audit smaller companies put a *relatively* stronger focus on *Opportunity* and *Controls*.
- The auditors who mainly audit larger companies put a relatively stronger focus on *Culture and ethics*, *Reward management*, and *Communications* in the specific model, i.e. a relatively stronger focus towards *Neutralisation/attitude*.

Internal control:

- The auditors who mainly audit larger companies put their strongest emphasis on *Control environment* while the group of auditors who mainly audit smaller companies put strongest emphasis on *Control activities*.
- The auditors who mainly audit larger companies generally have less spread within the subparts of the model as well as a higher degree of concordance compared to the group of auditors who mainly audit smaller companies.

- Relatively stronger focus on hard controls (i.e. *Control activities*) by the group of auditors who mainly audit smaller companies.

Reflections upon the results

The comparison between auditors who mainly audit larger companies and auditors who mainly audit smaller companies has revealed some interesting results. It is interesting to notice the similarities between these results and the results from the comparison between older and younger auditors. The similarities are primarily that auditors who mainly audit smaller companies put a relatively stronger focus on hard controls in terms of the COSO-model and *Opportunity* concerning their perceptions of red flags. It should, however, be recognised that the conclusions drawn from the comparison based on what companies the respondents mainly work with need to be interpreted somewhat more carefully. The reason is that the division of the two groups of auditors is difficult to make since several auditors also work with companies in the other group than the one in which they are placed, i.e. several respondents can be said to be border-line cases between the two groups.

Despite the difficulties in how to divide the two groups, the conclusions are supported by the general impression from the conducted interviews. Thus, the impression received from the respondents who clearly belonged to one of the two groups supported the conclusions above. Hence, the division seemed to give additional understanding of the differences in perceptions within the group of auditors. Additional research based on the different clients of auditors is in other words a possible approach for deeper understanding of the perceptions of auditors of red flags and criteria of internal control.

One possible reason behind the conclusions above is that auditors who mainly work with larger companies focus relatively more on the internal control of the companies audited. It is likely that relatively more work with internal control broadens the perspective of factors which are important to pay attention to, i.e. better coverage of the COSO-model. The strategy mainly used in audits of smaller companies, substantive testing, is likely to result in an increased focus and awareness of concrete audit evidence which can

explain the tendency to emphasise hard controls as well as the *Opportunity* concerning red flags.

A broader view of red flags among auditors who mainly audit larger companies can also depend on the sort of fraud studied (occupational fraud). Smaller companies are more often owned and managed by the owners of the companies. The risk of occupational fraud is perhaps not as likely to occur in these companies compared to irregularities which relate to tax evasion. Hence, the possibly increased focus on irregularity among auditors who mainly audit larger companies is perhaps more relevant for occupational fraud compared to the auditors who mainly audit smaller companies. Consequently, factors relating to culture and ethics and how this is communicated to employees are likely to be more emphasised in audits of larger companies.

7. DISCUSSION

7.1 INTRODUCTION

The results of the study indicate that a certain bias towards hard controls characterises auditors' view on red flags and criteria of internal control. Furthermore, there seem to be differences, not just compared to experts, but within the group of auditors as well. The mixture of factors emphasised in the model of analysis applied in the thesis as well as the mixture between hard and soft controls was limited among auditors, i.e. the auditors did in general not individually emphasise a very large number of the factors constituting the applied models of analysis. Finally, the group of auditors seems to be rather heterogeneous in its perception of red flags and internal control.

In this chapter, the results from the study will be discussed more in detail. The discussion aims at reflecting on the results as such, but also to outline hypotheses and/or possible questions of research for future research, which will be specified in chapter 8, *Conclusions and Proposals for Further Research*. The discussion will focus on the following results and observations from the study: differences between auditors and experts, differences within the group of auditors, auditors' ability to combat occupational fraud, methodological reflections, and comparison with earlier research. The chapter will be divided into these different areas in order to facilitate the reading. However, due to the fact that some aspects in one area are interconnected to aspects in another area, no sharp dividing line can be made between the different areas.

7.2 AUDITORS AND EXPERTS

The results in the thesis reveal a couple of interesting differences between auditors and experts. First, relatively, as well as in absolute terms, auditors focus to a larger degree on harder controls than experts. Second, the group of auditors shows a lower degree of agreement than the group of experts. Third, the group of auditors, in general, do not mix the different factors in the models very much, i.e. a comprehensive view of the factors in the models of analysis applied in the thesis was seldom present. The question can be asked why these differences arise and whether they must exist between the groups. A possible

explanation why a relatively stronger focus arises is that focus is dependent on how members of the two groups work within their profession.

As has been described previously in the thesis, forensic auditors work differently compared to auditors. However, although true, the different way of working on assignments would then need to be an explanation of the differences within the group of auditors as well. One such difference is that auditors audit companies of different sizes. If this is true, it would also be possible to conclude that the group of older auditors and auditors who mainly work with larger companies (notice that no analysis has been conducted on older and younger within the groups of different sizes on companies audited) are more similar to experts than the other groups. Another question is, in that case, what the similarities and differences in work methods are between the different groups. It is possible that auditors who mainly apply substantive audit testing are more inclined to view hard controls as more important than more abstract factors such as culture and ethics.⁷⁹ These possible similarities and differences and the cause and effect behind the differences are important questions for further research.

The second and third differences concern the lower degree of agreement within the group of auditors compared to the experts as well as the lower degree of mixture of factors in the model of analysis among the auditors. It is also reasonable that the homogeneity among experts is higher due to the relatively specific character of the group of experts. This difference indicates, together with a generally larger spread within the two models of analysis, that the group of auditors is less homogenous. The question is, of course, why this is so.

Obviously, something shapes the group of experts in a way that the group of auditors is not shaped. This could possibly be linked to factors such as how the two groups work (as discussed above) or how they are trained during the course of their careers. Even if so, such explanations mainly explain the differences in view, not the degree of homogeneity. In other words, the auditors might well differ in view but they could possibly differ with a high

⁷⁹ This can be seen in light of previous research (see Öhman, 2006), which indicates that auditors tend to audit right/correctly rather than audit right things.

degree of agreement within their group. It is, however, interesting to note that the group of older auditors and the group of auditors who mainly audit larger companies in general show a higher degree of agreement. However, since the two pairs of groups are mixed, it is not possible to conclude, for example, that years of experience generate a higher degree of agreement.

During the interviews it was also revealed that the experience of actual cases of occupational fraud, for auditors, often was limited to a few cases per respondent (see Appendix 8). This could, if being a determining factor of explanation, explain why the picture varies to such an extent, i.e. the experience of only a few cases might generate a biased understanding of the concept of occupational fraud based on the specific characteristics of these few experienced cases.

The differences in how to define irregularities and internal control which was present between auditors and experts could possibly also explain why some differences occur. Finally, it can be noted that no clear differences were present within the group of auditors concerning definitions of neither irregularities nor internal control. For the group of experts, some small differences existed in their view of whether differences exist between systems of internal control in general and a system of internal control specifically intended to combat occupational fraud.

The previously mentioned results are also in line with an article by Frank (2004) in which the author concluded that different risk analysis should be conducted when dealing with fraud compared to other risks in an organisation. For the group of auditors, no such distinction was made. In short, to explain why the group of auditors differs to such an extent with respect to homogeneity and why a lack of mixture of factors in the models of analysis was present are interesting questions for future research.

An interesting example of how two groups can be influenced by different basis and pre-knowledge is the study by LaSalle (2007) in which the introduction of two different models of explanation (also the same two main models applied in this thesis) was done with two different groups. The author concluded that differences in how to assess the risk of fraud arose depending on which model was presented to the participants. Such differences in pre-

knowledge and reference point can possibly also be one source of explanation of the variation in view between the different groups studied in this thesis. At the same time, people who possess greater experience with cases of occupational fraud are likely to acquire a greater and more elaborate knowledge of red flags and criteria of internal control, although possibly still biased. This is an important aspect to consider not only in this study but also in future research within the field of fraudulent behaviour.⁸⁰

There is a tendency in the quantitative results that experts generally give higher grades than auditors, and that older auditors give higher grades than younger auditors.⁸¹ Of course it is difficult to provide a good explanation as to why this tendency arose in the study conducted. One possible explanation is the extent of recognition of the red flags and criteria of internal control by the respondents. The selection of red flags and criteria of internal control for the quantitative part of the interview were chosen from different sources in which typical red flags and criteria of internal control were presented. Respondents who, to a larger extent, have encountered these red flags and criteria of internal control could possibly recognise them as red flags and criteria of internal control and thereby, also give them a relatively higher grade than those who have not previously encountered them. For example, during the interviews several auditor respondents reacted with surprise to the assertion that always working late/overtime was considered a red flag. A respondent who does not recognise a certain criteria as a red flag or as an important criteria of internal control would then possibly be less likely to give it a high grade and instead strive for grades in the middle of the grading scale. If this would be the case, it would imply that experts recognise the presented red flags and criteria of internal control to a larger extent than auditors.

⁸⁰ It is easy to conclude that the view of the older auditors and the auditors who mainly work with larger companies would be normatively “better” since it corresponds relatively better with the view presented by the experts. However, previous research is not entirely consistent concerning the focus of the importance of softer controls and attitude etc. since some research (often based on studied cases of fraud) also point to hard controls and red flags relating to *Opportunity*, see for example Gallagher and Radcliffe (2002), Jacka (2002) and Levy (1985).

⁸¹ There was also a slight tendency for auditors who mainly audit larger companies to give higher grades than auditors who mainly audit smaller companies but this tendency was not as strong as for experts vs. auditors, and older vs. younger auditors.

7.3 REFLECTIONS ON THE DIFFERENCES BETWEEN THE STUDIED SUBGROUPS OF AUDITORS

The results indicate that auditors as a group seem to put a stronger emphasis on hard controls. This is shown by the relatively stronger focus on *Opportunity* and its subgroup *Control* according to the fraud triangle and *Control activities* in the COSO-model. It is also interesting that a tendency appeared of increased emphasis on softer factors for older auditors and auditors who mainly audit larger companies (however not as strongly for the last group). One possible explanation of this tendency could be related to what Öhman (2006) labelled as “audit right things” vs. “audit right/correctly”. In other words, auditors might be inclined to audit with respect to what is actually possible to measure or at least relatively easier to measure, i.e. a preference for concrete audit evidence compared to abstract audit evidence.

Concrete audit evidence is likely easier to acquire for harder than softer controls. For example, it is likely that controls such as separation of duties, physical security, continuous reconciliations, routines of approval etc. are easier to check for as well as to document than competence among the Board of Directors or the CEO, tone-at-the-top, an open culture etc. More specifically, considering the fact that an inadequate audit can result in law suits and liability claims, it is possible that an audit which generates concrete audit evidence is not only preferred among auditors but also favoured on a legal basis (i.e. as a more successful legal/litigious audit strategy).

The explanation above does, however, not explain the indication found of a tendency among older auditors (and to a lesser extent auditors who mainly audit larger companies) to pay relatively stronger attention to softer controls and categories of red flags. The reasons behind this tendency are hard to find from the conducted study. However, it is interesting to notice how this tendency stands in relation to experts as well as to previous research. Concerning the comparison with the group of experts, the results indicate a greater similarity for the group of older auditors to the experts’ answers than for the group of younger auditors.

One explanation to the differences in view concerning the need for a mixture of the factors comprising the fraud triangle could possibly be derived from the

differences in working assignments. An analogy can be made to the interviewed experts, who often investigate cases of fraud and occupational fraud and are used to encounter and analyse the indicators of occupational fraud as well as deficiencies in the internal control systems of companies. This could generate a greater understanding of the seemingly vast number of possible cases of occupational fraud and indicators of occupational fraud which would explain the tendency to emphasise a relatively stronger mixture of factors. In the case of older auditors, they too, due to their longer experience, have encountered a greater number of occupational fraud cases compared to younger auditors but generally not as many cases as the group of experts. It is also often the case that older auditors, relatively younger auditors, more often deal with the issues relating to occupational fraud during an audit.

The younger auditors do, on the other hand, to a relatively larger degree deal with the concrete factors during an audit since younger auditors, to a relatively larger degree, are assigned to conduct most of the time consuming parts of the audit. Although younger auditors who have worked between five to ten years also face issues relating to occupational fraud, they are also still more involved with the collecting of concrete audit evidence than their older colleagues. The younger auditors have also more recently in their careers dealt with the more detailed audit assignments than the older auditors since they are more recently newly employed compared to the older auditors, i.e. they still bear the “burden” of being relatively fresh auditors. This could possibly explain the three different degrees of emphasis detected in the study concerning the mixture of factors between experts, older auditors and younger auditors.

The same logic as discussed above for auditors and experts concerning a tendency among older auditors to generally give higher grades than younger auditors, could possibly apply on older auditors compared to younger auditors as well. For both cases, the conclusion above is reasonable, i.e. that both experts and older auditors recognise the red flags and criteria of internal control to a larger extent than the entire group of auditors as well as the group of younger auditors, since the experts work with fraud and occupational fraud on a more day to day basis and the older auditors have had a relatively longer experience compared to the younger auditors during which time they have had

the possibility to encounter more red flags and differences of criteria of internal control.

The general impression from the conducted interviews also confirms the conclusions above, i.e. during the interviews several of the experts explicitly mentioned that they have encountered the red flags and criteria of internal control before (sometime through smiles of recognition). The contrary applied for some of the auditors. If this is the explanation, older auditors would to a larger extent recognise the red flags and criteria of internal control than younger auditors, hence older auditors would, as a result of higher degree of recognition, be inclined to, on average, give higher grades. In any case, the reason as to why these two groups seemed to differ in their grading is also a possible question to investigate in future research.

7.4 AUDITORS' ABILITY TO COMBAT OCCUPATIONAL FRAUD

Another interesting question is what implications the results have on auditors' ability to combat occupational fraud. It has been described previously in the thesis that according to the Swedish Companies Act, auditors are obligated to report to a public prosecutor and resign from the engagement in cases of suspicion of fraud/economic crime committed by the CEO or members of the Board of Directors. During several interviews, a common answer from the group of auditors was the reliability on their "gut feeling" when evaluating the risk of occupational fraud. It is interesting to note that this answer was hardly ever given by any of the experts. It is also in line with the theory of red flags to seek out the small, or large, signs of suspected occupational fraud.

An interesting parallel can be found with respect of the research presented in Granhag (2000), in which an overview of the area psychology of *lying* is outlined. According to the author, people in general as well as trained professionals (such as police, prosecutors etc.) all score very poorly when trying to detect lies (in less than six out of ten cases do people, on average, succeed in detecting a lie, i.e. not much better than just guessing). Thus, a strategy which does not build on relatively concrete facts rather than a feeling is possibly difficult to succeed with during an audit with respect to detection of occupational fraud. It should, however, be recognised that not all knowledge is possible to express in words (i.e. tacit use of knowledge does

matter) which makes it difficult to draw any clear conclusions from the expressed reliance on gut feeling.⁸² It is, however, still possible that a stronger focus and understanding on red flags could benefit in “audit right things” compared to “audit right/correctly” (Öhman, 2006) and thereby better combat occupational fraud in line with the legislator’s intentions.

The possibility of distinguishing between the fraud cases and non-fraud cases discussed above is for example studied in Bell and Carcello (2000). The study was conducted in order to test the likelihood of fraudulent financial reporting for an audit client, conditioned on the presence or absence of several fraud risk factors. The authors found that the applied logistic model was significantly more accurate than practicing auditors in assessing risk for the 77 fraud observations. In addition, there was not a significant difference between model assessments and those of practicing auditors for the sample of non-fraud cases.

The findings by Bell and Carcell (2000) suggest that a relatively simple decision aid performs quite well in differentiating between fraud and non-fraud observations. The study indicates that practicing auditors can have a somewhat incorrect view of indicators of occupational fraud and that the reliance on their gut feeling can result in incorrect and biased conclusions. A study with relating results is Rose and Rose (2003) in which it is concluded that auditors can make biased and inconsistent decisions when auditing potential occupational fraud cases. It is also concluded that an introduction of a computer-based decision aid could be beneficial in counteracting these possible biases and inconsistencies.

One possible way to proceed from the above discussion would be to extend and rewrite RS 240 in order to achieve a stronger (some red flags are listed in the present RS 240) connection between auditing strategy/requirements and the focus on red flags. The American counterpart to RS 240, is SAS No. 99, in which a large number of red flags are presented from the perspective of the traditional fraud triangle applied in this study, could serve as an example. In other words, it is not necessarily the auditors who should change but rather

⁸² The importance of tacit knowledge is studied within the research area called knowledge management.

the regulations stipulating how to audit with respect to the risk of fraud and occupational fraud. This partly applies for the case of the criteria of internal control as well, in which a more direct connection between the COSO-model (or another comprehensive internal control model), the RS 400 (which regulates how to evaluate and test internal control) and RS 240 would be beneficial in fighting occupational fraud and fraud in general. How the regulations concerning auditors' obligation to detect and prevent fraud as well as the regulations concerning internal control should be formulated in order to increase the possibilities of auditors to fight fraud and occupational fraud is another possible question for future research.

Two other aspects of the results from the thesis are interesting to consider concerning auditors' ability to detect and prevent occupational fraud. These are the tendency to apply a non-holistic perspective on occupational fraud and the heterogeneity present among auditors.

The tendency among many of the auditors to view only some parts of the two applied models as important indicates a non-holistic approach on how to view occupational fraud. This implies that audits carried out might be narrowed down to some aspects of occupational fraud. Considering the vast number of cases and characteristics which acts of occupational fraud can constitute, this tendency might limit the possibility of auditors to detect and prevent fraudulent actions from being carried out in companies.

Albeit that auditors play a limited role in detecting fraud (Frank, 2004 and PricewaterhouseCoopers, 2005), the possibilities of detecting occupational fraud also affects the legal risks (in terms of liability claims) which auditors face in cases of inadequate audits. Hence, a possibly increased audit risk should be of interest to the auditing profession. This being so, it is interesting to notice that many auditors speak of materiality in conjunction with occupational fraud, i.e. that only material mistakes resulting from occupational fraud and fraud in general are of interest.

It is also often assumed that fraud and occupational fraud are not material, i.e. do not result in significant financial misstatements. However, according to Wells (1990) and Wells (2001) it is only a myth that fraud is not a material issue since even though fraud often starts out as immaterial; it often becomes

material over time. According to Bonner et al. (1998) auditors are also more likely to be sued when financial statement frauds are of a common variety or when the frauds arise from fictitious transactions. Thus, the possibility of detecting fraud as well as occupational fraud should be of interest to auditors.

Second, the study in this thesis has shown that the views of auditors are rather heterogeneous. A heterogeneous view might also result in a heterogeneous audit of occupational fraud being carried out. Thus, it is possible that audits of occupational fraud are carried out with significant variation among auditors. A possibly large variation in audits of occupational fraud is likely to limit the role which auditors can play in combating occupational fraud. Several reasons are plausible as to why such heterogeneity arises, but one possible approach to counteract such a tendency could be to adjust the audit regulations in order to homogenise how the audits concerning fraud and occupational fraud are and should be carried out.

In the case of criteria of internal control, a stronger connection between the COSO-model and RS 400 (RS 400 – Risk evaluation and internal control) could be made. In the case of red flags, the RS 240 could emphasise the need to apply a comprehensive model (such as the fraud triangle) in connection with a larger number of examples of red flags. Thus, the number of red flags mentioned in RS 240 could also be increased as well as linked to the fraud triangle model (which is the case in the SAS No. 99). More comprehensive and elaborate regulations on how to audit for occupational fraud as well as fraud in general could also limit the risk that single cases of experienced fraudulent behaviour will bias the perception of how to deal with the risk of fraud and occupational fraud.

7.5 GENERAL METHODOLOGICAL REFLECTIONS ON THE STUDY

The purpose of the study in this thesis is to increase the understanding of auditors' perceptions of red flags and internal control concerning occupational fraud and to find hypotheses which can be tested in a larger study. It is, however, also interesting to ask to what extent the results of the study can be generalised. Most of all, all of the auditors (but not experts) who took part in the study are/were employed at Öhrlings PricewaterhouseCoopers in Stockholm. If this population of auditors does differ compared to other

auditors, it would limit the use of the results in future studies of auditors' perceptions of occupational fraud.

There are differences in how auditors carry out their work, which has been paid attention to in the thesis through the deliberate choice of which people to interview (older and younger auditors as well as auditors who mainly audit larger or smaller companies). Still, the differences between the Big 4 auditing firms are not likely to be very large. For example, the employment process, the education plan within the four firms, and the processes to guarantee quality of the audit, are all similar between these firms. Hence, it is therefore not likely that the differences between the firms are any larger than the existing differences within the larger auditing firms. Thus, it should be possible to apply the results of the study to a larger group of auditors, at least for the group of auditors who are employed at the Big 4 auditing firms.

The empirical material which the study of this thesis is based on consists of two sets of data: qualitative data and quantitative data. It has been emphasised previously in the study that the main focus is on the qualitative data despite the number of pages which the quantitative data analysis covers in the presentation and analysis of the data. The quantitative data is mainly meant as a *complement* to the qualitative data, i.e. to ensure that none of the conclusions drawn from the qualitative data clearly are contradicted by the results from the quantitative data analysis. Thus, considering the amount of quantitative data and the focus and purpose of the study, no further attempts to conduct statistical tests (in order to test for significance between different groups) have been conducted in the study.

With a larger set of data and a different approach when collecting the quantitative data, the study could have been conducted with a quantitative focus instead of a qualitative focus. This would, however, have meant another kind of study with a different purpose. Considering the results presented previously in the thesis, such a study is possible to conduct in order to investigate the tendencies outlined in this study. Such a study could also better analyse the group of auditors in order to outline other sorts of subgroups (for example through multivariate data analysis).

The conducted study is partly based on a division of the group of auditors into different subgroups. The purpose of this division is to shed further light on possible differences within the group of auditors. The division is made with respect to years of experience as well as with respect to what kind of clients (size) the interviewed auditors mainly work with.

Concerning the years of experience, the different groups are rather distinct, i.e. the difference in years of experience between the “oldest” of the younger auditors and the “youngest” of the older auditors is rather large. The difference is, however, not as clear concerning what kind of clients the auditors mainly work with. Some of the participating auditors were close to being in between the two groups studied. Hence, the conclusions drawn from the analysis of whether the auditors mainly work with larger or smaller companies need to be interpreted more carefully. However, the purpose of the divisions, to investigate whether any differences seem to be present within the group of auditors, is still considered to have benefited from the split. Additional quantitative studies could however, as previously mentioned, be made in order to investigate the presence of different groups within the total group of auditors. Such studies could be conducted through multivariate data analysis.

Another interesting question in the study is whether one can speak of better or worse red flags and criteria of internal control (concerning occupational fraud). To claim that some red flags or criteria of internal control are the “best” would require testing of the effects or predictability of those red flags and criteria of internal control. Hence, a study would need to show that this and that red flag are present in so and so many percent of occupational fraud cases. That would in turn require knowledge and data of not only the detected cases of occupational fraud but also of the undetected cases of occupational fraud. Since such data is not likely to be available and since it is possible that the cases of occupational fraud which are not detected differ from the cases of occupational fraud which are detected, the knowledge of red flags and criteria of internal control is biased towards the actual knowledge possessed. Consequently, views expressed by different individuals are likely to be based not on objective knowledge, but on knowledge based on their specific points of reference.

In the study conducted two models have been applied in order to analyse the answers received from the interviewed auditors and experts. The questions asked during the interviews have been both qualitative and quantitative and have been based on some specified prerequisites. However, this choice of method can of course be criticised and other methods could possibly have been chosen instead. One problem with the chosen method is that it might not capture the respondents' actual perceptions of red flags and internal control but rather how they want their perceptions to be or look like. This is basically a problem in all interviews that respondents are inclined to modify their answers in order to present what they believe to be "better" answers. A study of how auditors have behaved in actual situations of occupational fraud would have generated the actual behaviour of auditors.

One problem with studying real cases concerning occupational fraud is that it still may be difficult to discover auditors' perceptions fraud from their behaviour. Another problem with studying real cases is that such cases can only be based on cases in which an occupational fraud is actually detected which might not say anything about how auditors view occupational fraud. Thus, a problem of bias is present in the data on occupational fraud.

One possible alternative method could have been to collect data through a survey from which statistically based conclusions could be drawn. Such a method could possibly increase the possibility to generalise the results since statistically significant results would be reached. In addition, the data could easier be collected from a broader geographical area which would further increase the possibilities to find results from which generalised conclusions could be drawn. At the same time, the choice of applying a survey could face validity problems due to the fact that only a limited number of red flags and criteria of internal control could be included in such a survey. It is also possible that problems due to a low percentage of answers would arise.

Another possible alternative method could have been to apply different models or use different prerequisites for the interviews than the ones used. Although the results might have been slightly different, it is difficult to see what other models could have been used instead. The applied basic fraud triangle is well respected in previous research and the COSO-model also enjoys a high status in how to analyse internal control both in theory and in

practice. Possibly, the modified fraud triangle could have been different, but considering that the results were analysed both through the basic fraud triangle as well as through the modified fraud triangle, the choice of model should be at least satisfactory.

The problem with using models that are too well known could be that they may influence the answers of the respondents. This is mainly a validity problem. In order to mitigate and control for this effect, none of the models were mentioned during any of the interviews and the questions were formulated in order not to indicate the use of either of the two models. Furthermore, the possibility of a respondent to think in terms of any of these two models only captures the fact that the respondent's view actually is similar to these models.

Finally, different prerequisites presented during the interviews could also have influenced the results of the study. More specified prerequisites could have yielded more specific results which possibly could have been easier to compare between the studied groups and subgroups. However, more specified prerequisites could also have limited the possibilities for generalisation. In addition, more specified prerequisites would most likely have been difficult to apply in practice since they would require an even greater effort from the respondent since they would be required to remember more details. Thus, the need for greater effort would possibly have resulted in a larger variation among the respondents since some would be more inclined to make an extra effort than others. Hence, more specified prerequisites would possibly have worked against their own purpose of generating more specific results.

7.6 COMPARISON WITH EARLIER RESEARCH

As has been shown earlier in the thesis, the previous research in Sweden is limited. Two studies of interest which have been mentioned previously in the thesis are Öhman (2005) and Öhman (2006). According to the studies, auditors are inclined to audit with respect to hard audit evidence. This is also an interesting parallel factor of explanation to the results in this thesis. However, during the conducted interviews in this thesis no auditor gave any clear indication of thinking in terms of regulations or how they should audit in order to "audit right/correctly". Instead, their tendency to think in terms of

concrete audit evidence seems to be unconsciously shaped although this tendency seems to partly wither away with increased audit experience. In this sense, there is an interesting parallel between the results in Öhman (2005) and Öhman (2006) and the results in this thesis, despite the differences in purpose and focus between the two studies.

Öhman (2005) and Öhman (2006) also showed that a moderate homogeneity exists among auditors. In Öhman (2005) it is stated that “*no group has developed common and unique opinions which are not shared by other groups*” and that “*the work is assuredly surrounded by rules and regulations but are in the end based on the professional judgment of the individual auditor*”⁸³ (p. 68). This homogeneity is according to the author a result of the conformity in education, mandatory practice, method of working etc. However, in this thesis, heterogeneity among the auditors seemed to be present in their perceptions of red flags and internal control. This difference is interesting since it indicates that auditors’ perceptions of occupational fraud deviate from other aspects of auditors’ work. An explanation to this difference might be the specific character of occupational fraud and a lack of awareness of these kinds of issues. This might be a consequence of the resistance to have to deal with fraudulent issues (compare Wallerstedt (2005) in which it is shown that auditors were negative towards the introduction of the obligations of auditors to report of suspicions of economic crime in the Swedish Companies Act).

With the exception of the above discussed research, previous research conducted in Sweden is scarce. Thus, it is necessary to turn to the internal research done on the topic. It has been showed in an article by Moyes et al. (2005) that *Neutralisation/attitude* has been given a relatively stronger emphasis in the Coleman model concerning red flags. The article by Moyes et al. (2005) is however not completely comparable since it is based on empirical data from internal auditors and not external auditors which is the case in this thesis.

The work by Heiman-Hoffman et al. (1996) also concludes that attitude is the most important category of indicators concerning red flags. It is interesting to

⁸³ My translation from Swedish.

notice that the results presented by Heiman-Hofman et al. (1996) partly contrast the results found in this study since their results concluded that attitude was the most important category of red flags, while the results of this thesis yielded a relatively stronger emphasis on harder controls and *Opportunity*. However, when dividing the group of auditors into subgroups, a tendency towards a relatively stronger emphasis on softer controls (*Control environment*) and *Neutralisation/attitude* was reached for the group of older auditors and, although not as clearly, for auditors who mainly audit larger companies. Hence, depending on the years of experience among the respondents, the results of this thesis corresponds or contradicts the above mentioned previous research.

According to D'Aquila (2004), integrity and ethical values of management is crucial concerning fraud. D'Aquila (2004) also concludes that it is more common for management in large and publicly held organisations to emphasise integrity and ethical values compared to management in smaller organisations. This would possibly explain some of the tendency of experts as well as older auditors to emphasise softer factors such as *Control environment* and *Neutralisation/attitude*. The reason would be that auditors and experts who generally work relatively more with larger companies are influenced by management's view in these companies. Experts normally work relatively more with larger companies.

In the case of auditors, the above explanation is likely for the tendency of auditors who mainly audit larger companies to put a relatively stronger emphasis on softer factors compared to the auditors who mainly audit smaller companies. Although not investigated in any greater detail, the impression during the interviews was that older auditors who mainly work with larger companies also emphasised the importance of softer factors relatively more than older auditors who mainly audit smaller companies. The same general impression was given for younger auditors depending on whether they mainly work with larger or smaller companies.

The importance of the balance between the different parts of the fraud triangle has been recognised by the work of Apostolou et al. (2000), Hansen and Klammer (2004), and Rezaee (2002). The conclusion can be drawn that the views of experts as well as the views of older auditors (in relation to younger

auditors) correspond rather well with the results of the previous research. This is however, a normatively coloured conclusion which, as shown above, is hard to draw due to the limited possibility to evaluate what a “good” view of occupational fraud includes. Nevertheless, the results correspond well with the results of previous research in terms of experience and the tendency to emphasise softer factors as well as the mixture of factors (at least for the group of experts concerning the mixture of factors). The study by Hansen and Klamm (2004) also showed a strong homogeneity among the experts who participated in the study, which corresponds well with the results in this thesis for the part of the experts.

Some other studies of interest concerning the mixture of red flags and the coverage of the fraud triangle are Albrecht (1996), Pomeranz (1995), Smith et al. (2005), Thompson (1998), Thompson (1999), Thompson (2000), Thompson (2002), and Urbancic and Hubbard (2003). The lists of red flags in these studies, with the exception of Pomeranz (1995), could be said to adhere to *Incentive* and *Opportunity*. Strong emphasis is put on red flags which concern individual characteristics, pressure on employees etc. The studies complicate the picture presented by the previous research.

In short, several of the red flags mentioned in these last studies were mentioned by several of the auditors interviewed in this thesis. However, they do not pay very strong attention to red flags relating to *Neutralisation/attitude* which was the case with the experts in this thesis as well as with the research conducted by Apostolou et al. (2000), and Hansen and Klamm (2004) mentioned above. The general fraud triangle by Coleman, which is applied in this thesis, does however, enjoy strong recognition as a good model when analysing and assessing possible occupational frauds in a company.

In other words, the contrasting studies discussed above indicate the complex nature of fraud cases but do not overthrow the general fraud triangle model. Instead, the studies are interesting when considering the answers provided by the auditors in this thesis. Several of the contrasting studies are based on case studies of fraud in which the red flags identified can be specific to the cases studied. This could be another explanation of the tendency of auditors to emphasise the importance of hard controls as well as red flags relating to *Opportunity*. Consequently, the perceptions among auditors can be highly

influenced by cases they encountered as well as the “war stories” they heard from other auditors. It is also possible that it is easier to recall harder factors (for red flags as well as for criteria of internal control) than more abstract factors. Consequently, a bias towards harder factors can arise due both to experienced cases of occupational fraud which they heard of in the line of their profession and to the cognitive ability of auditors as human beings as well.

An interesting aspect from the conducted interviews was the lack of emphasis given to systems which involve whistle-blowers, either as a criteria of internal control or as a red flag when not present in a company. The previous research strongly emphasises the importance of such systems, for example McNeal (2006), Slovin (2006), and Johnson and Wright (2004). One explanation for this divergence between the results of this thesis and the previous research might be the fact that this study is conducted in a Swedish context in which whistle-blowers are not a very common feature in companies compared to an American context on which the studies above are based on. This does however only apply for the group of auditors since the group of experts did mention whistle-blowers during several of the conducted interviews.

In the case of criteria of internal control, the work by, Barnett et al. (1998), D’Aquila (2004), Dunn (2003), Holmes et al. (2002), Holzinger (1999), Hooks et al. (1994), Irvine and Lindsay (1994), Jacka (2004), Jennings (2003), Roth and Marks (2004), Vinten (1992), and Ziegenfuss (2000) have emphasised the relative importance of *Control environment* (according to the COSO-model) and the importance of factors such as ethics and tone-at-the-top, which are included in the *Control environment* of the COSO-model.

The study in this thesis has showed a tendency among the experts and partly among the older auditors to emphasise the *Control environment* relatively stronger than auditors in general and especially younger auditors or auditors who mainly audit smaller companies. Thus, years of experience (older auditors) and specialisation (experts) seem to form a view which confirms the results of the previous research. However, hard factors, *Opportunity*, were also strongly emphasised in the study of this thesis. The experts also emphasised the need of a complete view including all of the different parts of the COSO-model. Consequently, the results of this thesis both confirm some

of the previous international research but also shed further light on the subtle distinctions which seem to be apparent within the group of auditors. This is no doubt an important contribution of this thesis to the research on how auditors view fraudulent behaviour. It is also the basis for possible future research.

7.7 CHAPTER SUMMARY

This chapter has discussed the findings of the thesis more in detail. The chapter is divided into five different parts in which focus has been on differences between auditors and experts, differences within the group of auditors, auditors' ability to combat occupational fraud, methodological reflections, and comparison with earlier research. Possible explanations of the differences found between experts and auditors as well as between the different subgroups of auditors are the different working assignments of various auditors, differences in previous experience of occupational fraud cases, and differences in the focus on the collection of audit evidence. In the case of the auditors' ability to combat occupational fraud, it was discussed that modified audit regulations with a greater emphasis on red flags and a model of internal control could enhance the possibilities of auditors to detect and prevent occupational fraud in companies. Tendencies among the respondents such as the fact that experts and older auditors generally gave higher grades in the quantitative part of the conducted interviews were also discussed.

The last two parts of the discussion have focused on methodological considerations and comparison with earlier research. It is noticed that the study has implied a methodological choice which was made in competition with other possible methodological strategies. It was also considered whether one can speak of a better or worse view of red flags and criteria of internal control. Finally, the results were contrasted with earlier, mainly international, research in which the results both confirmed and contradicted previous results.

8. CONCLUSIONS AND PROPOSALS FOR FURTHER RESEARCH

The study in this thesis has investigated auditors' perceptions of occupational fraud. In short, the purpose in the study was to answer the following two questions of research:

1. What categories of red flags are perceived as the best by auditors (for auditors as such as well as compared to experts) in order to detect occupational fraud?
2. What is perceived by auditors (for auditors as such as well as compared to experts) as the most crucial parts of the internal control of companies to detect and prevent occupational fraud?

Both questions have been analysed with two models of analysis (one for each question). The empirical data has been gathered through interviews during which both qualitative and quantitative questions were asked. Both the qualitative and quantitative data has in turn been analysed by the two models of analysis, although the quantitative part has only served as a complement to the qualitative analysis.

The answers and conclusions from the study concerning the *first* question of research can briefly be described in the following way:

The group of interviewed auditors did cover the general fraud triangle model quite well as a group, but individually only a few respondents presented a comprehensive view of the three main parts of the model. In terms of the specific model, the subparts emphasised (as a group) were People (*Incentive*), Reward management, and Culture and ethics (*Neutralisation/attitude*), Structure, and Controls (*Opportunity*). Generally, a relatively stronger focus was put on *Opportunity* in terms of the model of analysis. The group of auditors also exhibited a rather large variation, i.e. the group's perception can be described as heterogeneous. The results from the quantitative data analysis were largely consistent with the results from the qualitative data analysis.

The results for the first question of research were compared to a group of experts as well as between subgroups within the total group of auditors. The

group of auditors put a relatively stronger focus on *Opportunity* than did the group of experts. Experts too put a strong focus on *Opportunity* but also focused strongly on cultural aspects, i.e. the *Neutralisation/attitude* part of the applied fraud triangle-model. The conclusions from the qualitative data analysis were confirmed rather well by the quantitative data analysis. In spite of a difference due to a relative bias towards *Opportunity*, and thereby hard controls, the main difference compared to the group of experts was how well the model of analysis was covered as well as the degree of homogeneity within the two groups. While the group of experts presented a picture which, on the one hand, covered all parts of the model of analysis, but, on the other hand, showed a strong homogeneity within the group (measured by a low standard deviation) the opposite was the case for the group of auditors. Hence, the group of auditors distinguished itself through the number of different views as well as the focus on red flags as such.

The answers and conclusions from the study concerning the *second* question of research can briefly be described in the following way:

The two main components of the COSO-model emphasised were the *Control activities* and *Control environment* from the qualitative data analysis. The view outlined from the quantitative data analysis was largely consistent with the results from the qualitative data analysis.

Compared to the group of experts, the group of auditors placed a relatively stronger focus on hard controls such as *Control activities*. This result is in line with the results of the analysis of red flags in which harder controls were given a relatively stronger focus. The main differences compared to the experts were, just as in the case of red flags, a rather heterogeneous view of internal control within the group of auditors and a less comprehensive view of the different factors of the model applied compared to the group of experts. Further, the group of experts emphasised the combination of hard and soft controls, a view which was hardly emphasised by the group of auditors.

The results above make it interesting to view whether any differences were present *within* the group of auditors as well. In order to investigate potential differences within the group of auditors, the group was divided with regard to

number of years of experience from the audit profession as well as whether the respondent mainly audits larger or smaller companies.

For the case of older vs. younger auditors, the differences resembled the differences between auditors as a group and the group of experts, although not as clearly. Concerning red flags, the group of older auditors, relative to the younger auditors, placed a stronger emphasis on *Neutralisation/Attitude* of the general fraud triangle while the younger auditors put a relatively stronger focus on *Incentives* and *Opportunity* (in the fraud triangle-model). The group of older auditors also covered the fraud triangle to a larger extent compared to the group of younger auditors.

In the case of criteria of internal control analysed with the COSO-model, the older auditors emphasised *Control environment* relatively more than younger auditors who instead put a stronger emphasis on *Control activities*. The results were, in large, confirmed by the quantitative data analysis. Both the qualitative and quantitative data analysis also indicated a generally stronger concordance within the group of older auditors compared to the group of younger auditors for both red flags and internal control.

Finally, for the group of auditors who mainly audit larger companies, again, similar results as above were found. Hence, the group of auditors who mainly audit larger companies emphasised *Neutralisation/attitude* relatively stronger while the other group emphasised *Opportunity* relatively stronger for the red flags. In the case of criteria of internal control and the COSO-model, the auditors who mainly audit smaller companies put a relatively stronger emphasis on hard controls than the other group.

The relative results from the *quantitative* analysis are summarised and presented in Table 13 and Table 14. The tables illustrate the results described above, i.e. how the different groups put relatively stronger (and weaker) emphasis on certain parts of the models applied in the study.

Table 13: Comprehensive comparisons of the views on red flags between the different groups studied

	Ratio experts/ auditors	Ratio older/ younger	Ratio larger companies/smaller companies
Incentive	1.17	1.12	1.10
Neutralisation/attitude	1.14	1.23	1.19
Opportunity	1.08	1.12	1.04

Table 14: Comprehensive comparisons of the views of internal control between the different groups studied

	Ratio experts/ auditors	Ratio older/ younger	Ratio larger companies/ smaller companies
Control environment	1.03	1.00	1.09
Risk assessment	1.16	1.30	1.33
Control activities	0.95	1.01	0.97
Information & Communication	1.05	1.18	1.02
Monitoring of controls	0.89	1.17	1.07

As has been seen in the presentation of previous research, several articles have been written on the topic of red flags and internal control. However, the research conducted in a Swedish context is scarce, hence the first important *scientific contribution* has been to shed light on a relatively new area of research on auditors' view of red flags and criteria of internal control. In the perspective of the international research, the study has served to deepen the understanding of how auditors' view of red flags and criteria of internal

control by not investigating how red flags and criteria of internal control *should* be viewed but how auditors actually view them.

Studies in which the views of auditors are investigated have often involved internal auditors as well and have studied how auditors rank specified red flags (for example Heiman-Hoffman et al., 1996; Moyes et al., 2005; Hansen and Klamm, 2004; Rezaee, 2002; Apostolou et al., 2000). This thesis not only investigates the view of red flags through a more elaborated fraud triangle model but also compares the view of auditors with a group of experts as well as between subgroups of auditors. Hence, the thesis sheds new light on how auditors view red flags and internal control, both through the relative and absolute applied analysis of auditors' views. The study also opens possibilities for further research of the potential causes behind the results.

The practical implications of the study are important as well. Interesting results concern the observed spread within the group of auditors as well as the relatively limited mixture of aspects of the models applied (i.e. a lack of holistic perspective) and the observed differences within and between studied subgroup as well as compared to the group of experts. The relatively stronger focus on harder controls is of course, also of interest.

In conclusion, the study has resulted in a picture of how auditors view red flags and internal control concerning occupational fraud. Although this picture does not imply generalisation, several interesting questions arise, which could constitute grounds for future research. The main focus for future research could be to investigate *why* these differences seem to exist and what role such differences play for the possibilities of auditors to fruitfully contribute in the fight to combat occupational fraud.

From the above presented results, a number of different hypotheses can be stated which can be tested in future studies.

- Statistically significant differences exist between subgroups of auditors concerning their perception of red flags and criteria of internal control concerning occupational fraud.
- Practicing auditors constitute a heterogeneous group concerning occupational fraud.

- Different perceptions of occupational fraud among auditors result in incomplete compliance with present auditing statutes and regulations.
- Auditors' perceptions of occupational fraud correlate with auditing of concrete audit evidence.
- An over-reliance on concrete audit evidence when auditing for occupational fraud results in audits which are not sufficiently risk driven.
- Different subgroups of auditors audit occupational fraud differently.
- Numbers of years of experience, as well as the sort of clients which different auditors work with, affect how these groups view occupational fraud.
- The current regulations on fraud and occupational fraud need to be adjusted in order to achieve an appropriate and coherent audit of fraud and occupational fraud.

Proposals for further research

The conducted study has revealed several interesting results on which future research can be based. Four main topics are very interesting to explore in future studies. These four areas of future research are:

- What explains the differences between the studied groups? There is room for further research in order to gain additional knowledge and understanding of the differences which have been found in this study.
- How can RS 240, including the relevant application of the so called Brottskatalogen in the Swedish Companies Act, be formulated in order to increase the role of auditors in combating fraud and occupational fraud?
- Are there any more subgroups within the auditor population concerning the perception of occupational fraud than the subgroups studied in this thesis? Such a study could be carried out using multivariate data analysis.

- What effects do the results of this thesis have on auditors' ability to detect and prevent occupational fraud?

As is seen in the above presented results, a number of possible hypotheses exist for the benefit of future research. In order to achieve results which to a larger degree can be generalised to the whole population of auditors, a study based on a random selection of auditors in Sweden could be made. This could apply for all four of the above areas of possible future research.

Considering the significance of the research area for society and its possible impact on the auditing profession, it is important to gain additional understanding of how occupational fraud is viewed by auditors in order to increase the possibilities for combating such deleterious activities from being carried out in companies. In other words, there is room for further research on occupational fraud in a Swedish context in the near future.

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APPENDIX 1 – LIST OF REGULATIONS

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Economic Association Act (Lagen om ekonomiska föreningar).

Auditing Act (Revisionslagen).

Auditors Ordinance (förordning om revisorer).

Annual Accounts Act (Årsredovisningslagen).

Book-keeping Act (Bokföringslagen).

Auditors Act (Revisorslagen).

Auditors Ordinance (Revisorsförordningen).

EC Recommendations on auditors' independence (EGs rekommendation om revisors oberoende).

FAR-SRS Auditing recommendation (FAR-SRSs yrkesetiska regler).

International Auditing Standard for Sweden (RS - Revisionsstandard i Sverige).

Regulations of the Supervisory Board of Public Accountants (Revisorsnämndens föreskrifter).

APPENDIX 2 – DAVIES’ MODEL OF ANALYSIS OF CAUSES OF FRAUD

The model of Davies (2000) emphasises the mix of factors as the reason of increased risk of fraud. This corresponds with the Coleman model (the fraud triangle). The model, in it self, consists of a number of factors for analysing the causes of fraud. Davies emphasises that some of these factors are connected with the business environment, such as culture and ethics, what management and reward structure look like and how such factors are communicated within the company. Davies (2000) has formalised this logic into a model to analyse and explain the presence of fraud. The core of the model consists of the basic business – business strategy, core business processes, and support processes. Around this core of business activities, a number of strategies in how to handle fraud, how risk assessment of fraud can be made, how to respond in cases of fraud, controls and measures to evaluate performance are present. Finally, other factors in the company which can be used to analyse fraud are included – people (i.e. employees), culture and ethics, reward management, (organisational) structure, and communication.

In the extended fraud triangle model applied in this thesis, the last two layers of the model described above are added to the traditional (three corners) fraud triangle. The purpose is to be able to conduct a deeper analysis of potential differences between groups of respondents.

APPENDIX 3 – MORRIS’ FRAUD CHECKLIST

1. Are all directors or senior executives made fully aware of their collective responsibility for the prevention and detection of fraud?
2. Do the directors or senior executives encourage a business culture that is open and honest, and lead by example?
3. Has a clear policy on fraud been developed and is this:
 - a. Widely publicised amongst employees?
 - b. Drawn to the attention of third parties (e.g. customers and suppliers)?
4. Do the personnel procedures ensure that:
 - a. The stated qualifications and experience of new employees are verified?
 - b. Any apparent gaps in the employment record of new employees are investigated?
 - c. References are taken up for all new employees?
 - d. Any points raised in employee references are followed up?
 - e. The same procedures are applied for temporary as well as permanent staff?
 - f. Where agency staff is used, the business understands the level of checking that has been carried out by the agency?
 - g. Where a service is contracted out to a third party, the business understands the level of checking carried out by the contractor, especially where individuals will be given access to the business’s premises outside normal working hours?
 - h. All employment contracts and other service contracts provide for immediate suspension on the suspicion of fraud?
 - i. All employees are required to take at least two consecutive week’s holiday each year?

- j. Regular late-working by employees is monitored and investigated?
 - k. An independent debriefing interview is held with all leavers?
- 5. Is fraud awareness included in staff induction programmes?
- 6. Is on-going fraud awareness training incorporated into staff development programmes?
- 7. Has a confidential “whistle-blowing” procedure been established?
- 8. Is the effectiveness of the “whistle-blowing” procedure subject to regular review?
- 9. Are staff rewarded for appropriate attention to compliance and control issues as well as for financial performance?
- 10. Has the likelihood of fraud arising been assessed for:
 - a. Each principal area of the business?
 - b. Each peripheral area (e.g. disposal of fixed assets, management of car scheme)?
- 11. Have the controls that operate to prevent fraud been identified and assessed?
- 12. In each case where a potential risk arises, have steps been taken to:
 - a. Introduce new controls where gaps are evident?
 - b. Strengthen potentially weak controls?
 - c. Ensure the proper flow of relevant management information?
 - d. Rationalise any areas where excessive bureaucracy has been identified?
- 13. Have steps been taken to confirm that the identified controls are actually operating in practice?
- 14. Do the entity’s procedures ensure that, as far as practicable, the following aspects of each transaction are segregated:
 - a. Initiation
 - b. Authorisation

- c. Execution
 - d. Custody of related assets
 - e. Recording in the accounting records?
15. Are procedures and controls regularly reviewed and updated to take account of developments in the business?
 16. If the business is subject to legal requirements in respect of money laundering, have appropriate procedures and controls been put in place?
 17. Are all directors or senior executives and staff aware of the issues relating to money laundering, and the risk of the business becoming inadvertently involved?
 18. Are all directors or senior executives and staff made aware of the potential warning signs of fraud?
 19. Is the use of management override of controls monitored and reviewed?
 20. Have appropriate performance indicators been identified for each aspect of the business?
 21. Are all variations from expected performance, and any unusual trends, thoroughly investigated and explanations corroborated?
 22. Is the use of incentive schemes and performance targets monitored and reviewed, to confirm that it is not encouraging manipulation of the underlying figures?
 23. Are regular control visits made to remote business locations?
 24. Do the entity's procedures ensure that all unusual transactions are investigated?
 25. Do the directors or senior executives collate information on actual and suspected fraud within the business and review this for any particular patterns?
 26. Does the entity have an up-to-date fraud response plan setting out:
 - a. The policy on fraud?

- b. Who will lead any investigation into suspected fraud?
- c. The detailed procedures that will be followed, covering in particular:
 - i. Suspension and isolation/removal of relevant individuals
 - ii. Protection of the business's records and assets
 - iii. Gathering of reliable evidence
 - iv. Contact with relevant third parties (e.g. police, insurers, regulators), and
 - v. Internal reporting?
- d. The policy on seeking recovery of funds?
- e. Procedures for dealing with any related publicity issues?

APPENDIX 4 – INTERVIEW GUIDE

Formalities – auditors

1. *Do you mainly audit large or smaller companies?*
2. *For how long have you worked as an auditor?*

Formalities – experts

1. *What kinds of frauds do you mainly work with?*
2. *For how long have you worked with fraud?*
3. *Have you in the past worked as an auditor?*

Part 1 – introductory questions and conditions

Introductory questions

1. *What do you think of when you hear the term "oegentligheter" ("irregularities")?*
2. *Have you ever come into contact with any of the following irregularities in the course of your work as an auditor: Fraud, embezzlement and fraudulent financial reporting? Which one?*
3. *In brief: How do you proceed in order to investigate whether irregularities are present in a firm?*

Conditions are presented (see Appendix 1 (below))

4. *Which frauds would you deem as the most common occupational frauds in a company (place in order of precedence) of fraud, embezzlement and fraudulent financial reporting?*
5. *What do you think of the possibilities of an auditor in the course of an audit (as defined by RS 240) to discover and/or prevent occupational fraud (fraud, embezzlement and fraudulent financial reporting)?*
6. *Why do you think people commit occupational frauds as stated above (place in order of precedence)?*

Part 2

Indicators/red flags (=warning signals) of frauds in companies

7. What (which) indicators/red flags of occupational frauds (of the one listed below) would you view as typical in a company (defined as recently committed, being committed or which with significant probability will be committed)? List in order of precedence!

- a) Fraud and embezzlement
- b) Fraudulent financial reporting

Internal control in order to prevent and discover the presence of frauds in a company

8. How would you define internal control (in general terms)?

9. Would you claim that a difference exists between the generally stated definition of internal control and intern control of occupational frauds specifically?

10. How would you describe a *good* internal control concerning possibility to detect and prevent the below listed occupational frauds from being committed?

- a. Fraud and embezzlement
- b. Fraudulent financial reporting

Part 3 – Let the respondent grade a number of factors which concern indicators/red flags and internal control

1. Indicators/red flags

Grade the following indicators of fraud in order of their importance in warning/indicating that frauds have been committed, are being committed *or* with significant probability will be committed. Grade the indicators on a scale from one to seven (7=very important; 1=not important).

1. Lack of possibility of longer (continuous) vacations for employees *or* not mandatory to take longer, continuous, vacations for the employees.
2. Lack of whistle blowing function.
3. Deficiencies in the routines of reconciliation.
4. Lack of former training of management in how to identify red flags of frauds.
5. One or a few people are dominating in the firm.
6. The ceiling is low in the firm.
7. Reluctance to cooperate with the auditor.
8. Lack of explicit policy regarding frauds.
9. Insufficient routines and systems for handling cases of fraud.
10. Employees who always work over time are not specifically supervised.
11. Private economic pressure on top/senior management.
12. Relatively (with respect to business, responsibility etc.) badly paid staff.
13. Strong dependence on a few key people.
14. Deficient controls of physical property (such as stock goods, inventory, etc.).

15. Dissatisfaction among employees with the company they work for (with respect to salaries, career opportunities etc.).
16. Senior management and management do not set good examples concerning ethical values.
17. Lack of reward system for maintaining control routines.
18. Deficient routines and systems for budget follow up.
19. Deficiencies in the routines of new employment (e.g. poor follow up on references and credentials, large differences in the routines for short and long term employment).
20. Deficiencies in how policies concerning frauds are communicated.
21. Indistinct structures concerning decisions and reporting.
22. Deficiencies in routines and systems for risk assessment.
23. Understaffed financial department.
24. Unnecessarily complicated IT function with respect to the conducted business.
25. Possibilities of the same person to initiate, authorise, carry out and enter transactions.
26. Hard pressure on senior management to meet financial targets.
27. Lack of continuous follow up on control routines (with respect to efficiency and purpose).

2. Internal control

Grade the following criteria of internal control in order of their importance in discovering and preventing frauds in a company. Grade the criteria on a scale from one to seven (7=very important; 1=not important).

1. The control system of senior management and management, including the internal audit, staff policy, employee administration and the distribution of work.
2. Assessments of the probability of business risks to occur.
3. Check and approve actions and document.
4. Assessments of the importance of business risks.
5. Senior management and management conduct follow ups of control activities.
6. Compare the outcomes from inventory of cash, securities, and stock-in-trade with the accountancy.
7. The philosophy, ethics, culture and way to run business of senior management.
8. Use of standard IT systems.
9. Decisions on measures on how to handle business risks.
10. The company's organisation and way of distributing authority and liability.
11. Assessments of IT risks.
12. Check and reconcile general ledger accounts.
13. Accurate analysis of which areas are particularly sensitive to present IT systems.
14. Active Board of Directors.
15. Report on, go through and approve reconciliations.
16. Active identification of business risks.

17. Well adapted IT system for handling large numbers of transactions.
18. Check that accounting entries are numerically correct.
19. Follow up on outcomes on investments.
20. Compare internal data with external sources of information.
21. Follow up on budget divergences.
22. The number of IT systems is limited to what is deemed as necessary for the business.
23. Restrict physical access to assets and accounting material.
24. Compare and analyse different financial outcomes in relation to last year, to budget, to forecasts etc.
25. Check IT based routines and adherent system environment, e.g. to create controls for:
 - Changes in computer programs
 - Access to computer directory
26. The IT system is well adapted to essential parts of the business.
27. Follow up on performances of new employees.

Conditions for the rest of the interview

Common starting points for the continuous interview

- *Business size* – middle market and large companies (50-250 companies and larger). Companies in which ownership and management are separated and in which a formal internal control normally is present.
- *Type of company* – limited liability companies, no financial companies or companies which deal mainly with cash.
- *Indicators/red flags* to discover and/or predict frauds: A wide definition is applied to the term indicator/red flag, i.e. the definition

includes indicators of a fraud newly being committed, currently being committed, or, with significant probability, will be committed. Examples of indicators are that the company or management is under financial pressure, many and complicated transactions are carried out or a deprivation culture etc., in short everything which can be perceived as warning signals that frauds occur or with high probability will occur.

- *Fraud* – fraud and embezzlement (directed towards the company and aimed to enrich an employee of the company) and fraudulent financial reporting (positive accounting, i.e. directed towards the stock holders or potential stock holders). In short, fraud consists of two parts which both are directed against (with loss or damage) the company (and thereby the stock holders or potential stockholders).
- Order of precedence shall be made from largest *effect* (size) during a certain period (e.g. a financial year).
- **Finally, it is not a test, i.e. there is no right or wrong answer and none of the questions are trick questions!!**

APPENDIX 5 – DEFINITIONS OF KEY TERMS

- *Perceived*: The *perception* is meant to be the view of red flags and internal control, independent of the differences which are present in the choice of method of working and methodology between auditors and experts. Furthermore, perceived or viewed will be outlined through the use of two models of analysis. Hence the focus on different aspects of the two models will determine differences and which aspects, group wise and individually (i.e. group of red flags and criteria of internal control), are viewed as “best” (i.e. relatively better/more important than other aspects and/or groups of aspects). However, the study is not normative; hence any conclusions of whether some views are better or worse than others will not be drawn. It is also important to notice that perceived should be viewed in terms of the emphasis which the studied groups put on the two models applied. Hence, it is not the red flags and criteria of internal control as such which are of interest but the emphasis put on different parts of the models applied.
- *Auditor*: The term *auditor* will be equivalent to an external auditor who is qualified, i.e. hold the title of “godkänd” or “auktoriserad”, if nothing else is stipulated.⁸⁴
- *Expert*: An expert is a person who works as a forensic specialist in either one of the Big 4⁸⁵ auditing firms or other firms which are specialised on fraud detection and prevention. Many of the experts have previously worked as auditors. This was deemed as strengthening the relevance of comparing the group of auditors with a group of experts. However, in order to distinguish the group of experts from the group of auditors, the choice of experts for the study was limited

⁸⁴ The Swedish system of qualification of auditors include two different titles, ”godkänd” (approved public accountant) and ”auktoriserad” (authorised public accountant). An auditor can be *godkänd* after practicing auditing for three years, acquired a certain level of academic education and passing a test, while *auktoriserad* requires five years of practice, additional academic education and passing of an additional test. According to the Auditing Act and the Auditors Ordinance.

⁸⁵ The Big 4 include Öhrlings PricewaterhouseCoopers, Ernst & Young, KPMG and Deloitte.

to experts who had several years of experience of forensic work. Hence, the extensive experience of the included experts was expected to ensure a distinction between the group of experts and the group of auditors. Due to the limited work of fraud related issues that an auditor normally is involved with during his every day work, several years of forensic working assignments is expected to result in a clear distinction between the two groups.

- *Red flags*: The applied definition of indicators in the thesis is broad, including not only red flags of occupational fraud being carried out but also that occupational fraud has been carried out or could, with significant probability, be carried out. For example, that a person previously (in another company) committed occupational fraud may be an indicator of risk of occupational fraud even if no occupational fraud has been carried out in the company of his current employment. In addition, a person who is under personal financial pressure as a result of addiction to gambling, alcohol abuse etc. could also be an indicator of occupational fraud. The broad definition applied will further emphasise the connection to issues of internal control which is the focus of the second question of research of the thesis.
- *Differences*: Differences refer to the differences which are present according to the two models of analysis which will be applied in order to analyse the data gathered through interviews with auditors and experts. For example, a difference can be present in the emphasis which is put on a certain criteria of the COSO-model (which will be applied concerning internal control).
- *Occupational fraud*: The term *occupational fraud* will be applied throughout the thesis instead of terms such as economic crime, occupational crime etc. The reason is that focus will not only be on activities which are deemed as criminal acts according to legal (external) statutes as such. Thus, *occupational fraud* will be used in order to avoid obscurities in terms of legal definitions. More specifically, occupational fraud used in the analysis will be limited to *misappropriation of assets* and *fraudulent financial reporting*. In some cases, the term *irregularities* will be used when refereeing to a general unspecified perception of the term. When referring to the

work or literature by other authors, the term used by the specific author will be applied.

- *Swedish perspective*: The thesis will focus on the situation in Sweden. However, international literature will of course be applied and covered. In addition, the line between national and international is not always clear (some auditors and experts who are interviewed will, for example, be involved in engagements with international aspects). Still, the perspective applied will be a Swedish one despite some difficulties in drawing a definite line between international and Swedish aspects.
- *Detect and prevent*: These two terms will be used together in order to capture the total effect that internal control tries to achieve concerning occupational fraud. For red flags, only the detection of occupational fraud is relevant. The reason to apply the terms together for internal control is that it is often difficult to separate the detective and preventive effect of internal control from each other. An attempt to separate the terms for internal control might also confuse respondents during the conducted interviews. For red flags, the preventive effect is of course relevant since an understanding of red flags can help to detect occupational fraud and hence indirectly also prevent additional fraudulent activities from being carried out. However, the focus in the thesis is auditors' perceptions of red flags in order to detect occupational fraud and therefore only the term detection is applied for the case of red flags. Sometimes the term *combat* will be used as a collecting term for detect and prevent.
- *Company*: The term company refers to a company which is regulated by the Swedish Companies Act (i.e. a limited liability company ("aktiebolag")). The different terms "corporations", "companies" and "firms" will be used interchangeably throughout the thesis, but with the same basic meaning, i.e. a legally defined form of an association which is active on a market place.
- *Employee*: An employee in this thesis covers both employees in general as well as management and senior management. Thus, the term *occupational* covers all of those employed by the defrauded

company. For example, external contractors which exclusively deliver products or services are not included.

APPENDIX 6 – RED FLAGS AND CRITERIA OF INTERNAL CONTROL

The lists presented below are examples of red flags and criteria of internal control considered important in the literature and previous research covered in the thesis.

1. Urbancic and Hubbard (2003). According to the authors there is an increased likelihood of fraud when one or more of the following indicators are present in an organisation:

- Shortage of sufficient working capital or credit to continue operations
- Urgency on the part of management to have a favourable earnings record to support the company's stock-market price
- An earnings forecast that is overly optimistic
- Dependence on one or few products, customers or transactions for the continued success of the company
- A declining industry characterised by numerous business failures
- Excess plant capacity
- Significant legal problems, especially litigation between stockholders and management
- Significant exposure to technological obsolescence
- Significant related-party transactions outside the ordinary scope of business
- Highly complex business practices that enable management to mask the economic substance of a business transaction
- Significant bank accounts or subsidiary or branch operations in "tax-haven" jurisdictions for which there is not apparent business justification

- Overly complex organisational structures with many or unusual legal entities, managerial lines of authority, or contractual arrangements without any clear business purpose
- Difficulty in determining the party that controls an off-balance-sheet entity

2. Heiman-Hoffman et al. (1996)

1. Managers have lied to the auditors or have been overly evasive in response to audit inquiries
2. The auditor's experience with management indicates a degree of dishonesty
3. Management places undue emphasis on meeting earnings projections or other quantitative targets
4. Management has engaged in frequent disputes with auditors, particularly about aggressive accounting principles that increase earnings
5. The client has engaged in opinion shopping
6. Management's attitude toward financial reporting is unduly aggressive
7. The client has a weak control environment
8. A substantial portion of management compensation depends on meeting quantified targets
9. Management displays significant disrespect for regulatory bodies
10. Management operating and financial decisions are dominated by a single person or a few persons acting in concert
11. Client managers display a propensity to take undue risks
12. There are frequent and significant difficult-to-audit-transactions
13. Key managers are considered highly unreasonable

14. The client's organisation is decentralised without adequate monitoring
15. Management and/or key accounting personnel turnover is high
16. Client personnel display significant resentment of authority
17. Management places undue pressure on the auditors, particularly through the fee structure or the imposition of unreasonable deadlines
18. The client's profitability is inadequate or inconsistent relative to its industry
19. The client is confronted with adverse legal circumstances
20. Management exhibits undue concern with the need to maintain or improve the image/reputation of the entity
21. There are adverse conditions in the client's industry or external environment
22. Accounting personnel exhibit inexperience or laxity in performing their duties
23. The client entered into one or a few specific transactions that have a material effect on the financial statements
24. Client management is inexperienced
25. The client is in a period of rapid growth
26. This is a new client with no prior audit history or insufficient information from the predecessor auditor
27. The client is subject to significant contractual commitments
28. The client's operating results are highly sensitive to economic factors (inflation, interest rates, unemployment, etc.)

29. The client recently entered into a significant number of acquisition transactions

APPENDIX 7 – ANALYSIS OF EXPERTS

Experts

General aspects

Definition of irregularities

The general view concerning the term *irregularities* (“oegentligheter”) is a violation of internal regulations (e.g. policies, guide lines etc.) as well as external regulations (legal statutes, both civil law and criminal law). In addition, the definition concerns violations which pertain to the legal association, i.e. an organisation or a corporation, and where this legal association is the one suffers the damage (i.e. the main focus is not on the society as such). Irregularities are also considered as actions which normally are carried out by one or more people who belong to the senior management and CEO. Taken all together, the definition presented by the experts is wide in scope and emphasises the position which individuals hold in corporations or organisations against which he/she or they commit damaging acts. A typical answer is captured by the following quotation:

“Suspected fraudulent activities – actions which violate some sort of regulations, legal statute or other norm with resulting damage to the suffering part. Can include everything which can result in impairment in trust.”

As the quotation above shows, the view expressed by the experts is wide in scope and comprises both internal regulations as well as legal statutes. It is not only the direct or indirect material damage per se which is referred to but also anything which damages *trust* in an organisation.

Reasons why people commit irregularities

In general, the dominant reason why people commit irregularities is, according to the group of experts, pure *greed*. Even though other reasons such as personal problems, jet set living etc. were mentioned during the interviews, the reason which was most often mentioned as the leading cause behind fraudulent actions is personal greed, i.e. as one respondent put it: “much

wants more”. It is also emphasised that since the main perpetrators exist among top management of corporations, the opportunity is often also present due to lack of internal control, which thereby is another important reason why they commit the irregularities.

Since top management is responsible for internal control the actions taken by them creates a tone-at-the-top which is devastating for the organisation in large since “employees do not do what you tell them to but like you to do”. This tone-at-the-top runs through the organisation affecting all parts of the internal control defined in terms of the COSO-model. Thus, *opportunity*, defined as lack of internal control (soft as well as hard controls) combined with a mixture of *incentive* and *attitude* are the main reasons to why irregularities are committed according to the experts. Taken all together, all three “corners” in the fraud-triangle are well represented in the answers.

Red flags

Qualitative results

How to investigate the possibility of occupational fraud

In the case of perceptions on how to tackle the possibility of occupational fraud in an organisation, the experts presented a quite coherent view. The strategy is risk focused. However, the extent of the analysis covers many areas – the incentives present in the organisation, the culture and attitude towards occupational fraud and ethical values, tone-at-the-top, deficiencies in internal control. The incentives can be described as a combination of personal incentives and possibilities, which means that the analysis of the incentives must take into consideration the individual or personal incentives of a potential perpetrator as well as the possibilities in the organisation which create personal incentives (“the opportunity makes the thief” was an expression used in several cases). In addition, the culture and tone-at-the-top were considered to be crucial factors since employees do not do what you tell them but like you do, i.e. to lead by example is considered as very important for senior management and management.

Deficiencies in the internal control were viewed as linked to the COSO-model (which was explicitly mentioned during several of the interviews), i.e. a combination of deficiencies relating to both hard (segregation of duties, processes, approval routines, physical controls etc.) *and* soft controls (culture, how communication works in the organisation, follow up-measures etc.). Finally, IT and how IT is used within the organisation, was mentioned as important to consider since IT can be very difficult to understand when many systems are integrated. A couple of quotations illustrate the perceptions of the experts, relating to the importance of understanding risk and the risk analysis as such when unbiased evaluating the risk of occupational fraud in an organisation:

“Crucial to understand that the risk is dynamic, i.e. it can change depending on changes in the internal control.”

“Risks are connected to everything – the culture (what management does, the employees do as well), deficiencies in the internal control, the presence of different incentives etc.”

The above quotations illustrate the perception revealed by several respondents, i.e. that occupational fraud risk is not something static but instead dynamic and that an analysis of the risk of occupational fraud must take into account how the present controls are designed. Internal control is also viewed as something which includes several aspects (combination of soft and hard controls). In addition, the incentives and the overall culture are important as well.

Typical red flags

A number of red flags were mentioned as important indicators of fraud and embezzlement. Several red flags were also the same for fraud and embezzlement as they were for fraudulent financial reporting and a main thread was also the importance of viewing red flags for asset misappropriation as well as fraudulent financial reporting as *interconnected*. In the case of asset misappropriation, the following red flags were brought up on several occasions:

- Rapid growth without the proper organisation to handle the quick changes.
- Lack of follow up of controls and performance measures.
- Lack of risk analysis relating to occupational fraud.
- Disarray in the company, especially concerning accounting issues.
- Deficiencies in internal control.
- Changes in lifestyle of employees.
- Deficiencies in how to handle and communicate cases of occupational fraud.
- Faithful old servants.
- Fraudulent financial reporting.
- Lack of distribution of responsibilities and work assignments.
- Present of bonuses.
- A culture which is characterised by greed and which is not putting emphasis on orderliness.
- Badly treated employees.
- Rapid changes in life style, behaviour, attitudes etc.

In short, the list of red flags brought up followed the three corners of the fraud triangle quite well. On several occasions, the fraud triangle was even explicitly mentioned as a good mind set in order to understand red flags. Finally, a few quotations are representative for the typical answers:

“Significant reorganisations create the opportunity to engage in fraudulent activities since they have a tendency to decrease the level and focus on internal control. The company’s focus on control is lost. New IT-system etc. Opportunity makes the thief.”

”People who not willingly let other people take part of reconciliations, i.e. that a few people deal with a lot and have control over many things without the insight from controlling functions. Deficiencies in routines. Often cases

are discovered when someone takes over the work assignments (for example in cases of sickness). ”

“Many changes, disarray in the company. Poor follow ups. It is easy to conduct changes in the system etc., there are holes in the system. Reports are missing. Transaction intensive. The tone-at-the-top is not beneficial – disarray, poor policies and systems of control, shady transactions as well as top management living on the expense of the company (greed – travel on the expense of the company, extravagant representation etc.). ”

“Complexity is a good friend of occupational fraud.”

As the quotations above illustrate, the answers cover the fraud triangle quite well. A combination of opportunity, incentives and poor company culture are considered as vital ingredients to look for in terms of red flags.

As mentioned above, a number of red flags were brought forward during the interviews and several of them were interconnected between cases of misappropriation of assets and fraudulent financial reporting. More specifically, the following red flags were mentioned and emphasised for the case of fraudulent financial reporting: badly treated employees, vague organisation structure, disarray, result which diverge from expectations, other businesses etc., attitudes within the company – no focus on order only profit, dominating persons, poor distribution of responsibilities and work distribution, deficiencies in how to handle cases of occupational fraud, shady transactions, and bonus driven reward system.

A couple of quotations illustrate the views expressed during the interviews:

“Companies which should produce results but which are caught in a performance trap.”

“The ethical attitude is deficient – poor tone-at-the-top (you do like the boss does, not what he says), extravagant representation, employees who can not identify themselves with the business (often bad people are attracted to such places). ”

The two quotations show a strong focus on attitude and how cultural aspects are vital in order to avoid fraudulent activities in a company. The first quotation also illustrates how pressure to produce results drives employees to manipulate earnings, i.e. carry out acts of fraudulent financial reporting.

Analysis of red flags (model applied)

1. Motive/incentive

a. People

- Changes in lifestyle of employees.
- Faithful old servants.
- Rapid changes in life style, behaviour, attitudes etc.
- Dominating persons.

2. Neutralisation (incentive driven rationalisations)

a. Reward management

- Present of bonuses.
- Badly treated employees.
- Bonus driven reward system.

b. Culture and ethics

- A culture which is characterised by greed and which is not putting emphasis on orderliness.
- Dominating persons.
- Attitudes within the company – no focus on order only profit.

c. Communication

- Deficiencies in how to handle and communicate cases of occupational fraud.

3. Opportunity

a. Structure

- Rapid growth without the proper organisation to handle the quick changes.
- Vague organisation structure.
- Shady transactions.

b. Performance measures

- Lack of follow up of controls and performance measures.
- Result which diverges from expectations, other businesses etc.

c. Risk assessment

- Lack of risk analysis relating to occupational fraud.

d. Fraud response

- Deficiencies in how to handle and communicate cases of occupational fraud.
- Deficiencies in how to handle cases of occupational fraud.

e. Controls

- Deficiencies in internal control.
- Lack of distribution of responsibilities and work assignments.
- Disarray.
- Disarray in the company, especially concerning accounting issues.
- Poor distribution of responsibilities and work distribution.

The analysis of the experts' perception of red flags is made in two steps. First, the subgroups are analysed in order to evaluate which subgroups are frequently viewed as important. The frequently mentioned subgroups are marked with bold. As seen above, all subgroups were covered, i.e. marked as bold, i.e. they were frequently mentioned and emphasised as important red flags of occupational fraud. The list of frequently and emphasised red flags is

listed above in relation to the subgroup where they belong. As seen by the division of each red flag, it is clear that all subgroups are covered. Judging from the number of red flags connected to each subgroup, *People* and *Controls* appear as the most emphasised subgroups. However, *Reward management*, *Culture and ethics*, as well as *Structure* emerge as important subgroups as well.

In general, the main conclusion from the analysis of the emphasis of red flags in relation to the different subgroups is that in large the view presented is broad, covering as well as emphasising a number of red flags as important. This is also in coherence with the general impression from the interviews, i.e. that a broad view is needed in order to evaluate signs of occupational fraud according to the experts.

When analysing the answers on the primary level of the model, i.e. from the traditional fraud triangle as such, the picture of a broad and encompassing view materialises. In short, all three “corners” of the model are emphasised as important. Since several of the respondents also directly referred to the fraud triangle as a good means of analysing occupational fraud, it is not too surprising to see that all “corners” of the model are well represented. The combination of views shows that the emphasis is relatively stronger for *Neutralisation/attitude* and *Opportunity* but in general emphasis is put on a combination of factors, especially a combination of hard and soft controls. In addition, the tone-at-the-top and culture were emphasised as very important, hence balancing the possible bias towards *Opportunity* as a relatively stronger factor.

The analysis above shows an evenly distributed coverage of the model applied. The general impression is however, as mentioned above, that the last two parts of the model, *Neutralisation/attitude* and *Opportunity*, were given relatively more focus than *Incentive*. However, the clearly dominating picture from the interviews was the emphasis on a mixture of red flags covering all three corners of the model applied. It is important to recognise the importance of culture and ethics which is not as clearly visible in the above analysis (since the *number* of points does not reflect how strongly some parts were emphasised). Almost all respondents focused on the importance of the tone-at-the-top and a good corporate culture as very important red flags. On the

Opportunity side, the above analysis reflects the general impression well, i.e. *Controls* were given strong emphasis.

Quantitative results

The findings of the quantitative questions concerning red flags are found in Appendix 10. As is shown in Appendix 10, the calculations of the red flags are made according to the applied model of analysis. Seen from the general fraud triangle model of analysis, the results are divided in the following way (average followed by standard deviation within parenthesis):

1. Motive/incentive, (5.10; 0.93)
2. Neutralisation/attitude (incentive driven rationalisations), (5.14; 0.90)
3. Opportunity (5.30; 0.93)

The results indicate that the group of experts viewed *Opportunity* as the relatively most important and *Motive/incentive* as least important (from the applied list of red flags), but all together, all factors were given rather high and even grades. It is also shown that the degree of concordance (measured as the standard deviation) is relatively high and equal for all parts of the model, i.e. indicating a strong consistency within the group both in terms of each factor of the model and the model as such.

Seen from the more specific fraud triangle model of analysis, the results are divided the following way (average followed by standard deviation within parenthesis):

1. Motive/incentive

- a) People (5.10; 0.93)

2. Neutralisation/attitude (incentive driven rationalisations)

- a) Reward management (4.58; 1.27)
- b) Culture and ethics (5.39; 0.73)
- c) Communication (5.19; 0.89)

3. Opportunity

- a. Structure (4.91; 0.96)
- b. Performance measures (5.67; 1.03)
- c. Risk assessment (5.44; 1.33)
- d. Fraud response (4.89; 1.24)
- e. Controls (5.68; 0.63)

In the case of the more specific model, *Controls*, *Performance measures*, *Risk assessment*, and *Culture and ethics* received, on average, the highest grading. In addition, the subparts with the lowest standard deviation, i.e. the subparts with the strongest concordance, are *Controls*, *Culture and ethics*, and *Communication*. *Controls* received the lowest standard deviation of all subparts, i.e. was the subpart which was viewed most homogenously by the group of experts. It is interesting to notice that the general picture from the quantitative analysis corresponds rather well with the results from the qualitative analysis. However, despite the importance paid to *Opportunity* in the qualitative analysis, the results in the quantitative analysis over emphasise the relative importance of *Opportunity* compared to *Neutralisation/attitude*. It is however important to remember that the quantitative results are based on a limited number of respondents and therefore no tests of significance have been carried out, i.e. the apparent differences might not be as strong as showed above.

The top five red flags (highest received average) for experts are presented in Table 15. Table 15 shows that a mixture of red flags encompasses the “top five” list of indicators of occupational fraud for the experts. For the complete list of red flags see Appendix 12.

Table 15: Top five red flags according to experts

Number	Red flag (experts)	Average	Standard deviation
1	Senior management and management do not set good examples concerning ethical values (<i>Attitude, Culture and ethics</i>)	6.50	0.50
2	Private economic pressure on top/senior management (<i>Incentive, People</i>)	6.39	0.49
3	Possibilities of the same person to initiate, authorize, carry out and enter transactions (<i>Opportunity, Controls</i>)	6.17	0.25
4	Hard pressure on senior management to meet financial targets (<i>Incentive, People</i>)	6.06	0.53
5	Deficiencies in the routines of reconciliation (<i>Opportunity, Controls</i>)	5.67	0.97

Internal control

Qualitative results

Definition of internal control

The definition or explanation of internal control according to the experts contains several aspects of importance. In general, the definition encompasses the main elements – that routines and processes in an organisation are constructed in order to ensure senior management that *statutes* (legal and internal) *are followed*, that the *financial accounting is accurate* and, finally, that *efficiency* of the processes is achieved. More specifically, the definition includes, in large, the elements of the COSO-model, which several of the respondents explicitly mentioned. One respondent expressed the view quite explicitly:

“To ensure that the assets of the company are managed safely as well as efficiently and that statutes/regulations are applied. COSO is on the top.”

Difference between the common definition of internal control and the definition of internal control specifically concerning occupational fraud

In the case of differences between the general definition of internal control and a definition of internal control, which specifically aims at discovering and combating occupational fraud, the experts' view was divided. Several respondents viewed internal control concerning occupational fraud as part of the general definition of internal control while some viewed the definitions as separated from each other. However, both groups seemed to agree that even if the definitions of internal control can incorporate different aspects, occupational fraud is a specific area which requires specific actions as well as understanding, training and attentiveness. Two quotations illustrate the differences as well as agreements between the two groups:

“Yes, it is [a difference]. Because irregularities are just one aspect. [Internal control] is about trying to prevent and deal with situations before they escalate. It is one part of a larger box. The control activities in COSO, are where the differences are.”

“Internal control is to make it harder to cheat, in that respect there is no difference. However, awareness among the employees is a complement to internal control, which is another but important part of occupational fraud. It has a lot to do with having the guts to talk about what you see and be aware of the risk of people committing occupational fraud.”

The above quotations show a broad view of the term internal control expressed by the experts. Not only are hard controls emphasised but the softer sides of controls (such as culture and “having the guts to talk about what you see”) are included in the view of internal controls and their relation to occupational fraud.

Good internal control in order to detect and prevent occupational fraud

The views of what encompasses “good” internal control included several aspects. In general, the views can be described as a combination between soft

and hard controls, i.e. on the one hand controls which relate to culture, ethics, values, behaviour of others etc. and on the other hand controls which include approval lists, separation of duties, physical controls etc. A correct balance of these two sides of control as well as an understanding of occupational fraud can summarise the views expressed by the respondents. In short, the following aspects were generally expressed as important parts of “good” internal control:

- Presence and the application of an authorisation list.
- That controls are conducted as well as followed up on.
- Presence of accurate physical controls.
- Accurate training of employees and management.
- An attentive attitude towards rumours, i.e. to have some sort of a whistleblower function (formally and/or informally).
- The tone-at-the-top (very important).
- Presence of routines in cases of occupational fraud and that actions are taken and communicated efficiently within the organisation in cases of occupational frauds.
- The follow up on references of applicants.
- A positive culture which stimulates the employees to “do the right thing” (soft controls) combined with approvals etc. (hard controls).
- An understanding and continuous analysis of risks within the organisation.
- An understanding that ethics are the foundation, which needs to be combined with hard controls.
- A continuous awareness and understanding of occupational frauds as such as well as fraudulent behaviour (e.g. that fraudulent behaviour is persistent and very inventive in finding ways to commit occupational fraud), i.e. thinking in terms of fraudulent behaviour and setting up appropriate controls (soft and hard) in response to the specific situation and organisational needs.

A couple of illustrative quotations of the views expressed:

“The company shall have an accurate comprehensive view – identify its risks, train its employees, accurate policy, contingency plan, learn from its mistakes. Strengthen the company’s resistance against occupational fraud. Awareness, knowledge and openness are central [aspects] in combination with controls and regulations.”

“[In short], COSO. 1. Risk understanding. 2. Controls concerning division of duties (efficient). 3. Sufficient follow up of controls. I.e. to obstruct loopholes and create a positive view and orderliness. It is important with balance between hard and soft parts of control (not too regulated) as well as practice what one preaches.”

Again, the picture presented by the above quotations shows the comprehensive view expressed by the experts. Of particular interest is the well balanced mix between hard and soft controls which is apparent. The softer sides of controls also connect to the dynamic characteristics of occupational fraud which was expressed for the part of red flags.

Analysis of internal control (model applied)

Just as in the case of the analysis of the view of red flags, the general view of internal control combines the elements of the applied model of analysis as well as representing the model in large. Hence, the view of internal control of experts covers the whole of the applied model of internal control. It was generally the case during the interviews that the COSO-model was mentioned explicitly when describing “good” internal control as well as when describing “internal control” as such.

In short, all parts of the applied COSO-model were more or less mentioned and emphasised by the respondents. It was also emphasised that the balance between soft and hard controls is emphasised as crucial as well as the fact that different parts, just as in the case of the COSO-model, need to be viewed as interconnected to each other. More specifically, when talking in terms of the COSO-model, it was emphasised that the model needs to be seen as building blocks on each other (e.g. it was often said that the basis is the internal control

environment). When dividing the different aspects sorted out from the answers, the results look like the model below.

1. Control environment

- Presence and the application of an authorisation list.
- Accurate training of employees and management.
- An attentive attitude towards rumours, i.e. to have some sort of a whistleblower function (formally and/or informally).
- The tone-at-the-top (very important).
- Presence of routines in cases of occupational fraud and that actions are taken and communicated efficiently within the organisation in cases of occupational frauds.
- A positive culture which stimulates the employees to “do the right thing” (soft controls) combined with approvals etc. (hard controls).
- An understanding that ethics is the foundation, which needs to be combined with hard controls.
- A continuous awareness and understanding of occupational frauds as such as well as fraudulent behaviour (e.g. that fraudulent behaviour is persistent and very inventive in finding ways to commit occupational fraud), i.e. thinking in terms of fraudulent behaviour and setting up appropriate controls (soft and hard) in response to the specific situation and organisational needs.

2. Risk assessment

- An understanding and continuous analysis of risks within the organisation.

3. Control activities

- Presence and the application of an authorisation list.
- That controls are conducted as well as followed up on.
- Presence of accurate physical controls.

- An attentive attitude towards rumours, i.e. to have some sort of a whistleblower function (formally and/or informally).
- The follow up on references of applicants.
- A positive culture which stimulates the employees to “do the right thing” (soft controls) combined with approvals etc. (hard controls).

4. Information and communication

- Presence of routines in cases of occupational fraud and that actions are taken and are communicated efficiently within the organisation in cases of occupational frauds.

5. Monitoring of controls

- That controls are conducted as well as followed up upon.

As seen in the applied version of the COSO-model above, all of the five parts of the model seem to be well represented from the point of view of the experts. However, it is also clear that the *Control environment* together with *Control activities* were given the most emphasis. This also corresponds well with the quantitative part of the study in which *Control environment* together with *Control activities* were given the strongest emphasis (see analysis in the section below). This conclusion is also coherent with the general impressions from the conducted interviews, even though the emphasis on *Control activities* is stronger relative the other parts in the qualitative analysis above compared to the general impression received during the interviews. For example, it was generally the view that follow up on controls is crucial in combination with a proper communication of controls and ethics among the employees. Finally, it was also emphasised that without an accurate risk analysis, the *Control activities* would not be sufficient due to the dynamic nature of occupational fraud.

Quantitative results

The findings of the quantitative questions concerning internal control are found in Appendix 11. As is shown in Appendix 11, the calculations of the internal control are made according to the applied model of analysis. Seen

from the COSO-model of analysis, the results are divided the following way (average followed by standard deviation within parenthesis):

- 1. Control environment** (6.28; 0.53)
- 2. Risk assessment** (4.58; 1.37)
- 3. Control activities** (5.55; 1.01)
- 4. Information and communication** (5.07; 1.28)
- 5. Monitoring of controls** (4.46; 1.00)

The results indicate that the group of experts viewed *Control environment* followed by *Control activities* as the most important parts of the COSO-model and *Monitoring of controls* as least important (from the applied list of internal control criteria). It is also shown that the lowest degree of concordance is found for *Risk assessment* and the highest for *Control environment*.

The top five criteria of internal control (highest received average) for experts are presented in Table 16 (part of the COSO-model within parenthesis). Table 16 shows that the top five criteria of internal control mainly belong to the category *Control environment* and *Control activities*. This corresponds rather well with the picture outlined in the analysis of the qualitative data even though the category of *Control activities* was, in the case of the qualitative data, somewhat stronger emphasised. For the complete list of criteria of internal control see Appendix 13.

Table 16: Top five criteria of intern control according to experts

Number	Criteria (experts)	Average	Standard deviation
1	The control system of senior management and management, including the internal audit, staff policy, employee administration and the distribution of work (<i>Control environment</i>)	6.67	0.43
2	The philosophy, ethics, culture and way to run business of senior management (<i>Control environment</i>)	6.67	0.50
3	Check IT based routines and adherent system environment, e.g. to create controls for: 1. Changes in computer programs 2. Access to computer directory (<i>Control activities</i>)	6.11	0.93
4	The company's organisation and way of distributing authority and liability (<i>Control environment</i>)	6.06	0.63
5	Assessments of IT risks (<i>Information and communication</i>)	5.89	1.17

Summary and conclusions

A summary of the analysis conducted in the *qualitative part* yields the following results:

- The definition of “irregularities” includes three main characteristics – a violation of internal as well as external regulations, the perpetrator is an employee of the victimised company, and the perpetrators often hold high positions in the company which is defrauded.

- On the question of why people commit occupational fraud, the answers pointed to greed as a strong factor but in general all three “corners” of the fraud triangle were well represented.
- On the question of how to investigate possible occupational frauds in a company, the answers covered the main parts (“corners”) of the fraud triangle well, individually as well as on a group level. Further, the COSO-model was well represented (although relatively less focus was put on *Information and communications* and *Monitoring of controls*) and emphasis was put on the balance between hard and soft controls.
- When asked to mention typical red flags, the answers were well spread out over the fraud triangle (both analysed on a general level as well as on the more specific model with subgroups).
- The definition of “internal control” included three main criteria – efficiency, the adherence to internal and external regulations, and ensuring a correct financial accounting.
- No clear agreement was reached on whether a difference exists between “internal control” in general and “internal control” more specifically directed to occupational fraud.
- The answers on the question of good internal control included the different parts of the COSO-model although a relatively stronger focus was put on *Control environment* and *Control activities*. Also emphasised was the need of a good balance between soft and hard controls as well as viewing the different parts of the COSO-model as integrated.

A summary of the analysis conducted in the *quantitative* part reveals the following results:

Red flags:

- Even spread between the different parts of the model of analysis.
- Relatively stronger focus on Culture and ethics (Neutralisation/attitude) and Controls (*Opportunity*).

Internal control:

- Relatively even spread between the different parts of the model of analysis.
- Relatively stronger focus on Control environment.
- Relative high degree of concordance within the different parts of the COSO-model.

Reflections upon the results

The general picture from the interviews with the experts is that they presented a broad perspective on how to view red flags and criteria of internal control concerning occupational fraud. On several occasions, the respondents referred directly back to the models applied in this thesis. This indicates a strong awareness of the models and also a possible tendency to view the models as best practice. Considering this tendency, it is interesting to consider what the view is based on, i.e. whether it based on text book learned views or from own acquired experiences from everyday work as an expert on fraud and occupational fraud. Both aspects are possibly present since the experts are trained as well as experienced in the field of occupational fraud. This is in any case, an interesting aspect to consider for the analysis of auditors since many of the interviewed auditors only had scarce experience of fraud and occupational fraud cases.

It is generally the case that a great number of aspects concerning occupational fraud were emphasised as important by the experts. Hence, the very difficult matter of occupational fraud was emphasised repeatedly during the interviews. It is therefore interesting to notice how well this view was captured by the models applied, i.e. the answers revealed a picture in which many perspectives were needed in order to understand signs of occupational fraud as well as how different parts of internal control were needed to interact in order to detect and prevent occupational fraud from being carried out. The findings provide a good foundation for the comparison with the perceptions of auditors.

APPENDIX 8 – RESPONDENTS’ EXPERIENCES OF OCCUPATIONAL FRAUD

Table 17: Respondents’ experiences of occupational fraud

	Number of respondents who gave a clear answer to the question	Number of respondents who gave an unclear answer to the question	Extensive experience* of misappropriations of assets	Extensive experience* fraudulent financial reporting
Experts	9	-	9	9
Auditors	20	4	4	15
Older auditors	10	2	4	9
Younger auditors	10	2	-	6
Auditors who mainly audit larger companies	12	2	2	10
Auditors who mainly audit smaller companies	8	2	2	5

The table above shows the respondents’ experiences of occupational fraud based on question number two in part 1 of the interview guide.

* By extensive experience is meant experience of the specific irregularities at least on several occasions during their career.

APPENDIX 9 – LIST OF RESPONDENTS

Auditors	Date of interview
Anders Dahlström	2007-03-05
Anna-Clara af Ekenstam	2007-03-23
Annika Victor	2007-03-08
Bengt Doyle	2007-05-03
Bengt Fröander	2007-03-30
Bertil Jonsson	2007-03-14
Bo Åkerberg	2007-03-29
Christer Andersson	2007-03-02
Eva Blom	2007-03-27
Henrik Gustafsson	2007-02-16
Håkan Jonsson	2007-03-16
Jonas Selberg	2007-02-15
Jörgen Rahm	2007-03-09
Madeleine Endre	2007-04-04
Magnus Backlund	2007-02-22
Magnus Lagerberg	2007-02-28
Maria Petersson	2007-03-20
Maria Wergedahl	2007-04-12

Michael Bengtsson	2007-03-21
Micke Åhlund	2007-03-21
Peo Zetterlund	2007-03-13
Robert Barnden	2007-03-15
Robert Holm	2007-03-12
Sune Johnson	2007-04-05

Experts	Date of interview
Angela Schönqvist	2007-05-07
Anita Lyshöj	2007-03-14
Hans Löfgren	2007-05-09
Håkan Askensjö	2007-04-27
Kenneth Johansson	2007-04-19
Lennart Elftman	2007-04-25
Martin Krüger	2007-03-22
Martin Selander (test interview)	2007-05-03
Richard Minogue	2007-04-04
Ulf Sandlund	2007-05-11

APPENDIX 10 – QUANTITATIVE ANALYSIS OF RED FLAGS

Subgroup 1.1 - People										
Group 1 - Motive/incentive	Lack of possibility of longer (continuous) vacations for employees or not mandatory to take longer, continuous, vacations for the employees	One or a few people are dominating the firm	Employees who always work overtime are not specifically supervised	Private economic pressure on top/senior management	Strong dependence on a few key people	Dissatisfaction among employees with the company they work for (with respect of salaries, career opportunities etc.)	Deficiencies in the routines of new employment (e.g. poor follow up on references and credentials, large differences in the routines for short and long term employment)	Hard pressure on senior management to meet financial targets	Total average for group 1	
	Average for auditors	2,09	5,02	3,32	6,25	4,52	4,18	3,70	5,91	4,36
	Average for older auditors	2,82	5,32	4,09	6,05	4,59	4,27	4,14	5,73	4,63
	Average for younger auditors	1,36	4,73	2,55	6,45	4,45	4,09	3,27	6,09	4,13
	Average for larger companies	2,08	5,12	3,38	6,19	4,58	4,77	3,81	6,46	4,55
	Average for smaller companies	2,11	4,89	3,22	6,33	4,44	3,33	3,56	5,11	4,13
	Average for experts	2,50	5,33	4,22	6,39	5,22	5,44	5,67	6,06	5,10
	Standard deviation auditors	1,15	1,69	1,67	0,89	1,45	1,44	1,47	1,23	1,36
	Standard deviation experts	0,61	1,71	1,28	0,49	1,12	0,63	1,03	0,53	0,93
	Standard deviation older auditors	1,08	1,27	1,81	0,65	1,07	1,42	1,14	1,01	1,18
	Standard deviation younger auditors	0,67	2,05	1,13	0,89	1,81	1,51	1,88	1,45	1,37
	Standard deviation larger companies	1,04	1,61	1,66	0,56	1,53	1,09	0,95	0,86	1,14
	Standard deviation smaller companies	1,36	1,90	1,79	0,87	1,42	1,50	2,07	1,45	1,55

Group 2 - Neutralization		Total average for group 2
Average for auditors	35,93	4,49
Average for older auditors	39,59	4,95
Average for younger auditors	32,27	4,03
Average for larger companies	38,50	4,81
Average for smaller companies	32,22	4,03
Average for experts	41,11	5,14
Standard deviation auditors	11,65	1,46
Standard deviation experts	7,23	0,90
Standard deviation older auditors	8,98	1,12
Standard deviation younger auditors	12,37	1,55
Standard deviation larger companies	10,71	1,34
Standard deviation smaller companies	12,15	1,52

Subgroup 2.1 - Reward management				
	Relatively (with respect to business, responsibility etc.) badly paid staff.	Lack of reward system for maintaining control routines.	Total for group 2.1	Total average for group
Average for auditors	4,43	3,34	7,77	3,89
Average for older auditors	4,32	3,77	8,09	4,05
Average for younger auditors	4,55	2,91	7,45	3,73
Average for larger companies	4,73	3,73	8,46	4,23
Average for smaller companies	4,00	2,78	6,78	3,39
Average for experts	5,22	3,94	9,17	4,58
Standard deviation auditors	1,51	1,46	2,97	1,49
Standard deviation experts	1,09	1,45	2,54	1,27
Standard deviation older auditors	1,38	1,54	2,92	1,46
Standard deviation younger auditors	1,69	1,30	3,00	1,50
Standard deviation larger companies	1,20	1,59	2,79	1,40
Standard deviation smaller companies	1,87	1,09	2,96	1,48

	Subgroup 2.2 - Culture and ethics						
	The ceiling is low in the firm	Reluctance to cooperate with the auditor	Lack of explicit policy regarding frauds	Senior management do not set good examples concerning ethical values	Total for group 2.2	Total average for group 2.2	
Average for auditors	4,45	6,14	3,64	6,02	20,25	5,06	
Average for older auditors	4,91	6,18	4,64	6,59	22,32	5,58	
Average for younger auditors	4,00	6,09	2,64	5,45	18,18	4,55	
Average for larger companies	4,62	6,31	4,15	6,35	21,42	5,36	
Average for smaller companies	4,22	5,89	2,89	5,56	18,56	4,64	
Average for experts	5,11	4,72	5,22	6,50	21,56	5,39	
Standard deviation auditors	1,53	0,77	1,65	1,35	5,31	1,33	
Standard deviation experts	0,82	0,97	0,62	0,50	2,91	0,73	
Standard deviation older auditors	1,64	0,75	0,81	0,66	3,86	0,97	
Standard deviation younger auditors	1,34	0,83	1,69	1,63	5,50	1,37	
Standard deviation larger companies	1,66	0,63	1,34	1,11	4,74	1,19	
Standard deviation smaller companies	1,39	0,93	1,83	1,59	5,75	1,44	

Subgroup 2.3 - Communications					Total average for group 2.3
	Lack of whistle blowing function	Deficiencies in how policies concerning frauds are communicated	Total for group 2.3		
Average for auditors	3,91	4,00	7,91		3,95
Average for older auditors	4,73	4,45	9,18		4,59
Average for younger auditors	3,09	3,55	6,64		3,32
Average for larger companies	4,46	4,15	8,62		4,31
Average for smaller companies	3,11	3,78	6,89		3,44
Average for experts	5,00	5,39	10,39		5,19
Standard deviation auditors	1,60	1,77	3,37		1,69
Standard deviation experts	1,00	0,78	1,78		0,89
Standard deviation older auditors	0,90	1,29	2,20		1,10
Standard deviation younger auditors	1,76	2,11	3,87		1,94
Standard deviation larger companies	1,51	1,68	3,18		1,59
Standard deviation smaller companies	1,45	1,99	3,44		1,72

Group 3 - Opportunity	Total for group 3	Total average for group 3
Average for auditors	53,84	4,89
Average for older auditors	56,91	5,17
Average for younger auditors	50,77	4,62
Average for larger companies	54,69	4,97
Average for smaller companies	52,61	4,78
Average for experts	58,33	5,30
Standard deviation auditors	13,56	1,23
Standard deviation experts	10,22	0,93
Standard deviation older auditors	13,35	1,21
Standard deviation younger auditors	12,76	1,16
Standard deviation larger companies	11,78	1,07
Standard deviation smaller companies	15,68	1,43

Subgroup 3.1 - Structure					
	Indistinct structures concerning decisions and reporting	Understaffed financial department	Unnecessarily complicated IT function with respect to the conducted business	Total for group 3.1	Total average for group 3.1
Average for auditors	5,02	5,05	3,77	13,84	4,61
Average for older auditors	5,41	5,36	4,00	14,77	4,92
Average for younger auditors	4,64	4,73	3,55	12,91	4,30
Average for larger companies	5,35	5,08	4,08	14,50	4,83
Average for smaller companies	4,56	5,00	3,33	12,89	4,30
Average for experts	5,00	4,89	4,83	14,72	4,91
Standard deviation auditors	1,20	1,10	1,66	3,96	1,32
Standard deviation experts	1,22	0,78	0,87	2,87	0,96
Standard deviation older auditors	1,11	1,14	1,95	4,21	1,40
Standard deviation younger auditors	1,21	1,01	1,37	3,58	1,19
Standard deviation larger companies	0,85	0,79	1,80	3,44	1,15
Standard deviation smaller companies	1,51	1,50	1,41	4,42	1,47

	Subgroup 3.2 - Performance measures		
	Deficient routines and systems for budget follow up	Total for group 3.2	Total average for group 3.2
Average for auditors	5,30	5,30	5,30
Average for older auditors	5,41	5,41	5,41
Average for younger auditors	5,18	5,18	5,18
Average for larger companies	5,50	5,50	5,50
Average for smaller companies	5,00	5,00	5,00
Average for experts	5,67	5,67	5,67
Standard deviation auditors	1,08	1,08	1,08
Standard deviation experts	1,03	1,03	1,03
Standard deviation older auditors	1,11	1,11	1,11
Standard deviation younger auditors	1,08	1,08	1,08
Standard deviation larger companies	1,04	1,04	1,04
Standard deviation smaller companies	1,12	1,12	1,12

	Subgroup 3.3 - Risk assessment		
	Deficiencies in routines and systems for risk assessment	Total for group 3.3	Total average for group 3.3
Average for auditors	4,41	4,41	4,41
Average for older auditors	5,27	5,27	5,27
Average for younger auditors	3,55	3,55	3,55
Average for larger companies	4,46	4,46	4,46
Average for smaller companies	4,33	4,33	4,33
Average for experts	5,44	5,44	5,44
Standard deviation auditors	1,40	1,40	1,40
Standard deviation experts	1,33	1,33	1,33
Standard deviation older auditors	1,27	1,27	1,27
Standard deviation younger auditors	0,93	0,93	0,93
Standard deviation larger companies	1,13	1,13	1,13
Standard deviation smaller companies	1,80	1,80	1,80

	Subgroup 3.4 - Fraud response			Total average for group
	Lack of former training of management in how to identify red flags of frauds	Insufficient routines and systems for handling cases of fraud	Total for group 3.4	Total average for group
Average for auditors	3,68	4,09	7,77	3,89
Average for older auditors	4,45	4,45	8,91	4,45
Average for younger auditors	2,91	3,73	6,64	3,32
Average for larger companies	4,00	3,92	7,92	3,96
Average for smaller companies	3,22	4,33	7,56	3,78
Average for experts	4,67	5,11	9,78	4,89
Standard deviation auditors	1,62	1,51	3,12	1,56
Standard deviation experts	1,00	1,47	2,47	1,24
Standard deviation older auditors	1,37	1,44	2,81	1,40
Standard deviation younger auditors	1,51	1,56	3,07	1,53
Standard deviation larger companies	1,22	0,95	2,18	1,09
Standard deviation smaller companies	2,05	2,12	4,17	2,08

Subgroup 3.5 - Controls		Deficiencies in the routines of reconciliation	Deficient controls of physical property (such as stock goods, inventory, etc.)	Possibilities of the same person to initiate, authorize, carry out and enter transactions	Lack of continuous follow up on control routines (with respect to efficiency and purpose)	Total for group 3.5	Total average for group 3.5
Average for auditors		5,30	5,68	6,43	5,11	22,52	5,63
Average for older auditors		5,18	5,73	6,41	5,23	22,55	5,64
Average for younger auditors		5,41	5,64	6,45	5,00	22,50	5,63
Average for larger companies		5,15	5,62	6,42	5,12	22,31	5,58
Average for smaller companies		5,50	5,78	6,44	5,11	22,83	5,71
Average for experts		5,67	5,33	6,17	5,56	22,72	5,68
Standard deviation auditors		1,32	1,03	0,58	1,07	4,00	1,00
Standard deviation experts		0,97	0,83	0,25	0,46	2,51	0,63
Standard deviation older auditors		1,60	0,88	0,49	0,98	3,95	0,99
Standard deviation younger auditors		1,02	1,21	0,69	1,18	4,10	1,02
Standard deviation larger companies		1,28	1,10	0,49	1,12	4,00	1,00
Standard deviation smaller companies		1,41	0,97	0,73	1,05	4,17	1,04

APPENDIX 11 – QUANTITATIVE ANALYSIS OF INTERNAL CONTROL

Group 1 - Control environment	The control system of senior management and management, including the internal audit, staff policy, employee administration and the distribution of work	The philosophy, ethics, culture and way to run business of senior management	The company's organization and way of distributing authority and liability	Active board of directors	Total for group 1
Average for auditors	6,50	6,07	6,09	5,63	6,07
Average for older auditors	6,46	6,21	6,17	5,50	6,08
Average for younger auditors	6,55	5,91	6,00	5,77	6,06
Average for larger companies	6,64	6,46	6,00	5,96	6,27
Average for smaller companies	6,28	5,44	6,22	5,11	5,76
Average for experts	6,67	6,67	6,06	5,72	6,28
Standard deviation auditors	0,56	1,26	0,72	1,20	0,94
Standard deviation experts	0,43	0,50	0,63	0,57	0,53
Standard deviation older auditors	0,62	0,94	0,69	1,15	0,85
Standard deviation younger auditors	0,52	1,58	0,77	1,29	1,04
Standard deviation larger companies	0,53	0,75	0,65	1,01	0,73
Standard deviation smaller companies	0,57	1,67	0,83	1,34	1,10

Group 2 - Risk assessment		Assessments of the probability of business risks to occur	Assessments of the importance of business risks	Decisions on measures on how to handle business risks	Active identification of business risks	Total for group 2
Average for auditors		3,85	3,85	4,07	4,00	3,94
Average for older auditors		4,38	4,13	4,54	4,67	4,43
Average for younger auditors		3,27	3,55	3,55	3,27	3,41
Average for larger companies		4,32	4,32	4,39	4,43	4,37
Average for smaller companies		3,11	3,11	3,56	3,33	3,28
Average for experts		4,44	4,17	4,72	5,00	4,58
Standard deviation auditors		1,70	1,78	1,75	1,86	1,77
Standard deviation experts		1,36	1,56	1,58	0,97	1,37
Standard deviation older auditors		1,55	1,51	1,56	1,68	1,58
Standard deviation younger auditors		1,74	2,07	1,86	1,85	1,88
Standard deviation larger companies		1,44	1,77	1,60	1,41	1,55
Standard deviation smaller companies		1,90	1,62	1,94	2,35	1,95

Group 3 - Control activities	Check and approve actions and document	Compare the outcomes from inventory of cash, securities, and stock-in-trade with the accountancy	Reconcile general ledger accounts	Report on, go through and approve reconciliations	Check that accounting entries are numerically correct	Compare internal data with external sources of information	Restrict physical access to assets and accounting material	Compare and analyse different financial outcomes in relation to last year, to budget, to forecasts etc.	Check IT based routines and adherent system environment, e.g. to create controls for: Changes in computer programs Access to computer directory	Total for group 3
Average for auditors	5,91	6,24	6,00	5,61	5,67	5,52	5,59	5,76	6,04	5,82
Average for older auditors	5,75	6,46	5,75	5,75	5,67	5,54	5,92	5,71	6,17	5,86
Average for younger auditors	6,09	6,00	6,27	5,45	5,88	5,50	5,23	5,82	5,91	5,77
Average for larger companies	5,86	6,18	5,86	5,36	5,57	5,32	5,68	5,82	6,00	5,74
Average for smaller companies	6,00	6,33	6,22	6,00	5,83	5,83	5,44	5,67	6,11	5,94
Average for experts	5,56	5,44	5,72	5,67	5,56	4,94	5,39	5,56	6,11	5,55
Standard deviation auditors	0,96	1,13	0,92	0,81	0,89	1,19	1,14	1,15	1,21	1,04
Standard deviation experts	0,73	1,04	0,97	1,00	1,26	1,07	0,93	1,16	0,93	1,01
Standard deviation older auditors	0,89	0,66	0,89	0,66	1,01	1,03	0,93	1,10	0,89	0,87
Standard deviation younger auditors	1,04	1,48	0,90	0,96	0,78	1,40	1,29	1,25	1,64	1,20
Standard deviation larger companies	1,12	1,30	0,79	0,86	0,88	1,17	1,17	1,07	1,45	1,07
Standard deviation smaller companies	0,71	0,87	1,09	0,56	1,17	1,22	1,16	1,32	0,78	0,99

Group 4 - Information and communication	Use of standard IT systems	Assessments of IT risks	Accurate analysis of which areas are particularly sensitive to present IT systems	Well adapted IT system for handling large numbers of transactions	The number of IT systems is limited to what is deemed as necessary for the business	The IT system is well adapted to the essential parts of the business	Total for group 4
Average for auditors	3,85	5,09	4,87	5,54	4,33	5,20	4,81
Average for older auditors	4,13	5,67	5,08	5,88	4,88	5,54	5,19
Average for younger auditors	3,55	4,45	4,64	5,18	3,73	4,82	4,39
Average for larger companies	3,96	5,00	4,86	5,32	4,46	5,46	4,85
Average for smaller companies	3,67	5,22	4,89	5,89	4,11	4,78	4,76
Average for experts	4,00	5,89	5,39	5,50	4,72	4,94	5,07
Standard deviation auditors	1,59	1,56	1,60	1,54	1,58	1,17	1,51
Standard deviation experts	1,41	1,17	1,50	1,17	1,20	1,24	1,28
Standard deviation older auditors	1,57	0,86	1,06	1,42	1,32	0,72	1,16
Standard deviation younger auditors	1,63	1,92	2,06	1,66	1,88	1,47	1,74
Standard deviation larger companies	1,50	1,51	1,50	1,51	1,55	1,05	1,44
Standard deviation smaller companies	1,80	1,72	1,83	1,62	1,89	1,30	1,66

Group 5 - Monitoring of controls	Senior management and management conduct follow ups of control activities	Follow up on outcomes on investments	Follow up on budget divergences	Follow up on performances of new employees	Total for group 5
Average for auditors	5,89	5,04	5,72	3,50	5,04
Average for older auditors	5,79	5,50	6,08	4,29	5,42
Average for younger auditors	6,00	4,55	5,32	2,64	4,63
Average for larger companies	5,96	5,71	5,57	3,46	5,18
Average for smaller companies	5,78	4,00	5,94	3,56	4,82
Average for experts	5,50	5,56	5,50	1,30	4,46
Standard deviation auditors	0,93	1,53	1,09	1,71	1,31
Standard deviation experts	1,06	0,98	0,86	1,30	1,00
Standard deviation older auditors	0,99	1,11	0,76	1,66	1,13
Standard deviation younger auditors	0,89	1,81	1,27	1,36	1,33
Standard deviation larger companies	0,84	0,85	1,21	1,71	1,15
Standard deviation smaller companies	1,09	1,80	0,88	1,81	1,40

APPENDIX 12 – QUANTITATIVE RESULTS FOR RED FLAGS

Number	Criteria (experts)	Average	Standard deviation
16	Senior management and management do not set good examples concerning ethical values	6,50	0,50
11	Private economic pressure on top/senior management	6,39	0,49
25	Possibilities of the same person to initiate, authorize, carry out and enter transactions	6,17	0,25
26	Hard pressure on senior management to meet financial targets	6,06	0,53
18	Deficient routines and systems for budget follow up	5,67	1,03
3	Deficiencies in the routines of reconciliation	5,67	0,97
27	Lack of continuous follow up on control routines (with respect to efficiency and purpose)	5,56	0,46
22	Deficiencies in routines and systems for risk assessment	5,44	1,33
15	Dissatisfaction among employees with the company they work for (with respect of salaries, career opportunities etc.)	5,44	0,63
20	Deficiencies in how policies concerning frauds are communicated	5,39	0,78
14	Deficient controls of physical property (such as stock goods, inventory, etc.)	5,33	0,83
5	One or a few people are dominating in the firm	5,33	1,71
13	Strong dependence on a few key people	5,22	1,12
12	Relatively (with respect to business, responsibility etc.) badly paid staff	5,22	1,09
8	Lack of explicit policy regarding frauds	5,22	0,62
19	Deficiencies in the routines of new employment (e.g. poor follow up on references and credentials, large differences in the routines for short and long term employment)	5,17	1,50
9	Insufficient routines and systems for handling cases of fraud	5,11	1,47
21	Indistinct structures concerning decisions and reporting	5,00	1,22
2	Lack of whistle blowing function	5,00	1,00
23	Understaffed financial department	4,89	0,78
6	The ceiling is low in the firm.	4,89	0,82
24	Unnecessarily complicated IT function with respect to the conducted business	4,83	0,87
7	Reluctance to cooperate with the auditor	4,72	0,97
4	Lack of former training of management in how to identify red flags of frauds	4,67	1,00
10	Employees who always work over time are not specifically supervised	4,22	1,28
17	Lack of reward system for maintaining control routines	3,94	1,45
1	Lack of possibility of longer (continuous) vacations for employees or not mandatory to take longer, continuous, vacations for the employees	2,50	0,61

Number	Criteria (auditors, total)	Average	Standard deviation
25	Possibilities of the same person to initiate, authorize, carry out and enter transactions	6,43	0,58
11	Private economic pressure on top/senior management	6,25	0,69
7	Reluctance to cooperate with the auditor	6,14	0,77
16	Senior management and management do not set good examples concerning ethical values	6,02	1,35
26	Hard pressure on senior management to meet financial targets	5,91	1,23
14	Deficient controls of physical property (such as stock goods, inventory, etc.)	5,68	1,03
18	Deficient routines and systems for budget follow up	5,30	1,08
3	Deficiencies in the routines of reconciliation	5,30	1,32
27	Lack of continuous follow up on control routines (with respect to efficiency and purpose)	5,11	1,07
23	Understaffed financial department	5,05	1,10
5	One or a few people are dominating in the firm	5,02	1,69
21	Indistinct structures concerning decisions and reporting	5,02	1,20
13	Strong dependence on a few key people	4,52	1,45
6	The ceiling is low in the firm. Relatively (with respect to business, responsibility etc.) badly paid staff	4,45	1,53
12	Deficiencies in routines and systems for risk assessment	4,43	1,51
22	Dissatisfaction among employees with the company they work for (with respect of salaries, career opportunities etc.)	4,41	1,40
15	Insufficient routines and systems for handling cases of fraud	4,18	1,44
9	Deficiencies in how policies concerning frauds are communicated	4,09	1,51
20	Lack of whistle blowing function	4,00	1,77
2	Unnecessarily complicated IT function with respect to the conducted business	3,91	1,60
24	Deficiencies in the routines of new employment (e.g. poor follow up on references and credentials, large differences in the routines for short and long term employment)	3,77	1,66
19	Lack of former training of management in how to identify red flags of frauds	3,70	1,47
4	Lack of explicit policy regarding frauds	3,68	1,62
8	Lack of reward system for maintaining control routines	3,64	1,65
17	Employees who always work over time are not specifically supervised	3,34	1,46
10	Lack of possibility of longer (continuous) vacations for employees or not mandatory to take longer, continuous, vacations for the employees	3,32	1,67
1		2,09	1,15

Number	Criteria (auditors, older)	Average	Standard deviation
16	Senior management and management do not set good examples concerning ethical values	6,59	0,66
25	Possibilities of the same person to initiate, authorize, carry out and enter transactions	6,41	0,49
7	Reluctance to cooperate with the auditor	6,18	0,75
11	Private economic pressure on top/senior management	6,05	0,65
26	Hard pressure on senior management to meet financial targets	5,73	1,01
14	Deficient controls of physical property (such as stock goods, inventory, etc.)	5,73	0,88
18	Deficient routines and systems for budget follow up	5,41	1,11
21	Indistinct structures concerning decisions and reporting	5,41	1,11
23	Understaffed financial department	5,36	1,14
5	One or a few people are dominating in the firm	5,32	1,27
22	Deficiencies in routines and systems for risk assessment	5,27	1,27
27	Lack of continuous follow up on control routines (with respect to efficiency and purpose)	5,23	0,98
3	Deficiencies in the routines of reconciliation	5,18	1,60
6	The ceiling is low in the firm.	4,91	1,64
2	Lack of whistle blowing function	4,73	0,90
8	Lack of explicit policy regarding frauds	4,64	0,81
13	Strong dependence on a few key people	4,59	1,07
20	Deficiencies in how policies concerning frauds are communicated	4,45	1,29
9	Insufficient routines and systems for handling cases of fraud	4,45	1,44
4	Lack of former training of management in how to identify red flags of frauds	4,45	1,37
12	Relatively (with respect to business, responsibility etc.) badly paid staff	4,32	1,38
15	Dissatisfaction among employees with the company they work for (with respect of salaries, career opportunities etc.)	4,27	1,42
19	Deficiencies in the routines of new employment (e.g. poor follow up on references and credentials, large differences in the routines for short and long term employment)	4,14	1,14
10	Employees who always work over time are not specifically supervised	4,09	1,81
24	Unnecessarily complicated IT function with respect to the conducted business	4,00	1,95
17	Lack of reward system for maintaining control routines	3,77	1,54
1	Lack of possibility of longer (continuous) vacations for employees or not mandatory to take longer, continuous, vacations for the employees	2,82	1,08

Number	Criteria (auditors, younger)	Average	Standard deviation
25	Possibilities of the same person to initiate, authorize, carry out and enter transactions	6,45	0,69
11	Private economic pressure on top/senior management	6,45	0,69
7	Reluctance to cooperate with the auditor	6,09	0,83
26	Hard pressure on senior management to meet financial targets	6,09	1,45
14	Deficient controls of physical property (such as stock goods, inventory, etc.)	5,64	1,21
16	Senior management and management do not set good examples concerning ethical values	5,45	1,63
3	Deficiencies in the routines of reconciliation	5,41	1,02
18	Deficient routines and systems for budget follow up	5,18	1,08
27	Lack of continuous follow up on control routines (with respect to efficiency and purpose)	5,00	1,18
23	Understaffed financial department	4,73	1,01
5	One or a few people are dominating in the firm	4,73	2,05
21	Indistinct structures concerning decisions and reporting	4,64	1,21
12	Relatively (with respect to business, responsibility etc.) badly paid staff	4,55	1,69
13	Strong dependence on a few key people	4,45	1,81
15	Dissatisfaction among employees with the company they work for (with respect of salaries, career opportunities etc.)	4,09	1,51
6	The ceiling is low in the firm.	4,00	1,34
9	Insufficient routines and systems for handling cases of fraud	3,73	1,56
22	Deficiencies in routines and systems for risk assessment	3,55	0,93
20	Deficiencies in how policies concerning frauds are communicated	3,55	2,11
24	Unnecessarily complicated IT function with respect to the conducted business	3,55	1,37
19	Deficiencies in the routines of new employment (e.g. poor follow up on references and credentials, large differences in the routines for short and long term employment)	3,27	1,68
2	Lack of whistle blowing function	3,09	1,76
4	Lack of former training of management in how to identify red flags of frauds	2,91	1,51
17	Lack of reward system for maintaining control routines	2,91	1,30
8	Lack of explicit policy regarding frauds	2,64	1,69
10	Employees who always work over time are not specifically supervised	2,55	1,13
1	Lack of possibility of longer (continuous) vacations for employees or not mandatory to take longer, continuous, vacations for the employees	1,36	0,67

Number	Criteria (auditors, larger companies)	Average	Standard deviation
26	Hard pressure on senior management to meet financial targets	6,46	0,66
25	Possibilities of the same person to initiate, authorize, carry out and enter transactions	6,42	0,49
16	Senior management and management do not set good examples concerning ethical values	6,35	1,11
7	Reluctance to cooperate with the auditor	6,31	0,63
11	Private economic pressure on top/senior management	6,19	0,56
14	Deficient controls of physical property (such as stock goods, inventory, etc.)	5,62	1,10
18	Deficient routines and systems for budget follow up	5,50	1,04
21	Indistinct structures concerning decisions and reporting	5,35	0,85
3	Deficiencies in the routines of reconciliation	5,15	1,28
27	Lack of continuous follow up on control routines (with respect to efficiency and purpose)	5,12	1,12
5	One or a few people are dominating in the firm	5,12	1,61
23	Understaffed financial department	5,08	0,79
15	Dissatisfaction among employees with the company they work for (with respect of salaries, career opportunities etc.)	4,77	1,09
12	Relatively (with respect to business, responsibility etc.) badly paid staff	4,73	1,20
6	The ceiling is low in the firm.	4,62	1,66
13	Strong dependence on a few key people	4,58	1,53
22	Deficiencies in routines and systems for risk assessment	4,46	1,13
2	Lack of whistle blowing function	4,46	1,51
20	Deficiencies in how policies concerning frauds are communicated	4,15	1,68
8	Lack of explicit policy regarding frauds	4,15	1,34
24	Unnecessarily complicated IT function with respect to the conducted business	4,08	1,80
4	Lack of former training of management in how to identify red flags of frauds	4,00	1,22
9	Insufficient routines and systems for handling cases of fraud	3,92	0,95
19	Deficiencies in the routines of new employment (e.g. poor follow up on references and credentials, large differences in the routines for short and long term employment)	3,81	0,95
17	Lack of reward system for maintaining control routines	3,73	1,59
10	Employees who always work over time are not specifically supervised	3,38	1,66
1	Lack of possibility of longer (continuous) vacations for employees or not mandatory to take longer, continuous, vacations for the employees	2,08	1,04

Number	Criteria (auditors, smaller companies)	Average	Standard deviation
25	Possibilities of the same person to initiate, authorize, carry out and enter transactions	6,44	0,73
11	Private economic pressure on top/senior management	6,33	0,87
7	Reluctance to cooperate with the auditor	5,89	0,93
14	Deficient controls of physical property (such as stock goods, inventory, etc.)	5,78	0,97
16	Senior management and management do not set good examples concerning ethical values	5,56	1,59
3	Deficiencies in the routines of reconciliation	5,50	1,41
26	Hard pressure on senior management to meet financial targets	5,11	1,45
27	Lack of continuous follow up on control routines (with respect to efficiency and purpose)	5,11	1,05
18	Deficient routines and systems for budget follow up	5,00	1,12
23	Understaffed financial department	5,00	1,50
5	One or a few people are dominating in the firm	4,89	1,90
21	Indistinct structures concerning decisions and reporting	4,56	1,51
13	Strong dependence on a few key people	4,44	1,42
22	Deficiencies in routines and systems for risk assessment	4,33	1,80
9	Insufficient routines and systems for handling cases of fraud	4,33	2,12
6	The ceiling is low in the firm.	4,22	1,39
12	Relatively (with respect to business, responsibility etc.) badly paid staff	4,00	1,87
20	Deficiencies in how policies concerning frauds are communicated	3,78	1,99
19	Deficiencies in the routines of new employment (e.g. poor follow up on references and credentials, large differences in the routines for short and long term employment)	3,56	2,07
15	Dissatisfaction among employees with the company they work for (with respect of salaries, career opportunities etc.)	3,33	1,50
24	Unnecessarily complicated IT function with respect to the conducted business	3,33	1,41
4	Lack of former training of management in how to identify red flags of frauds	3,22	2,05
10	Employees who always work over time are not specifically supervised	3,22	1,79
2	Lack of whistle blowing function	3,11	1,45
8	Lack of explicit policy regarding frauds	2,89	1,83
17	Lack of reward system for maintaining control routines	2,78	1,09
1	Lack of possibility of longer (continuous) vacations for employees or not mandatory to take longer, continuous, vacations for the employees	2,11	1,36

APPENDIX 13 – QUANTITATIVE RESULTS FOR CRITERIA OF INTERNAL CONTROL

Number	Criteria (experts)	Average	Standard deviation
1	The control system of senior management and management, including the internal audit, staff policy, employee administration and the distribution of work	6,67	0,43
7	The philosophy, ethics, culture and way to run business of senior management	6,67	0,50
25	Check IT based routines and adherent system environment, e.g. to create controls for: 1. Changes in computer programs 2. Access to computer directory	6,11	0,93
10	The company's organization and way of distributing authority and liability	6,06	0,63
11	Assessments of IT risks	5,89	1,17
12	Check and reconcile general ledger accounts	5,72	0,97
14	Active board of directors	5,72	0,57
15	Report on, go through and approve reconciliations	5,67	1,00
3	Check and approve actions and document	5,56	0,73
18	Check that accounting entries are numerically correct	5,56	1,26
19	Follow up on outcomes on investments	5,56	0,98
24	Compare and analyse different financial outcomes in relation to last year, to budget, to forecasts etc.	5,56	1,16
5	Senior management and management conduct follow ups of control activities	5,50	1,06
17	Well adapted IT system for handling large numbers of transactions	5,50	1,17
21	Follow up on budget divergences	5,50	0,66
6	Compare the outcomes from inventory of cash, securities, and stock-in-trade with the accountancy	5,44	1,04
13	Accurate analysis of which areas are particularly sensitive to present IT systems	5,39	1,50
23	Restrict physical access to assets and accounting material	5,39	0,93
16	Active identification of business risks	5,00	0,97
20	Compare internal data with external sources of information	4,94	1,07
26	The IT system is well adapted to essential parts of the business	4,94	1,24
9	Decisions on measures on how to handle business risks	4,72	1,58
22	The number of IT systems is limited to what is deemed as necessary for the business	4,72	1,20
2	Assessments of the probability of business risks to occur	4,44	1,36
4	Assessments of the importance of business risks	4,17	1,56
8	Use of standard IT systems	4,00	1,41
27	Follow up on performances of new employees	3,83	1,30

Number	Criteria (auditors, total)	Average	Standard deviation
1	The control system of senior management and management, including the internal audit, staff policy, employee administration and the distribution of work	6,50	0,56
6	Compare the outcomes from inventory of cash, securities, and stock-in-trade with the accountancy	6,24	1,13
10	The company's organization and way of distributing authority and liability	6,09	0,72
7	The philosophy, ethics, culture and way to run business of senior management	6,07	1,26
25	Check IT based routines and adherent system environment, e.g. to create controls for: 1. Changes in computer programs 2. Access to computer directory	6,04	1,21
12	Check and reconcile general ledger accounts	6,00	0,92
3	Check and approve actions and document	5,91	0,96
5	Senior management and management conduct follow ups of control activities	5,89	0,93
24	Compare and analyse different financial outcomes in relation to last year, to budget, to forecasts etc.	5,76	1,15
21	Follow up on budget divergences	5,72	1,09
18	Check that accounting entries are numerically correct	5,67	0,89
14	Active board of directors	5,63	1,20
15	Report on, go through and approve reconciliations	5,61	0,81
23	Restrict physical access to assets and accounting material	5,59	1,14
17	Well adapted IT system for handling large numbers of transactions	5,54	1,54
20	Compare internal data with external sources of information	5,52	1,19
26	The IT system is well adapted to essential parts of the business	5,20	1,17
11	Assessments of IT risks	5,09	1,56
19	Follow up on outcomes on investments	5,04	1,53
13	Accurate analysis of which areas are particularly sensitive to present IT systems	4,87	1,60
22	The number of IT systems is limited to what is deemed as necessary for the business	4,33	1,58
9	Decisions on measures on how to handle business risks	4,07	1,75
16	Active identification of business risks	4,00	1,86
2	Assessments of the probability of business risks to occur	3,85	1,70
4	Assessments of the importance of business risks	3,85	1,78
8	Use of standard IT systems	3,85	1,59
27	Follow up on performances of new employees	3,50	1,71

Number	Criteria (auditors, older)	Average	Standard deviation
1	The control system of senior management and management, including the internal audit, staff policy, employee administration and the distribution of work	6,46	0,62
6	Compare the outcomes from inventory of cash, securities, and stock-in-trade with the accountancy	6,46	0,66
7	The philosophy, ethics, culture and way to run business of senior management	6,21	0,94
10	The company's organization and way of distributing authority and liability	6,17	0,69
25	Check IT based routines and adherent system environment, e.g. to create controls for: 1. Changes in computer programs 2. Access to computer directory	6,17	0,69
21	Follow up on budget divergences	6,08	0,76
23	Restrict physical access to assets and accounting material	5,92	0,93
17	Well adapted IT system for handling large numbers of transactions	5,88	1,42
5	Senior management and management conduct follow ups of control activities	5,79	0,99
12	Check and reconcile general ledger accounts	5,75	0,89
3	Check and approve actions and document	5,75	0,89
15	Report on, go through and approve reconciliations	5,75	0,66
24	Compare and analyse different financial outcomes in relation to last year, to budget, to forecasts etc.	5,71	1,10
18	Check that accounting entries are numerically correct	5,67	1,01
11	Assessments of IT risks	5,67	0,86
20	Compare internal data with external sources of information	5,54	1,03
26	The IT system is well adapted to essential parts of the business	5,54	0,72
14	Active board of directors	5,50	1,15
19	Follow up on outcomes on investments	5,50	1,11
13	Accurate analysis of which areas are particularly sensitive to present IT systems	5,08	1,06
22	The number of IT systems is limited to what is deemed as necessary for the business	4,88	1,32
16	Active identification of business risks	4,67	1,68
9	Decisions on measures on how to handle business risks	4,54	1,56
2	Assessments of the probability of business risks to occur	4,38	1,55
27	Follow up on performances of new employees	4,29	1,66
4	Assessments of the importance of business risks	4,13	1,51
8	Use of standard IT systems	4,13	1,57

Number	Criteria (auditors, younger)	Average	Standard deviation
1	The control system of senior management and management, including the internal audit, staff policy, employee administration and the distribution of work	6,55	0,52
12	Check and reconcile general ledger accounts	6,27	0,90
3	Check and approve actions and document	6,09	1,04
6	Compare the outcomes from inventory of cash, securities, and stock-in-trade with the accountancy	6,00	1,48
10	The company's organization and way of distributing authority and liability	6,00	0,77
5	Senior management and management conduct follow ups of control activities	6,00	0,89
7	The philosophy, ethics, culture and way to run business of senior management	5,91	1,58
25	Check IT based routines and adherent system environment, e.g. to create controls for: 1. Changes in computer programs 2. Access to computer directory	5,91	1,64
24	Compare and analyse different financial outcomes in relation to last year, to budget, to forecasts etc.	5,82	1,25
14	Active board of directors	5,77	1,29
18	Check that accounting entries are numerically correct	5,68	0,78
20	Compare internal data with external sources of information	5,50	1,40
15	Report on, go through and approve reconciliations	5,45	0,96
21	Follow up on budget divergences	5,32	1,27
23	Restrict physical access to assets and accounting material	5,23	1,29
17	Well adapted IT system for handling large numbers of transactions	5,18	1,66
26	The IT system is well adapted to essential parts of the business	4,82	1,47
13	Accurate analysis of which areas are particularly sensitive to present IT systems	4,64	2,06
19	Follow up on outcomes on investments	4,55	1,81
11	Assessments of IT risks	4,45	1,92
22	The number of IT systems is limited to what is deemed as necessary for the business	3,73	1,68
9	Decisions on measures on how to handle business risks	3,55	1,86
4	Assessments of the importance of business risks	3,55	2,07
8	Use of standard IT systems	3,55	1,63
16	Active identification of business risks	3,27	1,85
2	Assessments of the probability of business risks to occur	3,27	1,74
27	Follow up on performances of new employees	2,64	1,36

Number	Criteria (auditors, larger companies)	Average	Standard deviation
1	The control system of senior management and management, including the internal audit, staff policy, employee administration and the distribution of work	6,64	0,53
7	The philosophy, ethics, culture and way to run business of senior management	6,46	0,75
6	Compare the outcomes from inventory of cash, securities, and stock-in-trade with the accountancy	6,18	1,30
10	The company's organization and way of distributing authority and liability	6,00	0,65
25	Check IT based routines and adherent system environment, e.g. to create controls for: 1. Changes in computer programs 2. Access to computer directory	6,00	1,45
5	Senior management and management conduct follow ups of control activities	5,96	0,84
14	Active board of directors	5,96	1,01
12	Check and reconcile general ledger accounts	5,86	0,79
3	Check and approve actions and document	5,86	1,12
24	Compare and analyse different financial outcomes in relation to last year, to budget, to forecasts etc.	5,82	1,07
19	Follow up on outcomes on investments	5,71	0,85
23	Restrict physical access to assets and accounting material	5,68	1,17
18	Check that accounting entries are numerically correct	5,57	0,68
21	Follow up on budget divergences	5,57	1,21
26	The IT system is well adapted to essential parts of the business	5,46	1,05
15	Report on, go through and approve reconciliations	5,36	0,86
20	Compare internal data with external sources of information	5,32	1,17
17	Well adapted IT system for handling large numbers of transactions	5,32	1,51
11	Assessments of IT risks	5,00	1,51
13	Accurate analysis of which areas are particularly sensitive to present IT systems	4,86	1,50
22	The number of IT systems is limited to what is deemed as necessary for the business	4,46	1,55
16	Active identification of business risks	4,43	1,41
9	Decisions on measures on how to handle business risks	4,39	1,60
4	Assessments of the importance of business risks	4,32	1,77
2	Assessments of the probability of business risks to occur	4,32	1,44
8	Use of standard IT systems	3,96	1,50
27	Follow up on performances of new employees	3,46	1,71

Number	Criteria (auditors, smaller companies)	Average	Standard deviation
6	Compare the outcomes from inventory of cash, securities, and stock-in-trade with the accountancy	6,33	0,87
1	The control system of senior management and management, including the internal audit, staff policy, employee administration and the distribution of work	6,28	0,57
10	The company's organization and way of distributing authority and liability	6,22	0,83
12	Check and reconcile general ledger accounts	6,22	1,09
25	Check IT based routines and adherent system environment, e.g. to create controls for: 1. Changes in computer programs 2. Access to computer directory	6,11	0,78
3	Check and approve actions and document Report on, go through and approve reconciliations	6,00	0,71
15		6,00	0,56
21	Follow up on budget divergences	5,94	0,88
17	Well adapted IT system for handling large numbers of transactions	5,89	1,62
18	Check that accounting entries are numerically correct	5,83	1,17
20	Compare internal data with external sources of information	5,83	1,22
5	Senior management and management conduct follow ups of control activities	5,78	1,09
24	Compare and analyse different financial outcomes in relation to last year, to budget, to forecasts etc.	5,67	1,32
7	The philosophy, ethics, culture and way to run business of senior management	5,44	1,67
23	Restrict physical access to assets and accounting material	5,44	1,16
11	Assessments of IT risks	5,22	1,72
14	Active board of directors	5,11	1,34
13	Accurate analysis of which areas are particularly sensitive to present IT systems	4,89	1,83
26	The IT system is well adapted to essential parts of the business	4,78	1,30
22	The number of IT systems is limited to what is deemed as necessary for the business	4,11	1,69
19	Follow up on outcomes on investments	4,00	1,80
8	Use of standard IT systems	3,67	1,80
9	Decisions on measures on how to handle business risks	3,56	1,94
27	Follow up on performances of new employees	3,56	1,81
16	Active identification of business risks	3,33	2,35
4	Assessments of the importance of business risks	3,11	1,62
2	Assessments of the probability of business risks to occur	3,11	1,90

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