AKSU AROLA

The Cash Flow Statement Under Scrutiny

Six problem areas that make it less useful than it could be

■

ACADEMIC DISSERTATION
To be presented, with the permission of
the Board of the School of Management of the University of Tampere,
for public discussion in the Paavo Koli Auditorium,
Kanslerinrinne 1, Tampere,
on May 15th, 2015, at 12 o'clock.

UNIVERSITY OF TAMPERE

AKSU AROLA

The Cash Flow Statement Under Scrutiny

Six problem areas that make it less useful than it could be

Acta Universitatis Tamperensis 2065
Tampere University Press
Tampere 2015

ACADEMIC DISSERTATION
University of Tampere
School of Management
Finland

The originality of this thesis has been checked using the Turnitin OriginalityCheck service in accordance with the quality management system of the University of Tampere.

Cover design by
Mikko Reinikka

Distributor:
verkkokauppa@juvenesprint.fi
https://verkkokauppa.juvenes.fi

Acta Universitatis Tamperensis 2065
ISBN 978-951-44-9826-8 (print)
ISSN-L 1455-1616
ISSN 1455-1616

Acta Electronica Universitatis Tamperensis 1558
ISBN 978-951-44-9827-5 (pdf)
ISSN 1456-954X
http://tampub.uta.fi

Suomen Yliopistopaino Oy – Juvenes Print
Tampere 2015

Acknowledgements

"Happiness is a journey, not a destination" is a classic phrase sometimes accredited to Alfred D'Souza although the actual origins may be unknown. It may be so that approximately 2500 years ago, one Gautama Buddha eloquently, with perhaps a more streamlined approach in mind, uttered the words: "It is better to travel, than to arrive". Despite the origins of these phrases, I wholeheartedly agree with them.

Not only have the events leading to the public defence of this doctoral dissertation been among the happiest times in my life, they truly have been a journey. I consider myself immensely fortunate to have been able to write this dissertation across, approximately, 12 countries during the past 5 years. A time period, I may now reflect back upon as if an adventure: I can still vividly picture the bright-orange-cape-clothed monks with whom I attended university accounting classes in Thailand. I can still grasp the tension in the DMZ area between North and South Korea. I am still enormously thankful for being fantastically looked after across Philippines during several months after acquiring a deep wound that just seemed not to heal. And I can still relive the excitement of going on stage in front of hundreds of people to play guitar, with dancing girls and fire bombs in the background, in packed night-clubs in Malaysia and Singapore. Aside from such great experiences, I am thankful for the relationships I have gained along the way.

Speaking of relationships, first and foremost, I want to thank my supervisor, Professor Petri Vehmanen from University of Tampere, with whom I feel I have had a fantastically productive relationship, filled with mutual respect and trust. I say productive, because, in addition to this doctoral dissertation, it has already generated one master's thesis, one licentiate thesis and two trade journal articles, and hopefully in the near future, three peer-reviewed journal articles. For their outstanding efforts in the preliminary examination of this, perhaps longer than usual, monograph, I would like to thank Professor Teija Laitinen from University of Vaasa who also has agreed to act as the opponent at the public defence, Professor Aila Virtanen from University of Jyväskylä who, not only pre-examined this dissertation, but also the licentiate thesis, and acted as the opponent in that occasion, and Professor Timo Rothovius from University of Vaasa who I did not yet get to thank for the preliminary examination of the licentiate thesis. I would also like to thank all the professors, doctoral students and other participants at several seminars where I have presented my work along the way for your insightful comments. And of course, I would like to thank my family and my friends for the fundamental support – without you none of this would have been possible.

I am thankful for the economic support I have received from Jenny and Antti Wihuri Foundation (Jenny ja Antti Wihurin rahasto); University of Tampere and its Foundations (Tampereen yliopisto tukisäätiöineen); Foundation for Economic Education (Liikesivistysrahasto); and Tampereen Liikesivistysäätiö. This support has been essential for reaching this milestone – the doctoral dissertation.

Finally, I hope I do not convey the quotes in the first paragraph in a wrong light. While the journey of getting here has been amazing, this certainly should not be the end destination. As, I believe it was Ralph Waldo Emerson who said: "Life is a journey, not a destination". Therefore, I'm eagerly waiting for the next leg. Kiitos.

Tampere, April 27th 2015
Aksu Arola

Abstract

Despite the accounting profession seems to be advocating accrual accounting, international research often suggests that the cash flow statement is the financial statement section most in unison with the objectives of financial statements given by international accounting standard-setters in that 1) it is incrementally useful, over and above the balance sheet and the income statement, in predicting an entity's future cash flows and in assessing an entity's liquidity and solvency, and 2) the information on the cash flow statement is more relevant, reliable and comparable than the information on the accrual-based financial statement sections. Therefore, compared to the other sections, the cash flow statement should better help users assess the net present value of an entity or an investment, which, drawing from modern financing theory, is exactly what they look for from a set of financial statements. However, this study argues that there are problem areas in the cash flow statement production that diminish the usefulness to users.

Through conducting surveys of 840 authorised accountants, 325 authorised auditors and 956 private investors and collecting 625 published cash flow statements, and by statistically analysing the data (which involves formulating 24 main hypotheses and performing more than 500 statistical tests or other calculations) and by assessing the current regulation and relevant literature, this study discovers problem areas in the cash flow statement production and considers their effects on the quality of published cash flow statements and what they mean for financial statement users. The problem areas originate from either the current regulation itself or the failure of preparers and auditors to fulfil their duties assigned to them by agency theory and other sources, that is, to produce cash flow statements that not only conform to the regulation but also strive to meet users' expectations.

This study discovers six problem areas, existence of which in Finland it provides empirical evidence on: 1) the cash flow statement being the least important financial statement section for preparers and auditors, 2) comparability issues caused by current regulation, 3) error-prone preparing practice, 4) adverse selection (manipulation), 5) moral hazard (lacking effort in preparing and auditing), and 6) preparers insisting on the indirect presentation of operating cash flows. The problem areas matter because they affect a statement, which users consider useful, and which most users use in their economic decision-making. Each of the problem areas jeopardise or reduce the reliability (faithful representation), comparability and/or understandability of the cash flow statement. The compromised qualitative characteristics, in turn, make the typical cash flow statement published in Finland less useful to users than it could be. The lessened usefulness entails that the cash flow statement may be infested with intentional or unintentional errors, or that it otherwise does not meet users' expectations. As a result, most users' trust in the figures on the published cash flow statement may often be unwarranted – even if the statement has been audited.

Tiivistelmä

Vaikka laskentatoimen ammattikunta näyttääkin kannattavan suoriteperusteista kirjanpitoa, kansainvälinen tutkimus usein esittää, että eri tilinpäätöksen osista juuri rahoituslaskelma parhaiten vastaa tilinpäätösstandardien laatijoiden asettamia tilinpäätöksen tavoitteita siinä mielessä, että 1) se on tasetta ja tuloslaskelmaa hyödyllisempi tilinpäätöksen osa ennakoitaessa yrityksen tulevia rahavirtoja sekä arvioitaessa yrityksen likviditeettiä ja maksukykyä/vakavaraisuutta, ja 2) sen sisältämä informaatio on relevantimpaa, luotettavampaa ja vertailukelpoisempaa kuin suoriteperusteisten tilinpäätöksen osien sisältämä informaatio. Näin ollen, rahoituslaskelman pitäisi muita tilinpäätöksen osia paremmin auttaa lukijoita arvioimaan yrityksen tai sijoituksen nettonykyarvoa, joka on juuri sitä, mitä he modernin rahoitusteorian mukaisesti tilinpäätöksestä etsivät. Tämä tutkimus kuitenkin väittää, että rahoituslaskelman tuottamiseen liittyy ongelmakohtia, jotka vähentävät laskelman hyödyllisyyttä lukijoille.

Toteuttamalla kyselytutkimukset 840 KLT-kirjanpitäjälle, 325 KHT- tai HTM-tilintarkastajalle ja 956 yksityiselle sijoittajalle ja hankkimalla 625 julkistettua rahoituslaskelmaa sekä tilastollisesti analysoimalla aineistot (mikä sisältää 24 päähypoteesin muodostamisen ja yli 500 tilastollisen testin tai muun laskelman tekemisen) ja arvioimalla nykyistä säännöstöä ja relevanttia kirjallisuutta, tämä tutkimus löytää rahoituslaskelmien tuottamiseen liittyviä ongelmakohtia sekä pohtii niiden vaikutusta julkaistujen rahoituslaskelmien laatuun ja merkitystä tilinpäätösten lukijoille. Nämä ongelmakohdat juontuvat joko nykyisistä säännöksistä tai laatijoiden ja tilintarkastajien epäonnistumisesta hoitaa heille agenttiteorian ja muiden lähteiden asettamia tehtäviä, eli tuottaa rahoituslaskelmia, jotka eivät ainoastaan ole nykyisten säännösten mukaisia mutta myös pyrkivät vastaamaan tilinpäätösten lukijoiden odotuksia.

Tämä tutkimus löytää kuusi ongelmakohtaa, joiden olemassaolosta Suomessa se antaa empiirisiä merkkejä: 1) laatijat ja tilintarkastajat pitävät rahoituslaskelmaa tilinpäätöksen vähiten tärkeänä osana, 2) nykyisten säännösten aiheuttamat vertailukelpoisuusongelmat, 3) virhealtis laadintamenetelmä, 4) adverse selection (manipulointi), 5) moral hazard (laiskuus laatimisessa ja tarkastamisessa), ja 6) laatijoiden mieltymys esittää liiketoiminnan rahavirta epäsuoralla menetelmällä. Nämä ongelmakohdat ovat merkityksellisiä, sillä ne koskevat laskelmaa, jota lukijat pitävät hyödyllisenä, ja jota useimmat lukijat käyttävät taloudellisessa päätöksenteossaan. Jokainen ongelmakohdista vaarantaa tai vähentää rahoituslaskelman luotettavuutta (todenmukaista esittämistä), vertailukelpoisuutta ja/tai ymmärrettävyyttä. Nämä heikennetyt laadulliset ominaisuudet taas tekevät tyypillisestä Suomessa julkaistusta rahoituslaskelmasta vähemmän hyödyllisen lukijoille kuin mitä se voisi olla. Vähentynyt hyödyllisyys pitää sisällään sen, että rahoituslaskelma voi sisältää tahallisia tai tahattomia virheitä, tai että se ei muutoin vastaa lukijoiden odotuksia. Näin ollen, lukijoiden enemmistön luottamus tilintarkastettuihin rahoituslaskelmalukuihin voi usein osoittautua perusteettomaksi.

Table of contents

1. Introduction

1.1 Motivation

Prior starting my doctoral studies and writing this study in late 2010, I had been working in a fairly large accounting firm for five or so years handling various duties such as book-keeping and preparing financial statements, filing tax returns, assisting in audits, and being a controller. In the last three or so years while working there, I specialised in preparing cash flow statements – both in accordance with Finnish Accounting Standards (henceforth FAS) and International Financial Reporting Standards (henceforth IFRS), for both private and public companies, and for both separate and consolidated companies. First thing I noticed was that, although the balance sheet and the income statement could be printed straight from the accounting system, the cash flow statement had to always be manually prepared in a spread sheet, such as Microsoft Excel. Secondly, as I studied the regulation concerning the preparation of cash flow statements, I started noticing that the regulation could be ambiguous or even contradictory in some aspects, which suggested to me that different preparers may produce different cash flow statements from the same accounting data, depending on how they interpret the instructions. Furthermore, because the accounting data were not recorded in congruence with the requirements of the cash flow statement (only with those of the balance sheet and the income statement), it led me to believe that different preparers would likely produce different statements based on how much effort they would put in finding the actual, realised cash flows of the accounting period.

Finally, when it came to annual audits, I could not help but notice that the cash flow statement seemed to be close to the bottom of the auditors' priorities list. Even when the company under audit was a public consolidated company, and the auditors spent weeks rather than days auditing the financial statements, I was rarely contacted with matters concerning the cash flow statement. These observations suggested to me that perhaps the published cash flow statements are often not

comparable with each other or, even worse, congruent with the regulation. This, in turn, evoked the following question: what would the provision of incomparable or otherwise flawed cash flow statements mean for financial statement users? This thought process motivated me to do this research about the phenomenon of preparing, auditing and using cash flow statements. Naturally, the first step is to find out what has already been said about the phenomenon – that is, to do a literature review.

1.2 Literature review

The importance/usefulness of the cash flow statement – theory vs. practice. Contemporary international research has been suggesting that the cash flow statement is incrementally useful, over and above the balance sheet and the income statement, in predicting an entity's future cash flows (Bowen, Burgstahler & Daley 1987; Livnat & Zarowin 1990; Finger 1994; Lorek & Willinger 1996; Chu 1997; Francis & Schipper 1999; Barth, Cram & Nelson 2001; Ryan & Zarowin 2003; Al-Attar & Hussain 2004; Farshadfar, Ng & Brimble 2008; Lorek & Willinger 2009; Miranda-Lopez & Nichols 2012) and in assessing an entity's liquidity and solvency (Ohlson 1980; Heath 1985; Zavgren & Freidman 1988; Staubus 1989; Peirson, Ramsey & McBride 1991; Sharma 1999; Sharma & Iselin 2003; Kirkham 2012). Furthermore, the information on the cash flow statement is potentially more relevant (Hicks 1981; Lee 1981a; Lawson 1982; Day 1986; McEnroe 1989; Ali & Pope 1995; Hackel & Livnat 1995; Jones, Romano & Smyrnios 1995; Yap 1997; Burgstahler, Jiambalvo & Pyo 1998; Thomas & Cushing 1998; Steyn & Hamman 2003; Frino & Jones 2005; Consler, Lepak & Havranek 2011) and reliable (Dechow 1994; Cheng, Liu & Schaefer 1997; Jones & Ratnatunga 1997; Nurnberg 2006) than the information on the accrual-based financial statement sections.

Therefore, the cash flow statement is argued to provide exactly the information users are suggested by finance literature (Ross, Westerfield & Jaffe 2005; Brealey, Myers & Allen 2006; Brigham & Houston 2007; Brealey, Myers & Allen 2008) to look for from a set of financial statements, and furthermore, the information on the cash flow statement is in unison with the objectives and qualitative characteristics given to financial statements by international accounting standard-setters (Financial

Accounting Standards Board (FASB) 2010; International Accounting Standards Board (IASB) 2010). Nonetheless, users are typically reported not to have found the suggested superior usefulness of the cash flow statement and continue to regard the balance sheet and the income statement as the two primary financial statement sections (Lee & Tweedie 1981; Arnold & Moizer 1984; Epstein & Pava 1992; Gadenne & Iselin 1996; Kim & Kross 2005) – although the perceived importance of the cash flow statement among users has been increasing in recent years (Siegel 2006; Troberg 2007; Cheng & Hollie 2008), and indeed, the cash flow statement is being used for various purposes (Carslaw & Mills 1991; Stickney 1993; Penman 2001).

Problems in preparing and auditing practices. Although the research about some of these is scarce, the preparing and auditing practices may contain problems, which jeopardise the usefulness and/or correctness of published cash flow statements. Problems mentioned in the current literature are 1) comparability issues caused by the regulation (Stewart, Ogorzelec, Baskin & Duffy 1988; Stephens & Govindarajan 1990; Alderman & Minyard 1991; Nurnberg 1993; Vent, Cowling & Sevalstad 1995; Nurnberg & Largay 1996; Hertenstein & McKinnon 1997; Nurnberg & Largay 1998; Weiss & Yang 2007; Miller & Bahnson 2012), 2) error-prone preparing practice (Rosen 2007), 3) manipulation of cash flow statements (Day 2002; Maremont 2002a; Maremont 2002b; Romero & Berenson 2002; Sender 2002; Tergesen 2002; Batson 2003; Broome 2004; Gullapalli 2005; Benston 2006; Scholz 2008; Ivancevich, Ivancevich & Hermanson 2012; Lee 2012), 4) a lack of interest from auditors (Mills & Yamamura 1998; Hanini & Abdullatif 2013), and 5) preparers' insisting on the indirect presentation of operating cash flows (Rue & Kirk 1996; Wallace, Choudhury & Pendlebury 1997; Wallace, Choudhury & Adhikari 1999; Kwok 2002) when users would prefer the direct presentation (Heath 1981; Gibson & Kruse 1984; Drtina & Largay 1985; Bracken & Volkan 1988; Richardson 1991; Cornell & Apostolou 1992; Trout, Tanner & Nicholas 1993; Bahnson, Miller & Budge 1996; Epstein, Nach & Bragg 2005) because the direct presentation is perceived to be easier to understand (Hovey 1986; Boze 1987; O'Leary 1988; Stickney & Weil 2003; Brahmasrene, Strupeck & Whitten 2004; Stice, Stice & Skousen 2004; Hodder, Hopkins & Wood 2008) and it is argued to be more useful in the prediction of future cash flows (Krishnan & Largay 2000; Plumlee 2003; Arthur & Chuang 2006; Orpurt & Zang 2009; Farshadfar & Monem 2011;

Farshadfar & Monem 2012; Farshadfar & Monem 2013; Hales & Orpurt 2013) and in the assessment of liquidity and solvency (Klammer & Reed 1990; Kojima 2012).

Therefore, a possibility exists that published and audited cash flow statements in Finland may not be congruent with the applicable standard – a phenomenon that has been reported in Italy (Mechelli 2009). Furthermore, it is possible that investors and other users make economic decisions based on the cash flow statements ignorant about the issues in the preparing and auditing practices; and as a result, possibly falsely trusting in a flawed statement. This could have economic consequences as scarce economic resources might not be efficiently allocated.

Limitations of the existing literature addressed by this study. Almost all of the existing empirical cash flow statement research has been conducted in different countries than Finland, for example in Australia, UK and US, and consequently, their results may not apply in the Finnish context. Furthermore, the existing research about cash flow statements is very specific in nature: it investigates some areas in great detail (for example, the usefulness in predicting future cash flows) but leaves other areas completely uncovered (for example, if preparers are lacking in effort to produce the statement correctly). This makes it hard, or impossible, for example, to assess of what quality[1] the published cash flow statements in Finland are because there may be factors in the preparing and auditing practices that drastically reduce quality – and thus potentially making the statement considerably less useful to users than what is suggested by international empirical research. This study will provide information on the "big picture": that is, 1) of what quality the published cash flow statements are, 2) what factors affect this quality, and 3) what this quality means for users of financial statements.

To my knowledge, there is no other research conducted in Finland, or elsewhere, that covers the whole lifespan of the cash flow statement from its preparation to its usefulness to financial statement users. This study addresses this void using Finnish empirical data specifically collected for this purpose from 840 authorised accountants, 325 authorised auditors, 956 private investors and 625 published cash flow statements. Because it is a pioneer study of a relatively inscrutable phenomenon (that is, the preparing, auditing and using cash flow statements in Finland), this study is explorative in nature. This leads to the following aim.

[1] I.e. to what extent the qualitative characteristics of useful financial information, as described by international accounting standard-setters, are met.

1.3 The aim of the study

The aim of the study is to discover problem areas in preparing and auditing cash flow statements and consider their effects on the quality of published cash flow statements and what they mean for financial statement users in the Finnish context. To achieve this, five distinct tasks will be completed – the first three relating to the discovery of problem areas.

First, several possible problems in the preparation and auditing of cash flow statements are to be identified based on, not only current research and other literature touching different aspects of cash flow statements, but also additional hunches stemming from my accounting work experience. Second, a meaningful classification of these possible problems into fewer, and broader, problem areas is to be introduced. Third, empirical evidence on the existence of these problem areas in Finland is to be provided by conducting, and statistically analysing the responses to, two surveys – one of accountants and other of auditors – as well as collecting and analysing published cash flow statements. Fourth, the effects of the discovered problem areas on the quality of published cash flow statements are to be assessed – the main basis being how they violate the qualitative characteristics of useful financial information as described by IASB and FASB. And fifth, the discovered problem areas' meaning for users is to be considered; mainly with a help of conducting, and statistically analysing the responses to, a third survey – one of investors. Agency theory will be used in this study to help explain the roles of preparers, auditors and users as well as the interrelationships among them.

1.4 Methodological basis

Ontological stand. The ontological assumption of this study sits closer to realism than idealism – realism referring to "reality as a concrete structure" and idealism referring to "reality as a projection of human imagination" (Morgan & Smircich 1980, 492). In this study, individuals are thought to have subjective interpretations of reality; however, through the process of conducting a survey and generalizing the results to a population, a single objective structure of reality is formed. Similarly, collecting the published cash flow statements provides a single objective reality of

the cash flow statements in Finland. However, the reality is assumed to be time-dependent; that is, preparers', auditors' and users' perceptions as well as the quality of published cash flow statements may vary across time. The notion of a single concrete reality is typically associated with positivistic perspective, but rather than seeing people as passive adapters to reality, which is typical of positivistic perspectives (Hoque 2006, 1), this study assumes reality – and accounting practices as parts of it – to be socially constructed. It is acknowledged that the preparation, auditing and using of cash flow statements occur within a social, cultural and political structure. This could be referred as seeing reality from institutional and contextual perspectives (Hoque 2006, 3).

Epistemological stand. A positive perspective is embedded in this study as it is assumed that information about reality can be gathered through observation rather than understanding. This study accepts the epistemological stand articulated by Nazari, Kline and Herremans (2006, 429) that when the topics of interest are the beliefs, attitudes, values, opinions and intentions of individuals, then the most appropriate sources for that information are the individuals themselves; it is assumed that these subjective perceptions matter, as perceptions of reality are more powerful than reality itself because people act on their perceptions. Similarly, information about the reality of different aspects of published cash flow statements in Finland can be gathered by observing them.

Methodological stand. Methodologically this study resembles the scientific method as described by Ryan, Scapens and Theobald (2002, 34–36). It is written out conforming to the traditionally preferred (Abdel-khalik & Ajinkya 1979) formal structure, where statistical methods are used on the empirical data in order to test the hypotheses formulated in the preceding theoretical section. But unlike the scientific method in its purest form, the hypotheses in this study are not formulated based on a strong previous theory, but instead on the sometimes mixed results of numerous previous studies concerning different aspects of the research topic as well as my work-experience-based hunches.

Regarding the formulation of hypotheses, Medawar (1986, 51) suggests that every recognition of a truth is preceded by an imaginative preconception of what the truth might be – the hypothesis. According to Homans and Curtis (1934/1970, 23), a hypothesis may simply mean a guess, a hunch, an assumption which points to a possibly fruitful line of work; furthermore, Machlup (1955, 3) argues that no fixed

lines can be drawn between theories, hypotheses and mere hunches, the differences being at best those of degree. (Chambers 2002, 794.) Not least because the existing research literature about preparing, auditing and using cash flow statements is scarce and the results sometimes mixed, also my work-experience-based hunches play a role in the hypotheses formulation.

Classification of this study. First, based on the ontological, epistemological and methodological assumptions described above, and taken into consideration that preparers, auditors and users are not able to act solely on their free will as there are regulations guiding their actions, this study sits most comfortably in Burrell and Morgan's (1979, 1–28) functionalist paradigm in that it leans towards the objective end of their subjective-objective dimension about the nature of science, and towards the regulation end of their regulation-radical change dimension about the nature of society. Second, since it investigates the problem areas in preparing, auditing and using cash flow statements through, mainly, describing them, this study could be categorised as mainstream accounting research following Hopper and Powell's (1985) or Chua's (1986) classification – although there is a critical undertone in that highlighting problem areas may give impetus to accountants, auditors and users to re-evaluate their current practices. This study seeing reality – contradictory to mainstream accounting research – as a socially constructed and an ever-changing structure is, however, irrelevant because the point of focus is at a specific point in time; therefore by removing time as a variable, an external and stable reality is created, albeit temporarily. Third, based on the traditional Finnish classification, this study could be categorised as nomothetic research. Nomothetic research methodology is positivist-empirical and it usually relies on a large sample of data; testing hypotheses and finding evidence are emphasised, and the key characteristics include discovering generalizations, patterns and recurrences (Neilimo & Näsi 1980; Näsi 1980).

Finally, this study can be seen as exploratory research. Exploratory surveys are used to find basic facts and become familiar with the phenomenon under investigation (Nazari et al. 2006, 429). According to Yin (2003) an exploratory study researches a phenomenon where the phenomenon being studied has no clear, single set of outcomes; exploratory research does not attempt to provide conclusive answers to the phenomena, but it guides a researcher to develop ideas for future research. Such a study enables the researcher to generate hypotheses about the

reasons for a particular accounting practice, and these hypotheses can be tested in subsequent studies (Ryan et al. 2002, 144). This study is explorative because – in addition to investigating the issues suggested by existing research – it attempts to discover problem areas previously unidentified. Furthermore, it does not focus on the reasons for the discovered problem areas in the accounting and auditing practices, but rather, it describes them and considers their effects on the quality of published cash flow statements and what they mean for users of financial statements. Highlighting problem areas in this rather general manner may give incentives for more specific subsequent research. In addition, this research setting could be used in another country.

1.5 The structure of the study

The remaining of this study is structured in the following way: Chapter 2 provides the literature presented in the literature review in much greater detail and also introduces other literature as well as my work-experience-based hunches; after considering these, it develops the research hypotheses to be empirically tested. The second level headings 2.1 through 2.6 reflect the subjects of the anticipated problem areas – thus they introduce the six-point classification – while subchapter 2.7 summarises the theoretical framework and the formulated hypotheses. Chapter 3 discusses this study's research methods and related ethical issues as well as describes and assesses the empirical data. The empirical results are then presented and discussed in chapters 4 and 5, respectively, and finally, chapter 6 provides conclusions.

The results and their discussions are provided one by one in great detail to inform readers how each result is inferred from the data, how each result fits in with prior research, and how the conclusions are derived from the results. This way, readers are free to examine each result independently in great detail, or at the other extreme, just glance through them from the tables provided in chapter 4.5.

1.6 Glossary

Adverse selection: Adverse selection is a term used in *agency theory*. Generally, it arises even when the principal is able to observe an agent's behaviour but is unable to determine whether the effort extended by the agent is the most appropriate behaviour. In this study, it refers to *preparers* purposely manipulating the figures presented on the cash flow statement and not disclosing it, and *auditors* not acknowledging the manipulation.

Agency theory: Agency theory is used in this study to help explain the roles of *preparers*, *auditors* and *users*. Generally, it deals with resolving agency problems that can occur in principal-agent relationships. The two agency problems central to this study are *adverse selection* and *moral hazard*. In this study, the principal refers to *users*, and the agent refers to *preparers*. *Auditors* serve principals as the monitors of agents' actions and outputs – that is, the financial statements (and the cash flow statements within them).

Auditor: An auditor audits financial statements (and cash flow statements). In this study, the results concerning auditors refer to KHT- and HTM-auditors.

Direct method: The direct method for presenting operating cash flows, which discloses major classes of gross cash receipts and gross cash payments.

FAS: Finnish Accounting Standards, which comprise of Accounting Act and Accounting Ordinance. Accounting Act 1:3 further requires entities to follow good accounting practice, which is not defined in Accounting Act or Accounting Ordinance; instead it is formed by accepted accounting practices, applicable regulations and instructions as well as accounting and auditing professions. *KILA* is a significant source of instructions on good accounting practice.

FAS manual preparer: A *manual preparer* who prepares cash flow statements primarily under *FAS*.

FASB: Financial Accounting Standards Board

IAS 7: IAS 7 Statement of Cash Flows, which regulates the preparation of cash flow statements under *IFRS*.

IASB: International Accounting Standards Board

IFRS: International Financial Reporting Standards, which refer to both IASs and IFRSs. International accounting standards (IASs) were issued by the

International Accounting Standards Committee (IASC). International financial reporting standards (IFRSs) are issued by *IASB*.

IFRS manual preparer: A *manual preparer* who prepares cash flow statements primarily under *IFRS*.

Indirect method: The indirect method for presenting operating cash flows, which adjusts net profit or loss for the effects of transactions of a non-cash nature, any deferrals or accruals of past or future operating cash receipts or payments, and items of income or expense associated with investing or financing cash flows.

KILA: Kirjanpitolautakunta, which is a government accounting standard-setting body in Finland.

KILA 30.1.2007: *KILA*'s Yleisohje rahoituslaskelman laatimisesta 30.1.2007, which regulates the preparation of cash flow statements under *FAS*.

Manual preparer: A *preparer* who typically prepares cash flow statements completely manually or by manually modifying a version printed from an accounting system.

Moral hazard: Moral hazard is a term used in *agency theory*. Generally, it relates to a lack of effort by the agent as a result of the principal having restricted ability to observe the performance of the agent directly, and the principal can only assess an agent's performance based on the outcome. In this study, it refers to a lack of effort by *preparers* to construct the cash flow statement correctly, and to a lack of effort by *auditors* to audit the cash flow statement meticulously.

Preparer: A preparer prepares financial statements (and cash flow statements). In this study, the results concerning preparers refer to KLT-accountants (who prepare cash flow statements).

Q4: The fourth quarter (i.e. the last three months) of an accounting period

SFAS 95: SFAS No. 95 Statement of Cash Flows, which regulates the preparation of cash flow statements in the US. A Statement of Financial Accounting Standards (SFAS) is issued by *FASB*.

User: A user utilises financial statements (and cash flow statements) in economic decision-making. In this study, the results concerning users refer to private investors in Finland who utilise financial statement information in their economic decision-making.

2. Theoretical framework and 24 hypotheses

The literature about cash flow statements that could be found for this study is presented in this chapter 2. As the aim was to gather as many prior writings touching different aspects of the cash flow statement and cash flow information as possible, the literature found extends across 10 decades – from a book published in 1924 to the latest scientific article published in 2014. Although the emphasis is on the most current, the literature within a topic is often presented loosely following a chronological order starting from the oldest to the newest.

2.1 The perceived usefulness/importance of the cash flow statement as a motivator for preparers, auditors and users

2.1.1 Objectives of cash flow statements

Objectives of cash flow statements as part of financial statements. From the perspective of the investment community at large, capital markets serve to allocate society's scarce resources across competing demands and provide a means for societal risk sharing. Elliott and Jacobson (1994, 90) note that rich disclosure contributes to effective allocation of capital by enabling investors and creditors to identify the most productive enterprises. The efficiency of capital markets requires the provision of relevant information that is useful in setting prices. (Cheng et al. 1997, 2.) Financial statements have a crucial role in this information provision: because most users cannot require reporting entities to provide information directly to them, they must rely on published financial statements for much of their financial information needs (FASB 2010, OB5; IASB 2010, OB5).

Indeed, financial statements are an important source of information for investment and credit decisions: Yap (1997, 653, 661–662) reports that financial statements are the most used source of information for financial decision-making by workers in Australian finance industry, leaving behind other sources, such as industry data and reports, economic data and reports, media reports, investment advisers, company visits, and recommendations from friends. On the other hand, Anderson and Epstein (1995, 26) note that amateur investors tend to rely more heavily on the advice of their share broker and financial newspapers and magazines than on the financial statements for making investment decisions; it may be presumed, however, that these sources draw heavily on published financial statements (Yap 1997, 662).

Because the cash flow statement is a part of the financial statements, it shares the same objectives set to financial reporting in general. Both IASB (2010) and FASB (2010)[2] state in their respective *Conceptual Frameworks for Financial Reporting Chapter 1: The Objective of General Purpose Financial Reporting* paragraphs OB2 and OB3 that: The objective of financial statements[3] is to provide financial information about the reporting entity that is useful to existing and potential investors, lenders and other creditors in making decisions about providing resources to the entity. Decisions by investors depend on the returns that they expect from an investment, for example dividends, principal and interest payments or market price increases. Similarly, decisions by lenders and other creditors depend on the principal and interest payments or other returns they expect. Investors', lenders' and other creditors' expectations about returns depend on their assessment of the amount, timing and uncertainty of (the prospects for) future net cash inflows to the entity. Consequently, existing and potential investors, lenders and other creditors need information to help them assess the prospects for future net cash inflows to an entity. Henceforth, this study uses the term "predict" future cash flows instead of "assess the prospects for" future cash flows.

In addition to providing information useful in predicting an entity's future cash flows, financial statements should provide information that is useful in assessing an entity's liquidity and solvency (FASB 2010, OB13, BC1.34; IASB 2010, OB13).

[2] The most important standard-setters internationally are IASB and FASB (Troberg 2007, 26).

[3] The term "financial statements" used in this study refer to the term "general purpose financial reporting" that is used by both FASB (2010) and IASB (2010).

The cash flow statement is useful for these purposes: the information about an entity's cash flows during a period helps users predict its future net cash inflows, understand its operations, evaluate its financing and investing activities, assess its liquidity or solvency and interpret other information about financial performance (FASB 2010, OB20; IASB 2010, OB20).

In Finland, Accounting Act 3:2.1 states that financial statements should provide correct and sufficient information (a true and fair view) about an entity's operating results and financial position. Although cash flow information is not specifically mentioned, a true and fair view of an entity's operating results and financial position is expected to be provided by financial statements as a whole. A true and fair view should be evaluated as an aspiration and readiness to provide relevant information about an entity (Helenius 1993); financial statements are not an end result of a scientific analysis, but rather they are based on the best knowledge and expectations available at the time of preparation (Määttä 2000, 23–24). The fundamental objective of financial statements of a public limited liability company is to provide investors relevant and sufficient information (KHT-yhdistys 2008, 157).

Specific objectives of cash flow statements. There are objectives set specifically to cash flow statements in the applicable standards guiding their preparation. In Finland, cash flow statements must be prepared in accordance with either Kirjanpitolautakunta's[4] (henceforth KILA) *Yleisohje rahoituslaskelman laatimisesta 30.1.2007* (henceforth KILA 30.1.2007) or IAS 7[5] *Statement of Cash Flows* (henceforth IAS 7). Another important standard for preparing cash flow statements is SFAS[6] No. 95 *Statement of Cash Flows* (henceforth SFAS 95) in the US.

The objective section of IAS 7 as well as IAS 1 *Presentation of Financial Statements* (henceforth IAS 1) paragraph 111 state that cash flow information is useful in providing users of financial statements with a basis to assess the ability of the entity to generate cash and cash equivalents and the needs of the entity to utilise those cash flows. The objective section of IAS 7 further states that the economic decisions taken by users require an evaluation of the ability of an entity to generate cash and cash equivalents and the timing and certainty of their generation.

[4] Kirjanpitolautakunta is a government accounting standard-setting body in Finland.

[5] International accounting standards (IASs) were issued by the International Accounting Standards Committee (IASC). International financial reporting standards (IFRSs) are issued by IASB, IASC's successor body.

[6] A Statement of Financial Accounting Standards (SFAS) is issued by FASB.

IAS 7 paragraph 4 states that cash flow statements, when used in conjunction with the rest of the financial statements, provide information that enables users to assess[7] the changes in net assets of an entity, its financial structure (including its liquidity and solvency) and its ability to affect the amounts and timing of cash flows in order to adapt to changing circumstances and opportunities. Cash flow information is useful in assessing the ability of the entity to generate cash and cash equivalents and enables users to develop models to assess and compare the present value of the future cash flows of different entities. IAS 7 paragraph 5 states that historical cash flow information is often used as an indicator of the amount, timing and certainty of future cash flows. It is also useful in checking the accuracy of past assessments of future cash flows and in examining the relationship between profitability and net cash flow and the impact of changing prices.

SFAS 95 paragraph 4 states that the primary objective of the cash flow statement is to provide relevant information about the cash receipts and cash payments of an enterprise during a period. SFAS 95 paragraph 5 states that the information provided in a cash flow statement, if used with information in the other financial statements, should help investors, creditors, and others to 1) assess the enterprise's ability to generate positive future net cash flows; 2) assess the enterprise's ability to meet its obligations, its ability to pay dividends, and its needs for external financing; and 3) assess the reasons for differences between net income and associated cash receipts and payments.

KILA 30.1.2007 section 2 states that: The fundamental objective of cash flow statements is to provide users of an entity’s financial statements with information that is useful in assessing how the entity has generated cash inflow and how the entity has used the generated cash inflow. Cash flow statements help users of financial statements in assessing the changes in an entity’s financial position and financial structure, including liquidity and solvency. Cash flow statements are typically used in predicting future cash flows of an entity.

As it can be seen from the discussion above, the objectives given to cash flow statements are practically identical in the applicable standards KILA 30.1.2007, IAS 7 and SFAS 95, and furthermore, the objectives are in unison with the objectives given to financial statements as a whole: to summarise, the cash flow statement

[7] IAS 7 paragraph 4 uses the term “evaluate” instead of the term “assess”.

should provide users of financial statements with information that is useful, especially in predicting future cash flows of an entity, and also in assessing an entity's liquidity and solvency. Given this discussion, I predict that users use the cash flow statement mainly for predicting future cash flows or for assessing liquidity. This leads to hypothesis U1[8]:

H_U1[9]: *Most users of financial statements use the cash flow statement mainly for predicting future cash flows or for assessing liquidity.*

The related analysis will be based on question U1[10], which investigates for which purpose users mainly use the cash flow statement in their economic decision-making while acknowledging that some users of financial statements may not utilise cash flow statements at all (printed versions of the questionnaires are included at the end of this study as follows: Appendix 1 – the questionnaire for preparers, Appendix 2 – the questionnaire for auditors, and Appendix 3 – the questionnaire for users):

Q_U1: *For which purpose do you mainly utilise the cash flow statement in your economic decision-making?*

- *Prediction of future cash flows of an entity or an investment*
- *Assessment of the liquidity of an entity*
- *Other*
- *I do not utilise cash flow statements at all.*

2.1.2 Usefulness of cash flow statements to users

The usefulness of cash flow statements in predicting future cash flows

Many decision-usefulness theorists advocate cash flow information based on the investor's desires to predict future cash flows (Staubus 1961; Revsine 1973). From

[8] Hypotheses U1 – U8 relate to using cash flow statements.
[9] At this stage, the hypotheses will use terms "most" or "few" indicating the prediction. Percentages will be provided in the results section where the data are analysed.
[10] Questions U1 – U8 relate to using cash flow statements.

the perspective of investors, the projected cash flow would reflect both the company's ability to pay its way in the future and its planned financial policy (Lee 1972b). Most advocates of cash flow information feel that the problems of asset valuation and income determination are so formidable that the inclusion of cash flow statements in company reports was warranted. (Belkaoui 1992, 449.) Indeed, the value of an entity's shares is fundamentally affected by the entity's ability to generate cash flow (Barth et al. 2001, 28). Several authors (Jones et al. 1995, 115; Mills & Yamamura 1998, 53; Steyn & Hamman, 2003, 182) suggest that cash flow statement figures are more useful for investors than figures shown on other statements (Mechelli 2009, 233). For example, Miranda-Lopez and Nichols (2012) report that investors in Mexico use cash flows more than earnings, and that valuation by using cash flows, compared to using earnings, has a lower chance of producing prediction errors (Hanini & Abdullatif 2013, 125).

The predictive ability of past cash flows for future cash flows has been reported in empirical research. For example, Burgstahler et al. (1998) find that cash flows have more predictive ability than aggregate earnings. The basis for predicting future cash flows is typically the cash flow from operating activities because it tells investors how much cash the regular business operations of the entity is creating; investing and financing cash flows are often more irregular in nature (Troberg 2007, 105).

The usefulness of cash flows from operating activities has been reported in numerous studies. Bowen et al. (1987) as well as Livnat and Zarowin (1990) demonstrate the usefulness of the cash flow statement information and show that operating cash flows associate positively to the market returns. Finger (1994) as well as Lorek and Willinger (1996) compare operating cash flows and earnings time-series data, and conclude that cash flows from operating activities contain better predictive ability than earnings (Chu 1997, 185). Chu (1997, 181) reports that during a period of 1990–1994, right after the promulgation of Taiwan's accounting standard for cash flow statement in 1989, share returns positively associate with cash flows from operating activities. From another perspective, Jones et al. (1995, 115–116, 119–120) find that Australian preparers of cash flow statements rate the cash flow from operations as the most important cash flow measure.

Research findings are not as unanimous regarding the predictive abilities of investing and financing cash flows. Miller and Rock (1985) postulate that an

increase in investment is positively associated with share returns due to higher future cash flows; McConnell and Muscarella (1985) support the argument. On the other hand, Amihud and Lev (1981) argue that the reforming of a portfolio may be rather due to manager's personal motivation and conclude a negative market reaction would be expected. An insignificant result for investing cash flows is also found in Livnat and Zarowin's (1990) study. Under Miller and Modigliani's (1961) perfect world postulation, the capital structure or dividend policy would be irrelevant to the share valuation. However, cash flows from financing are viewed as a signal to the market. Ross (1977) as well as Leland and Pyle (1977) suggest that debt issuance may be perceived as a good indicator of future cash flows. Miller and Rock (1985) argue that the market should have a negative response to such financing methods which may lower the future operating cash flows. (Chu 1997, 185.) Chu (1997, 181–182) finds evidence from Taiwan's share market on the predictive ability of financing cash flows, but the role of investing cash flows remains unclear.

Free cash flow (FCF) has become increasingly important in financial statement analysis; FCF is defined as cash without any restrictions on its use, or as cash being available for any purpose at any time – thus, a concept similar to appropriated retained earnings (Weiss & Yang 2007, 30). FCF, which is derived from the cash flow statement, is viewed as a critical criterion for financial analysts, as it would not be affected by the discretionary choice of accounting methods. Instead of Earnings/Price ratio (E/P), the level of FCF/Price may be a better option to look into when making investment decisions. Hackel and Livnat (1995) have developed an investment strategy based on FCF/Price, and they argue that it is able to measure more accurately the investment-recapture period than E/P; they also provide a live portfolio and find supportive results. Copeland, Koller and Murrin (1987) point out that the results of returns/earnings that are unclear may be due to earnings manipulation and conclude that the cash flows, or FCF, may be the main information for the market. (Chu 1997, 185–186.)

Much of the accounting literature stresses that the prime purpose of financial statements is to assist investors predict future cash flows from their investment, that is, the cash flows arising from dividends or from sale of shares, and an analysis of operating cash flows should give indications of the extent to which a company can generate positive future cash flows from its operating activities – in addition, cash

flow statements provide the significant advantage of highlighting any trends in the relationship between profit and cash flow (Whittington 1974; Jones 1975; Climo 1976; Ijiri 1978). Since shareholders are concerned with dividends, it is claimed that cash flows, not earnings, are a better indicator of future dividends – cash must be available before dividends can be paid (Lawson 1971; Lee 1974; Hawkins 1977; Mathews 1989). If dividends are set at levels consistently exceeding post-tax entity cash flows then such a shortfall must be debt-financed, which, in tum, adds both to future contractual interest payments, loan/overdraft repayments, and threatens the entity's capacity to remain solvent. (Yap 1997, 655–656.) Indeed, investors and analysts do predict dividends as part of their share valuation work (Consler et al. 2011, 482).

While the link between earnings and dividends has traditionally been reported in the literature, little work has been done linking cash flows directly to dividends. For example, Campbell and Shiller (1988) establish a link between the moving average of a firm's earnings and the present value of all future dividends. McCann and Olson (1994) provide further support for the relationship between a firm's earnings and dividends. Benartzi, Michaely and Thaler (1997) find that dividends convey information on current and past earnings and argue that the reverse may be true also. Lamont (1998) uses quarterly earnings to help predict short-term returns successfully. Fama and French (2001) support profitability as one characteristic that affects a firm's decision to pay cash dividends; they find that strongly negative earnings cause termination of cash dividend payments – thus suggesting a relationship between earnings and cash dividends. Finally, Bali, Ozgur and Tehranian (2008) find a strong positive relationship between earnings and expected returns, which include dividends. (Consler et al. 2011, 482–483.)

To investigate whether cash flows are a better predictor of dividends than earnings, Consler et al. (2011, 482–484, 488) use data from 1902 dividend-paying firms between the years 2000 and 2006 to compare the relative usefulness of operating cash flow and earnings in the prediction of dividends. Their findings indicate that cash flow per share is a better predictor of dividends per share than earnings per share. However, they use estimated cash flows, rather than reported cash flows, in their study.

Through analysing an earnings-based prediction model by Dechow, Kothari and Watts (1998) for next period's cash flow, Barth et al. (2001, 28, 56) reveal that the

various accrual components of earnings capture different information about cash flows, and that aggregate earnings, and thus aggregate accruals, mask this information by weighing the components equally. They find that disaggregating earnings into cash flow and six major accrual components – change in accounts receivable, change in inventory, change in accounts payable, depreciation, amortisation, and other accruals[11] – significantly enhances the predictive ability of earnings. The key insight from this is that expected future cash flows can be expressed as a function of current cash flow and major accrual components of current earnings.

Noteworthy is that the process of disaggregating earnings into cash flow and several accrual components is, in effect, similar to the process of preparing an indirect cash flow statement. The operating activities section of an indirect cash flow statement starts with accrual-based net income, adjusts it for the non-cash-flow effects of accrual components – that is, change in accounts receivable, change in inventory, change in accounts payable, depreciation, amortisation, and other accruals – and ends up in net operating cash flow. Therefore, it can be argued, that the results by Barth et al. (2001) suggest that the indirect-method cash flow statement is more useful in predicting an entity's future cash flows than the income statement.

Contributing to the growing number of studies (Barth et al. 2001; Al-Attar & Hussain 2004) conducted in the 2000s using reported operating cash flows consistently documenting that reported cash flow from operations is a better predictor of future cash flows than earnings, Farshadfar et al. (2008, 254, 256) examine the relative usefulness of earnings, cash flow from operations as reported on the cash flow statement, and two traditional estimates of cash flow (i.e. earnings plus depreciation and amortisation expense, and working capital from operations) in predicting future cash flows for Australian entities with a sample of 323 companies listed on the Australian Stock Exchange between 1992 and 2004 – resulting in 3,512 firm-years. Their findings indicate that the reported cash flows from operating activities are more useful in predicting future cash flows than earnings and traditional cash flow estimates. Furthermore, they find that although the predictability of both earnings and operating cash flows significantly increases with

[11] The term "accruals" refers to adjustments from operating cash flow to earnings.

firm size, the superiority of operating cash flows to earnings in predicting future cash flows is robust across small, medium and large firms.

Using a sample of 1174 firms spanning the interval from 1989 to 2004, Lorek and Willinger (2009, 1, 3, 13–14) investigate the ability of reported operating cash flows and earnings to predict future operating cash flows. They find that cash-flow-based models provide significantly more accurate predictions than earnings-based models. They also find that larger firms exhibit significantly more accurate cash-flow predictions than smaller firms, and that firms with relatively shorter operating cycles exhibit significantly more accurate cash flow predictions than firms with longer operating cycles. Their results are consistent with the relevance literature exemplified by Francis and Schipper (1999) as well as Ryan and Zarowin (2003), among others, which conclude that the relevance of earnings is deteriorating over time implying a growing inability of earnings to predict future cash flows.

Lorek and Willinger (2009, 12–13) also present additional analyses regarding the predictive power of cash flows as reported on the cash flow statement versus estimated cash flows. They find that their cash-flow-based prediction model performs more poorly when using estimated cash flow data – as opposed to reported cash flow data – as input; thus indicating that the algorithmic noise induced on the estimated cash flows may be responsible for the diminished predictive power of their model. All in all, Lorek and Willinger's (2009) findings are conforming to the previous results of Farshadfar et al. (2008) in that the reported operating cash flows are more useful in predicting future cash flows than earnings or estimated cash flows. From another angle, Yap (1997, 653, 665) reports that workers in Australian finance industry tend to consider cash flow statements useful in predicting future cash flows.

With a sample of 29090 firm-year observations from 1988 to 2004, Cheng and Hollie (2008, 29–30, 36, 51) examine the role of core and non-core cash flow components in predicting future cash flows. They define items that are closely related to operating activities – for example, cash flows related to sales, cost of goods sold and operating expenses – as core cash flows; cash flows related to interest, taxes and non-recurring operating activities are considered non-core cash flows. Their findings indicate that the use of these cash flow components enhances the predictive ability of cash flow prediction models. They also note that the

improvement in prediction models resulting from disaggregating cash flows is most apparent for large firms with high cash flows and earnings variability.

Orpurt and Zang (2009, 893) state that cash flow statements – especially the direct method cash flow statements – are useful to investors in predicting future cash flows and earnings. While Cheng and Hollie (2008) show that estimated direct method components improve the prediction of future operating cash flow relative to aggregate operating cash flow, Orpurt and Zang (2009, 893–896) argue that it is specifically the components of cash flow that are reported in the operating activities section prepared using the direct method that are of fundamental usefulness to users in predicting an entity's future cash flows and performance. Indeed, there is a vast support in the research literature for the direct method cash flow statements as being the primary source of information for predicting future cash flows, as it will be further discussed in chapter 2.6.2.

In summary, the above discussion suggests that cash flow information is more useful than earnings information in predicting future cash flows – may these cash flows be those flowing into the entity, or those flowing to investors in forms of dividends or gains resulting from selling their shares. More specifically, even though estimated cash flows are shown to have more predictive power than earnings, it is the operating cash flows reported on the cash flow statement that are incrementally useful, over and above estimated operating cash flows and earnings. Lastly, it is suggested that cash flow statements prepared in accordance with the direct method are more useful in predicting future cash flows than cash flow statements prepared in accordance with the indirect method. Hypothesis U2 addresses this discussion and investigates whether users in Finland consider the cash flow statement the most useful financial statement section for future cash flow predictions:

> H_U2: *Users of financial statements consider the cash flow statement to be the most useful financial statement section in predicting an entity's future cash flows.*

The related analysis will be based on question U2, which investigates how users rate the different financial statement sections in predicting an entity's future cash flows:

Q_U2: *Put the different sections of financial statements (balance sheet, income statement, cash flow statement and notes) in an order that reflects how useful you consider them to be in predicting an entity's future cash flows.*

The usefulness of cash flow statements in assessing liquidity and solvency

In addition to predicting an entity's future cash flows, both KILA 30.1.2007 section 2 and IAS 7 paragraph 4 suggest that cash flow statements are useful in assessing an entity's liquidity and solvency. Since the 1970s, the increasing belief that operating cash flow coverage rather than asset liquidation value is the crucial element in solvency analysis has emphasised the need for cash flow information (Lee 1974; Staubus 1977; Lee 1978; Heath 1985; Staubus 1989). Solvency assessments devolve to an assessment of whether a company's solvency will be sustained. The information on cash flow statements providing insight into the amounts, timing and certainty of a company's future cash receipts and payments is useful to such an assessment. (Yap 1997, 655.)

Several dramatic corporate failures have demonstrated the usefulness of cash flow statements in solvency assessments. The infamous W. T. Grant Company bankruptcy in the US (Largay & Stickney 1980), the fall of Laker Airways in the UK (Lee 1982), and Hooker Corporation (Flanagan & Whittred 1992) and Brash Holdings (Sharma 1996) in Australia, among others, illustrate the value of cash flow information over accrual information for assessing corporate solvency. In all of these and other cases, accrual measures of solvency did not indicate financial distress sufficiently early to avoid or minimise economic losses suffered by investors and lenders. On the contrary, cash flow information, particularly cash flow from operations, revealed imminent bankruptcy as long as 10 years prior to the entity's demise. In each case, cash flow from operations was historically declining whereas accrual solvency indicators either increased or remained stable. (Sharma & Iselin 2003, 125.)

In addition to these reports of high profile company failures, studies indicating support for cash flow analysis by investment professionals have increased awareness of the need for cash flow information to enable users to assess the cash-

generating ability of entities. It has been asserted that the disclosure of cash flow statements would have provided early warning of the liquidity crisis facing companies (Peirson et al. 1991, 3). (Yap 1997, 667.) Cash flow ratios, such as operating cash flow to current liabilities and operating cash flow to total liabilities, are valuable in assessing short- and long-term liquidity (Broome 2004, 16).

Mills and Yamamura (1998, 53) argue that, when it comes to liquidity analysis, cash flow statements are more useful than balance sheets or income statements. Balance sheet data are static – measuring a single point in time – while the income statement contains many arbitrary non-cash allocations, such as depreciation and amortisation. In contrast, the cash flow statement records the changes in the other statements and nets out the book-keeping artifice, focusing on what shareholders really care about: cash available for operations and investments.

Creditors and lenders have begun to use cash flow ratios in assessing liquidity and solvency because those ratios give more information about an entity's ability to meet its payment commitments than do traditional balance sheet working capital ratios such as the current ratio or the quick ratio. When loan officers evaluate the risk they are taking by lending to a particular entity, their greatest concern is whether the entity can pay the loan back, with interest, on time. Traditional working capital ratios indicate how much cash the entity had available on a single date in the past. Cash flow ratios, on the other hand, test how much cash was generated over a period of time and compare that to near-term obligations, giving a more dynamic picture of the entity’s ability to meet its commitments. (Mills & Yamamura 1998, 55.) Kirkham (2012, 1) finds that traditional ratios (current ratio, quick ratio & interest coverage ratio) can often lead to incorrect decisions about an entity’s liquidity and therefore should be compared against cash flow ratios (cash flow ratio, critical needs cash coverage ratio & cash interest coverage ratio).

Sharma and Iselin (2003, 123–124, 127, 130, 132) investigate the usefulness of reported cash flow and accrual information in a behavioural field solvency assessment experiment. Using sixty bankers with at least three years of corporate lending experience, they randomly form two experimental groups that are randomly provided either accrual information or cash flow information; that is, three consecutive years of financial ratios of 14 companies. Based on these information sets containing the same number of cues, bankers make solvency judgments – specifically, corporate failure judgments. The results provide strong evidence that

bankers using cash flow information make statistically significantly more accurate judgments than bankers using accrual information; the difference in judgment accuracy is more pronounced for insolvent (failed) companies than for solvent (non-failed) companies. Therefore, it is implied that cash flow information is more useful than accrual information in assessing corporate solvency. From another angle, Yap (1997, 653, 664–665) finds empirical evidence that workers in Australian finance industry mostly see the cash flow statement as being needed for liquidity and solvency assessments.

In summary, the above discussion suggests that cash flow information is more useful than earnings information in assessing an entity's liquidity and solvency. Hypothesis U3 addresses this discussion and investigates whether users in Finland consider the cash flow statement the most useful financial statement section for liquidity assessments:

> H_U3: *Users of financial statements consider the cash flow statement to be the most useful financial statement section in assessing an entity's liquidity.*

The related analysis will be based on question U3, which investigates how users rate the different financial statement sections in assessing an entity's liquidity:

> Q_U3: *Put the different sections of financial statements (balance sheet, income statement, cash flow statement and notes) in an order that reflects how useful you consider them to be in assessing an entity's liquidity.*

Traditionally, users have regarded the balance sheet and the income statement as the two primary financial statement sections

The predictions in the previous two hypotheses may, however, prove to be false. This is because users have traditionally regarded the balance sheet and the income statement as the two primary financial statement sections, although the cash flow statement has been receiving more and more attention in recent years. For example, Kim and Kross (2005) observe that despite theoretical valuation models' favouring

the use of cash flows as input, net earnings is still widely used in share valuation and performance measurement settings by practitioners (Lorek & Willinger 2009, 3).

Much of the early research of users' perceptions was conducted by Lee and Tweedie. Their first study (1975) found that private and institutional shareholders consider the income statement the most important financial statement section. Similarly, Wilton and Tabb (1978) identified the income statement as the most widely read section of the financial statements. Lee and Tweedie's (1977) more extensive private shareholder study found accrual-based profitability data to be of particular relevance to 52 % of respondents whereas only 7 % categorised liquidity data in the same way; additionally, 46 % of respondents stated that they read the income statement thoroughly, whereas only 18 % read the funds statement[12] thoroughly. It is noteworthy, that the funds statement had only recently become a professional accountancy requirement in the UK (Lee 1983, 105). Lee and Tweedie (1981, 73) extended their research by examining the views of institutional investors and found that, despite the additional expertise and available resources for financial analysis, these expert users gave results similar to the private shareholders: accrual-based profitability was considered to be of the most importance. Similar results were obtained in Arnold and Moizer's (1984) study of methods used by UK investment analysts to appraise share investments. (Yap 1997, 657–658.)

Even after the issuance of the applicable standards concerning cash flow statements (for example, SFAS 95 in the US), users were still typically found to consider the cash flow statement less important than the balance sheet or the income statement: Epstein and Pava's (1992) survey of US shareholders shows that, while a majority of investors consider the cash flow statement important, they consider the balance sheet and the income statement even more important. Anderson and Epstein's (1995, 26) survey of Australian shareholders finds that, while the income statement is among the most thoroughly read sections of the financial statements, only 24 % of respondents indicated that they read the cash flow statement thoroughly. The lower perceived importance of the cash flow statement in Australia than in the US may be explained by the fact that cash flow statements were then a relatively new addition to Australian financial statements. (Yap 1997, 658.)

[12] The funds statement was the predecessor of the cash flow statement, as it will be discussed in chapter 2.2.1.

Yap (1997, 653, 662) reports that workers in Australian finance industry rank the balance sheet and the income statement as the two primary sections of the financial statements, and the cash flow statement and the notes share the third place. Yap (1997, 662–663) concludes that while the cash flow statement is important to users of financial statements as a source of financial information, it has not replaced the balance sheet and the income statement in decision-making; this may reflect users' relative lack of familiarity with the cash flow statement as a tool of financial analysis.

However, reports exist stating that the perceived importance of the cash flow statement in relation to the other financial statement sections has been increasing: Epstein and Pava's (1992) survey of US shareholders shows that investors use the income statement less and less since the introduction of the cash flow statement when compared with results from Epstein's (1975) earlier study (Yap 1997, 658). Siegel (2006, 38) reports that as accrual-based figures started to lose reliability due to the scandals of Enron, WorldCom, and others in the early 2000s, many Wall Street analysts gravitated towards the cash flow statement; companies are now regularly evaluated on the basis of cash flow measures. Similarly, Price (2013, 356) notes that in the wake of recent accounting scandals and hundreds of earnings restatements, cash flow has become an increasingly popular measure, commonly thought to be less subject to managerial manipulation. Indeed, in recent years, the use of cash flow statements has increased rapidly (Mechelli 2009, 233).

As a measure of corporate performance, net operating cash flow is used as a numerator in certain financial ratios, such as the cash flow interest coverage ratio, the operating cash flow to total liabilities ratio, the operating cash flow to capital expenditures ratio, the cash flow per share ratio (CEPS), and the cash flow rate of return on investment ratio (CFROI) (Carslaw & Mills 1991, 64–69; Stickney 1993, 387–397). The cash flow interest coverage ratio, the operating cash flow to total liabilities ratio, and the operating cash flow to capital expenditures ratio are often used in contracts with creditors. Net operating cash flow, CEPS, and CFROI are often used in computing management incentive compensation. (Nurnberg 2006, 212.) Major credit-rating agencies use cash flow ratios prominently in their rating decisions, and bondholders – especially junk bond investors – and leveraged buyout specialists use cash flow ratios to clarify the risk associated with their investments (Mills & Yamamura 1998, 53).

Similar to finance and accounting literature, also banking literature emphasise the importance of cash flow information (Fulmer, Gavin & Bertin 1991). Yet, Gadenne and Iselin (1996) report that bankers consider cash flow information less important than accrual information for assessing corporate solvency. Despite the argued superior usefulness of cash flow information in assessing corporate liquidity and solvency (as discussed in chapter 2.1.2), the results of Gadenne and Iselin (1996) suggest that bankers are under-utilizing the cash flow statement. (Sharma & Iselin 2003, 123–124.)

Investors' increased focus on the cash flow statement is beneficial because analysing the cash flow statement is integral to understanding a company's financial performance and position (Siegel 2006, 39). Net operating cash flows less certain investment outflows is often used in discounted cash flow models to estimate the total value of a corporation (Penman 2001, 111–114); dividing this estimated total value by the number of shares outstanding generates an estimate of intrinsic value per share that is used in fundamental investment analysis (Nurnberg 2006, 211–212). Analysts and other financial statement users have used the operating activities section of the cash flow statement as a reality check on the reliability of the revenues and expenses reported on the income statement (Broome 2004, 18). Indeed, investors are looking more closely at cash flows from operations than ever before (Cheng & Hollie 2008, 30). The relative importance of the cash flow statement is expected to be further accentuated the more extensive the use of fair values in the balance sheet is becoming (Troberg 2007, 104).

2.1.3 Qualitative characteristics of cash flow statements

The main suggestion of the previous two chapters 2.1.1 and 2.1.2 is that the cash flow statement provides a better basis for predicting an entity's future cash flows and for assessing an entity's liquidity and solvency than do the accrual-based income statement and balance sheet. This is noteworthy, first, because the fundamental objective of the financial statements is to provide useful information that helps users to predict an entity's future cash flows, and second, because financial statements should also provide information that is useful in assessing an

entity's liquidity and solvency (FASB 2010, OB2, OB3, OB13, BC1.34; IASB 2010, OB2, OB3, OB13).

The usefulness of financial information is attributable to a number of qualitative characteristics. Cash flow statements share the same requirements for qualitative characteristics set to financial reporting in general. Both IASB (2010) and FASB (2010) state in their respective *Conceptual Frameworks for Financial Reporting Chapter 3: Qualitative Characteristics of Useful Financial Information* paragraphs QC4, QC6, QC12, QC20 and QC30 that: To be useful, financial information must be relevant and faithfully represent what it purports to represent, i.e. be relevant and reliable. Relevant information is capable of making a difference in the decisions made by users; in addition, financial information must not only represent relevant phenomena, but it must also faithfully represent the phenomena it purports to represent (i.e. be reliable). Comparability and understandability enhance the usefulness of financial information: information about a reporting entity is more useful if it can be compared with similar information about other entities and with similar information about the same entity for another period, and classifying, characterising and presenting information clearly and concisely makes it understandable.

Therefore, the two fundamental qualitative characteristics of cash flow statements are relevance and reliability (faithful representation)[13]; enhancing qualitative characteristics include comparability and understandability. Next, it is discussed how existing research literature sees the cash flow statement fulfil the requirement of relevance, and after that, the cash flow statement's potential to be reliable (a faithful representation), comparable and understandable is considered.

[13] IASB no longer lists reliability as a qualitative characteristic in the 2010 Conceptual Framework for Financial Reporting. The 2010 version superseded the Framework for the Preparation and Presentation of Financial Statements originally published in 1989. The Framework for the Preparation and Presentation of Financial Statements stated in paragraph 24 that the four principal qualitative characteristics are understandability, relevance, reliability and comparability; faithful representation is listed as a component of reliability in paragraphs 33 and 34 (IASB 2008). Similarly, FASB no longer lists reliability as a qualitative characteristic in the 2010 Conceptual Framework for Financial Reporting. The 2010 version replaced the Statement of Financial Accounting Concepts No. 2; Qualitative Characteristics of Accounting Information originally issued in 1980. The Statement of Financial Accounting Concepts No. 2 stated that relevance and reliability are the two primary qualities that make accounting information useful, and to be reliable, information must have representational faithfulness (FASB 2008, 2). It is important to note that, although the term "reliability" has now been replaced by term "faithful representation", the underlying meaning behind the terms remains fundamentally the same, as is evidenced in FASB's (2010, BC3.20) Basis for Conclusions: "Concepts Statement 2… … used the term reliability to describe what is now called faithful representation".

Throughout the later chapters of this study, the qualitative characteristics will be used as the main basis for assessing how the discovered problem areas in preparing and auditing affect the quality of published cash flow statements.

The relevance of cash flow information

Accrual-based earnings have been criticised for lacking relevance because of the historical emphasis. Moreover, the flexibility inherent in accounting principles provides preparers with the opportunity to use accruals to manipulate income to suit their own purposes (Bruns & Merchant 1990). As a result, many portfolio managers and analysts claim that the operating cash flow may be a more meaningful indicator of an entity's performance and value than reported earnings (Dechow 1994, 5). Indeed, cash flows are central to valuation models in both finance and accounting literature. (Cheng et al. 1997, 4.)

Finance literature. In finance literature, information about cash flows is essential to any investment and asset valuation decisions. Investment decisions are suggested to be made primarily based on the NPV of the particular investment; NPV being the present value of future cash flows minus the present value of the cost of the investment (Ross et al. 2005, 62, 168). A value of any asset depends on the amount, timing, and riskiness of the cash flows it is expected to produce (Brigham & Houston 2007, 404).

Only cash flow information is relevant to NPV, as it depends on future cash flows, not earnings (Brealey et al. 2008, 119, 143). NPV is a commonly used method as a survey conducted by Graham and Harvey (2001) shows: 75 % of CFOs always, or almost always, use NPV for evaluating investment projects. Another equally common method for evaluating investment decisions is internal rate of return (IRR). Like NPV, also IRR is based on discounting future cash flows. (Brealey et al. 2008, 118, 122.) The use of discounted cash flow techniques for investment appraisal purposes has emphasised the need for cash flow information (Lee 1981b, 13).

The value of any financial asset – a share, a bond, a lease, or even physical assets such as apartment buildings or pieces of machinery – is simply the present value of the cash flows the asset is expected to produce (Brigham & Houston 2007, 213). The value of a bond is equal to the future cash payments discounted at the spot rates

of interest (Brealey et al. 2006, 641). The value of a share is equal to the stream of future cash payments discounted at the rate of return that investors expect to receive on other securities with equivalent risks (Brealey et al. 2008, 106). Similarly, the value of the firm is the sum of the present values of the future cash flows (Ross et al. 2005, 86).

A share's value is found at the present value of the expected future cash flows, which consist of two elements: the dividends expected in each year and the price investors expect to receive when they sell the share. Two types of share valuation models can be used: the discounted dividend model and the corporate valuation model. The discounted dividend model calculates the value of a share as the present value of an infinite stream of dividends, whereas the corporate valuation model first calculates the firm's value as the present value of firm's future free cash flows; the firm's value can then be divided by the number of shares outstanding to find the value of a single share. Both models are widely used by analysts; however, the corporate valuation model is in many respects superior to the discounted dividend model. (Brigham & Houston 2007, 195, 293, 305, 308, 316.)

Accounting literature. The relevance of cash flow information to financial statement users has been reported in the accounting literature since, at least, the 1960s. For example, Lee's (1971; 1972a; 1972b) support for cash flow information was based on the principles of utility and relevance; that is, cash flow information is considered fundamentally relevant to users for resource allocation decisions (Jones et al. 1995, 117). Much of the early research (Anthony 1965; Solomons 1965; Staubus 1968; Bierman & Drebin 1972) dealt with the issue of discounted cash flow for decision-making versus accrual accounting for performance-evaluation in the late 1960s and early 1970s (Ferrara 1981, 98). It was argued that the trend of an entity's operating cash flow must be regarded as the primary indicator of its financial performance (Ferrara 1976; Ijiri 1978; Lawson 1982; Lee 1981a): it is the source from which the entity's transactions should be financed, and therefore, cash flows should also be used as a means of evaluating management's investing activities (Yap 1997, 655–656). Cash flow on realised transactions was suggested to correct the gap between the way in which an investment is made and the way in which the results are evaluated (Lee 1981a).

For example, Ijiri (1978, 331) emphasised the cash flow objective of entities by noting that an entity may hold various types of assets, but the reason it holds such

assets is always attributable to the cash flow objective, that is, to recover more than was invested. Later, Ijiri (1980, 54) stated that there is a serious discrepancy between the way in which investment decisions are made and the way in which results of the decisions are evaluated; in investment decisions the primary factor is cash flow, but in performance evaluation the emphasis shifts to earnings – and the two are often not reconcilable. Earnings are only a surrogate to represent performance of the entity on its cash flow objective and therefore, not the optimal measure. Instead, performance evaluation should be based on cash flow. (Ferrara 1981, 94.)

Staubus (1977) and others stressed the users' need for cash flow information (Hicks 1981, 26). Lee (1981a, 154) stated that investors' decision models are typically based on cash dividend flows from the entity; lenders and bankers are concerned with the cash receipts of interest and capital sums when due by the entity; creditors are mainly concerned with the entity's ability to meet its obligations in cash to them on due dates; the availability of cash within the entity is crucial to the well-being of employees concerned with payment of wages; customers buying goods and services from the entity are interested in whether it will be able to meet its commitments; and government relies on the entity having sufficient cash to pay its taxation liabilities when due – in other words, users consider the cash flows of an entity relevant. Heath (1981, 170) noted that financial statement users are interested in realised cash flows primarily because those are relevant to the prediction of future cash flows.

The early advocates of cash flow information questioned the importance of accrual information and identified a shift to cash flows in security analysis (Hawkins & Campbell 1978). The efficacy of the accrual system was severely questioned. Thomas (1969; 1974) stated that all allocations, which are the basis of accrual accounting, are arbitrary. (Belkaoui 1992, 421, 449.) On the other hand, cash flow reporting would specifically avoid making such allocations (Thomas 1981, 126). Furthermore, the flexibility of accrual accounting came under attack because the differences in accounting rules and methods made it hard to compare the profitability and the financial position of different entities (Drebin 1964; Accounting Objectives Study Group 1973; Lee 1974). Another persistent theme was criticism of the information content of historical-cost-based financial statements, particularly the confusing and ambiguous definitions of capital, capital maintenance

and income (Lee 1974; Accounting Standards Steering Committee (ASSC) 1975; McMonnies 1988; Mathews 1989). Historical cost accounting was not clearly defined or practiced as a homogeneous activity, but by contrast, cash flow reporting would be a straightforward information system that avoids the complex issues of accrual accounting. It would describe operational activity in an understandable language, which avoids items that are merely artefacts of the book-keeping system, such as depreciation and accruals. (Yap 1997, 654.)

Changes in environmental conditions often forced attention to cash flows. Lee (1983, 103) noted that the need for business management to assess and control cash flow is a continuing problem, but it becomes critical in times of high inflation, low demand for goods and services, high interest rates, and so on. Similarly, Bernard and Stober (1989) argued that cash flow becomes more important during periods of economic contraction; during a recession investors would react favourably to decreases in noncash working capital and the associated increase in cash. All in all, cash flow information was seen to be relevant and different from the information presented on accrual-based income statements and balance sheets. (Yap 1997, 656.)

Hicks (1981, 27–28) rejected the accrual-based income statement altogether on the grounds that it lacks the practical and theoretical support by decision-makers and causes errors in decision-making. He argued that: 1) reported earnings are rejected in the literature and practice of all other decision-making groups, including investors and managers, because it seems intuitively obvious that if historical financial measures are to be used in predicting future cash flows, the best such measures are the realised cash flows – the only exception seems to be the accounting profession, which appears to have an income statement fixation; and that 2) if earnings figures continue to be published, there will be a tendency by some investors to simply predict future earnings and use them directly in decision-making rather than to convert the future earnings into future cash flows, which will inevitably cause serious errors in the decisions made; furthermore, managers will continue to be concerned about the effects of their capital budgeting decisions on reported earnings and as a result, the alternative providing maximum cash flow would not be selected; practical evidence exists (for example, Lerner & Rappaport 1968) that when a discounted cash flow approach indicates that one alternative should be selected in a capital budgeting decision and reported earnings indicate another alternative should be selected, managers tend to select the latter alternative.

Even though these arguments by Hicks were made in 1981, they continue to make a valid point even at present – over 30 years later: As it was discussed in chapters 2.1.1 and 2.1.2, and as it will be further discussed later in this chapter, the cash flow statement is found to be more useful and relevant to financial statement users than the income statement. Yet, both IASB (2010) and FASB (2010) seem to regard accrual accounting to be of more relevance to users and state in their respective *Conceptual Frameworks for Financial Reporting Chapter 1: The Objective of General Purpose Financial Reporting* paragraphs OB4 and OB17 that: To assess an entity's prospects for future net cash inflows, users need information about the resources of the entity, claims against the entity, and how efficiently and effectively the entity's management and governing board have discharged their responsibilities to use the entity's resources; information about a reporting entity's economic resources and claims and changes in its economic resources and claims during a period provides a better basis for assessing the entity's past and future performance than information solely about cash flows during that period.

The criticism of accrual accounting relates to subjective allocations such as reporting a portion of the cost of an asset as depreciation expense on the income statement and the unallocated portion as asset on the balance sheet (Thomas 1969; Thomas 1974). Accrual accounting neither adjusts for a variation in the dimension of money, its general purchasing power: historic cost statements assume a stable measuring unit and thus fail to reflect the effects of price and price level changes – cash flow reporting, in contrast, automatically cope with them as all inflows and outflows of cash are stated in terms of contemporary general purchasing power (Lawson 1973; Accounting Standards Steering Committee (ASSC) 1975; Sandilands 1975). Indeed, most of the perceived limitations of accrual accounting relate to its failure to differentiate between financial facts and subjective assessments of value. Consequently, cash flow information is welcomed by financial statements users to redress some of these shortcomings. (Yap 1997, 654–655.) This is because cash flows are unaffected by subjective assessments such as accruals and deferrals (Cheng et al. 1997, 4–5).

The call for cash flow information does not originate solely from the academic world. Thomas (1982, 99) – a commissioner of SEC – has stated that: Over time, the accounting equation requires that accrual earnings equal cash earnings, but in the short term, timing variations between accruals and cash flows may be significant;

they may even make the crucial difference between continuing operations and bankruptcy. In other words, although accrual accounting may be important to the analysis of long-term profitability, cash flow is vital to survival. (Belkaoui 1992, 421.) Similarly, Foster (1986, 604) quotes former SEC Chairman Harold Williams' observation that "Corporate earnings reports communicate, at best, only part of the story… …Indeed, in my view, cash flow from operations is a better measure of performance than earnings-per-share" (Cheng et al. 1997, 2).

Empirical research findings. Yap (1997, 653, 663) reports that workers in Australian finance industry are dissatisfied with the usefulness of the information presented on balance sheets and income statements: only 13 % of respondents indicated they were not concerned about the usefulness of accrual-based financial statements whereas 68 % indicated at least some concern. The respondents were mostly concerned about unacceptable accounting practices, followed by the lack of market values for non-current assets, the confusing presentation of financial information, not being helpful in predicting future trends, the subjective nature of some measurements, and the failure to explain the effect of environmental factors, such as high interest rates and inflation (Yap 1997, 663–664).

Many event studies have explored the relative information content of accruals and cash flows. While this research has yielded mixed results (Bowen et al. 1987, Board & Day 1989; Ali 1994), the most recent studies have tended to confirm the incremental information content of operating cash flows over earnings. A study by Pfeiffer, Elgers, Lo and Rees (1998) examines the differential information content of operating cash flows and current accruals. By taking into account the impact of errors in measuring market expectations, they document significantly higher valuations of the operating cash flow component of earnings relative to current accruals. (Frino & Jones 2005, 1374.)

Day (1986) reports that 73 % of the analysts interviewed considered cash flow information relevant, useful and important (Yap 1997, 658). A survey of investors by Epstein and Pava (1992) reveals that investors' appreciation for cash flow information has increased significantly and that it is considered relevant for assessments of investment decisions (Brahmasrene et al. 2004, 59). The relevance of cash flow information has been recognised in a number of decision contexts – in addition to the prediction of future cash flows and the assessment of liquidity and solvency that were discussed in chapter 2.1.2: Yap (1997, 653, 665) reports that

workers in Australian finance industry regard cash flow information relevant for explaining the quality of earnings, supplying additional information, highlighting capacity to pay dividends, and highlighting investing policies and financing decisions. Indeed, the net operating cash flow is perceived to be a useful measure of corporate performance, often superior to net income (Nurnberg 2006, 211). Therefore, cash flows play (or at least, should play) a crucial role in resource allocation decisions (Broome 2004, 16).

The incremental relevance of cash flow statements over estimated cash flows

Unlike other firm performance measures, users can estimate cash flows from operations using other financial statement sections. First, periodic total cash flows are simply computed using two successive balance sheets. Then, by examining operating accruals (for, example, changes in accounts receivable, inventories, accounts payable, etc.) and income statement information, the operating component of total cash flows can be estimated. Because these estimates are easily obtained, a natural question has arisen concerning the incremental relevance of the reported cash flow statement over these estimated cash flows. Prior research often questions the relevance of the estimates. (Cheng et al. 1997, 5.)

Some early studies (Rayburn 1986; Wilson 1986; Wilson 1987; Bernard & Stober 1989) documented the information content of earnings for share prices but did not provide conclusive evidence on the incremental information content of operating cash flows. Whereas those studies had assumed linear relations between abnormal returns and accounting information, Freeman and Tse (1992) documented a nonlinear relation between abnormal returns and unexpected earnings. Early research also found that the marginal price response to unexpected earnings declines with an increase in the absolute value of annual earnings changes (Beaver, Clarke & Wright 1979). (Ali 1994, 61–62.)

Regarding the information content of cash flows for share prices, the early research findings were mixed: Livnat and Zarowin (1990) reported no incremental association between security returns and estimated cash flows from operations, after controlling for earnings. Ali (1994) reported incremental information content beyond earnings for only some operating cash flow estimates. Bowen et al. (1987),

on the other hand, reported incremental associations between the cash flow estimates and security returns. (Cheng et al. 1997, 5.) Lang and McNichols (1990), Frankel (1992) and Hanna (1992) reported mixed results on the incremental information content of cash flows for entities in financial distress, whereas Biddle and Seow (1991) find evidence of incremental information content of cash flows for selected industries (Ali 1994, 63).

Because cash flow statements were not required prior the applicable standards, most importantly SFAS 95 and IAS 7, the early research relied on estimated, rather than reported, cash flows (Cheng et al. 1997, 2). Because cash flow statements were not available, researchers were forced to prepare independent estimates of operating cash flow values with estimation models that assumed articulation between the balance sheet and the income statement accounts and cash flow (Bahnson et al. 1996, 7). Bahnson et al. (1996, 8) argue that relying on this assumption of articulation is likely to introduce substantial measurement error in estimated cash flows.

Early evidence on this non-articulation, or non-correlation, of cash flows and the balance sheet and the income statement information can be found in a study by Bowen, Burgstahler and Daley (1986, 713–716), where they examine the correlations between earnings and various cash flow estimates: The early research papers often used a traditional estimate for cash flow and defined it as some minor variant of net income plus depreciation and amortisation[14]. Alternative cash flow estimates advocated by accounting practitioners, the business media, and academics such as Largay and Stickney (1980), Greene (1981) as well as Gombola and Ketz (1983) included also the effects of changes in working capital as well as investing and financing activities.

Bowen et al. (1986, 713, 719) report that, 1) the observed correlations between traditional cash flow estimates and alternative cash flow estimates are low, and 2) the correlations between traditional cash flow estimates and earnings are high while the correlations between alternative cash flow estimates are earnings are low – these results indicate that the traditional cash flow estimates used in much of the early research are unlikely to provide different information from that contained in the income statement, and that the alternative cash flow measures and earnings indeed

[14] Examples of such studies include Altman, Haldeman and Narayanan (1977), Strischek (1980), Chen and Shirmerda (1981), and Fulmer, Moon, Gavin and Erwin (1984).

convey different signals. Bowen et al. (1986, 719) argue that the use of the traditional cash flow estimates is a likely explanation for the lack of significant results in early research on failure prediction (Chen & Shirmerda 1981), bond rating classification (Kaplan & Urwitz 1979), and market price association (Patell & Kaplan 1977).

Through analysing 117 financial statements of 54 major Finnish public companies during 1995–1997, Kinnunen and Koskela (1999, 632, 635–636) reveal a significant non-articulation of reported cash flows and estimated cash flows in the Finnish accounting regime. Kinnunen and Koskela (1999, 631) show that reported cash flows do not always articulate with income statements and balance sheets and that non-articulation can be observed in cash flows from operating, investing and financing activities; furthermore, the differences between reported and estimated cash flows prove to be mostly random.

Discrepancies between estimated and reported cash flows from operations arise for various reasons. Most can be traced to the fact that changes in current assets and current liabilities do not always result from operating activities, as it is presumed in a typical estimation process. Business acquisitions also present several problems in estimating cash flows from operations: changes in operating accounts (receivables, inventory, accounts payable, etc.) will reflect not only accruals, but also changes from consolidating the newly affiliated firms' accounts. Information presented on an entity's financial statements is frequently insufficient to identify the source of the non-articulation. As a result, estimates of cash flows from operations may contain substantial errors. (Cheng et al. 1997, 5–6.)

As noted, estimates of operating cash flows rely on a presumed articulation between changes in working capital accounts and the accrual component of revenues and expenses reported in the income statement. Hribar and Collins (2002, 106) state that this articulation breaks down when non-operating events such as reclassifications, acquisitions, divestitures, accounting changes and foreign currency translations occur (Drtina & Largay 1985); it is also documented that manipulation of earnings can create significant errors in estimating operating cash flows. (Frino & Jones 2005, 1376.)

By examining a sample of 9757 sets of public financial statements, Bahnson et al. (1996, 1) find many unexplained differences between estimated operating cash flow measures and the amounts reported in cash flow statements. The non-articulation

between the cash flow statement and the balance sheet and the income statement accounts is found to be widespread and significant[15]; in addition, it is found impossible to identify all of the factors that create the non-articulation (Bahnson et al. 1996, 6). Therefore, a likely reason the early research does not find consistent evidence supporting the relevance of operating cash flows is that the underlying estimates are noisy (Cheng et al. 1997, 3).

Similarly, Bahnson et al. (1996, 1, 7) argue that most of the early research about the relevance of operating flows is deficient and unreliable because the calculating of its key variable, the operating cash flow, is based on a false assumption of articulation, and thus resulting in estimates of cash flow that may be corrupted with errors. Therefore, the use of reported, rather than estimated, operating cash flows in subsequent research on the relevance of cash flows is crucial because studies – Austin and Bradbury (1995) in addition to the before-mentioned – now show that estimated operating cash flows may contain substantial errors and thus are a deficient proxy of cash flows from operations (Farshadfar et al. 2008, 256).

In light of these results, Cheng et al. (1997, 1, 12–14) set out to investigate the relevance of the reported cash flow statements to investors, and to compare it with the relevance of earnings information and estimated cash flows information. First, they show that the reported cash flow statements have significant incremental explanatory power for security returns even after controlling for accounting earnings information. Second, they find that estimated cash flows from operations also explain a significant portion of security returns that are not explained by accounting earnings. Third, their analysis reveals that the reported cash flow statements have an incremental role in explaining security prices, even after controlling for both earnings and estimated cash flows; in contrast, given earnings and the reported cash flow statements, the estimates fail to show incremental effects. Cheng et al. (1997, 1) conclude that while estimated cash flows from operations have incremental relevance beyond earnings, the estimates fail to show significant market effects after reported cash flow statements are included in the analysis – but that reported cash flow statements continue to be incrementally relevant in market association tests beyond earnings and estimated cash flows.

[15] As evidence of estimation problems, 16 per cent of the 9757 firm-year sample observations had the absolute difference between reported and estimated cash flows from operations exceed 100 per cent of the reported amount (Cheng et al. 1997, 5).

With a sample of 161 public companies in Australia, Frino and Jones (2005, 1373, 1381–1382, 1393) report that the required cash flow statement was associated with a decline in bid-ask spreads following the introduction of the regulation, even after controlling for changes in trading volume and price volatility: Firms reporting cash flow statements for the first time experienced a significantly larger decline in their bid-ask spreads compared to a control group of firms who were already publishing the information. Furthermore, firms with relatively lower correlations between reported cash flows and estimated cash flows experienced more pronounced declines in their bid-ask spreads. Similarly, a few other capital market studies (Ali & Pope 1995; Thomas & Cushing 1998) argue that cash flow statements provide information incremental to, and distinct from, that contained in balance sheets and income statements (Sharma & Iselin 2003, 123). Looking from a different perspective, Yap (1997, 653, 665–667) reports that 70 per cent of workers in Australian finance industry indicated that the inclusion of the cash flow statement in the financial reporting package had improved the usefulness of financial statements to them.

These results suggest that cash flow statements provide incrementally relevant information over and above cash flows estimated using other financial statement sections and reduce information asymmetry across market participants. However, this study argues that neither the cash flows reported on the cash flow statement necessarily reflect actual, realised cash flows of an entity due to the problems in preparing and auditing practices that will be highlighted in later chapters.

Cash flow statements' potential to be reliable (a faithful representation), comparable and understandable

Reliability (faithful representation). One explanation for the usefulness of cash flow statements emanating from the supporting literature has long been its presumed reliability (Broome 2004, 18). The reliability argument is deduced from the earnings manipulation argument: Lee (1981d; 1984), Lawson (1981) as well as Bruns and Merchant (1990) argue that the flexibility inherent in the accrual system provides management with opportunities to manipulate their accounts, and consequently, Cheng et al. (1997, 4–5) note that operating cash flows are seen as a more reliable firm performance measure than net income because it lacks this flexibility.

Management is often urged to engage in earnings manipulation when bonuses are concerned (Healy 1985), debt covenants are close to violation (Dharan & Lev 1993; DeFond & Jiambalvo 1994; Sweeney 1994), as well as under conditions of financial distress (Schwartz 1982; Lilien, Mellman & Pastena 1988; DeAngelo, DeAngelo & Skinner 1994; Sharma & Stevenson 1997). Ohlson (1980) as well as Zavgren and Freidman (1988) suggest earnings manipulation as a plausible explanation for their accrual-based models' failure in liquidity and solvency assessments (Sharma & Iselin 2003, 125).

Even though it is now understood that also cash flow statements can be manipulated, as it will be discussed in chapter 2.4, they are considered to be less vulnerable to such actions: Dechow (1994, 7–8) notes that in the absence of objective procedures to determine firm performance, external parties have difficulty assessing the reliability of accrual accounting figures, but the reported cash flows are more objectively measured – thus suggesting that the net operating cash flow is not subjected to such manipulation as the income statement (Nurnberg 2006, 211).

At least, the opportunities for manipulating reported cash flows are considerably less than those available under accrual reporting. Consequently, financial analysts, security managers and bankers believe that cash flow information is more reliable than accrual information especially for assessing liquidity and solvency (Jones & Ratnatunga 1997). Given that managers of entities approaching bankruptcy would have a greater incentive for manipulating the accrual accounts, Sharma (1999) provides evidence that failure prediction models based on accrual data would have a higher misclassification rate for bankrupt firms than models based on cash flow information. (Sharma & Iselin 2003, 126.)

Yap (1997, 654–655) states that most of the perceived limitations of conventional accounting relate to its failure to differentiate between financial facts and subjective assessments of value. Cheng et al. (1997, 4–5) conclude that cash flow statements are unaffected by accounting accruals and deferrals and consequently eliminate one source of potential manipulation; the cash flow statement is thus seen as a more reliable firm performance measure than the income statement. However, this study argues that the reliability of published cash flow statements may be drastically reduced due to the problems in preparing and auditing practices that will be highlighted in later chapters.

Comparability. The applicable standards emphasise the comparability factor of the information presented on the cash flow statement: KILA 30.1.2007 section 2 states that cash flow statements are useful in comparing different entities because the impacts of different valuation, accruing and allocation practices have been eliminated. Similarly, IAS 7 paragraph 4 notes that cash flow statements enhance the comparability of the reporting of operating performance by different entities because it eliminates the effects of using different accounting treatments for the same transactions and events.

However, the comparability of cash flow statements is a relatively new phenomenon, as it will be discussed in chapter 2.2.1. Currently, the cash flow statements prepared in accordance with KILA 30.1.2007, IAS 7 or SFAS 95 are, for the most part, comparable with each other, although there are issues caused by the current regulation that reduce the comparability in certain aspects – this will be discussed in chapter 2.2.3. Furthermore, the mere presence of the same regulation does not guarantee harmonisation of financial statements or consensus among preparers (Walton 1992, 197; Joos & Lang 1994; Rahman, Perera & Ganesh 2002, 69; Mechelli 2009, 236, 263), and the problem areas in preparing and auditing practices that will be highlighted in this study may negatively affect the comparability of cash flow statements.

Understandability. The understandability of cash flow statements relates closely to the way the operating activities section is presented: the direct method or the indirect method – this will be discussed in chapter 2.6. In short, the direct method is perceived to be much easier to understand (Spiller & Virgil 1974, 131; Hovey 1986; Boze 1987; Epstein & Pava 1992, 54; Yap 1997, 665–666; Stickney & Weil 2003, 184; Brahmasrene et al. 2004, 59; Broome 2004, 18; Stice et al. 2004, 245; Hodder et al. 2008, 915, 952), but in practice, a vast majority of entities are reporting their operating cash flows using the indirect method (Rue & Kirk 1996, 17; Wallace et al. 1997, 11; Wallace et al. 1999, 315; Krishnan & Largay 2000, 243; Broome 2004, 17; Epstein et al. 2005, 103; Troberg 2007, 104; Mechelli 2009, 237, 240, 261, 264; Orpurt & Zang 2009, 894).

2.1.4 Preparers' and auditors' perceptions of the importance

Considering the suggested superior usefulness of the cash flow statement to users, one might expect that preparers and auditors would perceive the cash flow statement as among the most, if not the most, important financial statement section. However, research evidence often states the opposite. Investigating these perceptions is important because, as Nazari et al. (2006, 429) argue: perceptions of reality are more powerful than reality itself because people act on their perceptions. Therefore, it may be so that preparers and auditors devote the most attention to those sections of financial statements they consider the most important, and vice versa, the least attention to those sections they consider the least important.

Preparers' perception of the importance of cash flow statements and other sections of financial statements. Little research could be found about how important preparers consider the cash flow statement. While information on realised cash flows was determined to be useful to users of financial statements even in the early 1980s (Heath 1981; Hicks 1981; Lee 1981a; Thomas 1982), Lee (1981c) reported that authorised accountants were on the fence about whether the cash flow statement should be included in the financial statements in the first place – 45 % being in favour of and 41 % being against the inclusion; but even then, the information on realised cash flows was determined to be useful to bankers, lenders, institutional and private shareholders, employees and suppliers (McEnroe 1989, 56). On a side note, 4 per cent of the respondents in Lee's (1981c) study indicated that cash flow accounting should completely replace accrual accounting (McEnroe 1989, 56–57).

In a survey study by Jones et al. (1995, 115–117, 123, 126) of 210 Australian cash flow statement preparers, 48 % of respondents considered operating cash flow to be a superior measure of a company's economic condition and future prospects to operating profit as reported in the income statement – only 28 % of respondents rated operating profit as the more important measure, and this difference in responses was found to be statistically significant; the respondents also identified bankers, managers, institutional investors and shareholders as major users of cash flow statements. Jones et al. (1995, 115–116, 121) note that Australian cash flow statement preparers find cash flow statements important to liquidity and solvency assessments, performance evaluation, prediction functions, monitoring evaluation, as well as to other uses. More recently, in 2003, Amazon.com formally stated that

the financial focus was growth in free cash flow, and the change of focus can be observed in the placement of the cash flow statement relative to the other statements: it was the fourth statement in 1997, the third in 2000, and in 2003, the cash flow statement was put in the first position, followed by the income statement, and the balance sheet (Price 2013, 356).

Nonetheless, I predict that preparers in Finland consider the cash flow statement the least important financial statement section. This may originate from a lack of attention to it in accounting education: Even though accounting educators and practitioners currently agree that the cash flow statement is an important topic for future accountants (Kieso, Weygandt & Warfield 2012, 233), the cash flow statement often receives much less attention in the classroom than the balance sheet or income statement (O'Bryan, Berry, Troutman & Quirin 2000). A factor contributing to that is that accounting textbooks typically leave the cash flow statement in the last chapters (Wouters 2008; Wahlen, Jones & Pagach 2013), hence often the time available for teaching the cash flow statement, after covering accrual accounting in depth, is limited. (Canace & Wilkerson 2014, 209–210.) Having attended accounting classes in universities in Finland, Thailand and South Korea, I noticed the cash flow statement either received some attention in the end of the course, or not at all due to running out of time.

Furthermore, preparers' perceptions about the importance of different financial statement sections may be influenced by those of auditors – after all, during every audit preparers see which financial statement sections receive the most, and which the least, attention from them. It has been reported that auditors in Finland seem to regard the cash flow statement as the least important section of the financial statements and, perhaps consequently, spend the least time with it (Arola 2011b, 17–19); or at least that auditors spend less time with the cash flow statement than with the balance sheet and the income statement (Mills & Yamamura 1998, 53). This discussion is addressed in hypothesis P1[16]:

H_P1: *Preparers of financial statements consider the cash flow statement to be the least important section of financial statements.*

[16] Hypotheses P1 – P6 relate to preparing cash flow statements.

Auditors' perception of the importance of cash flow statements and other sections of financial statements. As they were with regards to preparers, research findings are scarce about how auditors perceive the importance of the cash flow statement. In the late 1980s following the issuance of SFAS 95, McEnroe (1989, 58–60) surveyed 201 audit partners in US public accounting firms and only 75 per cent of them indicated that a cash flow statement should be included in the set of financial statements; the respondents nonetheless considered the information about realised cash flows useful to bankers, lenders, institutional and private shareholders, and suppliers. More recently, Hanini and Abdullatif (2013, 127) find that auditors in Jordan consider the cash flow statement only moderately important.

In Finland, authorised auditors were asked to put the different sections of financial statements (the balance sheet, the income statement, the cash flow statement, and the notes) in the order that reflects how important they consider them to be relatively. The scale ranged from 1 (the most important section) to 4 (the least important section). In HTM-auditors' responses, the cash flow statement was regarded as the least important financial statement section with the average grade of 3,62, while in KHT-auditors' responses, the title of the least important financial statement section was shared between the cash flow statement and the notes – both receiving the average grade of 3,41. In both populations (that is, KHT- and HTM-auditors separately), the cash flow statement was found to be statistically extremely significantly less important than the balance sheet and the income statement, but no statistically significant difference could be found between the cash flow statement and the notes. However, when estimating the opinion of the population of all authorised auditors in Finland, the cash flow statement was found to be the least important financial statement section. (Arola 2011b; 17–18.)

Finally, as it were with regards to preparers, auditors' considering the cash flow statement the least important financial statement may originate from a lack of attention to it in auditing education: for example, Mills and Yamamura (1998, 54) note that auditing education does not cover the cash flow statement – auditing textbooks commonly include ratios based on the balance sheet and income statement but little or no discussion of cash flow ratios. This leads to hypothesis A1[17]:

[17] Hypotheses A1 – A7 relate to auditing cash flow statements.

H_A1: *Auditors of financial statements consider the cash flow statement to be the least important section of financial statements.*

The related analyses to hypotheses P1 and A1 will be based on questions P1[18] and A1[19], which investigate how preparers and auditors, respectively, rate the different sections of financial statements:

Q_P1; Q_A1: *On a scale from 1 (not at all) to 7 (extremely), how important do you consider the following financial statement sections?*

- *Balance sheet*
- *Income statement*
- *Cash flow statement*
- *Notes*

2.2 Comparability issues caused by current regulation

As it was discussed in chapter 2.1.3, the usefulness of financial information is enhanced if the information is comparable (FASB, QC4; IASB, QC4): information about a reporting entity is more useful if it can be compared with similar information about other entities and with similar information about the same entity for another period (FASB 2010, QC20; IASB 2010, QC20). The cash flow statement is considered greatly useful in comparing different entities, or the same entity in different periods, because the effects of using different accounting treatments for the same transactions have been eliminated (KILA 30.1.2007, section 2; IAS 7, paragraph 4).

A precondition for efficient, well-functioning global capital markets is the comparability of financial reporting (Troberg 2007, 230). The internationalisation of capital markets and entities has created a need for harmonisation of financial reporting because it is not realistic to expect that international users will learn to understand the different financial statements and reporting practices applied in different countries (Troberg 2007, 17). Currently, the cash flow statements prepared

[18] Questions P1 – P6 relate to preparing cash flow statements.
[19] Questions A1 – A7 relate to auditing cash flow statements.

in accordance with KILA 30.1.2007 or IAS 7, or even SFAS 95, are[20], for the most part, comparable with each other. However, this comparability is a relatively new phenomenon, as it will be discussed next.

2.2.1 History of cash flow statement regulation

In 1961, Accounting Research Study No. 2 *"Cash Flow" Analysis and the Funds Statement*, sponsored by the American Institute of Certified Public Accountants (AICPA), recommended that a funds statement be included in annual reports to shareholders along with the income statement and balance sheet. Two years later Accounting Principles Board (APB) Opinion No. 3 *The Statement of Source and Application of Funds* was issued and it provided preparation guidelines for the recommended funds statement. An all-financial resources concept of funds was suggested to be used in this statement, so it included non-cash transactions such as the acquisition of property through the issue of securities. The reaction to the issuing of Opinion No. 3 was favourable, as evidenced by the combined endorsement of the New York Stock Exchange and the Directors of the Financial Analysts Federation, the inclusion of a funds statement in the financial statements by many US companies between 1964 and 1971, and a 1970 Securities and Exchange Commission (SEC) requirement that an audited funds statement be included in the financial statements filed with the Commission. Finally in 1971, APB Opinion No. 19 *Reporting Changes in Financial Position* officially made the funds statement one of the three primary documents required in the financial statements. (Belkaoui 1992, 416–417.) The idea of the funds statement was to disclose a firm's major sources and uses of capital, and according to Rosen and DeCoster (1969), the practice of providing some form of a ''sources and uses'' statement first gained popularity in the early 1900s (Hales & Orpurt 2013, 542).

During the late 1970s and early 1980s, the funds statement came under criticism, and emphasis shifted from a focus on working capital to a focus on cash flow (Hales & Orpurt 2013, 543). However, the relevance of cash flow information was not

[20] Although the regulation concerning cash flow statements in the different frameworks – FAS, IFRS, and even US GAAP – is now for the major parts harmonised, the current regulation itself contains aspects that can reduce the comparability of the cash flow statements prepared even within same framework, as it will be discussed in chapter 2.2.3.

universally accepted. The Trueblood Report (Accounting Objectives Study Group, 1973) rejected cash flow reporting in favour of periodic earnings despite acknowledging the importance of cash flow information to various financial statement users; The Corporate Report (Accounting Standards Steering Committee (ASSC) 1975) ignored the topic completely despite its analysis of the needs of various user groups (Lee 1981a, 152). Indeed, as it was discussed in chapter 2.1, although cash flow information had often been found to be more useful and relevant to financial statement users, the accounting profession had long been (and still is) an advocate of accrual accounting.

According to SFAS 95 paragraph 2, problems had been then identified in the funds statements prepared in accordance with Opinion No. 19. These included the ambiguity of terms such as funds, lack of comparability arising from diversity in the focus of the statement (cash, cash and short-term investments, quick assets, or working capital) and the resulting differences in definitions of funds flows from operating activities (cash or working capital), differences in the format of the statement (sources and uses format or activity format), variations in classifications of specific items in an activity format, and the reporting of net changes in amounts of assets and liabilities rather than gross inflows and outflows.

As Opinion No. 19 called for flexibility in form, content and terminology, it led to a variety of applications and a total lack of comparability between companies. This total flexibility was not without its benefits, however, as it generated discussions and debates as well as applications of a concept of funds as cash flows. This movement and support for a concept of cash flow resulted ultimately in official endorsement. In 1987, SFAS 95 was issued, and it required that entities present a cash flow statement for the accounting period, along with an income statement and balance sheet. (Belkaoui 1992, 417.) The cash flow statement improved upon the funds statement in providing a format for companies to follow, and a focus on cash and cash equivalents as opposed to the loosely defined funds (Price 2013, 357). Noteworthy is that the cash flow statement was introduced into the set of financial statements considerably later than the balance sheet and the income statement (Troberg 2007, 103).

Since the mid-1980s, a dramatic change has occurred in the cash flow reporting practices mandated by standard-setting bodies also outside the US. This development began with a recommendation in General Accounting Section 1540

from the Canadian Institute of Chartered Accountants in 1985, and was soon followed by corresponding standards promulgated by authorities in New Zealand (SSAP No. 10, 1987), in the UK (FRS No. 1. 1991) and in Australia (AASB 1026, 1991). (Kinnunen & Koskela 1999, 632–633.)

The original accrual-based IAS 7 *Statement of Changes in Financial Position* from 1977 was revised in 1992, and as a result, it required a cash-based cash flow statement to be included in the financial statements (Räty 2007, 2). The approval of the revised IAS 7 meant that the practice of disclosing cash flow statements was given considerable additional impetus in many countries in which the IAS principles were either mandated (for example, in South Africa) or used as general guidelines for national regulation (for example, in Finland); although there were many differences in details, a common feature of all of these standards was that they classify cash flows into operating, investing and financing activities (Kinnunen & Koskela 1999, 633).

In Finland, the first general instruction prescribed by KILA for preparing cash flow or funds statements date back to 1983. It gave two options for disclosing the statement of changes in financial position. The first was the statement of sources and uses of funds. Since this statement concluded with the change in current assets and current liabilities, it was rather a statement of accrual-based working capital flow than a statement of cash flow. The second option was the statement of cash flows showing cash receipts and payments during the accounting period.

While the cash flow statement suggested by KILA followed the direct method for presenting cash flows, it did not classify cash flows into operating, investing and financing activities. Instead, it followed a subtraction format, in which cash payments were deducted from sales cash receipts in the particular order determined by their 'financial priority'.[21] This implied that the subtraction of cash payments was determined by their necessity for the firm to be a going concern. Accordingly, payments in respect of short-term production factors (raw material, energy, wages and salaries etc.) were subtracted first, payments of interest, taxes and dividends followed, after which repayments of short- and long-term debt were deducted.

[21] The subtraction format followed the idea of the 'financial priority order' originally suggested by Artto (1966) for cash flow analysis. The idea has its roots in the 'theory of the priority order of costs' put forward by Saario (1949) for the determination of annual net income. (Kinnunen & Koskela 1999, 652.)

Finally, cash inflows from increases in short- and long-term debt and equity were added before the deduction of cash payments for long-term investments. (Kinnunen & Koskela 1999, 635.)

The Finnish Institute of Authorised Public Accountants[22] promulgated a guideline for the format of cash flow statements in 1995 and it underwent some minor revisions in 1998. This guideline followed the international trend in distinguishing between cash flows from operating, investing and financing activities. Interest and dividends received as well as taxes and interest paid were included in operating activities. Dividends paid were classified as financing cash flows. Thus, the treatment of these items was similar to that of the rule-making bodies in the US, Canada and New Zealand (Wallace et al. 1997, 12). Contradictory to the earlier KILA's instructions, cash flows from operating activities were presented solely using the indirect method. (Kinnunen & Koskela 1999, 635.)

The surveys undertaken by The Finnish Institute of Authorised Public Accountants revealed that while in 1986 none of the 100 largest Finnish firms disclosed cash flow statements, the percentage was approximately 62% in 1996. Contrary to the regulation, however, some firms reported only the net, instead of gross, amounts of financial revenues and expenses, investments and disposals of fixed assets, as well as increases and decreases of long-term debt. In addition, some firms reported dividends paid as part of operating instead of financing cash flows. (Kinnunen & Koskela 1999, 635.)

Before required by Accounting Act and Accounting Ordinance since 31.12.2004, the inclusion of funds flow or cash flow statements was prescribed in Finnish Companies Act and Co-operatives Act. They stipulated that all public companies as well as private entities fulfilling certain size criteria must disclose a statement of changes in financial position as a part of their financial statements. Since Finnish Companies Act or Co-operatives Act did not specify the content and format of the statement, companies followed the general instructions and guidelines promulgated by KILA and The Finnish Institute of Authorised Public Accountants (Kinnunen & Koskela 1999, 634). KILA has renewed its general instructions for preparing cash flow statements in 9.11.1999 and most recently in 30.1.2007, which was further slightly revised and updated in 11.12.2007.

[22] KHT-yhdistys

2.2.2 Current cash flow statement regulation in Finland

In Finland, cash flow statements must be prepared in accordance with the regulation applied to that set of financial statements. Financial statements must be prepared in accordance with the regulation under either FAS or IFRS, which deduces to preparing cash flow statements in accordance with either KILA 30.1.2007 or IAS 7, respectively. In this study, IFRS refer to both IASs and IFRSs. FAS refer to Finnish Accounting Standards, which comprise of Accounting Act and Accounting Ordinance. Accounting Act 1:3 further requires entities to follow *good accounting practice*[23].

Under FAS, Accounting Act 3:1.3 states that a cash flow statement must be prepared by an entity if it is a public limited liability company, or a private limited liability company or a co-operative if at least two of the thresholds referred to in Accounting Act 3:9.2 have been crossed both during the past financial year and the immediately preceding financial year. These thresholds are: 1) revenue 7 300 000 €, 2) total assets 3 650 000 €, and 3) average number of employees 50. However, if the financial statements are prepared in accordance with IFRS, Accounting Act 7a:4 states that these thresholds do not apply. Therefore under IFRS, a cash flow statement must always be prepared.

Accounting Act 7a:2.1 states that all entities whose securities are subject to public trading in a country in the European Economic Area (henceforth, public companies) must prepare consolidated financial statements in accordance with IFRS. For public companies, preparing their separate financial statements in accordance with IFRS is voluntary under Accounting Act 7a:3.1. However, public companies that are not required by Accounting Act to prepare consolidated financial statements are bound by Accounting Act 7a:2.2 to prepare their financial statements in accordance with IFRS. Other entities are allowed by Accounting Act 7a:3.2 to prepare their consolidated and separate financial statements in accordance with IFRS, if their accounting records, financial statements, annual report and administration are audited in accordance with Auditing Act. In Finland, it is typical that only the consolidated financial statements of public companies are prepared in accordance with IFRS, while FAS are applied to the separate financial statements

[23] Hyvä kirjanpitotapa

(Anttila, Halonen, Jalkanen-Steiner, Kemppainen, Kärpänen, Nurmo, Penttilä-Räty, Pyykkönen, Sundvik, Suomela, Tolvanen, Torkkel, Torniainen & Tuomala 2009, 2).

The cash flow statement regulation is similar under FAS and IFRS. Accounting Act 3:1.1 and IAS 1 paragraph 10 require a cash flow statement to be included in the financial statements. Accounting Ordinance 2:1 and IAS 7 paragraph 10 require a cash flow statement to be classified by operating, investing and financing activities. Accounting Act 3:1.2 and IAS 1 paragraph 38 require comparative information in respect of the previous period for all amounts reported in the current period's cash flow statement. If the presentation of the cash flow statement has been changed for the current period, Accounting Act 3:1.2 and IAS 1 paragraph 41 require the entity to reclassify also the comparative amounts unless reclassification is impracticable. IAS 1 paragraph 45 further requires entities to retain the presentation and classification of items in the financial statements from one period to the next unless a change in presentation is required by IFRS or another presentation would be more appropriate. Similarly, Accounting Act 3:3.1 requires consistency in accounting policies when preparing financial statements.

IAS 1 paragraph 15 requires financial statements to present fairly the financial position, financial performance and cash flows of an entity. The application of IFRS is presumed to result in financial statements that achieve a fair presentation. Accounting Act 3:2.1 requires financial statements to provide correct and sufficient information (a true and fair view) about an entity's operating results and financial position. Although cash flow information is not specifically mentioned, a true and fair view of an entity's operating results and financial position is expected to be provided by financial statements as a whole.

For achieving a true and fair view, Accounting Act 3:2.1 requires necessary additional information to be provided in the notes. Similarly, IAS 1 paragraph 112 requires information that is not presented elsewhere in the financial statements, but is relevant to an understanding of any of them, to be provided in the notes. These regulations should be taken into consideration by preparers and auditors when assessing whether any additional information regarding the cash flow statements should be provided in the notes. This could be the case, for example, when the cash flow statement has been drastically manipulated by methods that are not specifically prohibited under FAS or IFRS – this will be discussed in chapter 2.4.2.

Good accounting practice, following of which is required by Accounting Act 1:3, is not defined in Accounting Act or Accounting Ordinance; instead, it is formed by accepted accounting practices, applicable standards as well as accounting and auditing professions (Fredriksson, Havukainen, Hilmoja, Ilkka, Luoma, Mikkola, Mäkinen, Nevalainen, Ojala, Saari, Termäs, Tikka, Virtanen, & Vuorio 2008, 25). KILA is regarded as being a significant force in generating good accounting practice by publishing guidance on specific accounting practices; following this guidance will result in good accounting practice in a given issue (Leppiniemi 2006, 272; Fredriksson et al. 2008, 25). Therefore, in order to meet the requirement of following good accounting practice, cash flow statements under FAS should be prepared in accordance with KILA 30.1.2007[24].

The fundamentally similar KILA 30.1.2007 and IAS 7. KILA 30.1.2007 was renewed from the previous guidance KILA 9.11.1999 due to changes in Accounting Act and Accounting Ordinance that took place at the end of the year 2004. At the same time the comparability of KILA 30.1.2007 and IAS 7 was enhanced by revising the KILA's guidance closer to that of IAS 7. Currently, the guidance in KILA 30.1.2007 and IAS 7 is similar for the most part, although there are a few differences. More of the similarities and differences between KILA 30.1.2007 and IAS 7 as well as comparability issues concerning the two instructions are discussed in the subsequent chapter 2.2.3.

KILA 30.1.2007 shares the following definitions of terms of IAS 7:

- *Cash* comprises cash on hand and demand deposits.
- *Cash equivalents* are short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value.
- *Cash flows* are inflows and outflows of cash and cash equivalents.

Under both KILA 30.1.2007 and IAS 7, cash flows from operating activities can be reported using either: 1) the direct method, whereby major classes of gross cash receipts and gross cash payments are disclosed, or 2) the indirect method, whereby profit or loss is adjusted for the effects of transactions of a non-cash nature, any

[24] KILA 30.1.2007 section 1.3 allows an entity to depart from KILA 30.1.2007's guidance if it is necessary for achieving true and fair view. IAS 1 paragraph 19 requires an entity to depart from such requirements in IFRS, which are misleading and conflicting with the objective of financial statements.

deferrals or accruals of past or future operating cash receipts or payments, and items of income or expense associated with investing or financing cash flows. Entities are encouraged to report cash flows from operating activities using the direct method under both KILA 30.1.2007 and IAS 7, as the direct method provides information which may be useful in predicting future cash flows and which is not available under the indirect method[25]. Such encouragement was not included in the previous KILA 9.11.1999.

Although reporting separately major classes of gross cash receipts and gross cash payments arising from investing and financing activities (as well as operating activities when using the direct method) is required under both KILA 30.1.2007 and IAS 7, cash flows arising from the following operating, investing or financing activities may be reported on a net basis: 1) cash receipts and payments on behalf of customers when the cash flows reflect the activities of the customer rather than those of the entity; and 2) cash receipts and payments for items in which the turnover is quick, the amounts are large, and the maturities are short.

Changes in ownership interests in subsidiaries and other businesses could be presented in two ways in KILA 9.11.1999: in accordance with IAS 7 or with an alternative method. During the revision of KILA 30.1.2007, the alternative method was abandoned and the IAS 7 method became the only allowed presentation. This meant that the aggregate cash flows arising from changes in ownership interests in subsidiaries and other businesses are to be presented separately and classified as investing activities. The aggregate amount of the cash paid or received as consideration for changes in ownership interests in subsidiaries and other businesses is reported in the statement of cash flows net of cash and cash equivalents acquired or disposed of as part of such transactions, events or changes in circumstances.

When IAS 27 *Consolidated and Separate Financial Statements* was amended in 2008, IAS 7 was also amended. A separation of cash flows arising from obtaining and losing control of subsidiaries or other businesses, and cash flows arising from changes in ownership interests in a subsidiary that do not result in a loss of control was introduced. As a result, the cash flows arising from obtaining and losing control

[25] Direct method is preferred also in US GAAP. SFAS 95 paragraph 27 encourages the use of the direct method. As stated in SFAS 95 paragraph 107, the principal advantage of the direct method is that it shows operating cash receipts and payments; knowledge of the specific sources of operating cash receipts and the purposes for which operating cash payments were made in past periods may be useful in predicting future operating cash flows.

of subsidiaries or other businesses must still be classified as investing activities, but the cash flows arising from changes in ownership interests in a subsidiary that do not result in a loss of control are to be classified as cash flows from financing activities. KILA 30.1.2007 does not currently make such separation, and therefore all cash flows arising from changes in ownership interests in subsidiaries and other businesses should be classified as investing activities.

IAS 7 paragraph 40 further requires an entity to disclose, in aggregate, in respect of both obtaining and losing control of subsidiaries or other businesses during the period each of the following: 1) the total consideration paid or received; 2) the portion of the consideration consisting of cash and cash equivalents; 3) the amount of cash and cash equivalents in the subsidiaries or other businesses over which control is obtained or lost; and 4) the amount of the assets and liabilities other than cash or cash equivalents in the subsidiaries or other businesses over which control is obtained or lost, summarised by each major category. KILA 30.1.2007 does not require these disclosures.

IAS 7 paragraph 50 encourages entities to disclose additional information that may be relevant to users in understanding the financial position and liquidity of an entity. Such information may include: 1) the amount of undrawn borrowing facilities that may be available for future operating activities and to settle capital commitments, indicating any restrictions on the use of these facilities; 2) the aggregate amounts of the cash flows from each of operating, investing and financing activities related to interests in joint ventures reported using proportionate consolidation; 3) the aggregate amount of cash flows that represent increases in operating capacity separately from those cash flows that are required to maintain operating capacity; and 4) the amount of the cash flows arising from the operating, investing and financing activities of each reportable segment. KILA 30.1.2007 does not include such encouragements.

In summary, cash flow statements in Finland must be prepared in accordance with the regulation applied to that set of financial statements. If an entity is preparing financial statements under FAS, cash flow statements should be prepared in accordance with KILA 30.1.2007, which is argued to be an application of the good accounting practice required by Accounting Act 1:3. If an entity is preparing financial statements under IFRS, cash flow statements should be prepared in accordance with IAS 7. Furthermore, any additional information that is needed for

the financial statements as a whole presenting a true and fair view (FAS), or that is relevant to understanding any of the financial statement sections (IFRS), must be provided in the notes.

2.2.3 Identified comparability issues due to current regulation

As discussed in chapter 2.1, the cash flow statement provides users with potentially more useful, relevant, reliable and comparable information than the balance sheet and the income statement. However, some of the current rules for preparation make the cash flow statement less useful and comparable than it could be (Weiss & Yang 2007, 26). I classify comparability issues to originate from three types of current regulation:

- current regulation that allows different presentation options on a subject,
- current regulation that is specific on a subject, and
- current regulation that is not unambiguous on a subject.

Comparability issues due to allowing current regulation

Taxes. Under both KILA 30.1.2007 and IAS 7, cash flows arising from taxes should be separately disclosed and classified as cash flows from operating activities unless they can be specifically identified with financing and investing activities[26]. IAS 7 paragraph 36 requires the total amount of taxes paid to be disclosed when tax cash flows are allocated over more than one class of activity. Similarly, KILA 30.1.2007 section 4.9 requires information about classification of tax cash flows to be provided in the notes.

Allowing all taxes to be treated as operating activities, even when the gain being taxed is included in investing or financing activities, can distort the operating cash flow section. For example, a received group contribution is reported as financing activity in accordance with KILA 30.1.2007 section 4.3 (if it has been paid), but the related taxes can be left straining the operating cash flows. Similarly, if a company has a large gain from investment sales, the related tax expense may generate substantial cash outflow in the operating activities section despite all the proceeds

[26] US GAAP classifies tax payments as operating cash flows in SFAS 95 paragraph 23.

from the sales are recorded in investing activities[27]. Under the current regulation of FAS and IFRS, two companies with identical operating activities can report drastically different net operating cash flows, if the taxes relating to investing or financing activities have not been identified and reported separately.

Despite the apparent difficulties in doing so (SFAS 95, par. 91–92; Steyn & Hamman 2003, 187; Mechelli 2009, 246–247), authors who have dealt with the topic of taxes on the cash flow statement (Nurnberg 1993, 68; Mechelli 2009, 253–254; Miller & Bahnson 2012, 23) generally suggest that income taxes should be allocated on the cash flow statement in order to more accurately distinguish the cash flows relating to operating, investing and financing activities – otherwise, operating cash flows will be affected by taxes relating to non-operating activities (Stephens & Govindarajan 1990, 246). Interestingly, in the US, some firms choose to allocate taxes on the cash flow statement despite the prohibition of SFAS 95 (Nurnberg 1993, 69). In addition, condition of consequence – which will be further discussed in chapter 2.2.5 – suggests that users want the financial statements to contain as much relevant information as possible (Cosserat 2000, 39). This discussion leads to hypothesis U4:

H_U4: *Most users reckon taxes should be allocated on the cash flow statement based on the activity, taking into consideration the principle of materiality.*

The related analysis will be based on question U4, which investigates users' preference for the allocation of tax cash flows on the cash flow statement by measuring users' opinion to the proposition on a 7-point Likert[28] scale:

[27] Under SFAS 95, this problem is prevalent as income tax payments and refunds are solely classified as operating cash flows; cash flow from operating activities will therefore always include the income tax effects of gains and losses relating to investing or financing activities, such as gains and losses on plant asset disposals and similar items (Nurnberg 1993, 67).

[28] Attitudes are often measured using a scale invented by Rensis Likert (1932) that arranges respondents based on their level of agreement (Yhteiskuntatieteellinen tietoarkisto 2007). The answer choices for Likert scale used in this study are "Completely disagree", "Somewhat disagree", "Slightly disagree", "No opinion for or against", "Slightly agree", "Somewhat agree" and "Completely agree"; coded 1 to 7 respectively. The coding does not, however, make any assumptions about the difference in level of agreement between different numbers (Grönroos 2003, 22).

Q_U4: *In my opinion, tax cash flows should be allocated on the cash flow statement over the operating, investing and financing sections based on the activity causing the tax cash flows, taking into consideration the principle of materiality*

Regardless of the noted benefits of allocating them, tax cash flows are, in practice, most often reported solely as operating activities (Mechelli 2009, 247; IAS 7, paragraph 36). This leads to hypothesis C1[29]:

H_C1: *Most cash flow statements present tax cash flows solely as operating activities.*

Interest and dividends. KILA 30.1.2007 section 4.6 and IAS 7 paragraph 31 state that cash flows from interest and dividends received and paid must each be disclosed separately, and that each should be classified in a consistent manner from period to period as operating, investing or financing activities. KILA 30.1.2007 section 4.6 classifies dividends paid as financing cash flows, and interest paid as primarily operating cash flows – reasons for departing from this primary classification should be provided in the notes; interest and dividends received are to be classified as operating or investing cash flows regarding the activity they are generated from.

There is no consensus in IAS 7 on the classification of these cash flows. IAS 7 paragraph 33 states that interest paid and interest and dividends received may be classified as operating cash flows because they enter into the determination of profit or loss. Alternatively, interest paid and interest and dividends received may be classified as financing cash flows and investing cash flows respectively, because they are costs of obtaining financial resources or returns on investments. IAS 7 paragraph 34 further states that dividends paid may be classified as a financing cash flow because they are a cost of obtaining financial resources. Alternatively, dividends paid may be classified as a component of cash flows from operating

[29] Hypotheses C1 – C3 relate to published cash flow statements.

activities in order to assist users to determine the ability of an entity to pay dividends out of operating cash flows[30].

Because a variety of presentation choices are available, I will focus on how interest and dividend cash flows are suggested to be presented versus how they are, in practice, being presented. Authors who have dealt with the topic of interest and dividends on the cash flow statement (Stephens & Govindarajan 1990; Nurnberg 1993; Nurnberg & Largay 1998; Steyn & Hamman 2003) generally suggest that interest and dividends paid should both be classified as financing activities (Mechelli 2009, 245, 253; Miller & Bahnson 2012, 23). I predict that this is not common in Finland, and instead, interest payments are usually found in the operating activities section while dividend payments are usually presented as financing activities. This leads to hypothesis $C2_a$:

> H_$C2_a$: *Interest and dividends paid are treated differently: interest paid is classified solely as an operating activity on most cash flow statements, and dividends paid are classified solely as a financing activity on most cash flow statements.*

Treating interest paid and dividends paid differently makes it difficult to compare the performance of companies that make different financing choices (Weiss & Yang 2007, 27). Despite both being payments for having used money, dividends paid are typically classified as financing activities whereas interest paid is typically classified as an operating activity (Hertenstein & McKinnon 1997, 70; Nurnberg & Largay 1998, 409) – the evident consequence is that financing cash flows do not show cash flows used or generated by all financing activities because they lack an important item, that is, the cost of capital borrowed (Mechelli 2009, 244). Nurnberg (1993, 65) notes that interest payments result from incurring debt and, therefore, relate to financing activities – indeed, the finance literature emphasises the similarity of interest and dividend payments: interest is paid for the use of debt capital and dividends are paid for the use of equity capital. With regards to operating cash flows, a company that relies on debt financing will report lower net operating cash

[30] US GAAP are more definite on this issue. SFAS 95 paragraph 20 classifies dividends paid as financing cash flows, SFAS 95 paragraph 22 classifies interest and dividends received as operating cash flows, and SFAS 95 paragraph 23 classifies interest paid as operating cash flows.

flow compared to an operationally identical company that relies on equity financing in such instances.

Regarding interest and dividends received, authors who have dealt with the topic (Stephens & Govindarajan 1990; Nurnberg 1993; Nurnberg & Largay 1998; Steyn & Hamman 2003) generally suggest that interest and dividends received should both be classified as investing activities (Mechelli 2009, 245, 253; Miller & Bahnson 2012, 23–24). Again, I predict that this is not common in Finland, and instead, interest and dividends received are usually found in the operating activities section. This leads to hypothesis $C2_b$:

> H_$C2_b$: *Interest received and dividends received are classified solely as operating activities on most cash flow statements.*

Treating interest and dividends received as an operating activity rather than an investing activity can cause distortion in operating cash flows. When a company has significant investments in affiliated companies, it has the ability to manipulate its net operating cash flow by increasing the dividends it receives from such companies. This simple technique has been used by many companies to inflate operating cash flows. Furthermore, dividend income comes from investments. If the former is shown in the section of operating activities, and the latter placed in investing activities, users may struggle to visualise the whole picture of investment strategy. (Weiss & Yang 2007, 28.) Nurnberg (1993, 65) argues that interest and dividend collections result from making loans or investments in debt and equity securities and, therefore, relate to investment activities.

Comparability issues due to specific current regulation

Payments for capacity acquisitions. Cash payments for capacity acquisitions are a good example of a source of comparability issues between different cash flow statements due to specific current instructions under both FAS and IFRS. An entity can acquire capacity items, such as property and equipment, either by leasing or purchasing them. A purchase can further be repaid as a one-time cash payment or as a series of instalments. Under IFRS, leases are classified as either a finance lease or an operating lease. IAS 17 paragraph 8 states that a lease is classified as a finance

lease if it transfers substantially all the risks and rewards incidental to ownership; a lease is classified as an operating lease if it does not transfer substantially all the risks and rewards incidental to ownership. For lessees, finance leases are recognised as assets and liabilities at amounts equal to the fair value of the leased property or, if lower, the present value of the minimum lease payments as stated in IAS 17 paragraph 20. Subsequent lease payments will be apportioned, according to IAS 17 paragraph 25, between the finance charge and the reduction of the outstanding liability. Operating leases are recognised as an expense as stated in IAS 17 paragraph 33. FAS do not recognise the distinction between finance and operating leases and consequently, all leases are recorded as expense[31].

In cash flow statements under IFRS, operating lease payments are classified as operating activities according to IAS 7 paragraph 14. Cash payments of acquisitions are classified as investing activities according to IAS 7 paragraph 16 – instalment payments are relatable to cash payments[32]. Regarding finance lease payments, the apportioned reduction of the outstanding liability is classified as financing activities according to IAS 7 paragraph 17, whereas the apportioned finance charge is usually reported as an operating activity (Anttila et al. 2009, 28–29). The payment for the lease principal and interest is undoubtedly a cash flow event in a single transaction, but on the cash flow statement, this transaction is broken into two parts and consequently, it loses its wholeness (Weiss & Yang 2007, 28). The reporting of the payments regarding finance leases' principal is peculiar also because as a result, an entity appears to be paying off a phantom loan on the cash flow statement (Nurnberg 1993, 70)[33]. In cash flow statements under FAS, lease payments are classified as operating activities according to KILA 30.1.2007 section 4.1. Cash payments and instalments of acquisitions are classified as investing activities according to KILA 30.1.2007 sections 4.2 and 4.10, respectively.

[31] Although finance leases in consolidated financial statements of credit institutions must be recognised in accordance with IFRS (Anttila et al. 2009, 394).

[32] IAS 7 paragraph 43 states that investing transactions that do not require the use of cash or cash equivalents must be excluded from cash flow statements; IAS 7 paragraph 44 continues that an example of such a transaction is the acquisition of an asset by assuming a directly related liability. Therefore, the initial recognition in the balance sheet of such an acquisition does not have an effect on the cash flow statement; instead, the subsequent cash payments are presented. As instalments are cash flows arising from investing activities, i.e. cash payments to acquire property, plant and equipment, they are classified as investing activities according to IAS 7 paragraph 16.

[33] This applies to SFAS 95 as well.

Therefore, the current regulation of IAS 7 and KILA 30.1.2007 will result in monthly cash payments relating to capacity acquisitions being reported all across the different sections of cash flow statements: Under IFRS, they can end up in every section of a cash flow statement: operating, investing or financing activities. Under FAS, the classification is either operating or investing cash flows (although interest paid relating to instalments may end up in financing activities if the company chooses to depart from the primary classification of KILA 30.1.2007). From the perspective of reported net operating cash flow, a company whose leases are classified as operating leases will perform more poorly than otherwise identical companies, whose leases are classified as finance leases, or companies that use instalments to pay for the equipment. This also means that the net operating cash flows for the same company would be higher under IFRS than under FAS, if the company's leases are classified as finance leases.

Although it reduces the comparability of cash flow statements of different companies, this specific regulation must be followed when constructing the cash flow statement under FAS or IFRS. Consequently, this regulation will be used in chapter 2.5 to formulate hypotheses to test for moral hazard among preparers and auditors.

Comparability issues due to ambiguous current regulation

Non-cash transactions. Besides the comparability issues the current allowing and specific regulation may induce, I will introduce a potential source of lack of comparability between different cash flow statements under FAS: the handling of non-cash transactions. Under IFRS, omitting non-cash transactions is the preferred course of action, as IAS 7 paragraph 43 states that investing and financing transactions that do not require the use of cash or cash equivalents are to be excluded from a cash flow statement[34]. Paragraph 44 further states that the exclusion of non-cash transactions from the cash flow statement is consistent with the objective of a cash flow statement as these items do not involve cash flows in the current period. Cash flows from operating activities are also instructed not to

[34] Similarly, SFAS 95 paragraph 32 states that information about all investing and financing activities of an enterprise during a period that affect recognised assets or liabilities but that do not result in cash receipts or cash payments in the period are to be reported in related disclosures.

include effects of transactions of a non-cash nature in IAS 7 paragraphs 18–20. The reasoning for not including non-cash items in cash flow statements is that it preserves the statement's primary focus on cash flows (Epstein et al. 2005, 100).

Under FAS, the guidance regarding the handling of non-cash transactions in cash flow statements is not unambiguous. First, Accounting Act uses the term "varat", which translates to "funds" or "assets", instead of the term "rahavarat", which translates to "cash and cash equivalents": Accounting Act 3:1.1 requires the cash flow statement to be a statement of sources and uses of funds (or assets) instead of cash and cash equivalents. Second, Accounting Ordinance 2:1 requires the financing activities section of the cash flow statement to present the change – hence not specifically the change resulting in cash flow – in the owners' equity and outside capital during the accounting period. Third, KILA 30.1.2007 states in section 1.3 that although it provides guidance in preparing cash flow statements using cash basis, the items presented using cash basis may be limited to those considered material under the principle of materiality, which is a part of the good accounting practice.

Consider a situation, where a company A (henceforth A) sells a company B (henceforth B) monthly administrative services on account. At the end of the accounting period, B carries out a directed issue of shares to A for the total amount of the administrative services. The directed issue is settled in the companies' accounts, and as a result, A's account receivable is reclassified as an investment, and B's account payable is reclassified as owner's equity. Both A and B do not have any other transactions, and therefore, no cash payments or cash receipts occur for either company during the accounting period.

If A's and B's cash flow statements were prepared along the wordings of Accounting Act and Accounting Ordinance to illustrate the sources and uses of funds (or assets) and the changes in equity and debt capital, the total amount of the administrative services would be reported as a positive operating cash flow and a negative investing cash flow in A's statement, and as a negative operating cash flow and a positive financing cash flow in B's statement; the end result being the same as if B would have actually paid its accounts payable, and A would have paid its share investment. On the other hand, if the cash flow statements were prepared in

accordance with KILA 30.1.2007 and IAS 7[35], the net cash flows of both companies for each activity would be zero because no cash actually flowed during the accounting period.

Furthermore, it is noteworthy that if the cash flow statements would have been prepared using only the income statement, the balance sheet and the balance sheet specifications, the preparers may not have realised that no actual cash flow was generated during the accounting period. They would have additionally needed to go through, for example, the general ledger events on a particular account to track down the journal entries, or the actual vouchers, in order to spot the non-cash transactions.

Therefore, two identical companies with the same non-cash transactions may report severely different cash flow statements depending on how the preparer interprets the FAS regulation – some international research relates to this issue: for example, Joos and Lang (1994) reported that existing differences in accounting practices between European countries were largely unaffected by European accounting directives, and Walton (1992, 197) found little uniformity amongst either British or French accountants in presenting selected transactions in financial statements; because also other factors affect accounting practices (Rahman et al. 2002, 69), the mere presence of the same regulation does not necessarily imply harmonisation of financial statements or consensus among preparers (Mechelli 2009, 236, 263). Furthermore, the cash flow statements of two identical companies may drastically differ from each other as a direct consequence of the preparer's ability (or willingness to put in effort) to track down the non-cash transactions.

This study takes the stand that cash flow statements under FAS should be prepared in accordance with KILA 30.1.2007, which is argued to be an application of the good accounting practice required by Accounting Act 1:3. Consequently, the provided scenario of Company A and B will be used in chapter 2.5 to formulate hypotheses to test for moral hazard among preparers and auditors.

Other comparability issues. Some other classification problems are reported especially in the US literature on the cash flow statement: Stewart et al. (1988, 7–8), Nurnberg and Largay (1998, 411–412), and Vent et al. (1995, 88–96) note that although they could be treated as operating activities, premiums or discounts on

[35] And SFAS 95

bond investments and bonded debt could be treated as investing activities and finance activities, respectively. Munter (1990, 54–55) notes that two companies with identical interest or lease payments will report different amounts for net operating cash flow if one company capitalises interest or lease payments and the other company does not. Alderman and Minyard (1991, 20–21) note variations in the cash flow statement classification of bank overdrafts depending on balance sheet treatment; changes in overdrafts are included in operating activities if overdrafts are netted against deposit accounts with positive balances, but are included in financing activities if overdrafts are treated as borrowings. Munter and Moores (1992, 52–55) note several variations in cash flow statement classification of interest payments when total interest cost differs from total interest paid and some interest cost is capitalised. Finally, Nurnberg and Largay (1996, 123–136) note variations in the cash flow statement classification of hedging activities, sale-leaseback transactions, purchase and sale of rental assets, loan securitizations, and repurchase/reverse repurchase agreements. (Nurnberg 2006, 210–211.)

The role of free cash flow. One deficiency in the current cash flow statement is the absence of the concept FCF (free cash flow). As it was discussed in chapter 2.1, FCF has become increasingly important for users in financial statement analysis – yet, the accounting profession has been ignoring it. One current problem with free cash flow is that it has a number of definitions[36]. As a result, different users may be using different definitions and drawing different conclusions about a company's performance. (Weiss & Yang 2007, 30.) Contrary to what is suggested by many researchers (as it was discussed earlier in connection with taxes, interest and dividends), Troberg (2007, 107) argues that when interest and taxes are presented under operating activities, the cash flow after investments reflects better the free cash flow available to shareholders and creditors in the form of dividends and in the form of equity and debt repayments.

[36] Definitions of free cash flow currently in use include: cash provided by operations less capital expenditures; cash provided by operations less capital expenditures and dividends paid; net income plus depreciation less capital expenditures; earnings before interest, taxes, depreciation, and amortisation (EBITDA) less capital expenditures; and earnings before interest and taxes (EBIT) multiplied by 1 minus the tax rate, plus depreciation and amortisation less changes in operating working capital and less capital spending (Weiss & Yang 2007, 27, 30).

2.2.4 Agency theory: the roles of preparers, auditors and users

The previous chapter identified and discussed several aspects of current regulation that negatively affect the comparability of different cash flow statements. Despite the comparability issues, however, the current regulation must be followed when constructing a cash flow statement as it was discussed in chapter 2.2.2. Chapter 2.2.5 further investigates users' expectations for the congruence of published cash flow statements and the applicable standard, i.e. KILA 30.1.2007 or IAS 7, but first, this chapter introduces agency theory in order to help 1) explain the roles of the actors, that is, preparers, auditors and users, and 2) define the two types of agency problems, adverse selection and moral hazard, that can occur in the interrelationships among the actors.

In general, an agency relationship arises when one party hires another to perform a task (Subramaniam 2006, 55). Jensen and Meckling (1976, 308) define an agency relationship as a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf, which involves delegating some decision-making authority to the agent. In business settings, a commonly conceptualised agency relationship is between the owners of an entity (as the principal) and the managers (as agents) (Pratt & Zeckhauser 1985, 2). It is the duty of the managers to perform a task assigned to them for an agreed compensation – by doing this, the managers become accountable for their actions to the owners (Meklin 2009, 57).

An entity is not a monolithic set of interests (Broadbent & Laughlin 2002, 626). At least since the early decades of the 1900s, it has been recognised that there is a separation between ownership and control of the large publicly owned corporation; the shareholders legally own the corporation, but a self-perpetuating management group usually controls it (Marshall 1924; Berle & Means 1932); it has long been recognised that the interests of owners and managers may not coincide (Simon 1959, 256, 262; Williamson 1964, 32–35; Machlup 1967, 12–13, 19). Additionally, as publicly owned corporations are increasingly owned by financial institutions, such as hedge funds, mutual funds, and pension funds, the interests of individual shareholders and institutional investors may not coincide (Healy & Palepu 2003, 13–14; Ryan & Schneider 2003, 407). There is also considerable evidence (Dechow, Hutton & Sloan 1999, 1–4, 20–31; Hutton 2002, 1–3) that the interests of sell-side

analysts of investment banks do not coincide with investors who use these analysts' reports to make investment decisions. (Nurnberg 2006, 212.)

Although different individual shareholders have different interests, as a group they usually seek medium- and long-term enhancement in firm value. In contrast, managers are often under pressure to generate financial metrics that boost share price to satisfy their own and institutional investors' interests; in particular, in the hope for short-term enhancement in share price to maximise their own compensation and the market value of investment portfolios. And although different institutional investors have different interests (Bushee 2001, 213–214), non-index funds often seek short-term enhancement in share prices to boost portfolio market value and increase portfolio management fees and profits (Healy & Palepu 2003, 18–19). Finally, some sell-side equity analysts sugar-coat their reports to maintain access to senior management and win investment banking business (Dechow et al. 1999, 1–4, 20–31; Hutton 2002, 1–3). (Nurnberg 2006, 212.)

The principal-agent relationship is confronted with a fundamental issue. Drawing from the traditional economics literature are the following two underlying assumptions of agency theory: 1) the principal and the agent are utility maximisers that both seek to maximise their respective returns, and 2) it is not always that the interests of the principal and agent are aligned (Berle & Means 1932; Jensen & Meckling 1976). Consequently, inherent in any principal-agent situation is the agency problem that the agent may not act in the best interests of the principal. (Subramaniam 2006, 59.)

The challenge of a principal-agent relationship lies in that the agent cannot oversee the actions of the agent completely or without costs. The agency problem is seen to exacerbate under conditions of information asymmetry, where one party has an information advantage over another party – which is characteristic of most business settings (Scott 1997). It is usually the agents that have the information advantage over the principals as they tend to be more directly involved in the day-to-day operations of a business. (Pratt & Zeckhauser 1985, 2–4; Subramaniam 2006, 59.) If an information asymmetry exists in a principal-agent relationship, the principals cannot be sure that the agent has acted in their best interests (Arrow 1985, 39). Nor can they be sure that the agent's output, that is, the financial statements and the cash flow statement within them, are prepared with their interest in mind and in accordance with the applicable regulation.

Agency theory is concerned with resolving agency problems that can occur in principal-agent relationships. An agency problem arises when the desires or goals of the principal and agent conflict and it is difficult or expensive for the principal to monitor what the agent is actually doing. (Eisenhardt 1989, 58.) Consequently, the principal may elect to monitor the agent's behaviour and/or offer incentives through employment contracts that help align the agent's interest with of the principal (Subramaniam 2006, 56, 61). Incentives can, however, be harmful if the agent can take actions to affect the reported measure without affecting the real outcome, or even worse, the actions have a negative impact on the real outcome – manipulating financial statements is one example of this behaviour (Lambert 2001, 37).

Since the use of incentives does not guarantee appropriate behaviour of the agents or the truthfulness of accounting information, principals need to monitor the agents' actions and outputs. Regarding monitoring the agent's output, that is, the financial statements, mandatory external audits play an important role in this aspect of the principal-agent relationship (Subramaniam 2006, 61–62; Meklin 2009, 57). The provision of audited financial statements is usually regarded as a cost-effective contractual response to agency costs (DeAngelo 1981; Watts & Zimmerman 1986; Subramaniam 2006, 62). Because it is usually not possible for the principal to personally monitor the actions of the agent, the audit performed by an independent auditor is a central part of the monitoring process. The function of the audit is to verify that the agent has given the required financial information truthfully and in accordance with the law and other applicable regulation (Riistama 1999, 15). Therefore, agency theory stipulates that principals need audits to monitor the actions and outputs of the agent (Cosserat 2000, 40).

In this study, the principal refers to users of financial statements and the agent refers to preparers of financial statements; auditors serve users as the monitors of preparers' output – that is, the financial statements and specifically, the cash flow statements within them. As it will be discussed in chapter 3.3, users are in this study defined as private investors who utilise financial statement information in their economic decision-making – as investors, they likely hold shares of entities, which appoints them as the owners. Preparers are in this study defined as authorised accountants – although Accounting Act 3:7 and Limited Liability Companies Act 6:2 stipulate that the Board of Directors is responsible for the financial statements of an entity, presumably more often than not, it is outsourced or hired accountants who

in practice prepare the entity's financial statements. Finally, auditors are in this study defined as authorised private sector auditors.

The two types of agency problems: moral hazard and adverse selection. The information asymmetry between prepares and users may lead to two specific types of agency problems: moral hazard and adverse selection. Moral hazard relates to a lack of effort by the agent as a result of the principal having restricted ability to observe the performance of the manager directly, and the principal can only assess an agent's performance based on the outcome. Adverse selection arises even when the principal is able to observe an agent's behaviour but is unable to determine whether the effort extended by the agent is the most appropriate behaviour. For instance, an agent may choose accounting policies that maximise net income or operating cash flow in order to gain higher bonuses. At the capital market level, investors may not receive full and proper disclosures of a firm's prospects as managers may stand to gain from non-disclosure. (Subramaniam 2006, 59–60.)

Regarding cash flow statements, moral hazard would realise if the preparer lacks in effort to construct the statement correctly and the monitoring system fails – that is, the auditor lacks in effort to audit the statement meticulously. Adverse selection would realise if the reported cash flow figures are manipulated for the preparer's own purposes and this manipulation is not detected in the audit or otherwise disclosed in the financial statements. Of these two types of agency problems, adverse selection is discussed first in chapter 2.4. Moral hazard will, in turn, be discussed in chapter 2.5.

2.2.5 Users' expectations further discussed

Information hypothesis. There is some degree of overlap of the information hypothesis with agency theory. In agency theory, the users' need to monitor preparers is the source of demand for audits; the information hypothesis stresses the increase in the reliability (faithful representation) of financial information as an input to investors' and other users' decision-making. Investors require financial information to make an assessment of the expected returns and risks associated with their investment. An audit is a means of improving the quality of the information. Therefore, users demand audited financial information because it is seen as more

useful for decision-making than non-audited information. (Cosserat 2000, 40.) It is noteworthy that auditing serves a function that transcends the relationship between agents and principals, as other stakeholders besides owners need reliable information for their respective decision-making. Information has a great significance for a society as a whole. (Riistama 1999, 15.)

Insurance hypothesis. From another angle, the insurance hypothesis looks the need for an audit from the perspective of entities, and it refers to the possibility for them to share litigation risk with the auditors. Wallace (1980, 21) describes the insurance hypothesis as follows: the ability to shift financial responsibility for reported data to auditors lowers the expected loss from litigation or related settlements to managers, creditors, and other professionals involved in the securities market; as potential litigation awards increase, this insurance demand for an audit from managers and professional participants in financial activities can be expected to grow (Cosserat 2000, 40). Another dimension of the insurance hypothesis is the incentive of politicians to require audits. Government regulators can insure themselves against blame by requiring corporate entities be audited. Wallace (1980, 23) illustrates that political benefits are derived from mandating audits, increasing liability exposure of auditors to provide greater remedies to individual investors who lose money in the market, and focusing attention on audit failure, which places auditors in the defendant's chair. (Cosserat 2000, 41.)

As it was discussed in chapter 2.1.3, relevance and reliability (faithful representation) are the two primary qualitative characteristics that make accounting information useful for decision-making. Users of financial statements look to the auditors' report for assurance that the qualitative characteristics have been met. The need for external audits of financial statements can be attributed to four conditions: 1) conflict of interest, 2) consequence, 3) complexity, and 4) remoteness. (Cosserat 2000, 38–39.)

Conflict of interest. Other than the conflict of interest between the agent and the principal, conflicts of interest can exist among the different classes of users of financial statements such as shareholders and creditors. Thus, users seek assurance from external auditors that the information is both 1) free from management bias and 2) neutral with respect to the various user groups; that is, they seek an assurance that the information is not presented in a way that favours one user group over

another. (Cosserat 2000, 39.) This creates the need for the cash flow statements to be audited and assessed for biases towards specific user groups.

Consequence. Published financial statements represent an important, and in some cases, the only, source of information used in making significant investment, lending and other economic decisions. Thus, users want the financial statements to contain as much relevant information as possible. Because of the significant economic, social and other consequences of their decisions, users look to external auditors for assurance that the financial statements are prepared in accordance with the applicable accounting standards and that the statement contains all the appropriate disclosures. (Cosserat 2000, 39.) This creates the need for the cash flow statements to be audited: to make sure they are prepared in accordance with what users are entitled to expect; that is, in congruence with the applicable standard guiding their preparation. Furthermore, this implies that auditors should verify that all the additional information required by Accounting Act 3:2.1 under FAS and IAS 1 paragraph 112 under IFRS is provided in the notes.

Complexity. Both the subject matter of accounting and the process of preparing the financial statements are complex, which creates a great risk of misinterpretation and unintentional error. Users are finding it difficult or even impossible to assess the quality of financial statements. Accordingly, they look to the opinion of external auditors to assess the quality of the information presented. (Cosserat 2000, 39.) As the guidance regarding cash flow statements can be complex (as it was partly discussed in chapter 2.2) and their preparation process is likely more subject to error than that of the balance sheet and the income statement (as it will be discussed in chapter 2.3), there is a need for an audit.

Remoteness. Few users have direct access to the accounting records from which the financial statements are derived. Furthermore, in instances when records are available for scrutiny, time and cost constraints normally prevent users from making a meaningful examination. Thus, remoteness prevents users from directly assessing the quality of the statements. (Cosserat 2000, 39.) This creates the need for the financial statements – and the cash flow statements within them – to be assessed by a third party; that is, the independent auditor.

Users' expectations for congruence of cash flow statements with KILA 30.1.2007 or IAS 7. Users' expectations regarding the congruence of cash flow statements and the applicable standard will be investigated from two perspectives: 1) whether they

consider this congruence important, and 2) whether they trust that audited cash flow statements are congruent with the applicable standard if it is not mentioned otherwise in the financial statements or in the auditor's report. In addition, it will be investigated if especially those users who consider the congruence important also trust that audited cash flow statements are congruent with the applicable standard when not mentioned otherwise – this is important, because these users may likely[37] put considerable weight on cash flow statements in their economic decision-making, and if the cash flow statements are incongruent due to problems in preparing and auditing practices, these users are misled, and consequently, economic resource allocation decisions may likely be made based in part on flawed information.

Users' expectations for the cash flow statements are of great importance to preparers and auditors: after all, the fundamental objective of financial statements is to provide users with useful information that is relevant and sufficient, reliable (faithful representation), comparable and understandable (KHT-yhdistys 2008, 157; FASB 2010, OB2, QC4; IASB 2010, OB2, QC4). Furthermore, auditing has a societal nature as its value is determined entirely by its practical benefit (Flint 1988) – in an ever-changing society, the purpose of auditing is formed through an on-going discussion between auditors and users of financial statements; auditors need to listen to the representatives of different user groups in order to be able to meet their expectations from the audit (Riistama 1999, 23). Therefore, preparers and auditors should produce cash flow statements that meet the expectations of users. The before-mentioned conditions of consequence, complexity and remoteness imply that users of financial statements expect audited financial statements, and cash flow statements within them, to be prepared in accordance with the applicable standard (Cosserat 2000, 39). This discussion leads to hypotheses $U5_a$, $U5_b$ and $U5_c$:

[37] First, if users do not consider the congruence of cash flow statements and the applicable standard important, it suggests that they probably will not rely heavily on the statements in any case as they could not be certain how the figures on the cash flow statement were formed. Similarly, if users do not trust that an audited cash flow statement has been prepared in accordance with the applicable standard, they probably will not rely heavily on the statement either (even if they wanted to) because they will not be able to trust that the figures on the statement represent what they expect them to represent. On the other hand, if users both consider the congruence important and trust that the cash flow statement is congruent, they may likely put considerable weight on the statement in their economic decision-making because 1) they trust the figures, and 2) it seems there is little reason to consider the congruence important unless they are going to make use of the statement.

H_U5$_a$: *It is important for most users that the cash flow statement has been prepared in accordance with the applicable standard (KILA 30.1.2007 or IAS 7).*

H_U5$_b$: *Most users trust that the cash flow statement has been prepared in accordance with the applicable standard (KILA 30.1.2007 or IAS 7) if there is no mentioning otherwise in the financial statements or in the auditor's report.*

H_U5$_c$: *Most of those users who consider the congruence of cash flow statements and the applicable standard important trust that the cash flow statement has been prepared in accordance with the applicable standard if there is no mentioning otherwise in the financial statements or in the auditor's report.*

The related analyses will be based on questions U5$_a$ and U5$_b$, which investigate users' expectations for congruence of cash flow statements with KILA 30.1.2007 or IAS 7 by measuring users' opinion to the propositions on a 7-point Likert scale:

Q_U5$_a$: *It is important to me that the cash flow statement has been prepared in accordance with the applicable standard (KILA 30.1.2007 or IAS 7).*

Q_U5$_b$: *If there is no mentioning otherwise in the financial statements or in the auditor's report, I trust that the cash flow statement has been prepared in accordance with the applicable standard (KILA 30.1.2007 or IAS 7).*

Thus far, this study has discussed that the cash flow statement provides users with potentially more useful, relevant, reliable and comparable information than the balance sheet and the income statement. Furthermore, it has been discussed that, although it may induce comparability issues in some aspects, preparers and auditors must follow the current regulation when producing the statement – not least because users are likely to expect this congruence. Now, this study changes focus onto the anticipated problem areas in the preparing and auditing practices that not only would affect comparability but also would jeopardise or reduce the reliability (faithful representation) of the cash flow statement: the subsequent chapters 2.3, 2.4

and 2.5 will discuss the error-prone preparing practice, adverse selection (manipulation) and moral hazard (lacking effort in preparing and auditing), respectively.

2.3 Error-prone preparing practice jeopardises reliability and comparability

Based on my work experience, it seems possible that many accounting systems used by entities are not capable of producing cash flow statements that conform to the regulations of KILA 30.1.2007 or IAS 7 – even though balance sheets and income statements are most often readily printable. Even if the accounting software would technically be capable of producing cash flow statements, entities may not have equipped their accounting scheme to include all the accounts that are necessary for producing a cash flow statement. For example, within the short-term debt accounts, the amounts owed to other group entities may usually be separated in order to prepare a consolidated balance sheet, but the short-term debt accounts may not be divided into debt accounts resulting from operating, investing and financing activities – which is information needed for preparing a cash flow statement. In these situations, cash flow statements will have to be manually prepared based on information that is categorised with the requirements of the balance sheet and the income statement in mind.

According to Rosen (2007, 25), cash flow statements are typically prepared by translating the (originally often cash-based) transactions that are presented using an accrual basis in the balance sheet and income statement back into a cash basis. It is this back-and-forth preparing method that creates what he calls leakage between the sections in cash flow statements, and what ultimately may result in a quasi-cash basis. He argues that this quasi-cash basis on the cash flow statement may mean that the reported cash flows are not real, that is, the actual cash flows of an entity, but are infected with errors. Finally, he lists that the leakage can be caused by pension plans, income taxes, share options, corporate acquisitions, minority interests, asset securitizations and a variety of other factors.

This back-and-forth preparing method of cash flow statements seems to be common in Finland as well: majority[38] of authorised auditors in Finland seem to reckon that cash flow statements are usually prepared by translating the accrual-based balance sheet and income statement back into a cash basis (Arola 2011a, 69). As the cash flow statement receives only little attention in accounting education (O'Bryan et al. 2000; Wouters 2008; Kieso et al. 2012, 233; Wahlen et al. 2013; Canace & Wilkerson 2014, 209–210), preparers may often need to seek out guidance on how to construct it themselves. Rosen (2007, 25) argues that it is because of this error-prone preparing practice that users of financial statements cannot blindly rely on reported cash flows. This discussion leads to hypothesis P2:

H_P2: *Most cash flow statements are prepared manually (for example, in Microsoft Excel) using the balance sheet, the income statement and other book-keeping material.*

The related analysis will be based on questions $P2_a$ and $P2_b$. Question $P2_a$ investigates the preparing procedure of authorised accountants: based on my work experience, it seems possible that preparing cash flow statements is a specialty skill and consequently, many accountants may not prepare them at all in their work – for this reason, the option "I do not prepare cash flow statements" is provided. Question $P2_b$ is presented to auditors because they presumably have audited also cash flow statements that have been prepared by others than authorised accountants:

Q_$P2_a$: *In which of the following ways do you typically prepare cash flow statements?*

- *I prepare cash flow statements manually (for example, in Excel) using the balance sheet, the income statement and other book-keeping material.*
- *A version of the cash flow statement is printable from the accounting system, but it needs some manual modifications.*
- *A cash flow statement conforming to KILA 30.1.2007 or IAS 7 is readily printable from the accounting system.*

[38] 62 % as measured by a population's unbiased estimator

- *I do not prepare cash flow statements.*

Q_P2$_b$: *In which of the following ways do your clients typically prepare cash flow statements?*

- *Cash flow statements are prepared manually (for example, in Excel) using the balance sheet, the income statement and other book-keeping material.*
- *A version of the cash flow statement is printable from the accounting system, but it needs some manual modifications.*
- *A cash flow statement conforming to KILA 30.1.2007 or IAS 7 is readily printable from the accounting system.*

The error-prone preparing practice would jeopardise the qualitative characteristics reliability (faithful representation) and comparability: Reliability (faithful representation) would be jeopardised because the manual back-and-forth preparing method may induce errors on the cash flow statement. Comparability would be jeopardised because the errors induced would likely vary on different cash flow statements.

2.4 Adverse selection (manipulation) reduces reliability and comparability

The first type of agency problem to be investigated is adverse selection. In this study, adverse selection relates to preparers purposely manipulating the figures presented on the cash flow statement and not disclosing it, and auditors not acknowledging the manipulation.

Since SFAS 95 was issued in 1987, a common belief has existed that, unlike the balance sheet and the income statement, the cash flow statement cannot be manipulated by preparers (Broome 2004, 18). For example, Dechow (1994) suggests that earnings are less relevant than operating cash flows for users, because accrual-based earnings are more easily manipulated by managers than cash flows, and accruals are, by nature, a product of arbitrary allocations and different accounting policy choices (Farshadfar et al. 2008, 255) – specifically, Dechow

(1994, 7–8) argues that the reported cash flows are more objectively measured. However, it is now understood that cash flow statements can be almost as vulnerable to manipulation as income statements (Tergesen 2002). But instead of affecting accruals by biased estimates to increase earnings, cash flows are manipulated by classification and timing of the cash collections and payments (Lee 2012, 1).

There are motivations for managers to manipulate cash flow statements, as Nurnberg (2006, 213) describes: Because net operating cash flow is often used as a performance metric, management may seek to manipulate it for some of the same reasons that it seeks to manipulate reported earnings – to mislead stakeholders about the underlying economic performance of the entity. As Healy and Wahlen (1999) as well as Dechow and Skinner (2000) note, management seeks to manipulate financial statements to reduce the likelihood of violating loan covenants, to meet or exceed financial analysts' predictions, to increase the company's share price, and to increase management incentive compensation, among other reasons. To the extent that loan covenants specify certain cash flow levels, management may manipulate cash flow statements to reduce the likelihood of violating loan covenants. Similarly, to the extent that share prices reflect analysts' and investors' individual predictions of net operating cash flow, management may manipulate cash flow statements in the hope of increasing the entity's share price. And to the extent that management incentive compensation is based on net operating cash flow, management may manipulate it to increase the received compensation.

Indeed, Healy and Palepu (2003, 13–14) note that performance-based compensation and share-based awards are frequently based on short-term performance metrics, such as next period's net income or net operating cash flow, often with few, if any, requirements for management to hold any shares acquired this way for the long-term. As a result, performance-based and share-based compensation plans may motivate management to manipulate financial statements, and the cash flow statements within them, in order to boost performance-based compensation and share prices without enhancing medium- and long-term firm value (Watts & Zimmerman 1978, 117–118). Lee (2012, 28) identifies four firm characteristics that are associated with stronger incentives to manipulate the cash flow statement: 1) financial distress, 2) a long-term credit rating near the investment/non-investment grade cut-off, 3) the existence of analyst cash flow

forecasts, and 4) higher associations between share values and reported operating cash flows.

The next two chapters discuss the manipulation of cash flow statements by categorising the methods of manipulation into two groups. Chapter 2.4.1 discusses manipulating cash flow statements by methods prohibited under both FAS and IFRS, while chapter 2.4.2 discusses manipulation by methods not specifically prohibited under FAS or IFRS.

2.4.1 Methods prohibited under both FAS and IFRS

Typically the objective of manipulation seems to be boosting the cash flow from operating activities, as it is thought to be the focus of interest of cash flow statement users. This can be done by artificially reporting cash inflows from investing and financing activities as operating activities, and dumping elements of operating cash outflows into the investing and financing activities sections of the cash flow statement. Evidence exists that cash flow statements are being manipulated by such methods: During an internal audit, WorldCom (the then second-largest long-distance carrier in US) was found to have been overstating its operating cash flow by more than $3,8 billion during a course of five quarters by classifying normal operating activities, such as basic network maintenance, as investing activities (Romero & Berenson 2002). Similarly, Adelphia aggressively capitalised labour expenses totalling approximately $40 million in both 2000 and 2001 resulting in shifting operating cash outflows to the investing activities section of the cash flow statement (Broome 2004, 19).

Gullapalli (2005, C3) reports that General Motors, Ford and several other companies have overstated their cash flows from operating activities. General Motors reported more than twice as much operating cash flow as it actually had for one accounting period, $7,6 billion versus the true $3,5 billion. This was done by reporting changes in accounts receivable as financing activities instead of operating activities. (Brigham & Houston 2007, 78.)

Maremont (2002a) states that Tyco International Ltd (henceforth Tyco) purchased customer contracts from dealers totalling more than $800 million, and the cash paid for these contracts was reported as investing activities. When the

customers made payments to Tyco under these contracts, however, Tyco reported the cash received as operating activities. Thus, all of the cash received from the contracts increased operating cash flow whereas Tyco had, in effect, paid out cash for this stream of inflows. (Broome 2004, 18.)

In 2002, Dynergy was mandated to restate its 2001 cash flow statement for the effects of complex natural gas trading arrangements. As a result, the net operating cash flow decreased approximately $300 million from the amount originally reported (Sender 2002). The arrangements were round-trip trades that involved the sale and purchase of equivalent amounts of natural resources at the same price with the same party. Dynergy reported the cash received from the sale as an operating cash inflow, but the cash paid for the purchase was reported as an investing cash outflow. (Broome 2004, 19.)

Qwest inflated its operating cash flows in a manner similar to that used by Dynegy. For example, in 2001, Qwest sold telecommunications capacity for approximately $100 million to Global Crossing. At the same time, Qwest paid $100 million for substantially equivalent telecommunications capacity from Global Crossing (Day 2002, E1). The capacity given up was presented as an operating activity, but the capacity received was accounted for as an investment. Cash flow from operations was thus increased because the cash outflow to acquire capacity equivalent to the capacity sold was classified as an investing cash outflow, not as an operating cash outflow. (Broome 2004, 19.)

Overall, Scholz (2008, 41) found 360 restatements from 1997 to 2006 that were related to classifications within the cash flow statement, and Ivancevich et al. (2012, 29) found 109 auditor's reports that mentioned material classification errors in the cash flow statements of large companies between the years 2004 and 2010. Many of the classification errors resulted in overstating operating cash flows: if the cash flows were inflows, they tended to be placed in operating activities when they should have been recorded as financing activities; if they were outflows, they tended to be placed in investing activities rather than operating activities (Ivancevich et al. 2012, 31).

Given the widely publicised cash flow manipulation cases in journals such as the Wall Street Journal and the Financial Analysts Journal, despite these being US journals, I predict that most users are aware of the possibility of cash flow statement manipulation. This leads to hypothesis U6:

H_U6: *Most users are aware of that a cash flow statement can be manipulated by preparers, for example, the management.*

Surprisingly, auditors may not be as aware of cash flow statement manipulation as users: first, the auditing education does not emphasise the cash flow statement (Mills & Yamamura 1998, 54), and second, for example Siegel (2006, 39–40) reports that auditors do not acknowledge the manipulation of cash flow statements. This leads to hypothesis A2:

H_A2: *Few auditors are aware of that a cash flow statement can be manipulated by preparers, for example, the management.*

The related analyses to hypotheses U6 and A2 will be based on questions U6 and A2, which investigate how well aware users and auditors, respectively, are of the risk of manipulation by measuring their opinion to the proposition on a 7-point Likert scale:

Q_U6; Q_A2: A cash flow statement can be intentionally manipulated by preparers, for example, the management.

It would be alarming if only few auditors were aware of the possibility of manipulating cash flow statements – because if auditors do not believe that the cash flow statement figures can be manipulated, they are likely to put little effort in auditing this aspect. After all, subjective perceptions matter because people act on their perceptions (Nazari et al. 2006, 429).

Manipulating cash flow statement by presenting the change in current maturities of long-term debt as an operating activity. I will focus on one specific way of manipulating operating cash flow, which is prohibited under both FAS and IFRS; namely presenting the change in current maturities of long-term debt as an operating activity. When a portion of long-term debt is coming due within the next year, that portion is reclassified from being a long-term liability to being a current liability; and presenting this increase in current liabilities as an operating activity would artificially boost the operating cash flows (Rosen 2007, 25). According to Batson

(2003), Enron overstated its reported cash flow from operations by at least $8,6 billion over the years 1997–2001; this was done by presenting what actually were loans as cash inflows from operations (Benston 2006, 478–479). Indeed, Hanini and Abdullatif (2013, 123) conclude that cash flow statement manipulation exists, and shifting financial cash inflows into operating cash flows is a typical method (Schilit & Perler, 2010). On a side note, users may spot this from increased debt on the balance sheet that is not reflected in financial cash flows (Brown 2013, 37) – although such manipulation can also be undetectable from the financial statements[39].

As noted, presenting the change in current maturities of long-term debt as an operating activity is prohibited under both FAS and IFRS: First, the balance sheet reclassification of debt from long-term liability to current liability does not result in cash flow, and consequently, it should be excluded from the cash flow statement altogether based on IAS 7 paragraph 43 and KILA 30.1.2007 section 1.3 (as long as the non-cash transaction is material). Second, cash flows regarding debt belong to the financing activities based on IAS 7 paragraph 17 and KILA 30.1.2007 section 4.3. Therefore, under no circumstances should the change in current maturities of long-term debt be presented as an operating activity.

However, some evidence exists suggesting that authorised auditors in Finland are indifferent towards non-congruence of the cash flow statement and the applicable standard: Only a minority[40] of Finland's authorised auditors seem to consider the non-congruence of the cash flow statement with KILA 30.1.2007 a material misstatement; even smaller a minority[41] seems to consider not following the unambiguous guiding of KILA 30.1.2007 on presenting changes in ownership interests in subsidiaries and other businesses a material misstatement (Arola 2011b, 18). As previously noted, Accounting Act 1:3 requires entities to follow good accounting practice, and KILA's general instructions are argued to be applications of the good accounting practice (Leppiniemi 2006, 272; Fredriksson et al. 2008, 25). If the cash flow statement is not prepared in accordance with KILA 30.1.2007, it can be argued that good accounting practice was not followed in preparing that section

[39] For example, when a company takes out a new loan and reports it in the operating activities section, and repays it during the same accounting period and reports the repayment in the financial activities section – on the balance sheet, this will have no effect on the amount of debt compared to previous accounting period.

[40] 37 % as measured by a population's unbiased estimator

[41] 29 % as measured by a population's unbiased estimator

of the financial statements. Therefore, if auditors accept such set of financial statements, they either do not consider following good accounting practice essential for achieving a true and fair view, or they consider cash flow statements to be irrelevant to a degree where not following good accounting practice on that financial statement section will not put the true and fair view presented by the financial statements as a whole in jeopardy. The latter interpretation seems more likely, as a majority[42] of authorised auditors in Finland seem to have the opinion that the financial statements as a whole can present a true and fair view even if the cash flow statement is flawed (Arola 2011b, 19). Therefore, a cash flow statement that is flawed or non-congruent with the applicable standard will not necessarily result in a mention in the auditor's report or anywhere in the financial statements.

Furthermore, the auditing education not emphasising the cash flow statement (Mills & Yamamura 1998, 54), and the auditors' ignorance of or indifference towards the manipulation of cash flow statements (Siegel 2006, 39–40), in addition to auditors' alleged lack of interest in auditing the cash flow statement (Mills & Yamamura 1998, 53; Arola 2011b, 17–19; Hanini & Abdullatif 2013, 132), which will be discussed further in chapter 2.5, suggest that auditors may not acknowledge this manipulation. As a result, the monitoring system would be failing and consequently, preparers would be allowed to boost the operating cash flow by a method that is prohibited under both FAS and IFRS. This is addressed in hypothesis A3:

> H_A3: *Few auditors would require a mention in the notes or in the auditor's report if the change in current liabilities that is a result of reclassifying debt from being a long-term liability to being a current liability is reported as operating activity in the cash flow statement.*

The related analysis will be based on question A3, which investigates how auditors would react to manipulating operating cash flow by this method that is prohibited under both FAS and IFRS:

[42] 51 % as measured by a population's unbiased estimator

Q_A3: *Would you require a mention in the notes or in the auditor's report, if the change in current liabilities that is a result of reclassifying debt from being a long-term liability to being a current liability is reported as operating activity in the cash flow statement?*

This study does not investigate the cash flow statement manipulation by methods prohibited under FAS and IFRS directly from preparers because they would presumably be an unreliable source of information for two reasons: First, the preparers in this study are defined as authorised accountants, and because they likely have no stake in the entity whose cash flow statement they are preparing, they have very little incentive to manipulate the accounts – in fact, by doing so, they would presumably only stand to lose their professional reputation. A far more likely source of manipulation would be the managers, but they are not investigated in this study. Second, even if the preparers surveyed had been involved in knowingly manipulating the statement, they would presumably have less to gain and more to lose by volunteering this information.

Instead, users are investigated in order to find whether there is a consensus among them on that cash flow statements can be manipulated by preparers. Similarly, auditors' awareness of the manipulation is investigated, because that may have an influence on whether they would focus on the cash flow statement manipulation during annual audits. Finally, it is investigated how auditors would react to manipulating the cash flow statement by one specific method that is prohibited under both FAS and IFRS. Preparers will be investigated, along with auditors and users, about manipulating the cash flow statement by methods that are not specifically prohibited in FAS or IFRS – and thus less incriminating – in the subsequent chapter 2.4.2.

2.4.2 Methods not specifically prohibited under FAS or IFRS

The reported cash flows from different activities can also be manipulated in ways that are not specifically prohibited under FAS or IFRS. Indeed, cash flow statements are relatively easily manipulated in the short run with such methods.

Financing of accounts payable. An example of such a short run manipulation is the financing of accounts payable, which entails that an entity uses a third-party financial institution to pay a vendor in the current period, and the entity pays back the financial institution in a subsequent period. For example, such an arrangement between Delphi Corporation and General Electric Capital Corporation allowed Delphi to manipulate the timing of its operating cash flows because the timing and extent of the vendor financing was at the discretion of Delphi's management. (Siegel 2006, 39.)

During 2004, three companies in the same industry – AutoZone, Pep Boys, and Advance Auto Parts – all financed payments to vendors through a third-party financial institution. While each of these auto parts companies used a similar process for financing accounts payable, each presented it differently on its cash flow statement. Interestingly, two of these companies even had the same auditor. Consequently, this disparity in accounting treatment made analysts' comparisons of cash flow yields for each of these companies irrelevant. (Siegel 2006, 39–40.)

Securitization of receivables. Securitizations of receivables occur when companies package their receivables, most often those that have a longer term and higher credit quality, and transfer them to a financial institution. By doing this, companies can accelerate the cash-collection of sales, and thus boost the reported operating cash flows. But similarly to financing of accounts payable, any reported improvement in operating cash flows resulting from securitizations of receivables should be considered unsustainable, because there is a limit to how much a company can securitise. (Siegel 2006, 40.)

Manipulating the cash flows of a soon-to-be-acquired company. Under the cash flow statement classification rules of both KILA 30.1.2007 and IAS 7 (as well as SFAS 95), the reported net operating cash flow may increase directly as a result of business acquisitions and dispositions, although the acquisitions and dispositions themselves are ostensibly reported as investing cash flows. Examples from published financial statements suggest that this distortion may be substantial. (Nurnberg 2006, 209.)[43]

[43] These distortion effects are also largely ignored in the financial statement analysis literature. For example, Bernstein (1993), Palepu, Healy and Bernard (2000), Penman (2001), and Stickney (1993) do not discuss the distorting effects of acquisitions and dispositions on reported net operating cash flow in their financial statement analysis texts. A notable exception is White, Sondhi and Fried (2003, 83, 519), which very briefly discusses and illustrates the distorting effects of acquisitions on

Post-acquisition net operating cash flow increases due to acquisitions whenever acquired operating assets (such as accounts receivable and inventories) exceed assumed operating liabilities (such as accounts payable and accrued expenses). The cash payments for acquisitions are investing outflows, including the portions of such payments attributable to operating receivables and inventories acquired less operating liabilities assumed. After acquisition, however, cash realisations of operating receivables and inventories of acquired businesses are operating inflows, and payments of operating liabilities of acquired businesses are operating outflows. The classification is explicit under the direct method and implicit under the indirect method. Post-acquisition net operating cash flow increases by the excess of the cash realised on operating assets acquired over the cash paid on operating liabilities assumed in the acquisition. (Nurnberg 2006, 217.)

Therefore, acquiring a company that has positive working capital will have a positive impact on the consolidated operating cash flows as the realisation of the positive working capital occurs after the consolidation. This is because the cash flows of the acquired entity are only recognised on the consolidated cash flow statements from the time of the consolidation until the time of disposition – leaving actions occurring in pre-consolidation or post-disposition with no effect.

Methods to manipulate the consolidated operating cash flow after consolidation include speeding the repayment of debts and slowing down the collection of receivables of a soon-to-be-acquired company. For example, Tyco required some of its pending subsidiaries to accelerate payments for operating expenses so that the payments would be reported in accounting periods before the consolidation. Maremont (2002b) reports that one acquired company by Tyco, Raychem Corporation, paid more than $50 million to eliminate amounts due to suppliers before its financial statements were consolidated with Tyco's financial statements. Although the economic effect of these prepayments is to forgo the interest that could be earned on cash that is paid before it is due (which actually reduces real operating cash flows as interest received diminishes), the effect on Tyco's post-merger consolidated cash flow statement was to relieve the operating activities section of

---

reported net operating cash flow, and mentions but neither discuss nor illustrate the distorting effects of dispositions on reported net operating cash flow. Maremont (2002a; 2002b) also discusses the distorting effects of acquisitions, but not the distorting effects of dispositions, on reported net operating cash flow of Tyco. (Nurnberg 2006, 211.)

these payments and increase reported consolidated operating cash flow. (Broome 2004, 18–19.)

Furthermore, evidence (Amihud & Lev 1981; Morck, Shleifer & Vishny 1988) exists that management structures transactions, including business acquisitions and dispositions, to benefit itself rather than the entity or its shareholders. Shleifer and Vishny (1990) suggest that some acquisitions are made to protect executive positions or increase executive compensation. For example, in order to retain control and/or protect executive positions, Company X may acquire Company Y before Company X is acquired by Company Y or some other company. Similarly, acquisitions may be structured to increase some performance metric, such as post-acquisition net operating cash flow, especially when performance-based executive compensation is based on that metric. (Nurnberg 2006, 214.)

Stretching out accounts payable. This study investigates one of the simplest ways to manipulate operating cash flows, that is, stretching out accounts payable over their due dates. Accountants and financial statement users have long understood that a major defect of net operating cash flow as a performance metric emanates from management's ability to speed up operating collections and slow down operating payments to increase net operating cash flow for a particular period (Hendriksen 1970, 242; Heath 1978a, 127–128; Nurnberg 2006, 214; Lee 2012, 22). A simple thing that companies can do to improve reported operating cash flow is to slow down the rate of payments to their vendors. If analysts or investors then expect the current period cash flow from operating activities to continue, they would be mistaken: vendors will eventually put increasing pressure on the company to pay more timely. Therefore, any benefit would be unsustainable or, at minimum, any year-over-year improvement in operating cash flow would be unsustainable. For example, General Electric Corporation began stretching out its accounts payable in 2001 and therefore received boosts to operating cash flow. However, that benefit began to slow in subsequent periods. (Siegel 2006, 39.)

Even though stretching out accounts payable is not specifically prohibited under FAS or IFRS, both FAS and IFRS require additional information to be provided in the notes in some instances: Under FAS, preparers are obligated by Accounting Act 3:2.1 to provide in the notes any necessary information, which is relevant for achieving a true and fair view. Under IFRS, IAS 1 paragraph 112 requires

information that is not presented elsewhere in the financial statements, but is relevant to an understanding of any of them, to be provided in the notes.

Ivancevich et al. (2012, 29) argue that it is clear the cash flow statement has been a challenge for preparers – a possible reason being the cash flow statement receiving only little attention in accounting education (O'Bryan et al. 2000; Wouters 2008; Kieso et al. 2012, 233; Wahlen et al. 2013; Canace & Wilkerson 2014, 209–210). Furthermore, the auditing education not emphasising the cash flow statement (Mills & Yamamura 1998, 54), and the auditors' ignorance of or indifference towards the manipulation of cash flow statements (Siegel 2006, 39–40), in addition to auditors' alleged lack of interest in auditing the cash flow statement (Mills & Yamamura 1998, 53; Arola 2011b, 17–19; Hanini & Abdullatif 2013, 132) would open up a window for boosting the operating cash flow by drastically stretching out operating payments over their due dates and not disclosing this action in the notes. This discussion is addressed in hypothesis P3:

> H_P3: *Few preparers of financial statements would provide information in the notes if the entity has not paid its accounts payable that were due the last month of the accounting period; furthermore, few of those who would not disclose such information, would provide information in the notes if the entity has not paid its accounts payable that were due Q4 of the accounting period.*

The related analysis will be based on question P3, which investigates preparers' willingness to provide any information in the notes if the operating cash flow has been manipulated by drastically stretching out operating payments over their due dates:

> Q_P3: *Would you provide information in the notes if the entity has not paid its accounts payable that were due the last month of the accounting period? If not, on a scale from 1 (definitely not) to 7 (definitely yes), would you provide information in the notes if the entity has not paid its accounts payable that were due Q4 of the accounting period?*

Similarly, regarding auditors, their alleged lack of interest in auditing the cash flow statement (Mills & Yamamura 1998, 53; Arola 2011b, 17–19; Hanini & Abdullatif 2013, 132) and ignorance of or indifference towards the manipulation of cash flow statements (Siegel 2006, 39–40), as well as the auditing education not emphasising the cash flow statement (Mills & Yamamura 1998, 54), suggest that auditors would not require a mention in the notes or in the auditor's report if the operating cash flow has been boosted by drastically stretching out operating payments over their due dates. This leads to hypothesis A4:

> H_A4: *Few auditors would require a mention in the notes or in the auditor's report if the entity has not paid its accounts payable that were due the last month of the accounting period; furthermore, few of those who would not require such mentioning, would require a mention in the notes or in the auditor's report if the entity has not paid its accounts payable that were due Q4 of the accounting period.*

The related analysis will be based on question A4, which investigates how auditors would react if the operating cash flow has been manipulated by drastically stretching out operating payments over their due dates:

> Q_A4: *Would you require a mention in the notes or in the auditor's report if the entity has not paid its accounts payable that were due the last month of the accounting period? If not, on a scale from 1 (definitely not) to 7 (definitely yes), would you require a mention in the notes or in the auditor's report if the entity has not paid its accounts payable that were due Q4 of the accounting period?*

Regarding users, condition of conflict of interest stipulates that they expect audited cash flow statements to be non-manipulated, and condition of consequence entails that users expect audited financial statements to contain all the appropriate disclosures of information because they want financial statements to contain as much relevant data as possible (Cosserat 2000, 39). This leads to hypothesis U7:

H_U7: *Most users reckon that there should be a mention in the notes or in the auditor's report if the entity has not paid its accounts payable that were due the last month of the accounting period.*

The related analysis will be based on question U7, which investigates whether users reckon it should be mentioned in the financial statements or in the auditor's report if the operating cash flow has been manipulated by drastically stretching out operating payments over their due dates:

Q_U7: *In your opinion, should there be a mention in the notes or in the auditor's report if the entity has not paid its accounts payable that were due the last month of the accounting period?*

Nurnberg (2006, 215) reasons that the costs of manipulating cash flow statements are borne by the entities and their shareholders as explicit outlays or opportunity costs, by investors who purchase overpriced securities, and by financial statement users as additional effort to disentangle the cash flow statement; on the other hand, the benefits of manipulating cash flow statements accrue to investors who sell overpriced securities, to investment fund portfolio managers as higher management fees on overvalued portfolios, and to managers as higher incentive compensation when that is based on net operating cash flow or higher share-based compensation due to overpriced shares. Cash flow statement manipulation – similar to manipulating income statements – typically provides short-lived benefits that are reversed in subsequent accounting periods; but it can have negative impact on a company's business activities if, for example, the company antagonises suppliers and customers by delaying supplier payments beyond customary due dates and hounding customers to speed up collections.

Finally, the manipulation of cash flow statements would reduce the qualitative characteristics reliability (faithful representation) and comparability: Reliability (faithful representation) would be reduced because the cash flow statement would no longer represent what users are entitled to expect it to represent: that is, the cash flows as regulated in the applicable standard. Comparability would be reduced because unlikely all cash flow statements would be manipulated in the same manner. Especially if the manipulation is not mentioned in the financial statements

or in the auditor's report, users are not informed about the diminished usefulness of the published cash flow statement.

2.5 Moral hazard (lacking effort in preparing and auditing) reduces reliability and comparability

The second type of agency problem is moral hazard. In this study, moral hazard relates to a lack of effort by preparers to construct the cash flow statement correctly, and to a lack of effort by auditors to audit the cash flow statement meticulously. In order to conceptualise how moral hazard could manifest in the practices of preparers and auditors, their objectives and responsibilities are reviewed next.

2.5.1 Objectives and responsibilities of preparers and auditors

The precondition for effective global capital markets is their credibility, which is earned through comparable and transparent financial reporting (Troberg 2007, 13). In addition to developing harmonised international accounting standards, these standards must be rigorously interpreted and applied. It is evident that high quality accounting standards are not sufficient to secure the credibility of financial reporting; financial reports must be audited in an independent and professional manner. Consequently, in addition to international accounting standards also international auditing standards are needed to secure the same high quality of auditing everywhere. (Troberg 2007, 230.)

Preparers. The objectives and responsibilities of preparers of cash flow statements were comprehensibly discussed in chapter 2.2.2 in connection with the current cash flow regulation in Finland. The conclusion is that cash flow statements must be prepared in accordance with the regulation applied to that set of financial statements: If an entity is preparing financial statements under FAS, cash flow statements should be prepared in accordance with KILA 30.1.2007, which is argued to be an application of the good accounting practice required by Accounting Act 1:3. If an entity is preparing financial statements under IFRS, cash flow statements must be prepared in accordance with IAS 7. Furthermore, Accounting Act 3:2.1 requires necessary additional information for achieving a true and fair view to be

provided in the notes. Similarly, IAS 1 paragraph 112 requires information that is not presented elsewhere in the financial statements, but is relevant to an understanding of any of them, to be provided in the notes.

Auditors. In a nutshell, the purpose of auditing is, on the basis of the audit process, to provide an opinion on whether the financial statements give a true and fair view of (represent fairly) the financial position, financial performance and cash flows of an entity. From the users' perspective, auditing increases the reliability of financial statements (Troberg 2007, 231).

According to Tilintarkastusstandardi 200 (uudistettu) *Tilintarkastuksen tavoitteet ja yleiset periaatteet* – which is based on International Federation of Accountants' (IFAC) ISA[44] 200 *Overall Objectives of the Independent Auditor and the Conduct of an Audit in Accordance with International Standards on Auditing* – the objective of an audit is that the auditor can form an opinion on whether the financial statements are prepared, in all material[45] respects, in accordance with the applicable financial reporting framework. Auditing Act 15.1 requires that an auditor must issue, for each financial period, an auditor's report, which must be dated and signed. According to Auditing Act 15.2, the auditor's report is to contain an opinion on 1) whether the financial statements and the director's report give a true and fair view, in accordance with the applicable financial reporting framework, of the result of operations and the financial position of the entity, and 2) whether the information included in the director's report is consistent with the information included in the financial statements. Auditing Act 11.1 states that an audit covers the audit of the accounting records, the financial statements, the director's report and the administration of an entity.

Under FAS, the following of good accounting practice is assumed to lead to financial statements that give a true and fair view of a company's financial position and activities. As noted, good accounting practice is not defined in Accounting Act or Accounting Ordinance; instead it is formed by accepted accounting practices,

[44] International Standards on Auditing

[45] Materiality is defined in Tilintarkastussuositus 320 *Olennaisuus* – which is based on ISA 320 *Materiality in Planning and Performing an Audit* – in a following manner: Misstatements, including omissions, are considered material if they, individually or in the aggregate, could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements. Judgments about materiality are made in light of surrounding circumstances and are affected by the size or nature of the misstatement, or a combination of both. Therefore, materiality is more of a threshold than a qualitative characteristic.

applicable standards as well as accounting and auditing professions (Fredriksson et al. 2008, 25). KILA is regarded as being a significant force in generating good accounting practice by publishing guidance on specific accounting practices; following this guidance will result in good accounting practice in a given issue (Leppiniemi 2006, 272; Fredriksson et al. 2008, 25). Therefore, under FAS, auditors should verify that the cash flow statement has been prepared in accordance with KILA 30.1.2007.

According to Tilintarkastusstandardi 200 (uudistettu), an auditor must follow *good auditing practice*[46] when performing the audit; this entails that the auditing must be performed in accordance with applicable auditing standards. According to Tilintarkastusstandardi 200 (uudistettu) and ISA 200, the auditor should plan and perform an audit with professional scepticism recognising that circumstances may exist that cause the financial statements to be materially misstated.

When issuing an auditor's report, the auditor should assess the information presented in the financial statements also from the point of view of the financial statement user – however, the auditor cannot presume that the financial statements should entail information that is not required by the applicable financial reporting framework, that is, FAS or IFRS (KHT-yhdistys 2009, 42–43). Nonetheless, the auditor should require that the financial statements contain the additional information in the notes that is required by Accounting Act 3:2.1 under FAS and IAS 1 paragraph 112 under IFRS.

Besides verifying the correctness of the calculations when auditing a cash flow statement, the auditor needs to keep in mind its objectives (Riistama 1999, 225, 245). In addition to the objectives of cash flow statements discussed in chapter 2.1.1, namely providing information that is useful in predicting an entity's future cash flows and assessing its liquidity and solvency (IAS 7, paragraphs 4–5; SFAS 95, paragraphs 4–5; KILA 30.1.2007, section 2; FASB 2010, OB2, OB3, OB13, OB20, BC1.34; IASB 2010, OB2, OB3, OB13, OB20), the cash flow statement should help users assess the cash aspects of investing and financing transactions on an entity's financial position and the reasons for differences between net income and net cash receipts and payments (Epstein et al. 2005, 99).

[46] Hyvä tilintarkastustapa

Furthermore, the value of an audit is determined entirely by its practical benefit (Flint 1988) – in an ever-changing society, the purpose of auditing is formed through an on-going discussion between auditors and users of financial statements; auditors need to listen to the representatives of different user groups in order to be able to meet their expectations from the audit (Riistama 1999, 23). In recent years the use of cash flow statements has increased rapidly (Mechelli 2009, 233). Siegel (2006, 43) argues that, as cash flow statements are more and more becoming the new focus for users of financial statements, auditors should adjust their work accordingly in order to provide the most value to the public.

A lack of effort in auditing the cash flow statement might lead to negative consequences in financial markets: it would weaken the ability of users to assess the future and continuity of an entity – in particular, users would be less able to predict the entity's future cash flows or assess its liquidity and solvency due to the lower credibility of the published information. Furthermore, the lack of effort by auditors would increase the possibility of preparers manipulating the cash flow statement to the detriment of users. (Hanini & Abdullatif 2013, 125.)

To summarise, auditors should verify that the cash flow statement has been prepared in accordance with the applicable standard, namely KILA 30.1.2007 under FAS and IAS 7 under IFRS (Riistama 1999, 225–226). Furthermore, auditors should verify that any additional information that is needed for the financial statements as a whole presenting a true and fair view (FAS), or that is relevant to understanding any of the financial statements' sections (IFRS), is provided in the notes. Finally, because the cash flow statement is a part of the financial statements, it should, at least, be audited with the same level of attention as the rest of the financial statement sections (Riistama 1999, 226).

2.5.2 The practice of preparing and auditing

This chapter investigates the possibility of moral hazard in preparing and auditing the cash flow statement from different perspectives. First, and more generally, it will be investigated whether auditors spend the least time with the cash flow statement in relation to the other financial statement section during an annual audit of an entity as a possible indicator of moral hazard among auditors. Second, and more specifically,

two examples of current regulation – namely the presentation of payments for capacity acquisitions and non-cash transactions – are used to investigate moral hazard in these aspects of preparing and auditing cash flow statements. The presentation of capacity acquisition payments and non-cash transactions were selected as examples because these, presumably, affect most cash flow statements during most accounting periods, and they can have a material effect on the figures presented on an entity's cash flow statement.

The time auditors spend with cash flow statements in relation to the other sections of financial statements. Mills and Yamamura (1998, 53) note that many auditors spend less time with the cash flow statement than with the balance sheet and the income statement, even though they should not. They argue that many auditors have been slow to learn how to use cash flow ratios; auditors traditionally use either a balance sheet or a transaction cycles approach. Neither approach emphasises cash or the cash flow statement. While auditors do use the cash flow statement to verify balance sheet and income statement accounts and to trace common items to the cash flow statement, their use of ratios for cash-related analysis has been limited to the current ratio or the quick ratio. According to an informal survey of (then) Big Five and other audit firms, their audit procedures had not changed in ways that take advantage of the information presented on the cash flow statement, even though the statement had been required for a long time. This may be due to the cash flow statement not being emphasised in the auditing education (Mills & Yamamura 1998, 54)

Mills and Yamamura (1998, 55) suggest that auditors need to learn how to use cash flow ratios in audits because such measures are becoming increasingly important to the marketplace; investors and other users are relying on them. Similarly, Siegel (2006, 38) suggests that the focus of audits must change in order to devote more attention to the cash flow statement; the users of financial statements demand it. At the very least, cash flow statements should be audited with the same level of attention as the rest of the financial statements (Riistama 1999). However, based on their findings, Hanini and Abdullatif (2013, 132) conclude that auditors in Jordan do not consider the cash flow statement significant or relevant to their audit, and that they do not make sufficient efforts to audit the statement meticulously. In

Finland, a statistically significant majority[47] of authorised auditors seem to spend the least time with the cash flow statements of all the sections of the financial statements (Arola 2011b, 18–19). This discussion leads to hypothesis A5:

> H_A5: *Most auditors spend the least time with the cash flow statement of all the sections of the financial statements during an annual audit of an enterprise.*

The related analysis will be based on question A5, which investigates the time management of auditors during an annual audit of an enterprise:

> Q_A5: *Put the different sections of financial statements (balance sheet, income statement, cash flow statement and notes) in an order that reflects how much time you spend with them during an annual external audit of an enterprise.*

Moral hazard regarding payments for capacity acquisition. As it was discussed in chapter 2.2.3, the guidance of IAS 7 and KILA 30.1.2007 will result in monthly cash payments relating to capacity acquisitions being reported all across the different sections of a cash flow statement, which can make it difficult for users to compare different cash flow statements. Nonetheless, cash flow statements in Finland must be prepared in accordance with the regulation applied to that set of financial statements. If an entity is preparing financial statements under FAS, cash flow statements should be prepared in accordance with KILA 30.1.2007, which is argued to be an application of the good accounting practice required by Accounting Act 1:3. If an entity is preparing financial statements under IFRS, cash flow statements must be prepared in accordance with IAS 7.

Regarding preparers, the alleged lack of interest by auditors (Mills & Yamamura 1998, 53; Arola 2011b, 17–19; Hanini & Abdullatif 2013, 132), and more specifically, auditors' alleged indifference to the congruence of the cash flow statement and the applied standard (Arola 2011b, 18–19), would enable preparers to keep lacking in effort to prepare cash flow statements correctly in accordance with

[47] 69 % as measured by a population's unbiased estimator

IAS 7 or KILA 30.1.2007. In practice, many preparers find constructing the cash flow statement challenging (Ivancevich et al. 2012, 29), possibly due to it receiving only little attention in accounting education (O'Bryan et al. 2000; Wouters 2008; Kieso et al. 2012, 233; Wahlen et al. 2013; Canace & Wilkerson 2014, 209–210). Mechelli (2009, 231) reports that cash flow statements in Italy do not often conform to the regulation of IAS 7; thus, the mere presence of the same regulation does not guarantee harmonisation of financial statements or consensus among preparers (Walton 1992, 197; Joos & Lang 1994; Rahman et al. 2002, 69; Mechelli 2009, 236, 263). It must be taken into consideration that those who prepare cash flow statements under FAS do not need to know the regulation of IFRS – and vice versa, those who prepare cash flow statements under IFRS do not need to know the regulation of FAS. This discussion is addressed in hypotheses $P4_a$, $P4_b$ and $P4_c$:

H_$P4_a$: *Few preparers of financial statements who manually prepare cash flow statements would present cash payments relating to capacity acquisitions correctly in accordance with both KILA 30.1.2007 and IAS 7.*

H_$P4_b$: *Few preparers of financial statements who manually prepare cash flow statements primarily under FAS would present cash payments relating to capacity acquisitions correctly in accordance with KILA 30.1.2007.*

H_$P4_c$: *Few preparers of financial statements who manually prepare cash flow statements primarily under IFRS would present cash payments relating to capacity acquisitions correctly in accordance with IAS 7.*

Similarly, auditors' alleged lack of interest in auditing the cash flow statement (Mills & Yamamura 1998, 53; Arola 2011b, 17–19; Hanini & Abdullatif 2013, 132), and more specifically, auditors alleged indifference to the congruence of the cash flow statement and the applied standard (Arola 2011b, 18–19), as well as the cash flow statement not being emphasised in auditing education (Mills & Yamamura 1998, 54) suggest that auditors would not necessarily know how the monthly cash payments relating to capacity acquisitions should be presented on the cash flow statement in accordance with either IAS 7 or KILA 30.1.2007. Again, it is

noted that the regulation is different under FAS and IFRS. This discussion is addressed in hypotheses $A6_a$, $A6_b$ and $A6_c$:

H_$A6_a$: *Few auditors know how cash payments relating to capacity acquisitions should be presented in accordance with both KILA 30.1.2007 and IAS 7.*

H_$A6_b$: *Few auditors know how cash payments relating to capacity acquisitions should be presented in accordance with KILA 30.1.2007.*

H_$A6_c$: *Few auditors know how cash payments relating to capacity acquisitions should be presented in accordance with IAS 7.*

The related analysis for preparers will be based on question P4, which investigates how manual preparers (i.e. those who typically prepare the cash flow statement either completely manually or by manually modifying a version printed from their accounting system) of cash flow statements would present monthly cash payments relating to capacity acquisitions. Similarly, the related analysis for auditors will be based on question A6, which investigates whether auditors of financial statements know how monthly cash payments relating to capacity acquisitions should be presented under FAS and IFRS:

Q_P4: *In which section of the cash flow statement (operating, investing or financing activities) would you primarily present the following transactions of a manufacturing company?*

- *A one-time payment of 10000€ relating to a purchase of manufacturing equipment*
- *A monthly payment of 10000€ relating to instalments of manufacturing equipment*
- *A monthly rent-payment of 10000€ relating to a lease of manufacturing equipment (FAS)*
- *A monthly rent-payment of 10000€ relating to a finance lease of manufacturing equipment (IFRS)*
- *A monthly rent-payment of 10000€ relating to an operating lease of manufacturing equipment (IFRS)*

Q_A6: *In which section of the cash flow statement (operating, investing or financing activities) should the following transactions of a manufacturing company be primarily presented?*

- *A one-time payment of 10000€ relating to a purchase of manufacturing equipment*
- *A monthly payment of 10000€ relating to instalments of manufacturing equipment*
- *A monthly rent-payment of 10000€ relating to a lease of manufacturing equipment (FAS)*
- *A monthly rent-payment of 10000€ relating to a finance lease of manufacturing equipment (IFRS)*
- *A monthly rent-payment of 10000€ relating to an operating lease of manufacturing equipment (IFRS)*

In cash flow statements under FAS, cash payments of acquisitions are classified as investing activities according to KILA 30.1.2007 section 4.2. Instalments of acquisitions are classified as investing activities according to KILA 30.1.2007 section 4.10, and lease payments are classified as operating activities according to KILA 30.1.2007 section 4.1. In cash flow statements under IFRS, cash payments of acquisitions are classified as investing activities according to IAS 7 paragraph 16. IAS 7 paragraph 43 states that investing transactions that do not require the use of cash or cash equivalents must be excluded from cash flow statements; IAS 7 paragraph 44 continues that an example of such a transaction is the acquisition of an asset by assuming a directly related liability. Therefore, the initial recognition in the balance sheet of such an acquisition does not have an effect on the cash flow statement; instead, the subsequent cash payments are presented. As instalments are cash flows arising from investing activities, i.e. cash payments to acquire property, plant and equipment, they are classified as investing activities according to IAS 7 paragraph 16. Regarding finance lease payments, the apportioned reduction of the outstanding liability is classified as financing activities according to IAS 7 paragraph 17. Operating lease payments are classified as operating activities according to IAS 7 paragraph 14. As a result, this study identifies the correct row of

answers as follows: A_1= investing, A_2= investing, A_3= operating, A_4= financing, and A_5= operating activities.

Not presenting capacity acquisition cash flows in accordance with the applicable standard would reduce the qualitative characteristics reliability (faithful representation) and comparability: Reliability (faithful representation) would be reduced because this aspect of the cash flow statement would no longer faithfully represent what it purports to represent – that is, the capacity acquisition payments in accordance with the applicable standard. Comparability would be reduced because the classification errors would likely vary on different cash flow statements.

Moral hazard regarding non-cash transactions under FAS. As it was discussed in chapter 2.2.3, the regulation under FAS regarding the handling of non-cash transactions in cash flow statements is rather ambiguous. Regardless, if an entity is preparing financial statements under FAS, cash flow statements should be prepared in accordance with KILA 30.1.2007, which is argued to be an application of the good accounting practice required by Accounting Act 1:3. KILA 30.1.2007 states in section 1.3 that although it provides guidance in preparing cash flow statements using cash basis, the items presented using cash basis may be limited to those considered material under the principle of materiality, which is a part of the good accounting practice. Therefore, this study takes the stand that at least all material non-cash transactions should be omitted from the cash flow statements prepared under FAS.

Furthermore, it was also briefly discussed in chapter 2.2.3 that in order to spot the non-cash transactions, preparers would need to go beyond the balance sheet and the income statement and, for example, check the journal entries, or the actual vouchers, of the possible non-cash transactions. Therefore, identifying the non-cash transactions requires extra effort by preparers, and as a result, an entity's cash flow statement may turn out drastically differently depending on the preparer's ability, or willingness to put in effort, to track down the non-cash transactions.

The indication that many preparers find constructing the cash flow statement challenging (Ivancevich et al. 2012, 29), and the accounting education giving only little attention to the cash flow statement (O'Bryan et al. 2000; Wouters 2008; Kieso et al. 2012, 233; Wahlen et al. 2013; Canace & Wilkerson 2014, 209–210), together with the alleged lack of interest by auditors in auditing the statement (Mills & Yamamura 1998, 53; Arola 2011b, 17–19; Hanini & Abdullatif 2013, 132), and

more specifically, auditors' alleged indifference to the congruence of the cash flow statement and the applied standard (Arola 2011b, 18–19) may result in preparers not tracking down and omitting the material non-cash transactions from the cash flow statement – and thus not complying with KILA 30.1.2007. Again, Mechelli (2009, 231) reports that cash flow statements in Italy do not often conform to the regulation of IAS 7, thus the mere presence of the same regulation does not guarantee harmonisation of financial statements or consensus among preparers (Walton 1992, 197; Joos & Lang 1994; Rahman et al. 2002, 69; Mechelli 2009, 236, 263). This leads to hypothesis P5:

> H_P5: *Few preparers of financial statements who manually prepare cash flow statements primarily under FAS would omit material non-cash transactions from cash flow statements under FAS.*

Similarly, the alleged lack of interest by auditors in auditing the statement (Mills & Yamamura 1998, 53; Arola 2011b, 17–19; Hanini & Abdullatif 2013, 132), and more specifically, auditors alleged indifference to the congruence of the cash flow statement and the applied standard (Arola 2011b, 18–19), as well as the cash flow statement not being emphasised in auditing education (Mills & Yamamura 1998, 54) suggest that auditors would not necessarily know that the material non-cash transactions should be omitted from the cash flow statement. This leads to hypothesis A7:

> H_A7: *Few auditors would omit material non-cash transactions from cash flow statements under FAS.*

The related analyses will be based on questions P5 and A7. The former investigates whether FAS manual preparers (i.e. those who prepare cash flow statements primarily under FAS and who either typically prepare them completely manually or by manually modifying a version printed from their accounting system), and the latter investigates whether auditors, would omit material non-cash transactions from the FAS cash flow statement:

Q_P5; Q_A7: *Under FAS, what should Company A's cash flow statement look like for the accounting period in the following scenario? Company A purchases monthly administrative services from Company B on account, totalling at 12000€ for the accounting year. At the end of the accounting period, Company A carries out a directed issue of shares to Company B for the amount of the total administrative services. Company A had not yet paid its account payable, and therefore the companies decide to settle the mutual debt and receivable accounts. As a result, Company A's account payable is reclassified as owner's equity. Company A does not have other transactions during the accounting period.*

- *The cash flow statement should be blank.*
- *The cash flow statement should present a negative operating cash flow, and a positive financing cash flow for the amount of 12000€.*

As already mentioned, this study takes the stand that at least all material non-cash transactions should be omitted from the cash flow statements prepared under FAS because that is stipulated in KILA 30.1.2007, following of which is argued to be an application of the good accounting practice required by Accounting Act 1:3. Undoubtedly the non-cash transactions presented in the question are material because they are the sole transactions the company has in the accounting period. Therefore, the correct answer would be that the net cash flows for each activity should be zero, i.e. the cash flow statement should be blank.

I will investigate this issue further: If those FAS manual preparers who indicate that they would omit material non-cash transactions prepare the cash flow statement using primarily the income statement, the balance sheet and the balance sheet specifications, they may not notice the material non-cash transactions that occurred during the accounting period. They would, for example, additionally need to go through the general ledger events on a particular account to track down the journal entries, or the actual vouchers, in order to spot the non-cash transactions. An alternative would be looking through the bank statements. Furthermore, from A/P reports preparers may, for example, find, which PPE purchases have not yet been paid, from A/R reports preparers may, for example, find, which receivables have

been settled against other accounts than cash accounts, and the director's report may give insight into, for example, how much of a subsidiary acquisition price was paid in cash.

Again, the mere presence of the same regulation does not guarantee the congruence of the cash flow statement and the applicable standard (Mechelli 2009, 231), or more generally, the harmonisation of financial statements or consensus among preparers (Walton 1992, 197; Joos & Lang 1994; Rahman et al. 2002, 69; Mechelli 2009, 236, 263). The indication that many preparers find constructing the cash flow statement challenging (Ivancevich et al. 2012, 29), the accounting education not emphasising the cash flow statement (O'Bryan et al. 2000; Wouters 2008; Kieso et al. 2012, 233; Wahlen et al. 2013; Canace & Wilkerson 2014, 209–210), the error-prone preparing practice (Rosen 2007, 25; Arola 2011a, 69), and the alleged lack of interest by auditors (Mills & Yamamura 1998, 53; Arola 2011b, 17–19; Hanini & Abdullatif 2013, 132), and more specifically, auditors' alleged indifference to the congruence of the cash flow statement and the applied standard (Arola 2011b, 18–19), would allow preparers to take the easier route and not dig deeper than the balance sheet, the income statement and the balance sheet specifications to track down the material non-cash transactions for the accounting period. This is addressed in hypothesis P6:

> H_P6: *Most of those FAS manual preparers who indicate omitting non-cash transactions from the cash flow statement, never or rarely use any essential accounting material (journal, other vouchers, bank statements, A/P reports, A/R reports or director's report) for detecting non-cash transactions.*

The related analysis will be based on question P6, which investigates what material preparers use when constructing a cash flow statement:

> Q_P6: *On a scale from 1 (never) to 7 (always), do you use the following material when preparing a cash flow statement?*
>
> - *Balance sheet*
> - *Balance sheet specifications*
> - *Income statement*

- *Notes*
- *Director's report*
- *General ledger*
- *Journal*
- *Accounts receivable reports*
- *Accounts payable reports*
- *Bank statements*
- *Other vouchers*

Not omitting material non-cash transactions from the cash flow statement would reduce the qualitative characteristics reliability (faithful representation) and comparability: Reliability (faithful representation) would be reduced because, as the phenomenon the cash flow statement purports to represent is the realised cash flows of an entity, not omitting material non-cash transactions from the statement clearly results in not faithfully representing the actual, realised cash flows. Comparability would be reduced because, if non-cash transactions are not omitted from some statements but are omitted to some extent from others, the different cash flow statements would not be comparable with each other.

2.6 Indirect vs. direct method affects understandability

2.6.1 Indirect method as the preparers' favourite

Companies are predominantly using the indirect method for presenting operating cash flows (Wallace et al. 1997, 11; Troberg 2007, 104). The indirect method is most widely used, primarily because it is perceived to be easier to prepare (Hertenstein & McKinnon 1997, 71; Epstein et al. 2005, 103), and it requires no additional recording or ledger manipulation than that is provided in typical accounting systems (Kwok 2002, 350). According to SFAS 95 paragraph 109, many preparers of financial statements have said that it would be costly for their companies to report gross operating cash receipts and payments, as they are not collecting information in a manner that will allow them to determine amounts such

as cash received from customers or cash paid to suppliers directly from their accounting systems. However, Hales and Orpurt (2013, 539) conclude that recurring benefits that many firms derive from providing direct method information likely exceed recurring costs. Yet, in practice, more than 90 per cent of the companies' cash flow statements are found to use the indirect method (Broome 2004, 17). Mailibayeva, Makarov and Orazalin (2012, 97) find that the likelihood of using the indirect method increases with firm size, ownership concentration and the selection of a Big Four auditor, whereas IFRS adoption is not found to make a difference.

The popularity of the indirect method among preparers has long been recognised. Of the over 6,000 companies listed on Compustat, Rue and Kirk (1996, 17) identified only 259 that used the direct method during the 1987–1989 period representing the early years of application of SFAS 95; of this group, 69 companies initially adopted the direct method but switched to the indirect method by 1989. Since then, various studies have shown that less than 5% of entities in the US prepare the cash flow statement using the direct method (Rue & Kirk 1996, 17). Wallace et al. (1999, 315) report that in the UK, only two of 200 analysed companies adopted the direct method, and Krishnan and Largay (2000, 243) note that the direct method was used by only 2,56 % of companies in 1995 (Mechelli 2009, 240). AICPA (2005) reports that of 600 US public firms surveyed over 2001–2004, only seven or eight firms disclosed a direct method cash flow statement each year (Orpurt & Zang 2009, 894). Mechelli (2009, 237, 240, 261, 264) reports that all of the 101 Italian listed companies in his sample used the indirect method in 2005, and that all of the 94 Italian listed companies in his sample used the indirect method in 2007/2008. This discussion leads to hypothesis C3:

H_C3: *Most cash flow statements present operating cash flows using the indirect method.*

Although using the indirect method is allowed, it does not meet the preference of international standard-setters: all the applicable standards (KILA 30.1.2007, IAS 7 and SFAS 95) encourage entities to use the direct method. Stolowy and Walser-Prochazka (1992, 193) note that the indirect method is permitted because standard-setters believe that reporting operating cash flows by the direct method may cause costs that outweigh the benefits of the information to users (Mechelli 2009, 239).

Nor, does the use of the indirect method meet the preference of financial statement users as it will be discussed in the subsequent chapter 2.6.2. Furthermore, because the indirect method is reported to be more confusing to users (as it also will be discussed in the subsequent chapter 2.6.2), its prevailing use conflicts with one of the qualitative characteristics of useful financial information, that is, understandability.

Finally, on a side note, each entity that was caught manipulating its cash flow statement in the early 2000s in the US used the indirect method for the operating activities section. Adjustments to reconcile net income to operating cash flow were numerous, complicated, and difficult to understand – and it is this complexity that can provide a cover for manipulating cash flow figures. (Broome 2004, 19.)

2.6.2 Direct method as the users' favourite

Prior research suggests that the format of information presented in financial statements can influence the way entity-specific information is processed and used by both novices (Maines & McDaniel 2000) and experts (Hirst, Hopkins & Wahlen 2004). Consequently, the presentation format of the cash flow statement likely affects users' financial statement analyses and the resulting economic decisions. (Hodder et al. 2008, 918.)

Studies have consistently shown that users of financial statements prefer the direct method for presenting the operating cash flows (Bahnson et al. 1996). Association for Investment Management and Research (AIMR), on behalf of securities analysts and investment managers, has expressed a strong preference for the direct method (Knutson 1993). The direct method allows for reporting operating cash inflows and outflows by understandable categories, while the adjustments required by the indirect method are hard for the user to understand and, in addition, provide preparers more leeway for manipulating the statement. (Broome 2004, 18.) In a survey study by Jones et al. (1995, 115–117, 119) of 210 Australian preparers of cash flow statements, majority of respondents indicated that the direct method better helps users understand cash flow data, better facilitates cash flow analysis, is a better indicator of an entity's solvency, has a sounder conceptual basis, and reflects accepted commercial practice.

The direct format better fulfils users' information needs because of the breakdown of major classes of cash inflows and outflows; in addition, the format is easier to understand and provides performance evaluation via the expected and realised cash flows (Brahmasrene et al. 2004, 59). CFA Institute (2005, 6, 27) states that the cash received from customers is the single most important direct cash flow figure investors require for analysis and the primary indicator of a company's cash-generating ability, and that the primary purpose for this information is predicting an entity's future cash flows (Orpurt & Zang 2009, 894). Similarly, Farshadfar and Monem (2013, 111) provide evidence that disaggregating operating cash flow into its components enhances the predictive ability of aggregate operating cash flow in predicting future cash flows – they find that cash received from customers and cash paid to suppliers and employees complement each other in enhancing the overall predictive ability of cash flow components.

Krishnan and Largay (2000) investigate whether direct method components better predict future cash flows than indirect method components by developing time-series models that predict one-year-ahead operating cash flows. Their indirect method model predicts future operating cash flows using items similar to indirect method components, while their direct method model uses either reported or estimated direct method components to predict future operating cash flows. Comparing predictive abilities based on mean absolute percentage forecast errors, they find that the direct method model yields lower errors, regardless of whether reported or estimated direct method components are used in the model. (Orpurt & Zang 2009, 898.) Arthur and Chuang (2006) validate the findings of Krishnan and Largay (2000), and through examining a sample of 163 Australian firms over a five-year window from 2000 to 2004, they find direct method components incrementally useful beyond indirect method components, and also Farshadfar and Monem (2011; 2012) provide evidence on the superior usefulness of the direct method cash flow statement in predicting future operating cash flows (Hales & Orpurt 2013, 546, 548).

Orpurt and Zang (2009, 893, 895) go further and argue that direct method line items, such as cash received from customers, are not reliably estimable using income statements and either balance sheets or indirect method cash flow statements, and for that reason the direct method cash flow statement is incrementally useful beyond the indirect method cash flow statement when

predicting future operating cash flows or earnings. They find evidence suggesting that market participants use direct method cash flow statements, when available, for setting share prices; and conclude that the direct method cash flow statement yield current returns that are more highly associated with realised future earnings and operating cash flows, suggesting that direct method components provide investors with a more useful basis for predicting entities' future performances than the information available from indirect method cash flow statements. Also Hughes, Hoy and Andrew (2010) – using income statement and indirect cash flow statement data for 53 Australian firms over 2004–2007 – report that they cannot accurately estimate direct method components for cash collected from customers or cash paid to suppliers (Hales & Orpurt 2013, 553).

Plumlee (2003) reports that analysts' forecast errors are positively related to the complexity of forecast-relevant information (Hodder et al. 2008, 950). According to Stice et al. (2004, 245) as well as Stickney and Weil (2003, 184), the presentation format of the indirect method operating cash flows is often described as confusing by students, accounting educators and users of financial statements (Hodder et al. 2008, 952). Hodder et al. (2008, 915) propose that the reversed-accruals orientation required in the indirect method cash flow statement is unnecessarily complex, causing information-processing problems that result in increased cash flow prediction errors and dispersion. According to Epstein and Pava (1992, 54), interpreting the meaning of the adjustments under the indirect method is considerably more difficult than interpreting the more straightforward presentation of the direct method (Yap 1997, 665–666).

The preference of the direct method has been acknowledged, at least, since the early 1980s. Heath (1981, 169–170) argued that the indirect method is basically a set of work sheet adjustments rather than an explanation of how operating activities affects cash; the direct method, on the other hand, is likely to enlighten the relationship between operating activities and cash receipts and payments, because it shows clearly that profits are neither cash nor a source of cash, that cash comes from customers, that it is paid for merchandise, administrative and selling costs, taxes, and so forth, and that depreciation is neither a source nor a use of cash. For example, presenting depreciation as an adjustment to cash flow has long been perceived confusing: in the 1970s Spiller and Virgil (1974, 131) reported that "almost 45 per cent of the sample entities conveyed the impression that they had acquired capital

assets with depreciation money, financed growth through depreciation, or engaged in similar forms of black magic" (Heath 1981, 171).

In line with Heath's arguments, Gibson and Kruse (1984) noted that, as cash comes from customers and suppliers and not from the net income, the direct approach is more meaningful. Similarly, Bracken and Volkan (1988, 39) argued for the superiority of the direct format stating that while the indirect format is basically a mechanical reconciliation that does not show sources and uses of operating cash flows, the direct format reports operating cash collections that are real activities as opposed to abstractions. Drtina and Largay (1985) suggested that the indirect method results in an estimate of cash flow that may be materially different from the actual realised cash flow from operations. Hovey (1986) noted that the direct format is easier to read because it parallels the income statement, and Boze (1987) argued that the indirect method leads to confusion because of the implication that add-backs of non-cash expenses to accrual net income are actual cash inflows. (Rue & Kirk 1996, 17.)

In the late 1980s, according to SFAS 95 paragraph 111, majority of commercial lenders said that amounts of operating cash receipts and payments are particularly important in assessing an entity's external borrowing needs and its ability to repay borrowings; it has been indicated that creditors are more exposed to fluctuations in net operating cash flows than to fluctuations in net income and that information on the amounts of operating cash receipts and payments is important in assessing those fluctuations. Klammer and Reed (1990, 217) asked bank analysts to study a set of financial statements, answer a series of questions about the cash flows of an entity, and make a decision whether to grant the company's loan request; their results show less variability in the size of the loans that would be granted when analysts received a direct method, as opposed to an indirect method, cash flow statement. This study by Klammer and Reed (1990) was recently replicated by Kojima (2012) who, using accounting students instead of professionals, obtained similar results (Hales & Orpurt 2013, 553). During interviews conducted in early 2000s as part of the FASB's project on financial performance reporting, most investors, creditors, and advisors (for example, equity and credit analysts) preferred cash flow statements that present operating cash flows using the direct method (Epstein et al. 2005, 102).

Mechelli (2009, 239, 252) considers the direct method to be superior on the grounds that it is simpler to understand (O'Leary 1988), it improves cash flow

comparisons across firms (Richardson 1991) and between realised cash flows and budgets (Trout et al. 1993), it facilitates sensitivity analysis of cash flows to volume changes (Cornell & Apostolou 1992), it avoids the misconception of the indirect method that recognises items such as depreciation (Moonitz 1956, 381; Grudnitski & Harrison 1977, 202; Heath 1978b, 99), and it permits showing the most significant source of funds – revenues – and the application of funds (Roberts & Gabhart 1972, 55). Similarly, Miller and Bahnson (2012, 23) advocate the direct method and, to facilitate it, urge companies to set up cash accounting sub-system to classify each cash flow as it occurs. Finally, through their review of relevant studies, Hales and Orpurt (2013, 541) conclude that there is substantial evidence, across many years and multiple reporting jurisdictions, that the information contained in a direct method cash flow statement is incrementally useful beyond the indirect method cash flow statement and other financial statement information, and that in particular, the direct method information can be used to enhance predictions of future operating performance as measured by operating cash flows or earnings.

However, also contradictory results have been reported: In McEnroe's (1989, 59) survey, 57 per cent of audit partner respondents in US accounting firms opted for the indirect method. A survey study by Brahmasrene et al. (2004, 59) reports that 70 per cent of investors and analysts and 82 per cent of CEOs, CFOs and managers preferred the indirect method over the direct method. Using a sample of over 1,000 Chinese listed firms from 1998–2004, Ding, Jeanjean and Stolowy (2006) predict one-year-ahead operating cash flow using either indirect method information or direct method information and conclude that the indirect method information model exhibits more predictive ability – however, Bradbury (2011) notes several econometric issues related to Ding et al. (2006), suggesting that these results be interpreted cautiously (Hales & Orpurt 2013, 548).

Sound arguments have been made for using the indirect method: Anthony (1997) notes that the indirect method, by providing the reasons for differences between net income and the change in cash from operating activities, aids understanding of the cash tied up in or released from current assets and liabilities (Broome 2004, 20). Troberg (2007, 104–105) argues that as the net income and earnings per share (EPS) are in focus on stock exchanges, the usefulness of the indirect method is highlighted because the cash flow statement illustrates the difference between reported earnings and the change in cash and cash equivalents during the accounting period as well as

the relation between these two items. Another argument in favour of the indirect method is that it is theoretically superior because it articulates the cash flow statement with the balance sheet and income statement (Thompson & Buttross 1988); Seed (1984) notes that a study by the Financial Executives Institute shows that the indirect method is preferred because it links the income statement and the balance sheet together (Rue & Kirk 1996, 17).

In summary, there is a vast support for the direct method for presenting operating cash flows in the research literature, although the indirect method is not entirely without its proponents. The direct method is seen preferable because it reports the components that are extremely valuable to users and that are not available anywhere else in the financial statements – for example, the cash received from customers and the cash paid to suppliers. Furthermore, the direct method is perceived to be easier to understand, and it is argued to be more useful in the prediction of an entity's future cash flows and in the assessment of an entity's liquidity and solvency. Finally, all the applicable standards (KILA 30.1.2007, IAS 7 and SFAS 95) encourage entities to use the direct method. This discussion leads to the final hypothesis U8:

H_U8: *Most users prefer the direct method for presenting the operating activities section of the cash flow statement.*

The related analysis will be based on question U8, which investigates which method of presenting the operating cash flows users prefer:

Q_U8: *Which method for presenting the operating activities section of the cash flow statement do you prefer?*

- *direct method*
- *indirect method*

2.7 Theoretical framework summary and a table of the hypotheses

The perceived usefulness/importance of the cash flow statement as a motivator for preparers, auditors and users. Both major international accounting standard-setters, IASB and FASB, see the objective of the financial statements as providing users with information that is useful, especially in predicting future cash flows of an entity, and also in assessing an entity's liquidity and solvency – hypothesis U1 investigates whether most users are using the cash flow statement mainly for these two purposes. Both IASB and FASB postulate that in order to be useful, the information must possess certain qualitative characteristics. Using their analogy: to be useful, the information must be relevant and reliable (a faithful representation); in addition, comparability and understandability of the information enhance this usefulness. In the existing research literature, the information presented on the cash flow statement has been found to be more relevant and potentially more reliable and comparable than the information presented on the income statement or the balance sheet. And most importantly, the existing research literature suggests that the cash flow statement is indeed more useful than the income statement or the balance sheet in predicting an entity's future cash flows and assessing an entity's liquidity and solvency. Consequently, hypotheses U2 and U3 investigate whether users consider the cash flow statement the most useful financial statement section in future cash flow predictions and liquidity assessments, respectively.

Given the suggested superior usefulness of it, one might expect that also preparers and auditors would perceive the cash flow statement as among the most, if not the most, important financial statement section. However, research evidence tends to suggest the opposite – hypotheses P1 and A1 investigate whether preparers and auditors perceive the cash flow statement as the least important financial statement section. Investigating these perceptions is important, because it is suggested that people act on their perceptions; that is, preparers and auditors devote the most attention to those sections of financial statements they consider the most important, and vice versa, the least attention to those sections they consider the least important.

Comparability issues caused by current regulation. Although the information on the cash flow statement is considered readily comparable between different entities

or different time periods of the same entity, mostly due to eliminating the effects of using different accounting treatments (for example, different valuation, accruing and allocation practices) for the same transactions, some aspects of current regulation are found to reduce comparability. The comparability issues can originate from three types of current regulation: 1) current regulation that allows different presentation options on a subject, 2) current regulation that is specific on a subject, and 3) current regulation that is not unambiguous on a subject. Examples of the second and third types will be used to test for moral hazard among preparers and auditors.

Regarding the first type, although tax cash flows are suggested to be allocated on the cash flow statement between the operating, investing and financing sections based on the activity causing the gain being taxed, it is allowed to present them solely as operating activities. Given that users are expected to want as much information as possible, but that tax allocation may require extra effort from preparers, hypothesis U4 investigates whether most users want tax cash flows allocated on the cash flow statement while hypothesis C1 investigates whether taxes are, in practice, reported solely as operating activities on most published cash flow statements.

Similarly, different presentation options are allowed for interest and dividends cash flows, although it is suggested that interest and dividends paid should both be classified as financing activities and that interest and dividends received should both be classified as investing activities. The prediction here is that those suggestions are rarely followed in practice, and consequently, hypothesis $C2_a$ investigates whether interest paid and dividends paid are classified solely as operating activities and solely as financing activities, respectively, and hypothesis $C2_b$ investigates whether interest and dividends received are both classified solely as operating activities on most published cash flow statements.

Despite any comparability issues, drawing from agency theory and other hypotheses, the role of preparers is to produce cash flow statements that are congruent with current regulation, and the role of auditors is to verify that the cash flow statement not only conforms to the regulation but also strives to meet the expectations of users. Users, in turn, are postulated to expect the congruence of the cash flow statement and the applicable standard. Hypotheses $U5_a$, $U5_b$ and $U5_c$ investigate users' expectations regarding the congruence from different

perspectives: first, it is investigated whether most users consider this congruence important; second, it is investigated whether most users trust that audited cash flow statements are congruent with the applicable standard; finally, it is investigated if specifically those users who consider the congruence important also trust that audited cash flow statements have been prepared in accordance with the applicable standard if there is no mentioning otherwise in the financial statements or in the auditor's report.

Error-prone preparing practice. Cash flow statements are often found to be prepared using a back-and-forth preparing method where transactions that are firstly converted into an accrual basis for the balance sheet and the income statement are manually translated back into a cash basis in a spread sheet such as Microsoft Excel. Hypothesis P2 investigates whether most cash flow statements are, in practice, prepared this way. Such an error-prone preparing practice would jeopardise reliability (faithful representation) and comparability of the cash flow statement.

Adverse selection (manipulation). On a general level, it is now understood that cash flow statements can be almost as vulnerable to manipulation as income statements: numerous cash flow manipulation cases were reported during the 2000s in journals like Wall Street Journal and Financial Analysts Journal, which suggests that preparers do manipulate the statement, and on the other hand, that users may now be aware of it. However, auditors are reported not to acknowledge this manipulation. Hypothesis U6 investigates whether most users are aware of the possibility of preparers manipulating the cash flow statement, while hypothesis A2 investigates whether only few auditors are aware of the manipulation possibility.

More precisely, it has been reported that the cash flow statement can be, and have been, manipulated by preparers with methods that are prohibited under both FAS and IFRS, but also with methods that are not specifically prohibited under either framework. Regarding the former, hypothesis A3 investigates whether only few auditors would require a mention in the notes or in the auditor's report if operating cash flow has been boosted by the increase of current maturities of long-term debts. Regarding the latter, preparers are nonetheless obligated 1) under FAS, to provide in the notes any necessary information that is relevant for achieving a true and fair view, and 2) under IFRS, to provide in the notes information that is not presented elsewhere in the financial statements but is relevant to an understanding of any of them. Because providing this additional information is stipulated in the current

regulation, auditors should require it. Furthermore, users are postulated to expect the disclosure of such additional information. Consequently, hypotheses P3, A4 and U7 investigate whether only few preparers would mention a drastic non-payment of accounts payable, whether only few auditors would require such a mention, and whether most users expect mentioning the drastic non-payment, respectively. Manipulation, and not disclosing the manipulation, would reduce reliability (faithful representation) and comparability of the cash flow statement.

Moral hazard (lacking effort in preparing and auditing). In this study, moral hazard relates to a lack of effort by preparers to construct the cash flow statement correctly, and to a lack of effort by auditors to audit the cash flow statement meticulously. Regarding moral hazard among preparers, existing research literature is practically non-existent. Regarding moral hazard among auditors, the research literature is extremely scarce, although it suggests that auditors tend to devote more attention to other financial statement sections than the cash flow statement. Consequently, on a general level, hypothesis A5 investigates whether most auditors spend the least time with the cash flow statement during annual audits.

As it was mentioned while discussing comparability issues caused by current regulation, two examples of such regulation are used to investigate moral hazard among preparers and auditors: First, hypotheses $P4_a$, $P4_b$ and $P4_c$ investigate whether only few preparers would present payments for capacity acquisitions correctly, while hypotheses $A6_a$, $A6_b$ and $A6_c$ investigate whether only few auditors know how such payments should be presented. Second, hypotheses P5 and A7 investigate whether only few preparers and few auditors, respectively, would omit material non-cash transactions from the cash flow statement under FAS (which they ought to), and furthermore, hypothesis P6 investigates whether most of those preparers who indicate omitting the non-cash transactions never or rarely use any essential accounting material for detecting them. The lack of effort to prepare it correctly and to audit it meticulously would reduce reliability (faithful representation) and comparability of the cash flow statement.

Direct vs. indirect presentation of operating cash flows. It is widely reported that the operating activities section of the cash flow statement is most often constructed using the indirect method, although the direct method is encouraged by the applicable standards (KILA 30.1.2007, IAS 7 and SFAS 95) and preferred by users. Consequently, hypothesis C3 investigates whether operating cash flows are

presented using the indirect method on most published cash flow statements, while hypothesis U8 investigates whether most users would prefer the direct method instead. The choice of direct vs. indirect method for presenting operating activities affects understandability of the cash flow statement as the direct method is reported to be easier for users to understand.

Chapter 2, the theoretical framework, has discussed different aspects of the cash flow statement grouped by the subjects of the anticipated problem areas. Chapters 4 and 5 will, after the methods and data of the study are described in chapter 3, turn the focus and present the results and discussions grouped by the actors – that is, preparers, auditors and users of financial statements – and the contents of the published cash flow statements. Table 1 summarises the hypotheses and presents them grouped by both the problem area subjects (row) and the actors and the cash flow statement contents (column).

Table 1. Hypotheses grouped by the subjects, actors and contents

	Preparers	Auditors	Cash flow statements	Users	
The perceived importance / usefulness of the cash flow statement	The cash flow statement is the least important financial statement section for preparers (H_P1)	The cash flow statement is the least important financial statement section for auditors (H_A1)		Most users use the cash flow statement mainly for predicting future cash flows or for assessing liquidity (H_U1). For users, the cash flow statement is the most useful financial statement section in predicting future cash flows (H_U2) and assessing liquidity (H_U3).	
Comparability issues caused by current regulation			Most cash flow statements do not allocate taxes (H_C1)	Most users want taxes allocated (H_U4)	Most users expect the audited cash flow statement to be congruent with the applicable standard (H_U5_a, H_U5_b & H_U5_c)
			Most cash flow statements' presentation of interest and dividends reduces comparability (H_C2_a & H_C2_b)		
Error-prone preparing practice	Most cash flow statements are prepared manually (H_P2)				
Adverse selection (manipulation)		Few auditors are aware of the possibility of manipulation (H_A2)		Most users are aware of the possibility of manipulation (H_U6)	
		Few auditors would require mentioning if operating cash flow is boosted by the increase of current maturities of long-term debts (H_A3)			
	Few preparers would mention drastic non-payment of accounts payable (H_P3)	Few auditors would require mentioning drastic non-payment of accounts payable (H_A4)		Most users expect mentioning drastic non-payment of accounts payable (H_U7)	
Moral hazard (lacking the effort in preparing and auditing)		Most auditors spend the least time with the cash flow statement during audits (H_A5)			
	Few preparers would present capacity acquisitions correctly (H_P4_a, H_P4_b & H_P4_c)	Few auditors know how capacity acquisitions should be presented (H_A6_a, H_A6_b & H_A6_c)			
	Few preparers would omit material non-cash transactions from the cash flow statement (H_P5) or even use any essential accounting material for detecting them (H_P6)	Few auditors would omit material non-cash transactions from the cash flow statement (H_A7)			
Direct vs. indirect presentation of operating cash flows			Most cash flow statements use the indirect method (H_C3)	Most users prefer the direct method (H_U8)	

3. Methods and data

3.1 Research methods

Survey of the target individuals. The main research method in this study is the survey method. Peasnell (1981, 111) notes that survey methods are particularly valuable in testing hypotheses concerning how and to what extent accounts are actually read (Yap 1997, 659). The ability to estimate with considerable precision the percentage of a population that has a particular attribute by obtaining data from only a small fraction of the total population is what distinguishes surveys from all other research methods (Dillman 2007, 9).

A survey of the target individuals in three populations – preparers, auditors and users of financial statements – is a sound method for this study, because it is assumed that their subjective perceptions can be linked to outcomes of a bigger entity. That is, subjective perceptions influence behaviours and those behaviours have real consequences for populations and organisations. Research suggests that this assumption is tenable: Fishbein and Ajzen (1975, 139) asserted that the best single predictor of individuals' behaviour is a measure of their intention to perform that behaviour[48]. (Nazari et al. 2006, 429.)

Web questionnaires were constructed using E-lomake version 3.1 by Eduix Oy. E-lomake 3 is a browser based application, which can be used to define and publish diverse e-forms and to handle their responses; the collected information can be transferred into spread sheets or statistics software products such as Excel or SPSS (Eduix Oy 1996–2009). The questionnaires were constructed along guidelines offered by Ghiselli, Campbell and Zedek (1981), Madow, Nisselson and Olkin

[48] They further supported this contention calling the phenomenon the Theory of Reasoned Action (Ajzen & Fishbein 1977); the theory was updated and broadened by Ajzen (1991; 1996) and called the Theory of Planned Behaviour to address complex behaviours that require planning, arranging resources, and obtaining cooperation of others (Nazari et al. 2006, 429).

(1983), Nunnally and Bernstein (1994), Nazari et al. (2006, 431–435), and Dillman (2007, 377–399)[49].

Prior sending out the invitations and links to the questionnaires to the target individuals, the web questionnaires were tested by a group consisting of members in the accounting and auditing professions as well as university professors and doctoral students in the field of accounting. Final touches to the questionnaires were then applied based on the comments of the test group.

Clicking on links and responding to surveys can intimidate some people, less because of their objections to the survey, than because of the worry about whether such an action will result in their computer being infected by malware. Concerns also exist that replying to random e-mails may result in being added to a junk e-mail list. Thus, a climate of extreme caution for responding to e-mails persists. (Dillman 2007, 449–450.) In this study, the target groups were contacted from Tampere University's e-mail address, which was believed to be a trusted source in the eyes of the potential respondents. In addition, the target individuals were given individual usernames and passwords to the web questionnaire. The access to the questionnaire was denied unless a correct username and password were submitted. This was expected to increase the feeling of confidentiality for the respondents as well as to increase the likelihood that only the selected individuals would fill out the questionnaires.

Just as multiple contacts are the most important determinant of response in face-to-face, telephone, and regular mail surveys, they are essential for internet surveys.

[49] 1) Introduce the web questionnaire in a motivational manner that emphasises the ease of responding, and offers short instructions, 2) offer incentives, 3) guarantee information privacy, 4) choose for the first question an item that is likely to be interesting to most respondents, and is easily answered, 4) provide specific instructions on how to take each necessary computer action for responding to the questionnaire, and give other necessary instructions at the point where they are needed, 5) present each question in a conventional format similar to that normally used on paper self-administered questionnaires, 6) deal with only one central thought in each time, 7) keep questionnaires as short and effortless as possible, 8) use graphical symbols or words that convey a sense of where the respondent is in the completion process, 9) be precise and brief, 10) avoid awkward wording and irrelevant information, 11) present items in positive language and avoid double negatives, 12) avoid terms like "all" and "none", 13) avoid indeterminate terms like "frequently" or "sometimes", 14) use drop-down boxes sparingly, and identify each with a "click here" instruction, 15) construct web questionnaires so they scroll from question to question, 16) do not require respondents to provide an answer to each question before being allowed to answer any subsequent ones, 17) exercise restraint in the use of question structures that have known measurement problems on paper questionnaires, such as check-all-that-apply and open-ended questions, 18) restrain the use of colour so that figure/ground consistency and readability are maintained, navigational flow is unimpeded, and measurement properties of questions are maintained, and 19) avoid differences in the visual appearance of questions that result from different screen configurations, operating systems, browsers, partial screen displays, and wrap-around text.

The large number of messages received by some people is fostering less attentive reading behaviour. This fact alone makes brevity desirable. The e-mails to the target individuals should be kept brief, covering only the essence of what is being requested. For reasons of confidentiality it is undesirable to include a long list of recipients on a message, a procedure that would provide each recipient's address to all other recipients. (Dillman 2007, 367–368.)

The initial invitation e-mails to fill out the web questionnaires were sent on October 10th 2011. The data collection plan included the initial invitation and 4 reminder e-mails. The reminder e-mails would only be sent to those who had not filled out the questionnaire by that time. The first reminder was sent on October 24th 2011, the second on November 14th 2011, the third on November 29th 2011, and the fourth and final reminder was sent on December 7th 2011. The final reminder informed the recipients that they had until December 8th to fill out the questionnaire. The data collection was ended and the access to the web questionnaires was terminated on December 9th 2011. The initial invitation and every reminder included the link to the web questionnaire as well as the personal username and password. Individual recipients of the invitation and reminder e-mails only saw their own e-mail address in the recipient field and my personal Tampere University's e-mail address as the sender. Therefore, at no time did the recipients see other recipients e-mail addresses.

Following up on the non-respondents with a telephone call has been reported to be an effective way to increase response rate. The survey could then be conducted there and then as a telephone conversation. This can, however, jeopardise the comparability of the responses. Recent studies have shown that respondents to telephone surveys consistently provide more positive answers than respondents to mail surveys. (Dillman 2007, 456–458.) For this reason, the non-respondents were not contacted via telephone at any time.

The response rates in survey studies can vary largely, and in the case of internet surveys, they can be abysmal. A survey response can be seen as a social exchange. Social exchange theory asserts that actions of individuals are motivated by the return these actions are expected to bring, and in fact usually do bring, from others (Blau 1964; Gallegos 1974; Dillman 1978; Goyder 1987). According to the theory, three elements are critical for predicting a particular action: rewards, costs, and trust. Simply stated, rewards are what one expects to gain from a particular activity, costs

are what one gives up or spends to obtain the rewards, and trust is the expectation that in the long run the rewards will outweigh the costs. Other factors affecting the response rate include the interaction between the researcher and the respondent, and the interestingness of the research topic from the respondent's perspective. (Alkula, Pöntinen & Ylöstalo 1994, 67, 109; Dillman 2007, 14, 450.)

To increase the response rate in this study, the invitation and the reminders informed the recipients about the rewards and costs involved in filling out the questionnaire. The rewards included a drawing of a gift certificate of 100€ to Stockmann & Akateeminen Kirjakauppa prior the 2011 Christmas holidays, and having access to the research results in electronic form once the study is completed. The value of their responses to this study was also emphasised. The drawing was performed with Excel's random number generator on December 9th 2011 between all respondents and the gift certificate was mailed to the lucky winner on December 12th 2011. The costs associated with taking part in the survey for potential respondents involve only the time it takes to fill out the web questionnaire. Therefore, the number of questions was provided and the ease of answering was emphasised in the initial invitation and remainder messages.

To reassure the recipients of the safety of responding, they were informed about the confidentiality and anonymity of responses, as well as letting them know from what source and for what purpose their e-mail address was provided. The anonymity of responses included that no personal information was asked in the questionnaires as well as giving reassurance that no individual respondent could be identified from the finished research paper(s). The recipients were also informed that the database of their e-mail addresses formed during the data collection would be destroyed once the data collection has ended. Furthermore, the recipients were encouraged to contact me if they had any questions about this study or filling out the questionnaires. As a result, numerous e-mail conversations took place between me and a number of different recipients about this study, the topic of this study and the web questionnaires. Many recipients also e-mailed just to give their reasons for not taking part in the survey.

Collection of published cash flow statements. In addition to the surveys of the target individuals in the three populations, data were also obtained through collecting financial statements and, especially, the cash flow statements within them. Both research methods are important and complimentary: With the survey

data it is possible to investigate matters that are not observable from published cash flow statements – for example, if cash flow statements are being prepared using an error-prone preparing practice. On the other hand, some aspects are more reliably observed straight from the published statements rather than asking the preparers and auditors – for example, what percentage of published cash flow statements present operating cash flows using the direct method.

The Securities Markets Act 7:5 requires listed companies to publish their financial statements and director's report – along with the auditor's report as stipulated in the Securities Markets Act 7:8 – no later than within three months from the end of an accounting period. The Securities Markets Act 10:5 further requires that the financial statements – along with the director's and auditor's reports – are to be kept available to the public on the listed company's website for at least five years. Thus, the websites of every company in the target population were, first, located, and second, visited for finding and collecting the published financial statements[50].

A chart of all listed companies on NASDAQ OMX Helsinki (NASDAQ OMX Nordic, 2013a retrieved) was obtained on July 20th 2013. Starting July 27th 2013, the websites of each target company were located and visited for the hand collection of their three latest consolidated and parent company's cash flow statements. The cash flow statements for each year were to be collected from that year's financial statements. However, if a company did not provide a given accounting period's cash flow statement on its website, those cash flow statement figures would be collected from the comparative information disclosed in the subsequent period's financial statements[51]. In such instances, the notes of the financial statements would be read to find indications of any alterations to the figures[52]. If such alterations would have

[50] Had a company not offered financial statements on its website, the next step would have been to request them from the company via e-mail. Had that also proven unsuccessful, the final step would have been to purchase them for 5 € + VAT from Virre Information Service (National Board of Patents and Registration of Finland, 2013 retrieved). Accounting Act 3:9 requires that companies notify their financial statements – along with the director's and auditor's reports – for registration to the National Board of Patents and Registration of Finland. Limited Liability Companies Act 8:10 further stipulates that this notification must occur within two months of the adoption of the financial statements.

[51] Accounting Act 3:1.2 and IAS 1 paragraph 38 require comparative information in respect of the previous period for all amounts reported in the current period's cash flow statement. Accounting Act 3:3.1 and IAS 1 paragraph 45 state that, as the general principle, the cash flow statement must be prepared in a consistent manner from one accounting period to the next.

[52] If the entity has changed the presentation of the cash flow statement for the current period, Accounting Act 3:1.2 and IAS 1 paragraph 41 require the entity to reclassify also the comparative

affected the information investigated in this study, they would have been revoked in an attempt to obtain the original cash flow statement figures. The figures of seven cash flow statements had to be collected from the comparative information, yet in none of those instances did the notes indicate that any alterations, which would affect the figures under investigation, had been made.

Finally, regarding two companies, not all of the target cash flow statements were available from the financial statements published on their websites, and consequently, those were requested via e-mail. The CFO of the first company received the enquiry on August 1st 2013, and the missing cash flow statement was provided on August 5th 2013. The CFO of the second company received the enquiry first on August 2nd, and second on August 22nd 2013; however, the CFO never replied. The collection of cash flow statements was ended on August 31st 2013.

3.2 Ethical aspects of the study

Because of the explorative nature of this study – that is, in addition to investigating the issues suggested by existing research, it attempts to discover problem areas previously unidentified – the questionnaires included topics to which the related analyses and results are not reported; in order to identify the problem areas, many topics were investigated, but only those worth mentioning are reported. First, some topics are not reported because the responses to them were very heterogeneous within the target populations. Which topics the respondents are conflicted about can too be interesting, but because the aim of the study is to discover problem areas in preparing and auditing cash flow statements and consider their effects on published cash flow statements and what they mean for users, mainly those results are presented where a population is found to be "unanimous enough" about a topic. Examples of such results are: when an issue that jeopardises the correctness of accounting information is indicated by a statistically significant majority of a population, and on the other hand, when an issue leading to high-quality accounting

amounts unless reclassification is impracticable. In such instances, Accounting Ordinance 2:2.1 requires alterations to comparative information to be disclosed in the notes and Accounting Act 3:3.3 stipulates that, unless the alterations were due to law or other applicable regulation, the entity must provide the reasons for them in the notes. Similarly, IAS 1 paragraph 41 requires the nature and amounts of and the reasons for the reclassifications to be disclosed in the notes.

information is endorsed by less than 20 % of a population. Second, if the responses indicated there is no problem regarding a topic, the analyses and results regarding that topic are not reported. The reason is that, if all the areas in preparing and auditing cash flow statements that have no issues were to be reported, it would require numerous extra analyses, and more importantly, it would make this study considerably longer and steer the focus away from the aim of discovering problem areas.

However, the individuals that were invited to fill out the questionnaires were not informed that the aim of the study is specifically to discover problem areas – instead, they were told more generally that the study investigates the preparing, auditing and using of cash flow statements. The reason being that mentioning the purpose of only highlighting problems in their respective professions was expected to provide very little incentive for accountants and auditors to partake in such a survey, which would likely result in abysmal response rates, which, in turn, would reduce the prospects for finding generalizable results. Nonetheless, it is considered to be the ethically correct conduct to inform the research objects of the purpose of the research (Kuula 2006, 121). Therefore, if not mentioning the aim of discovering problem areas constitutes as misleading the respondents, it was an intentional sacrifice of ethical conduct in pursue of obtaining more reliable and generalizable results.

Another important norm of research ethics is not to harm the object of the research (Hallamaa, Launis, Lötjönen & Sorvali 2006, 398). Some might consider highlighting problems in accounting and auditing practices harmful to the reputation of some the research objects, that is, authorised accountants and auditors. However, no results concerning individual accountants or auditors, or even specific accounting or audit firms, are reported – only results concerning the entire population or general sub-groups within a population (such as KHT- and HTM-auditors) are provided. Furthermore, it must be noted that the used research method, a voluntary survey, itself cannot harm or offend anyone – only the results can; and as long as the results are not manipulated, they are independent of the researcher and only dependent on the survey respondents themselves.

To paraphrase The Nuremberg Code (1947) standard 6, the degree of risk to be taken should never exceed the benefit to be gained by the research. Does the risk of members of two professions, accountants and auditors, possibly getting offended

exceed the benefit of highlighting problem areas that may infect published cash flow statements with material errors? Presumably most financial statement users and even many accountants and auditors would be interested in such problems. Furthermore, it could have serious economic consequences if scarce economic resources were not to be efficiently allocated due to investors and other resource providers basing decisions on flawed cash flow statements.

3.3 Data descriptions

This study investigates four major populations: 1) preparers of financial statements, 2) auditors of financial statements, 3) users of financial statements, and 4) published cash flow statements. For the first three populations, three separate web questionnaires were prepared. The questionnaire for preparers was sent to every authorised accountant (KLT-accountant) in Finland, totalling at 2575 contacts. The questionnaire for auditors was sent to almost[53] every authorised private sector auditor (KHT-auditor or HTM-auditor) in Finland, totalling at 1367 contacts. The questionnaire for users of financial statements was sent to every member of *Osakesäästäjien Keskusliitto ry*[54] whose e-mail address was known – totalling at 6045 contacts. Regarding the fourth population, there were 105 non-financial companies listed on NASDAQ OMX Helsinki on July 20th 2013; however, one of the companies was listed only since January 2nd 2012 and therefore did not have financial statements available for prior years. As the target was to collect the three latest cash flow statements of the listed companies, and the listed companies were expected to provide both consolidated and parent company's financial statements, the aim was to collect 210 cash flow statements for the year 2012 (or early 2013) and 208 cash flow statements for the years 2011 (or early 2012) and 2010 (or early 2011) each – totalling at 626 cash flow statements.

[53] The representative of the Central Chamber of Commerce informed that their "system contained the e-mail addresses of almost every KHT- and HTM-auditor" (H. Haukkala, e-mail to author, June 17, 2011)

[54] Osakesäästäjien Keskusliitto ry is a registered association that provides its members with information on investment activities in forms of publications (including *Viisas Raha* and *Kauppalehti*) as well as activities through its local associations (Osakesäästäjien Keskusliitto ry 2011).

The questionnaire for preparers received 840 replies, the questionnaire for auditors received 325 replies, and the questionnaire for users received 1162 replies – altogether 2327 replies. The initial invitation and the reminder e-mails did not reach on average (due to invalid e-mail addresses, "out of office" responses etc.) 276 preparers, 73 auditors and 988 users – thus hypothetically leaving 2299 preparers, 1294 auditors and 5057 users with the opportunity to fill out the questionnaires. Taking this into consideration, the response rates for preparers, auditors and users are 37 %, 25 % and 23 %, respectively. 210 cash flow statements were collected for the year 2012 (or early 2013), 208 cash flow statements were collected for the year 2011 (or early 2012), and 207 cash flow statements were collected for the year 2010 (or early 2011) – altogether 625 cash flow statements. Consequently, the sample sizes from the populations of published cash flow statements during each year are 100 % for the year 2012 (or early 2013), 100 % for the year 2011 (or early 2012) and 99,5 % for the year 2010 (or early 2011).

Although the questionnaires for preparers and auditors were sent to the entire or almost entire target populations and the questionnaire for users was sent to every known e-mail address of Osakesäästäjien Keskusliitto ry's members, due to response rates below 100%, the data end up not being collected from the populations, but instead from samples of them. Similarly, although the aim was to collect every cash flow statement of the listed companies for the accounting periods ending 2010, 2011 and 2012 (or early 2011, 2012 and 2013), due to one company not offering one 2010 cash flow statement on its website – nor via e-mail enquiry – the data for 2010 represent a sample of the population. Although these are not random samples as defined by statistical theory, statistical methods developed around random samples are used in this study to suggest stronger evidence for the results found.

Authorised accountants as preparers

Preparers of financial statements are in this study defined as KLT-accountants (per mid-2011) – the only authorised accountant group in Finland. It is not possible to contact and research every preparer of financial statements as they are not a single homogeneous group. According to Accounting Act 3:7 and Limited Liability Companies Act 6:2, it is the Board of Directors who is responsible for the financial

statements, but presumably more often than not, it is not the Board of Directors who actually prepares the financial statements of an entity.

In 2009, there were approximately 4500 accounting firms in Finland, with total personnel of approximately 12000. On average, an employee in an accounting firm is responsible for the accounts of 22 clients. (Taloushallintoliitto 2009c–.) According to the Business Register of Statistics Finland, approximately 320000 enterprises operated in Finland in 2009 (Tilastokeskus 2011). Therefore, roughly speaking, the personnel of accounting firms may be responsible for the financial statements of approximately 264000 firms; that is, 83 % of all enterprises in Finland.

It is also not possible with reasonable effort to contact and research every employee of every accounting firm. KLT-accountants represent a little over 20 % of the work force in accounting firms (Taloushallintoliitto 2009c–). Furthermore, the little over 800 authorised accounting firms, where at least the management is required to have passed the KLT accounting examination (among other requirements), handle the accounts of approximately 130000 enterprises (Taloushallintoliitto 2009a–; Taloushallintoliitto 2009b–); that is, roughly 41 % of all enterprises in Finland. As KLT-accountants are the only authorised accountants in Finland, they can be considered to be the leading experts in preparing financial statements. Therefore, by defining preparers of financial statements as KLT-accountants, the data in this study reflect the views of a highly skilled group of financial statement preparers.

Background information, or in other words, independent variable data, was collected from the respondents consisting of employer or entrepreneur information, age and information about accounting work experience. 55 % of respondents are employees of authorised accounting firms, 13 % are employees of other accounting firms, 22 % are employees of other enterprises, and the final 10 % are entrepreneurs. Of the entrepreneurs, 21 % own authorised accounting firms, 69 % own other accounting firms, and 10 % own other enterprises. Table 2 displays this information with the percentages calculated based on all respondents.

Table 2. Type of employer or own business of the respondents

	Authorised accounting firm	Other accounting firm	Other enterprise	Total	(n)
Employee	55 %	13 %	22 %	90 %	(756)
Entrepreneur	2 %	7 %	1 %	10 %	(84)
All respondents	57 %	20 %	23 %	100 %	(840)

The remaining independent variable data were checked for errors: The variable "Age" contained one obvious mistake, "3", which was deleted. The variable "Work experience in years as an accountant" was checked for having a smaller number than "Age" by at least a margin of 16 (indicating that the individual would have been at least 16 years of age when starting working as an accountant). In five instances, this criterion was not met, and those values were deleted. Similarly, the variable "Work experience in years as a KLT-accountant" was checked for having a smaller number than "Age" by at least a margin of 19 (indicating that the individual would have been at least 19 years of age when receiving the KLT-status)[55]. In one instance, this criterion was not met, and that value was deleted.

After controlling for the before-mentioned errors, the mean age of respondents is 49 (with the standard deviation of 8,4 years), the mean work experience as an accountant is 22 years (with the standard deviation of 9,0 years), and the mean work experience as a KLT-accountant is 11 years (with the standard deviation of 7,3 years). As the standard deviations suggest, these variables have a considerably large range: the age of respondents varies from 25 to 77, the accounting work experience varies from zero to 50 years, and the work experience as a KLT-accountant varies from zero to 33 years. The values of zero in the accounting work experience variables cannot be disregarded from analysis as mistakes, because people having passed the KLT accounting examination can also work, and have gained their work experience, in other positions than accountants. Overall, the data suggest that the respondents are, on average, a highly experienced group of financial statement preparers. Table 3 summarises these descriptive statistics.

[55] The KLT-rules typically require a person to have a minimum of three years of relevant work experience in order to be eligible to take part in the KLT accounting examination. A person who does not have the educational and vocational qualifications required by the KLT-rules can, under special consideration, also be accepted to take part in the KLT accounting examination. (Taloushallintoliitto 2011.)

Table 3. Age and accounting work experience of the respondents

	n	Mean	Sd	Min	Max
Age	839	49	8,4	25	77
Work experience in years as an accountant	835	22	9,0	0	50
Work experience in years as a KLT-accountant	839	11	7,3	0	33

Authorised auditors as auditors

Auditors of financial statements are in this study defined as KHT- and HTM-auditors (per mid-2011) – the authorised private sector auditors in Finland. There is a two-tier system of auditors in Finland: 1) auditors and audit firms approved by the *Central Chamber of Commerce (Keskuskauppakamari)*[56], namely KHT-auditors and KHT audit firms, and 2) auditors and audit firms approved by a local *Chamber of Commerce (Kauppakamari)*[57], namely HTM-auditors and HTM audit firms (Tilintarkastuslautakunta, 2011 retrieved). Due to different requirements[58] – for example, educational background requirements – for KHT- and HTM-auditors, these groups are, for the most part, analysed separately.

Independent variable data were collected from the respondents consisting of auditing examination passed, employer information, age and information about auditing work experience. The distribution of KHT- and HTM-auditors among the respondents is almost even: 163 KHT-auditors and 162 HTM-auditors filled out the questionnaire. Over 90 % of HTM-respondents work in other enterprises than the so called Big Four audit firms – that is, PricewaterhouseCoopers Oy, KPMG Oy Ab, Ernst & Young Oy, and Deloitte & Touche Oy. Maybe a little surprisinly, also almost half of KHT-respondents work in other enterprises than the Big Four firms.

[56] According to Chamber of Commerce Act section 1, the Central Chamber of Commerce of Finland is an organisation comprised of the Chambers of Commerce. The Central Chamber of Commerce of Finland is operating as a joint body of the Chambers of Commerce and supports the Chambers of Commerce in performing their duties. The Central Chamber of Commerce of Finland will develop the operational facilities of trade and industry on a national level, grant Medals of Merit as recognitions by the Finnish trade and industry and perform public duties as prescribed.

[57] According to Chamber of Commerce Act section 1, a Chamber of Commerce is a member organisation of the Central Chamber of Commerce of Finland, and its area of operation is as confirmed by the Central Chamber of Commerce of Finland. The purpose of a Chamber of Commerce is to develop the operational facilities for trade and industry within its area of operation and to perform public duties as prescribed.

[58] A certain educational background, professional experience and an examination of professional competence is required for both categories of authorised auditors. The detailed requirements are prescribed in the regulations given by the Ministry of Employment and the Economy. (Central Chamber of Commerce 2011, 6.)

Only 32 % of all respondents work in Big Four audit firms. Table 4 displays this information in a cross tabulation.

Table 4. Audit qualification and employer of the respondents cross tabulation

	KHT-auditor (n=163)	HTM-Auditor (n=162)	(n)
Big Four audit firm	54 %	9 %	(103)
Other enterprise	46 %	91 %	(222)
Total	100 %	100 %	(325)

The remaining independent variable data were checked for errors: The variable "Age" contained three obvious mistakes, "0, 1 and 10", which were deleted. The variable "Work experience in years as an auditor" was checked for having a smaller number than "Age" by at least a margin of 16 (indicating that the individual would have been at least 16 years of age when starting working as an auditor). In all instances, this criterion was met. Similarly, the variable "Work experience in years as an authorised auditor" was checked for having a smaller number than "Age" by at least a margin of 19 (indicating that the individual would have been at least 19 years of age when receiving the KHT- or HTM-status)[59]. Again, in all instances, this criterion was met.

After controlling for the before-mentioned errors, the mean age of respondents is 52 (with the standard deviation of 11,9 years), the mean work experience as an auditor is 21 years (with the standard deviation of 10,4 years), and the mean work experience as an authorised auditor is 17 years (with the standard deviation of 11,2 years). Also these standard deviations suggest that the variables have a considerably large range: the age of respondents varies from 28 to 71, the auditing work experience varies from 2 to 45 years, and the work experience as an authorised auditor varies from zero to 44 years. Again, the value of zero in the work experience as an authorised auditor cannot be disregarded from analysis as a mistake, because, for example, the individual may have just passed the examination; thus not yet have gained a whole year of work experience. Overall, the data suggest that the respondents are, on average, a highly experienced group of financial statement

[59] According to Auditing Act sections 30 and 31, an individual is generally required to have obtained at least three years of relevant work experience in order to be approved as an authorised auditor.

auditors. Table 5 summarises these descriptive statistics and also displays them separately for KHT- and HTM-auditors.

Table 5. Age and auditing work experience of the respondents

KHT-auditors	n	Mean	Sd	Min	Max
Age	160	48	11,3	28	69
Work experience in years as an auditor	163	19	9,4	4	40
Work experience in years as an authorised auditor	163	15	9,8	0	37
HTM-auditors	n	Mean	Sd	Min	Max
Age	162	55	11,4	28	71
Work experience in years as an auditor	162	23	11,1	2	45
Work experience in years as an authorised auditor	162	20	12,0	1	44
All respondents	n	Mean	Sd	Min	Max
Age	322	52	11,9	28	71
Work experience in years as an auditor	325	21	10,4	2	45
Work experience in years as an authorised auditor	325	17	11,2	0	44

Private investors as users

Users of financial statements are in this study defined as private investors who utilise financial statement information in their economic decision-making (per mid-2011). Because it is not possible to contact and research every private financial statement user in Finland, Osakesäästäjien Keskusliitto ry's members were selected as the sample. They can be assumed to be seriously interested in investment activities – after all, the membership requires a yearly fee for the activities and investment publications the association provides.

On the questionnaire, respondents were given alternatives to select the most appropriate financial statement user profile. The alternatives were *"Private investor (with own money)"*, *"Investor (on behalf of others)"*, *"Institutional investor"*, *"Equity capital provider"*, *"Debt capital provider"*, *"Financial statement analyst"*, *"Other user of financial statements"*, and lastly, the option of *"I don't use financial statements in economic decision-making"* was provided. First, because this study investigates the users of financial statements, the data of 102 respondents (9 % of all respondents) who indicated that they don't utilise financial statements in their economic decision-making, were deleted. Second, because this study investigates only private investors, the data of 104 respondents (9 % of all respondents) who

selected other user profile than a private investor, were deleted[60]. Thus, the final sample data consist of the responses of 956 private investors.

Information on respondents' educational background was collected on two dimensions: the level and the subject of education. The level of education is categorised as *"Master's degree"*, *"Bachelor's degree"*, *"Other degree"* and *"Student"*. The subjects of education consist of *"Accounting and finance"*, *"Other business studies"* and *"Other studies"*. A little over 40 % of respondents have master's degree, and a little over 50 % of respondents have either a bachelor's or other degree. Approximately 8 % of respondents are students. Regarding the subject of education, approximately 11 % of respondents come from the field of accounting and finance, 17 % from other business studies, while the vast majority (a little over 70 %) of respondents come from other fields of studies. Table 6 displays the educational background of the respondents in a cross tabulation, with the percentages being calculated from all respondents.

Table 6. Respondents' subject and level of education cross tabulation

(Total n = 956)	Accounting and finance (n=108)	Other business studies (n=158)	Other studies (n=690)	Level of education total
Master's degree (n=391)	5 %	6 %	30 %	41 %
Bachelor's degree (n=165)	2 %	4 %	11 %	17 %
Other degree (n=323)	3 %	4 %	27 %	34 %
Student (n=77)	1 %	3 %	4 %	8 %
Subject of education total	11 %	17 %	72 %	100 %

Background information was collected on respondents' investment profile on two dimensions: how much they spend on investments (on average) every year, and how much their investment portfolio is currently worth. These were checked for errors, that is, unusual and high values. The variable "Yearly investments" contained one error, "1234567890123", which was deleted, and the variable "Portfolio value" contained one error, "123456789123", which was deleted.

After deleting the erroneous values, the mean yearly investment is approximately 34 000 € (while the median is 10 000 €), and the mean portfolio value is

[60] Only private investors are investigated for two reasons: First, the number of responses in other user groups is very small, which results in difficulties in making statistically significant inferences about the differences of the user groups. Second, the respondents of other user groups do not, presumably, form a good representation of the population of those user groups – this is because the responses are collected from members of an investing association whose members, for the most part, seem to be private investors.

approximately 275 000 € (while the median is 90 000 €). The yearly investments vary from zero to 2 000 000 €, and the portfolio values vary from zero to 30 000 000 €. As these are substantial ranges, table 7 displays the yearly investment and portfolio value distributions divided into six sub-ranges. The most popular (35 %) yearly investment range is from 10 000 € to 24 999 €, and the second most popular (28 %) yearly investment range is from 2 500 € to 9 999 €. Therefore, approximately 63 % of the respondents invest yearly within the sub-range of 2 500 € to 24 999 €. The most popular (29 %) portfolio value range is from 25 000 € to 99 999 €, and the second most popular (25 %) portfolio value range is from 100 000 € to 249 999 €. Therefore, approximately 54 % of the respondents have portfolios valued within the sub-range of 25 000 € to 249 999 €.

Table 7. Respondents' average yearly investments and portfolio values

Average yearly investments	n	Per cent
0-999 EUR	40	4 %
1 000-2 499 EUR	91	10 %
2 500-9 999 EUR	271	28 %
10 000-24 999 EUR	330	35 %
25 000-99 999 EUR	138	14 %
100 000 and over EUR	85	9 %
Total	955	100 %
Portfolio value	n	Per cent
0-999 EUR	41	4 %
1 000-24 999 EUR	173	18 %
25 000-99 999 EUR	274	29 %
100 000-249 999 EUR	234	25 %
250 000-999 999 EUR	177	18 %
1 000 000 and over EUR	56	6 %
Total	955	100 %

Finally, independent variable data for age and experience in using financial statements were checked for errors: The variable "Age" contained five obvious errors, "0, 2, 101, 7715 and 1234567890123", which were deleted. The variable "Experience in years in using financial statements in economic decision-making" was checked for having a smaller number than "Age" by at least a margin of 16 (indicating that the individual would have been at least 16 years of age when

starting using financial statements in economic decision-making). In five instances, this criterion was not met, and those values were deleted.

After controlling for the before-mentioned errors, the mean age of respondents is 50 (with the standard deviation of 15,1 years), and the mean experience in using financial statements in economic decision-making is 14 years (with the standard deviation of 11,9 years). These standard deviations suggest that the variables have a considerably large range: the age of respondents varies from 17 to 84, and the experience in financial statement using varies from zero to 55. Overall, the data suggest that users of financial statements are a largely heterogeneous group. Table 8 summarises the statistics for age and financial statement using experience.

Table 8. Respondents' age and experience in using financial statements

	n	Mean	Sd	Min	Max
Age	951	50	15,1	17	84
Experience in years in using financial statements in economic decision-making	951	14	11,9	0	55

Cash flow statements of listed non-financial companies as published cash flow statements

Published cash flow statements are in this study defined as the three latest consolidated and parent company cash flow statements of the Finnish (headquarters in Finland) non-financial companies listed on NASDAQ OMX Helsinki (per mid-2013) – therefore covering three accounting periods ending 2012, 2011 and 2010 (or early 2013, early 2012 and early 2011 if the company whose accounting period is not a calendar year had already published financial statements for the period ending 2013 at the time of the collection). Cash flow statements of financial firms[61] are excluded due to expected different accounting practices (Ahmed & Duellman 2007; Garcia Lara, Garcia Osma & Penalva 2007). Only the cash flow statements of listed companies are investigated because it seems reasonable to presume that users, defined in this study as private investors, are mainly interested in companies whose shares are subject to public trading – furthermore, the cash flow statements of such companies are to be audited by a member of a group of auditors investigated in this

[61] I.e. the companies categorised as "8000 Financials" in The Industry Classification Benchmark (ICB) used by NASDAQ OMX (NASDAQ OMX Nordic, 2013b retrieved.)

study, namely a KHT-auditor (or a KHT-firm) as prescribed by Auditing Act section 5.

Selecting the cash flow statements for the accounting period ending 2011 (or early 2012) is appropriate because the individuals surveyed for this study are, presumably, responsible for preparing, auditing and using at least some of them. The inclusion of the cash flow statements for accounting periods ending 2010 and 2012 (or early 2011 and 2013) is also warranted as those were published approximately one year before and one year after conducting the surveys – therefore enabling the investigation of whether changes in cash flow statement presentation have occurred.

The Finnish non-financial companies listed on NASDAQ OMX Helsinki can be divided into three size-groups – small, mid and large – based on the NASDAQ OMX Nordic segment indexes[62] (per mid-2013). 46 % of the companies are small-sized, 31 % are mid-sized, and 23 % are big-sized. Table 9 displays this size distribution.

Table 9. The size of the listed non-financial Finnish companies

Company size	N	Per cent
Small	48	46 %
Mid	33	31 %
Big	24	23 %
Total	105	100 %

The collected published cash flow statements can be classified based on 1) the regulation applied, 2) whether they present consolidated or the parent company's figures, and 3) the year the accounting period ended. 50 % of the cash flow statements are prepared in accordance with FAS and 50 % in accordance with IFRS; similarly, 50 % of the cash flow statements present consolidated figures and 50 % the parent company's figures. Table 10 displays the total and yearly frequencies of the classes. The explanation for the similarity of each class is that 1) all companies prepared both consolidated and parent company's cash flow statements (although

[62] All NASDAQ OMX companies are divided into three segments: Large Cap, Mid Cap and Small Cap. Companies with a market value over one billion Euros are presented within the Nordic Large Cap segment. Companies with a market value between 150 million and 1 billion Euro are contained within the Mid Cap segment, while companies with a market value below 150 million Euros are contained in the Small Cap segment. The segments are revised every six months, on 1 January and 1 July, based on the weighted average price for May and November. (NASDAQ OMX Nordic, 2013b retrieved.)

one company did not publish or provide for this study its 2010 parent company cash flow statement), 2) all companies but one published the cash flow statement for all three accounting periods (the one company reported only for 2012), and 3) all companies but one applied FAS to the parent company's cash flow statement and IFRS to the consolidated cash flow statement (the one company switched to applying IFRS also to the parent company's statement for the latest accounting period).

Table 10. The collected published cash flow statements categorised

	Classification 1		Classification 2		
	FAS	IFRS	Parent	Consolidated	Total (per year)
2012 (or early 2013)	104	106	105	105	210
2011 (or early 2012)	104	104	104	104	208
2010 (or early 2011)	103	104	103	104	207
Total (per class)	311	314	312	313	625

3.4 Potential errors in the data

Sampling error. Random sampling is often used to form a representative sample of the target population; however, the sample can be formed in ways different than random sampling. Sampling error is the result of attempting to investigate only some, and not all, of the units in the target population. It is therefore possible that the units included in the sample are not representative of the population in question. (Alkula et al. 1994, 44; Dillman 2007, 9.) Formally, sampling error is the difference between a sample statistic and its corresponding population parameter (Lind, Marchal & Wathen 2012, 274).

To reduce sampling error, as large samples as possible for the four target populations were collected for this study. Regarding the three surveys, random sampling would have been redundant as samples based on responses that come from surveys would have to be regarded as non-probability samples in almost all cases (Nazari et al. 2006, 434). That is, unless the response rate of 100 per cent is achieved, the data end up not being collected from the intended random sample, but instead from a sample that is also determined by the willingness of the selected population units to participate. Therefore, the web questionnaires were sent to every member of the target populations whose e-mail address could be obtained.

Failing to see any advantage (other than time consumption) in random sampling the listed companies publishing cash flow statements, the whole target population is investigated. Furthermore, such random sampling may have proven unsuccessful if any of the companies failed to keep cash flow statements available on their websites (or even have a website) and, in such instances, would refuse to provide them for this study. Again, if one or more companies in the random sample did not publish or provide their cash flow statements, the data would end up not being collected from the intended random sample, but instead from a sample that is also determined by the companies' communication strategy.

Coverage error. Sampling error is only one of four sources of error which form the cornerstones for conducting a quality quantitative study (Groves 1989; Salant & Dillman 1994). A second source of error to be minimised is coverage error. Coverage error occurs when the list from which the sample is drawn does not include all units of the population, thus making it impossible to give all population units an equal or known chance of being included in the sample. (Dillman 2007, 9.)

Regarding preparers of financial statements, a complete contact list of KLT-accountants was provided by *Association of Finnish Accounting Firms (Taloushallintoliitto)*[63]. Naturally, KLT-accountants are not the only ones preparing financial statements, but they are the only authorised accountant group in Finland, and therefore, they can be considered to be leading experts in preparing financial statements. In this study, any generalization of results concerning preparers is not made to every financial statement preparer, but only to KLT-accountants. Thus, there is no coverage error concerning prepapers – defined as KLT-accountants.

An almost complete contact list of KHT- and HTM-auditors was provided by the Central Chamber of Commerce. According to Auditing Act section 4, an authorised auditor must be appointed for a corporation or a foundation and an audit must be carried out unless not more than one of the following conditions were met in both the past completed financial year and the financial year immediately preceding it: 1) the balance sheet total exceeds 100 000 €; 2) net sales or comparable revenue

[63] The Association of Finnish Accounting Firms was founded in 1968 and acts as an umbrella organisation for Finnish accounting firms. Its main functions are information sharing, education, lobbying and promoting good accounting practice. *The Institute for Accountancy* is a private institute founded in 1980 by the Association of Finnish accounting firms. It organises the KLT accounting examination and, on the basis of the examinations, authorises accounting firms and personnel (KLT-accountants). (Taloushallintoliitto 2009a–.)

exceeds 200 000 €; or 3) the average number of employees exceeds three. An auditor must, however, always be appointed for a corporation whose principal activities consist of the owning and holding of securities and which exercises significant influence, as described in section 8 of chapter 1 of the Accounting Act, over the operating and financial policies of another entity that is obliged to keep accounting records.

Auditing Act section 5 states that at least one of the auditors appointed has to be a KHT-auditor or a KHT-firm if the corporation is subject to public trading or if at least two of the following conditions were met by the corporation or the foundation in the past completed financial year: 1) the balance sheet total exceeds 25 000 000 €; 2) net sales or comparable revenue exceeds 50 000 000 €; or 3) the average number of employees exceeds 300. Auditing Act section 7 further states that a JHTT-auditor or a JHTT-firm may be appointed, in addition to a KHT- or HTM-auditor or a KHT- or HTM-firm, as an auditor for a corporation or a foundation in which a controlling interest is held by a municipality or ajoint municipal board[64]. Therefore, financial statements will always be audited – with the exception of small firms – by either an KHT-auditor or a HTM-auditor (or a KHT-firm or a HTM-firm). As a result, there is no material coverage error concerning auditors.

Users of financial statements, or private investors, are not such populations from which a complete contact list can be compiled or obtained. For this study, a list of Osakesäästäjien Keskusliitto ry's members' known e-mail addresses was provided[65]. Because users of financial statements are not a homogeneous group, background information was collected on the questionnaire about respondents' profile for using financial statement information (i.e. private investor, institutional investor etc.), which enabled isolating the private investors from all respondents. As this is not a

[64] According to Auditing Act section 57: Notwithstanding the provisions in this Act, the provisions of the Act to be revoked are to be applied in associations to the appointment of an auditor other than a KHT-auditor or an HTM-auditor or a KHT-firm or an HTM-firm and to an audit referred to in section 1 conducted by such an auditor. Correspondingly, the provisions of the Act to be revoked are to be applied in other legal entities or foundations founded before this Act enters into force to the appointment of an auditor other than a KHT-auditor or an HTM-auditor or a KHT-firm or an HTM-firm and to an audit conducted by such an auditor in respect of financial periods ending on or before 31 December 2011. Auditing Act section 57 further states that a JHTT-auditor may be appointed as an auditor instead of a HTM-auditor in a corporation or a foundation where a controlling interest is held by a municipality or a joint municipal board, for a term ending at 31 December 2012 at the latest.

[65] Osakesäästäjien Keskusliitto ry has over 10000 members (A. Järvinen, e-mail to author, September 22, 2011), of which 6045 e-mail addresses was known at the time of data collection.

complete list of all private investors in Finland, coverage error exists, and it is not certain that the views of the respondents reflect the views of all private investors in Finland. Therefore, the results provided in this study can only give suggestions about the target population, that is, the private investors in Finland who utilise financial statement information in their economic decision-making.

A complete chart of all companies listed on NASDAQ OMX Helsinki per mid-2013 was obtained. Naturally, it is possible that cash flow statements have been published in Finland from 2010 to early 2013 by previously public companies that no longer were listed on NASDAQ OMX Helsinki at the time of the collection, and consequently, such cash flow statements would not be included in the analyses. However, because published cash flow statements are in this study defined as the three latest consolidated and parent company cash flow statements of the Finnish non-financial companies listed on NASDAQ OMX Helsinki per mid-2013, no coverage error exists.

Measurement error. A third source of error, measurement error, occurs, for example, when a respondent's answer to a survey question is inaccurate, imprecise, or cannot be compared in any useful way to other respondents' answers. Measurement error results from poor question wording and questionnaire construction. A challenge for all survey methods, it is of particular concern in self-administered surveys, in which direct feedback from respondents about poor questions is less available than in interview surveys. (Dillman 2007, 9–10.)

To minimise measurement error, the web questionnaires consisted solely of multiple choice questions (except for when such questions were not appropriate,for example, when enquiring age). The answer choices were constructed by either using a 7-point Osgood[66] or Likert scale or by giving question-spesific choices aiming to cover all possible answers. The respondents were also given the opportunity to comment some of their multiple choice answers. Only when collecting numerical background information of the respondents, such as age or work-experience in years, no multiple choice questions were used; instead, the respondents were required to provide the relevant figure. Measurement error resulting from poor question wording or poor questionnaire construction was minimised by testing and

[66] Osgood scale (semantic differential) is a 5- or 7-point scale between two bipolar adjectives (Heikkilä 1998, 54–55).

modifying the web questionnaires based on comments of the test group prior the actual data collection.

However, given the nature of the Osgood scale, it can induce measurement error especially if the data collected is recoded during analysing stages. The Osgood scale can be understood as an ordinal level of measurement, which enables the data to be ranked or ordered, but the magnitude of differences between the values is not distinguishable (Lind et al. 2012, 11). For example, consider that a question was measured with a 7-point Osgood scale from 1 (definitely not) to 7 (definitely yes), and, for analysing purposes, the responses are recoded as "No" (responses 1 to 3), "No opinion for or against" (response 4) and "Yes" (responses 5 to 7). Outside the given values 1 and 7, it is not certain that in the mind of the respondent, the values 2 and 3 indicated "No", the value 4 indicated "No opinion for or against", and the values 5 and 6 indicated "Yes". This, and other possible sources of measurement error, will be taken into consideration in connection with discussing each result, when appropriate.

Regarding published cash flow statements, measurement error could have occurred when cash flow statement figures had to be collected from the comparative information of the subsequent accounting period's financial statements, due to the company not offering that period's cash flow statement on their website, and when such comparative information had been altered by the company but the alterations are not – at all or clearly – illustrated in the notes. Of the 625 cash flow statements collected for this study, only 7 (1 %) had to be collected from comparative information and in none of those cases the financial statements indicated alterations to the comparative cash flow statement figures, and therefore, no material measurement error exists with this respect. However, a potential of measurement error exists with regards to some analyses concerning the proportions of item classifications when it was not clear from the cash flow statement, or from the other sections of the financial statements, how that item was presented on the cash flow statement – this will be taken into consideration while discussing the result when applicable.

Nonresponse error. Regarding surveys, the fourth source of error, nonresponse error, occurs when a significant number of people in the sample do not respond to the questionnaire and have different characteristics from those who do respond, when these characteristics are important to the study (Dillman 2007, 10). Analysing

nonresponse error in the sense of comparing the characteristics of respondents to the characteristics of those who did not respond is, however, impossible in this study, because information about the characteristics of the target populations is either very limited or non-existent.

Therefore, the responses are analysed against the background information collected on the questionnaires. Statistical generalizations are only made to the populations the data was collected from, or to sub-groups of such populations (for example, KHT-auditors instead of all auditors), and the results presented are further tested for any statistically significant associations with the collected independent variable data.

Analogous to the nonresponse error regarding surveys would be if the companies that do not provide cash flow statements on their websites or elsewhere had different characteristics from those who do, and those characteristics were important. This is considered a nonissue in this study, though, since all the target cash flow statements but one were successfully collected.

Missing values. Finally, due to erroneous responses that were then deleted, there are missing values in the data sets collected from the three surveys. Calculated from what would have been the complete data for the variables used in the analyses, missing values constitute 0,05 %[67] for preparers, 0,74 %[68] for auditors, and 1,41 %[69] for users. Because of the low percentage of the missing values in each data set, they are considered a nonissue, and any cases having them in variables used in an analysis are excluded from that analysis (listwise deletion).

[67] 7/15387
[68] 31/4175
[69] 216/15366

4. Empirical results

The empirical results are provided one by one in great detail to inform readers how each result is inferred from the data. Each presentation of a result consists, when applicable, of the provision of the 1) test hypothesis formulated in chapter 2, 2) overview of what was asked from the respondents, 3) sample statistics, 4) used statistical test(s) for analysing the data, 5) accepted alternate hypothesis (hypotheses), and 6) confidence interval(s) for the population parameter(s).

The results are derived from statistical analyses, which are performed either in SPSS or manually. The statistical analyses are identified in the footnotes along the description of the result: the footnote displays either the manual calculation or the name of the SPSS test – the output(s) of which can be found in the appendices. The SPSS 19 outputs for the statistical tests and relevant data descriptions for the analyses regarding preparing and auditing cash flow statements are provided in Appendix 4 and Appendix 5, respectively. Similarly, the SPSS 19/21 outputs for the analyses regarding using cash flow statements are provided in Appendix 6.

4.1 Results about preparing cash flow statements

4.1.1 Cash flow statement is the least important financial statement section for preparers

H_P1: Preparers of financial statements consider the cash flow statement to be the least important section of financial statements. Preparers of financial statements were asked how important they consider the different financial statement sections to be on a scale from 1 (not at all important) to 7 (extremely important). The balance sheet was perceived to be the most important with a mean score of 6,90, followed by the income statement with a mean score of 6,76 and the notes with a mean score of

6,46. The cash flow statement was perceived to be the least important financial statement section with a mean score of 4,93.

Because it cannot be assumed that the importance scores for different financial statement sections are normally distributed[70] in the population, and because the variable of importance is ordinal rather than interval or ratio level, Kruskal-Wallis test is used to test whether the different sections of financial statements are regarded as equally important. The test shows that not all the sections of financial statements are regarded equally important among preparers (p<,001). Because SPSS does not allow for examination of which populations differ using Kruskal-Wallis methods, ANOVA techniques are used for this purpose. Again, it is shown that the mean scores for importance are not the same for every section of the financial statements (p<,001), and more importantly, it is shown that the cash flow statement's mean importance is statistically extremely significantly lower (p<,001) than that of any other financial statement section.

This analysis leads to accepting the alternate hypothesis "preparers of financial statements consider the cash flow statement to be the least important section of financial statements". To illustrate, table 11 displays the mean scores of the respondents as well as the 95 % confidence intervals for the mean scores of the population of KLT-accountants (adjusted for a finite population[71] and using df=200). It is noteworthy that the higher bound of 95 % confidence interval for population mean of cash flow statement's importance is lower than the lower bound of 95 % confidence interval for population mean of any other financial statement section's importance.

Table 11. Preparers' scores for importance of different sections of financial statements (scale: 1=not at all important to 7=extremely important)

	Balance sheet	Income statement	Cash flow statement	Notes
Mean score	6,90	6,76	4,93	6,46
95 % Confidence interval lower bound	6,88	6,73	4,84	6,41
95 % Confidence interval higher bound	6,92	6,79	5,02	6,51

[70] Kolmogorov-Smirnov test of normality (p<,001)

[71] Finite-population correction factor FPC=sqrt((N-n)/(N-1)) is used to adjust the standard error of the mean or the proportion. The correcting factor should be used when the sample is more than 5 per cent of a finite population. (Lind et al. 2012, 320–321, 330.) Here the sample is 33 % (840/2575) of the finite population, and the resulting FPC is 0,821004.

4.1.2 Majority of cash flow statements are prepared completely manually

H_P2: Most cash flow statements are prepared manually (for example, in Microsoft Excel) using the balance sheet, the income statement and other book-keeping material. The preparation method of cash flow statements is investigated from two perspectives: First, preparers of financial statements were asked in which way they typically prepare cash flow statements (completely manually, by manually modifying a version from their accounting system, or by having an accounting system capable of producing finished statements); it was also taken into consideration that preparing cash flow statements may be a specialty skill amongst accountants, and thus, the option "I do not prepare cash flow statements" was provided. Second, auditors of financial statements were asked in which way their clients typically prepare cash flow statements.

The data suggest that the preparation of cash flow statements may indeed be a specialty skill among accountants: 38 % of respondents indicated that they do not prepare cash flow statements. Of those who are involved in preparation of cash flow statements, 62 % indicated they typically prepare the statement completely manually – this proportion is statistically extremely significantly higher than 50 % (p<,001)[72]. 29 % indicated they apply some manual modifications to a printed version and the remaining 9 % indicated they could print a cash flow statement conforming to KILA 30.1.2007 or IAS 7 straight from their accounting system.

Regarding auditors responses, 70 % indicated their clients typically prepare the statement completely manually – again, this proportion is statistically extremely significantly higher than 50 % (p<,001)[73]. 23 % indicated their clients apply some manual modifications to a printed version and the remaining 7 % indicated their clients could print a cash flow statement conforming to KILA 30.1.2007 or IAS 7 straight from the accounting system.

This analysis leads to accepting the alternate hypothesis "majority of cash flow statements are prepared manually (for example, in Microsoft Excel) using the

[72] Binomial Test
[73] Binomial Test

balance sheet, the income statement and other book-keeping material". To illustrate, table 12 shows the proportions of completely manually prepared cash flow statements (as indicated by the samples) as well as suggestions for the 95 % confidence intervals for the population proportions[74]. As the data suggest that values $n\pi$ and $n(1 - \pi)$ are both equal to or greater than 5, the Central Limit Theorem[75] applies and the standard normal distribution can be employed to complete a confidence interval (Lind et al. 2012, 314)[76]. It is noteworthy that the lower bound of 95 % confidence interval for the population proportion of completely manually prepared cash flow statements is higher than 50 % in both populations.

Table 12. Proportion of cash flow statements that are prepared completely manually

	All cash flow statements	Cash flow statements prepared by KLT-accountants
Sample proportion	70 %	62 %
95 % Confidence interval lower bound	65 %	58 %
95 % Confidence interval higher bound	75 %	66 %

4.1.3 Minority of preparers would mention drastic non-payment of accounts payable

H_P3: Few preparers of financial statements would provide information in the notes if the entity has not paid its accounts payable that were due the last month of the accounting period; furthermore, few of those who would not disclose such information, would provide information in the notes if the entity has not paid its accounts payable that were due Q4 of the accounting period. Preparers of financial statements were asked (yes or no) would they provide information in the notes if the entity has not paid its accounts payable that were due the last month of the accounting period. 14 % of respondents indicated that they would provide

[74] Lower bound for all cash flow statements = ,7015-1,96*sqrt(,7015*,2985/325); higher bound for all cash flow statements = ,7015+1,96*sqrt(,7015*,2985/325); lower bound for cash flow statements prepared by KLT-accountants = ,6207-1,96*sqrt(,6207*,3793/522); higher bound for cash flow statements prepared by KLT-accountants = ,6207+1,96*sqrt(,6207*,3793/522)

[75] Central Limit Theorem states that if all samples of a particular size are selected from any population, the sampling distribution of the sampling mean is approximately a normal distribution. This approximation improves with larger samples; typically a sample size of at least 30 will result in a normal shape for any population. (Lind et al. 2012, 279.)

[76] Here the lower of $n\pi$ or $n(1 - \pi)$ is suggested to be at least 81,25 (,25*325) for all cash flow statements, and 177,48 (,34*522) for cash flow statements prepared by KLT-accountants.

information in the notes in such an instance. This proportion is statistically extremely significantly lower than 20 % (p<,001)[77].

If respondents indicated they would not disclose information about such a boosting of the operating cash flows, they were asked would they – on a scale from 1 (definitely not) to 7 (definitely yes) – provide information in the notes if the entity has not paid its accounts payable that were due Q4 of the accounting period. By recoding values 1 to 3 as "No", 4 as "No opinion for or against" and 5 to 7 as "Yes", 24 % of respondents indicated that they would provide information in the notes in such an instance. This proportion is statistically extremely significantly lower than 30 % (p<,001)[78].

This analysis leads to accepting the alternate hypothesis "fewer than 20 % of preparers of financial statements would provide information in the notes if the entity has not paid its accounts payable that were due the last month of the accounting period; furthermore, fewer than 30 % of those who would not disclose such information, would provide information in the notes if the entity has not paid its accounts payable that were due Q4 of the accounting period". To illustrate, table 13 shows the proportions of respondents who would provide information in the notes about stretching out payments over their due dates in either scenario as well as the 95 % confidence intervals (adjusted for a finite population[79]) for the population[80] proportions[81]. Taking into consideration that those who would disclose information about the entity not paying its payable due the last month would also likely disclose information about the entity not paying its payable due Q4, the point estimate for the

[77] Binomial Test

[78] Binomial Test

[79] For mentioning A/P due last month not paid, the sample is 33 % (840/2575) of the finite population, and the resulting FPC is 0,821004. For mentioning A/P due Q4 not paid, the sample is at least 32 % (723/((1-,1201)*2575)) of the finite population, and the resulting FPC is 0,825348.

[80] Lower bound for mentioning A/P due last month not paid = ,1393-1,96*sqrt(,1393*,8607/840)*,821004; higher bound for mentioning A/P due last month not paid = ,1393+1,96*sqrt(,1393*,8607/840)*,821004; lower bound for mentioning A/P due Q4 not paid = ,2365-1,96*sqrt(,2365*,7635/723)*,825348; higher bound for mentioning A/P due Q4 not paid = ,2365+1,96*sqrt(,2365*,7635/723)*,825348

[81] Here the lower of $n\pi$ or $n(1 - \pi)$ is suggested to be at least 100,83 (,12*840) for mentioning A/P due last month not paid, and 151,83 (,21*723) for mentioning A/P due Q4 not paid. As the data suggest that values $n\pi$ and $n(1 - \pi)$ are both equal to or greater than 5, the Central Limit Theorem applies and the standard normal distribution can be employed to complete a confidence interval (Lind et al. 2012, 314).

population proportion of preparers who would disclose information about the entity not paying its accounts payable that were due Q4 is 34 %[82].

Table 13. Proportion of preparers who would provide information in the notes about stretching out payments

	A/P due last month not paid (of all preparers)	A/P due Q4 not paid (of those preparers not reporting the previous)
Sample proportion	14 %	24 %
95 % Confidence interval lower bound	12 %	21 %
95 % Confidence interval higher bound	16 %	26 %

4.1.4 Small minority of manual preparers would present cash payments relating to capacity acquisitions correctly

H_P4_a: Few preparers of financial statements who manually prepare cash flow statements would present cash payments relating to capacity acquisitions correctly in accordance with both KILA 30.1.2007 and IAS 7. H_P4_b: Few preparers of financial statements who manually prepare cash flow statements primarily under FAS would present cash payments relating to capacity acquisitions correctly in accordance with KILA 30.1.2007. H_P4_c: Few preparers of financial statements who manually prepare cash flow statements primarily under IFRS would present cash payments relating to capacity acquisitions correctly in accordance with IAS 7.

Manual preparers of cash flow statements were asked in which section of the cash flow statement (operating, investing or financing activities) they would primarily present the following transactions of a manufacturing company: 1) a one-time payment of 10000€ relating to a purchase of manufacturing equipment, 2) a monthly payment of 10000€ relating to instalments of manufacturing equipment, 3) a monthly rent-payment of 10000€ relating to a lease of manufacturing equipment (FAS), 4) a monthly rent-payment of 10000€ relating to a finance lease of manufacturing equipment (IFRS), and 5) a monthly rent-payment of 10000€ relating to an operating lease of manufacturing equipment (IFRS). As it was discussed in chapter 2.5.2, the correct row of answers is A_1= investing, A_2= investing, A_3= operating, A_4= financing, and A_5= operating activities.

[82] (117+171)/840

Operating activities were coded as 1, investing activities were coded as 2, and financing activities were coded as 3. Three new variables were computed: for both FAS and IFRS, a variable was computed as $(A_1-2)^2+(A_2-2)^2+(A_3-1)^2+(A_4-3)^2+(A_5-1)^2$; for FAS, a variable was computed as $(A_1-2)^2+(A_2-2)^2+(A_3-1)^2$; and for IFRS, a variable was computed as $(A_1-2)^2+(A_2-2)^2+(A_4-3)^2+(A_5-1)^2$. These variables would obtain a value of zero only when the particular answer row is correct.

3 % of manual preparers indicated they would present cash payments relating to capacity acquisitions correctly in accordance with both KILA 30.1.2007 and IAS 7 – this proportion is statistically significantly lower than 5 % (p=,020)[83]. 15 % of FAS manual preparers indicated they would present cash payments relating to capacity acquisitions correctly in accordance with KILA 30.1.2007 – this proportion is statistically highly significantly lower than 20 % (p=,004)[84]. 5 % of IFRS manual preparers (i.e. those who prepare cash flow statements primarily under IFRS and who either typically prepare them completely manually or by manually modifying a version printed from their accounting system) indicated they would present cash payments relating to capacity acquisitions correctly in accordance with IAS 7 – this proportion is statistically significantly lower than 25 % (p=,019)[85].

This analysis leads to accepting the alternate hypotheses a) "fewer than 5 % of preparers of financial statements who manually prepare cash flow statements would present cash payments relating to capacity acquisitions correctly in accordance with both KILA 30.1.2007 and IAS 7", b) "fewer than 20 % of preparers of financial statements who manually prepare cash flow statements primarily under FAS would present cash payments relating to capacity acquisitions correctly in accordance with KILA 30.1.2007", and c) "fewer than 25 % of preparers of financial statements who manually prepare cash flow statements primarily under IFRS would present cash payments relating to capacity acquisitions correctly in accordance with IAS 7". To illustrate, table 14 shows the proportions of respondents who would present capacity acquisition payments correctly in the three scenarios as well as the 95 % confidence intervals (adjusted for a finite population[86]) for the population[87] proportions[88].

[83] Binomial Test
[84] Binomial Test
[85] Binomial Test
[86] For manual preparers, the sample is at least 31 % (475/((475/840+1,96*sqrt(,5655*,4345/840))*2575)) of the finite population, and the resulting FPC is 0,832161. For FAS manual preparers, the sample is at least 31 %

Table 14. Proportion of manual preparers who would present capacity acquisition payments correctly on the cash flow statement

	Both FAS and IFRS correctly (of all manual preparers)	FAS correctly (of FAS manual preparers)	IFRS correctly (of IFRS manual preparers)
Sample proportion	3 %	15 %	5 %
95 % Confidence interval lower bound	2 %	12 %	0 %
95 % Confidence interval higher bound	4 %	18 %	13 %

4.1.5 Fewer than 30 % of FAS manual preparers would omit material non-cash transactions from cash flow statements under FAS

H_P5: Few preparers of financial statements who manually prepare cash flow statements primarily under FAS would omit material non-cash transactions from cash flow statements under FAS. FAS manual preparers were asked what should Company A's cash flow statement look like under FAS – either 1) blank, or 2) present a negative operating cash flow and a positive financing cash flow for the amount of 12000€ – for the accounting period in the following scenario: "Company A purchases monthly administrative services from Company B on account, totalling at 12000€ for the accounting year. At the end of the accounting period, Company A carries out a directed issue of shares to Company B for the amount of the total administrative services. Company A had not yet paid its account payable, and therefore the companies decide to settle the mutual debt and receivable accounts. As a result, Company A's account payable is reclassified as owner's equity. Company A does not have other transactions during the accounting period." As it was

(454/((454/840+1,96*sqrt(,5405*,4595/840))*2575)) of the finite population, and the resulting FPC is 0,832708. For IFRS manual preparers, the sample is at least 23 % (21/((21/840+1,96*sqrt(,0250*,9750/840))*2575)) of the finite population, and the resulting FPC is 0,882699.

[87] Lower bound for both FAS and IFRS = ,0295-1,96*sqrt(,0295*,9705/475)*,832161; higher bound for both FAS and IFRS = ,0295+1,96*sqrt(,0295*,9705/475)*,832161; lower bound for FAS = ,1498-1,96*sqrt(,1498*,8502/454)*,832708; higher bound for FAS = ,1498+1,96*sqrt(,1498*,8502/454)*,832708; lower bound for IFRS = ,0476-1,96*sqrt(,0476*,9524/21)*,882699 (negative result adjusted as 0); higher bound for IFRS = ,0476+1,96*sqrt(,0476*,9524/21)*,882699

[88] Values $n\pi$ and $n(1 - \pi)$ should both be equal to or greater than 5 for the Central Limit Theorem to apply and the standard normal distribution to be employed to complete a confidence interval (Lind et al. 2012, 314). Here, the lower of $n\pi$ or $n(1 - \pi)$ is suggested to be at least 9,5 (,02*475) for all manual preparers, and 54,48 (,12*454) for FAS manual preparers. For IFRS manual preparers, the lower of $n\pi$ or $n(1 - \pi)$ is suggested to be less than 5. Regardless, for illustration purposes, the 95 % confidence interval is constructed using the standard normal distribution.

discussed in chapter 2.5.2, the correct answer is that Company A's cash flow statement should be blank (i.e. the net cash flows for each activity should be zero).

25 % of FAS manual preparers indicated they would omit material non-cash transactions from the cash flow statement under FAS – this proportion is statistically significantly lower than 30 % (p=,016)[89]. This analysis leads to accepting the alternate hypothesis "fewer than 30 % of preparers of financial statements who manually prepare cash flow statements primarily under FAS would omit material non-cash transactions from cash flow statements under FAS". To illustrate, table 15 shows the proportion of respondents who would omit material non-cash transactions from the cash flow statement under FAS as well as the 95 % confidence interval (adjusted for a finite population[90]) for the population[91] proportion[92].

Table 15. Proportion of FAS manual preparers who would omit material non-cash transactions from cash flow statements under FAS

	Would omit material non-cash transactions from cash flow statements under FAS
Sample proportion	25 %
95 % Confidence interval lower bound	22 %
95 % Confidence interval higher bound	29 %

4.1.6 Majority of those preparers who indicate omitting non-cash transactions from the cash flow statement seem to never or rarely use any essential accounting material

H_P6: Most of those FAS manual preparers who indicate omitting non-cash transactions from the cash flow statement, never or rarely use any essential accounting material (journal, other vouchers, bank statements, A/P reports, A/R reports or director's report) for detecting non-cash transactions. FAS manual preparers who indicated in connection with hypothesis P5 that they would omit

[89] Binomial Test

[90] Here the sample is at least 31 % (454/((454/840+1,96*sqrt(,5405*,4595/840))*2575)) of the finite population of FAS manual preparers, and the resulting FPC is 0,832708.

[91] Lower bound = ,2533-1,96*sqrt(,2533*,7467/454)*,832708; higher bound = ,2533+1,96*sqrt(,2533*,7467/454)*,832708

[92] Here the lower of nπ or n(1 – π) is suggested to be at least 99,88 (,22*454). As the data suggest that values nπ and n(1 – π) are both equal to or greater than 5, the Central Limit Theorem applies and the standard normal distribution can be employed to complete a confidence interval (Lind et al. 2012, 314).

material non-cash transactions from the cash flow statement were asked, on a scale from 1 (never) to 7 (always), if they used the following accounting material when preparing cash flow statements: 1) the balance sheet, 2) balance sheet specifications, 3) the income statement, 4) the notes, 5) the director's report, 6) the ledger, 7) the journal, 8) A/R reports, 9) A/P reports, 10) bank statements, and 11) other vouchers. Values 1 to 3 were recoded as "Never or rarely", 4 as "Sometimes" and 5 to 7 as "Often or always".

The most popular accounting materials among the respondents for preparing cash flow statements were the balance sheet (97 % of respondents indicated they often or always use it), the income statement (93 % of respondents indicated they often or always use it) and the balance sheet specifications (89 % of respondents indicated they often or always use them). The notes were used often or always by 63 % of the respondents, and the ledger was used often or always by 54 % of the respondents. However, the accounting material essential for detecting non-cash transactions was never or rarely used by majority of the respondents: The journal was used never or rarely by 71 % of the respondents – this proportion is statistically extremely significantly higher than 50 % (p<,001)[93]. Other vouchers were used never or rarely by 61 % of the respondents – this proportion is statistically significantly higher than 50 % (p=,013)[94]. Bank statements were used never or rarely by 73 % of the respondents – this proportion is statistically extremely significantly higher than 50 % (p<,001)[95]. A/P reports were used never or rarely by 64 % of the respondents – this proportion is statistically highly significantly higher than 50 % (p=,002)[96]. A/R reports were used never or rarely by 65 % of the respondents – this proportion is statistically extremely significantly higher than 50 % (p<,001)[97]. Finally, the director's report was used never or rarely by 69 % of the respondents – also this proportion is statistically extremely significantly higher than 50 % (p<,001)[98].

This analysis leads to accepting the alternate hypothesis "majority of those FAS manual preparers who indicate omitting non-cash transactions from the cash flow statement, never or rarely use any essential accounting material (journal, other

[93] Binomial Test
[94] Binomial Test
[95] Binomial Test
[96] Binomial Test
[97] Binomial Test
[98] Binomial Test

vouchers, bank statements, A/P reports, A/R reports or director's report) for detecting non-cash transactions". To illustrate, table 16 shows the proportions of respondents who never or rarely use the essential accounting materials as well as the 95 % confidence intervals (adjusted for a finite population[99]) for the population[100] proportions[101].

Table 16. Proportion of FAS manual preparers who indicate omitting non-cash transactions that never or rarely use the following, essential for detecting non-cash transactions, accounting material

	Journal	Other vouchers	Bank statements
Sample proportion	71 %	61 %	73 %
95 % Confidence interval lower bound	64 %	53 %	66 %
95 % Confidence interval higher bound	78 %	68 %	80 %
	A/P reports	A/R reports	Director's report
Sample proportion	64 %	65 %	69 %
95 % Confidence interval lower bound	57 %	58 %	62 %
95 % Confidence interval higher bound	72 %	73 %	76 %

It is noteworthy that for each essential accounting material, the lower bound of 95 % confidence interval for the population proportion of FAS manual preparers who indicate omitting material non-cash transactions from FAS cash flow statements but who never or rarely use the given material is higher than 50 %. Lastly, the proportions of respondents who indicated they never use the before-mentioned accounting materials when preparing cash flow statements are 43 % for

[99] Here the sample is at least 28 % (115/((115/840+1,96*sqrt(,1369*,8631/840))*2575)) of the finite population of FAS manual preparers who would omit material non-cash transactions from the FAS cash flow statement, and the resulting FPC is 0,850075.

[100] Lower bound for the journal = ,7130-1,96*sqrt(,7130*,2870/115)*,850075; higher bound for the journal = ,7130+1,96*sqrt(,7130*,2870/115)*,850075; lower bound for other vouchers = ,6087-1,96*sqrt(,6087*,3913/115)*,850075; higher bound for other vouchers = ,6087+1,96*sqrt(,6087*,3913/115)*,850075; lower bound for bank statements = ,7304-1,96*sqrt(,7304*,2696/115)*,850075; higher bound for bank statements = ,7304+1,96*sqrt(,7304*,2696/115)*,850075; lower bound for A/P reports = ,6435-1,96*sqrt(,6435*,3565/115)*,850075; higher bound for A/P reports = ,6435+1,96*sqrt(,6435*,3565/115)*,850075; lower bound for A/R reports = ,6522-1,96*sqrt(,6522*,3478/115)*,850075; higher bound for A/R reports = ,6522+1,96*sqrt(,6522*,3478/115)*,850075; lower bound for the director's report = ,6870-1,96*sqrt(,6870*,3130/115)*,850075; higher bound for the director's report = ,6870+1,96*sqrt(,6870*,3130/115)*,850075

[101] Here the lower of $n\pi$ or $n(1 - \pi)$ is suggested to be at least 25,30 (,22*115) for the journal, 36,80 (,32*115) for other vouchers, 23,00 (,20*115) for bank statements, 32,20 (,28*115) for A/P reports, 31,05 (,27*115) for A/R reports, and 27,60 (,24*115) for the director's report. As the data suggest that values $n\pi$ and $n(1 - \pi)$ are both equal to or greater than 5, the Central Limit Theorem applies and the standard normal distribution can be employed to complete a confidence interval (Lind et al. 2012, 314).

the journal, 26 % for other vouchers, 43 % for bank statements, 34 % for A/P reports, 35 % for A/R reports, and 38 % for the director's report.

4.2 Results about auditing cash flow statements

4.2.1 Cash flow statement is the least important financial statement section for auditors

H_A1: Auditors of financial statements consider the cash flow statement to be the least important section of financial statements. Auditors of financial statements were asked how important they consider the different financial statement sections to be on a scale from 1 (not at all important) to 7 (extremely important). KHT-auditors perceived the balance sheet to be the most important with a mean score of 6,90, followed by the income statement with a mean score of 6,77 and the notes with a mean score of 6,34. KHT-auditors perceived the cash flow statement to be the least important financial statement section with a mean score of 5,71. Similarly, HTM-auditors perceived the balance sheet to be the most important with a mean score of 6,91, followed by the income statement with a mean score of 6,74 and the notes with a mean score of 6,55. Also HTM-auditors perceived the cash flow statement to be the least important financial statement section with a mean score of 5,31.

Because it cannot be assumed that the importance scores for different financial statement sections are normally distributed[102] in the population, and because the variable of importance is ordinal rather than interval or ratio level, Kruskal-Wallis test is used to test whether the different sections of financial statements are regarded as equally important. The test shows that the not all the sections of financial statements are regarded equally important among KHT- and HTM-auditors (p<,001). Because SPSS does not allow for examination of which populations differ using Kruskal-Wallis methods, ANOVA techniques are used for this purpose. Again, it is shown that the mean scores for importance are not the same for every section of financial statements among KHT- and HTM-auditors (p<,001), and more importantly, it is shown that the cash flow statement's mean importance is

[102] Kolmogorov-Smirnov test of normality (p<,001)

statistically extremely significantly lower (p<,001) than that of any other section of financial statements amongst both KHT- and HTM-auditors separately.

This analysis leads to accepting the alternate hypothesis "auditors of financial statements consider the cash flow statement to be the least important section of financial statements". To illustrate, table 17 shows the mean scores of the respondents as well as the 95 % confidence intervals for the mean scores of the populations of KHT- and HTM-auditors separately (adjusted for a finite population[103] and using df=160). It is noteworthy that the higher bound of 95 % confidence interval for population mean of cash flow statement's importance is lower than the lower bound of 95 % confidence interval for population mean of any other financial statement section's importance among both KHT- and HTM-auditors separately.

Table 17. KHT- and HTM-auditors' scores for importance of different sections of financial statements (scale: 1=not at all important to 7=extremely important)

KHT-auditors	Balance sheet	Income statement	Cash flow statement	Notes
Mean score	6,90	6,77	5,71	6,34
95 % Confidence interval lower bound	6,85	6,70	5,53	6,20
95 % Confidence interval higher bound	6,95	6,84	5,89	6,48
HTM-auditors	Balance sheet	Income statement	Cash flow statement	Notes
Mean score	6,91	6,74	5,31	6,55
95 % Confidence interval lower bound	6,87	6,67	5,12	6,45
95 % Confidence interval higher bound	6,95	6,81	5,50	6,65

4.2.2 Minority of auditors are aware of that a cash flow statement can be manipulated

H_A2: Few auditors are aware of that a cash flow statement can be manipulated by preparers, for example, the management. Auditors of financial statements were asked – on a 7-point Likert scale with a range of "completely disagree", "somewhat disagree", "slightly disagree", "no opinion for or against", "slightly agree", "somewhat agree" and "completely agree" – whether they agreed with that a cash

[103] The sample of KHT-auditors is 23 % (163/709) and the sample of HTM-auditors is 25 % (162/658) of the finite populations, and the resulting FPC's are 0,878172 and 0,868877 respectively.

flow statement can be intentionally manipulated by preparers, for example the management. By recoding the answer-choices "slightly agree", "somewhat agree" and "completely agree" as "agree", 45 % of respondents indicated that they agree with that a cash flow statement can be manipulated by preparers – this proportion is statistically significantly lower than 50 % (p=,043)[104]. This analysis leads to accepting the alternate hypothesis "minority of auditors of financial statements are aware of that a cash flow statement can be manipulated by preparers, for example, the management".

When analysing KHT- and HTM-auditors separately, 41 % of HTM-auditors indicated they agree with that a cash flow statement can be manipulated by preparers – this proportion is statistically significantly lower than 50 % (p=,014)[105]. 49 % of KHT-auditors indicated they agree with that a cash flow statement can be manipulated by preparers – however, this proportion is not statistically significantly lower than 50 %[106]. To illustrate, table 18 shows the proportions of respondents who agree with that a cash flow statement can be manipulated by preparers as well as the 95 % confidence intervals (adjusted for a finite population[107]) for the population[108] proportions[109].

[104] z = (,4523-,50)/sqrt(,5*,5/325) = -1,72

[105] z = (,4136-,50)/sqrt(,5*,5/162) = -2,20

[106] z = (,4908-,50)/sqrt(,5*,5/163) = -0,23 (p=,409)

[107] The sample of KHT-auditors is 23 % (163/709) and the sample of HTM-auditors is 25 % (162/658) of the finite populations, and the resulting FPC's are 0,878172 and 0,868877 respectively.

[108] KHT-auditors: lower bound = ,4908-1,96*sqrt(,4908*,5092/163)*,878172; higher bound = ,4908+1,96*sqrt(,4908*,5092/163)*,878172, HTM-auditors: lower bound = ,4136-1,96*sqrt(,4136*,5864/162)*,868877; higher bound = ,4136+1,96*sqrt(,4136*,5864/162)*,868877

[109] Here the lower of $n\pi$ or $n(1 - \pi)$ is suggested to be at least 68,46 (,42*163) for KHT-auditors and 56,70 (,35*162) for HTM-auditors. As the data suggest that values $n\pi$ and $n(1 - \pi)$ are both equal to or greater than 5, the Central Limit Theorem applies and the standard normal distribution can be employed to complete a confidence interval (Lind et al. 2012, 314).

Table 18. Proportion of auditors who agree with that a cash flow statement can be manipulated by preparers, for example, the management

KHT-auditors	Agree with that a cash flow statement can be manipulated by the preparers
Sample proportion	49 %
95 % Confidence interval lower bound	42 %
95 % Confidence interval higher bound	56 %
HTM-auditors	Agree with that a cash flow statement can be manipulated by the preparers
Sample proportion	41 %
95 % Confidence interval lower bound	35 %
95 % Confidence interval higher bound	48 %

It is noteworthy that the higher bound of 95 % confidence interval for the population proportion of HTM-auditors who agree with that a cash flow statement can be manipulated by preparers is lower than 50 %, but for KHT-auditors, 50 % is included in the confidence interval. Thus, the results indicate that minority of HTM-auditors, as well as minority of all authorised auditors in Finland, are aware of that a cash flow statement can be manipulated by preparers, for example, the management of an enterprise. Although the sample suggests that the proportion is a minority also for KHT-auditors separately, this cannot be statistically significantly shown.

4.2.3 Minority of auditors would require a mention if the reported operating cash flows are boosted by the increase of current maturities of long-term debts

H_A3: Few auditors would require a mention in the notes or in the auditor's report if the change in current liabilities that is a result of reclassifying debt from being a long-term liability to being a current liability is reported as operating activity in the cash flow statement. Auditors of financial statements were asked (yes or no) would they require a mention in the notes or in the auditor's report if the change in current liabilities that is a result of reclassifying debt from being a long-term liability to being a current liability is reported as operating activity on the cash flow statement. 45 % of respondents indicated that they would require a mention in such an event – this proportion is statistically significantly lower than 50 % (p=,026)[110]. This

[110] z = (,4462-,50)/sqrt(,5*,5/325) = -1,94

analysis leads to accepting the alternate hypothesis "minority of auditors would require a mention in the notes or in the auditor's report if the change in current liabilities that is a result of reclassifying debt from being a long-term liability to being a current liability is reported as operating activity in the cash flow statement".

When analysing KHT- and HTM-auditors separately, 44 % of KHT-auditors and 45 % of HTM-auditors indicated they would require a mention if operating cash flows were manipulated by such a method. These proportions are, however, not statistically significantly lower than 50 %[111]. To illustrate, table 19 shows the proportions of respondents who would require a mention in the notes or in the auditor's report about such manipulation as well as the 95 % confidence intervals (adjusted for a finite population[112]) for the population[113] proportions[114]. It is noteworthy that 50 % is included in both confidence intervals; thus, although the samples of KHT- and HTM-auditors suggest that both proportions are minorities, this cannot be statistically significantly shown.

Table 19. Proportion of auditors who would require a mention in the notes or in the auditor's report about reporting current maturities of long-term debts as operating cash flows

KHT-auditors	Current maturies of long-term debts reported as operating activities
Sample proportion	44 %
95 % Confidence interval lower bound	37 %
95 % Confidence interval higher bound	51 %
HTM-auditors	Current maturies of long-term debts reported as operating activities
Sample proportion	45 %
95 % Confidence interval lower bound	38 %
95 % Confidence interval higher bound	52 %

[111] KHT-auditors: z = (,4417-,50)/sqrt(,5*,5/163) = -1,49 (p=,068), HTM-auditors: z = (,4506-,50)/sqrt(,5*,5/162) = -1,26 (p=,104)

[112] The sample of KHT-auditors is 23 % (163/709) and the sample of HTM-auditors is 25 % (162/658) of the finite populations, and the resulting FPC's are 0,878172 and 0,868877 respectively.

[113] KHT-auditors: lower bound = ,4417-1,96*sqrt(,4417*,5583/163)*,878172; higher bound = ,4417+1,96*sqrt(,4417*,5583/163)*,878172, HTM-auditors: lower bound = ,4506-1,96*sqrt(,4506*,5494/162)*,868877; higher bound = ,4506+1,96*sqrt(,4506*,5494/162)*,868877

[114] Here the lower of $n\pi$ or $n(1 - \pi)$ is suggested to be at least 60,31 (,37*163) for KHT-auditors and 61,56 (,38*162) for HTM-auditors. As the data suggest that values $n\pi$ and $n(1 - \pi)$ are both equal to or greater than 5, the Central Limit Theorem applies and the standard normal distribution can be employed to complete a confidence interval (Lind et al. 2012, 314).

4.2.4 Minority of auditors would require mentioning drastic non-payment of accounts payable

H_A4: Few auditors would require a mention in the notes or in the auditor's report if the entity has not paid its accounts payable that were due the last month of the accounting period; furthermore, few of those who would not require such mentioning, would require a mention in the notes or in the auditor's report if the entity has not paid its accounts payable that were due Q4 of the accounting period. Auditors of financial statements were asked (yes or no) would they require a mention in the notes or in the auditor's report if the entity has not paid its accounts payable that were due the last month of the accounting period. 13 % of KHT-auditors indicated that they would require a mention in the notes or in the auditor's report in such an instance – this proportion is statistically extremely significantly lower than 25 % (p<,001)[115]. 18 % of HTM-auditors indicated that they would require a mention in the notes or in the auditor's report in such an instance – this proportion is statistically significantly lower than 25 % (p=,020)[116].

If respondents indicated they would not require a mention about such a boosting of the operating cash flows, they were asked would they – on a scale from 1 (definitely not) to 7 (definitely yes) – require a mention in the notes or in the auditor's report if the entity has not paid its accounts payable that were due Q4 of the accounting period. By recoding values 1 to 3 as "No", 4 as "No opinion for or against" and 5 to 7 as "Yes", 34 % of KHT-auditors indicated that they would require a mention in the notes or in the auditor's report in such an instance – this proportion is statistically extremely significantly lower than 50 % (p<,001)[117]. Similarly, 34 % of HTM-auditors indicated that they would require a mention in the notes or in the auditor's report in such an instance – again, this proportion is statistically extremely significantly lower than 50 % (p<,001)[118].

This analysis leads to accepting the alternate hypothesis "fewer than 25 % of auditors of financial statements would require a mention in the notes or in the auditor's report if the entity has not paid its accounts payable that were due the last month of the accounting period; furthermore, minority of those who would not

[115] Binomial Test
[116] Binomial Test
[117] Binomial Test
[118] Binomial Test

require such mentioning, would require a mention in the notes or in the auditor's report if the entity has not paid its accounts payable that were due Q4 of the accounting period". To illustrate, table 20 shows the proportions of respondents who would require a mention in the notes or in the auditor's report about stretching out payments over their due dates in either scenario as well as the 95 % confidence intervals (adjusted for a finite population[119]) for the population[120] proportions[121]. Taking into consideration that those who would require mentioning the entity not paying its accounts payable due the last month would also likely require mentioning the entity not paying its accounts payable due Q4, the point estimates for the population proportions of KHT- and HTM-auditors who would require a mention in the notes or in the auditor's report about the entity not paying its accounts payable due Q4 are 42 % and 46 %, respectively[122].

[119] For mentioning A/P due last month not paid, sample of KHT-auditors is 23 % (163/709) and the sample of HTM-auditors is 25 % (162/658) of the finite populations, and the resulting FPC's are 0,878172 and 0,868877 respectively. For mentioning A/P due Q4 not paid, the sample of KHT-auditors is at least 22 % (142/((1-,0836)*709)) and the sample of HTM-auditors is at least 23 % (133/((1-,1277)*658)) of the finite populations, and the resulting FPC's are 0,884676 and 0,877281 respectively.

[120] KHT-auditors: lower bound for mentioning A/P due last month not paid = ,1288-1,96*sqrt(,1288*,8712/163)*,878172; higher bound for mentioning A/P due last month not paid = ,1288+1,96*sqrt(,1288*,8712/163)*,878172; lower bound for mentioning A/P due Q4 not paid = ,3380-1,96*sqrt(,3380*,6620/142)*,884676; higher bound for mentioning A/P due Q4 not paid = ,3380+1,96*sqrt(,3380*,6620/142)*,884676, HTM-auditors: lower bound for mentioning A/P due last month not paid = ,1790-1,96*sqrt(,1790*,8210/162)*,868877; higher bound for mentioning A/P due last month not paid = ,1790+1,96*sqrt(,1790*,8210/162)*,868877; lower bound for mentioning A/P due Q4 not paid = ,3383-1,96*sqrt(,3383*,6617/133)*,877281; higher bound for mentioning A/P due Q4 not paid = ,3383+1,96*sqrt(,3383*,6617/133)*,877281

[121] KHT-auditors: the lower of $n\pi$ or $n(1 - \pi)$ is suggested to be at least 13,04 (,08*163) for mentioning A/P due last month not paid, and 38,34 (,27*142) for mentioning A/P due Q4 not paid. HTM-auditors: the lower of $n\pi$ or $n(1 - \pi)$ is suggested to be at least 21,06 (,13*162) for mentioning A/P due last month not paid, and 35,91 (,27*133) for mentioning A/P due Q4 not paid. As the data suggest that values $n\pi$ and $n(1 - \pi)$ are both equal to or greater than 5, the Central Limit Theorem applies and the standard normal distribution can be employed to complete a confidence interval (Lind et al. 2012, 314).

[122] (21+48)/163; (29+45)/162

Table 20. Proportion of auditors who would require a mention in the notes or in the auditor's report about stretching out payments

KHT-auditors	A/P due last month not paid (of all KHT-auditors)	A/P due Q4 not paid (of those KHT-auditors not reporting the previous)
Sample proportion	13 %	34 %
95 % Confidence interval lower bound	8 %	27 %
95 % Confidence interval higher bound	17 %	41 %
HTM-auditors	A/P due last month not paid (of all HTM-auditors)	A/P due Q4 not paid (of those HTM-auditors not reporting the previous)
Sample proportion	18 %	34 %
95 % Confidence interval lower bound	13 %	27 %
95 % Confidence interval higher bound	23 %	41 %

4.2.5 At least 75 % of auditors spend the least time with the cash flow statement during audits

H_A5: Most auditors spend the least time with the cash flow statement of all the sections of the financial statements during an annual audit of an enterprise. Auditors of financial statements were asked which of the sections of financial statements they spend the least time with during annual audits of enterprises[123]. 81 % of KHT-auditors indicated that they spend the least time with the cash flow statement during annual audits – this proportion is statistically significantly higher than 74 % (p=,031)[124]. 82 % of HTM-auditors indicated that they spend the least time with the cash flow statement during annual audits – also this proportion is statistically significantly higher than 74 % (p=,015)[125].

This analysis leads to accepting the alternate hypothesis "more than 74 % of auditors of financial statements spend the least time with the cash flow statement of all the sections of the financial statements during an annual audit of an enterprise".

[123] Auditors were asked to put the different sections of financial statements (balance sheet, income statement, cash flow statement, and notes) in an order that reflects how much time they spend with them during an annual external audit of an enterprise. These data were then checked for errors. An error would occur, if a financial statement section would have been chosen more than once in the ranking – in other words, the financial statement section the auditor spends the most time, the second most time, the third most time, and the least time with during audits, had to be different sections. In 7 instances this error existed, and these rankings were deleted.

[124] Binomial Test

[125] Binomial Test

To illustrate, table 21 shows the proportions of respondents who spend the least time with cash flow statements during annual audits as well as the 95 % confidence intervals (adjusted for a finite population[126]) for the population[127] proportions[128]. It is noteworthy that the lower bounds of 95 % confidence intervals for the population proportions of KHT- and HTM-auditors who spend the least time with the cash flow statement during annual audits are equal or higher than 75 %.

Table 21. Proportion of auditors who spend the least time with the cash flow statement during an annual audit of an enterprise

KHT-auditors	Spend the least time with the cash flow statement during annual audits
Sample proportion	81 %
95 % Confidence interval lower bound	75 %
95 % Confidence interval higher bound	86 %
HTM-auditors	Spend the least time with the cash flow statement during annual audits
Sample proportion	82 %
95 % Confidence interval lower bound	76 %
95 % Confidence interval higher bound	87 %

4.2.6 Small minority of auditors know how cash payments relating to capacity acquisitions should be presented

H_A6$_a$: Few auditors know how cash payments relating to capacity acquisitions should be presented in accordance with both KILA 30.1.2007 and IAS 7. H_A6$_b$: Few auditors know how cash payments relating to capacity acquisitions should be presented in accordance with KILA 30.1.2007. H_A6$_c$: Few auditors know how cash payments relating to capacity acquisitions should be presented in accordance with IAS 7.

[126] The sample of KHT-auditors is 23 % (160/709) and the sample of HTM-auditors is 24 % (158/658) of the finite populations, and the resulting FPC's are 0,880581 and 0,872373 respectively.

[127] KHT-auditors: lower bound = ,8063-1,96*sqrt(,8063*,1937/160)*,880581; higher bound = ,8063+1,96*sqrt(,8063*,1937/160)*,880581, HTM-auditors: lower bound = ,8165-1,96*sqrt(,8165*,1835/158)*,872373; higher bound = ,8165+1,96*sqrt(,8165*,1835/158)*,872373

[128] Here the lower of nπ or n(1 – π) is suggested to be at least 22,40 (,14*160) for KHT-auditors and 20,54 (,13*158) for HTM-auditors. As the data suggest that values nπ and n(1 – π) are both equal to or greater than 5, the Central Limit Theorem applies and the standard normal distribution can be employed to complete a confidence interval (Lind et al. 2012, 314).

Auditors of financial statements were asked in which section of the cash flow statement (operating, investing or financing activities) should the following transactions of a manufacturing company be primarily presented: 1) a one-time payment of 10000€ relating to a purchase of manufacturing equipment, 2) a monthly payment of 10000€ relating to instalments of manufacturing equipment, 3) a monthly rent-payment of 10000€ relating to a lease of manufacturing equipment (FAS), 4) a monthly rent-payment of 10000€ relating to a finance lease of manufacturing equipment (IFRS), and 5) a monthly rent-payment of 10000€ relating to an operating lease of manufacturing equipment (IFRS). As it was discussed in chapter 2.5.2, the correct row of answers is A_1= investing, A_2= investing, A_3= operating, A_4= financing, and A_5= operating activities.

Operating activities were coded as 1, investing activities were coded as 2, and financing activities were coded as 3. Three new variables were computed: for both FAS and IFRS, a variable was computed as $(A_1-2)^2+(A_2-2)^2+(A_3-1)^2+(A_4-3)^2+(A_5-1)^2$; for FAS, a variable was computed as $(A_1-2)^2+(A_2-2)^2+(A_3-1)^2$; and for IFRS, a variable was computed as $(A_1-2)^2+(A_2-2)^2+(A_4-3)^2+(A_5-1)^2$. These variables would obtain a value of zero only when the particular answer row is correct.

2 % of respondents indicated they know how cash payments relating to capacity acquisitions should be presented in accordance with both KILA 30.1.2007 and IAS 7 – this proportion is statistically significantly lower than 5 % (p=,017)[129]. 20 % of respondents indicated they know how cash payments relating to capacity acquisitions should be presented in accordance with KILA 30.1.2007 – this proportion is statistically significantly lower than 25 % (p=,014)[130]. 2 % of respondents indicated they know how cash payments relating to capacity acquisitions should be presented in accordance with IAS 7 – this proportion is statistically significantly lower than 5 % (p=,017)[131]. This analysis leads to accepting the alternate hypotheses a) “fewer than 5 % of auditors know how cash payments relating to capacity acquisitions should be presented in accordance with both KILA 30.1.2007 and IAS 7”, b) “fewer than 25 % of auditors know how cash payments relating to capacity acquisitions should be presented in accordance with

[129] Binomial Test
[130] Binomial Test
[131] Binomial Test

KILA 30.1.2007", and c) "fewer than 5 % of auditors know how cash payments relating to capacity acquisitions should be presented in accordance with IAS 7".

When analysing KHT- and HTM-auditors separately, 3 % of KHT-auditors indicated they know how cash payments relating to capacity acquisitions should be presented in accordance with both KILA 30.1.2007 and IAS 7 – this proportion is statistically highly significantly lower than 10 % (p=,001)[132]. 25 % of KHT-auditors indicated they know how cash payments relating to capacity acquisitions should be presented in accordance with KILA 30.1.2007 – this proportion is statistically highly significantly lower than 35 % (p=,005)[133]. 3 % of KHT-auditors indicated they know how cash payments relating to capacity acquisitions should be presented in accordance with IAS 7 – this proportion is statistically highly significantly lower than 10 % (p=,001)[134].

2 % of HTM-auditors indicated they know how cash payments relating to capacity acquisitions should be presented in accordance with both KILA 30.1.2007 and IAS 7 – this proportion is statistically significantly lower than 5 % (p=,036)[135]. 14 % of HTM-auditors indicated they know how cash payments relating to capacity acquisitions should be presented in accordance with KILA 30.1.2007 – this proportion is statistically significantly lower than 20 % (p=,036)[136]. 2 % of HTM-auditors indicated they know how cash payments relating to capacity acquisitions should be presented in accordance with IAS 7 – this proportion is statistically significantly lower than 5 % (p=,036)[137]. To illustrate, table 22 shows the proportions of respondents who know how capacity acquisition payments should be presented in the three scenarios as well as the 95 % confidence intervals (adjusted for a finite population[138]) for the population[139] proportions[140].

---

[132] Binomial Test
[133] Binomial Test
[134] Binomial Test
[135] Binomial Test
[136] Binomial Test
[137] Binomial Test
[138] The sample of KHT-auditors is 23 % (163/709) and the sample of HTM-auditors is 25 % (162/658) of the finite populations, and the resulting FPC's are 0,878172 and 0,868877, respectively.
[139] KHT-auditors: lower bound for both FAS and IFRS = ,0307-1,96*sqrt(,0307*,9693/163)*,878172; higher bound for both FAS and IFRS = ,0307+1,96*sqrt(,0307*,9693/163)*,878172; lower bound for FAS = ,2515-1,96*sqrt(,2515*,7485/163)*,878172; higher bound for FAS = ,2515+1,96*sqrt(,2515*,7485/163)*,878172; lower bound for IFRS = ,0307-1,96*sqrt(,0307*,9693/163)*,878172; higher bound for IFRS = ,0307+1,96*sqrt(,0307*,9693/163)*,878172, HTM-auditors: lower bound for both FAS and IFRS =

Table 22. Proportion of auditors who know how capacity acquisition payments should be presented on the cash flow statement

KHT-auditors	Both FAS and IFRS correctly	FAS correctly	IFRS correctly
Sample proportion	3 %	25 %	3 %
95 % Confidence interval lower bound	1 %	19 %	1 %
95 % Confidence interval higher bound	5 %	31 %	5 %
HTM-auditors	Both FAS and IFRS correctly	FAS correctly	IFRS correctly
Sample proportion	2 %	14 %	2 %
95 % Confidence interval lower bound	0 %	10 %	0 %
95 % Confidence interval higher bound	4 %	19 %	4 %

4.2.7 Minority of auditors would omit material non-cash transactions from FAS cash flow statements

H_A7: Few auditors would omit material non-cash transactions from cash flow statements under FAS. Auditors of financial statements were asked what should Company A's cash flow statement look like under FAS – either 1) blank, or 2) present a negative operating cash flow and a positive financing cash flow for the amount of 12000€ – for the accounting period in the following scenario: "Company A purchases monthly administrative services from Company B on account, totalling at 12000€ for the accounting year. At the end of the accounting period, Company A carries out a directed issue of shares to Company B for the amount of the total administrative services. Company A had not yet paid its account payable, and therefore the companies decide to settle the mutual debt and receivable accounts. As a result, Company A's account payable is reclassified as owner's equity. Company

,0185-1,96*sqrt(,0185*,9815/162)*,868877; higher bound for both FAS and IFRS = ,0185+1,96*sqrt(,0185*,9815/162)*,868877; lower bound for FAS = ,1420-1,96*sqrt(,1420*,8580/162)*,868877; higher bound for FAS = ,1420+1,96*sqrt(,1420*,8580/162)*,868877;; lower bound for IFRS = ,0185-1,96*sqrt(,0185*,9815/162)*,868877; higher bound for IFRS = ,0185+1,96*sqrt(,0185*,9815/162)*,868877

[140] Values $n\pi$ and $n(1 - \pi)$ should both be equal to or greater than 5 for the Central Limit Theorem to apply and the standard normal distribution to be employed to complete a confidence interval (Lind et al. 2012, 314). Here, the lower of $n\pi$ or $n(1 - \pi)$ is suggested to be at least 30,97 (,19*163) for KHT-auditors who know FAS, and 16,20 (,10*162) for HTM-auditors who know FAS. For KHT- and HTM-auditors who know both FAS and IFRS, and for KHT- and HTM-auditors who know IFRS, the lower of $n\pi$ or $n(1 - \pi)$ is suggested to be less than 5 – the reason being that so few answered correctly. Regardless, for illustration purposes, the 95 % confidence intervals are constructed using the standard normal distribution.

A does not have other transactions during the accounting period." As it was discussed in chapter 2.5.2, the correct answer is that Company A's cash flow statement should be blank (i.e. the net cash flows for each activity should be zero).

39 % of KHT-auditors indicated they would omit material non-cash transactions from the cash flow statement under FAS – this proportion is statistically highly significantly lower than 50 % (p=,004)[141]. 28 % of HTM-auditors indicated they would omit material non-cash transactions from the cash flow statement under FAS – this proportion is statistically significantly lower than 35 % (p=,045)[142]. This analysis leads to accepting the alternate hypotheses a) "minority of KHT-auditors would omit material non-cash transactions from cash flow statements under FAS", and b) "fewer than 35 % of HTM-auditors would omit material non-cash transactions from cash flow statements under FAS". To illustrate, table 23 shows the proportions of respondents who would omit material non-cash transactions from the FAS cash flow statement as well as the 95 % confidence intervals (adjusted for a finite population[143]) for the population[144] proportions[145].

Table 23. Proportion of auditors who would omit material non-cash transactions from cash flow statements under FAS

KHT-auditors	Would omit material non-cash transactions from cash flow statements under FAS
Sample proportion	39 %
95 % Confidence interval lower bound	33 %
95 % Confidence interval higher bound	46 %
HTM-auditors	Would omit material non-cash transactions from cash flow statements under FAS
Sample proportion	28 %
95 % Confidence interval lower bound	22 %
95 % Confidence interval higher bound	34 %

[141] Binomial Test

[142] Binomial Test

[143] The sample of KHT-auditors is 23 % (163/709) and the sample of HTM-auditors is 25 % (162/658) of the finite populations, and the resulting FPC's are 0,878172 and 0,868877 respectively.

[144] KHT-auditors: lower bound = ,3926-1,96*sqrt(,3926*,6074/163)*,878172; higher bound = ,3926+1,96*sqrt(,3926*,6074/163)*,878172, HTM-auditors: lower bound = ,2840-1,96*sqrt(,2840*,7160/162)*,868877; higher bound = ,2840+1,96*sqrt(,2840*,7160/162)*,868877

[145] Here the lower of $n\pi$ or $n(1 - \pi)$ is suggested to be at least 53,79 (,33*163) for KHT-auditors and 35,64 (,22*162) for HTM-auditors. As the data suggest that values $n\pi$ and $n(1 - \pi)$ are both equal to or greater than 5, the Central Limit Theorem applies and the standard normal distribution can be employed to complete a confidence interval (Lind et al. 2012, 314).

4.3 Results about the contents of cash flow statements

4.3.1 Nearly all cash flow statements present tax cash flows solely as operating activities – i.e. no tax allocation

H_C1: Most cash flow statements present tax cash flows solely as operating activities. It was investigated how tax cash flows were presented on the published cash flow statements. Companies either presented them solely as 1) operating activities, or 2) financing activities. Furthermore, from some cash flow statements, tax cash flows were absent.

Of those consolidated cash flow statements that showed tax cash flows, 100 % presented them solely as operating activities in 2012, 2011 and 2010[146]. Of those parent company cash flow statements that showed tax cash flows, 99 % presented them solely as operating activities in 2012 and 2011[147]. The previous are all population proportions. The 95 % confidence interval (adjusted for a finite population[148]) for the population[149] proportion[150] of tax-showing parent company cash flow statements that presented tax cash flows solely as operating activities in 2010 is 99 % – 99 %. This analysis leads to accepting the alternate hypothesis "more than 95 % of cash flow statements present tax cash flows solely as operating activities". To illustrate, table 24 shows the proportions yearly and separately for consolidated and parent company cash flow statements.

[146] 2012 = 101/101; 2011 = 100/100; 2010 = 96/96

[147] 2012 = 85/86; 2011 = 85/86

[148] The sample is at least 99 % (85/86) of the finite population of 2010 parent company cash flow statements showing taxes, and the resulting FPC is 0,108465.

[149] Lower bound = 84/85-1,96*sqrt(84/85*1/85/85)*,108465; higher bound = 84/85+1,96*sqrt(84/85*1/85/85)*,108465

[150] Values $n\pi$ and $n(1 - \pi)$ should both be equal to or greater than 5 for the Central Limit Theorem to apply and the standard normal distribution to be employed to complete a confidence interval (Lind et al. 2012, 314). Here, the lower of $n\pi$ or $n(1 - \pi)$ is suggested to be less than 5 – the reason being that so few cash flow statements classified tax cash flows other than operating activities. Regardless, the 95 % confidence interval is constructed using the standard normal distribution for illustration purposes.

Table 24. Proportions of tax-showing cash flow statements that present tax cash flows solely as operating activities

Consolidated	Tax cash flows presented solely as operating activities
2012 (or early 2013)	100 %
2011 (or early 2012)	100 %
2010 (or early 2011)	100 %
Parent company	Tax cash flows presented solely as operating activities
2012 (or early 2013)	99 %
2011 (or early 2012)	99 %
2010 (or early 2011)	99 % - 99 %
2010 (or early 2011): 95 % confidence interval	

4.3.2 Most cash flow statements' presentation of interest and dividends reduces comparability

H_C2a: Interest and dividends paid are treated differently: interest paid is classified solely as an operating activity on most cash flow statements, and dividends paid are classified solely as a financing activity on most cash flow statements. H_C2b: Interest received and dividends received are classified solely as operating activities on most cash flow statements.

It was investigated how interest and dividend[151] cash flows were presented on the published cash flow statements. Companies presented interest paid 1) solely as operating activities, 2) solely as financing activities, 3) allocated between operating and financing activities, 4) netted with interest received as operating activities, or 5) netted with interest received and dividends received as operating activities. Furthermore, from one parent company cash flow statement, interest cash outflows were absent.

By combining the alternatives 1, 4 and 5, of the consolidated cash flow statements, 99 % presented interest paid solely as operating activities in 2012, 2011 and 2010[152]. Of those parent company cash flow statements that included interest paid, 99 % in 2012 and 98 % in 2011 presented them solely as operating

[151] Equity returns are included in the term "dividend".
[152] 2012 = 104/105; 2011 = 103/104; 2010 = 103/104

activities[153]. The previous are all population proportions. The 95 % confidence interval (adjusted for a finite population[154]) for the population[155] proportion[156] of parent company cash flow statements that presented interest paid solely as operating activities in 2010 is 98 % – 98 %.

Companies presented dividends paid solely as financing activities – although from some cash flow statements, dividend cash outflows were absent. That is, of the consolidated cash flow statements that showed dividends paid, 100 % presented them solely as financing activities in 2012, 2011 and 2010[157]. Of those parent company cash flow statements that showed dividends paid, 100 % presented them solely as financing activities in 2012 and 2011[158]. The previous are all population proportions. The 95 % confidence interval (adjusted for a finite population[159]) for the population[160] proportion[161] of dividend-outflow-showing parent company cash flow statements that presented dividends paid solely as financing activities in 2010 is 100 % – 100 %.

The previous analyses lead to accepting the alternate hypothesis "more than 95 % of cash flow statements present interest paid solely as operating activities, and all cash flow statements present dividends paid solely as financing activities". To illustrate, table 25 shows the proportions yearly and separately for consolidated and parent company cash flow statements.

---

[153] 2012 = 103/104; 2011 = 102/104

[154] The sample is 99 % (103/104) of the finite population of 2010 parent company cash flow statements, and the resulting FPC is 0,098533.

[155] Lower bound = 101/103-1,96*sqrt(101/103*2/103/103)*,098533; higher bound = 101/103+1,96*sqrt(101/103*2/103/103)*,098533

[156] Values nπ and n(1 – π) should both be equal to or greater than 5 for the Central Limit Theorem to apply and the standard normal distribution to be employed to complete a confidence interval (Lind et al. 2012, 314). Here, the lower of nπ or n(1 – π) is suggested to be less than 5 – the reason being that so few cash flow statements classified interest cash outflows other than solely operating activities. Regardless, the 95 % confidence interval is constructed using the standard normal distribution for illustration purposes.

[157] 2012 = 84/84; 2011 = 85/85; 2010 = 92/92

[158] 2012 = 84/84; 2011 = 88/88

[159] The sample is at least 99 % (90/91) of the finite population of 2010 parent company cash flow statements showing dividends paid, and the resulting FPC is 0,105409.

[160] Lower bound = 90/90-1,96*sqrt(90/90*0/90/90)*,105409; higher bound = 90/90+1,96*sqrt(90/90*0/90/90)*,105409

[161] Values nπ and n(1 – π) should both be equal to or greater than 5 for the Central Limit Theorem to apply and the standard normal distribution to be employed to complete a confidence interval (Lind et al. 2012, 314). Here, the lower of nπ or n(1 – π) is suggested to be less than 5 – the reason being that none of the cash flow statements classified dividends paid other than solely financing activities. Regardless, the 95 % confidence interval is constructed using the standard normal distribution for illustration purposes.

Table 25. Proportions of interest-outflow-showing and dividend-outflow-showing cash flow statements that present interest paid solely as operating activities and dividends paid solely as financing activities

Consolidated	Interest paid presented solely as an operating activity
2012 (or early 2013)	99 %
2011 (or early 2012)	99 %
2010 (or early 2011)	99 %
Parent company	Interest paid presented solely as an operating activity
2012 (or early 2013)	99 %
2011 (or early 2012)	98 %
2010 (or early 2011)	98 % - 98 %
2010 (or early 2011): 95 % confidence interval	
Consolidated	Dividends paid presented solely as an financing activity
2012 (or early 2013)	100 %
2011 (or early 2012)	100 %
2010 (or early 2011)	100 %
Parent company	Dividends paid presented solely as an financing activity
2012 (or early 2013)	100 %
2011 (or early 2012)	100 %
2010 (or early 2011)	100 % - 100 %
2010 (or early 2011): 95 % confidence interval	

Companies presented interest received 1) solely as operating activities, 2) solely as investing activities, 3) allocated between operating and investing activities, 4) allocated between operating and financing activities, 5) netted with interest paid as operating activities, 6) combined with dividends received as operating activities, or 7) netted with interest paid and dividends received as operating activities. By combining the alternatives 1, 5, 6 and 7, of the consolidated cash flow statements, 97 % in 2012, 95 % in 2011 and 96 % in 2010 presented interest received solely as operating activities[162]. Of the parent company cash flow statements, 95 % in 2012 and 94 % in 2011 presented interest received solely as operating activities[163]. The previous are all population proportions. The 95 % confidence interval (adjusted for a

[162] 2012 = 102/105; 2011 = 99/104; 2010 = 100/104
[163] 2012 = 100/105; 2011 = 98/104

finite population[164]) for the population[165] proportion[166] of parent company cash flow statements that presented interest received solely as operating activities in 2010 is 94 % – 95 %.

Companies presented dividends received 1) solely as operating activities, 2) solely as investing activities, 3) solely as financing activities, 4) allocated between operating and investing activities, 5) allocated between investing and financing activities, 6) combined with interest received as operating activities, or 7) netted with interest paid and interest received as operating activities. Furthermore, dividend cash inflows were absent from some cash flow statements or the presentation was otherwise unclear[167].

By combining the alternatives 1, 6 and 7, of the consolidated cash flow statements where dividends received were present and the classification was reasonably clear, 59 % presented them solely as operating activities in 2012, 2011 and 2010[168]. Of the parent company cash flow statements where dividends received were present and the classification was reasonably clear, 63 % in 2012 and 64 % in 2011 presented them solely as operating activities[169]. The previous are all population proportions. The 95 % confidence interval (adjusted for a finite population[170]) for the population[171] proportion[172] of parent company cash flow statements that presented interest received solely as operating activities in 2010 is 66 % – 68 %.

---

[164] The sample is 99 % (103/104) of the finite population of 2010 parent company cash flow statements, and the resulting FPC is 0,098533.

[165] Lower bound = 97/103-1,96*sqrt(97/103*6/103/103)*,098533; higher bound = 97/103+1,96*sqrt(97/103*6/103/103)*,098533

[166] Here the lower of $n\pi$ or $n(1 - \pi)$ is suggested to be at least 5,15 (,05*103). As the data suggest that values $n\pi$ and $n(1 - \pi)$ are both equal to or greater than 5, the Central Limit Theorem applies and the standard normal distribution can be employed to complete a confidence interval (Lind et al. 2012, 314).

[167] Classification "absent" would be used if also other financial statement sections indicated the absence, and "unclear" would be used if other financial statement indicated the existence but would not indicate the potential location on the cash flow statement.

[168] 2012 = 38/64; 2011 = 39/66; 2010 = 38/64

[169] 2012 = 50/80; 2011 = 54/84

[170] The sample is at least 99 % (84/85) of the finite population of 2010 parent company cash flow statements showing reasonably clearly dividends received, and the resulting FPC is 0,109109.

[171] Lower bound = 56/84-1,96*sqrt(56/84*28/84/84)*,109109; higher bound = 56/84+1,96*sqrt(56/84*28/84/84)*,109109

[172] Here the lower of $n\pi$ or $n(1 - \pi)$ is suggested to be at least 26,88 (,32*84). As the data suggest that values $n\pi$ and $n(1 - \pi)$ are both equal to or greater than 5, the Central Limit Theorem applies and the standard normal distribution can be employed to complete a confidence interval (Lind et al. 2012, 314).

The previous analyses lead to accepting the alternate hypothesis "more than 90 % of cash flow statements present interest received solely as operating activities, and more than 55 % of cash flow statements present dividends received solely as operating activities". To illustrate, table 26 shows the proportions yearly and separately for consolidated and parent company cash flow statements.

Table 26. Proportions of cash flow statements and dividend-inflow-showing cash flow statements that present interest received and dividends received solely as operating activities

Consolidated	Interest received presented solely as an operating activity
2012 (or early 2013)	97 %
2011 (or early 2012)	95 %
2010 (or early 2011)	96 %
Parent company	Interest received presented solely as an operating activity
2012 (or early 2013)	95 %
2011 (or early 2012)	94 %
2010 (or early 2011)	94 % - 95 %
2010 (or early 2011): 95 % confidence interval	
Consolidated	Dividends received presented solely as an operating activity
2012 (or early 2013)	59 %
2011 (or early 2012)	59 %
2010 (or early 2011)	59 %
Parent company	Dividends received presented solely as an operating activity
2012 (or early 2013)	63 %
2011 (or early 2012)	64 %
2010 (or early 2011)	66 % - 68 %
2010 (or early 2011): 95 % confidence interval	

4.3.3 More than 85 % of cash flow statements present operating cash flows using the indirect method

H_C3: Most cash flow statements present operating cash flows using the indirect method. It was investigated which method was used in presenting the operating activities section of the published cash flow statements. Companies either presented it using 1) the indirect method, or 2) the direct method.

Of the consolidated cash flow statements, 87 % presented operating activities using the indirect method in 2012, 2011 and 2010[173]. Of the parent company cash flow statements, 87 % presented operating activities using the indirect method in 2012 and 2011[174]. The previous are all population proportions. The 95 % confidence interval (adjusted for a finite population[175]) for the population[176] proportion[177] of parent company cash flow statements that presented operating activities using the indirect method in 2010 is 86 % – 87 %. This analysis leads to accepting the alternate hypothesis "more than 85 % of cash flow statements present operating cash flows using the indirect method". To illustrate, table 27 shows the proportions yearly and separately for consolidated and parent company cash flow statements.

Table 27. Proportions of cash flow statements that present operating cash flows using the indirect method

Consolidated	Operating cash flows presented using the indirect method
2012 (or early 2013)	87 %
2011 (or early 2012)	87 %
2010 (or early 2011)	87 %
Parent company	Operating cash flows presented using the indirect method
2012 (or early 2013)	87 %
2011 (or early 2012)	87 %
2010 (or early 2011)	86 % - 87 %
2010 (or early 2011): 95 % confidence interval	

Furthermore, not all indirect presentations are alike. For example, entities chose the start the indirect presentation from either the 1) net profit or net profit attributable to the owners of the parent, 2) profit before taxes, 3) profit after extraordinary items, 4) profit before extraordinary items or profit after financial items, 5) earnings before interest and taxes, or 6) operating profit.

[173] 2012 = 91/105; 2011 = 90/104; 2010 = 90/104

[174] 2012 = 91/105; 2011 = 90/104

[175] The sample is 99 % (103/104) of the finite population of 2010 parent company cash flow statements, and the resulting FPC is 0,098533.

[176] Lower bound = 89/103-1,96*sqrt(89/103*14/103/103)* ,098533; higher bound = 89/103+1,96*sqrt(89/103*14/103/103)* ,098533

[177] Here the lower of nπ or n(1 – π) is suggested to be at least 13,39 (,13*103). As the data suggest that values nπ and n(1 – π) are both equal to or greater than 5, the Central Limit Theorem applies and the standard normal distribution can be employed to complete a confidence interval (Lind et al. 2012, 314).

4.4 Results about using cash flow statements

4.4.1 More than 75 % of users use the cash flow statement mainly for predicting future cash flows or for assessing liquidity

H_U1: Most users of financial statements use the cash flow statement mainly for predicting future cash flows or for assessing liquidity. Users of financial statements were asked for which purpose they mainly use the cash flow statement (prediction of future cash flows of an entity or an investment, assessment of the liquidity of an entity, or other); it was also taken into consideration that some users may not utilise the cash flow statement at all in their economic decision-making, and thus, the option "I do not utilise cash flow statements at all" was provided. 41 % of respondents indicated they mainly use the cash flow statement for predicting future cash flows, 40 % indicated they mainly use it for assessing liquidity, and 2 % indicated they mainly use it for other purposes. 17 % of respondents indicated they do not utilise the cash flow statement at all in their economic decision-making. The proportion of respondents who mainly use the cash flow statement for predicting future cash flows or for assessing liquidity is therefore 81 % – this proportion is statistically extremely significantly higher than 75 % (p<,001)[178].

This analysis leads to accepting the alternate hypothesis "more than 75 % of users of financial statements use the cash flow statement mainly for predicting future cash flows or for assessing liquidity". To illustrate, table 28 shows the proportions of respondents grouped by the main purpose of use as well as the 95 % confidence intervals for the population[179] proportions[180]. It is noteworthy that the summed lower bound of 95 % confidence interval for the population proportion of

[178] Binomial Test

[179] Lower bound for future cash flow prediction = ,4100-1,96*sqrt(,4100*,5900/956); higher bound for future cash flow prediction = ,4100+1,96*sqrt(,4100*,5900/956); lower bound for liquidity assessment = ,4027-1,96*sqrt(,4027*,5973/956); higher bound for liquidity assessment = ,4027+1,96*sqrt(,4027*,5973/956); lower bound for other use = ,0209-1,96*sqrt(,0209*,9791/956); higher bound for other use = ,0209+1,96*sqrt(,0209*,9791/956); lower bound for not using = ,1663-1,96*sqrt(,1663*,8337/956); higher bound for not using = ,1663+1,96*sqrt(,1663*,8337/956)

[180] Here the lower of $n\pi$ or $n(1 - \pi)$ is suggested to be at least 363,28 (,38*956) for predicting future cash flows, 353,72 (,37*956) for assessing liquidity, 9,56 (,01*956) for other use, and 133,84 (,14*956) for not using CFS's. As the data suggest that values $n\pi$ and $n(1 - \pi)$ are both equal to or greater than 5, the Central Limit Theorem applies and the standard normal distribution can be employed to complete a confidence interval (Lind et al. 2012, 314).

users who use the cash flow statement mainly for predicting future cash flows or for assessing liquidity is higher than 75 %[181].

Table 28. Cash flow statements' main purpose of use

	Predicting future cash flows	Assessing liquidity	Other	Do not use CFS's
Sample proportion	41 %	40 %	2 %	17 %
95 % Confidence interval lower bound	38 %	37 %	1 %	14 %
95 % Confidence interval higher bound	44 %	43 %	3 %	19 %

4.4.2 Users consider the cash flow statement the third most useful financial statement section in predicting future cash flows

H_U2: Users of financial statements consider the cash flow statement to be the most useful financial statement section in predicting an entity's future cash flows. Users of financial statements were asked to put the different sections of financial statements (balance sheet, income statement, cash flow statement, and notes) in an order that reflects how useful they consider them to be in predicting an entity's future cash flows. These data were then checked for errors. An error would occur, if a financial statement section would have been chosen more than once in the ranking – in other words, the financial statement section the user considers the most useful, the second most useful, the third most useful, and the least useful in predicting an entity's future cash flows, had to be different sections. In 20 instances this error existed, and these rankings were deleted.

By calculating the mean usefulness of each financial statement section (1 = the most useful, 2 = the second most useful, 3 = the third most useful, and 4 = the least useful), the income statement was considered the most useful financial statement section in predicting future cash flows with a mean score of 1,60, and the balance sheet was considered the second most useful financial statement section with a mean score of 2,22. The cash flow statement was considered the third most useful financial statement section with a mean score of 2,56, while the notes were

[181] 75,04 % rounded to two decimals

considered the least useful financial statement section in predicting future cash flows with a mean score of 3,62.

Because it cannot be assumed that the usefulness scores for different financial statement sections are normally distributed[182] in the population, and because the variable of usefulness is ordinal rather than interval or ratio level, Kruskal-Wallis test is used to test whether the different sections of financial statements are considered equally useful[183]. The test shows that the not all the sections of financial statements are considered equally useful among users (p<,001). Because SPSS does not allow for examination of which populations differ using Kruskal-Wallis methods, ANOVA techniques are used for this purpose. Again, it is shown that the mean scores for usefulness are not the same for every section of financial statements (p<,001), and more importantly, it is shown that the cash flow statement's mean usefulness in predicting future cash flows is statistically extremely significantly lower (p<,001) than those of the balance sheet and the income statement but statistically extremely significantly higher (p<,001) than that of the notes.

This analysis leads to accepting an alternate hypothesis "users of financial statements consider the cash flow statement to be less useful than the balance sheet and the income statement but more useful than the notes in predicting an entity's future cash flows". To illustrate, table 29 displays the mean scores of the respondents as well as the 95 % confidence intervals for the mean scores of the population of private investors. It is noteworthy that the higher bound of 95 % confidence interval for population mean of cash flow statement's usefulness is lower than the lower bound of 95 % confidence interval for population mean of balance sheet's or income statement's usefulness, but the lower bound of 95 % confidence interval for population mean of cash flow statement's usefulness is higher than the higher bound of 95 % confidence interval for population mean of notes' usefulness.

[182] Kolmogorov-Smirnov test of normality (p<,001)

[183] Though the requirement of independent samples may not be perfectly met: for example, the ranked usefulness of the balance sheet influences the ranked usefulness of the income statement because respondents are not allowed to rank different sections as equally useful.

Table 29. Users' scores for financial statement sections' usefulness in predicting future cash flows (scale: 1=the most useful to 4=the least useful)

	Balance sheet	Income statement	Cash flow statement	Notes
Mean score	2,22	1,60	2,56	3,62
95 % Confidence interval higher bound	2,16	1,55	2,51	3,57
95 % Confidence interval lower bound	2,27	1,66	2,62	3,66

4.4.3 Users consider the cash flow statement the most useful financial statement section in assessing liquidity

H_U3: Users of financial statements consider the cash flow statement to be the most useful financial statement section in assessing an entity's liquidity. Users of financial statements were asked to put the different sections of financial statements (balance sheet, income statement, cash flow statement, and notes) in an order that reflects how useful they consider them to be in assessing an entity's liquidity. These data were then checked for errors. An error would occur, if a financial statement section would have been chosen more than once in the ranking – in other words, the financial statement section the user considers the most useful, the second most useful, the third most useful, and the least useful in assessing an entity's liquidity, had to be different sections. In 31 instances this error existed, and these rankings were deleted.

By calculating the mean usefulness of each financial statement section (1 = the most useful, 2 = the second most useful, 3 = the third most useful, and 4 = the least useful), the cash flow statement was considered the most useful financial statement section in assessing liquidity with a mean score of 1,84. The balance sheet was considered the second most useful financial statement section with a mean score of 2,00, the income statement was considered the third most useful financial statement section with a mean score of 2,40, while the notes were considered the least useful financial statement section in assessing liquidity with a mean score of 3,76.

Because it cannot be assumed that the usefulness scores for different financial statement sections are normally distributed[184] in the population, and because the variable of usefulness is ordinal rather than interval or ratio level, Kruskal-Wallis

[184] Kolmogorov-Smirnov test of normality (p<,001)

test is used to test whether the different sections of financial statements are considered equally useful[185]. The test shows that the not all the sections of financial statements are considered equally useful among users (p<,001). Because SPSS does not allow for examination of which populations differ using Kruskal-Wallis methods, ANOVA techniques are used for this purpose. Again, it is shown that the mean scores for usefulness are not the same for every section of financial statements (p<,001), and more importantly, it is shown that the cash flow statement's mean usefulness in assessing liquidity is statistically extremely significantly higher (p<,001) than that of any other financial statement section.

This analysis leads to accepting the alternate hypothesis "users of financial statements consider the cash flow statement to be the most useful financial statement section in assessing an entity's liquidity". To illustrate, table 30 displays the mean scores of the respondents as well as the 95 % confidence intervals for the mean scores of the population of private investors. It is noteworthy that the lower bound of 95 % confidence interval for population mean of cash flow statement's usefulness is higher than the higher bound of 95 % confidence interval for population mean of any other financial statement section's usefulness.

Table 30. Users' scores for financial statement sections' usefulness in assessing liquidity (scale: 1=the most useful to 4=the least useful)

	Balance sheet	Income statement	Cash flow statement	Notes
Mean score	2,00	2,40	1,84	3,76
95 % Confidence interval higher bound	1,94	2,34	1,79	3,72
95 % Confidence interval lower bound	2,06	2,45	1,90	3,79

4.4.4 Half of users want taxes allocated on the cash flow statement

H_U4: Most users reckon taxes should be allocated on the cash flow statement based on the activity, taking into consideration the principle of materiality. Users of financial statements were asked – on a 7-point Likert scale with a range of

[185] Though the requirement of independent samples may not be perfectly met: for example, the ranked usefulness of the balance sheet influences the ranked usefulness of the income statement because respondents are not allowed to rank different sections as equally useful.

"completely disagree", "somewhat disagree", "slightly disagree", "no opinion for or against", "slightly agree", "somewhat agree" and "completely agree" – whether they agreed with that they reckon tax cash flows should be allocated on the cash flow statement over the operating, investing and financing sections based on the activity causing the tax cash flows, taking into consideration the principle of materiality. By recoding the answer-choices "slightly agree", "somewhat agree" and "completely agree" as "agree", 50 %[186] of respondents reckon that taxes should be allocated based on the underlying activity – however, this proportion is not statistically significantly higher than 50 %[187], and thus, no alternate hypothesis indicating a majority of users being in favour of tax allocation can be accepted.

To illustrate, table 31 shows the proportion of respondents who reckon tax cash flows should be allocated on the cash flow statement as well as the 95 % confidence interval for the population[188] proportion[189]. It is noteworthy that the 95 % confidence interval is centred on 50 %.

Table 31. Proportion of users who reckon that taxes should be allocated on the cash flow statement over operating, investing and financing activities

	Reckon that tax cash flows should be allocated based on the activity
Sample proportion	50 %
95 % Confidence interval lower bound	47 %
95 % Confidence interval higher bound	53 %

4.4.5 Most users consider the congruence of cash flow statements and standards important and trust that audited cash flow statements are congruent with them

H_U5_a: It is important for most users that the cash flow statement has been prepared in accordance with the applicable standard (KILA 30.1.2007 or IAS 7). H_U5_b: Most users trust that the cash flow statement has been prepared in

[186] 50,2 % rounded to one decimal

[187] z = (,5021-,50)/sqrt(,5*,5/956) = 0,13 (p=,448)

[188] Lower bound = ,5021-1,96*sqrt(,5021*,4979/956); higher bound = ,5021+1,96*sqrt(,5021*,4979/956);

[189] Here the lower of $n\pi$ or $n(1 - \pi)$ is suggested to be at least 449,32 (,47*956). As the data suggest that values $n\pi$ and $n(1 - \pi)$ are both equal to or greater than 5, the Central Limit Theorem applies and the standard normal distribution can be employed to complete a confidence interval (Lind et al. 2012, 314).

accordance with the applicable standard (KILA 30.1.2007 or IAS 7) if there is no mentioning otherwise in the financial statements or in the auditor's report. H_U5$_c$: Most of those users who consider the congruence of cash flow statements and the applicable standard important trust that the cash flow statement has been prepared in accordance with the applicable standard if there is no mentioning otherwise in the financial statements or in the auditor's report.

Users of financial statements were asked – on a 7-point Likert scale with a range of "completely disagree", "somewhat disagree", "slightly disagree", "no opinion for or against", "slightly agree", "somewhat agree" and "completely agree" – whether they agreed with that it is important to them that the cash flow statement has been prepared in accordance with the applicable standard (KILA 30.1.2007 or IAS 7). By recoding the answer-choices "slightly agree", "somewhat agree" and "completely agree" as "agree", 63 % of respondents indicated that the congruence of cash flow statements with the applicable standard is important to them – this proportion is statistically significantly higher than 60 % (p=,024)[190].

Users of financial statements were also asked on the same 7-point Likert scale whether they agreed with that they trust the cash flow statement has been prepared in accordance with the applicable standard (KILA 30.1.2007 or IAS 7) if there is no mentioning otherwise in the financial statements or in the auditor's report. By recoding the answer-choices "slightly agree", "somewhat agree" and "completely agree" as "agree", 64 % of respondents indicated that they trust that audited cash flow statements have been prepared in accordance with the applicable standard – this proportion is statistically highly significantly higher than 60 % (p=,009)[191]. Furthermore, 82 % of those respondents who consider the congruence of cash flow statements and the applicable standard important indicated that they trust that audited cash flow statements have been prepared in accordance with the applicable standard if no mentioning otherwise – this proportion is statistically extremely significantly higher than 75 % (p<,001)[192].

This analysis leads to accepting the alternate hypotheses a) "it is important for more than 60 % of users of financial statements that the cash flow statement has been prepared in accordance with the applicable standard (KILA 30.1.2007 or IAS

[190] Binomial Test
[191] Binomial Test
[192] Binomial Test

7)", b) "more than 60 % of users of financial statements trust that the cash flow statement has been prepared in accordance with the applicable standard (KILA 30.1.2007 or IAS 7) if there is no mentioning otherwise in the financial statements or in the auditor's report", and c) "more than 75 % of those users of financial statements who consider the congruence of cash flow statements and the applicable standard important trust that the cash flow statement has been prepared in accordance with the applicable standard if there is no mentioning otherwise in the financial statements or in the auditor's report".

To illustrate, table 32 shows the proportions of respondents who agree with that it is important to them that the cash flow statement has been prepared in accordance with the applicable standard, and the proportions of all respondents – as well as those respondents who consider the congruence of cash flow statements and the applicable standard important – who agree with that they trust the cash flow statement has been prepared in accordance with the applicable standard if there is no mentioning otherwise in the financial statements or in the auditor's report. In addition, the 95 % confidence intervals for the population[193] proportions[194] are presented.

[193] Lower bound for considering the congruence of cash flow statements and the applicable standard important = ,6318-1,96*sqrt(,6318*,3682/956); higher bound for considering the congruence of cash flow statements and the applicable standard important = ,6318+1,96*sqrt(,6318*,3682/956); lower bound for trusting the congruence of cash flow statements and the applicable standard (all users) = ,6381-1,96*sqrt(,6381*,3619/956); higher bound for trusting the congruence of cash flow statements and the applicable standard (all users) = ,6381+1,96*sqrt(,6381*,3619/956); lower bound for trusting the congruence of cash flow statements and the applicable standard (those users considering the congruence important) = ,8195-1,96*sqrt(,8195*,1805/604); higher bound for trusting the congruence of cash flow statements and the applicable standard (those users considering the congruence important) = ,8195+1,96*sqrt(,8195*,1805/604)

[194] Here the lower of $n\pi$ or $n(1 - \pi)$ is suggested to be at least 325,04 (,34*956) for users who consider the congruence of cash flow statements and the applicable standard important, 315,48 (,33*956) for users who trust that audited cash flow statements are prepared in accordance with the applicable standard, and 90,60 (,15*604) for those users who consider the congruence of cash flow statements and standards important and who trust that audited cash flow statements are prepared in accordance with the applicable standard. As the data suggest that values $n\pi$ and $n(1 - \pi)$ are both equal to or greater than 5, the Central Limit Theorem applies and the standard normal distribution can be employed to complete a confidence intervals (Lind et al. 2012, 314).

Table 32. Proportions of users who consider the congruence of cash flow statements and the applicable standard important, and who trust that audited cash flow statements are prepared in accordance with the applicable standard

	Consider the congruence of cash flow statements and the applicable standard important
Sample proportion	63 %
95 % Confidence interval lower bound	60 %
95 % Confidence interval higher bound	66 %
	Trust that the audited cash flow statement has been prepared in accordance with the applicable standard (of all users of financial statements)
Sample proportion	64 %
95 % Confidence interval lower bound	61 %
95 % Confidence interval higher bound	67 %
	Trust that the audited cash flow statement has been prepared in accordance with the applicable standard (of those users who consider the congruence of CFS's and standarts important)
Sample proportion	82 %
95 % Confidence interval lower bound	79 %
95 % Confidence interval higher bound	85 %

It is noteworthy that the lower bounds of 95 % confidence intervals for the population proportions of users who consider the congruence important and users who believe in the congruence are higher than 60 %[195]. Furthermore, the lower bound of 95 % confidence interval for the population proportion of those users who consider the congruence important who trust that cash flow statements have been prepared in accordance with the applicable standard is higher than 75 %.

4.4.6 More than 70 % of users are aware of that a cash flow statement can be manipulated

H_U6: Most users are aware of that a cash flow statement can be manipulated by preparers, for example, the management. Users of financial statements were asked – on a 7-point Likert scale with a range of "completely disagree", "somewhat

[195] The lower bound of 95 % confidence interval for the population proportion of users who consider it important that the cash flow statement has been prepared in accordance with the applicable standard has been rounded down to 60 % from the two-decimal proportion 60,12 %.

disagree", "slightly disagree", "no opinion for or against", "slightly agree", "somewhat agree" and "completely agree" – whether they agreed with that a cash flow statement can be intentionally manipulated by preparers, for example the management. By recoding the answer-choices "slightly agree", "somewhat agree" and "completely agree" as "agree", 73 % of respondents indicated that they agree with that a cash flow statement can be manipulated by preparers. This proportion is statistically significantly higher than 70 % (p=,016)[196].

This analysis leads to accepting the alternate hypothesis "more than 70 % of users of financial statements are aware of that a cash flow statement can be manipulated by preparers, for example, the management". To illustrate, table 33 shows the proportions of respondents who agree with that a cash flow statement can be manipulated by preparers as well as the 95 % confidence interval for the population[197] proportion[198]. It is noteworthy that the lower bound of 95 % confidence interval for the population proportion of users who agree with that a cash flow statement can be manipulated by preparers is higher than 70 %[199].

Table 33. Proportion of users who agree with that a cash flow statement can be manipulated by preparers, for example, the management

	Agree with that a cash flow statement can be manipulated by the preparers
Sample proportion	73 %
95 % Confidence interval lower bound	70 %
95 % Confidence interval higher bound	76 %

4.4.7 Almost all users reckon drastic non-payment of accounts payable should be mentioned

H_U7: Most users reckon that there should be a mention in the notes or in the auditor's report if the entity has not paid its accounts payable that were due the last

[196] Binomial Test

[197] Lower bound = ,7322-1,96*sqrt(,7322*,2678/956); higher bound = ,7322+1,96*sqrt(,7322*,2678/956)

[198] Here the lower of $n\pi$ or $n(1 - \pi)$ is suggested to be at least 229,44 (,24*956). As the data suggest that values $n\pi$ and $n(1 - \pi)$ are both equal to or greater than 5, the Central Limit Theorem applies and the standard normal distribution can be employed to complete a confidence interval (Lind et al. 2012, 314).

[199] The lower bound of 95 % confidence interval for the population proportion of users who agree with that a cash flow statement can be manipulated by preparers has been rounded down to 70 % from the two-decimal proportion 70,41 %.

month of the accounting period. Users of financial statements were asked (yes or no) do they reckon there should be a mention in the notes or in the auditor's report if the entity has not paid its accounts payable that were due the last month of the accounting period. 93 % of respondents reckon that there should be a mention in the notes or in the auditor's report in such an instance. This proportion is statistically highly significantly higher than 90 % (p=,002)[200].

This analysis leads to accepting the alternate hypothesis "more than 90 % of users of financial statements reckon that there should be a mention in the notes or in the auditor's report if the entity has not paid its accounts payable that were due the last month of the accounting period". To illustrate, table 34 shows the proportion of respondents who reckon there should be a mention in this scenario as well as the 95 % confidence interval for the population[201] proportion[202]. To comply with hypotheses P3 and A4, and taking into consideration that those who reckon there should be a mention about the entity not paying its accounts payable due the last month would also likely reckon there should be a mention about the entity not paying its accounts payable due Q4, the point estimate for the population proportion of users who reckon there should be a mention about the entity not paying its accounts payable due Q4 is 96 %[203].

Table 34. Proportion of users who reckon there should be a mention in the notes or in the auditor's report about stretching out payments

	A/P due last month not paid
Sample proportion	93 %
95 % Confidence interval lower bound	91 %
95 % Confidence interval higher bound	94 %

[200] Binomial Test

[201] Lower bound = ,9268-1,96*sqrt(,9268*,0732/956); higher bound = ,9268+1,96*sqrt(,9268*,0732/956)

[202] Here the lower of nπ or n(1 – π) is suggested to be at least 57,36 (,06*956). As the data suggest that values nπ and n(1 – π) are both equal to or greater than 5, the Central Limit Theorem applies and the standard normal distribution can be employed to complete a confidence interval (Lind et al. 2012, 314).

[203] (886+36)/956; if respondents indicated they do not reckon there should be a mention about the entity not paying its accounts payable due the last month, they were asked if they – on a scale from 1 (definitely not) to 7 (definitely yes) – reckoned there should be a mention in the notes or in the auditor's report if the entity has not paid its accounts payable due Q4 of the accounting period. By recoding values 1 to 3 as "No", 4 as "No opinion for or against" and 5 to 7 as "Yes", 51 % of respondents indicated that they reckon there should be a mention in the notes or in the auditor's report if the entity has not paid its accounts payable due Q4 of the accounting period.

4.4.8 More than 85 % of users prefer the direct method for presenting operating cash flows

H_U8: Most users prefer the direct method for presenting the operating activities section of the cash flow statement. Users of financial statements were asked which method (the direct or the indirect method) of presenting the operating cash flows they preferred. 89 % of the respondents prefer the direct method – this proportion is statistically highly significantly higher than 85 % (p=,001)[204].

This analysis leads to accepting the alternate hypothesis "more than 85 % of users of financial statements prefer the direct method for presenting the operating activities section of the cash flow statement". To illustrate, table 35 shows the proportions of respondents who prefer the direct method as well as the 95 % confidence interval for the population[205] proportion[206].

Table 35. Proportion of users who prefer the direct method for presenting operating cash flows

	Prefer the direct method
Sample proportion	89 %
95 % Confidence interval lower bound	87 %
95 % Confidence interval higher bound	91 %

4.5 Empirical results summarised in two tables

Chapter 4 has presented the empirical results grouped by the actors – that is, preparers, auditors and users of financial statements – and the contents of the published cash flow statements. Chapter 2, on the other hand, provided the theoretical framework grouped by the subjects of the anticipated problem areas. The empirical results are summarised and presented grouped by both the problem area subjects (row) and the actors and the cash flow statement contents (column) in tables 36 and 37 – the former summarises the results concerning the contents of the

[204] Binomial Test

[205] Lower bound = ,8860-1,96*sqrt(,8860*,1140/956); higher bound = ,8860+1,96*sqrt(,8860*,1140/956)

[206] Here the lower of $n\pi$ or $n(1 - \pi)$ is suggested to be at least 86,04 (,09*956). As the data suggest that values $n\pi$ and $n(1 - \pi)$ are both equal to or greater than 5, the Central Limit Theorem applies and the standard normal distribution can be employed to complete a confidence interval (Lind et al. 2012, 314).

published cash flow statements and the related results about users, and the latter summarises the results regarding preparers and auditors and, again, the related results about users.

Table 36. Empirical results about cash flow statement contents and related users' views

	Cash flow statements	**Users**
Comparability issues caused by current regulation	Nearly all cash flow statements seem not to allocate taxes: more than 95 % present tax cash flows solely as operating activities (H_C1)	Half of users want taxes allocated (H_U4)
	Interest and dividends paid seem to be treated differently on nearly all cash flow statements: more than 95 % present interest paid solely as operating activities and all present dividends paid solely as financing activities (H_C2_a); interest and dividends received seem to be treated as operating activities instead of investing activities on most cash flow statements: more than 90 % present interest received and more than 55 % present dividends received solely as operating activities (H_C2_b)	
Direct vs. indirect presentation of operating cash flows	More than 85 % of cash flow statements use the indirect method (H_C3)	More than 85 % of users prefer the direct method (H_U8)

Table 37. Empirical results about preparing and auditing practices and related users' views

	Preparers	Auditors	Users	
The perceived importance / usefulness of the cash flow statement	The cash flow statement is the least important financial statement section for preparers (H_P1)	The cash flow statement is the least important financial statement section for auditors (H_A1)	More than 75 % of users use the cash flow statement mainly for predicting future cash flows or for assessing liquidity (H_U1); for users, the cash flow statement is the third most useful financial statement section in predicting future cash flows (H_U2), and the most useful in assessing liquidity (H_U3)	
Error-prone preparing practice	Majority of cash flow statements are prepared manually (H_P2)			
Adverse selection (manipulation)		Minority of auditors are aware of the possibility of manipulation (H_A2)	More than 70 % of users are aware of the possibility of manipulation (H_U6)	More than 60 % of users consider it important (H_U5a), and more than 60 % of users trust (H_U5b), that the audited cash flow statement is congruent with the applicable standard; more than 75 % of those who consider it important also believe in the congruence (H_U5c)
		Minority of auditors would require a mention if operating cash flow is boosted by the increase of current maturities of long-term debts (H_A3)		
	Fewer than 20 % of preparers would mention the entity not paying its accounts payable due the last month (H_P3); the point estimate for preparers who would mention the entity not paying its accounts payable due Q4 is 34 %	Fewer than 25 % of auditors would require mentioning the entity not paying its accounts payable due the last month (H_A4); the point estimates for KHT- and HTM-auditors who would require mentioning the entity not paying its accounts payable due Q4 are 42 % and 46 % respectively	More than 90 % of users reckon the entity not paying its accounts payable due the last month should be mentioned (H_U7); the point estimate for users who reckon the entity not paying its accounts payable due Q4 should be mentioned is 96 %	
Moral hazard (lacking the effort in preparing and auditing)		At least 75 % of auditors spend the least time with the cash flow statement during audits (H_A5)		
	Fewer than 5 % of manual preparers would present capacity acquisitions correctly under both FAS and IFRS (H_P4_a); fewer than 20 % of FAS manual preparers would present them correctly under FAS (H_P4_b); fewer than 25 % of IFRS manual preparers would present them correctly under IFRS (H_P4_c)	Fewer than 5 % of auditors know how capacity acquisitions should be presented under both FAS and IFRS (H_A6_a); fewer than 25 % of auditors know how they should be presented under FAS (H_A6_b); fewer than 5 % of auditors know how they should be presented under IFRS (H_A6_c)		
	Fewer than 30 % of FAS manual preparers would omit material non-cash transactions from FAS cash flow statements (H_P5); majority of those who indicate the omission seem to never or rarely use any essential accounting material for detecting them (H_P6)	Fewer than 50 % of KHT-auditors and fewer than 35 % of HTM-auditors would omit material non-cash transactions from FAS cash flow statements (H_A7)		

5. Discussion

There is always some uncertainty around the results of survey studies: The respondents are often forced to choose from a set of given response choices, which can reflect the researcher's preconceptions. The researcher seldom has the means to verify the individuals who actually filled out the questionnaire, or to assess their motives and the environment where the questionnaire where completed – all of which makes it difficult to assess the reliability of the empirical data. Surveys can be criticised for their conservativeness and their preference to classification methods that can be regarded as old-fashioned: every response is treated as equal in statistical analysis procedures, which can lead to survey studies being considered overly democratic. Furthermore, it is argued that survey results are most reliable in general and common topics – whereas the answers to sensitive questions or questions about attitudes are more unreliable. (Alkula et al. 1994, 120–121; Valli 2007, 106.)

In this study, the questions and statements presented on the questionnaires were formed as neutral as possible so that my preconceptions as the researcher would not influence the respondents. In order to accomplish that only those who were invited to participate in the survey could fill out the questionnaire, the chosen individuals were given personal and unique usernames and passwords that were required when logging in to the questionnaire – yet, this does not guarantee that they personally filled out the questionnaire. The suggestion that surveys are overly democratic works in favour of this study because the purpose is to collect information about the target populations – the preparers, auditors and users of financial statements – rather than any particular individuals in them. Furthermore, the topics presented in the questionnaires were not sensitive in nature, and thus, this gives no reason to suspect that the answers would be unreliable.

Regarding the motives for partaking in the survey, the respondents were offered a chance to win a gift certificate, and they were reminded a few times about the survey had they not yet filled out their questionnaire. Although these seem to be commonly used methods to increase response rates in surveys, they can raise some

concerns: what if the respondents just randomly fill out the questionnaire just for the chance to win the gift certificate, or just to stop the researcher from sending another reminder? Furthermore, there is nothing to stop the respondent from intentionally giving false answers to the questions – this risk simply has to be accepted as it is embedded in the concept of a survey. In this study, preparers spent 13 minutes, on average, on their questionnaire, while auditors and users spent on theirs, on average, 14 and 12 minutes, respectively. This suggests that the average preparer, auditor and user spent approximately 71, 51 and 52 seconds, respectively, on each question[207]. Taking into consideration that the questions did not require any typing[208], only clicking on the mouse to select from the provided answer-choices, this suggests that the average respondent did not just randomly choose their answers, but instead, spent approximately one minute to ponder each question.

Getting decent response rates was a priority in this study. This is because the characteristics of the respondents' populations are largely unknown, which prohibits analysing the nonresponse error in the sense of comparing the characteristics of respondents to the characteristics of those who did not respond. Therefore, the lottery of the gift certificate and the multiple reminders were an intentional trade-off of possibly sacrificing the reliability of some answers in pursue of higher response rates and thus obtaining more (statistically) generalizable results.

The response rates for preparers, auditors and users are 37 %, 25 % and 23 %, respectively. Although not ideal, they seem to be adequate for this study: first, they translate to responses of 840 preparers, 325 auditors and 956 users, and second, the results are based on statistical analyses, which do take into consideration the sample size. However, the statistical analyses assume random samples, which – as with all surveys unless a 100 % response rate is achieved – these are not. This follows that as the results make an inference about the population with a certain (95 % or higher) probability, they refer to a population that has characteristics similar (or different but statistically insignificant) to the sample. With the absence of a possibility of a nonresponse analysis, the responses are thoroughly analysed against the independent

[207] Treating the 4–6 questions regarding the respondents' background information as one question, preparers spent 780 seconds on the questionnaire's 11 questions, auditors spent 821 seconds on the questionnaire's 16 questions, and users spent 732 seconds on the questionnaire's 14 questions, on average.

[208] Apart from the background information questions about the respondent's age and work experience in years (and the amounts users invest yearly and the value of their current portfolio), which required the figure to be typed

variable data collected on the questionnaires, and readers are informed about how the results may change with alternate population characteristics.

The samples, from which the survey data are collected, form the general limitations of this study: First, the data are collected from preparers, auditors and users in Finland – thus the results may not apply in different countries. Second, preparers are defined as authorised accountants, and consequently, the results concerning preparers refer only to the population of authorised accountants – although there are others who prepare cash flow statements, authorised accountants can be considered to be leading experts in preparing financial statements. Third, users are defined as private investors who utilise financial statements in their economic decision-making, but not all such private investors can be reached and surveyed. Therefore, members of an investing association were selected as a sample. But because this induces coverage error, the results concerning users can only give suggestions about the target population of all private investors in Finland. Results concerning auditors are not faced with the above-mentioned limitations that concern preparers or users. This is because auditors are defined as KHT- and HTM-auditors and, with the exception of small firms, financial statements must always be audited by them (or KHT- or HTM-firms).

The empirical results are discussed one by one so that readers can review each result independently in great detail. Each discussion begins with an analysis of the result's associations with the collected independent variable data, which – with the absence of a possibility of a nonresponse analysis – will inform readers about how the result may change with alternate population characteristics. This is followed by a critical assessment of the limitations of the result – after all, the scientific method pursues the road of systematic doubt (Cohen & Nagel 1934); scientists doubt systematically everything that goes into their proof: their facts, their hypotheses, and whether those fit together as they think they do (Larrabee 1945, 317–318). Finally, a general discussion is provided, which contains, when applicable, the following aspects: 1) how the result fits in with the previous literature provided in chapter 2, 2) how the result concerning preparers, auditors or cash flow statement contents affects the quality of published cash flow statements, 3) a consideration of the combined effects on published cash flow statements of the result concerning preparers or auditors together with other results concerning preparers and auditors, 4) a consideration of the relationships between the result and the other problem areas, 5)

a consideration of the combined effects of the result concerning users together with other results concerning users (i.e. to paint a bigger picture of users' expectations), and 6) how the result concerning users is linked to the results concerning preparers, auditors and cash flow statement contents (i.e. what the results concerning preparers, auditors and cash flow statement contents mean for users).

The analyses of the results' associations with independent variable data are performed either in SPSS or manually. The analyses are identified in the footnotes along the discussion of the result: the footnote displays either the manual calculation or the name of the SPSS test – the output(s) of which can be found in the appendices. As they were in connection with the empirical results, the SPSS 19 outputs for the independent variable data analyses regarding preparing and auditing cash flow statements are provided in Appendix 4 and Appendix 5, respectively. Similarly, the SPSS 19/21 outputs for the analyses regarding using cash flow statements are provided in Appendix 6.

5.1 Preparing cash flow statements and the six hypotheses

Cash flow statement is the least important financial statement section for preparers (H_P1)

Associations with independent variable data. The perceived importance of the cash flow statement is statistically significantly (p=,042)[209] different between those who primarily prepare cash flow statements under IFRS (mean importance = 5,95) and those who primarily prepare the statement under FAS (mean importance = 5,35). Furthermore, the perceived importance is not the same among different employees/entrepreneurs (p<,001)[210]: Employees of other enterprises responded the highest mean importance (5,58), which is statistically extremely significantly higher (p<,001) than that of any of the other groups. Authorised accounting firm employees responded the second highest mean importance (4,85), followed by employees of

[209] Both Mann-Whitney U and T-Test
[210] Both Kruskal-Wallis test and ANOVA

other accounting firms (4,64), while entrepreneurs responded the lowest mean importance (4,27). The mean difference is statistically highly significant (p=,008) between authorised accounting firm employees and entrepreneurs, whereas it is not statistically significant between employees of other accounting firms and authorised accounting firms or between employees of other accounting firms and entrepreneurs.

Whether or not preparers of financial statements are involved in preparing cash flow statements has a statistically extremely significant effect (p<,001) on how important they consider them; but if they are involved, the method of preparation has no statistically significant effect[211]: Those who are not involved in preparing cash flow statements responded the lowest mean importance (4,19), which is statistically extremely significantly lower (p<,001) compared to those who are somehow involved. Those who apply manual fixes to an available printed version of the cash flow statement responded the highest mean importance (5,40), followed by those who completely manually prepare the statement (5,37) and those who are able to print a finished cash flow statement from their accounting system (5,30).

There is a statistically significant positive linear correlation between the age of the preparer of financial statements and the perceived importance of the cash flow statement, but the correlation is extremely weak[212]. No strong linear correlation can be found between the importance of the cash flow statement and the accounting experience in years or the experience in years as an authorised accountant[213]. Finally, although statistically significant associations exist between the result and the independent variable data, the cash flow statement is perceived as the least important financial statement section also within each of the before-mentioned sub-groups (grouped by employer, preparing method, or IFRS/FAS orientation).

The result "cash flow statement is the least important financial statement section for preparers" applies to a population that has characteristics similar (or different but statistically insignificant) to the sample. With the absence of a nonresponse analysis due to unknown population characteristics, the independent variable analysis above

[211] Both Kruskal-Wallis test and ANOVA

[212] Pearson 0,075 (p=,029); Spearman's rho 0,087 (p=,011)

[213] Importance of CFS and accounting experience: Pearson 0,045 (p=,190), Spearman's rho 0,074 (p=,032); importance of CFS and experience as an authorised accountant: Pearson 0,057 (p=,099), Spearman's rho 0,064 (p=,066)

suggests that, whatever their actual population characteristics[214] may be, preparers will consider the cash flow statement the least important financial statement section nonetheless.

Critical assessment. Despite the lowest scores relative to other financial statement sections, the respondents rated the importance of the cash flow statement with a mean score of 4,93 on a scale from 1 (not at all important) to 7 (extremely important), which suggests that they do consider the cash flow statement moderately important. Noteworthy is that the scale used to measure the importance is a 7-point Osgood scale, which allows for rating different financial statement sections equally important. Therefore, the data do suggest that the cash flow statement is perceived to be the least important financial statement section among preparers.

In addition, the previously discussed limitations originating from the methods and data apply: Although preventive measures were taken and nothing suggests otherwise, due to the survey method, it is not absolutely certain that only the selected individuals themselves filled out the questionnaires or that they responded truthfully, with proper consideration, to the questions. Despite the sample not being a random sample and the response rate not being ideal, the data, together with the statistical methods used, seem sufficient for the result, which refers to authorised accountants in Finland (per mid-2011).

General discussion. The cash flow statement is found to be the least important financial statement section for preparers. This is in line with the prior results of Lee (1981c) where professionally qualified accountants were on the fence about whether the cash flow statement should be included in the set of financial statements – a possible reason being the cash flow statement receiving little attention in accounting education (O'Bryan et al. 2000; Wouters 2008; Kieso et al. 2012; Wahlen et al. 2013; Canace & Wilkerson 2014); thus not in line with the findings of Jones et al. (1995) where preparers in Australia consider the operating cash flow to be a better measure of a company's economic condition and future prospects than the income statement's operating profit, and Price (2013) who notes that Amazon.com moved the cash flow statement to the first position in their financial statements in 2003 to highlight their financial focus.

[214] I.e. the distributions of the independent variables investigated

The result of preparers perceiving the cash flow statement as the least important financial statement section matters, because it may be so that they devote the most attention to those sections of financial statements they consider the most important, and vice versa, the least attention to those sections they consider the least important. After all, people act on their perceptions (Nazari et al. 2006, 429). Therefore, rather than having a direct effect on published cash flow statements or a meaning for users, this study sees preparers' perceiving the cash flow statement as the least important financial statement section as a possible reason for some of the discovered problem areas. Specifically, it is a possible reason for 1) moral hazard among preparers, and 2) error-prone preparing practice as companies appear to have only felt the need to invest in accounting systems that can automatically produce balance sheets and income statements.

Majority of cash flow statements are prepared completely manually (H_P2)

Associations with independent variable data. A statistically significant (p=,036)[215] difference in preparing habits exists between clients of those who work in Big Four audit firms and clients of those who work in other enterprises: clients of Big Four audit firms tend to prepare the cash flow statement completely manually more frequently than expected. No statistically significant difference in preparing habits can be found between clients of KHT- and HTM-auditors[216].

Similarly, there is a statistically extremely significant (p<,001)[217] relationship between the typical preparation method and the employer (or entrepreneur status) of the preparer: employees of authorised accounting firms tend to prepare the cash flow statement completely manually less frequently than expected, while employees of other accounting firms or other enterprises, as well as entrepreneurs, tend to prepare it completely manually more frequently than expected. No statistically significant difference in the preparing habits can be found between those who primarily prepare cash flow statements under IFRS and those who primarily prepare them under FAS[218]. Nor can statistically significant associations be found between

[215] Chi-Square Test
[216] Chi-Square Test
[217] Chi-Square Test
[218] Chi-Square Test

the typical preparation method and whether the preparer is younger or older than 40, has more or less than 10 years of accounting experience, or has more or less than 5 years of experience as an authorised accountant[219].

The independent analysis above suggests that the higher the proportion of other than authorised accounting firm employees in the population is, the higher the proportion of preparers who completely manually prepare cash flow statements is. Furthermore, it suggests that the higher the proportion of cash flow statements audited by Big Four audit firms in the population is, the higher the proportion of completely manually prepared cash flow statements is.

Critical assessment. Although preparers' responses are used to make an inference about the population of "cash flow statements prepared by authorised accountants in Finland", the sample proportion actually refers to a proportion of authorised accountants who prepare cash flow statements and who typically prepare them completely manually – rather than to a proportion of cash flow statements prepared by authorised accountants that are constructed completely manually. This is because the number of cash flow statements the respondent prepares yearly is unknown, and therefore it is not possible to weigh the responses. Similarly, although auditors' responses are used to make an inference about the population of "all cash flow statements in Finland", as it is not known how many clients they have, which makes it impossible to weigh the responses, the sample proportion actually refers to a proportion of auditors whose clients typically prepare their cash flow statements completely manually – rather than to a proportion of all cash flow statements that are constructed completely manually. Furthermore, it is not known whether the clients of the responding auditors are a fair representation of all cash-flow-statement-producing entities. Finally, the responses reflect the way cash flow statements are prepared typically, and thus not necessarily solely. Therefore, these results can only give indications of the actual proportion of completely manually prepared cash flow statements among all cash flow statements.

In addition, the previously discussed limitations originating from the methods and data apply: Although preventive measures were taken and nothing suggests otherwise, due to the survey method, it is not absolutely certain that only the selected individuals themselves filled out the questionnaires or that they responded

[219] Chi-Square Test

truthfully, with proper consideration, to the questions. Despite the sample not being a random sample and the response rate not being ideal, the data, together with the statistical methods used, seem sufficient for the result.

General discussion. The preparation of cash flow statements does seem to be a specialty skill amongst accountants, and thus, many accountants may not be familiar with preparing them. 38 % of the accountants who responded to the questionnaire indicated that they do not prepare cash flow statements. In the population of preparers of financial statements this percentage may be considerably higher: the respondents in this study are KLT-accountants who represent only a little over 20 % of the work force in accounting firms (Taloushallintoliitto 2009c–), and who can also be considered to be the leading experts in preparing financial statements in Finland as they are the sole authorised accountant group. In addition, the 38 % represent the responses of a group that took the time to partake in a survey that was specifically targeted for preparers of cash flow statements – not financial statements in general. In fact, many KLT-accountants responded to the survey invitation via e-mail saying that they will not take part in this study because they do not prepare, or never have prepared, cash flow statements.

The results do suggest that the proportion of cash flow statements that are prepared completely manually – for example, in Microsoft Excel using the balance sheet, the income statement and other book-keeping material – is a majority. This is consistent with the prior findings of Rosen (2007) and Arola (2011a). The result is important, because it shows that the typical preparing process of the cash flow statement is significantly more error-prone than that of the balance sheet and the income statement, not least because the cash flow statement receives only little attention in accounting education (O'Bryan et al. 2000; Wouters 2008; Kieso et al. 2012; Wahlen et al. 2013; Canace & Wilkerson 2014); a finished cash flow statement could be printed out straight from the accounting system in less than 10 per cent of the respondents' cases.

This error-prone preparing practice jeopardises the qualitative characteristics reliability (faithful representation) and comparability: Reliability (faithful representation) is jeopardised because the manual back-and-forth preparation method may induce errors on the cash flow statement. Comparability is jeopardised because the errors induced will likely vary on different cash flow statements.

Minority of preparers would mention drastic non-payment of accounts payable (H_P3)

Associations with independent variable data. There is a statistically highly significant (p=,001)[220] relationship regarding the last month's accounts payable, and a statistically extremely significant (p<,001)[221] relationship regarding the Q4's accounts payable, between the willingness to disclose information about not paying them and the employer or entrepreneur status of the preparer: Most noticeably, employees of authorised accounting firms tend to be less willing than expected to disclose such information, while employees of other enterprises tend to be more willing than expected to provide this information. Employees of other accounting firms tend to be slightly less willing than expected to disclose such information, while entrepreneurs tend to be slightly more willing than expected to disclose information about last month's accounts payable but slightly less willing than expected to disclose information about Q4's accounts payable.

Whether or not preparers of financial statements are involved in preparing cash flow statements has a statistically significant effect (p=,020)[222] on their willingness to disclose information about last month's accounts payable and a statistically highly significant effect (p=,002)[223] on their willingness to disclose information about Q4's accounts payable: those who are involved in preparing cash flow statements tend to be more willing than expected to disclose information about stretching out payments. Furthermore, a statistically highly significant (p=,006)[224] relationship exists regarding the willingness to disclose information about not paying Q4's accounts payable between those who primarily prepare cash flow statements under IFRS and those who primarily prepare the statement under FAS: IFRS preparers tend to be more willing than expected to provide such information. No statistically significant relationship can be found between the willingness to disclose information about not paying the last month's accounts payable and preparers' IFRS/FAS-orientation[225].

[220] Chi-Square Test
[221] Chi-Square Test
[222] Chi-Square Test
[223] Chi-Square Test
[224] Chi-Square Test
[225] Chi-Square Test

Finally, no statistically significant association can be found between the willingness to disclose information about not paying last month's or Q4's accounts payable and whether the preparer is younger or older than 40[226]. Nor can statistically significant associations be found between the willingness to disclose such information and whether the preparer has more or less than 10 years of accounting experience or more or less than 5 years of experience as an authorised accountant[227].

The result "minority of preparers would mention drastic non-payment of accounts payable" applies to a population that has characteristics similar (or different but statistically insignificant) to the sample. With the absence of a nonresponse analysis due to unknown population characteristics, the independent variable analysis above suggests that the higher the proportion of accounting firm employees, FAS preparers or non-preparers of cash flow statements in the population is, the lower the proportion of preparers who would mention drastic non-payments of accounts payable is.

Critical assessment. Hypothesis P3 deals with the willingness of preparers of financial statements to disclose information in the notes about the entity boosting its operating cash flows by stretching out accounts payable drastically over their due dates. The word "drastically" is measured in two ways: first, it is assumed that not paying any accounts payable due the last month of an accounting period qualifies as drastic; second, it is assumed that not paying any accounts payable due Q4 qualifies as drastic. Because it seems likely that those who would disclose information about not paying accounts payable due the last month would also disclose information about not paying accounts payable due Q4, the question about Q4's accounts payable was presented to only those who indicated they would not disclose information about the non-payment of accounts payable due the last month.

The question about disclosing information about the entity not paying any accounts payable due Q4 was measured with a 7-point Osgood scale from 1 (definitely not) to 7 (definitely yes), and, for analysing purposes, the responses were recoded as "No" (responses 1 to 3), "No opinion for or against" (response 4) and "Yes" (responses 5 to 7). The Osgood scale can be understood as an ordinal level of measurement. The ordinal level of measurement enables the data to be ranked or ordered, but the magnitude of differences between the values is not distinguishable

[226] Chi-Square Test
[227] Chi-Square Test

(Lind et al. 2012, 11). Apart from the given "1=definitely not" and "7=definitely yes", it is not certain that, in the mind of a respondent, the values 2 and 3 indicate "No", the value 4 indicates "No opinion for or against", and the values 5 and 6 indicate "Yes". Therefore, a possibility of a measurement error exists regarding this question.

Furthermore, instead of the binomial test outcome regarding Q4's accounts payable, a point estimate is used in table 37 in chapter 4.5 mainly for the sake of simplicity and understandability of the result. It is simpler to use the point estimate because the populations are not the same in the analyses regarding last month's and Q4's accounts payable: for the binomial test regarding last month's accounts payable, the population is preparers of financial statements, whereas for the binomial test regarding Q4's accounts payable, the population is those preparers of financial statements who would not disclose information about the unpaid last month's accounts payable. Therefore, instead of reporting "fewer than 30 % of those preparers who would not mention the entity not paying its accounts payable due the last month would mention the entity not paying its accounts payable due Q4", it seems simpler and more understandable to report "the point estimate for preparers who would mention the entity not paying its accounts payable due Q4 is 34 %".

Noteworthy is that the use of a population estimate and the possibility of a measurement error apply only to the question about Q4's accounts payable – not to the question about whether or not the respondent would disclose information if the entity did not pay any of its accounts payable due the last month of the accounting period, which was a "yes or no" question. Both are, however, affected by the previously discussed limitations originating from the methods and data: Although preventive measures were taken and nothing suggests otherwise, due to the survey method, it is not absolutely certain that only the selected individuals themselves filled out the questionnaires or that they responded truthfully, with proper consideration, to the questions. Despite the sample not being a random sample and the response rate not being ideal, the data, together with the statistical methods used, seem sufficient for the result, which refers to authorised accountants in Finland (per mid-2011).

To summarise, the result about last month's account payable is on a par reliable with most results in this study, whereas the result about Q4's accounts payable is faced with additional uncertainty. To account for this, they are phrased as follows:

fewer than 20 % of preparers would mention the entity not paying its accounts payable due the last month, and the point estimate for preparers who would mention the entity not paying its accounts payable due Q4 is 34 %. This warrants the conclusion that is it not likely that preparers would mention drastic non-payment of accounts payable – especially, when "drastic" refers to not paying any accounts payable due the last month of the accounting period, but also when the entity has not paid any of its accounts payable due the last three months of the accounting period.

Finally, it must be emphasised that the results refer to authorised accountants; and they are unlikely the ones making the decisions about whether or not to stretch accounts payable payments. More likely the decision is made 1) deliberately by the management to manipulate the figures, or 2) out of necessity, that is, due to running out of cash. The results thus show, once the payments of accounts payable have been suspended for a) one month, or b) three months, the suggested percentages of authorised accountants who would mention it in the financial statements.

General discussion. The results suggest that only a minority of preparers would provide any information in the notes about the entity boosting the reported operating cash flows by drastically stretching out its accounts payable over their due dates. The results are consistent with that preparers are finding the construction of the cash flow statement challenging (Ivancevich et al. 2012) as well as the accounting education giving the statement only little attention (O'Bryan et al. 2000; Wouters 2008; Kieso et al. 2012; Wahlen et al. 2013; Canace & Wilkerson 2014). The boosting of operating cash flows has been documented in prior research by this method (Hendriksen 1970; Heath 1978a; Nurnberg 2006; Siegel 2006; Lee 2012) and other not specifically prohibited methods (Maremont 2002b; Broome 2004).

Although it is not specifically prohibited under FAS or IFRS, the entity not paying any of its accounts payable due the last month of the accounting period – or at least due Q4 – and thus boosting the reported operating cash flow may easily constitute as such information that is required by Accounting Act 3:2.1 and IAS 1 paragraph 112 to be provided in the notes. Together with the results presented in chapter 4.2.4 that only a minority of auditors would require this disclosure, this allows for an aspect of adverse selection to manifest in majority of financial statements: if the reported cash flow figures are manipulated by drastically stretching out accounts payable over their due dates, this is likely not disclosed in the financial statements or in the auditor's report.

Furthermore, not disclosing this manipulation reduces the qualitative characteristics reliability (faithful representation) and comparability: Reliability (faithful representation) is reduced because the reported operating cash flow no longer represent what the users are entitled to expect it to represent if not stated otherwise – that is, the operating cash flows at level of the entity's actual performance. Comparability would be reduced because not all entities would stretch their payments in the same manner.

Small minority of manual preparers would present cash payments relating to capacity acquisitions correctly (H_P4_a, H_P4_b & H_P4_c)

Associations with independent variable data. Regarding capacity acquisition payments, no statistically significant relationship can be found between the employer or entrepreneur status of 1) manual preparers and whether or not they would present them correctly in accordance with both KILA 30.1.2007 and IAS 7, 2) FAS manual preparers and whether or not they would present them correctly in accordance with KILA 30.1.2007, or 3) IFRS manual preparers and whether or not they would present them correctly in accordance with IAS 7[228]. Furthermore, no statistically significant associations can be found between whether or not manual preparers would present them correctly in accordance with both KILA 30.1.2007 and IAS 7 and whether they are younger or older than 40, have more or less than 10 years of accounting experience, or have more or less than 5 years of experience as an authorised accountant [229].

Finally, no statistically significant associations can be found between whether or not FAS manual preparers would present capacity acquisition payments correctly in accordance with KILA 30.1.2007 and whether they are younger or older than 40 or have more or less than 10 years of accounting experience[230]. However, a statistically significant (p=,021)[231] association exists regarding the experience as an authorised accountant that seems counterintuitive: those FAS manual preparers who have 5 or

[228] Chi-Square Test
[229] Chi-Square Test. Although the Chi-Square Test suggests a p-value of ,037 regarding the accounting experience in years, the test is not valid because more than 20 % of cells have expected count less than 5.
[230] Chi-Square Test
[231] Chi-Square Test

more years of experience as an authorised accountant tend to present them correctly in accordance with KILA 30.1.2007 less often than expected.[232]

The result "small minority of manual preparers would present cash payments relating to capacity acquisitions correctly" applies to a population that has characteristics similar (or different but statistically insignificant) to the sample. With the absence of a nonresponse analysis due to unknown population characteristics, the independent variable analysis above suggests that the higher the proportion of experienced[233] authorised accountants in the population is, the lower the proportion of FAS manual preparers who would present capacity acquisition payments correctly in accordance with KILA 30.1.2007 is.

Critical assessment. Even though some of the rules for preparation make it less useful than it could be (Nurnberg 1993; Weiss & Yang 2007), the cash flow statement should be prepared in accordance with the regulation applied to that set of financial statements. If an entity is preparing financial statements under FAS, cash flow statements should be prepared in accordance with KILA 30.1.2007, which is argued to be an application of the good accounting practice required by Accounting Act 1:3. If an entity is preparing financial statements under IFRS, cash flow statements must be prepared in accordance with IAS 7. Naturally, those who prepare cash flow statements under FAS do not need to know the regulation of IFRS – and vice versa, those who prepare cash flow statements under IFRS do not need to know the regulation of FAS. Furthermore, if the accounting system is capable of producing finished cash flow statements, the preparer does not necessarily need to know the regulation. On the other hand, FAS manual preparers must know FAS rules and IFRS manual preparers must know IFRS rules in order to produce cash flow statements that are congruent with the applicable regulation.

Consequently, three different hypotheses are tested with the following results: 1) the proportion of manual preparers who would present cash payments relating to capacity acquisitions correctly in accordance with both KILA 30.1.2007 and IAS 7 is found to be lower than 5 %, 2) the proportion of FAS manual preparers who would present cash payments relating to capacity acquisitions correctly in accordance with KILA 30.1.2007 is found to be lower than 20 %, and 3) the

[232] No such analyses of age, accounting experience and experience as an authorised accountant could be conducted regarding IFRS manual preparers due to low n.

[233] I.e. those who have at least 5 years of experience as an authorised accountant

proportion of IFRS manual preparers who would present cash payments relating to capacity acquisitions correctly in accordance with IAS 7 is found to be lower than 25 %. The corresponding sample proportions are 3 %, 15 % and 5 %, respectively.

The reason why the proportion of IFRS manual preparers who would present cash payments relating to capacity acquisitions correctly in accordance with IAS 7 can statistically significantly be accepted to be lower than 25 % (and not smaller) – while the sample proportion is 5 % – is that there were only 21 respondents who manually prepare cash flow statements primarily under IFRS. Therefore, additional uncertainty exists regarding this result. The other two results are based on responses from 475 manual preparers and 454 FAS manual preparers, respectively, which seem sufficient.

It is noteworthy that the sample proportions show the percentages of respondents who mastered the regulation at the time of the survey. It is possible that, for example, they prepare cash flow statements so irregularly that they do not memorise all the rules but refer to the regulation when actually constructing the statement. The 71 seconds the avegare respondent spent, on avegare, pondering each question does allow for some additional studying of the regulation, although some may have responded solely based on their current knowledge. Although most entities likely have capacity acquisition payments during accounting periods, they may only have them of specific types. Consequently, although the respondents probably have dealt with them before, it is possible that they have had to be familiar with only some, but not all, types of capacity acquisition payments.

In addition, the other previously discussed limitations originating from the methods and data apply: Although preventive measures were taken and nothing suggests otherwise, due to the survey method, it is not absolutely certain that only the selected individuals themselves filled out the questionnaires or that they responded truthfully to the questions. Despite the sample not being a random sample and the response rate not being ideal, the data, together with the statistical methods used, seem sufficient for the results[234], which refer to authorised accountants in Finland (per mid-2011) who manually prepare cash flow statements.

To summarise, the results suggest the proportions of preparers who would present all three types of capacity acquisition payments (a one-time payment, an

[234] With the exception of the result concerning IFRS manual preparers, which is faced with additional uncertainty due to low n

instalment payment, and a lease payment[235]) correctly in any of the three scenarios (FAS manual preparers under FAS, IFRS manual preparers under IFRS, and all manual preparers under both FAS and IFRS) at the time of the survey. Although these are very low, the proportion of preparers who would present capacity acquisition payments correctly on any given cash flow statement may be higher if the entity has only some types of capacity acquisition payments, or if some of the respondents would refer to the regulation when actually preparing a cash flow statement, but did not do so when filling out the questionnaire.

General discussion. The results suggest that only a small minority of manual preparers of cash flow statements would present cash payments relating to capacity acquisitions correctly. This is consistent with Mechelli (2009) who reports that cash flow statements in Italy do not often conform to the regulation of IAS 7, and Ivancevich et al. (2012) who note that many preparers are finding the construction of cash flow statements challenging – a contributing factor being that the cash flow statement receives only little attention in accounting education (O'Bryan et al. 2000; Wouters 2008; Kieso et al. 2012; Wahlen et al. 2013; Canace & Wilkerson 2014). Overall, the mere presence of the same regulation does not guarantee harmonisation of financial statements or consensus among preparers (Walton 1992; Joos & Lang 1994; Rahman et al. 2002; Mechelli 2009).

Together with the results presented in chapter 4.2.6 that only a small minority of auditors know how such cash payments should be presented, this allows for an aspect of moral hazard to manifest in majority of financial statements: preparers lack in effort to present capacity acquisition payments correctly on the cash flow statement and the monitoring system fails – that is, auditors do not recognise the errors in the cash flow statement relating to capacity acquisition payments. It is acknowledged that capacity acquisitions are typically substantial in value, and consequently, their misrepresentation may materially distort the cash flow statement.

Not presenting capacity acquisition cash flows in accordance with the applicable standard also reduces the qualitative characteristics reliability (faithful representation) and comparability: Reliability (faithful representation) is reduced because this aspect of the cash flow statement no longer faithfully represent what it

[235] Lease payments are further divided into operating and financing leases under IFRS.

purports to represent – that is, the capacity acquisition payments in accordance with the applicable standard. Comparability is reduced because the classification errors will likely vary on different cash flow statements.

Fewer than 30 % of FAS manual preparers would omit material non-cash transactions from cash flow statements under FAS (H_P5)

Associations with independent variable data. No statistically significant relationship can be found between the employer or entrepreneur status of FAS manual preparers and whether or not they would omit material non-cash transactions from the FAS cash flow statement[236]. Nor can statistically significant associations be found between whether or not they would omit them and whether they are younger or older than 40 or have more or less than 10 years of accounting experience[237]. However, there is a statistically significant (p=,037)[238] association regarding the experience as an authorised accountant that seems counterintuitive: those FAS manual preparers who have 5 or more years of experience as an authorised accountant tend to omit material non-cash transactions from the FAS cash flow statement less often than expected.

The result "fewer than 30 % of FAS manual preparers would omit material non-cash transactions from cash flow statements under FAS" applies to a population that has characteristics similar (or different but statistically insignificant) to the sample. With the absence of a nonresponse analysis due to unknown population characteristics, the independent variable analysis above suggests that the higher the proportion of experienced[239] authorised accountants in the population is, the lower the proportion of FAS manual preparers who would omit material non-cash transactions from the FAS cash flow statements is.

Critical assessment. Although the guidance regarding the handling of non-cash transactions in cash flow statements is not entirely unambiguous under FAS, the non-cash transactions that are considered material should nonetheless be omitted from the statement according to KILA 30.1.2007 section 1.3. Undoubtedly the non-

[236] Chi-Square Test
[237] Chi-Square Test
[238] Chi-Square Test
[239] I.e. those who have at least 5 years of experience as an authorised accountant

cash transactions presented on the questionnaire can be considered material because they are the sole transactions the company has in the accounting period.

The question presented to respondents offered two answer choices: 1) the cash flow statement should be blank, and 2) the cash flow statement should present a negative operating cash flow, and a positive financing cash flow for the amount of 12000€. The first answer choice might have been better phrased "the net cash flows for each activity should be zero" instead of using the term "blank". This is because when using the indirect method, the operating activities section would show an operating profit of negative 12000€ and an adjustment to the profit of positive 12000€ – resulting in zero net cash flow. The other sections would be completely blank, as would be the entire direct method cash flow statement. This is not expected to have affected the results, however, because 1) the second answer choice should clarify the intention of the first answer choice, and 2) as the respondents were able to comment the questions, only one respondent (0,2 %[240]) expressed a possible confusion by commenting: "it is visible in the indirect method cash flow statement".

In addition, the previously discussed limitations originating from the methods and data apply: Although preventive measures were taken and nothing suggests otherwise, due to the survey method, it is not absolutely certain that only the selected individuals themselves filled out the questionnaires or that they responded truthfully, with proper consideration, to the questions. Despite the sample not being a random sample and the response rate not being ideal, the data, together with the statistical methods used, seem sufficient for the result, which refers to authorised accountants in Finland (per mid-2011) who manually prepare cash flow statements and primarily prepare them under FAS.

General discussion. The proportion of FAS manual preparers who indicate they would omit material non-cash transactions from the cash flow statement under FAS is found to be lower than 30 %. Thus, for more than 70 % of FAS manual preparers, producing a cash flow statement may simply be an exercise of re-organizing the balance sheet and the income statement, with no intention to honour the quintessential of purpose of the cash flow statement: to present only the actual cash flows of an entity. This is consistent with Mechelli (2009) who reports that cash

[240] 1/454

flow statements in Italy do not often conform to the regulation of IAS 7, and Ivancevich et al. (2012) who note that preparers are finding the construction of cash flow statements challenging – a contributing factor being that the cash flow statement receives only little attention in accounting education (O'Bryan et al. 2000; Wouters 2008; Kieso et al. 2012; Wahlen et al. 2013; Canace & Wilkerson 2014). Overall, the mere presence of the same regulation does not guarantee harmonisation of financial statements or consensus among preparers (Walton 1992; Joos & Lang 1994; Rahman et al. 2002; Mechelli 2009).

Together with the results presented in chapter 4.2.7 that only a minority of auditors would omit material non-cash transactions from FAS cash flow statements, this allows for an aspect of moral hazard to manifest in majority of financial statements: preparers lack in effort to produce the cash flow statement correctly and the monitoring system fails – that is, auditors do not require that material non-cash transactions be omitted from the statement. On the other hand, if the material non-cash transactions are intentionally presented on the cash flow statement, it rather relates to adverse selection on preparers' behalf.

Not omitting material non-cash transactions from the cash flow statement reduces the qualitative characteristics reliability (faithful representation) and comparability: Reliability (faithful representation) is reduced because, as the phenomenon the cash flow statement purports to represent is the realised cash flows of an entity, not omitting material non-cash transactions from the statement clearly results in not faithfully representing the actual, realised cash flows. Comparability is reduced because, as non-cash transactions are not omitted from some statements, but are omitted to some extent from others, the different cash flow statements are not comparable with each other.

Majority of those preparers who would omit non-cash transactions from the cash flow statement seem to never or rarely use any essential accounting material (H_P6)

Associations with independent variable data. No statistically significant relationship can be found between the employer or entrepreneur status of FAS manual preparers who indicate omitting non-cash transactions from the cash flow statement and whether or not they never or rarely use the journal, other vouchers, bank statements,

A/P reports, A/R reports or the director's report when preparing cash flow statements[241]. Similarly, no statistically significant relationships can be found between whether or not they never or rarely use the journal, other vouchers, bank statements, A/P reports, A/R reports or the director's report when preparing cash flow statements and whether they are younger or older than 40 or have more or less than 10 years of accounting experience[242].

There is no statistically significant relationship between whether or not they have more or less than 5 years of experience as an authorised accountant and whether or not they never or rarely use the bank statements, A/P reports, A/R reports or the director's report when preparing cash flow statements[243] – however, such statistically extremely significant (p<,001)[244] and statistically significant (p<,016)[245] relationships exist regarding the journal and other vouchers, respectively: FAS manual preparers who indicate omitting non-cash transactions from the cash flow statement that have 5 or more years of experience as an authorised accountant tend to use the journal and other vouchers less often than expected.

The result "majority of those preparers who would omit non-cash transactions from the cash flow statement seem to never or rarely use any essential accounting material" applies to a population that has characteristics similar (or different but statistically insignificant) to the sample. With the absence of a nonresponse analysis due to unknown population characteristics, the independent variable analysis above suggests that the higher the proportion of experienced[246] authorised accountants in the population is, the higher the proportion of FAS manual preparers who indicate the omission but never or rarely seem to use the journal or other vouchers is.

Critical assessment. Hypothesis P6 deals with whether or not those FAS manual preparers who indicated in connection with hypothesis P5 that they would omit material non-cash transactions from the cash flow statement, actually use any of the accounting material that would inform them about the non-cash transactions that occurred during the accounting period. More than 90 % of respondents indicated

[241] Chi-Square Test

[242] Chi-Square Test. Although the Chi-Square Test suggests a p-value of ,037 regarding the accounting experience in years and journal usage, the test is not valid because more than 20 % of cells have expected count less than 5.

[243] Chi-Square Test

[244] Chi-Square Test

[245] Chi-Square Test

[246] I.e. those who have at least 5 years of experience as an authorised accountant

they often or always use the balance sheet and the income statement – however, these financial statement sections will not provide any information about non-cash transactions. A somewhat grey area may be the notes and the balance sheet specifications, which majority of respondents indicated they often or always use: Accounting Act or Accounting Ordinance do not specifically require mentioning non-cash transactions in the notes or in the balance sheet specifications; however, mentioning is possible in the notes, for example, based on the stipulation of Accounting Act 3:2.1 that requires necessary additional information for achieving a true and fair view to be provided in the notes. Though based on my accounting work experience, this seems unlikely; similarly unlikely seems that information about non-cash transactions would be presented in the balance sheet specifications, which typically seem to only specify the items in each account without providing any information about, for example, how the items were funded. Majority of respondents also indicated they often or always use the ledger. Although the information of the journal is available in the ledger, the information is widely dispersed and not easily attainable: for example, if preparers would like to know how a particular transaction was entered in the accounting records, they would have to look through the entire ledger and gather all the information that is related to a particular journal entry or voucher number.

On the other hand, the journal provides information about which accounts were involved in any particular transaction – more specifically, it enables preparers to see whether or not a cash account was used in a particular transaction. Similarly, the actual voucher can give information about the financing and other details of the transaction as well as illustrate the used journalizing. In addition, from A/P reports preparers may, for example, find, which PPE purchases have not yet been paid, from A/R reports preparers may, for example, find, which receivables have been settled against other accounts than cash accounts, and the director's report may give insight into, for example, how much of a subsidiary acquisition price was paid in cash. Finally, bank statements, naturally, provide information about the entity's cash flows. These accounting materials, however, the results suggest, those FAS manual preparers who indicate they would omit non-cash transactions from the cash flow statement, seem to never or rarely use.

The question about which material preparers use when constructing a cash flow statement was measured with a 7-point Osgood scale from 1 (never) to 7 (always),

and, for analysing purposes, the responses were recoded as “Never or rarely” (responses 1 to 3), “Sometimes” (response 4) and “Often or always” (responses 5 to 7). The Osgood scale can be understood as an ordinal level of measurement. The ordinal level of measurement enables the data to be ranked or ordered, but the magnitude of differences between the values is not distinguishable (Lind et al. 2012, 11). Apart from the given “1=never” and “7=always”, it is not certain that, in the mind of a respondent, the values 2 and 3 indicate “Rarely”, the value 4 indicates “Sometimes”, and the values 5 and 6 indicate “Often”. Therefore, a possibility of a measurement error exists regarding this question.

In addition, the previously discussed limitations originating from the methods and data apply: Although preventive measures were taken and nothing suggests otherwise, due to the survey method, it is not absolutely certain that only the selected individuals themselves filled out the questionnaires or that they responded truthfully, with proper consideration, to the questions. Despite the sample not being a random sample and the response rate not being ideal, the data, together with the statistical methods used, seem sufficient for the results, which refer to authorised accountants in Finland (per mid-2011) who manually prepare cash flow statements, and who primarily prepare them under FAS, and who say they would omit material non-cash transactions from the FAS cash flow statement.

To conclude, these results are faced with additional uncertainty. To account for this, they are phrased in the following way: majority of those FAS manual preparers who indicate they would omit material non-cash transactions from the cash flow statement seem to never or rarely use any accounting material essential for detecting the non-cash transactions.

General discussion. The result is consistent with Mechelli (2009) who reports that cash flow statements in Italy do not often conform to the regulation of IAS 7, and Ivancevich et al. (2012) who note that preparers are finding the construction of cash flow statements challenging, possibly due to the cash flow statement receiving only little attention in accounting education (O’Bryan et al. 2000; Wouters 2008; Kieso et al. 2012; Wahlen et al. 2013; Canace & Wilkerson 2014). Overall, the mere presence of the same regulation does not guarantee harmonisation of financial statements or consensus among preparers (Walton 1992; Joos & Lang 1994; Rahman et al. 2002; Mechelli 2009).

By combining the results presented in chapters 4.1.5, 4.1.6 and 4.2.7, not only is the proportion of FAS manual preparers who say they would omit material non-cash transactions from the cash flow statement lower than 30 %, but in addition, majority of them seem to never or rarely use any of the essential material that would provide them with information about the non-cash transactions; furthermore, only a minority of auditors indicate they would omit material non-cash transactions from FAS cash flow statements. Taking also into consideration the results presented in chapter 4.1.2 that suggest that a majority of cash flow statements are prepared either completely manually or by manually modifying a version from the accounting system, it seems likely that majority of cash flow statements reported in the set of financial statements are not cleared from the effects of material non-cash transactions[247].

5.2 Auditing cash flow statements and the seven hypotheses

An overall limitation. A limitation regarding the results concerning auditors is that it is not certain whether the auditors who responded to the survey actually audit cash flow statements in their work. For example, if an auditor works as a part of an audit team that has specific responsibilities for each team member, it may be so that an auditor is not involved in auditing cash flow statements and thus would not need to be familiar with the regulation of IAS 7 or KILA 30.1.2007. Because it is not known how many, if any, cash flow statements a respondent audits yearly, it is not possible to make an inference about what percentage of published cash flow statement are affected by the discovered problem areas regarding auditors. Nonetheless, the results do refer to the whole population of authorised auditors in Finland and therefore, at the very least, the auditing of cash flow statements is found to be a specialty skill among auditors; that is, the regulation concerning the cash flow statement is found to be mastered by a small percentage of authorised auditors.

[247] Although it is unknown what proportion of entities publishing cash flow statements actually have material non-cash transactions in any given accounting period.

Cash flow statement is the least important financial statement section for auditors (H_A1)

Associations with independent variable data. The perceived importance of the cash flow statement is statistically highly significantly[248] different between KHT-auditors (mean importance = 5,71) and HTM-auditors (mean importance 5,31). Similarly, the perceived importance is statistically highly significantly (p=,001)[249] different between those who work in Big Four audit firms (mean importance = 5,87) and those who work in other enterprises (mean importance = 5,34).

There is no statistically significant linear correlation between the age of the auditor and the perceived importance of the cash flow statement[250]. Furthermore, no statistically significant linear correlation can be found between the importance and the auditing experience in years or the experience in years as an authorised auditor[251]. Finally, although statistically significant associations exist between the result and the independent variable data, the cash flow statement is perceived as the least important financial statement section within each of the before-mentioned sub-groups (grouped by KHT/HTM-status or employer) as well as amongst all respondents.

The result "cash flow statement is the least important financial statement section for auditors" applies to a population that has characteristics similar (or different but statistically insignificant) to the sample. With the absence of a nonresponse analysis due to unknown population characteristics, the independent variable analysis above suggests that, whatever their actual population characteristics[252] may be, auditors will consider the cash flow statement the least important financial statement section nonetheless.

Critical assessment. Despite the lowest scores relative to other financial statement sections, the respondents rated the importance of the cash flow statement with mean scores of 5,71 (KHT-auditors) and 5,31 (HTM- auditors) on a scale from 1 (not at all important) to 7 (extremely important), which suggests that they do consider the cash flow statement moderately important. Noteworthy is that the scale

[248] Mann-Whitney U (p=,004), T-Test (p=,008)
[249] Both Mann-Whitney U and T-Test
[250] Both Pearson and Spearman's rho
[251] Both Pearson and Spearman's rho
[252] I.e. the distributions of the independent variables investigated

used to measure the importance is a 7-point Osgood scale, which allows for rating different financial statement sections equally important. Therefore, the data do suggest that the cash flow statement is perceived to be the least important financial statement section among auditors.

In addition, the previously discussed limitations originating from the methods and data apply: Although preventive measures were taken and nothing suggests otherwise, due to the survey method, it is not absolutely certain that only the selected individuals themselves filled out the questionnaires or that they responded truthfully, with proper consideration, to the questions. Despite the sample not being a random sample and the response rate not being ideal, the data, together with the statistical methods used, seem sufficient for the result, which refers to all (per mid-2011) KHT- and HTM-auditors in Finland (not necessarily limited to those who actually audit cash flow statements in their work).

General discussion. The cash flow statement is found to be the least important financial statement section for auditors. This is consistent with the prior results of Arola (2011b) where authorised auditors in Finland seemed to regard the cash flow statement as the least important section of the financial statements. The result is also in line with Mills and Yamamura (1998) who noted that auditors do not take enough advantage of the information presented in the cash flow statement possibly because the auditing education does not emphasise the cash flow statement, Hanini and Abdullatif (2013) who found that auditors in Jordan consider the cash flow statement only moderately important, and McEnroe (1989) who found that only 75 % of audit partners were in favour of the inclusion of the cash flow statement in the set of financial statements.

The result of auditors perceiving the cash flow statement as the least important financial statement section matters, because it may be so that they devote the most attention to those sections of financial statements they consider the most important, and vice versa, the least attention to those sections they consider the least important. After all, people act on their perceptions (Nazari et al. 2006, 429). Therefore, rather than having a direct effect on published cash flow statements or a meaning for users, this study sees auditors' perceiving the cash flow statement as the least important financial statement section as a possible reason for the discovered moral hazard among auditors. Furthermore, auditors' views may influence preparers' views, and

indeed, also preparers of financial statements are in this study found to regard the cash flow statement as the least important financial statement section.

Minority of auditors are aware of that a cash flow statement can be manipulated (H_A2)

Associations with independent variable data. A statistically highly significant (p=,003)[253] association exists between whether or not auditors are aware of that a cash flow statement can be manipulated and whether or not their employer is a Big Four audit firm: Big Four audit firm employees tend to be aware of the possibility more often than expected. No statistically significant relationship can be found between whether or not auditors are aware of the possibility of manipulation and their KHT- or HTM-status[254].

Furthermore, statistically extremely significant (p<,001)[255] associations can be found between whether or not auditors are aware of the possibility of manipulation and whether they are younger or older than 40 or have more or less than 5 years of experience as an authorised auditor, and a statistically significant (p=,015)[256] association regarding whether they have more or less than 10 years of auditing experience. That is, auditors who are younger than 40, have less than 10 years of auditing experience, or have less than 5 years of experience as an authorised auditor tend to be more aware than expected of the possibility of cash flow statement manipulation.

The result "minority of auditors are aware of that a cash flow statement can be manipulated" applies to a population that has characteristics similar (or different but statistically insignificant) to the sample. With the absence of a nonresponse analysis due to unknown population characteristics, the independent variable analysis above suggests that the higher the proportion of Big Four audit firm employees, young[257]

[253] Chi-Square Test
[254] Chi-Square Test
[255] Chi-Square Test
[256] Chi-Square Test
[257] I.e. those who are younger than 40

or inexperienced[258] auditors in the population is, the higher the proportion of manipulation-aware auditors is.

Critical assessment. The proportion of auditors who are aware of that a cash flow statement can be manipulated is found to be statistically significantly a minority in the population of all authorised auditors in Finland. When analysing KHT- and HTM-auditors separately, this proportion can be statistically significantly found to be a minority only in the population of HTM-auditors despite the sample proportions are minorities for both KHT- and HTM-auditors. However, because the auditing examination of an auditor could not be shown to have a statistically significant effect on the manipulation-awareness, the results indeed suggest that only a minority of authorised auditors in Finland are aware of that a cash flow statement can be manipulated by preparers, for example, the management.

The respondents were asked whether they agreed with the following statement: a cash flow statement can be intentionally manipulated by preparers, for example, the management. The statement might have been better rephrased "preparers, for example the management, can try to intentionally manipulate a cash flow statement" in order to emphasise that the point in focus is the preparer's output prior an audit, instead of the post-audit published cash flow statement. This is not expected to have affected the results, however, because 1) numerous reports exist where also post-audit published cash flow statements have been later shown to contain manipulation by the preparer, which should inform the respondents that the manipulation by preparers is possible and that auditors may not spot it, and 2) as the respondents were able to comment the questions, none of them expressed confusion or different understanding of the point in focus than the preparer's output.

In addition, the previously discussed limitations originating from the methods and data apply: Although preventive measures were taken and nothing suggests otherwise, due to the survey method, it is not absolutely certain that only the selected individuals themselves filled out the questionnaires or that they responded truthfully, with proper consideration, to the questions. Despite the sample not being a random sample and the response rate not being ideal, the data, together with the statistical methods used, seem sufficient for the result, which refers to all (per mid-

[258] I.e. those who have less than 10 years of auditing experience, or less than 5 years of experience as an authorised auditor

2011) KHT- and HTM-auditors in Finland (not necessarily limited to those who actually audit cash flow statements in their work).

General discussion. The proportion of auditors who are aware of that a cash flow statement can be manipulated by preparers, for example, the management, is found to be a minority. This is alarming, because although a common belief has long existed that, unlike the balance sheet and the income statement, the cash flow statement cannot be manipulated by preparers (Broome 2004), it is now understood that cash flow statements can be almost as vulnerable to manipulation as income statements (Dechow 1994; Tergesen 2002; Nurnberg 2006). Evidence exists that cash flow statements are being manipulated (Day 2002; Maremont 2002a; Romero & Berenson 2002; Sender 2002; Broome 2004; Gullapalli 2005; Brigham & Houston 2007; Scholz 2008; Ivancevich et al. 2012; Lee 2012; Hanini & Abdullatif 2013), and for much of the same reasons as reported earnings are being manipulated: to boost performance-based compensation, to reduce the likelihood of violating loan covenants, and to boost the company's share price, among other reasons (Watts & Zimmerman 1978; Healy & Wahlen 1999; Dechow & Skinner 2000; Healy & Palepu 2003; Nurnberg 2006). Nonetheless, the result is consistent with the prior findings of Siegel (2006) who reports that auditors do not acknowledge this manipulation, possibly because – as Mills & Yamamura (1998) note – auditing education does not emphasise the cash flow statement.

The result of only a minority of auditors being aware of the possibility of cash flow statement manipulation matters because, if auditors do not believe that the cash flow statement figures could have been manipulated, they are likely to put little effort in auditing this aspect. As Nazari et al. (2006, 429) argue: subjective perceptions matter because perceptions of reality are more powerful than reality itself because people act on their perceptions.

Minority of auditors would require a mention if the reported operating cash flows are boosted by the increase of current maturities of long-term debts (H_A3)

Associations with independent variable data. No statistically significant relationships can be found between whether or not auditors would require a mention in the notes or in the auditor's report about the entity reporting current maturities of

long-term debts as operating cash flows and their KHT/HTM-status or whether or not their employer is a Big Four audit firm[259]. Similarly, no statistically significant relationships can be found between whether or not auditors would require such a mention and whether they are younger or older than 40, have more or less than 10 years of auditing experience, or have more or less than 5 years of experience as an authorised auditor[260].

The result "minority of auditors would require a mention if the reported operating cash flows are boosted by the increase of current maturities of long-term debts" applies to a population that has characteristics similar (or different but statistically insignificant) to the sample. With the absence of a nonresponse analysis due to unknown population characteristics, the independent variable analysis above suggests that, indeed, a minority of the population of auditors will require a mention if operating cash flows are boosted by the increase of current maturities of long-term debts as their population characteristics[261] – whatever they may be – seem to have no effect.

Critical assessment. The question presented to auditors on the questionnaire did not specify whether or not the presentation of the change in current liabilities that is a result of reclassifying debt from being a long-term liability to being a current liability would have a material effect on the cash flow statement – primarily due to an expectation that auditors' answers would then rather reflect their opinion on whether or not they would require a mention in the notes or in the auditor's report if the cash flow statement is materially flawed (regardless of what has caused the flaw). This question focuses on how auditors would react if the operating cash flow has been manipulated by a method that is prohibited under both FAS and IFRS. The effects of presenting changes of current maturities of long-term debts as operating activities can certainly be material at least whenever a company takes out a new loan or retires an existing loan – in these cases, the current liabilities are increased by the amount due the subsequent accounting period or decreased by the amount of current accounting period's maturities, respectively. Nonetheless, under both FAS and IFRS, the changes in current maturities of a long-term debt belong to the financing section of the cash flow statement.

[259] Chi-Square Test
[260] Chi-Square Test
[261] I.e. the distributions of the independent variables investigated

The proportion of auditors who would require this mention in the notes or in the auditor's report is found statistically significantly to be a minority in the population of all authorised auditors in Finland. When analysing KHT- and HTM-auditors separately, these population proportions cannot statistically significantly be shown to be minorities despite both sample proportions are. However, the auditing examination of an auditor cannot be shown to have a statistically significant effect on whether or not the auditor would require this mention – in fact, both the sample proportion as well as the proportion of all respondents are almost equal (44 % for KHT-auditors, 45 % for HTM-auditors, and 45 % all respondents). The reason why the proportion can be statistically significantly shown to be lower than 50 % for all authorised auditors, but not for KHT- or HTM-auditors separately, is that the sample of all auditors is approximately twice the size of those of KHT- and HTM-auditors (325 for all authorised auditors, 163 for KHT-auditors, and 162 for HTM-auditors). Furthermore, no statistically significant relationships can be found between whether or not auditors would require this mention and any other independent variable data. Thus, the results indeed suggest that only a minority of authorised auditors in Finland would require a mention in the notes or in the auditor's report about the entity presenting the change in current maturities of long-term debts as operating activities on the cash flow statement – a method that is prohibited under both FAS and IFRS.

In addition, the previously discussed limitations originating from the methods and data apply: Although preventive measures were taken and nothing suggests otherwise, due to the survey method, it is not absolutely certain that only the selected individuals themselves filled out the questionnaires or that they responded truthfully, with proper consideration, to the questions. Despite the sample not being a random sample and the response rate not being ideal, the data, together with the statistical methods used, seem sufficient for the result, which refers to all (per mid-2011) KHT- and HTM-auditors in Finland (not necessarily limited to those who actually audit cash flow statements in their work).

General discussion. The proportion of auditors who would require a mention in the notes or in the auditor's report if the change in current liabilities that is a result of reclassifying debt from being a long-term liability to being a current liability is reported as operating activity on the cash flow statement is found to be a minority. This is consistent with the prior findings that operating cash flows can be, and have

been, boosted, for example, by reporting what actually are loans as cash inflows from operations (Batson 2003; Benston 2006; Rosen 2007; Schilit & Perler 2010) as well as the reported auditor's lack of interest in auditing the cash flow statement (Mills & Yamamura 1998; Arola 2011b; Hanini & Abdullatif 2013) and ignorance of or indifference towards the cash flow statement manipulation (Siegel 2006) possibly because auditing education has not been emphasising the cash flow statement (Mills & Yamamura 1998). It is important to acknowledge that this method of boosting the operating cash flow is prohibited under both FAS and IFRS.

The boosting of operating cash flows by this method can be intentional manipulation, or, in addition, it can be an unintentional side-effect of preparers not crafting the statement meticulously. The phenomenon of reclassifying debt from being a long-term liability to being a current liability occurs at the end of every accounting period when the amounts of a long-term debt due the subsequent accounting period is reclassified as a current liability on the balance sheet, and if the preparer is not alert, this may end up on the published cash flow statement as a positive cash flow from operating activities and a negative cash flow from financing activities – especially if the cash flow statement is prepared relying primarily on the publishable balance sheet and income statement.

Not disclosing this manipulation reduces the qualitative characteristics reliability (faithful representation) and comparability: Reliability (faithful representation) is reduced because the reported operating cash flow no longer represents only the operating activities of an entity but is infested with effects of financing activities, that is, the changes in current maturities of long-term debts. Comparability is reduced because not all entities would falsely present the current maturities in the operating activities sections, and moreover, the amount of current maturities would vary between different entities.

Minority of auditors would require mentioning drastic non-payment of accounts payable (H_A4)

Associations with independent variable data. A statistically significant (p=,024)[262] association exists between the willingness of auditors to require a mention about the

[262] Chi-Square Test

entity not paying its accounts payable due the last month and whether or not their employer is a Big Four audit firm: Big Four audit firm employees tend to be less willing than expected to require such mentioning. No statistically significant relationship can be found between the auditor's willingness to require information about Q4's accounts payable and whether or not the employer is a Big Four audit firm[263]. Nor can statistically significant relationships be found between the willingness to require information about last month's or Q4's accounts payable and the KHT- or HTM-status of the auditor[264]. Finally, no statistically significant associations can be found between the willingness to require information about last month's or Q4's accounts payable and whether the auditor has more or less than 10 years of auditing experience or more or less than 5 years of experience as an authorised auditor, or is younger or older than 40[265].

The result "minority of auditors would require mentioning drastic non-payment of accounts payable" applies to a population that has characteristics similar (or different but statistically insignificant) to the sample. With the absence of a nonresponse analysis due to unknown population characteristics, the independent variable analysis above suggests that the higher the proportion of Big Four audit firm employees in the population is, the lower the proportion of auditors who would require mentioning the non-payment of last month's accounts payable is.

Critical assessment. Hypothesis A4 deals with whether or not auditors of financial statements would require a mention in the notes or in the auditor's report about the entity boosting its operating cash flows by stretching out accounts payable drastically over their due dates. The word "drastically" is measured in two ways: first, it is assumed that not paying any accounts payable due the last month of an accounting period qualifies as "drastic"; second, it is assumed that not paying any accounts payable due Q4 qualifies as "drastic". Because it would seem likely that those who would require mentioning the entity not paying its accounts payable due the last month would also require mentioning the entity not paying its accounts payable due Q4, the question about Q4's accounts payable was presented to only those who indicated they would not require a mention about the non-payment of accounts payable due the last month.

[263] Chi-Square Test
[264] Chi-Square Test
[265] Chi-Square Test

The question about requiring a mention about the entity not paying its accounts payable due Q4 was measured with a 7-point Osgood scale from 1 (definitely not) to 7 (definitely yes), and, for analysing purposes, the responses were recoded as "No" (responses 1 to 3), "No opinion for or against" (response 4) and "Yes" (responses 5 to 7). The Osgood scale can be understood as an ordinal level of measurement. The ordinal level of measurement enables the data to be ranked or ordered, but the magnitude of differences between the values is not distinguishable (Lind et al. 2012, 11). It is not certain that, in the mind of a respondent, the values 1 to 3 indicate "No", the value 4 indicates "No opinion for or against", and the values 5 to 7 indicate "Yes". Therefore, a possibility of a measurement error exists regarding this question.

Furthermore, instead of the binomial test outcomes regarding Q4's accounts payable, point estimates are used in table 37 in chapter 4.5 mainly for the sake of simplicity and understandability of the results. It is simpler to use the point estimates because the populations are not the same in the analyses regarding last month's and Q4's accounts payable: for the binomial tests regarding last month's accounts payable, the population is KHT- or HTM-auditors, whereas for the binomial tests regarding Q4's accounts payable, the population is those KHT- or HTM-auditors who would not require mentioning the unpaid last month's accounts payable. Therefore, instead of reporting "minority of those auditors who would not require mentioning the entity not paying its accounts payable due the last month would require mentioning the entity not paying its accounts payable due Q4", it seems simpler and more understandable to report "the point estimates for KHT- and HTM-auditors who would require mentioning the entity not paying its accounts payable due Q4 are 42 % and 46 %, respectively".

Noteworthy is that the use of population estimates and the possibility of a measurement error apply only to the question about Q4's accounts payable – not to the question about whether or not the respondent would require disclosing information if the entity did not pay any of its accounts payable due the last month of the accounting period, which was a "yes or no" question. Both are, however, affected by the previously discussed limitations originating from the methods and data: Although preventive measures were taken and nothing suggests otherwise, due to the survey method, it is not absolutely certain that only the selected individuals themselves filled out the questionnaires or that they responded truthfully, with

proper consideration, to the questions. Despite the sample not being a random sample and the response rate not being ideal, the data, together with the statistical methods used, seem sufficient for the result, which refers to all (per mid-2011) KHT- and HTM-auditors in Finland (not necessarily limited to those who actually audit cash flow statements in their work).

To summarise, the result about last month's account payable is on a par reliable with most results in this study, whereas the result about Q4's accounts payable is faced with additional uncertainty. To account for this, they are phrased as follows: fewer than 25 % of auditors would require mentioning the entity not paying its accounts payable due the last month, and the point estimates for KHT- and HTM-auditors who would require mentioning the entity not paying its accounts payable due Q4 are 42 % and 46 % respectively. This warrants the conclusion that is it not likely that auditors would require mentioning drastic non-payment of accounts payable – especially, when "drastic" refers to not paying any accounts payable due the last month of the accounting period, but also when the entity has not paid any of its accounts payable due the last three months of the accounting period.

General discussion. The results suggest that only a minority of auditors would require a mention in the notes or in the auditor's report about the entity boosting the reported operating cash flow by drastically stretching out its accounts payable over their due dates. The results are consistent with the reported auditor's lack of interest in auditing the cash flow statement (Mills & Yamamura 1998; Arola 2011b; Hanini & Abdullatif 2013) and ignorance of or indifference towards the manipulation of cash flow statements (Siegel 2006) possibly because auditing education has not been emphasising the cash flow statement (Mills & Yamamura 1998). The boosting of operating cash flows has been documented in prior research by this method (Hendriksen 1970; Heath 1978a; Nurnberg 2006; Siegel 2006; Lee 2012) and other not specifically prohibited methods (Maremont 2002b; Broome 2004).

Although it is not specifically prohibited under FAS or IFRS, the entity not paying any of its accounts payable due the last month of the accounting period – or at least due Q4 – and thus boosting the reported operating cash flow may easily constitute as such information that is required by Accounting Act 3:2.1 and IAS 1 paragraph 112 to be provided in the notes. Together with the results presented in chapter 4.1.3 that only a minority of preparers would provide this disclosure, this allows for an aspect of adverse selection to manifest in majority of financial

statements: if the reported cash flow figures are manipulated by drastically stretching out accounts payable over their due dates, this is likely not disclosed in the financial statements or in the auditor's report. Again, not mentioning this manipulation reduces the qualitative characteristics reliability (faithful representation) and comparability.

At least 75 % of auditors spend the least time with the cash flow statement during audits (H_A5)

Associations with independent variable data. No statistically significant relationships can be found between whether or not auditors spend the least time with cash flow statements during annual audits and their KHT/HTM-status or whether or not their employer is a Big Four audit firm[266]. Similarly, no statistically significant relationships can be found between whether or not auditors spend the least time with the cash flow statement and whether they are younger or older than 40, have more or less than 10 years of auditing experience, or have more or less than 5 years of experience as an authorised auditor[267].

The result "at least 75 % of auditors spend the least time with the cash flow statement during audits" applies to a population that has characteristics similar (or different but statistically insignificant) to the sample. With the absence of a nonresponse analysis due to unknown population characteristics, the independent variable analysis above suggests that, indeed, at least 75 % of the population of auditors spend the least time with the cash flow statement during audits as their population characteristics[268] – whatever they may be – seem to have no effect.

Critical assessment. Although the result suggests that at least 75 % of auditors spend the least time with the cash flow statement during annual audits, it does not suggest anything about how much less time they spend with it compared to the other financial statement sections. Furthermore, it is not certain that each respondent actually audits cash flow statements in their work, and if some do not, the cash flow statement would certainly receive little attention from those respondents. Therefore, it is not possible to conclude, based on this result alone, that auditors do not audit

[266] Chi-Square Test
[267] Chi-Square Test
[268] I.e. the distributions of the independent variables investigated

the cash flow statement meticulously – but it does contribute to the accumulating evidence on the subject.

In addition, the other previously discussed limitations originating from the methods and data apply: Although preventive measures were taken and nothing suggests otherwise, due to the survey method, it is not absolutely certain that only the selected individuals themselves filled out the questionnaires or that they responded truthfully, with proper consideration, to the questions. Despite the sample not being a random sample and the response rate not being ideal, the data, together with the statistical methods used, seem sufficient for the result, which refers to all (per mid-2011) KHT- and HTM-auditors in Finland.

General discussion. At least 75 % of both KHT- and HTM-auditors are found to spent the least time with the cash flow statement of all the sections of the financial statements during an annual audit of an entity. This is consistent with the prior results of Arola (2011b) where authorised auditors in Finland were found to spend the least time with the cash flow statements of all the sections of the financial statements, and Mills and Yamamura (1998) who state that auditors spend less time with the cash flow statement than with the balance sheet and the income statement possibly due to auditing education not emphasising the cash flow statement; thus not consistent with Siegel (2006) who suggests that, as cash flow statements are more and more becoming the new focus by users of financial statements, auditors should adjust their work accordingly in order to provide the most value to the public – because after all, the value of an audit is determined entirely by its practical benefit (Flint 1988), and the use of cash flow statements has increased rapidly in recent years (Mechelli 2009).

Drawing from agency theory, as well as other hypotheses, independent audits are needed for verifying the correctness of the reported cash flow statements, because users of financial statements cannot verify it themselves (Marshall 1924; Berle & Means 1932; Simon 1959; Williamson 1964; Machlup 1967; Jensen & Meckling 1976; DeAngelo 1981; Arrow 1985; Pratt & Zeckhauser 1985; Watts & Zimmerman 1986; Scott 1997; Dechow et al. 1999; Cosserat 2000; Bushee 2001; Broadbent & Laughlin 2002; Hutton 2002; Healy & Palepu 2003; Ryan & Schneider 2003); and at the very least, the cash flow statement should be audited with the same level of attention as the rest of the financial statements (Riistama 1999). Together with the results presented in chapters 4.2.1, 4.2.2, 4.2.3, 4.2.4, 4.2.6 and 4.2.7 that auditors

regard the cash flow statement as the least important financial statement section, only a minority of auditors are aware of that cash flow statements can be manipulated, know how cash payments relating to capacity acquisitions should be presented, would require mentioning artificial boosting of operating cash flows, or would omit material non-cash transactions from the statement, this suggests that the cash flow statement may not be audited as meticulously as the other financial statement sections – which is consistent with the conclusion of Hanini and Abdullatif (2013). Because external audits play an important role in monitoring the agent's output i.e. the financial statements in the principal-agent relationship (DeAngelo 1981; Watts & Zimmerman 1986; Subramaniam 2006; Meklin 2009), the results suggest that this aspect of the monitoring process may be failing.

Finally, the result of auditors spending the least time with the cash flow statement is important also because it may have a negative impact on the preparing process by allowing preparers to keep lacking in effort when producing the statement. That is, it may keep feeding the moral hazard among preparers: auditors spending the least amount of time with the cash flow statement during audits may signal preparers that neither they should put substantial effort in preparing it.

Small minority of auditors know how cash payments relating to capacity acquisitions should be presented (H_A6_a, H_A6_b & H_A6_c)

Associations with independent variable data. A statistically extremely significant (p<,001)[269] association exists between whether or not auditors know how capacity acquisition payments should be presented under FAS and whether or not their employer is a Big Four audit firm: Big Four audit firm employees tend to know more often than expected how to present them. No statistically significant relationship can be found between whether or not auditors know how to present capacity acquisition payments under IFRS – or under both FAS and IFRS – and whether or not their employer is a Big Four audit firm[270].

Similarly, a statistically significant (p=,013)[271] association exists between the KHT- or HTM-status of the auditors and whether or not they know how capacity

[269] Chi-Square Test
[270] Chi-Square Test
[271] Chi-Square Test

acquisition payments should be presented under FAS: KHT-auditors tend to know more often than expected how to present them. No statistically significant relationship can be found between whether or not auditors know how to present capacity acquisition payments under IFRS – or under both FAS and IFRS – and their KHT- or HTM-status[272]. Finally, no statistically significant associations can be found between whether or not auditors know how to present capacity acquisition payments under FAS, under IFRS, or under both FAS and IFRS, and whether they are younger or older than 40, have more or less than 10 years of auditing experience, or have more or less than 5 years of experience as an authorised auditor[273].

The result "small minority of auditors know how cash payments relating to capacity acquisitions should be presented" applies to a population that has characteristics similar (or different but statistically insignificant) to the sample. With the absence of a nonresponse analysis due to unknown population characteristics, the independent variable analysis above suggests that the higher the proportion of KHT-auditors or Big Four audit firm employees in the population is, the higher the proportion of auditors who know how to present capacity acquisition payments correctly under FAS is.

Critical assessment. Even though some of the rules for preparation make it less useful than it could be (Nurnberg 1993; Weiss & Yang 2007), auditors should verify that the cash flow statement has been prepared in accordance with the regulation applied to that set of financial statements. If an entity is preparing financial statements under FAS, cash flow statements should be prepared in accordance with KILA 30.1.2007, which is argued to be an application of the good accounting practice required by Accounting Act 1:3. If an entity is preparing financial statements under IFRS, cash flow statements must be prepared in accordance with IAS 7.

Because the guidance under FAS and IFRS is not uniform, three different hypotheses were tested with the following results: 1) the proportion of authorised auditors who know how cash payments relating to capacity acquisitions should be presented in accordance with both KILA 30.1.2007 and IAS 7 is found to be lower than 5 %, 2) the proportion of authorised auditors who know how cash payments relating to capacity acquisitions should be presented in accordance with KILA

[272] Chi-Square Test
[273] Chi-Square Test

30.1.2007 is found to be lower than 25 %, and 3) the proportion of authorised auditors who know how cash payments relating to capacity acquisitions should be presented in accordance with IAS 7 is found to be lower than 5 %. The corresponding sample proportions are 2 %, 20 % and 2 %, respectively.

It is noteworthy that the sample proportions show the percentages of respondents who mastered the regulation at the time of the survey. It is possible that, for example, they audit cash flow statements so irregularly that they do not memorise all the rules but refer to the regulation when actually auditing the statement. The 51 seconds the avegare respondent spent, on avegare, pondering each question does allow for some additional studying of the regulation, although some may have responded solely based on their current knowledge. Although most entities likely have capacity acquisition payments during accounting periods, they may only have them of specific types. Consequently, although the respondents probably have dealt with them before, it is possible that they have had to be familiar with only some, but not all, types of capacity acquisition payments.

In addition, the other previously discussed limitations originating from the methods and data apply: Although preventive measures were taken and nothing suggests otherwise, due to the survey method, it is not absolutely certain that only the selected individuals themselves filled out the questionnaires or that they responded truthfully to the questions. Despite the sample not being a random sample and the response rate not being ideal, the data, together with the statistical methods used, seem sufficient for the results, which refer to all (per mid-2011) KHT- and HTM-auditors in Finland (not necessarily limited to those who actually audit cash flow statements in their work).

To summarise, the results suggest the proportions of auditors who know how all three types of capacity acquisition payments (a one-time payment, an instalment payment, and a lease payment[274]) should be presented in any of the three scenarios (under FAS, under IFRS, and under both FAS and IFRS) at the time of the survey. Although these are very low, the proportion of auditors who know how capacity acquisition payments should be presented on any given cash flow statement may be higher if the entity has only some types of capacity acquisition payments, or if some

[274] Lease payments are further divided into operating and financing leases under IFRS.

of the respondents would refer to the regulation when actually auditing a cash flow statement, but did not do so when filling out the questionnaire.

General discussion. The results suggest that only a small minority of authorised auditors know how cash payments relating to capacity acquisitions should be presented. This is consistent with the reported auditor's lack of interest in auditing the cash flow statement (Mills & Yamamura 1998; Arola 2011b; Hanini & Abdullatif 2013) and the cash flow statement not being emphasised in auditing education (Mills & Yamamura 1998).

Together with the results presented in chapter 4.1.4 that only a small minority of preparers would present such payments correctly, this allows for an aspect of moral hazard to manifest in majority of financial statements: preparers lack in effort to produce the cash flow statement correctly and the monitoring system fails – that is, auditors do not recognise the errors on the cash flow statement relating to capacity acquisitions cash payments. It is assumed that capacity acquisitions are typically substantial in value, and consequently, their misrepresentation may materially distort the cash flow statement. Again, not presenting capacity acquisition cash flows in accordance with the applicable standard reduces the qualitative characteristics reliability (faithful representation) and comparability.

Minority of auditors would omit material non-cash transactions from FAS cash flow statements (H_A7)

Associations with independent variable data. A statistically extremely significant (p<,001)[275] association exists between whether or not auditors would omit material non-cash transactions from FAS cash flow statements and whether or not their employer is a Big Four audit firm: Big Four audit firm employees tend to omit them more often than expected. Similarly, a statistically significant (p=,038)[276] association exists between the KHT- or HTM-status of the auditors and whether or not they would omit the material non-cash transactions: KHT-auditors tend to omit them more often than expected.

[275] Chi-Square Test
[276] Chi-Square Test

Finally, statistically extremely significant (p<,001)[277] associations can be found between whether or not auditors would omit material non-cash transactions from FAS cash flow statements and whether they are younger or older than 40 or have more or less than 5 years of experience as an authorised auditor, and a statistically significant (p=,030)[278] association can be found between whether or not auditors would omit them and whether they have more or less than 10 years of auditing experience. That is, auditors who are younger than 40, have less than 10 years of auditing experience, or have less than 5 years of experience as an authorised auditor tend to omit them more often than expected.

The result "minority of auditors would omit material non-cash transactions from FAS cash flow statements" applies to a population that has characteristics similar (or different but statistically insignificant) to the sample. With the absence of a nonresponse analysis due to unknown population characteristics, the independent variable analysis above suggests that the higher the proportion of KHT-auditors, Big Four audit firm employees, young[279] or inexperienced[280] auditors in the population is, the higher the proportion of auditors who would omit non-cash transactions from FAS cash flow statements is.

Critical assessment. Although the guidance regarding the handling of non-cash transactions in cash flow statements is not entirely unambiguous under FAS, the non-cash transactions that are considered material should nonetheless be omitted from the statement according to KILA 30.1.2007 section 1.3. Undoubtedly the non-cash transactions presented on the questionnaire can be considered material because they are the sole transactions the company has in the accounting period.

The question presented to respondents offered two answer choices: 1) the cash flow statement should be blank, and 2) the cash flow statement should present a negative operating cash flow, and a positive financing cash flow, for the amount of 12000€. The first answer choice might have been better rephrased "the net cash flows for each activity should be zero" instead of using the term "blank". This is because when using the indirect method, the operating activities section would show an operating profit of negative 12000€ and an adjustment to the profit of positive

[277] Chi-Square Test
[278] Chi-Square Test
[279] I.e. those who are younger than 40
[280] I.e. those who have less than 10 years of auditing experience, or less than 5 years of experience as an authorised auditor

12000€ – resulting in zero net cash flow. The other sections would be completely blank, as would be the entire direct method cash flow statement. This is not expected to have affected the results, however, because 1) the second answer choice should clarify the intention of the first answer choice, and 2) as the respondents were able to comment the questions, only one respondent (0,3 %[281]) expressed a possible confusion by commenting: "might depend on the format".

In addition, the previously discussed limitations originating from the methods and data apply: Although preventive measures were taken and nothing suggests otherwise, due to the survey method, it is not absolutely certain that only the selected individuals themselves filled out the questionnaires or that they responded truthfully, with proper consideration, to the questions. Despite the sample not being a random sample and the response rate not being ideal, the data, together with the statistical methods used, seem sufficient for the result, which refers to all (per mid-2011) KHT- and HTM-auditors in Finland (not necessarily limited to those who actually audit cash flow statements in their work).

General discussion. The proportion of KHT-auditors who would omit material non-cash transactions from the cash flow statement under FAS is found to be a minority (sample proportion 39 %). The proportion of HTM-auditors who would omit material non-cash transactions from the cash flow statement under FAS is found to be lower than 35 % (sample proportion 28 %). Again, the results are consistent with the reported auditor's lack of interest in auditing the cash flow statement (Mills & Yamamura 1998; Arola 2011b; Hanini & Abdullatif 2013) and the cash flow statement not being emphasised in auditing education (Mills & Yamamura 1998).

Together with the results presented in chapters 4.1.5 and 4.1.6 that fewer than 30 % of FAS manual preparers would omit material non-cash transactions from FAS cash flow statements and that majority of them seem to never or rarely utilise any essential accounting material for detecting non-cash transactions, this allows for an aspect of moral hazard to manifest in majority of financial statements: preparers lack in effort to produce the cash flow statement correctly and the monitoring system fails – that is, auditors do not require that material non-cash transactions be omitted from the statement. Furthermore, considering the results presented in

[281] 1/325

chapter 4.1.2 that suggest that majority of cash flow statements are prepared manually, it seems likely that majority of cash flow statements reported in the set of financial statements are not cleared from the effects of material non-cash transactions[282]. Finally, not omitting material non-cash transactions, and thus not complying with the applicable standard, reduces the qualitative characteristics reliability (faithful representation) and comparability.

5.3 The contents of cash flow statements and the three hypotheses

Changes in accounting practices through the years. This study investigates the cash flow statements of three consecutive accounting periods ending 2010 (or early 2011), 2011 (or early 2012) and 2012 (or early 2013). The results suggest no major changes in accounting practices regarding the issues analysed: 1) 100 % of consolidated and 99 % of parent company cash flow statements presented tax cash flows solely as operating activities during each accounting period. 2) 99 % of consolidated cash flow statements presented interest paid solely as operating activities during each accounting period while with parent company cash flow statements, the proportion varied between 98 % and 99 %; 100 % of both consolidated and parent company cash flow statements presented dividends paid solely as financing activities during each accounting period. Regarding interest received, the yearly proportions of consolidated and parent company cash flow statements that presented them solely as operating activities varied between 95 % and 97 % and between 94 % and 95 %, respectively; 59 % of consolidated cash flow statements presented dividends received solely as operating activities during each accounting period while with parent company cash flow statements, the proportion varied between 63 % and 68[283] %. 3) 87 % of consolidated cash flow statements presented operating activities using the indirect method during each accounting

[282] Although it is unknown what proportion of entities publishing cash flow statements actually have material non-cash transactions in any given accounting period.

[283] 95 % confidence interval higher bound

period while with parent company cash flow statements, the proportion varied between 86[284] % and 87 %.

Nearly all cash flow statements present tax cash flows solely as operating activities – i.e. no tax allocation (H_C1)

Associations with independent variable data[285]. The proportions that present tax cash flows solely as operating activities are higher of IFRS and consolidated cash flow statements than they are of FAS and parent company cash flow statements, respectively, although the differences are extremely small[286]. Similarly, the proportion that presents tax cash flows solely as operating activities is higher of small-sized and big-sized firms' cash flow statements than it is of mid-sized firms' cash flow statements, although the difference is small[287].

Critical assessment. Hypothesis C1 deals with whether companies choose to allocate tax cash flows on the cash flow statement or present them solely as operating activities. From approximately 5 %[288] of the consolidated and 18 %[289] of the parent company's cash flow statements, tax cash flows were absent. The reason for this is, presumably, that the entity did not have any tax cash flows for that accounting period; although this is impossible to verify from the entity's financial statements (or the auditor's or director's report). For example, even if the entity presents taxes on its income statement, it is unreasonable to conclude that there is an error on the cash flow statement if it does not present any tax cash flows[290]– for the reason that taxes are accrued on the income statement. Consequently, only those cash flow statements that showed taxes were included in the analysis.

---

[284] 95 % confidence interval lower bound

[285] These will treated as population analyses although one cash flow statement was not obtained. As a result, the data represents 625 of the 626, i.e. 99,84 % of the population, published cash flow statements from accounting periods ending 2010 (or early 2011), 2011 (or early 2012) and 2012 (or early 2013). The missing cash flow statement belongs to the following sub-populations: FAS cash flow statement, parent company cash flow statement, and mid-sized firm cash flow statement.

[286] FAS vs. IFRS: 99 % ((85+85+84)/(86+86+85)) vs. 100 % ((101+100+96)/(101+100+96)); parent company vs. consolidated: 99 % ((85+85+84)/(86+86+85)) vs. 100 % ((101+100+96)/(101+100+96))

[287] Small vs. mid vs. big: 100 % (224/224) vs. 98 % (184/187) vs. 100 % (143/143)

[288] (4/105+4/104+8/104)/3

[289] (19/105+18/104+18/103)/3

[290] According to both KILA 30.1.2007 and IAS 7, cash flows arising from taxes should be separately disclosed.

The result suggests that nearly all entities choose not to allocate taxes on the cash flow statement – although a possible, yet seemingly unlikely, scenario would be that the taxes were, in fact, allocated, but they were exclusively caused by operating activities. Yet, to account for this, the result is phrased as follows: nearly all cash flow statements seem not to allocate taxes: more than 95 % present tax cash flows solely as operating activities. Finally, the result refers to the three latest consolidated and parent company cash flow statements of the Finnish non-financial companies listed on NASDAQ OMX Helsinki (per mid-2013).

General discussion. The proportion of tax-showing cash flow statements that present tax cash flows solely as operating activities is found to be higher than 95 %. This is evident for both consolidated and parent company's cash flow statements for each accounting period – ending 2012 (or early 2013), 2011 (or early 2012), and 2010 (or early 2011). In fact, all entities but one presented tax cash flows solely as operating activities – the one entity presented them solely as financing activities.

Though consistent with prior research about reporting practices (Mechelli 2009), the result does not comply with the suggestion that taxes should be allocated on the cash flow statement (Nurnberg 1993; Miller & Bahnson 2012), despite the apparent difficulties in doing so (Steyn & Hamman 2003), because unless allocated, operating cash flows will be affected by taxes relating to non-operating activities (Stephens & Govindarajan 1990). Finally, not allocating taxes on the cash flow statement reduces the qualitative characteristic comparability: Comparability is reduced because, even if all companies uniformly refuse to allocate their tax cash flows, their operating activities section will contain various amounts of taxes that originated from investing or financing activities. Furthermore, if some companies do allocate their tax cash flows but others do not, that too will reduce comparability across different cash flow statements.

Most cash flow statements' presentation of interest and dividends reduces comparability (H_C2_a & H_C2_b)

Associations with independent variable data. The proportions that present interest paid solely as operating activities are higher of IFRS and consolidated cash flow statements than they are of FAS and parent company cash flow statements,

respectively, although the differences are extremely small[291]. Furthermore, small-sized firms present interest paid solely as operating activities the most often, followed by big-sized firms and then mid-sized firms – although the differences are small[292]. No difference is found between FAS and IFRS, or parent company and consolidated, cash flow statements – nor between the cash flow statements of different firm sizes – regarding the proportion that presents dividends paid solely as financing activities[293].

The proportions that present interest received solely as operating activities are higher of IFRS and consolidated cash flow statements than they are of FAS and parent company cash flow statements, respectively, although the differences are extremely small[294]. Similarly, the proportion that presents interest received solely as operating activities is higher of small-sized firms' cash flow statements than it is of mid-sized and big-sized firms' cash flow statements, although the difference is small[295]. On the other hand, the proportions that present dividends received solely as operating activities are higher of FAS and parent company cash flow statements than they are of IFRS and consolidated cash flow statements, respectively, although the differences are small[296]. Finally, big-sized firms present dividends received solely as operating activities the most often, followed by small-sized firms and then mid-sized firms [297].

Critical assessment. Hypotheses $C2_a$ and $C2_b$ deal with whether interest and dividend cash flows are typically presented in a way that is argued to reduce comparability between different cash flow statements: that is, whether companies choose to treat interest and dividends paid differently, and whether interest and dividends received are presented as operating activities rather than investing activities. Interest paid was present on all consolidated and all but one parent

[291] FAS vs. IFRS: 98 % ((102+102+101)/(103+104+103)) vs. 99 % ((105+103+103)/(106+104+104)); parent company vs. consolidated: 98 % ((103+102+101)/(104+104+103)) vs. 99 % ((104+103+103)/(105+104+104))

[292] Small vs. mid vs. big: 100 % (284/284) vs. 97 % (192/197) vs. 98 % (140/143)

[293] FAS vs. IFRS: 100 % ((83+88+90)/(83+88+90)) vs. 100 % ((85+85+92)/(85+85+92)); parent company vs. consolidated: 100 % ((84+88+90)/(84+88+90)) vs. 100 % ((84+85+92)/(84+85+92)); small vs. mid vs. big: 100 % (203/203) vs. 100 % (176/176) vs. 100 % (144/144)

[294] FAS vs. IFRS: 95 % ((99+98+97)/(104+104+103)) vs. 96 % ((103+99+100)/(106+104+104)); parent company vs. consolidated: 95 % ((100+98+97)/(105+104+103)) vs. 96 % ((102+99+100)/(105+104+104))

[295] Small vs. mid vs. big: 97 % (275/284) vs. 94 % (186/197) vs. 94 % (135/144)

[296] FAS vs. IFRS: 64 % ((49+54+56)/(79+84+84)) vs. 59 % ((39+39+38)/(65+66+64)); parent company vs. consolidated: 65 % ((50+54+56)/(80+84+84)) vs. 59 % ((38+39+38)/(64+66+64))

[297] Small vs. mid vs. big: 61 % (95/155) vs. 55 % (87/157) vs. 72 % (93/130)

company cash flow statements; from approximately 17 %[298] of the consolidated and 16 %[299] of the parent company's cash flow statements, dividends paid were absent. Interest received was present on all consolidated and parent company cash flow statements; from approximately 38 %[300] of the consolidated and 20 %[301] of the parent company's cash flow statements, dividends received were absent or the presentation was unclear. The reason for the absence is, presumably, that the entity did not have any interest or dividend cash flows for that accounting period; although this is impossible to verify from the entity's financial statements (or the auditor's or director's report). For example, even if the entity presents interest expense on its income statement, it is unreasonable to conclude that there is an error on the cash flow statement if it does not present any interest cash outflows – for the reason that interest expense is accrued on the income statement.

If a company did not have interest or dividend cash inflows or outflows in a given accounting period, naturally, it is unknown how the company would have presented them on that year's cash flow statement. Consequently, only those cash flow statements that included interest or dividend paid or received were included in the respective analyses: for example, the percentages about the classification of interest paid are calculated from interest-cash-outflow-showing cash flow statements, and the percentages about the classification of dividends received are calculated from dividend-cash-inflow-showing cash flow statements, instead of all cash flow statements.

Although the result suggests that interest paid and dividends paid are treated differently on nearly all cash flow statements, there is some uncertainty to it because the investigation is not limited to those cash flow statements that present both. To illustrate, consider a population of 100 cash flow statements, of which 50 include interest paid but no dividends paid, and the other 50 include dividends paid but no interest paid. All 50 interest-cash-outflow-showing statements classify interest paid as operating activities, and all 50 dividend-cash-outflow-showing statements classify dividends paid as financing activities. In such a situation, it would be impossible to investigate whether any statement presents interest and dividends paid

[298] (21/105+19/104+12/104)/3
[299] (21/105+16/104+13/103)/3
[300] (41/105+38/104+40/104)/3
[301] (25/105+20/104+19/103)/3

differently because none of the 100 cash flow statements contain both. If it is assumed – as this study does – that the classification of one item has no effect on the classification of the other, the conclusion is that all cash flow statements present interest and dividends paid differently. On the contrary, if it is assumed that the classification of one item also determines the classification of the other, a more appropriate conclusion would be that 50 % of cash flow statements present interest and dividends paid as operating activities and 50 % present them as financing activities. The same applies to the result concerning interest and dividends received.

When interest paid, interest received, dividends paid or dividends received were not separately presented on the cash flow statement, some detective work went into making the classifications. Other financial statement sections, especially the notes (to the income statement), were then investigated for clues. For example, if the cash flow statement only showed one line for interest, but other financial statement sections indicated both interest revenue and expense, the classification would be "net interest". However, such detective work does not necessarily provide 100 % accurate classifications: for example, it is possible that the interest revenue present on the income statement and in the notes has resulted in cash flow, but the interest expense has only been accrued, and therefore, not resulted in cash flow. Similarly, if the cash flow statement showed only one line labelled "financial items", but other financial statement sections indicated interest paid and received as well as dividends received, the classification would be "netted interest paid, interest received and dividends received"; however, it is possible that some of these were only accrued. Therefore, a possibility of measurement error exists regarding the results concerning interest and dividends. These are not, however, expected to materially jeopardise the reported results, which, to account for the uncertainties, use the phrase "seem to be" instead of "are" even when the actual percentages of the subjects investigated are close to 100 % (with the exception of dividends received).

It is noteworthy that netting interest paid and received, combining interest received and dividends received, and netting interest paid, interest received and dividends received all violate the regulation under both FAS and IFRS: KILA 30.1.2007 section 4.6 and IAS 7 paragraph 31 both state that cash flows from interest and dividends received and paid must each be disclosed separately. Thus,

approximately 8 %[302] of consolidated cash flow statements and 15 %[303] of parent company cash flow statements appear not to comply with the applicable regulation with regards to presenting interest and dividend cash flows. Finally, the results refer to the three latest consolidated and parent company cash flow statements of the Finnish non-financial companies listed on NASDAQ OMX Helsinki (per mid-2013).

General discussion. Regarding interest and dividends paid, more than 95 % of interest-outflow-showing cash flow statements are found to present interest paid solely as operating activities, while all dividend-outflow-showing cash flow statements are found to present dividends paid solely as financing activities. This is evident for both consolidated and parent company's cash flow statements for each accounting period – ending 2012 (or early 2013), 2011 (or early 2012), and 2010 (or early 2011). This suggests that interest and dividends paid seem to be treated differently on nearly all cash flow statements. Though consistent with prior research about reporting practices (Hertenstein & McKinnon 1997; Nurnberg & Largay 1998), the result conflicts with the suggestion by authors who have dealt with the topic of interest and dividends on the cash flow statement (Stephens & Govindarajan 1990; Steyn & Hamman 2003; Mechelli 2009; Miller & Bahnson 2012) that interest and dividends paid should both be classified as financing activities; indeed, also the finance literature emphasises the similarity of interest and dividend payments: interest is paid for the use of debt capital and dividends are paid for the use of equity capital (Nurnberg 1993).

Treating interest paid and dividends paid differently on the cash flow statement reduces the qualitative characteristic comparability: Comparability is reduced because presenting interest paid as an operating activity while dividends paid as an financing activity makes it more difficult to compare the performance of companies that make different financing choices (Weiss & Yang 2007; Mechelli 2009). With regards to operating cash flows, a company that relies on debt financing will report lower net operating cash flow compared to an operationally identical company that relies on equity financing.

Regarding interest and dividends received, more than 90 % of interest-inflow-showing cash flow statements are found to present interest received solely as

[302] (7/105+7/104+11/104)/3
[303] (16/105+16/104+16/103)/3

operating activities, and more than 55 % of dividend-inflow-showing cash flow statements are found to present dividends received solely as operating activities. This is evident for both consolidated and parent company's cash flow statements for each accounting period – ending 2012 (or early 2013), 2011 (or early 2012), and 2010 (or early 2011). The result suggests that interest and dividends received seem to be treated as operating activities on most cash flow statements, which conflicts with the suggestion by authors who have dealt with the topic of interest and dividends on the cash flow statement (Stephens & Govindarajan 1990; Nurnberg & Largay 1998; Steyn & Hamman 2003; Mechelli 2009; Miller & Bahnson 2012) that both should be classified as investing activities instead.

Treating interest and dividends received as an operating activity rather than an investing activity reduces the qualitative characteristic comparability: First, the comparability is jeopardised because when a company has significant investments in affiliated companies, it then has the ability to manipulate its net operating cash flow by increasing the dividends it receives from such companies – a technique that has been used by many companies; furthermore, dividend income comes from investments: if the former is presented as operating activities and the latter as investing activities, users may struggle to visualise the whole picture of investment strategy (Weiss & Yang 2007). Second, the comparility is reduced because the operating cash flows will then include the various amounts of interest and dividend collections, which result from making loans or investments in debt and equity securities and thus relate to investing activities (Nurnberg 1993).

More than 85 % of cash flow statements present operating cash flows using the indirect method (H_C3)

Associations with independent variable data. The proportion that presents operating cash flows using the indirect method is higher of IFRS cash flow statements than it is of FAS cash flow statements, although the difference is extremely small[304]. The

[304] FAS vs. IFRS: 86 % ((90+90+89)/(104+104+103)) vs. 87 % ((92+90+90)/(106+104+104)

proportion also increases with firm size[305]. No such a difference is found between parent company and consolidated cash flow statements[306].

Critical assessment. The result refers to the three latest consolidated and parent company cash flow statements of the Finnish non-financial companies listed on NASDAQ OMX Helsinki (per mid-2013).

General discussion. The proportion of cash flow statements that present operating cash flows using the indirect method is found to be higher than 85 %. This is consistent with the prior research on reporting practices stating that a vast majority of companies are presenting their operating cash flows using the indirect method (Wallace et al. 1997; Troberg 2007) – primarily, because it is perceived to be easier to prepare (Hertenstein & McKinnon 1997; Epstein et al. 2005), and it requires no additional recording or ledger manipulation than that is provided in typical accounting systems (Kwok 2002). The proportion of cash flow statements that have been prepared using the indirect method has often been reported to be well over 90 per cent (Rue & Kirk 1996; Wallace et al. 1999; Krishnan & Largay 2000; Broome 2004; Mechelli 2009; Orpurt & Zang 2009). Indeed, the indirect method is not entirely without its supporters (Seed 1984; Thompson & Buttross 1988; McEnroe 1989; Stolowy & Walser-Prochazka 1992; Anthony 1997; Brahmasrene et al. 2004; Ding et al. 2006; Troberg 2007).

Consistent with Mailibayeva et al. (2012), the likelihood of using the indirect method is found to increase with firm size. Furthermore, the proportion using the indirect method is found to be slightly higher of IFRS cash flow statements than it is of FAS cash flow statements – Mailibayeva et al. (2012) did not find IFRS adoption to affect the reporting choice.

Though using the indirect method is allowed, it does not meet the preference of international standard-setters: all the applicable standards (KILA 30.1.2007, IAS 7 and SFAS 95) encourage entities to use the direct method. Finally, because the indirect method is reported to be more confusing for users (Spiller & Virgil 1974; Hovey 1986; Boze 1987; O'Leary 1988; Epstein & Pava 1992; Yap 1997; Stickney & Weil 2003; Brahmasrene et al. 2004; Broome 2004; Stice et al. 2004; Hodder et al. 2008), its use reduces the qualitative characteristic understandability.

---

[305] Small vs. mid vs. big: 83 % (236/284) vs. 88 % (173/197) vs. 92 % (132/144)

[306] Parent company vs. consolidated: 87 % ((91+90+89)/(105+104+103)) vs. 87 % ((91+90+90)/(105+104+104))

5.4 Using cash flow statements and the eight hypotheses

More than 75 % of users use the cash flow statement mainly for predicting future cash flows or for assessing liquidity (H_U1)

Associations with independent variable data. There is a statistically extremely significant (p<,001)[307] association between whether users invest yearly more or less than 10 000 €, and a statistically highly significant (p=,006)[308] association between whether users' investment portfolio is worth more or less than 100 000 €, and whether or not they use the cash flow statement mainly for predicting future cash flows or for assessing liquidity. That is, those who invest 10 000 € or more yearly and those whose portfolio is worth 100 000 € or more tend to use it mainly for those purposes more often than expected.

Similarly, there is a statistically significant (p=,026)[309] association between whether or not users use the cash flow statement mainly for predicting future cash flows or for assessing liquidity and whether they have more or less than 10 years of experience in using financial statements in economic decision-making: those who have 10 or more years of such experience tend to use it mainly for those purposes more often than expected. No statistically significant associations can be found between whether or not users use the cash flow statement mainly for those purposes and their education major (accounting&finance major, other business major, or other major), education level (master's degree, bachelor's degree, other degree, or student), or whether they are younger or older than 40[310].

The result "more than 75 % of users use the cash flow statement mainly for predicting future cash flows or for assessing liquidity" applies to a population that has characteristics similar (or different but statistically insignificant) to the sample. With the absence of a nonresponse analysis due to unknown population characteristics, the independent variable analysis above suggests that the higher the

[307] Chi-Square Test
[308] Chi-Square Test
[309] Chi-Square Test
[310] Chi-Square Test

proportion of big or experienced investors[311] in the population is, the higher the proportion of users who use the cash flow statement mainly for predicting future cash flows or for assessing liquidity is.

Critical assessment. The previously discussed limitations originating from the methods and data apply: Although preventive measures were taken and nothing suggests otherwise, due to the survey method, it is not absolutely certain that only the selected individuals themselves filled out the questionnaires or that they responded truthfully, with proper consideration, to the questions. Despite the sample not being a random sample and the response rate not being ideal, the data, together with the statistical methods used, seem sufficient for the result, which, due to the coverage error, only gives suggestions about the target population, i.e. the private investors in Finland who utilise financial statement information in their economic decision-making (per mid-2011).

General discussion. The proportion of users of financial statements who use the cash flow statement mainly for predicting future cash flows or for assessing liquidity is found to be higher than 75 %. This is consistent with the prior literature stating that cash flow statements are typically used for these purposes (Dechow 1994; Yap 1997; Mills & Yamamura 1998; Frino & Jones 2005; Siegel 2006); it is also consistent with the objectives of the cash flow statement as a part of the financial statements (FASB 2010; IASB 2010; KILA 30.1.2007; IAS 7; SFAS 95), that is, the cash flow statement should provide users of financial statements with information that is useful, especially in predicting future cash flows of an entity, and also in assessing an entity's liquidity and solvency. Furthermore, the result is in line with the prior research stating that cash flow statements are more useful than balance sheets and income statements in predicting an entity's future cash flows (Bowen et al. 1987; Livnat & Zarowin 1990; Finger 1994; Lorek & Willinger 1996; Chu 1997; Francis & Schipper 1999; Barth et al. 2001; Ryan & Zarowin 2003; Al-Attar & Hussain 2004; Troberg 2007; Cheng & Hollie 2008; Farshadfar et al. 2008; Lorek & Willinger 2009; Orpurt & Zang 2009; Miranda-Lopez & Nichols 2012) and in assessing an entity's liquidity or solvency (Lee 1974; Lee 1978; Staubus 1977; Ohlson 1980; Heath 1985; Zavgren & Freidman 1988; Staubus 1989; Peirson

[311] I.e. those users who invest 10 000 € or more yearly, or whose portfolio is worth 100 000 € or more, or who have at least 10 years of experience in using financial statements in economic decision-making

et al. 1991; Yap 1997; Mills & Yamamura 1998; Sharma 1999; Sharma & Iselin 2003; Broome 2004; Kirkham 2012).

The sample proportions between these two purposes of use were almost equal: 41 % of respondents use the cash flow statement mainly for predicting future cash flows of an entity or an investment, while 40 % of respondents use it mainly for assessing the liquidity of an entity. Only 2 % of respondents, which relates to a proportion of 1 % – 3 % of the population of financial statement users, use the cash flow statement mainly for other purposes. On the other hand, 17 % of respondents (relating to a population proportion of 14 % – 19 %) do not use the cash flow statement at all for economic decision-making, which reflects the prior research stating that the balance sheet and the income statement have been the two primary financial statement sections for users (Lee & Tweedie 1975; Lee & Tweedie 1977; Wilton & Tabb 1978; Lee & Tweedie 1981; Arnold & Moizer 1984; Epstein & Pava 1992; Gadenne & Iselin 1996; Kim & Kross 2005).

Users consider the cash flow statement the third most useful financial statement section in predicting future cash flows (H_U2)

Associations with independent variable data. The tests[312] indicate that the mean usefulness of cash flow statements in predicting future cash flows differs between the main purposes of use: those who use the cash flow statement mainly for predicting future cash flows consider it more useful for this purpose than those who use it mainly for other purposes or not at all – the difference is statistically extremely significant (p<,001) regarding those who do not use it for economic decision-making, statistically highly significant (p=,001) regarding those who use it mainly for assessing liquidity, but not statistically significant regarding those who use it mainly for other purposes. Although the tests[313] indicate that the mean usefulness differs between education majors (accounting&finance major, other business major, or other major), no statistically significant differences are found between any pair of majors. No statistically significant linear correlations exist between the cash flow statement's usefulness scores and users' age, investing

[312] Kruskal-Wallis test (p<,001); ANOVA (p<,001)
[313] Kruskal-Wallis test (p=,026); ANOVA (p=,050)

experience, yearly investments, or portfolio value[314]. Similarly, no statistically significant association exists between the considered usefulness and users' education level (master's degree, bachelor's degree, other degree, or student)[315].

The result "users consider the cash flow statement the third most useful financial statement section in predicting future cash flows" applies to a population that has characteristics similar (or different but statistically insignificant) to the sample. With the absence of a nonresponse analysis due to unknown population characteristics, the independent variable analysis above suggests that the higher the proportion of users who use the cash flow statement mainly for predicting future cash flows in the population is, the more useful users consider the cash flow statement to be for that purpose.

Critical assessment. Although the result suggests that users consider the cash flow statement the third most useful financial statement section in future cash flow predictions, due to the ordinal scale used, it does not suggest anything about how much more or less useful they consider it to be compared to the other financial statement sections. Although the mean as a measure of central tendency can often be deemed inappropriate for ordinal level measurements, the mean scores for different financial statements' usefulness and their 95 % confidence intervals are presented in table 29 in chapter 4.4.2 – yet, those only illustrate to rank order, not the differences in usefulness between the different financial statement sections.

In addition, the previously discussed limitations originating from the methods and data apply: Although preventive measures were taken and nothing suggests otherwise, due to the survey method, it is not absolutely certain that only the selected individuals themselves filled out the questionnaires or that they responded truthfully, with proper consideration, to the questions. Despite the sample not being a random sample and the response rate not being ideal, the data, together with the statistical methods used, seem sufficient for the result, which, due to the coverage error, only gives suggestions about the target population, i.e. the private investors in Finland who utilise financial statement information in their economic decision-making (per mid-2011).

General discussion. Users of financial statements are found to consider the cash flow statement the third most useful financial statement section in predicting an

[314] Both Pearson and Spearman's rho
[315] Both Kruskal-Wallis test and ANOVA

entity's future cash flows. This does not reflect the superior usefulness of the cash flow statement for this purpose as suggested by a substantial amount of empirical research (Bowen et al. 1987; Livnat & Zarowin 1990; Finger 1994; Lorek & Willinger 1996; Chu 1997; Francis & Schipper 1999; Barth et al. 2001; Ryan & Zarowin 2003; Al-Attar & Hussain 2004; Troberg 2007; Cheng & Hollie 2008; Farshadfar et al. 2008; Lorek & Willinger 2009; Orpurt & Zang 2009; Miranda-Lopez & Nichols 2012); instead, it is consistent with the prior research stating that the balance sheet and the income statement have been the two primary financial statement sections for users (Lee & Tweedie 1975; Lee & Tweedie 1977; Wilton & Tabb 1978; Lee & Tweedie 1981; Arnold & Moizer 1984; Epstein & Pava 1992; Gadenne & Iselin 1996; Kim & Kross 2005).

The income statement is considered the most useful, while the balance sheet is considered the second most useful, financial statement section in predicting future cash flows. The cash flow statement is considered the third most useful, and the notes are considered the least useful financial statement section in predicting an entity's future cash flows.

Users consider the cash flow statement the most useful financial statement section in assessing liquidity (H_U3)

Associations with independent variable data. The tests[316] indicate that the mean usefulness of cash flow statements in assessing liquidity differs between the main purposes of use: Those who use the cash flow statement mainly for assessing liquidity consider it statistically significantly (p=,021) more useful for this purpose than those who use it mainly for predicting future cash flows and statistically extremely significantly (p<,001) more useful than those who do not use it at all for economic decision-making. The difference between those who use it mainly for assessing liquidity and those who use it mainly for other purposes is not statistically significant.

There is a statistically significant (highly significant or extremely significant, depending on the test) positive[317] linear correlation between the considered

[316] Kruskal-Wallis test (p<,001); ANOVA (p<,001)
[317] Positive in the sense that as users' age increases, also the considered usefulness increases.

usefulness and users' age, but the correlation is extremely weak[318]. Similarly, there is a statistically significant (highly significant or extremely significant, depending on the test) positive[319] linear correlation between the considered usefulness and users' investing experience, but again, the correlation is extremely weak[320]. No strong linear correlations can be found between the considered usefulness and users' yearly investments or portfolio values[321]. Finally, there are no statistically significant associations between the considered usefulness and users' education level (master's degree, bachelor's degree, other degree, or student) or education major (accounting&finance major, other business major, or other major)[322].

The result "users consider the cash flow statement the most useful financial statement section in assessing liquidity" applies to a population that has characteristics similar (or different but statistically insignificant) to the sample. With the absence of a nonresponse analysis due to unknown population characteristics, the independent variable analysis above suggests that the higher the proportion of users who use the cash flow statement mainly for assessing liquidity in the population is, the more useful users consider the cash flow statement to be for that purpose.

Critical assessment. Although the result suggests that users consider the cash flow statement the most useful financial statement section in liquidity assessments, due to the ordinal scale used, it does not suggest anything about how much more useful they consider it to be compared to the other financial statement sections. Although the mean as a measure of central tendency can often be deemed inappropriate for ordinal level measurements, the mean scores for different financial statements' usefulness and their 95 % confidence intervals are presented in table 30 in chapter 4.4.3 – yet, those only illustrate to rank order, not the differences in usefulness between the different financial statement sections.

In addition, the previously discussed limitations originating from the methods and data apply: Although preventive measures were taken and nothing suggests otherwise, due to the survey method, it is not absolutely certain that only the

[318] Pearson -0,103 (p=,002); Spearman's rho -0,117 (p<,001)

[319] Positive in the sense that as users' investing experience increases, also the considered usefulness increases.

[320] Pearson -0,098 (p=,003); Spearman's rho -0,119 (p<,001)

[321] Yearly investments: Pearson -0,002 (p=,958), Spearman's rho -0,080 (p=,015); portfolio value: Pearson 0,003 (p=,926), Spearman's rho -0,083 (p=,012)

[322] Both Kruskal-Wallis test and ANOVA

selected individuals themselves filled out the questionnaires or that they responded truthfully, with proper consideration, to the questions. Despite the sample not being a random sample and the response rate not being ideal, the data, together with the statistical methods used, seem sufficient for the result, which, due to the coverage error, only gives suggestions about the target population, i.e. the private investors in Finland who utilise financial statement information in their economic decision-making (per mid-2011).

General discussion. Users of financial statements are found to consider the cash flow statement the most useful financial statement section in assessing an entity's liquidity. This is consistent with the prior research insisting that the information in cash flow statements is incrementally useful – over and above balance sheets and income statements – in assessing an entity's liquidity and solvency (Lee 1974; Lee 1978; Staubus 1977; Ohlson 1980; Heath 1985; Zavgren & Freidman 1988; Staubus 1989; Peirson et al. 1991; Yap 1997; Mills & Yamamura 1998; Sharma 1999; Sharma & Iselin 2003; Broome 2004; Kirkham 2012); thus, it does not reflect the research findings stating that users typically rank the balance sheet and the income statement the top two financial statement sections (Lee & Tweedie 1975; Lee & Tweedie 1977; Wilton & Tabb 1978; Lee & Tweedie 1981; Arnold & Moizer 1984; Epstein & Pava 1992; Gadenne & Iselin 1996; Kim & Kross 2005). While the cash flow statement is considered the most useful financial statement section, the balance sheet is considered the second most useful, the income statement the third most useful, and the notes are considered the least useful financial statement section in assessing an entity's liquidity.

The combined results presented in chapters 4.4.1, 4.4.2, and 4.4.3 suggest that more than 75 % of financial statement users utilise the cash flow statement in their economic decision-making, that is, in assessing an entity's liquidity or in predicting its future cash flows, and that, for those purposes, they consider the cash flow statement the most, and the third most, useful financial statement section, respectively. This is consistent with prior reseach (Ferrara 1976; Staubus 1977; Ijiri 1978; Heath 1981; Hicks 1981; Lee 1981a; Lawson 1982; Thomas 1982; Day 1986; McEnroe 1989; Epstein & Pava 1992; Ali & Pope 1995; Hackel & Livnat 1995; Jones et al. 1995; Cheng et al. 1997; Yap 1997; Burgstahler et al. 1998; Thomas & Cushing 1998; Frino & Jones 2005; Ross et al. 2005; Brealey et al. 2006; Nurnberg 2006; Brigham & Houston 2007; Brealey et al. 2008; Consler et al. 2011)

suggesting that cash flow information is considered useful to users, or important by users. Although not specifically addressing the following aspects, the results are in line with the prior research stating that the perceived importance of cash flow statements in relation to other financial statement sections has constantly been increasing in recent years (Siegel 2006; Troberg 2007; Cheng & Hollie 2008; Price 2013), and that the cash flow statement is being used for a number of different purposes (Carslaw & Mills 1991; Stickney 1993; Mills & Yamamura 1998; Penman 2001; Broome 2004; Nurnberg 2006; Mechelli 2009).

On the other hand, the results presented in chapters 4.4.1 and 4.4.2 indicate that approximately 17 % of users do not utilise the cash flow statement in their economic decision-making and that they consider it only the third most useful financial statement section in future cash flow predictions. Thus, it is apparent that, even though the information provided in cash flow statements is potentially more reliable (Dechow 1994; Cheng et al. 1997; Jones & Ratnatunga 1997; Nurnberg 2006) and comparable (IAS 7; KILA 30.1.2007) than the information in balance sheets and income statements, the superiority of the cash flow statement (Lee 1974; Lee 1978; Staubus 1977; Ohlson 1980; Heath 1985; Bowen et al. 1987; Zavgren & Freidman 1988; Staubus 1989; Livnat & Zarowin 1990; Peirson et al. 1991; Finger 1994; Jones et al. 1995; Lorek & Willinger 1996; Chu 1997; Yap 1997; Mills & Yamamura 1998; Francis & Schipper 1999; Sharma 1999; Barth et al. 2001; Ryan & Zarowin 2003; Sharma & Iselin 2003; Steyn & Hamman 2003; Al-Attar & Hussain 2004; Broome 2004; Troberg 2007; Cheng & Hollie 2008; Farshadfar et al. 2008; Lorek & Willinger 2009; Orpurt & Zang 2009; Kirkham 2012; Miranda-Lopez & Nichols 2012) in usefulness to users over all other financial statement sections is not unanimously accepted by practitioners in Finland.

Finally, the results presented in chapters 4.4.1, 4.4.2, and 4.4.3 provide a noteworthy justification for this study. That is, any problem area found will affect a statement, which 1) most users utilise in their economic decision-making, and 2) which users consider the most, or the third most, useful financial statement section for the main economic decision-making purposes.

Half of users want taxes allocated on the cash flow statement (H_U4)

Associations with independent variable data. A statistically extremely significant (p<,001)[323] association exists between whether or not users use the cash flow statement for their economic decision-making, and a statistically significant (p=,039)[324] association exists between whether users have more or less than 10 years of experience in using financial statements in economic decision-making, and whether or not they reckon taxes should be allocated on the cash flow statement: those who utilise the cash flow statement and those who have 10 or more years of such experience tend to advocate tax allocation more often than expected. No statistically significant associations can be found between whether or not users advocate tax allocation and whether they are younger or older than 40, whether they invest yearly more or less than 10 000 €, or whether their investment portfolio is worth more or less than 100 000 €[325]. Furthermore, no statistically significant associations can be found between whether or not users advocate tax allocation and their education level (master's degree, bachelor's degree, other degree, or student) or their education major (accounting&finance major, other business major, or other major)[326].

The result "half of users want taxes allocated on the cash flow statement" applies to a population that has characteristics similar (or different but statistically insignificant) to the sample. With the absence of a nonresponse analysis due to unknown population characteristics, the independent variable analysis above suggests that the higher the proportion of cash flow statement users or experienced users[327] in the population is, the higher the proportion of users who want taxes allocated on the cash flow statement is.

Critical assessment. The previously discussed limitations originating from the methods and data apply: Although preventive measures were taken and nothing suggests otherwise, due to the survey method, it is not absolutely certain that only the selected individuals themselves filled out the questionnaires or that they

[323] Chi-Square Test
[324] Chi-Square Test
[325] Chi-Square Test
[326] Chi-Square Test
[327] I.e. those users who have at least 10 years of experience in using financial statements in economic decision-making

responded truthfully, with proper consideration, to the questions. Despite the sample not being a random sample and the response rate not being ideal, the data, together with the statistical methods used, seem sufficient for the result, which, due to the coverage error, only gives suggestions about the target population, i.e. the private investors in Finland who utilise financial statement information in their economic decision-making (per mid-2011).

General discussion. The proportion of users who want taxes allocated on the cash flow statement is found to be approximately 50 % (± 3 % percentage points, 95 % confidence interval). Alhough it is not statistically singificantly a majority, it is nonetheless a considerably large proportion of financial statement users – taking into consideration that tax allocation is not required by FAS or IFRS (and is even prohibited under US GAAP), and that, presumably, taxes are extremely seldom, in practice, allocated on published cash flow statements (Mechelli 2009) even though accounting researchers (Stephens & Govindarajan 1990; Nurnberg 1993; Miller & Bahnson 2012) generally advocate the allocation, despite the apparent difficulties in doing so (Steyn & Hamman 2003). Therefore, the result indicates that approximately half of users are not satisfied with the current practice in Finland, as evidenced by the result presented in chapter 4.3.1, where nearly all entities are found to report tax cash flows solely as operating activities. Indeed, condition of consequence stipulates that users want as much relevant information as possible contained in the financial statements (Cosserat 2000).

Most users consider the congruence of cash flow statements and standards important and trust that audited cash flow statements are congruent with them (H_U5$_a$, H_U5$_b$ & H_U5$_c$)

Associations with independent variable data. A statistically extremely significant (p<,001)[328] association exists between whether or not users utilise the cash flow statement and whether or not they consider the congruence important, and a statistically highly significant (p=,003)[329] association exists between whether or not users utilise the cash flow statement and whether or not they believe in the congruence. That is, those who use the cash flow statement for economic decision-

[328] Chi-Square Test
[329] Chi-Square Test

making 1) consider more often than expected that the congruence of cash flow statements and the applicable standard is important, and 2) trust more often than expected that audited cash flow statements have been prepared in accordance with applicable standard if not mentioned otherwise.

A statistically significant (p=,025)[330] association exists between the education major of users and whether or not they consider the congruence important, and a statistically extremely significant (p<,001)[331] association exists between their education major and whether or not they believe in the congruence: accounting&finance majors and other business majors consider more often than expected, while other majors consider less often than expected, that the congruence of cash flow statements and the applicable standard is important; similarly, accounting&finance majors and other business majors trust more often than expected, while other majors trust less often than expected, that audited cash flow statements have been prepared in accordance with applicable standard if not mentioned otherwise. No such statistically significant associations can be found relating to the education level (master's degree, bachelor's degree, other degree, or student) of users[332].

There is a statistically significant (p=,033)[333] association between whether or not users believe in the congruence and whether they have more or less than 10 years of experience in using financial statements in economic decision-making: those who have 10 or more years of experience trust more often than expected that audited cash flow statements have been prepared in accordance with the applicable standard. No statistically significant association can be found between whether or not users consider the congruence important and whether they have more or less than 10 years of such experience[334]. Nor can statistically significant associations be found between whether or not users consider the congruence important, or whether or not users believe in the congruence, and whether they are younger or older than 40[335]. Finally, no statistically significant associations can be found between whether or not users consider the congruence important, or whether or not users believe in the

[330] Chi-Square Test
[331] Chi-Square Test
[332] Chi-Square Test
[333] Chi-Square Test
[334] Chi-Square Test
[335] Chi-Square Test

congruence, and whether they invest yearly more or less than 10 000 € or whether their investment portfolio is worth more or less than 100 000 €[336].

The result "most users consider the congruence of cash flow statements and standards important and trust that audited cash flow statements are congruent with them" applies to a population that has characteristics similar (or different but statistically insignificant) to the sample. With the absence of a nonresponse analysis due to unknown population characteristics, the independent variable analysis above suggests that the higher the proportion of cash flow statement users or accounting&finance or other business majors in the population is, the higher the proportion of users who consider the congruence important is. Furthermore, it suggests that the higher the proportion of cash flow statement users, experienced users[337] or accounting&finance or other business majors in the population is, the higher the proportion of users who believe in the congruence is.

Critical assessment. The previously discussed limitations originating from the methods and data apply: Although preventive measures were taken and nothing suggests otherwise, due to the survey method, it is not absolutely certain that only the selected individuals themselves filled out the questionnaires or that they responded truthfully, with proper consideration, to the questions. Despite the sample not being a random sample and the response rate not being ideal, the data, together with the statistical methods used, seem sufficient for the result, which, due to the coverage error, only gives suggestions about the target population, i.e. the private investors in Finland who utilise financial statement information in their economic decision-making (per mid-2011).

General discussion. It is found to be important for more than 60 % of users that the cash flow statement is prepared in accordance with the applicable standard (KILA 30.1.2007 or IAS 7). This is consistent with Cosserat (2000) who states that conditions of consequence, complexity and remoteness stipulate that users of financial statements expect audited financial statements, and cash flow statements within them, to be prepared in accordance with the applicable standard. On the other hand, for almost 40 % of users the congruence of cash flow statements and the applicable standard seem to be more or less irrelevant, which is in line with the

[336] Chi-Square Test

[337] I.e. those users who have at least 10 years of experience in using financial statements in economic decision-making

research findings stating that – although the cash flow statement is found to be more useful to users than the balance sheet and the income statement (Lee 1974; Lee 1978; Staubus 1977; Ohlson 1980; Heath 1985; Bowen et al. 1987; Zavgren & Freidman 1988; Staubus 1989; Livnat & Zarowin 1990; Peirson et al. 1991; Finger 1994; Lorek & Willinger 1996; Chu 1997; Yap 1997; Mills & Yamamura 1998; Francis & Schipper 1999; Sharma 1999; Barth et al. 2001; Ryan & Zarowin 2003; Sharma & Iselin 2003; Al-Attar & Hussain 2004; Broome 2004; Troberg 2007; Cheng & Hollie 2008; Farshadfar et al. 2008; Lorek & Willinger 2009; Orpurt & Zang 2009; Miranda-Lopez & Nichols 2012; Kirkham 2012) – not all users have discovered this superior usefulness and continue to regard the balance sheet and the income statement as the two primary financial statement sections (Lee & Tweedie 1975; Lee & Tweedie 1977; Wilton & Tabb 1978; Lee & Tweedie 1981; Arnold & Moizer 1984; Epstein & Pava 1992; Gadenne & Iselin 1996; Kim & Kross 2005).

Furthermore, more than 60 % of users are found to trust that the cash flow statement has been prepared in accordance with the applicable standard (KILA 30.1.2007 or IAS 7) if there is no mentioning otherwise in the financial statements or in the auditor's report. This is consistent with Cosserat (2000) who states that users of financial statements demand audits, because – according to information hypothesis – audits are expected to improve the quality of the financial information. On the other hand, it is indicated that about a third of users do not trust that audited cash flow statements have been prepared in accordance with the applicable standard, which implies that they suspect there are problems in preparing and/or auditing practices that jeopardise the correctness of the statement.

The result of a clear majority of users considering the congruence of cash flow statements and the applicable standard important and trusting that audited cash flow statements are congruent with it is noteworthy because users' expectations are of great importance to financial statements' preparing and auditing practices: after all, the value of an audit is determined entirely by its practical benefit (Flint 1988), and as cash flow statements are suggested to more and more become the new focus of financial statement users (Mechelli 2009), auditors should adjust their work accordingly in order to provide the most value to the public (Siegel 2006). Therefore, preparers and auditors should produce cash flow statements that meet the expectations of users, which in this instance means being congruent with the applicable standard. However, the results presented in chapters 4.1.4, 4.1.5, 4.1.6,

4.2.3, 4.2.6 and 4.2.7 – that a small minority of preparers would present cash payments relating to capacity acquisitions correctly and a small minority of auditors know how those should be presented, minority of preparers and auditors would omit material non-cash transactions from FAS cash flow statements (and majority of those preparers who would omit the non-cash transactions, seem to never or rarely utilise any essential accounting material for detecting them), and that minority of auditors would require a mention if the reported operating cash flows are boosted by the increase of current maturities of long-term debts – suggest that majority of cash flow statements may not be congruent with the standard in the aspects investigated.

Finally, more than 75 % of those users who consider the congruence of cash flow statements and the applicable standard important are found to trust that audited cash flow statements have been prepared in accordance with the applicable standard if there is no mentioning otherwise. Thus, especially those who consider the congruence important also believe in the congruence. As more than 85 %[338] of them are found to use cash flow statements in their economic decision-making, these users may likely put considerable weight on cash flow statement when making such decisions, and when the cash flow statements are incongruent with the standard due to problems in preparing and auditing practices, these users are misled, and consequently, economic resource allocation decisions may likely be made based in part on flawed information.

More than 70 % of users are aware of that a cash flow statement can be manipulated (H_U6)

Associations with independent variable data. A statistically highly significant (p=,002)[339] association exists between whether or not users agree with that a cash flow statement can be manipulated by preparers and whether or not they use the cash flow statement in economic decision-making: those who utilise the cash flow statement agree more often than expected with that such manipulation is possible.

[338] z = (438/495-,85)/sqrt(,85*,15/495) = 2,17 (p=,002); Here the lower of nπ or n(1 – π) is suggested to be at least 43,10 ((1-(,8848+1,96*sqrt(,8848*,1152/495)))*495). As the data suggest that values nπ and n(1 – π) are both equal to or greater than 5, the Central Limit Theorem applies and the standard normal distribution can be employed to complete a confidence interval (Lind et al. 2012, 314) and in the z-test.

[339] Chi-Square Test

Similarly, there is a statistically significant (p=,011)[340] association between whether or not users agree with the possibility of manipulation and their education major: accounting&finance majors agree less often than expected, while both other business majors and other majors agree more often than expected, with that the manipulation is possible.

No statistically significant associations can be found between whether or not users agree with that a cash flow statement can be manipulated and their education level (master's degree, bachelor's degree, other degree, or student), or whether they are younger or older than 40 or have more or less than 10 years of experience in using financial statements in economic decision-making[341]. Similarly, no statistically significant associations can be found between whether or not users agree with that such manipulation is possible and whether they invest yearly more or less than 10 000 € or whether their investment portfolio is worth more or less than 100 000 €[342].

The result "more than 70 % of users are aware of that a cash flow statement can be manipulated" applies to a population that has characteristics similar (or different but statistically insignificant) to the sample. With the absence of a nonresponse analysis due to unknown population characteristics, the independent variable analysis above suggests that the higher the proportion of cash flow statement users or other than accounting&finance majors in the population is, the higher the proportion of manipulation-aware users is.

Critical assessment. The respondents were asked whether they agreed with the following statement: a cash flow statement can be intentionally manipulated by preparers, for example, the management. The statement might have been better rephrased "preparers, for example the management, can try to intentionally manipulate a cash flow statement" in order to emphasise that the point in focus is the preparer's output prior an audit, instead of the post-audit published cash flow statement. This is not expected to have affected the results, however, because 1) numerous reports exist where also post-audit published cash flow statements have been later shown to contain manipulation by the preparer, which should inform the respondents that the manipulation by preparers is possible and that auditors may not

[340] Chi-Square Test
[341] Chi-Square Test
[342] Chi-Square Test

spot it, and 2) as the respondents were able to comment the questions, none of them expressed confusion or different understanding of the point in focus than the preparer's output.

In addition, the previously discussed limitations originating from the methods and data apply: Although preventive measures were taken and nothing suggests otherwise, due to the survey method, it is not absolutely certain that only the selected individuals themselves filled out the questionnaires or that they responded truthfully, with proper consideration, to the questions. Despite the sample not being a random sample and the response rate not being ideal, the data, together with the statistical methods used, seem sufficient for the result, which, due to the coverage error, only gives suggestions about the target population, i.e. the private investors in Finland who utilise financial statement information in their economic decision-making (per mid-2011).

General discussion. The proportion of users who are aware of that a cash flow statement can be manipulated by preparers, for example, the management, is found to be higher than 70 %. This is consistent with the prior research stating that, although a common belief has long existed that the cash flow statement cannot be manipulated by preparers (Broome 2004), it is now understood that cash flow statements can be almost as vulnerable to manipulation as income statements (Dechow 1994; Tergesen 2002; Nurnberg 2006).

By combining this with the results presented in chapter 4.4.5 that a clear majority of users trust that audited cash flow statements are congruent with the applicable standard if not mentioned otherwise, it is suggested that, although they are aware of the possibility of manipulation by preparers, most users trust that the auditors will detect and correct or disclose any manipulation. Together with the evidence presented in recent studies (Healy & Wahlen 1999; Dechow & Skinner 2000; Day 2002; Maremont 2002a; Romero & Berenson 2002; Sender 2002; Healy & Palepu 2003; Broome 2004; Gullapalli 2005; Nurnberg 2006; Brigham & Houston 2007; Scholz 2008; Ivancevich et al. 2012; Lee 2012; Hanini & Abdullatif 2013) that cash flow statements are, in practice, being manipulated and the results presented in chapters 4.2.2 and 4.2.3 that only a minority of auditors are even aware of that a cash flow statement can be manipulated and that minority of them would require a mention if the reported operating cash flows are boosted by the increase of current maturities of long-term debts, this allows for the monitoring aspect in the principal-

agent relationship to fail and an aspect of adverse selection to manifest in audited cash flow statements; that is, the cash flow statement is being manipulated by the preparer, but the auditor does not detect and correct or require disclosing this manipulation.

Almost all users reckon drastic non-payment of accounts payable should be mentioned (H_U7)

Associations with independent variable data. A statistically extremely significant (p<,001)[343] association exists between whether or not users reckon there should be a mention about the entity not paying its accounts payable due the last month of the accounting period and their education major: both accounting&finance majors and other business majors reckon less often than expected, while other majors reckon more often than expected, that such information should be disclosed. No statistically significant associations can be found between whether or not users reckon there should be such a mention and their education level (master's degree, bachelor's degree, other degree, or student) or whether or not they use cash flow statements for economic decision-making[344].

Furthermore, no statistically significant associations can be found between whether or not users reckon there should be such a mention and whether they are younger or older than 40 or have more or less than 10 years of experience in using financial statements in economic decision-making[345]. Finally, no statistically significant associations can be found between whether or not users reckon there should be such a mention and whether they invest yearly more or less than 10 000 € or whether their investment portfolio is worth more or less than 100 000 €[346].

The result "almost all users reckon drastic non-payment of accounts payable should be mentioned" applies to a population that has characteristics similar (or different but statistically insignificant) to the sample. With the absence of a nonresponse analysis due to unknown population characteristics, the independent variable analysis above suggests that the higher the proportion of other majors[347] in

[343] Chi-Square Test
[344] Chi-Square Test
[345] Chi-Square Test
[346] Chi-Square Test
[347] I.e. other than accounting&finance and other business majors

the population is, the higher the proportion of users who want drastic non-payments of accounts payable mentioned is.

Critical assessment. Hypothesis U7 deals with whether or not users of financial statements reckon there should be a mention in the notes or in the auditor's report about the entity boosting its operating cash flows by stretching out accounts payable over their due dates. The extent of the stretching was defined as "not paying accounts payable due the last month of the accounting period".

In addition, respondents who indicated they do not reckon that such stretching should be mentioned were asked if they reckoned there should be a mention in the notes or in the auditor's report if the entity has not paid its accounts payable due Q4 of the accounting period. This question was measured with a 7-point Osgood scale from 1 (definitely not) to 7 (definitely yes), and, for analysing purposes, the responses were recoded as "No" (responses 1 to 3), "No opinion for or against" (response 4) and "Yes" (responses 5 to 7). The Osgood scale can be understood as an ordinal level of measurement. The ordinal level of measurement enables the data to be ranked or ordered, but the magnitude of differences between the values is not distinguishable (Lind et al. 2012, 11). It is not certain that, in the mind of a respondent, the values 1 to 3 indicate "No", the value 4 indicates "No opinion for or against", and the values 5 to 7 indicate "Yes". Therefore, a possibility of a measurement error exists regarding this question. To comply with hypotheses P3 and A4, a point estimate is used in table 37 in chapter 4.5 to display the result about Q4's accounts payable.

Noteworthy is that the use of a population estimate and the possibility of a measurement error apply only to the question about Q4's accounts payable – not to the question about whether or not the respondent reckons it should be mentioned if the entity did not pay any of its accounts payable due the last month of the accounting period, which was a "yes or no" question. Both are, however, affected by the previously discussed limitations originating from the methods and data: Although preventive measures were taken and nothing suggests otherwise, due to the survey method, it is not absolutely certain that only the selected individuals themselves filled out the questionnaires or that they responded truthfully, with proper consideration, to the questions. Despite the sample not being a random sample and the response rate not being ideal, the data, together with the statistical methods used, seem sufficient for the result, which, due to the coverage error, only

gives suggestions about the target population, i.e. the private investors in Finland who utilise financial statement information in their economic decision-making (per mid-2011).

To summarise, the result about last month's account payable is on a par reliable with most results in this study, whereas the result about Q4's accounts payable is faced with additional uncertainty. To account for this, they are phrased as follows: more than 90 % of users reckon the entity not paying its accounts payable due the last month should be mentioned, and the point estimate for users who reckon the entity not paying its accounts payable due Q4 should be mentioned is 96 %. This warrants the conclusion that almost all users want drastic non-payment of accounts payable mentioned – "drastic" referring to not paying any accounts payable due the last month, or longer period, until the next accounting period.

General discussion. The results suggest that almost all users reckon there should be a mention in the notes or in the auditor's report about the entity boosting the reported operating cash flows by stretching out its accounts payable over their due dates. The results are consistent with the condition of conflict of interest, which stipulates that users of financial statements expect audited financial statements, and cash flow statements within them, to be free from management bias, i.e. non-manipulated, and the condition of consequence, which entails that users of financial statements expect audited financial statements to contain all the appropriate disclosures of information, because they want financial statements to contain as much relevant information as possible (Cosserat 2000).

The boosting of operating cash flows has been documented in prior research by this method (Hendriksen 1970; Heath 1978a; Nurnberg 2006; Siegel 2006; Lee 2012) and other not specifically prohibited methods (Maremont 2002b; Broome 2004). Although it is not specifically prohibited under FAS or IFRS, the entity not paying any of its accounts payable due the last month of the accounting period, or at least due Q4, and thus boosting the reported operating cash flow may easily constitute as such information that is required by Accounting Act 3:2.1 and IAS 1 paragraph 112 to be provided in the notes. However, the results presented in chapters 4.1.3 and 4.2.4 – that only a minority of preparers would provide, and only a minority of auditors would require, this disclosure – suggest than this aspect of adverse selection may manifest in majority of financial statements: if the reported cash flow figures are manipulated by drastically stretching out accounts payable

over their due dates, this is likely not disclosed in the financial statements or in the auditor's report.

Whether or not this boosting of operating cash flows by stretching out payments over their due dates constitutes as such information that is required by Accounting Act 3:2.1 and IAS 1 paragraph 112 to be provided in the notes, the results show that almost all users demand it regardless: more than 90 % of users reckon it should be mentioned in the notes or in the auditor's report if the entity has not paid any of its accounts payable due the last month whereas only fewer than 20 % of preparers would provide, and fewer than 25 % of auditors would require, this information. Thus, the preparing and auditing processes fall short in this aspect – after all, the fundamental purpose of financial statements is to provide users useful, relevant and sufficient, comparable and understandable information (KHT-yhdistys 2008; FASB 2010; IASB 2010) and the value of an audit is determined entirely by its practical benefit (Flint 1988), and as cash flow statements are suggested to more and more become the new focus for users of financial statements (Mechelli 2009), auditors should adjust their work accordingly in order to provide the most value to the public (Siegel 2006).

More than 85 % of users prefer the direct method for presenting operating cash flows (H_U8)

Associations with independent variable data. A statistically highly significant (p=,004)[348] association exists between whether or not users prefer the direct method and their education level: those who have a master's degree, a bachelor's degree, or who are students, tend to prefer it less often than expected, while those who have some other degree tend to prefer it more often than expected. Furthermore, there is a statistically highly significant (p=,002)[349] association between whether or not users prefer the direct method and whether they are younger or older than 40: those who are 40 or older tend to prefer it more often than expected. Similarly, a statistically significant (p=,022)[350] association exists between whether or not users prefer the

[348] Chi-Square Test
[349] Chi-Square Test
[350] Chi-Square Test

direct method and whether they invest yearly more or less than 10 000 €: those who invest more than 10 000 € yearly tend to prefer it more often than expected.

No statistically significant associations can be found between whether or not users prefer the direct method and their education major (accounting&finance major, other business major, or other major) or whether or not they use cash flow statements for economic decision-making[351]. Similarly, no statistically significant associations can be found between whether or not they prefer the direct method and whether they have more or less than 10 years of experience in using financial statements in economic decision-making or whether their investment portfolio is worth more or less than 100 000 €[352].

The result "more than 85 % of users prefer the direct method for presenting operating cash flows" applies to a population that has characteristics similar (or different but statistically insignificant) to the sample. With the absence of a nonresponse analysis due to unknown population characteristics, the independent variable analysis above suggests that the higher the proportion of users who are at least 40 years-of-age, invest at least 10 000 € per year, or have some other degree[353] in the population is, the higher the proportion of users who prefer the direct method is.

Critical assessment. The previously discussed limitations originating from the methods and data apply: Although preventive measures were taken and nothing suggests otherwise, due to the survey method, it is not absolutely certain that only the selected individuals themselves filled out the questionnaires or that they responded truthfully, with proper consideration, to the questions. Despite the sample not being a random sample and the response rate not being ideal, the data, together with the statistical methods used, seem sufficient for the result, which, due to the coverage error, only gives suggestions about the target population, i.e. the private investors in Finland who utilise financial statement information in their economic decision-making (per mid-2011).

General discussion. The proportion of users who prefer the direct method for presenting operating cash flows is found to be higher than 85 %. This is consistent with the prior research stating that users of financial statements would much prefer

[351] Chi-Square Test
[352] Chi-Square Test
[353] I.e. other than a master's degree, a bachelor's degree, or who are students

the direct method for operating cash flows (Moonitz 1956; Roberts & Gabhart 1972; Grudnitski & Harrison 1977; Heath 1978b; Heath 1981; Gibson & Kruse 1984; Drtina & Largay 1985; Bracken & Volkan 1988; Richardson 1991; Cornell & Apostolou 1992; Trout et al. 1993; Jones et al. 1995; Bahnson et al. 1996; Epstein et al. 2005; Mechelli 2009; Miller & Bahnson 2012) because it is perceived to be easier to understand (Spiller & Virgil 1974; Hovey 1986; Boze 1987; O'Leary 1988; Epstein & Pava 1992; Yap 1997; Stickney & Weil 2003; Brahmasrene et al. 2004; Broome 2004; Stice et al. 2004; Hodder et al. 2008), and it is argued to be more useful in the prediction of future cash flows (Krishnan & Largay 2000; Plumlee 2003; Arthur & Chuang 2006; Orpurt & Zang 2009; Farshadfar & Monem 2011; Farshadfar & Monem 2012; Farshadfar & Monem 2013; Hales & Orpurt 2013) and in the assessment of liquidity and solvency (Klammer & Reed 1990; Kojima 2012). Furthermore, standards guiding the construction of cash flow statements (KILA 30.1.2007, IAS 7 and SFAS 95) encourage preparers to use the direct method.

However, as the result presented in chapter 4.3.3 shows, more than 85 % of published cash flow statements in Finland are found to not meet this users' preference; instead, those present the operating activities section using the indirect method. Indeed, it is apparent also from prior research that a vast majority of companies are reporting their operating cash flows using the indirect method (Wallace et al. 1997; Troberg 2007) – primarily, because it is perceived to be easier to prepare (Hertenstein & McKinnon 1997; Epstein et al. 2005), and it requires no additional recording or ledger manipulation than that is provided in typical accounting systems (Kwok 2002). The proportion of cash flow statements that have been prepared using the indirect method has been reported to be well over 90 per cent (Rue & Kirk 1996; Wallace et al. 1999; Krishnan & Largay 2000; Broome 2004; Mechelli 2009; Orpurt & Zang 2009), and naturally, the indirect method is not entirely without its supporters (Seed 1984; Thompson & Buttross 1988; McEnroe 1989; Stolowy & Walser-Prochazka 1992; Anthony 1997; Brahmasrene et al. 2004; Ding et al. 2006; Troberg 2007).

6. Conclusions

The aim of the study is to discover problem areas in preparing and auditing cash flow statements and consider their effects on the quality of published cash flow statements and what they mean for financial statement users in the Finnish context. First step was to identify possible problem areas from the existing research literature and, when no research evidence was available, hunches based on my accounting work experience. Six problem areas in preparing and auditing cash flow statements are identified: 1) cash flow statement is the least important financial statement section for preparers and auditors, 2) comparability issues caused by current regulation, 3) error-prone preparing practice, 4) adverse selection (manipulation), 5) moral hazard (lacking effort in preparing and auditing), and 6) preparers insisting on the indirect presentation of operating cash flows. Second step was to investigate using empirical data specifically collected for this purpose whether or not such problem areas exist in Finland. Chapter 6.1 provides summaries on each problem area. After that, chapter 6.2 considers the problem areas' effects on the quality of published cash flow statements, and chapter 6.3 considers their meaning for users. Chapter 6.4 continues to point out the limitations of this study, and chapter 6.5 provides a dense summary and a table of the conclusions. Finally, chapter 6.6 assesses this study's contribution and suggests possible future research ideas.

6.1 The six discovered problem areas

1. Cash flow statement is the least important financial statement section for preparers and auditors. Both preparers and auditors are found to consider the cash flow statement the least important financial statement section, which is also apparent within every sub-group of preparers and auditors allowed by the independent variable data – a possible reason for this is the reported limited attention to cash flow statements in both accounting and auditing education. These

results matter because it has been noted that people act on their perceptions, which implies that preparers and auditors devote the most attention to those sections of financial statements they consider the most important, and vice versa, the least attention to those sections they consider the least important. Therefore, preparers and auditors perceiving the cash flow statement as the least important financial statement section is a possible reason for the discovered moral hazard among them.

Preparers considering the cash flow statement the least important financial statement section may also be a possible reason for the discovered error-prone preparing practice: Companies and accounting firms have only felt the need to invest in accounting systems that can automatically produce balance sheets and income statements. Furthermore, they may not have then felt the need to equip their accounting scheme to include the accounts that are necessary for producing a cash flow statement, which, in turn, makes the manual preparation of cash flow statements increasingly more challenging and, thus, error-prone.

2. Comparability issues caused by current regulation. Comparability issues are identified to originate from three types of current regulation: 1) current regulation that allows different presentation options on a subject, 2) current regulation that is specific on a subject, and 3) current regulation that is not unambiguous on a subject. Regulation concerning taxes, interest and dividends is an example of the first type, regulation concerning capacity acquisitions is an example of the second type, and regulation concerning non-cash transactions is an example of the third type.

Regarding the first type, although they are allowed to be presented in different ways, tax cash flows are suggested to be allocated between operating, investing and financing activities based on the activity causing the gain being taxed, interest and dividend cash outflows are suggested to be treated equally and classified as financing activities, and interest and dividends cash inflows are suggested to be classified as investing activities. These suggestions seem not to be followed in practice: of cash flow statements showing them, more than 95 % are found to present taxes solely as operating activities (instead of allocating them), more than 95 % are found to present interest paid solely as operating activities and all are found to present dividends paid solely as financing activities (instead of treating interest and dividends paid equally), and more than 90 % are found to present interest received, and more than 55 % are found to present dividends received, solely as operating activities (instead of investing activities). Regarding the second and the third type,

examples of them are used to investigate moral hazard among preparers and auditors, as it will be discussed shortly.

3. Error-prone preparing practice. Majority of cash flow statements are found to be prepared completely manually, for example, in Microsoft Excel using the balance sheet, the income statement and other book-keeping material – only in less than 10 per cent of the respondents' cases could the statement be automatically produced from the accounting system. Furthermore, it is indicated that the manual preparation of cash flow statements is a specialty skill that only some accountants have. Because the manual preparation implies a rather complicated method where transactions that are firstly converted into an accrual basis for the balance sheet and the income statement are manually translated back into a cash basis, the results suggest that the typical preparing process of the cash flow statement is considerably more error-prone – especially since accounting education reportedly gives only little attention to the cash flow statement, which may leave preparers to seek out the guidance themselves – than that of the balance sheet or the income statement, which are assumed to be automatically available from the accounting system.

4. Adverse selection (manipulation). On a general level, this study accepts the prevalent notion in the relevant literature that cash flow statements can be, and have been, manipulated by preparers; this is supported by the result that more than 70 per cent of users are found to be aware of the possibility of manipulation by preparers. On the other hand, only a minority of auditors are found to be aware of that a cash flow statement can be manipulated, which is alarming because it implies that majority of auditors may be ill-equipped to detect the possible manipulation – as, again, it has been reported that people act on their perceptions.

Two types of manipulation are identified: 1) manipulation by methods prohibited under both FAS and IFRS, and 2) manipulation by methods not specifically prohibited under FAS or IFRS. Boosting operating cash flows by the increase of current maturities of long-term debts is an example of the former, and boosting operating cash flows by drastically stretching out payments of accounts payable over their due dates is an example of the latter.

Regarding the first type, only a minority of auditors are found to require a mention in the notes or in the auditor's report if the change in current liabilities that is a result of reclassifying debt from being a long-term liability to being a current liability is reported as an operating activity on the cash flow statement; the result of

this is that what actually are loans are reported as operating cash flows. Prior evidence exists that operating cash flows can be, and have been, manipulated by such a method, and, although the question presented to auditors did not specify whether it would have a material effect on the cash flow statement, this is indeed prohibited under both FAS and IFRS.

Regarding the second type, although it is not specifically prohibited, boosting operating cash flows by drastically stretching out operating payments over their due dates may constitute as such information that is required by Accounting Act 3:2.1 and IAS 1 paragraph 112 to be provided in the notes. Yet, a clear minority of preparers would provide, and a clear minority of auditors would require, this disclosure: The proportion of preparers that would provide information about the entity not paying any of its accounts payable due the last month of the accounting period is found to be lower than 20 %, and the point estimate for the population proportion of preparers who would disclose information about the entity not paying any of its accounts payable due Q4 is 34 %. The proportions of KHT- and HTM-auditors that would require mentioning the non-payment of the last month's accounts payable are both found to be lower than 25 %, and the point estimates for the population proportions of KHT- and HTM-auditors who would require such a mention about Q4's accounts payable are 42 % and 46 %, respectively.

5. Moral hazard (lacking effort in preparing and auditing). First, on a general level, at least 75 % of both KHT- and HTM-auditors are found to spend the least time with the cash flow statement of all the sections of the financial statements during an annual audit of an entity – this is also apparent within every sub-group of auditors allowed by the independent variable data. Although this alone does not indicate that the cash flow statement is not meticulously audited, it does contribute to the accumulating evidence on the subject. Furthermore, it is a possible reason for moral hazard among preparers; that is, auditors spending the least amount of time with the cash flow statement during audits may signal preparers that neither they need to put substantial effort in constructing it. Second, as it was mentioned before, two examples of current regulation – namely the presentation of payments for capacity acquisitions and non-cash transactions – are used to investigate moral hazard on specific aspects of preparing and auditing cash flow statements.

Regarding cash payments relating to capacity acquisition, the results suggest that small percentages of preparers and auditors know how to present them correctly:

Fewer than 5 % of manual preparers are found to present them correctly under both FAS and IFRS, fewer than 20 % of FAS manual preparers are found to present them correctly under FAS, and fewer than 25 % of IFRS manual preparers are found to present them correctly under IFRS. Of auditors, fewer than 5 % are found to know how they should be presented under both FAS and IFRS, fewer than 25 % are found to know how they should be presented under FAS, and fewer than 5 % are found to know how they should be presented under IFRS. Although these are very low, the proportions of preparers and auditors who would present them correctly on any given cash flow statement may be higher if the entity has only some types of capacity acquisition payments, or if some preparers or auditors would refer to the regulation when actually preparing or auditing a cash flow statement, but did not do so when filling out the questionnaire.

Regarding non-cash transactions, this study takes the stand that at least all material non-cash transactions should be omitted from the cash flow statements prepared under FAS because that is prescribed in KILA 30.1.2007, following of which is argued to be an application of the good accounting practice required by Accounting Act 1:3. Yet, the proportion of FAS manual preparers who indicate they would omit material non-cash transactions from FAS cash flow statements is found to be lower than 30 %. Similarly, the proportions of KHT-auditors and HTM-auditors who would omit them are found to be lower than 50 % and 35 %, respectively. Furthermore, it is found that majority of those FAS manual preparers who indicate the omission seem to never or rarely use any accounting material essential for detecting the non-cash transactions (although there is some grey area as to from which accounting materials the non-cash transactions can be identified, and also a possibility of measurement error exists due to the used Osgood scale).

6. Preparers insisting on the indirect presentation of operating cash flows. Operating activities are suggested to be presented using the direct method. However, in practice, this suggestion is not followed, and more than 85 % of cash flow statements are found to use the indirect method for presenting the operating activities section.

6.2 Effects on the quality of published cash flow statements

Effects on the qualitative characteristics of published cash flow statements. In terms of qualitative characteristics of useful financial information, to be useful, the information must be relevant and reliable (a faithful representation). Because, out of the two fundamental qualitative characteristics, relevance is largely dependent on the needs of the user, the discovered problem areas' effects are considered on the more objective fundamental qualitative characteristic, that is, reliability.

Reliability is achieved if the information on the cash flow statement faithfully represents the phenomena it purports to represent. Error-prone preparing practice jeopardises reliability because the manual preparing method may induce errors on the statement. Adverse selection, and not disclosing it, reduces reliability, for example, because the reported operating cash flow no longer represents what users are entitled to expect it to represent if not stated otherwise – that is, the operating cash flows at the level of the entity's actual operating performance.

Moral hazard was investigated on two specific aspects: Not presenting capacity acquisition cash flows correctly reduces reliability because this aspect of the cash flow statement no longer faithfully represents what it purports to represent – that is, the capacity acquisition payments in accordance with the applicable standard. Not omitting material non-cash transactions from the cash flow statement reduces reliability because, as the phenomenon the cash flow statement purports to represent is the realised cash flows of an entity, not omitting material non-cash transactions from the statement clearly results in not faithfully representing the actual, realised cash flows. Generally speaking, moral hazard reduces reliability because users can no longer rely on that the cash flow statement figures represent the entity's cash flows in accordance with the current regulation.

In addition to the fundamental qualitative characteristics of useful financial information, comparability and understandability of the information enhance the usefulness. The current regulation itself contains aspects that reduce the comparability of different cash flow statements – again, these were classified as allowing, specific, and ambiguous current regulation.

By nature, allowing taxes, interest and dividends to be presented in various ways on cash flow statements reduces comparability because unlikely all companies

would choose the same options. As to the found reporting choices, 1) not allocating taxes (i.e. presenting them solely as operating activities) reduces comparability, for example, because the operating cash flows of operationally identical companies will contain various amounts of taxes that originated from investing or financing activities, 2) treating interest and dividends paid differently (i.e. presenting interest paid as operating activities and dividends paid as financing activities) reduces comparability, for example, because companies relying on debt financing will report lower net operating cash flow compared to operationally identical companies relying on equity financing, and 3) due to treating interest and dividends received as operating activities rather than investing activities, the comparability is, first, jeopardised, for example, because a company holding significant investments in affiliated companies can manipulate its operating cash flow by increasing the dividends it receives from such companies, and second, reduced, for example, because the operating cash flows of operationally identical companies will include the various amounts of interest and dividend collections, which result from making loans or investments in debt and equity securities, i.e. investing activities.

The specific regulation concerning capacity acquisition payments reduces comparability because, depending on the acquisition strategy, the payments should end up in different sections of the cash flow statement. As a result, from the perspective of reported net operating cash flow, companies whose leases are classified as operating leases will perform more poorly than otherwise identical companies whose leases are classified as finance leases or companies that use instalments to pay for the equipment; also, the net operating cash flows of a company would be higher under IFRS than under FAS if the company's leases are classified as finance leases. Nonetheless, this regulation must be followed when constructing the cash flow statement. Seemingly more dangerous source of reduced comparability is the discovered moral hazard – that is, not presenting capacity acquisition cash flows correctly in accordance with the applicable standard – because the classification errors likely vary on different cash flow statements.

The ambiguous regulation under FAS concerning non-cash transactions jeopardises comparability, for example, because two identical companies with the same non-cash transactions may report different cash flow statements depending on how the preparer interprets the regulation. Nonetheless, this study takes the stand that material non-cash transactions should always be omitted. The results on

omitting material non-cash transactions from the cash flow statement indicate moral hazard and reduced comparability because, as material non-cash transactions are not omitted from some statements, but are omitted to some extent from others, the different cash flow statements are no longer comparable with each other.

Furthermore, error-prone preparing practice jeopardises comparability because the possible errors induced will likely vary on different cash flow statements. Adverse selection, and not disclosing it, reduces comparability because unlikely all entities would manipulate their accounts in the same manner. Finally, preparers' insisting on the indirect presentation of operating cash flows reduces understandability because the direct method is reported to be easier for users to understand.

The effects of the results concerning error-prone preparing practice, adverse selection and moral hazard further considered. The results on error-prone preparing practice suggest that majority of cash flow statements are prepared manually by translating the transactions that are firstly converted into an accrual basis for the balance sheet and the income statement back into a cash basis – a practice, which is error-prone, and which may result in quasi-cash-based statements especially since accounting education reportedly gives only little attention to the cash flow statement. Therefore, the results allow for that majority of published cash flow statements are subjected to being infested with unintentional errors.

This study rationalises that in order for adverse selection to manifest in published cash flow statements, two conditions must be met: 1) the preparer tries to manipulate the statement, and 2) the auditor does not detect this manipulation, nor is it otherwise disclosed in the financial statements. Regarding the former, this study accepts that cash flow statements can be, and have been, manipulated by preparers. Regarding the latter, the results suggest that most auditors are ignorant of or indifferent to aspects of cash flow statement manipulation. Furthermore, a clear minority of preparers are found to provide, and a clear minority of auditors are found to require, additional information if the cash flow statement has been manipulated by a method not specifically prohibited under FAS or IFRS. These results allow adverse selection to manifest in published cash flow statements: given the cash flow figures are manipulated by preparers using the investigated methods, this will likely not be disclosed in the financial statements or in the auditor's report.

The results suggest that moral hazard exists among both preparers and auditors, which was evidenced primarily by using two examples of current regulation. This, in turn, allows moral hazard to manifest in published cash flow statements: preparers may have lacked in effort to produce the statement correctly and auditors may have not recognised the errors. The results on the two examples suggest – considering that most cash flow statements are found to be prepared manually – first, that capacity acquisition payments may be incorrectly presented on most cash flow statements, and second, that most cash flow statements are likely not cleared from the effects of material non-cash transactions. More generally, moral hazard among preparers and auditors results in published cash flow statements that may be flawed on different aspects.

6.3 Meaning for users

The most important result concerning users is a general one: most users expect the published cash flow statement to be congruent with the applicable standard – that is, more than 60 % of users are found to consider it important, and more than 60 % of users are found to trust, that the published cash flow statement has been prepared in accordance with the applicable standard if it is not mentioned otherwise in the financial statements or in the auditor's report. These results have important implications: 1) despite any comparability issues the current regulation induces, most users still expect it to be followed when producing the cash flow statement; 2) despite the typical error-prone preparing practice, most users still trust that the cash flow statement is congruent with the applicable standard, 3) although they are aware of the possibility of preparers manipulating the statement, most users still trust that auditors will detect and correct, or at least disclose, any manipulation, and 4) despite moral hazard among preparers and auditors and them considering it the least important financial statement section, most users still expect the cash flow statement to be congruent with the applicable standard. However, the results on the discovered problem areas in preparing and auditing suggest that most published cash flow statements do not achieve the congruence in the aspects investigated.

Furthermore, it is found that more than 75 % of those users who consider it important also trust that the audited cash flow statement is congruent with the

applicable standard if not mentioned otherwise, and that more than 85 % of the previous use the cash flow statement in their economic decision-making. This implies that when the published cash flow statements are incongruent with the applicable standard, these users are misled, and consequently, their economic decisions may likely be made based in part on flawed information – potentially resulting in less than optimal allocation of scarce resources in the Finnish economy.

Overall, more than 75 % of users of financial statements are found to use the cash flow statement mainly for predicting future cash flows of an entity or an investment or for assessing an entity's liquidity. Consistent with prior research, though, users are still found to rank the cash flow statement third, behind the balance sheet and the income statement, in usefulness in future cash flow predictions. On the other hand, in usefulness in liquidity assessments, users are found to consider the cash flow statement the most useful financial statement section. Therefore, the problem areas in preparing and auditing matter because they affect a statement, which most users use in their economic decision-making, and which users consider the most, or the third most, depending on the purpose, useful financial statement section.

An aspect of cash flow statement manipulation, that is, the boosting of operating cash flows by drastically stretching out operating payments over their due dates, was used to investigate users' expectations for disclosing additional information. Regardless of whether or not it is required by Accounting Act 3:2.1 and IAS 1 paragraph 112, almost all users reckon it should be mentioned in the notes or in the auditor's report nonetheless: the proportion of users that reckon there should be a mention if the entity has not paid any of its accounts payable due the last month is found to be higher than 90 %, and the point estimate for the population proportion of users who reckon there should be a mention about the entity not paying any of its accounts payable due Q4 is 96 %. However, the results that only a clear minority of preparers would provide, and only a clear minority of auditors would require, this disclosure suggest that preparing and auditing practices fall short in this aspect and, as a result, the published statements typically do not meet this expectation of users.

The presentation of taxes was used to investigate users' preference for reporting an item that is allowed to be presented in different ways on the cash flow statement. Approximately half of users are found to prefer tax allocation and, therefore, are not satisfied with the current reporting practice where nearly all entities are found to report tax cash flows solely as operating activities – which implies no tax allocation.

More generally, the comparability issues caused by current regulation affect users because those make the cash flow statement less comparable, and thus, less useful.

Furthermore, more than 85 per cent of users are found to prefer the direct method for presenting operating cash flows. On the other hand, more than 85 % of cash flow statements are found to use the indirect method instead. As a result, most published cash flow statements do not meet users' preference on this aspect either.

Regarding the quality of published cash flow statements, the six problem areas result in published cash flow statements with lessened reliability, comparability and understandability. Because of these compromised qualitative characteristics, the typical cash flow statement is less useful to users than it could be.

6.4 Limitations of the study

Limitations of the study originate, on one hand, from the methods and data, and on the other hand, from the subjects of the problem areas and the actors. Due to the survey method, it is not absolutely certain that only the selected individuals themselves filled out the questionnaires or that they responded truthfully, with proper consideration, to the questions – although preventive measures were taken and nothing suggests otherwise. The data, together with the statistical methods used, seem sufficient for the results even though the samples were not random samples and the surveys' response rates were not ideal.

Regarding the problem areas, for example, moral hazard and adverse selection are wide subjects, which may manifest in numerous different ways. Because not every aspect of producing a cash flow statement could be investigated in this one study, only some were selected for investigation. For instance, the presentation of capacity acquisition payments and non-cash transactions were selected to investigate moral hazard because these are relatively simple aspects and they, presumably, affect most cash flow statements during most accounting periods, and furthermore, they can have a material effect on the figures presented on an entity's cash flow statement. However, the results suggesting moral hazard in these aspects does not indicate that preparers and auditors would lack effort in presenting other aspects correctly. There are numerous aspects that could be investigated in this manner, but that remains outside the scope of this study. To conclude, although a particular

result does not imply anything outside the particular aspect, together the results contribute to accumulating evidence on moral hazard among preparers and auditors. The same applies to the other problem areas.

Regarding the actors, the samples, from which the data are collected, limit the populations, about which inferences can be made based on the results: The results concerning preparers refer only to the population of authorised accountants in Finland (who prepare cash flow statements); but because they can be considered to be the leading experts in financial statement preparation, it seems likely that the discovered problem areas will exist among other preparer-groups as well. The results concerning auditors refer to the whole population of KHT- and HTM-auditors in Finland – however, it is not certain that the respondents actually audit cash flow statements in their work; consequently, if not necessarily indicating which percentage of cash flow statement auditors are affected by the discovered problem areas, the results, at least, suggest that the auditing of cash flow statements is a specialty skill that few auditors have. The data on users were collected from members of an Finnish investing association, and it is not certain that their views reflect the views of all private investors in Finland who utilise financial statement information in their economic decision-making; because of this coverage error, the results only give suggestions about the target population. Furthermore, because these results refer to the populations of the actors around cash flow statements, and since it's not known how many statements per year the preparer prepares or the auditor audits, it is not possible to conclude what precise percentage of published cash flow statements are affected by them. On the other hand, the results concerning cash flow statement contents do refer to the published consolidated and parent company cash flow statements of non-financial companies listed in Finland.

Finally, the results may be time-dependent – that is, the results indicating a problem at the time of this investigation does not indicate that the problem will exist in other accounting periods. The results concerning preparers, auditors and users refer to the authorised accountants, authorised auditors and private investors per mid-2011, and the results concerning cash flow statement contents refer to the three latest cash flow statements published by listed non-financial companies per mid-2013 – thus covering the accounting periods ending 2010 (or early 2011), 2011 (or early 2012) and 2012 (or early 2013).

6.5 Summary and a table of conclusions

Despite the accounting profession seems to be advocating accrual accounting, international research often suggests that the cash flow statement is of superior usefulness to users compared to the balance sheet and the income statement, not least because the information presented on the cash flow statement is suggested to be more relevant, reliable and comparable than the information presented on the accrual based financial statement sections. However, in the Finnish context, this study argues that there are problems in the cash flow statement production that diminish this usefulness of published cash flow statements. The problems originate from either the current regulation itself or the failure of preparers and auditors to fulfil their duties assigned to them by agency theory and other sources, that is, to produce cash flow statements that not only conform to the regulation but also strive to meet the expectations of users.

This study classifies the problems into broader problem areas, which, in different ways, negatively affect the quality of the published cash flow statement, i.e. they reduce or jeopardise the reliability, comparability and/or understandability of the statement. The compromised qualitative characteristics, in turn, make the cash flow statements published in Finland less useful to users than they could be. The lessened usefulness entails that the cash flow statement may be infested with intentional or unintentional errors, or that it otherwise does not meet users' expectations.

Speaking numbers, this study discovered six problem areas. Empirical evidence to support the existence of these problem areas in Finland was provided by testing 24 main hypotheses using data collected from 840 authorised accountants, 325 authorised auditors, 956 private investors and 625 published cash flow statements – outcomes of the tests are linked to the six problem areas. As some of the main hypotheses comprised of several sub-hypotheses, in total, the results are based on testing 31 hypotheses, which, in turn, involved performing approximately 250 SPSS statistical tests and 260 manual calculations. Table 38 summarises the main conclusions of this study.

Table 38. The six discovered problem areas and their effects on published cash flow statements and meaning for users

Problem areas	Relationships with other problem areas	Compared with users' perceptions
1. Cash flow statement is the least important financial statement section for preparers and auditors	Instead of having direct effects on cash flowstatements, it is a possible reason for error-prone preparing practice and moral hazard; furthermore, moral hazard among auditors possibly feeds moral hazard among preparers.	The problem areas affect a statement, which most users use in economic decision-making, and which users consider the most, or the third most, depending on the purpose, useful financial statement section.

	Effects on published cash flow statements	Meaning for users
2. Comparability issues caused by current regulation	Comparability is reduced due to aspects of current regulation that are allowing, specific or ambiguous in nature.	Most users still expect the current regulation to be followed. With regards to allowing current regulation, taxes seem not to be allocated in practice although half of users want it. Cash flow statement's usefulness to users is diminished.
3. Error-prone preparing practice	Majority of cash flow statements are subjected to being infested with unintentional errors. Reliability and comparability are jeopardised.	Most users' expectation of the congruence of the cash flow statement and the applicable standard is jeopardised. Cash flow statement's usefulness to users may be diminished.
4. Adverse selection (manipulation)	Cash flow statements can be manipulated, and manipulation by the methods investigated is likely not disclosed in the financial statements or in the auditor's report. Additional information required by Accounting Act 3:2.1 and IAS 1 paragraph 112 is likely not provided. Reliability and comparability are reduced.	Most users' expectation of the congruence of the cash flow statement and the applicable standard is jeopardised. Users are not likely to receive the information almost all of them want about drastic non-payment of accounts payable. Cash flow statement's usefulness to users is diminished.
5. Moral hazard (lacking effort in preparing and auditing)	Generally, preparers may lack in effort to produce the statement correctly and the monitoring by auditors may fail. Specifically, capacity acquisition payments may be incorrectly presented on most of cash flow statements and most cash flow statements are likely not cleared from the effects of material non-cash transactions. Reliability and comparability are reduced.	Most users' expectation of the congruence of the cash flow statement and the applicable standard is jeopardised. Cash flow statement's usefulness to users is diminished.
6. Preparers insist on the indirect presentation of operating cash flows	As most cash flow statements present operating cash flows using the indirect method, understandability is reduced.	Most users' preference for the direct presentation method of operating cash flows is likely not met. Cash flow statement's usefulness to users is diminished.

6.6 Contribution and future research ideas

Derived from the aim of this study, five tasks were completed: Several possible problems in the preparation and auditing of cash flow statements were, first, identified, and second, classified into six problem areas. Third, empirical evidence on the existence of these problem areas in Finland was provided. Fourth, the discovered problem areas' effects on the quality of published cash flow statements were assessed, and fifth, their meaning for users was investigated. In doing so, this study discovered problem areas in preparing and auditing cash flow statements and considered their effects on the quality of published cash flow statements and what they mean for financial statement users in the Finnish context.

This study contributes to the existing research literature in three ways: 1) it compiles prior literature touching different aspects of cash flow statements into one study, 2) it introduces a six-point classification of the problem areas in the cash flow statement production, and 3) it provides empirical evidence on subjects across the lifespan of the cash flow statement from its preparation to its usefulness to financial statement users in one setting (rather than focusing on a narrow issue in isolation). Thus, this study provides information on the big picture: a) of what quality are the published cash flow statements in Finland, b) what factors, i.e. problem areas, affect this quality, and c) what this quality means for financial statement users.

Preparers and auditors of cash flow statements may benefit from this study as it hopefully encourages assessing and, if needed, improving the current practices in order to produce even higher quality cash flow statements in the future. The benefit to users of financial statements is two-fold: on one hand, it points out the cash flow statement's potential superior usefulness to them, as apparently, not all of them are aware of this; on the other hand, it cautions them to not blindly trust the figures currently presented on the cash flow statement, even if it has been audited.

Future research could be conducted that is more specific in nature; that is, it may prove fruitful to focus on a single problem area in greater detail. For example, if a researcher could have access to companies' accounting data, i.e. at least the ledgers and journals in addition to the detailed balance sheets and income statements, it may prove interesting to investigate the effects of non-cash transactions on the companies' cash flow statements. On the other hand, the used research setting could be carried out in other countries.

References

Abdel-khalik, A. R. & Ajinkya, B. B. 1979. *Empirical Research in Accounting: A Methodological Viewpoint.* Sarasota, FL: American Accounting Association.

Accounting Act 1336/1997. Amendments up to 399/2013 included; kirjanpitolaki.

Accounting Objectives Study Group 1973. *Objectives of Financial Statements*. American Institute of Certified Public Accountants (AICPA).

Accounting Ordinance 1339/1997. Amandmends up to 547/2008 included; kirjanpitoasetus.

Accounting Principles Board 1963. *APB Opinion No. 3. The Statement of Source and Application of Funds.*

Accounting Principles Board 1971. *APB Opinion No. 19. Reporting Changes in Financial Position.*

Accounting Standards Steering Committee (ASSC) 1975, August. *The Corporate Report*. ICAEW.

Ahmed, A. & Duellman, S. 2007. Accounting conservatism and board of director's characteristics: An empirical analysis. *Journal of Accounting and Economics* 43(2–3), 411–437.

Ajzen, I. 1991. The theory of planned behaviour. *Organizational Behaviour and Human Decision Processes* 50, 179–211.

Ajzen, I. 1996. The directive influences of attitudes on behaviour. In Gollwitzer, P. M. & Bargh, J. A (Eds.) *The Psychology of Action: Linking Cognition and Motivation to Behaviour*. New York: Guildford, 385–403.

Ajzen, I. & Fishbein, M. 1977. Attitude-behaviour relations: A theoretical analysis and review of empirical research. *Psychological Bulletin* 84, 888–918.

Al-Attar, A. & Hussain, S. 2004. Corporate data and future cash flows. *Journal of Business Finance and Accounting* 31(7&8), 861–903.

Alderman, C. W. & Minyard, D. H. 1991. Preparing and presenting statements of cash flows. *The Journal of Accountancy* CLXXIII(1).

Ali, A. 1994. The Incremental Information Content of Earnings, Working Capital from Operations, and Cash Flows. *Journal of Accounting Research* 32(1), 61–74.

Ali, A. & Pope, P. F. 1995. The incremental information content of earnings, funds flow and cash flow: the UK evidence. *Journal of Business Finance & Accounting* 22(1), 19–34.

Alkula, T. Pöntinen, S. & Ylöstalo, P. 1994. *Sosiaalitutkimuksen kvantitatiiviset menetelmät.* Juva: WSOY.

Altman, E., Haldeman, R. & Narayanan, P. 1977, June. Zeta Analysis: A New Method to Identify Bankruptcy Risk of Corporations. *Journal of Banking and Finance,* 29–54.

American Institute of Certified Public Accountants (AICPA) 1961. *Accounting Research Study No. 2. "Cash Flow" Analysis and the Funds Statement*.

American Institute of Certified Public Accountants (AICPA) 2005. *Accounting Trends and Techniques* (59th ed.). Jersey City, NJ: AICPA.

Amihud, Y. & Lev, B. 1981. Risk reduction as a managerial motivation for conglomerate mergers. *Bell Journal of Economics* XII, 605–617.

Anderson, R. & Epstein, M. 1995, April. The usefulness of annual reports. *Australian Accountant*, 25–28.

Anthony, R. N. 1965. Accounting for Capital Costs. In Anthony, R. N., Dearden, J. & Vancil, R. F. *Management Control Systems.* R. D. Irwin Inc, 265–348.

Anthony, R. 1997. Financial Reporting in the 1990s and Beyond. *Accounting Horizons* 11(4), 107–111.

Anttila, R., Halonen, J., Jalkanen-Steiner, J., Kemppainen, O., Kärpänen, M., Nurmo, P., Penttilä-Räty, E., Pyykkönen, R-L., Sundvik, P., Suomela, M., Tolvanen, M., Torkkel, T., Torniainen, T. & Tuomala, M. 2009. *IFRS - Käytännön käsikirja.* Helsinki: Edita Publishing Oy.

Arnold, J. & Moizer, P. 1984, Summer. A survey of the methods used by UK investment analysts to appraise investment in ordinary shares. *Accounting and Business Research,* 195–207.

Arola, A. 2011a. Rahoituslaskelma – tilinpäätöksen outo lintu. *Tilisanomat* 32(3), 68–71.

Arola, A. 2011b. Rahoituslaskelma tilintarkastajien silmin. *Tilintarkastus* 4, 16–19.

Arrow, K. J. 1985. The economics of agency. In Pratt, J. W. & Zeckhauser, R. J. (Eds.) *Principals and agents: the structure of business*. Boston, Massachusetts: Harvard Business School Press, 37–54.

Arthur, N. & Chuang G. C.-H. 2006. *IAS 7 Alternative Methods of Disclosing Cash Flow From Operations: Evidence on the Usefulness of Direct Method Cash Flow Disclosures.* The University of Sydney. Working paper.

Artto, E. 1966. Tasearvostelu ja kassavirta-analyysit. *Talouselämä* 29(5), 94–98.

Auditing Act 459/2007. Amendments up to 679/2010 included; Tilintarkastuslaki.

Austin, L. M. & Bradbury, M. E. 1995. The accuracy of cash flow estimation procedures. *Accounting and Finance* 35(1), 73–86.

Bahnson, P. R., Miller, P. B. W. & Budge, B. P. 1996. Nonarticulation in Cash Flow Statements and Implications for Education, Research and Practice. *Accounting Horizons* 10(4), 1–15.

Bali, T. G., Ozgur, D. & Tehranian, H. 2008. Aggregate earnings, firm-level earnings, and expected stock returns. *Journal of Financial and Quantitative Analysis* 43(3), 657–684.

Barth, M. E., Cram, D. P. & Nelson, K. K. 2001. Accruals and the Prediction of Future Cash Flows. *The Accounting Review* 76(1), 27–58.

Batson, N. 2003. *Second interim report of Neal Batson, court-appointed examiner. In: re: Chapter 11 Enron Corp., et al., Debtors, Case No. 01-16034.* New York: United States Bankruptcy Court.

Beaver, W. H., Clarke, R. & Wright, W. F. 1979. The Association between Unsystematic Security Returns and the Magnitude of Earnings Forecast Errors. *Journal of Accounting Research* 17, 316–340.

Belkaoui, A. R. 1992. *Accounting Theory* (3rd ed.). London: Academic Press Limited.

Benartzi, S., Michaely, R. & Thaler, R. 1997. Do changes in dividends signal the future or the past. *The Journal of Finance* 52(3), 1007–1034.

Benston, G. J. 2006. Fair-value accounting: A cautionary tale from Enron. *Journal of Accounting and Public Policy* 25, 465–484.

Berle, A. & Means, G. 1932. *The Modern Corporation and Private Property.* New York: MacMillan Publishers.

Bernard, V. L. & Stober, T. L. 1989. The nature and amount of information in cash flows and accruals. *The Accounting Review* 64(4), 624–652.

Bernstein, L. 1993. *Financial statement analysis* (5th ed.). Homewood, IL: Richard D. Irwin, Inc.

Biddle, G. C. & Seow, G. S. 1991, September. *Relative versus Incremental Information Content: Cross-Industry Evidence for Net Income, Cash Flows and Sales*. University of Washington. Working paper.

Bierman, H. & Drebin, A. R. 1972. *Managerial Accounting: An Introduction* (2nd ed.). The Macmillan Company.

Blau, P. M. 1964. *Exchange and power in social life.* New York: Wiley.

Board, J. L. & Day, J. F. 1989, Winter. The Information Content of Cash Flow Figures. *Accounting and Business Research*, 3–11.

Bowen, R. M., Burgstahler, D. & Daley, L. A. 1986. Evidence on the Relationships Between Earnings and Various Measures of Cash Flow. *The Accounting Review* LXI(4), 713–725.

Bowen, R., Burgstahler, D. & Daley, L. 1987, October. The incremental information content of accrual versus cash flows. *The Accounting Review*, 723–747.

Boze, K. 1987. Cash Flows Statements: Converting From Accrual Based Financial Statements. *National Public Accountant* 32, 35–40.

Bracken, R. M. & Volkan, A. G. 1988. Cash Flows: A New Reporting Format for Turbulent Times. *Management Accounting* 69, 38–41.

Bradbury, M. 2011. Direct or indirect cash flow statements? *Australian Accounting Review* 57(2), 124–130.

Brahmasrene, T., Strupeck, C. D. & Whitten, D. 2004. Examining Preferences in Cash Flow Statement Format. *CPA Journal* 74(10), 58–60.

Brealey, R. A., Myers, S. C. & Allen, F. 2006. *Corporate Finance* (8th ed.). New York: McGraw-Hill/Irwin.

Brealey, R. A., Myers, S. C. & Allen, F. 2008. *Principles of Corporate Finance* (9th ed.). New York: McGraw-Hill/Irwin.

Brigham, E. F. & Houston, J. F. 2007. *Essentials of Financial Management.* Singapore: Thomson Learning.

Broadbent, J. & Laughlin, R. 2002. Accounting choices: Technical and political trade-offs and the UK's private finance initiative. *Accounting, Auditing & Accountability Journal* XV(5), 622–654.

Broome, O. W. 2004. Statement of cash flows: Time for change! *Financial Analysts Journal* 60(2), 16–22.

Brown, S. 2013, Aug 22nd. How to cheat a cash flow statement. *Finweek*, 37.

Bruns, W. & Merchant, K. 1990, August. The dangerous morality of managing earnings. *Management Accounting*, 22–25.

Burgstahler, D., Jiambalvo, J. & Pyo, Y. 1998. *The informativeness of cash flows for future cash flows*. University of Washington. Working paper.

Burrell, G. & Morgan, G. 1979. *Sociological Paradigms and Organisational Analysis.* London: Heinemann.

Bushee, B. J. 2001. Do institutional investors prefer near-term earnings over long-run value? *Contemporary Accounting Research* XVIII(2), 207–246.

Campbell, J. Y. & Shiller, R. J. 1988. Stock prices, earnings, and expected dividends. *The Journal of Finance* 43(3), 661–676.

Canace, T. G. & Wilkerson, J. E. Jr. 2014. A Practice-Based Statement of Cash Flows Learning Experience: An Initial Public Offering for Contempri Homes? *Issues in Accounting Education* 29(1), 195–216.

Carslaw, C. A. & Mills, J. R. 1991. Developing ratios for effective cash flow statement analysis. *The Journal of Accountancy* CLXXIV(5), 63–70.

Central Chamber of Commerce 2011. *The authorisation and supervision of auditors and audit firms in Finland.* Retrieved December 23, 2011, from Tilintarkastuslautakunta's website: http://www.tilintarkastuslautakunta.fi/til_eng/

CFA Institute 2005. *A Comprehensive Business Reporting Model: Financial Reporting for Investors*. Charlottesville, VA: CFA Institute.

Chamber of Commerce Act 878/2002. Amendments up to 475/2007 included; kauppakamarilaki

Chambers, R.J. 2002. *An Accounting Thesaurus: 500 Years of Accounting.* Amsterdam – Boston – London – New York – Oxford – Paris – San Diego – San Francisco – Singapore – Sydney – Tokyo: Pergamon.

Chen, K. & Shirmerda, T. 1981, Spring. An Empirical Analysis of Useful Financial Ratios. *Financial Managemen*, 51–60.

Cheng, C. S., Liu, C. & Schaefer, T. F. 1997. The Value-Relevance of SFAS No. 95 Cash Flows from Operations as Assessed by Security Market Effects. *Accounting Horizons* 11(3), 1–15.

Cheng, C. & Hollie, D. 2008. Do core and non-core cash flows from operations persist differentially in predicting future cash flows? *Review of Quantitative Finance & Accounting* 31(1), 29–53.

Chu, E. L. 1997. Impact of Earnings, Dividends and Cash Flows on Stock Returns: Case of Taiwan's Stock Market. *Review of Quantitative Finance and Accounting* 9, 181–202.

Chua, W. F. 1986. Radical developments in accounting thought. *Accounting Review* 61.

Climo, T. A. 1976. Cash flow statements for investors. *Journal of Business, Finance and Accounting* 3(3), 3–15.

Cohen, M. R. & Nagel, E. 1934. *An Introduction to Logic and Scientific Method.* New York: Harcourt, Brace and company.

Consler, J., Lepak, G. M. & Havranek, S. F. 2011. Earnings per share versus cash flow per share as predictor of dividends per share. *Managerial Finance* 37(5), 482–488.

Co-operatives Act 1488/2001. Amendments up to 936/2010 included; osuuskuntalaki.

Copeland, T., Koller, T. & Murrin, J. 1987. *Valuation-Measuring and Managing the Value of Companies.* McKinsey & Co, Inc.

Cornell, D. W. & Apostolou, B. 1992. Direct approach to cash flows enhances credit analysis. *Business Credit* April, 10–13.

Cosserat, G. W. 2000. *Modern auditing.* Chichester: John Wiley & Sons Ltd.

Day, J. F. 1986, Autumn. The use of annual reporting by UK investment analysts. *Accounting and Business Research*, 295–307.

Day, K. 2002, August 20. SEC Targets 'Swap' Deals by Telecom Firms. *Washington Post*, p. E1.

DeAngelo, H., DeAngelo, L. & Skinner, D. J. 1994. Accounting choice in troubled companies. *Journal of Accounting and Economics* 17, 113–143.

DeAngelo, L. E. 1981. Auditor size and auditor quality. *Journal of Accounting and Economics* 3(3), 183–199.

Dechow, P. M. 1994. Accounting earnings and cash flows as measures of firm performance: The role of accounting accruals. *Journal of Accounting and Economics* XVIII(1), 3–42.

Dechow, P. M., Kothari, S. P. & Watts, R. L. 1998. The relation between earnings and cash flows. *Journal of Accounting and Economics* 25, 133–168.

Dechow, P. M., Hutton, A. P. & Sloan, R. G. 1999, June. *The relationship between analysts' forecasts of long-term earnings growth and stock price performance following equity offerings*. Unpublished paper.

Dechow, P. M. & Skinner, D. J. 2000. Earnings management: Reconciling the views of accounting academics, practitioners, and regulators. *Accounting Horizons* XIV(2), 235–250.

DeFond, M. L., & Jiambalvo, J. 1994. Debt covenant violation and manipulation of accruals. *Journal of Accounting and Economics* 17, 145–176.

Dharan, B. G., & Lev, B. 1993. The valuation consequence of accounting changes: a multi-year examination. *Journal of Accounting, Auditing, & Finance* 8(4), 475–494.

Dillman, D. A. 1978. *Mail and telephone surveys: The total design method.* New York: Wiley-Interscience.

Dillman, D. A. 2007. *Mail and Internet Surveys - The Tailored Design Method; 2007 Update with New Internet, Visual, and Mixed-Mode Guide* (2nd ed.). Hoboken, New Jersey: John Wiley & Sons.

Ding, Y., Jeanjean, T. & Stolowy, H. 2006. *The Usefulness of Disclosing Both Direct and Indirect Cash Flows: An Empirical Study.* HEC School of Management, Paris. Working paper.

Drebin, A. R. 1964. 'Cash-Flowitis': malady or syndrome? *Journal of Accounting Research* 2(1), 25–34.

Drtina, R. E. & Largay, J. A. 1985. Pitfalls in Calculating Cash Flows From Operations. *Accounting Review* 60, 314–326.

Eduix Oy 1996–2009. *E-Lomake - Briefly in English*. Retrieved July 28, 2011, from Eduix Oy's website: https://e-lomake.fi/web/briefly-in-english/

Eisenhardt, K. M. 1989, January. Agency Theory: An Assessment and Review. *The Academy of Management Review* 14(1), 57–74.

Elliot, R. & Jacobson, P. 1994, December. Costs and benefits of business information disclosure. *Accounting Horizons*, 80–96.

Epstein, B. J., Nach, R. & Bragg, S. M. 2005. *GAAP 2006 - Intepretation and Applications of generally accepted accounting principles.* New Jersey: John Wiley & Sons, Inc.

Epstein, M. J. 1975. *The usefulness of annual reports to corporate shareholders*. Los Angeles: California State University. Bureau of Business and Economic Research.

Epstein, M. J. & Pava, M. L. 1992. How useful is the statement of cash flows. *Managerial Accounting*, 52–55.

Fama, E. F. & French, K. R. 2001. Disappearing dividends: changing firm charasteristics or lower propensity to pay? *Journal of Financial Economics* 60, 3–44.

Farshadfar, S. & Monem, R. 2011. Discretionary accruals and the predictive ability of earnings in the forecast of future cash flows: Evidence from Australia. *Corporate Ownership and Control* 9(1), 597–608.

Farshadfar, S. & Monem, R. 2012. The usefulness of operating cash flow and accrual components in improving the predictive ability of earnings: A re-examination and extension. *Accounting and Finance* Forthcoming.

Farshadfar, S. & Monem, R. 2013. Further Evidence on the Usefulness of Direct Method Cash Flow Components for Forecasting Future Cash Flows. *International Journal of Accounting* 48(1), 111–133.

Farshadfar, S., Ng, C. & Brimble, M. 2008. The relative ability of earnings and cash flow data in forecasting future cash flows – Some Australian evidence. *Pacific Accounting Review* 20(3), 254–268.

Ferrara, W. L. 1976. Accounting for performance evaluation and decision-making. *Management Accounting* 58(6), 13–19.

Ferrara, W. L. 1981. Decision models, financial reporting and cash flows. In Hicks, B. E. (Ed.) *Cash Flow Accounting*. Ontario: The International Group for Cash Flow Accounting & Laurentian University, 94–105.

Financial Accounting Standards Board (FASB) 1987. *Statement of Financial Accounting Standards No. 95. Statement of Cash Flows.*

Financial Accounting Standards Board (FASB) 2008. *Original Pronouncements As Amended. Statement of Financial Accounting Concepts No. 2. Qualitative Characteristics of Accounting Information.*

Financial Accounting Standards Board (FASB) 2010. *Statement of Financial Accounting Concepts No. 8. Conceptual Framework for Financial Reporting*.

Finger, C. A. 1994. The Ability of Earnings to Predict Future Earnings and Cash Flows. *Journal of Accounting Research* 32, 210–223.

Finnish Companies Act 734/1978. Amendments up to 129/2005 included; osakeyhtiölaki.

Fishbein, M. & Ajzen, I. 1975. *Belief, Attitude, Intention, and Behaviour: An Introduction to Theory and Research.* Reading, MA: Addison-Wesley.

Flanagan, J. & Whittred, G. 1992. Hooker Corporation: a case for cash flow reporting. *Australian Accounting Review* 1(3), 48–52.

Flint, D. 1988. *Philosophy and principles of auditing.* Basingstoke: MacMillan Press Ltd.

Foster, G. 1986. *Financial Statement Analysis.* Englewood Cliffs, NJ: Prentice Hall.

Francis, J. & Schipper, K. 1999. Have financial statements lost their relevance? *Journal of Accounting Research* 37, 319–352.

Frankel, R. 1992, February. *Accounting Information and Firms with Low-Grade Bonds*. Stanford University. Working paper.

Fredriksson, A., Havukainen, J., Hilmoja, J., Ilkka, H. L., Luoma, J., Mikkola, J., Mäkinen, T., Nevalainen, R., Ojala, A., Saari, J., Termäs, K., Tikka, M., Virtanen, P. & Vuorio, A. 2008. *Kirjanpitolaki tänään.* Jyväskylä: Gummerus Kirjapaino Oy.

Freeman, R. N. & Tse, S. Y. 1992. A Nonlinear Model of Security Price Responses to Unexpected Earnings. *Journal of Accounting Research* 30, 185–209.

Frino, A. & Jones, S. 2005. The Impact of Mandated Cash Flow Disclosure on Bid-Ask Spreads. *Journal of Business Finance & Accounting* 32(7), 1373–1396.

Fulmer, J., Moon, J., Gavin, T. & Erwin, J. 1984, July. A Bankruptcy Classification Model for Small Firms. *The Journal of Commercial Bank Lending*, 25–37.

Fulmer, J. G., Gavin, T. A. & Bertin, W. J. 1991. What factors influence the lending decision: a survey of commercial loan officers. *Commercial Lending Review* 7(1), 64–70.

Gadenne, D. L. & Iselin, E. R. 1996. Information needs for predicting financial distress in companies. *International Journal of Business Studies* 4(2), 21–37.

Gallegos, J. G. 1974. *An experiment in maximizing response to telephone interviews through use of a preliminary letter, based on principles of exchange theory*. Washington State University. Department of Sociology. Unpublished master's thesis.

Garcia Lara, J.M., Garcia Osma, B. & Penalva, F. 2007. Board of Director's characteristics and conditional accounting conservatism: Spanish evidence. *European Accounting Review* 16(4), 727–755.

Ghiselli, E. E., Campbell, J. P. & Zedek, S. 1981. *Measurement Theory for the Behavioral Sciences.* New York: W. H. Freeman.

Gibson, C. H. & Kruse, M. M. 1984. The Statement of Changes is Changing. *The Woman CPA* 46, 24–28.

Gombola & Ketz 1983, January. A Note on Cash Flow and Classification Patterns of Financial Ratios. *The Accounting Review*, 105–114.

Goyder, J. C. 1987. *The silent majority: Nonrespondents on sample surveys.* Boulder, CO: Westview Press.

Graham, J. R. & Harvey, C. R. 2001. The Theory and Practice of Finance: Evidence from the Field. *Journal of Financial Economics* 61, 187–243.

Greene, R. 1981, February 2. Are More Chryslers in the Offing? *Forbes*, 69–73.

Groves, R. M. 1989. *Survey errors and survey costs.* New York: Wiley.

Grudnitski, G. & Harrison, T. 1977. Subcommittee on IASC Exposure Draft Number 7 of the American Accounting Association's Committee on Financial Accounting Standards. *Accounting Review* 52(Suppl. 2–9), 197–204.

Grönroos, M. 2003. *Johdatus tilastotieteeseen – kuvailu, mallit ja päättely.* Tampere: Oy Finn Lectura Ab.

Gullapalli, D. 2005, March 1. Little Campus Lab Shakes Big Firms. *The Wall Street Journal*, C3.

Hackel, K. S. & Livnat, J. 1995, Fall. International Investment Based on Free Cash Flow: A Practical Approach. *The Journal of Financial Statement Analysis*, 5–14.

Hales, J. & Orpurt, S. F. 2013. A Review of Academic Research on the Reporting of Cash Flows from Operations. *Accounting Horizons* 27(3), 539–578.

Hallamaa, J., Launis, V., Lötjönen, S. & Sorvali, I. 2006. *Etiikkaa ihnistieteille.* Helsinki: SKS.

Hanini, E. & Abdullatif, M. 2013. Auditing the Statement of Cash Flows for Jordanian Public Listed Companies. *International Journal of Business and Management* 8(4), 123–134.

Hanna, J. D. 1992, March. *Characterizing the Relationship between Enexpected Cash-Flows and Abnormal Returns*. University of Waterloo. Working paper.

Hawkins, D. F. 1977. Toward an old theory of equity valuation. *Financial Analysts Journal* 33(6), 48–53.

Hawkins, D. & Campbell, W. 1978. *Equity Valuation: Models, Analysis and Implications.* New York: Financial Executives Institute.

Healy, P. 1985. The effect of bonus schemes on accounting decisions. *Journal of Accounting and Economics* 7, 85–107.

Healy, P. M. & Wahlen, J. M. 1999. A review of the earnings management literature and its implications for standard setting. *Accounting Horizons* XIII(4), 365–383.

Healy, P. M. & Palepu, K. G. 2003. The fall of Enron. *Journal of Economic Perspectives* XVII(2), 3–26.

Heath, L. C. 1978a. *Financial Reporting and the Evaluation of Solvency. Accounting Research Monograph No. 3*. New York: AICPA.

Heath, L. C. 1978b. Let's scrap the 'funds' statement. *The Journal of Accountancy* October, 94–103.

Heath, L. C. 1981. Cash receipts and payments vs income reconciliation. In Hicks, B. E. & Hunt, P. (Eds.) *Cash Flow Accounting*. Ontario: The International Group for Cash Flow Accounting & Laurentian University, 164–171.

Heath, L. C. 1985. Let's scrap the funds' statement. In Zeff, S. A. & Keller, T. K. (Eds.) *Financial Accounting Theory* (3rd ed.). New York: McGraw Hill, 241–253.

Heikkilä, T. 1998. *Tilastollinen tutkimus*. Helsinki: Edita.

Helenius, A. 1993. True and fair view. *Tilintarkastus* 5.

Hendriksen, E. 1970. *Accounting theory* (revised ed.). Homewood, IL: Richard D. Irwin, Inc.

Hertenstein, J. H. & McKinnon, S. M. 1997. Solving the puzzle of the cash flow statement. *Business Horizons* January–February, 69–76.

Hicks, B. E. 1981. The cash flow basis of accounting. In Hicks, B. E. & Hunt, P. (Eds.) *Cash Flow Accounting*. Ontario: The Intenational Group for Cash Flow Accounting & Laurentian University, 26–39.

Hirst, D. E., Hopkins, P. E. & Wahlen, J. M. 2004. Fair values, comprehensive income reporting, and bank analysts' risk and valuation judgments. *The Accounting Review* 79(2), 455–474.

Hodder, L., Hopkins, P. E. & Wood, D. A. 2008. The Effects of Financial Statement and Informational Complexity on Analysts' Cash Flow Forecasts. *The Accounting Review* 83(4), 915–956.

Homans & Curtis, C. P. 1934/1970. *An introduction to Pareto.* New York: Howard Fertig.

Hopper, T. & Powell, A. 1985. Making sense of research into organizational and social aspects of management accounting: a review of its underlying assumptions. *Journal of Management Studies* 22(5), 429–465.

Hoque, Z. 2006. Introduction. In Hoque, Z. (Ed.) *Methodological Issues in Accounting Research: Theories and Methods*. London: Spiramus Press Ltd, 1–5.

Hovey, D. 1986. Memo to FASB: A Cash Flow Statement Suggestion. *Management Accounting* 67, 63–67.

Hribar, P. & Collins, D. W. 2002. Errors in Estimating Accruals: Implications for Empirical Research. *Journal of Accounting Research* 40, 105–134.

Hughes, M., Hoy, S. & Andrew, B. 2010. Cash flows: The gap between reported and estimated operating cash flow elements. *Australasian Accounting Business and Finance Journal* 4(1), 96–114.

Hutton, A. P. 2002. *The role of sell-side analysts in the Enron debacle*. Tuck School of Business at Dartmouth College. Working paper 03-17.

Ijiri, Y. 1978, Summer. Cash Flow Accounting and Its Structure. *Journal of Accounting, Auditing and Finance*, 331–348.

Ijiri, Y. 1980, March. Recovery Rate and Cash Flow Accounting. *Financial Executive*, 54–60.

International Accounting Standards Board (IASB) 2008. *International Financial Reporting Standards (IFRSs) 2008 – Including International Accounting Standards (IASs) and Interpretations as approved at 1 January 2008.* London: International Accounting Standards Committee Foundation (IASCF).

International Accounting Standards Board (IASB) 2010. *The Conceptual Framework for Financial Reporting.*

Ivancevich, D. M., Ivancevich, S. H. & Hermanson, D. R. 2012, December. Material Weaknesses in Internal Control Related to the Statement of Cash Flows. *CPA Journal.* 29–33.

Jensen, M. C. & Meckling, W. H. 1976, October. Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics* 3(4), 305–360.

Jones, C. J. 1975. Accounting standards: a blind alley? *Accounting and Business Research* 5(20), 273–279.

Jones, S., Romano, C. A. & Smyrnios, K. X. 1995. An Evaluation of the Decision Usefulness of Cash Flow Statements By Australian Reporting Entities. *Accounting and Business Research* 25(98), 115–129.

Jones, S. & Ratnatunga, J. 1997. The decision usefulness of cash flow statements by Australian reporting entities: some further evidence. *British Accounting Review* 29, 67–85.

Joos, P. & Lang, M. 1994. The effects of accounting diversity: evidence from the European Union. *Journal of Accounting Research* 32, 141–168.

Kaplan, R. & Urwitz, G. 1979, April. Statistical Models of Bond Ratings: A Methodological Inquiry. *Journal of Business,* 231–261.

KHT-yhdistys 2008. *Osakeyhtiön tilinpäätösmalli 2009.* Helsinki: KHT-Media Oy.

KHT-yhdistys 2009. *Tilintarkastusalan kertomukset ja lausunnot 2009.* Helsinki: KHT-yhdistys – Föreningen CGR ry.

KHT-yhdistys 2010. *IFRS-standardit 2010.* Helsinki: KHT-yhdistys – Föreningen CGR ry.

Kieso, D., Weygandt, J. & Warfield, T. 2012. *Intermediate Accounting* (14th ed.). New York: Wiley.

Kim, M. & Kross, W. 2005. The ability of earnings to predict future operating cash flows has been increasing – not decreasing. *Journal of Accounting Research* 43, 753–780.

Kinnunen, J. & Koskela, M. 1999. Do cash flows reported by firms articulate with their income statements and balance sheets? Descriptive evidence from Finland. *The European Accounting Review* 8(4), 631–654.

Kirjanpitolautakunta (KILA). *Yleisohje rahoituslaskelman laatimisesta 29.12.1983*.

Kirjanpitolautakunta (KILA). *Yleisohje rahoituslaskelman laatimisesta 9.11.1999*.

Kirjanpitolautakunta (KILA). *Yleisohje rahoituslaskelman laatimisesta 30.1.2007*. Including amendmends made on 11.12.2007.

Kirkham, R. 2012. Liquidity Analysis Using Cash Flow Ratios and Traditional Ratios: The Telecommunications Sector in Australia. *Journal of New Business Ideas & Trends* 10(1), 1–13.

Klammer, T. P. & Reed, S. A. 1990. Operating cash flow formats: Does format influence decisions? *Journal of Accounting and Public Policy* 9(3), 217–235.

Klein, A. & Todd, R. 1993. The Market Valuation of Earnings and Cash Flows. In Butler, S. A. (Ed.) *Earnings Quality.* Norman: University of Oklahoma Center for Economic and Management Research.

Knutson, P. 1993. *Financial Reporting in the 1990s and Beyond*. Charlottesville, V A: Association for Investment Management and Research. 1993 Position paper.

Kojima, K. 2012. Decision usefulness of cash flow information format: An experimental study. *International Review of Business* 12, 23–44.

Krishnan, G. V. & Largay, J. A. 2000. The predictive ability of direct method cash flow information. *Journal of Business Finance & Accounting* 27(1–2), 215–245.

Kuula, A. 2006. *Tutkimusetiikka.* Tampere: Vastapaino.

Kwok, H. 2002. The effect of cash flow statement format on lenders' decisions. *The International Journal of Accounting* 37(3), 347–362.

Lambert, R. A. 2001. Contracting theory and accounting. *Journal of Accounting and Economics* 32(1–3), 3–87.

Lamont, O. 1998. Earnings and expected returns. *The Journal of Finance* 53(5), 1563–1587.

Lang, M. & McNichols, M. 1990, July. *Earnings Quality, Financial Distress and the Incremental Information Content of Cash Flows*. Stanford University. Working paper.

Largay, J. A. & Stickney, C. P. 1980. Cash flows, ratio analysis and the W.T.Grant Company bankruptcy. *Financial Analysts Journal* 36(4), 51–78.

Larrabee, H. A. 1945. *Reliable Knowledge.* Cambridge, Massachusetts: The Riverside Press.

Lawson, G. H. 1971, October. Cash flow accounting. *The Accountant* 28, 586–589.

Lawson, G. H. 1973, April. Some arguments for cash-flow accounting. *Certified Accountant* 65, 217–220, 247.

Lawson, G. H. 1981. The cash flow performance of UK companies. In Bromwich, M. & Hopwood, A. (Eds.) *Essays in British Accounting Research* (chapter 4). London: Pitman Publishing Ltd.

Lawson, G. H. 1982. Was Woolworth ailing? *The Accountant* 187(5616), 12–14, 32.

Lee, T. A. 1971, Autumn. Goodwill – an Example of Will-o'-the-Wisp Accounting. *Accounting and Business Research,* 318–328.

Lee, T. A. 1972a, January. The Relevance of Accounting Information Including Cash Flows. *Accountants' Magazine,* 30–34.

Lee, T. A. 1972b. A Case for Cash-Flow Reporting. *Journal of Business Finance,* 27–36.

Lee, T. A. 1974, Summer. Enterprise income: survival or decline and fall? *Accounting and Business Research,* 178–192.

Lee, T. A. 1978. The cash flow accounting alternative for corporate financial reporting. In van Dam, C. (Ed.) *Trends in Managerial and Financial Accounting*. Boston: Martinus Nijhoff, 63–84.

Lee, T. A. 1981a. Cash Flow Accounting and Reporting. In Lee, T. A. (Ed.) *Developments in Financial Reporting*. Oxford: Philip Allan Publishers Limited, 148–170.

Lee, T. A. 1981b. Developments in Company Financial Reporting: a History and an Introduction. In Lee, T. A. (Ed.) *Developments in Financial Reporting*. Oxford: Philip Allan Publishers Limited, 1–26.

Lee, T. A. 1981c. A Survey of Accountants' Opinions on Cash Flow Reporting. *Abacus* 17(2), 130–144.

Lee, T. A. 1981d. Cash flow accounting and corporate financial reporting. In Bromwich, M. & Hopwood, A. (Eds.) *Essays in British Accounting Research* (chapter 3). London: Pitman Publishing Ltd.

Lee, T. A. 1982. Laker Airways – the cash flow truth. *Accountancy* 94(1065), 115–116.

Lee, T. A. 1983. A note on users and uses of cash flow information. *Accounting and Business Research* 13(50), 103–106.

Lee, T. A. 1984. *Cash Flow Accounting.* England: Van Nostrand Reinhold (UK).

Lee, T. A. & Tweedie, D. P. 1975, Autumn. Accounting information: an investigation of private shareholder usage. *Accounting and Business Research*, 280–291.

Lee, T. A. & Tweedie, D. P. 1977. *The Private Shareholder and The Corporate Report.* London: ICAEW.

Lee, T. A. & Tweedie, D. P. 1981. *The Institutional Investor and Financial Information.* London: ICAEW.

Lee, L. F. 2012. Incentives to Inflate Reported Cash from Operations Using Classification and Timing. *The Accounting Review* 87(1), 1–33.

Leland, H. & Pyle, D. 1977. Information Asymmetries, Financial Structures, and Financial Intermination. *Journal of Finance* 32, 371–481.

Leppiniemi, J. 2006. *Kirjanpitolaki - kommentaari*. Juva: WS Bookwell Oy.

Lerner, E. M. & Rappaport, A. 1968, September–October. Limit DCF in Capital Budgeting. *Harvard Business Review*.

Lilien, S., Mellman, M. & Pastena, V. 1988. Accounting changes: successful versus unsuccessful firms. *The Accounting Review* LXIII(4), 642–656.

Limited Liability Companies Act 624/2006. Amendments up to 981/2011 included; osakeyhtiölaki.

Lind, D., Marchal, W. & Wathen, S. 2012. *Statistical Techniques in Business & Economics* (International 15th ed.). New York: McGraw-Hill/Irwin.

Livnat, J. & Zarowin, P. 1990, May. The incremental information content of cash-flow components. *Journal of Accounting and Economics*, 25–46.

Lorek, K. S. & Willinger, G. L. 1996. A Multivariate Time-Series Prediction Model for Cash Flow Data. *The Accounting Review* 71, 81–102.

Lorek, K. S. & Willinger, G. L. 2009. New evidence pertaining to the prediction of operating cash flows. *Review of Quantitative Finance & Accounting* 32(1), 1–15.

Machlup, F. 1955. *Southern economic j.* Jul.

Machlup, F. 1967. Theories of the firm: Marginalist, behavioral, managerial. *The American Economic Review* LVII(1), 1–33.

Madow, W. G., Nisselson, H. & Olkin, I. 1983. *Incomplete Data in Sample Surveys Volume 1 Report and Case Studies* (1st ed.). New York: Academic Press.

Mailibayeva, Z. D., Makarov, R. R. & Orazalin, N. S. 2012. Financial reporting practices in emerging economy: Determinants of cash flow reporting

methods in Kazakhstan. *Journal of International Business & Economics* 12(2), 97–104.

Maines, L. A. & McDaniel, L. S. 2000. Effects of comprehensive-income characteristics on nonprofessional investors' judgments: The role of financial statement presentation format. *The Accounting Review* 75(2), 179–208.

Maremont, M. 2002a, March 5. How Is Tyco Accounting for Its Cash Flow. *Wall Street Journal* CCXXXIX(44), C1–2.

Maremont, M. 2002b, March. Firm Acquired by Tyco Sped Payments to Bolster Cash Flow, E-Mail Indicates. *The Wall Street Journal*.

Marshall, A. 1924. *Industry and trade* (3rd ed.). London: The Macmillan Company.

Mathews, R. 1989. Is business income measurable? In Kerr, J. & Clift, R. C. (Eds.) *Essays in Honour of Louis Goldberg*. Melbourne: University of Melbourne, 17–45.

McCann, D. & Olson, G. T. 1994. The linkage between dividends and earnings. *The Financial Review* 29(1), 1–14.

McConnell, J. & Muscarella, C. J. 1985. Corporate Capital Expenditure Decisions and the Market Value of the Firm. *Journal of Financial Economics* 14, 399–422.

McEnroe, J. 1989. Cash Flow Accounting Revisited: A Note on a Partial Replication of the Lee Study. *Abacus* 25(1), 56–60.

McMonnies, P. 1988. *Making Corporate Reports Valuable.* London: Kogan Page/The Institute of Chartered Accountants of Scotland.

Mechelli, A. 2009. Accounting Harmonization and Compliance in Applying IASB Standards: An Empirical Survey about the First Time Adoption of IAS 7 by Italian Listed Groups. *Accounting in Europe* 6(2), 231–270.

Medawar, P. B. 1986. *The limits of science.* Oxford: OUP.

Meklin, P. 2009. Tarkastus verorahoitteisessa ja markkinarahoitteisessa toiminnassa - erojen ja yhtäläisyyksien teoreettisia perusteluja. In Heiskanen, J., Kihn, L. & Näsi, S. (Eds.) *Näkökulmia laskentatoimeen ja tilintarkastukseen*. Tampere: Tampereen yliopistopaino Oy - Juvenes Print, 56–69.

Miller, M. & Modigliani, F. 1961. Dividend Policy, Growth, and the Valuation of Shares. *Journal of Business* 34, 411–433.

Miller, M. & Rock, K. 1985. Dividend Policy under Asymmetric information. *Journal of Finance* 40, 1031–1052.

Miller, P. B. W. & Bahnson P. R. 2012. The spirit of accounting. *Accounting Today* Jul., 23–24.

Mills, J. R. & Yamamura, J. H. 1998. The Power of Cash Flow Ratios. *Journal of Accountancy* 186(4), 53–61.

Miranda-Lopez, J. E. & Nichols, L. M. 2012. The use of earnings and cash flows in investment decisions in the U.S. and Mexico: Experimental evidence. *Journal of International Accounting, Auditing and Taxation* 21(2), 198–208.

Moonitz, M. 1956. Reporting on the flow of funds. *The Accounting Review* 31(3), 375–385.

Morck, R., Shleifer, A. & Vishny, R. 1988. Management ownership and market valuation. *Journal of Financial Economics* XX(1), 293–315.

Morgan, G. & Smircich, L. 1980. The case for qualitative research. *The Academy of Management Review* 5(4), 491–500.

Munter, P. 1990. Form over substance: Another look at the statement of cash flows. *CPA Journal* LX(9), 54–55.

Munter, P. & Moores, T. 1992. How to best present interest cost in the statement of cash flows. *The Practical Accountant* XXV(8), 49–55.

Määttä, S. 2000. *True and fair view – ajatuksia oikeista ja riittävistä tiedoista ja kuvasta erityisesti Suomessa käydyn keskustelun valossa.* Turku: Kirjapaino Grafia Oy.

NASDAQ OMX Nordic. *Nordic list, The.* Retrieved July 20, 2013a, from NASDAQ OMX Nordic's website: http://www.nasdaqomxnordic.com/about_us/?languageId=1&Instrument=SSE101

NASDAQ OMX Nordic. *Rules for the Construction and Maintenance of the NASDAQ OMX Nordic All-Share, List, Tradable and Sector Indexes.* Retrieved July 26, 2013b, from NASDAQ OMX Nordic's website: https://indexes.nasdaqomx.com/docs/Methodology_OMXNORDIC.pdf

National Board of Patents and Registration of Finland. *Welcome to Virre Information Service.* Retrieved July 26, 2013, from National Board of Patents and Registration of Finland's website: https://virre.prh.fi/portal/dt?userLang=en

Nazari, J., Kline, T. & Herremans, I. 2006. Conducting survey research in management accounting. In Hoque, Z. (Ed.) *Methodological issues in*

accounting research: Theories and Methods. London: Spiramus Press Ltd, 427–459.

Neilimo, K. & Näsi, J. 1980. *Nomoteettinen tutkimusote ja suomalaisen yrityksen taloustiede – tutkimus positivismin soveltamisesta.* Tampere: Tampereen yliopisto.

Nunnally, J. C. & Bernstein, I. H. 1994. *Psychometric Theory* (3rd ed.). New York: McGraw-Hill.

Nuremberg Code, The 1947. In Mitscherlich, A. & Mielke, F. (Eds.) *Doctors of infamy: the story of the Nazi medical crimes*. New York: Schuman 1949, xxiii-xxv.

Nurnberg, H. 1993. Inconsistencies and Ambiguities in Cash Flow Statements Under FASB Statement No. 95. *Accounting Horizons* 7(2), 60–75.

Nurnberg, H. 2006. The distorting effects of acquisitions and dispositions on net operating cash flow. *Accounting Forum* 30(3), 209–226.

Nurnberg, H. & Largay, J. A. 1996. More concerns over cash flow reporting under FASB Statement No. 95. *Accounting Horizons* X(4), 123–136.

Nurnberg, H. & Largay, J. A. 1998. Interest payments in the cash flow statement. *Accounting Horizons* XII(4), 407–418.

Näsi, J. 1980. *Ajatuksia käsiteanalyysista ja sen käytöstä yrityksen taloustieteessä (Thoughts about conceptual analysis and its use in business economics).* Tampere: Tampereen yliopisto.

O'Bryan, D., Berry, K., Troutman, C. & Quirin, J. 2000. Using accounting equation analysis to teach the statement of cash flows in the first financial accounting course. *Journal of Accounting Education* 18, 147–155.

Ohlson, J. A. 1980. Financial ratios and the probabilistic prediction of bankruptcy. *Journal of Accounting Research* 18(1), 109–131.

O'Leary, C. 1988. Cash flow reporting, Part I: an overview of SFAS 95. *The Journal of Commercial Banking* May, 22–28.

Orpurt, S. F. & Zang, Y. 2009. Do Direct Cash Flow Disclosures Help Predict Future Operating Cash Flows and Earnings? *The Accounting Review* 84(3), 293–935.

Osakesäästäjien Keskusliitto ry 2011. *Jäsenedut*. Retrieved December 23, 2011, from Osakesäästäjien Keskusliitto ry's website: http://www.osakeliitto.fi/jasenedut

Osakesäästäjien Keskusliitto ry 2011. *Paikallisyhdistykset*. Retrieved December 23, 2011, from Osakesäästäjien Keskusliitto ry's website: http://www.osakeliitto.fi/paikallisyhdistykset

Palepu, K. G., Healy, P. M. & Bernard, V. L. 2000. *Business analysis & valuation using financial statements; Text & cases* (2nd ed.). Cincinnati: South-Western College Publishing.

Patell, J. & Kaplan, R. 1977, August. *The Information Content of Cash Flow Data Relative to Annual Earnings*. Stanford University. Unpublished working paper.

Peasnell, K. V. 1981. Empirical research in financial accounting. In Bromwich, M. & Hopwood, A. (Eds.) *Essays in British Accounting Research*. London: Pitman, 104–129.

Peirson, G., Ramsey, A. & McBride, P. 1991. *ED52 Statement of cash flows, Accounting Communique No. 32*. ASCPA.

Penman, S. H. 2001. *Financial statement analysis & security valuation.* New York: McGraw-Hill Book Company, Inc.

Pfeiffer, R. J., Elgers, P. T., Lo, M. & Rees, L. L. 1998. Additional Evidence on the Incremental Information Content of Cash Flow vs Accruals: The Impact of Errors in Measuring Market Expectations. *The Accounting Review* 73, 373–385.

Plumlee, M. A. 2003. The effect of information complexity on analysts' use of that information. *The Accounting Review* 78(1), 275–296.

Pratt, J. W. & Zeckhauser, R. J. 1985. Principals and agents: an overview. In Pratt, J. W. & Zeckhauser, R. J. (Eds.) *Principals and agents: the structure of business*. Boston, Massachusetts: Harvard Business School Press, 1–36.

Price, R. A. III 2013. Cash Flows at Amazon.com. *Issues in Accounting Education* 28(2), 353–374.

Rahman, A., Perera, H. & Ganesh, S. 2002. Accounting practice harmony, accounting regulation and firm characteristics. *Abacus* 38(1), 46–77.

Rayburn, J. 1986. The Association of Operating Cash Flow and Accruals with Security Returns. *Journal of Accounting Research* 24, 112–133.

Revsine, L. 1973. *Replacement-Cost Accounting.* Englewood Cliffs, N.J.: Prentice-Hall.

Richardson, P. 1991. Does FASB Statement No. 95 really help lenders? *The Journal of Commercial Bank Lending* March, 49–54.

Riistama, V. 1999. *Tilintarkastuksen teoria ja käytäntö* (2nd ed.). Porvoo: WSOY.

Roberts, A. C. & Gabhart, D. R. L. 1972. Statement of funds: a glimpse of the future? *The Journal of Accountancy* April, 54–59.

Romero, S. & Berenson, A. 2002, June 26. WorldCom Says It Hid Expenses, Inflating Cash Flow $3.8 billion. *The New York Times*.

Rosen, A. 2007. Cash flow myths. *Canadian Business* 80(6), 25.

Rosen, L. S. & DeCoster, D. 1969. Funds statements: A historical perspective. *Accounting Review* 44, 124–236.

Ross, S. 1977. The Determinants of Capital Structure: The Incentive-Signaling Approach. *Bell Journal of Economics* 8, 23–40.

Ross, S. A., Westerfield, R. W. & Jaffe, J. 2005. *Corporate Finance* (7th ed.). New York: McGraw-Hill/Irwin.

Rue, J. C. & Kirk, F. 1996. Settling the cash flow statement dispute. *National Public Accountant* 41(6), 17.

Ryan, B., Scapens, R. W. & Theobald, M. 2002. *Research Method and Methodology in Finance and Accounting* (2nd ed.). London: Thomson.

Ryan, L. V. & Schneider, M. 2003. Institutional investor power and heterogeneity. *Business and Society* XLII(4), 398–429.

Ryan, S. & Zarowin, P. 2003. Why has the contemporaneous linear returns-earnings relation declined? *Accounting Review* 78, 523–553.

Räty, P. 2007. Rahoituslaskelma osana tilinpäätöstä. *Rahoituslaskelman laadinta.* Helsinki: KHT-Media.

Saario, M. 1949. Kustannusten etuoikeusjärjestyksestä. In *Huugo Raninen 50 Vuotta. Kauppatieteellisen yhdistyksen vuosikerta 1949.* Helsinki.

Salant, P. & Dillman, D. A. 1994. *How to conduct your own survey.* New York: Wiley.

Sandilands, F. E. 1975. *Inflation Accounting: Report of the Inflation Accounting Committee.* London: HMSO.

Schilit, H. M. & Perler, J. 2010. *Financial shenanigans* (3rd ed.). USA: McGraw-Hill.

Scholz, S. 2008, April. *The Changing Nature and Consequences of Public Company Financial Restatements: 1997–2006.* U.S. Department of the Treasury.

Schwartz, K. B. 1982. Accounting changes by corporations facing possible insolvency. *Journal of Accounting, Auditing & Finance*, 33–43.

Scott, W. R. 1997. *Financial Accounting Theory.* New Jersey: Prentice-Hall Inc.

Securities Markets Act, The 746/2012. Amendments up to 258/2013 included; arvopaperimarkkinalaki.

Seed, A. 1984. The Funds Statement: How Can It Be Improved? *Financial Executive* 52, 54–55.

Sender, H. 2002, May 8. Cash Flow? It Isn't Always What It Seems. *Wall Street Journal*, C1, C3.

Sharma, D. S. 1996. Analysing the statement of cash flows. *Australian Accounting Review* 6(2), 37–44.

Sharma, D. S. 1999. Forecasting financial distress, information fidelity and cash flows. *Accounting, Accountability & Performance* 5, 63–87.

Sharma, D. S. & Stevenson, P. A. 1997. The impact of impending corporate failure on the incidence and magnitude of discretionary accounting policy changes. *The British Accounting Review* 29, 129–153.

Sharma, D. S. & Iselin, E. R. 2003. The decision usefulness of reported cash flow and accrual information in a behavioral field experiment. *Accounting and Business Research* 33(2), 123–135.

Shleifer, A. & Vishny, R. 1990. Equilibrium short horizon of investors of firms. *American Economic Review, Papers and Proceedings* LXXX(2), 148–153.

Siegel, M. A. 2006. Accounting shenanigans on the cash flow statement. *CPA Journal* 76(3), 38–43.

Simon, H. A. 1959. Theories of decision-making in economics and behavioral science. *The American Economic Review* XLIX, 253–283.

Solomons, D. 1965. *Divisional Performance: Measurement and Control.* Financial Executives Research Foundation Inc.

Spiller, E. A. & Virgil, R. L. 1974, Spring. Effectiveness of APB Opinion No. 19 in Improving Funds Reporting. *Journal of Accounting Research,* 131.

Staubus, G. J. 1961. *A Theory of Accounting to Investors.* Berkeley, Ca.: University of California Press.

Staubus, G. J. 1968, Summer. Plant Financing, Accounting and Divisional Targetry. *California Management Review*, 81–94.

Staubus, G. J. 1977. *Making accounting decisions.* Houston, Texas: Scholars Book Co.

Staubus, G. J. 1989, Spring. Cash flow accounting and liquidity: cash flow potential and wealth. *Accounting and Business Research*, 161–169.

Stephens, R. G. & Govindarajan, V. 1990. On assessing a firm's cash generating ability. *The Accounting Review* 65(1), 242–257.

Stewart, J. E., Ogorzelec, P. R., Baskin, D. L. & Duffy, T. J. 1988. Implementing the new statement of cash flows for banks. *Bank Accounting and Finance* I(1), 3–19.

Steyn, B. W. & Hamman, W. D. 2003. Revamping the cash flow statement. *Meditari Accountancy Research* 11, 181–198.

Stice, E. K., Stice, J. D. & Skousen, K. F. 2004. *Intermediate Accounting* (15th ed.). Mason, OH: South-Western.

Stickney, C. P. 1993. *Financial statement analysis: A strategic perspective* (2nd ed.). Fort Worth: The Dryden Press.

Stickney, C. P. & Weil, R. L. 2003. *Financial Accounting: An Introductory to Concepts, Methods and Uses* (10th ed.). Mason, OH: South-Western.

Stolowy, H. & Walser-Prochazka, S. 1992. The American influence in accounting: myth or reality? The statement of cash flows example. *The International Journal of Accounting* 27(3), 185–221.

Strischek, D. 1980, May. Analyzing the Quantity and Quality of Cash Flow for Long-Term Borrowing. *The Journal of Commercial Bank Lending*, 30–44.

Subramaniam, N. 2006. Agency theory and accounting research: an overview of some conceptual and empirical issues. In Hoque, Z. (Ed.) *Methodological Issues in Accounting Research: Theories and Methods*. London: Spiramus Press Ltd, 55–81.

Sweeney, A. P. 1994. Debt covenant violations and managers' accounting responses. *Journal of Accounting and Economics* 17, 281–308.

Taloushallintoliitto 2009a–. *Association of Finnish Accounting Firms*. Retrieved December 5, 2011, from Taloushallintoliitto's website: http://www.taloushallintoliitto.fi/taloushallintoliitto/association_of_finnish_accountin/

Taloushallintoliitto 2009b–. *Taloushallintoliitto lyhyesti*. Retrieved December 30, 2011, from Taloushallintoliitto's website:

http://www.taloushallintoliitto.fi/taloushallintoliitto/taloushallintoliitto_lyhyesti/

Taloushallintoliitto 2009c–. *Tilitoimistofaktaa*. Retrieved December 30, 2011, from Taloushallintoliitto's website: http://www.taloushallintoliitto.fi/media/tilitoimistofaktaa2/

Taloushallintoliitto 2011. *KLT-säännöt*. Retrieved December 30, 2011, from Taloushallintoliitto's website: http://www.taloushallintoliitto.fi/klt/klt-saannot/

Tergesen, A. 2002, July 15. Cash-Flow Hocus-Pocus. *Businessweek*.

Thomas, A. L. 1969. *Studies in Accounting Research No 3. The Allocation Problem in Financial Accounting Theory.* Sarasota: American Accounting Association.

Thomas, A. L. 1974. *Studies in Accounting Research No. 9. The Allocation Problem, Part Two.* Sarasota: American Accounting Association.

Thomas, A. L. 1981. Cash-flow reporting as allocation-free disclosure: A polemic. In Hicks, B. E & Hunt, P. (Eds.) *Cash Flow Accounting*. Ontario: The International Group for Cash Flow Accounting & Laurentian University, 126–132.

Thomas, B. S. 1982. Reporting Cash Flow Information. *Journal of Accounting* 11, 99.

Thomas, W. B. & Cushing, B. E. 1998. *The incremental information content of reported operating cash flow numbers*. University of Utah. Working paper.

Thompson, J. H., & Buttross, T. E. 1988. Return to Cash Flow. *CPA Journal* 58, 30–40.

Tilastokeskus 2011. *Finnish enterprises*. Retrieved December 30, 2011, from Tilastokeskus' website: http://tilastokeskus.fi/til/syr/index_en.html

Tilintarkastuslautakunta. *Auditing.* Retrieved December 5, 2011, from Tilintarkastuslautakunta's website: http://www.tilintarkastuslautakunta.fi/til_eng/

Tilintarkastusstandardi 200 (uudistettu). *Tilintarkastuksen tavoitteet ja yleiset periaatteet*. Finnish auditing standard 200 (renewed).

Tilintarkastussuositus 320. *Olennaisuus*. Finnish auditing recommendation 320.

Troberg, P. 2007. *IFRS and US GAAP. A Finnish Perspective.* Gummerus Kirjapaino Oy.

Trout, K., Tanner, M. & Nicholas, L. 1993. On track with direct cash flow. *Management Accounting* July, 23–27.

Valli, R. 2007. Kyselylomaketutkimus. In Aaltola, J. & Valli, R. (Eds.) *Ikkunoita tutkimusmetodeihin I – metodin valinta ja aineiston keruu: virikkeitä aloittelevalle tutkijalle* (2nd ed.). Juva: PS-kustannus, 102–125.

Vent, G. A., Cowling, J. F. & Sevalstad, S. 1995. Cash flow comparability: Accounting for long-term debt under FASB-95. *Accounting Horizons* IX(4), 88–96.

Wahlen, J., Jones, J. & Pagach, D. 2013. *Intermediate Accounting: Reporting and Analysis* (Instructor's ed.). Mason, OH: South-Western.

Wallace, R. S., Choudhury, M. S. & Pendlebury, M. 1997. Cash flow statements: an international comparison of regulatory positions. *International Journal of Accounting* 32(1), 1–22.

Wallace, R. S. O., Choudhury, S. I. M. & Adhikari, A. 1999. The comprehensiveness of cash flow reporting in the United Kingdom: some characteristics and firm-specific determinants. *The International Journal of Accounting* 34(3), 311–347.

Wallace, W. A. 1980. *The Economic Role of the Audit in Free and Regulated Markets.* New York: Touche Ross & Co.

Walton, P. 1992. Harmonization of accounting in France and Britain: some evidence. *Abacus* 28(2), 186–199.

Watts, R. L. & Zimmerman, J. L. 1978. Towards a positive theory of the determination of accounting standards. *The Accounting Review* LIII(1), 112–134.

Watts, R. L. & Zimmerman, J. L. 1986. *Positive Accounting Theory.* New Jersey: Prentice Hall.

Weiss, N. S. & Yang, J. G. 2007. The Cash Flow Statement: Problems with the Current Rules. *CPA Journal* 77(3), 26–31.

White, G. I., Sondhi, A. C. & Fried, D. 2003. *The analysis and use of financial statements* (3rd ed.). New York: John Wiley & Sons, Inc.

Whittington, G. 1974, Spring. Asset valuation, income measurement and accounting income. *Accounting and Business Research,* 96–101.

Williamson, O. E. 1964. *The economics of discretionary behavior: Managerial objectives in a theory of the firm.* Englewood Cliffs, NJ: Prentice-Hall, Inc.

Wilson, G. P. 1986. The Relative Information Content of Accruals and Cash Flows: Combined Evidence at the Earnings Announcement and Annual Report Release Date. *Journal of Accounting Research* 24, 196–200.

Wilson, G. P. 1987. The Incremental Information of Accrual and Funds Components of Earnings after Controlling for Earnings. *The Accounting Review* 62, 293–322.

Wilton, R. L. & Tabb, J. B. 1978. An investigation into private shareholder usage of financial statements in New Zealand. *Accounting Education* 18(1), 93–101.

Wouters, M. 2008. The order of teaching accounting topics – Why do most textbooks end with the beginning? *Accounting Education: An International Journal* 17, 3–14.

Yap, C. 1997. Users' perceptions of the need for cash flow statements – Australian evidence. *The European Accounting Review* 6(4), 653–672.

Yhteiskuntatieteellinen tietoarkisto 2007. *Menetelmäopetuksen tietovaranto.* Retrieved December 21, 2011, from KvantiMOTV's website: http://www.fsd.uta.fi/menetelmaopetus/mittaaminen/ominaisuudet.html#likert

Yin, R. K. 2003. *Case Study Research: Design and Methods.* Thousand Oaks, CA: Sage Publications.

Zavgren, C. V. & Friedman, G. E. 1988. Are bankruptcy prediction models worthwhile? An application in securities analysis. *Management International Review* 28(1), 34–43.

Appendix 1: Questionnaire for preparers

1. Kuinka tärkeänä pidät seuraavia tilinpäätöksen osia ?

	1. Ei ollenkaan tärkeä	2	3	4	5	6	7. Erittäin tärkeä
Tase	☐	☐	☐	☐	☐	☐	☐
Tuloslaskelma	☐	☐	☐	☐	☐	☐	☐
Rahoituslaskelma	☐	☐	☐	☐	☐	☐	☐
Liitetiedot	☐	☐	☐	☐	☐	☐	☐

2. Millä seuraavista tavoista tyypillisesti laadit rahoituslaskelman ?

- ☐ Teen rahoituslaskelmat manuaalisesti (esimerkiksi Excelissä) käyttäen apuna esim. tasetta, tuloslaskelmaa ja muuta kirjanpitomateriaalia
- ☐ Rahoituslaskelmaversio on tulostettavissa laskentajärjestelmästä, mutta se vaatii joitain manuaalisia muokkauksia
- ☐ KILA:n rahoituslaskelman laatimista koskevan yleisohjeen tai IAS 7 standardin mukainen rahoituslaskelma on suoraan tulostettavissa laskentajärjestelmästä
- ☐ En laadi rahoituslaskelmia

2b. Käytätkö seuraavia kirjanpitoaineistoja hyväksesi laatiessasi rahoituslaskelmaa ?

	1. En koskaan	2	3	4	5	6	7. Aina
Tase	☐	☐	☐	☐	☐	☐	☐
Tase-erittelyt	☐	☐	☐	☐	☐	☐	☐
Tuloslaskelma	☐	☐	☐	☐	☐	☐	☐
Liitetiedot	☐	☐	☐	☐	☐	☐	☐
Toimintakertomus	☐	☐	☐	☐	☐	☐	☐
Pääkirja	☐	☐	☐	☐	☐	☐	☐
Päiväkirja	☐	☐	☐	☐	☐	☐	☐
Myyntireskontraraportit	☐	☐	☐	☐	☐	☐	☐
Ostoreskontraraportit	☐	☐	☐	☐	☐	☐	☐

Tiliotteet	☐	☐	☐	☐	☐	☐	☐
Muut kirjanpitotositteet	☐	☐	☐	☐	☐	☐	☐

2c. Laaditko rahoituslaskelmia pääsääntöisesti suomalaisen kirjanpitosäännöstön (FAS) vai IFRS:n mukaisesti ?

- ☐ FAS
- ☐ IFRS

2d. Laaditko rahoituslaskelman siten, että se on täysin joko KILA:n rahoituslaskelman laatimista koskevan yleisohjeen (FAS) tai IAS 7 standardin (IFRS) mukainen ?

1. En koskaan	2	3	4	5	6	7. Aina
☐	☐	☐	☐	☐	☐	☐

2e. Pyritkö tunnistamaan rahoituslaskelmaa laatiessasi kaikki olennaiset kirjanpidossa tehdyt kuittaukset ?

1. En koskaan	2	3	4	5	6	7. Aina
☐	☐	☐	☐	☐	☐	☐

3. Annatko tilinpäätöksen liitetiedoissa rahoituslaskelmaa koskevaa lisäinformaatiota kirjanpitolain 3:2 (tai vastaavan IFRS säännöksen) nojalla: "Tilinpäätöksen oikeaa ja riittävää kuvaa varten tarpeelliset lisätiedot on ilmoitettava liitetiedoissa" ?

1. En koskaan	2	3	4	5	6	7. Aina
☐	☐	☐	☐	☐	☐	☐

4. Antaisitko tilinpäätöksen liitetiedoissa informaatiota siitä, jos yritys on jättänyt tilikauden viimeisessä kuussa erääntyneet ostovelkansa maksamatta ?

- ☐ En
- ☐ Kyllä

4b. Antaisitko tilinpäätöksen liitetiedoissa informaatiota siitä, jos yritys on jättänyt Q4:n aikana erääntyneet ostovelkansa maksamatta ?

1. Ehdottomasti en	2	3	4	5	6	7. Ehdottomasti kyllä	Voit perustella vastauksesi tähän kenttään
☐	☐	☐	☐	☐	☐	☐	

5. Liiketoiminnan rahavirran esittämistapa rahoituslaskelmassa ?

	Epäsuoraa laatimistapaa	Suoraa laatimistapaa
5a. Mielestäni liiketoiminnan rahavirta tulisi esittää käyttäen:	☐	☐
5b. Käytännössä liiketoiminnan rahavirta esitetään useimmiten käyttäen:	☐	☐

Kohdissa 6-7 on esitetty kaksi väittämää rahoituslaskelmasta. Väittämän jälkeen on seitsemänportainen mielipideasteikko. Valitse niistä sopivin vaihtoehto kuvaamaan omaa mielipidettäsi.

6. Mielestäni maksetut tuloverot tulisi jakaa rahoituslaskelmassa liiketoiminnan, investointien ja rahoituksen rahavirtoihin veron aiheuttaneen liiketapahtuman mukaisesti olennaisuuden periaate huomioiden. ?

- Täysin eri mieltä
- Jokseenkin eri mieltä
- Hieman eri mieltä
- Ei mielipidettä puolesta tai vastaan
- Hieman samaa mieltä
- Jokseenkin samaa mieltä
- Täysin samaa mieltä

Voit perustella vastauksesi tähän kenttään

7. Rahoituslaskelmaa voidaan tarkoituksellisesti manipuloida. ?

- Täysin eri mieltä
- Jokseenkin eri mieltä
- Hieman eri mieltä
- Ei mielipidettä puolesta tai vastaan
- Hieman samaa mieltä
- Jokseenkin samaa mieltä
- Täysin samaa mieltä

Voit perustella vastauksesi tähän kenttään

8. Kuinka altis rahoituslaskelma on mielestäsi manipuloinnille verrattuna tuloslaskelmaan ?

1. Huomattavasti vähemmän altis	2	3	4	5	6	7. Huomattavasti enemmän altis	Voit perustella vastauksesi tähän kenttään

9. Missä rahoituslaskelman osassa (liiketoiminnan, investointien vai rahoituksen rahavirta) pääosin esittäisit seuraavat tuotantoyrityksen liiketapahtumat:

9a. Tuotantokaluston hankinnasta aiheutuva 10000€:n kertamaksu ? --Valitse tästä--

9b. Tuotantokaluston hankinnasta johtuvan osamaksuvelan kuukausittainen 10000€:n lyhennys ? --Valitse tästä--

9c. Vuokratusta tuotantokalustosta johtuva kuukausittainen 10000€:n vuokranmaksu (suomalaisen tilinpäätöskäytännön mukainen tilinpäätös) ? --Valitse tästä--

9d. Vuokratusta tuotantokalustosta johtuva kuukausittainen 10000€:n vuokranmaksu (vuokrasopimus luokiteltu rahoitusleasing-sopimukseksi; IFRS-tilinpäätös) ? --Valitse tästä--

9e. Vuokratusta tuotantokalustosta johtuva kuukausittainen 10000€:n vuokranmaksu (vuokrasopimus luokiteltu muuksi vuokrasopimukseksi; IFRS-tilinpäätös) ? --Valitse tästä--

10. Yritys A ostaa Yritys B:ltä kuukausittaisia hallintopalveluja velaksi. Tilikauden lopuksi Yritys A suorittaa suunnatun osakeannin Yritys B:lle hallintopalvelujen yhteissummasta 12000€. Yritys A ei ollut vielä maksanut ostovelkaansa, ja näin ollen yritykset kuittaavat keskinäiset velat ja saatavat kirjanpidoissaan. Tämän seurauksena Yritys A:n ostovelka muuntuu omaksi pääomaksi. Yritys A:lla ei ole tilikautena muita liiketapahtumia.

Miltä Yritys A:n rahoituslaskelma tulisi näyttää suomalaisen tilinpäätössäännöstön mukaan edellä mainitussa tilanteessa ?

- ○ Rahoituslaskelma tulisi olla tyhjä
- ○ Rahoituslaskelman tulisi osoittaa 12000€:n negatiivinen liiketoiminnan rahavirta sekä 12000€:n positiivinen rahoituksen rahavirta

Voit perustella a vastauksesi tähän kenttään

Vastaajan tiedot.

1. Työnantaja ? --Valitse tästä--
1b. Oma yritys ? --Valitse tästä--
2. Ikä ?
3. Työvuodet kirjanpitäjänä ?
4. Työvuodet KLT-kirjanpitäjänä ?

Kiitos lomakkeen täyttämisestä. Paina lopuksi alla olevaa "tallenna" -painiketta.

Tietojen lähetys

Appendix 2: Questionnaire for auditors

1. Kuinka tärkeänä pidät seuraavia tilinpäätöksen osia ?

	1. Ei ollenkaan tärkeä	2	3	4	5	6	7. Erittäin tärkeä
Tase	○	○	○	○	○	○	○
Tuloslaskelma	○	○	○	○	○	○	○
Rahoituslaskelma	○	○	○	○	○	○	○
Liitetiedot	○	○	○	○	○	○	○

2. Järjestä tilinpäätöksen osat (tase, tuloslaskelma, rahoituslaskelma ja liitetiedot) sen mukaan, kuinka paljon käytät aikaa niiden tarkastamiseen yrityksen vuositilintarkastuksessa. Huom! Valitse kukin tilinpäätöksen osa vain yhden kerran.

2a. Eniten aikaa vie ? --Valitse tästä--

2b. Toiseksi eniten aikaa vie ? --Valitse tästä--

2c. Kolmanneksi eniten aikaa vie? --Valitse tästä--

2d. Neljänneksi eniten aikaa vie ? --Valitse tästä--

Kohdat 3-6 käsittelevät kirjanpitovelvollisen vuosittaista tilintarkastusta.

3. Vaaditko kirjanpitovelvollisen vuositilintarkastuksen yhteydessä, että rahoituslaskelma on laadittu täysin joko KILA:n 30.1.2007 antaman yleisohjeen tai IAS 7:n ohjeistuksen mukaisesti ?

1. En koskaan	2	3	4	5	6	7. Aina
○	○	○	○	○	○	○

4. Vaaditko, että tilinpäätöksen liitetiedoissa annetaan rahoituslaskelmaa koskevaa lisäinformaatiota KPL 3:2 (tai vastaavan IFRS säännöksen) nojalla: "Tilinpäätöksen oikeaa ja riittävää kuvaa varten tarpeelliset lisätiedot on ilmoitettava liitetiedoissa" ?

1. En koskaan	2	3	4	5	6	7. Aina
○	○	○	○	○	○	○

5. Vaatisitko, että tilinpäätöksen liitetiedoissa tai tilintarkastuskertomuksessa mainitaan siitä, jos yritys on jättänyt tilikauden viimeisessä kuussa erääntyneet ostovelkansa maksamatta ?

○ En

☐ Kyllä

5b. Vaatisitko, että tilinpäätöksen liitetiedoissa tai tilintarkastuskertomuksessa mainitaan siitä, jos yritys on jättänyt Q4:n aikana erääntyneet ostovelkansa maksamatta ?

1. Ehdottomasti en	2	3	4	5	6	7. Ehdottomasti kyllä	Voit perustella vastauksesi tähän kenttään
☐	☐	☐	☐	☐	☐	☐	

6. Vaatisitko, että liitetiedoissa tai tilintarkastuskertomuksessa mainitaan siitä, jos yritys esittää liiketoiminnan rahavirrassa sen lyhytaikaisten velkojen muutoksen, joka johtuu pitkäaikaisen rahalaitoslainan seuraavan vuoden lyhennyseristä ?

☐ En

☐ Kyllä

6b. Jos kohdassa 6. mainitulla menettelyllä on olennainen vaikutus liiketoiminnan rahavirtaan, vaatisitko tällöin, että siitä mainitaan tilintarkastuskertomuksessa tai liitetiedoissa ?

1. Ehdottomasti en	2	3	4	5	6	7. Ehdottomasti kyllä	Voit perustella vastauksesi tähän kenttään
☐	☐	☐	☐	☐	☐	☐	

7. Millä seuraavista tavoista asiakkaasi tyypillisesti laativat rahoituslaskelman ?

	Voit perustella vastauksesi tähän kenttään
☐ Rahoituslaskelma laaditaan manuaalisesti (esimerkiksi Excelissä) käyttäen apuna esim. tasetta, tuloslaskelmaa ja muuta kirjanpitomateriaalia ☐ Rahoituslaskelmaversio on tulostettavissa laskentajärjestelmästä, mutta se vaatii joitain manuaalisia muokkauksia ☐ KILA:n yleisohjeen tai IAS 7:n mukainen rahoituslaskelma on automaattisesti tulostettavissa laskentajärjestelmästä	

8. Liiketoiminnan rahavirran esittämistapa rahoituslaskelmassa ?

	Epäsuoraa laatimistapaa	Suoraa laatimistapaa
8a. Mielestäni liiketoiminnan rahavirta tulisi esittää käyttäen:	☐	☐
8b. Käytännössä liiketoiminnan rahavirta esitetään useimmiten käyttäen:	☐	☐

Kohdissa 9-12 on esitetty neljä väittämää rahoituslaskelmasta. Väittämien jälkeen on seitsemänportainen mielipideasteikko. Valitse niistä sopivin vaihtoehto kuvaamaan omaa mielipidettäsi.

9. Tilinpäätöksessä on tilintarkastuskertomuksessa huomioitava olennainen virhe, jos rahoituslaskelma poikkeaa olennaisesti KILA:n yleisohjeesta (FAS) tai IAS 7 standardista (IFRS). ?

- Täysin eri mieltä
- Jokseenkin eri mieltä
- Hieman eri mieltä
- Ei mielipidettä puolesta tai vastaan
- Hieman samaa mieltä
- Jokseenkin samaa mieltä
- Täysin samaa mieltä

Voit perustella vastauksesi tähän kenttään

10. Tilinpäätös voi kokonaisuudessaan antaa oikean ja riittävän kuvan, vaikka rahoituslaskelma olisi olennaisesti virheellinen; eikä tällöin rahoituslaskelman virheellisyyttä tarvitse mainita tilintarkastuskertomuksessa. ?

- Täysin eri mieltä
- Jokseenkin eri mieltä
- Hieman eri mieltä
- Ei mielipidettä puolesta tai vastaan
- Hieman samaa mieltä
- Jokseenkin samaa mieltä
- Täysin samaa mieltä

Voit perustella vastauksesi tähän kenttään

11. Mielestäni maksetut tuloverot tulisi jakaa rahoituslaskelmassa liiketoiminnan, investointien ja rahoituksen rahavirtoihin veron aiheuttaneen liiketapahtuman mukaisesti olennaisuuden periaate huomioiden. ?

- Täysin eri mieltä
- Jokseenkin eri mieltä
- Hieman eri mieltä
- Ei mielipidettä puolesta tai vastaan
- Hieman samaa mieltä
- Jokseenkin samaa mieltä
- Täysin samaa mieltä

Voit perustella vastauksesi tähän kenttään

12. Rahoituslaskelmaa voidaan tarkoituksellisesti manipuloida laatijoiden (esim. yritysjohdon) toimesta. ?

- Täysin eri mieltä
- Jokseenkin eri mieltä
- Hieman eri mieltä
- Ei mielipidettä puolesta tai vastaan
- Hieman samaa mieltä
- Jokseenkin samaa mieltä
- Täysin samaa mieltä

Voit perustella vastauksesi tähän kenttään

13. Kuinka altis rahoituslaskelma on mielestäsi laatijoiden manipuloinnille verrattuna tuloslaskelmaan ?

1. Huomattavasti vähemmän altis	2	3	4	5	6	7. Huomattavasti enemmän altis	Voit perustella vastauksesi tähän kenttään
○	○	○	○	○	○	○	

14. Missä rahoituslaskelman osassa (liiketoiminnan, investointien vai rahoituksen rahavirta) tulisi seuraavat tuotantoyrityksen liiketapahtumat pääosin esittää:

14a. Tuotantokaluston hankinnasta aiheutuva 10000€:n kertamaksu ? --Valitse tästä--

14b. Tuotantokaluston hankinnasta johtuvan osamaksuvelan kuukausittainen 10000€:n lyhennys ? --Valitse tästä--

14c. Vuokratusta tuotantokalustosta johtuva kuukausittainen 10000€:n vuokranmaksu (suomalaisen tilinpäätöskäytännön mukainen tilinpäätös) ? --Valitse tästä--

14d. Vuokratusta tuotantokalustosta johtuva kuukausittainen 10000€:n vuokranmaksu (vuokrasopimus luokiteltu rahoitusleasing-sopimukseksi; IFRS-tilinpäätös) ? --Valitse tästä--

14e. Vuokratusta tuotantokalustosta johtuva kuukausittainen 10000€:n vuokranmaksu (vuokrasopimus luokiteltu muuksi vuokrasopimukseksi; IFRS-tilinpäätös) ? --Valitse tästä--

15. Yritys A ostaa Yritys B:ltä kuukausittaisia hallintopalveluja velaksi. Tilikauden lopuksi Yritys A suorittaa suunnatun osakeannin Yritys B:lle hallintopalvelujen yhteissummasta 12000€. Yritys A ei ollut vielä maksanut ostovelkaansa, ja näin ollen yritykset kuittaavat keskinäiset velat ja saatavat kirjanpidoissaan. Tämän seurauksena Yritys A:n ostovelka muuntuu omaksi pääomaksi. Yritys A:lla ei ole tilikautena muita liiketapahtumia.

Miltä Yritys A:n rahoituslaskelma tulisi näyttää suomalaisen tilinpäätössäännöstön mukaan edellä mainitussa tilanteessa ?

	Voit perustella vastauksesi tähän kenttään
○ Rahoituslaskelma tulisi olla tyhjä ○ Rahoituslaskelman tulisi osoittaa 12000€:n negatiivinen liiketoiminnan rahavirta sekä 12000€:n positiivinen rahoituksen rahavirta	

Vastaajan tiedot.

1. Suoritettu tilintarkastustutkinto ? --Valitse tästä--
2. Työnantajayritys ? --Valitse tästä--
3. Ikä ?
4. Työvuodet tilintarkastajana ?

5. Työvuodet auktorisoituna tilintarkastaja ?

Kiitos lomakkeen täyttämisestä. Paina lopuksi alla olevaa "tallenna" -painiketta.

Tietojen lähetys

Appendix 3: Questionnaire for users

1. Kuinka tärkeänä pidät seuraavia tilinpäätöksen osia ?

	1. Ei ollenkaan tärkeä	2	3	4	5	6	7. Erittäin tärkeä
Tase	○	○	○	○	○	○	○
Tuloslaskelma	○	○	○	○	○	○	○
Rahoituslaskelma	○	○	○	○	○	○	○
Liitetiedot	○	○	○	○	○	○	○

2. Järjestä tilinpäätöksen osat (tase, tuloslaskelma, rahoituslaskelma ja liitetiedot) sen mukaan, kuinka hyödyllisinä pidät niitä yrityksen tulevien rahavirtojen ennakoimisessa. Huom! Valitse kukin tilinpäätöksen osa vain yhden kerran.

2a. Hyödyllisin tilinpäätöksen osa? --Valitse tästä--
2b. Toiseksi hyödyllisin tilinpäätöksen osa ? --Valitse tästä--
2c. Kolmanneksi hyödyllisin tilinpäätöksen osa ? --Valitse tästä--
2d. Neljänneksi hyödyllisin tilinpäätöksen osa ? --Valitse tästä--

3. Järjestä tilinpäätöksen osat (tase, tuloslaskelma, rahoituslaskelma ja liitetiedot) sen mukaan, kuinka hyödyllisinä pidät niitä yrityksen likviditeetin (maksuvalmiuden) arvioinnissa. Huom! Valitse kukin tilinpäätöksen osa vain yhden kerran.

3a. Hyödyllisin tilinpäätöksen osa? --Valitse tästä--
3b. Toiseksi hyödyllisin tilinpäätöksen osa ? --Valitse tästä--
3c. Kolmanneksi hyödyllisin tilinpäätöksen osa ? --Valitse tästä--
3d. Neljänneksi hyödyllisin tilinpäätöksen osa ? --Valitse tästä--

4. Mihin tarkoitukseen käytät rahoituslaskelmaa pääasiallisesti hyväksi taloudellisessa päätöksenteossasi ?

- ○ Yrityksen tai sijoituksen tulevien rahavirtojen ennakointiin
- ○ Yrityksen likviditeetin (maksuvalmiuden) arviointiin
- ○ Muu

Muu, mikä?

- [ ] En käytä rahoituslaskelmia lainkaan hyväksi

5. Liiketoiminnan rahavirran esittämistapa rahoituslaskelmassa ?

	Epäsuoraa laatimistapaa	Suoraa laatimistapaa
5a. Mielestäni liiketoiminnan rahavirta tulisi esittää käyttäen:	☐	☐
5b. Käytännössä liiketoiminnan rahavirta esitetään useimmiten käyttäen:	☐	☐

Kohdissa 6-9 on esitetty neljä väittämää rahoituslaskelmasta. Väittämien jälkeen on seitsemänportainen mielipideasteikko. Valitse niistä sopivin vaihtoehto kuvaamaan omaa mielipidettäsi.

6. Minulle on tärkeää, että rahoituslaskelma on laadittu KILA:n rahoituslaskelman laatimista koskevan yleisohjeen (FAS) tai IAS 7 standardin (IFRS) mukaisesti. ?

- [ ] Täysin eri mieltä
- [ ] Jokseenkin eri mieltä
- [ ] Hieman eri mieltä
- [ ] Ei mielipidettä puolesta tai vastaan
- [ ] Hieman samaa mieltä
- [ ] Jokseenkin samaa mieltä
- [ ] Täysin samaa mieltä

Voit perustella vastauksesi tähän kenttään

7. Jos tilinpäätöksessä tai tilintarkastuskertomuksessa ei muuta mainita, luotan siihen, että rahoituslaskelma on laadittu KILA:n rahoituslaskelman laatimista koskevan yleisohjeen (FAS) tai IAS 7 standardin (IFRS) mukaisesti. ?

- [ ] Täysin eri mieltä
- [ ] Jokseenkin eri mieltä
- [ ] Hieman eri mieltä
- [ ] Ei mielipidettä puolesta tai vastaan
- [ ] Hieman samaa mieltä
- [ ] Jokseenkin samaa mieltä
- [ ] Täysin samaa mieltä

Voit perustella vastauksesi tähän kenttään

8. Mielestäni maksetut tuloverot tulisi jakaa rahoituslaskelmassa liiketoiminnan, investointien ja rahoituksen rahavirtoihin veron aiheuttaneen liiketapahtuman mukaisesti olennaisuuden periaate huomioiden. ?

- [ ] Täysin eri mieltä
- [ ] Jokseenkin eri mieltä
- [ ] Hieman eri mieltä
- [ ] Ei mielipidettä puolesta tai vastaan

Voit perustella vastauksesi tähän kenttään

- Hieman samaa mieltä
- Jokseenkin samaa mieltä
- Täysin samaa mieltä

9. Rahoituslaskelmaa voidaan tarkoituksellisesti manipuloida laatijoiden (esim. yritysjohdon) toimesta. ?

- Täysin eri mieltä
- Jokseenkin eri mieltä
- Hieman eri mieltä
- Ei mielipidettä puolesta tai vastaan
- Hieman samaa mieltä
- Jokseenkin samaa mieltä
- Täysin samaa mieltä

Voit perustella vastauksesi tähän kenttään

10. Kuinka altis rahoituslaskelma on mielestäsi laatijoiden manipuloinnille verrattuna tuloslaskelmaan ?

1. Huomattavasti vähemmän altis	2	3	4	5	6	7. Huomattavasti enemmän altis	Voit perustella vastauksesi tähän kenttään

11. Missä rahoituslaskelman osassa (liiketoiminnan, investointien vai rahoituksen rahavirta) oletat pääosin näkeväsi seuraavat tuotantoyrityksen liiketapahtumat:

11a. Tuotantokaluston hankinnasta aiheutuva 10000€:n kertamaksu ? --Valitse tästä--

11b. Tuotantokaluston hankinnasta johtuvan osamaksuvelan kuukausittainen 10000€:n lyhennys ? --Valitse tästä--

11c. Vuokratusta tuotantokalustosta johtuva kuukausittainen 10000€:n vuokranmaksu (suomalaisen tilinpäätöskäytännön mukainen tilinpäätös) ? --Valitse tästä--

11d. Vuokratusta tuotantokalustosta johtuva kuukausittainen 10000€:n vuokranmaksu (vuokrasopimus luokiteltu rahoitusleasing-sopimukseksi; IFRS-tilinpäätös) ? --Valitse tästä--

11e. Vuokratusta tuotantokalustosta johtuva kuukausittainen 10000€:n vuokranmaksu (vuokrasopimus luokiteltu muuksi vuokrasopimukseksi; IFRS-tilinpäätös) ? --Valitse tästä--

12. Tulisiko mielestäsi tilinpäätöksen liitetiedoissa tai tilintarkastuskertomuksessa mainita siitä, jos yritys on jättänyt tilikauden viimeisessä kuussa erääntyneet ostovelkansa maksamatta ?

- Ei
- Kyllä

12b. Tulisiko mielestäsi tilinpäätöksen liitetiedoissa tai tilintarkastuskertomuksessa mainita siitä, jos yritys on jättänyt Q4:n aikana erääntyneet ostovelkansa maksamatta ?

1.	2	3	4	5	6	7.	Voit perustella

Ehdottomasti ei						Ehdottomasti kyllä	vastauksesi tähän kenttään
○	○	○	○	○	○	○	

13. Yritys A ostaa Yritys B:ltä kuukausittaisia hallintopalveluja velaksi. Tilikauden lopuksi Yritys A suorittaa suunnatun osakeannin Yritys B:lle hallintopalvelujen yhteissummasta 12000€. Yritys A ei ollut vielä maksanut ostovelkaansa, ja näin ollen yritykset kuittaavat keskinäiset velat ja saatavat kirjanpidoissaan. Tämän seurauksena Yritys A:n ostovelka muuntuu omaksi pääomaksi. Yritys A:lla ei ole tilikautena muita liiketapahtumia.

Miltä Yritys A:n rahoituslaskelma tulisi näyttää suomalaisen tilinpäätössäännöstön mukaan edellä mainitussa tilanteessa ?

- ○ Rahoituslaskelma tulisi olla tyhjä
- ○ Rahoituslaskelman tulisi osoittaa 12000€:n negatiivinen liiketoiminnan rahavirta sekä 12000€:n positiivinen rahoituksen rahavirta

Voit perustella a vastauksesi tähän kenttään

Vastaajan tiedot.

1. Missä roolissa pääasiallisesti käytät tilinpäätösinformaatiota hyväksi ?

- ○ Yksityisenä sijoittajana yrityksen arvopapereihin (sijoittaen omia rahoja)
- ○ Muiden lukuun sijoittajana yrityksen arvopapereihin; esim. tehdessäsi työnantajayrityksesi sijoituspäätöksiä
- ○ Institutionaalisena sijoittajana; esim. salkunhoitajana sijoitusrahastoyhtiössä
- ○ Oman pääoman tarjoajana yritykselle
- ○ Vieraan pääoman tarjoajana yritykselle
- ○ Tilinpäätösanalyyttikona
- ○ Muu käyttötarkoitus
- ○ En käytä tilinpäätösinformaatiota lainkaan hyväksi taloudellisessa päätöksenteossa

Muu, mikä?

2. Kuinka paljon rahaa keskimäärin käytät sijoituksiin vuodessa euroina? Huom! Kirjoita vain positiivinen kokonaisluku; ei välilyöntejä, valuuttayksikköä tai desimaaleja ?

3. Mikä on sijoitusportfoliosi arvo euroina? Huom! Kirjoita vain positiivinen kokonaisluku; ei välilyöntejä, valuuttayksikköä tai desimaaleja ?

?

4. Mikä on koulutuksesi?

- ○ Laskentatoimen ylempi korkeakoulututkinto
- ○ Muu kauppatieteiden ylempi korkeakoulututkinto

- Muu ylempi korkeakoulututkinto
- Laskentatoimen alempi korkeakoulututkinto
- Muu kauppatieteiden alempi korkeakoulututkinto
- Muu alempi korkeakoulututkinto
- Muu laskentatoimen tutkinto
- Muu kauppatieteiden tutkinto
- Muu tutkinto
- Olen laskentatoimen opiskelija
- Olen muun kauppatieteiden opiskelija
- Olen muun alan opiskelija

5. Ikä ?

6. Kuinka monta vuotta olet käyttänyt tilinpäätöksiä hyväksesi taloudellisessa päätöksenteossa?

Kiitos lomakkeen täyttämisestä. Paina lopuksi alla olevaa "tallenna" -painiketta.

Tietojen lähetys

Appendix 4: SPSS 19 outputs regarding preparers

H_P1: Preparers of financial statements consider the cash flow statement to be the least important section of financial statements.

Descriptives

			Statistic	Std. Error
BS_imp	Mean		6.90	.012
	95% Confidence Interval for Mean	Lower Bound	6.88	
		Upper Bound	6.92	
	Median		7.00	
IS_imp	Mean		6.76	.019
	95% Confidence Interval for Mean	Lower Bound	6.73	
		Upper Bound	6.80	
	Median		7.00	
CFS_imp	Mean		4.93	.054
	95% Confidence Interval for Mean	Lower Bound	4.82	
		Upper Bound	5.03	
	Median		5.00	
Notes_imp	Mean		6.46	.031
	95% Confidence Interval for Mean	Lower Bound	6.40	
		Upper Bound	6.53	
	Median		7.00	

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
BS_imp	.526	840	.000	.311	840	.000
IS_imp	.483	840	.000	.490	840	.000
CFS_imp	.144	840	.000	.925	840	.000
Notes_imp	.380	840	.000	.645	840	.000

a. Lilliefors Significance Correction

Kruskal-Wallis Test

Ranks

	Section	N	Mean Rank
Importance	Balance Sheet	840	2157.36
	Income Statement	840	2008.34
	Cash Flow Statement	840	806.85
	Notes	840	1749.45
	Total	3360	

Test Statistics[a,b]

	Importance
Chi-Square	1351.047
df	3
Asymp. Sig.	.000

a. Kruskal Wallis Test
b. Grouping Variable: Section

ANOVA

Importance

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2085.090	3	695.030	763.176	.000
Within Groups	3056.333	3356	.911		
Total	5141.424	3359			

Multiple Comparisons

Importance
Bonferroni

(I) Section	(J) Section	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Balance Sheet	Income Statement	.138*	.047	.018	.02	.26
	Cash Flow Statement	1.974*	.047	.000	1.85	2.10
	Notes	.436*	.047	.000	.31	.56
Income Statement	Balance Sheet	-.138*	.047	.018	-.26	-.02

	Cash Flow Statement	1.836*	.047	.000	1.71	1.96
	Notes	.298*	.047	.000	.17	.42
Cash Flow Statement	Balance Sheet	-1.974*	.047	.000	-2.10	-1.85
	Income Statement	-1.836*	.047	.000	-1.96	-1.71
	Notes	-1.538*	.047	.000	-1.66	-1.42
Notes	Balance Sheet	-.436*	.047	.000	-.56	-.31
	Income Statement	-.298*	.047	.000	-.42	-.17
	Cash Flow Statement	1.538*	.047	.000	1.42	1.66

*. The mean difference is significant at the 0.05 level.

Associations with independent variable data (H_P1).

Kruskal-Wallis Test

Ranks

	Employer	N	Mean Rank
CFS_imp	Authorised accounting firm	465	405.40
	Other accounting firm	106	377.81
	Other enterprise	185	523.65
	Entrepreneur	84	330.77
	Total	840	

Test Statistics[a,b]

	CFS_imp
Chi-Square	51.939
df	3
Asymp. Sig.	.000

a. Kruskal Wallis Test

b. Grouping Variable: Employer

ANOVA

CFS_imp

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	127.234	3	42.411	18.659	.000
Within Groups	1900.190	836	2.273		
Total	2027.424	839			

Report

CFS_imp

Employer	Mean	N	Std. Deviation
Authorised accounting firm	4.85	465	1.496
Other accounting firm	4.64	106	1.593
Other enterprise	5.58	185	1.416
Entrepreneur	4.27	84	1.653
Total	4.93	840	1.555

Multiple Comparisons

CFS_imp

Bonferroni

(I) Employer	(J) Employer	Mean Difference (I-J)	Std. Error	Sig.
Authorised accounting firm	Other accounting firm	.206	.162	1.000
	Other enterprise	-.736*	.131	.000
	Entrepreneur	.574*	.179	.008
Other accounting firm	Authorised accounting firm	-.206	.162	1.000
	Other enterprise	-.942*	.184	.000
	Entrepreneur	.368	.220	.572
Other enterprise	Authorised accounting firm	.736*	.131	.000
	Other accounting firm	.942*	.184	.000
	Entrepreneur	1.310*	.198	.000
Entrepreneur	Authorised accounting firm	-.574*	.179	.008
	Other accounting firm	-.368	.220	.572
	Other enterprise	-1.310*	.198	.000

*. The mean difference is significant at the 0.05 level.

Correlations

		CFS_imp	Age
CFS_imp	Pearson Correlation	1	.075*
	Sig. (2-tailed)		.029
	N	840	839
Age	Pearson Correlation	.075*	1
	Sig. (2-tailed)	.029	
	N	839	839

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

Correlations

			CFS_imp	Age
Spearman's rho	CFS_imp	Correlation Coefficient	1.000	.087*
		Sig. (2-tailed)	.	.011
		N	840	839
	Age	Correlation Coefficient	.087*	1.000
		Sig. (2-tailed)	.011	.
		N	839	839

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

Correlations

		CFS_imp	AccountingExperience
CFS_imp	Pearson Correlation	1	.045
	Sig. (2-tailed)		.190
	N	840	835
AccountingExperience	Pearson Correlation	.045	1
	Sig. (2-tailed)	.190	
	N	835	835

Correlations

			CFS_imp	AccountingExperience
Spearman's rho	CFS_imp	Correlation Coefficient	1.000	.074*
		Sig. (2-tailed)	.	.032
		N	840	835
	AccountingExperience	Correlation Coefficient	.074*	1.000
		Sig. (2-tailed)	.032	.
		N	835	835

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

Correlations

		CFS_imp	KLTExperience
CFS_imp	Pearson Correlation	1	.057
	Sig. (2-tailed)		.099
	N	840	839
KLTExperience	Pearson Correlation	.057	1
	Sig. (2-tailed)	.099	
	N	839	839

Correlations

			CFS_imp	KLTExperience
Spearman's rho	CFS_imp	Correlation Coefficient	1.000	.064
		Sig. (2-tailed)	.	.066
		N	840	839
	KLTExperience	Correlation Coefficient	.064	1.000
		Sig. (2-tailed)	.066	.
		N	839	839

Kruskal-Wallis Test

Ranks

	Preparing method	N	Mean Rank
CFS_imp	Manual	324	487.13
	Print version + manual fixes	151	492.76
	Automatically printable	47	474.49
	Do not prepare CFS's	318	310.32
	Total	840	

Test Statistics[a,b]

	CFS_imp
Chi-Square	109.803
df	3
Asymp. Sig.	.000

a. Kruskal Wallis Test

b. Grouping Variable: Preparing method

ANOVA

CFS_imp

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	278.745	3	92.915	44.420	.000
Within Groups	1748.678	836	2.092		
Total	2027.424	839			

Report

CFS_imp

Preparing method	Mean	N	Std. Deviation
Manual	5.37	324	1.381
Print version + manual fixes	5.40	151	1.352
Automatically printable	5.30	47	1.301
Do not prepare CFS's	4.19	318	1.569
Total	4.93	840	1.555

Multiple Comparisons

CFS_imp
Bonferroni

(I) Preparing method	(J) Preparing method	Mean Difference (I-J)	Std. Error	Sig.
Manual	Print version + manual fixes	-.031	.143	1.000
	Automatically printable	.076	.226	1.000
	Do not prepare CFS's	1.185*	.114	.000
Print version + manual fixes	Manual	.031	.143	1.000
	Automatically printable	.106	.242	1.000
	Do not prepare CFS's	1.215*	.143	.000
Automatically printable	Manual	-.076	.226	1.000
	Print version + manual fixes	-.106	.242	1.000
	Do not prepare CFS's	1.109*	.226	.000
Do not prepare CFS's	Manual	-1.185*	.114	.000
	Print version + manual fixes	-1.215*	.143	.000
	Automatically printable	-1.109*	.226	.000

Mann-Whitney Test

Ranks

	FASIFRS	N	Mean Rank	Sum of Ranks
CFS_imp	FAS	500	258.75	129374.50
	IFRS	22	324.02	7128.50
	Total	522		

Test Statistics[a]

	CFS_imp
Mann-Whitney U	4124.500
Wilcoxon W	129374.500
Z	-2.038
Asymp. Sig. (2-tailed)	.042

a. Grouping Variable: FASIFRS

T-Test

Group Statistics

	FASIFRS	N	Mean	Std. Deviation	Std. Error Mean
CFS_imp	FAS	500	5.35	1.366	.061
	IFRS	22	5.95	1.174	.250

Independent Samples Test

		Levene's Test for Equality of Variances	
		F	Sig.
CFS_imp	Equal variances assumed	1.263	.262
	Equal variances not assumed		

Independent Samples Test

		t-test for Equality of Means			
		t	df	Sig. (2-tailed)	Mean Difference
CFS_imp	Equal variances assumed	-2.042	520	.042	-.605
	Equal variances not assumed	-2.346	23.574	.028	-.605

Report

Mean

Employer	BS_imp	IS_imp	CFS_imp	Notes_imp
Authorised accounting firm	6.91	6.74	4.85	6.50
Other accounting firm	6.92	6.81	4.64	6.31
Other enterprise	6.91	6.84	5.58	6.58
Entrepreneur	6.82	6.67	4.27	6.20
Total	6.90	6.76	4.93	6.46

Report

Mean

Preparing method	BS_imp	IS_imp	CFS_imp	Notes_imp
Manual	6.89	6.78	5.37	6.52
Print version + manual fixes	6.87	6.69	5.40	6.56
Automatically printable	6.94	6.70	5.30	6.45
Do not prepare CFS's	6.92	6.79	4.19	6.36
Total	6.90	6.76	4.93	6.46

Report

Mean

FASIFRS	BS_imp	IS_imp	CFS_imp	Notes_imp
FAS	6.88	6.74	5.35	6.51
IFRS	6.91	6.82	5.95	6.77
Total	6.89	6.75	5.38	6.52

H_P2: Most cash flow statements are prepared manually (for example, in Microsoft Excel) using the balance sheet, the income statement and other book-keeping material.

Preparing method

Preparers of financial statements		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Manual	324	38.6	38.6	38.6
	Print version + manual fixes	151	18.0	18.0	56.5
	Automatically printable	47	5.6	5.6	62.1
	Do not prepare CFS's	318	37.9	37.9	100.0
	Total	840	100.0	100.0	

Preparing method

Preparers of cash flow statements		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Manual	324	38.6	62.1	62.1
	Print version + manual fixes	151	18.0	28.9	91.0
	Automatically printable	47	5.6	9.0	100.0
	Total	522	62.1	100.0	
Missing	System	318	37.9		
Total		840	100.0		

Preparing method

Auditors' clients		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Manual	228	70.2	70.2	70.2
	Print version + manual fixes	74	22.8	22.8	92.9
	Automatically printable	23	7.1	7.1	100.0
	Total	325	100.0	100.0	

Binomial Test

Preparers of cash flow statements		Category	N	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)
Preparing method	Group 1	Manual	324	.62	.50	.000
	Group 2	Other	198	.38		
	Total		522	1.00		

Binomial Test

Auditors' clients		Category	N	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)
Preparing method	Group 1	Manual	228	.70	.50	.000
	Group 2	Other	97	.30		
	Total		325	1.00		

Associations with independent variable data (H_P2).

Preparing method * Employer Crosstabulation

			Employer		
			Authorised accounting firm	Other accounting firm	Other enterprise
Preparing method	Manual	Count	135	39	124
		Expected Count	173.8	37.9	90.0
	Print version + manual fixes	Count	109	16	17
		Expected Count	81.0	17.6	41.9
	Automatically printable	Count	36	6	4
		Expected Count	25.2	5.5	13.1
Total		Count	280	61	145
		Expected Count	280.0	61.0	145.0

Preparing method * Employer Crosstabulation

			Employer	
			Entrepreneur	Total
Preparing method	Manual	Count	26	324
		Expected Count	22.3	324.0
	Print version + manual fixes	Count	9	151
		Expected Count	10.4	151.0
	Automatically printable	Count	1	47
		Expected Count	3.2	47.0
Total		Count	36	522
		Expected Count	36.0	522.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	59.493[a]	6	.000
Likelihood Ratio	64.629	6	.000
Linear-by-Linear Association	45.181	1	.000
N of Valid Cases	522		

a. 1 cells (8.3%) have expected count less than 5. The minimum expected count is 3.24.

Preparing method * FASIFRS Crosstabulation

			FASIFRS		
			FAS	IFRS	Total
Preparing method	Manual	Count	311	13	324
		Expected Count	310.3	13.7	324.0
	Print version + manual fixes	Count	143	8	151
		Expected Count	144.6	6.4	151.0
	Automatically printable	Count	46	1	47
		Expected Count	45.0	2.0	47.0
Total		Count	500	22	522
		Expected Count	500.0	22.0	522.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.979[a]	2	.613
Likelihood Ratio	1.056	2	.590
Linear-by-Linear Association	.012	1	.914
N of Valid Cases	522		

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 1.98.

Preparing method * Age2class Crosstabulation

			Age2class		
			Under 40	40 and above	Total
Preparing method	Manual	Count	47	276	323
		Expected Count	47.7	275.3	323.0
	Print version + manual fixes	Count	23	128	151
		Expected Count	22.3	128.7	151.0
	Automatically printable	Count	7	40	47
		Expected Count	6.9	40.1	47.0
Total		Count	77	444	521
		Expected Count	77.0	444.0	521.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.038[a]	2	.981
Likelihood Ratio	.038	2	.981
Linear-by-Linear Association	.022	1	.882
N of Valid Cases	521		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.95.

Preparing method * AccountingExperience2class Crosstabulation

			AccountingExperience2class		
			Under 10	10 and above	Total
Preparing method	Manual	Count	24	298	322
		Expected Count	22.3	299.7	322.0
	Print version + manual fixes	Count	10	140	150
		Expected Count	10.4	139.6	150.0
	Automatically printable	Count	2	45	47
		Expected Count	3.3	43.7	47.0
Total		Count	36	483	519
		Expected Count	36.0	483.0	519.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.674[a]	2	.714
Likelihood Ratio	.749	2	.688
Linear-by-Linear Association	.592	1	.442
N of Valid Cases	519		

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 3.26.

Preparing method * KLTExperience2class Crosstabulation

			KLTExperience2class		
			Under 5	5 and above	Total
Preparing method	Manual	Count	47	277	324
		Expected Count	46.6	277.4	324.0
	Print version + manual fixes	Count	24	127	151
		Expected Count	21.7	129.3	151.0
	Automatically printable	Count	4	43	47
		Expected Count	6.8	40.2	47.0
Total		Count	75	447	522
		Expected Count	75.0	447.0	522.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.601[a]	2	.449
Likelihood Ratio	1.783	2	.410
Linear-by-Linear Association	.371	1	.542
N of Valid Cases	522		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.75.

Preparing method * Auditing examination Crosstabulation

			Auditing examination		
			KHT	HTM	Total
Preparing method	Manual	Count	121	107	228
		Expected Count	114.4	113.6	228.0
	Print version + manual fixes	Count	34	40	74
		Expected Count	37.1	36.9	74.0
	Automatically printable	Count	8	15	23
		Expected Count	11.5	11.5	23.0
Total		Count	163	162	325
		Expected Count	163.0	162.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.474[a]	2	.176
Likelihood Ratio	3.509	2	.173
Linear-by-Linear Association	3.399	1	.065
N of Valid Cases	325		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.46.

Preparing method * Big4orNot Crosstabulation

			Big4orNot		
			Big 4	Other	Total
Preparing method	Manual	Count	79	149	228
		Expected Count	72.3	155.7	228.0
	Print version + manual fixes	Count	22	52	74
		Expected Count	23.5	50.5	74.0
	Automatically printable	Count	2	21	23
		Expected Count	7.3	15.7	23.0
Total		Count	103	222	325
		Expected Count	103.0	222.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.671[a]	2	.036
Likelihood Ratio	8.054	2	.018
Linear-by-Linear Association	5.477	1	.019
N of Valid Cases	325		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.29.

H_P3: Few preparers of financial statements would provide information in the notes if the entity has not paid its accounts payable that were due the last month of the accounting period; furthermore, few of those who would not disclose such information, would provide information in the notes if the entity has not paid its accounts payable that were due Q4 of the accounting period.

A/P due last month

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	723	86.1	86.1	86.1
	Yes	117	13.9	13.9	100.0
	Total	840	100.0	100.0	

Binomial Test

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
A/P due last month	Group 1	No	723	.86	.80	.000
	Group 2	Yes	117	.14		
	Total		840	1.00		

A/P due Q4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	171	20.4	23.7	23.7
	No opinion for or against	163	19.4	22.5	46.2
	No	389	46.3	53.8	100.0
	Total	723	86.1	100.0	
Missing	System	117	13.9		
Total		840	100.0		

Binomial Test

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
A/P due Q4	Group 1	Yes	171	.24	.30	.000[a]
	Group 2	Other	552	.76		
	Total		723	1.00		

a. Alternative hypothesis states that the proportion of cases in the first group < .30.

Associations with independent variable data (H_P3).

A/P due last month * Employer Crosstabulation

			Employer				
			Authorised accounting firm	Other accounting firm	Other enterprise	Entrepreneur	Total
A/P due last month	No	Count	417	92	143	71	723
		Expected Count	400.2	91.2	159.2	72.3	723.0
	Yes	Count	48	14	42	13	117
		Expected Count	64.8	14.8	25.8	11.7	117.0
Total		Count	465	106	185	84	840
		Expected Count	465.0	106.0	185.0	84.0	840.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17.137[a]	3	.001
Likelihood Ratio	15.963	3	.001
Linear-by-Linear Association	10.873	1	.001
N of Valid Cases	840		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.70.

A/P due Q4 * Employer Crosstabulation

			Employer		
			Authorised accounting firm	Other accounting firm	Other enterprise
A/P due Q4	Yes	Count	81	19	60
		Expected Count	98.6	21.8	33.8
	No opinion for or against	Count	103	14	29
		Expected Count	94.0	20.7	32.2
	No	Count	233	59	54
		Expected Count	224.4	49.5	76.9
Total		Count	417	92	143
		Expected Count	417.0	92.0	143.0

A/P due Q4 * Employer Crosstabulation

			Employer	
			Entrepreneur	Total
A/P due Q4	Yes	Count	11	171
		Expected Count	16.8	171.0
	No opinion for or against	Count	17	163
		Expected Count	16.0	163.0
	No	Count	43	389
		Expected Count	38.2	389.0
Total		Count	71	723
		Expected Count	71.0	723.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	38.797[a]	6	.000
Likelihood Ratio	36.408	6	.000
Linear-by-Linear Association	5.234	1	.022
N of Valid Cases	723		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 16.01.

Crosstab

			Involved in preparing CFS's		
			Involved in preparing CFS's	Not involved in preparing CFS's	Total
A/P due last month	No	Count	438	285	723
		Expected Count	449.3	273.7	723.0
	Yes	Count	84	33	117
		Expected Count	72.7	44.3	117.0
Total		Count	522	318	840
		Expected Count	522.0	318.0	840.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	5.383[a]	1	.020		
Continuity Correction[b]	4.917	1	.027		
Likelihood Ratio	5.576	1	.018		
Fisher's Exact Test				.024	.012
Linear-by-Linear Association	5.377	1	.020		
N of Valid Cases	840				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 44.29.

b. Computed only for a 2x2 table

Crosstab

			Involved in preparing CFS's		
			Involved in preparing CFS's	Not involved in preparing CFS's	Total
A/P due Q4	Yes	Count	122	49	171
		Expected Count	103.6	67.4	171.0
	No opinion for or against	Count	100	63	163
		Expected Count	98.7	64.3	163.0
	No	Count	216	173	389
		Expected Count	235.7	153.3	389.0
Total		Count	438	285	723
		Expected Count	438.0	285.0	723.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.498[a]	2	.002
Likelihood Ratio	12.799	2	.002
Linear-by-Linear Association	12.260	1	.000
N of Valid Cases	723		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 64.25.

Crosstab

			FASIFRS		
			FAS	IFRS	Total
A/P due Q4	Yes	Count	111	11	122
		Expected Count	117.0	5.0	122.0
	No opinion for or against	Count	98	2	100
		Expected Count	95.9	4.1	100.0
	No	Count	211	5	216
		Expected Count	207.1	8.9	216.0
Total		Count	420	18	438
		Expected Count	420.0	18.0	438.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.349[a]	2	.006
Likelihood Ratio	9.095	2	.011
Linear-by-Linear Association	7.749	1	.005
N of Valid Cases	438		

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 4.11.

Crosstab

			FASIFRS		
			FAS	IFRS	Total
A/P due last month	No	Count	420	18	438
		Expected Count	419.5	18.5	438.0
	Yes	Count	80	4	84
		Expected Count	80.5	3.5	84.0
Total		Count	500	22	522
		Expected Count	500.0	22.0	522.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.074[a]	1	.785		
Continuity Correction[b]	.000	1	1.000		
Likelihood Ratio	.072	1	.788		
Fisher's Exact Test				.767	.484
Linear-by-Linear Association	.074	1	.785		
N of Valid Cases	522				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 3.54.

b. Computed only for a 2x2 table

A/P due last month * Age2class Crosstabulation

			Age2class		
			Under 40	40 and above	Total
A/P due last month	No	Count	108	614	722
		Expected Count	111.0	611.0	722.0
	Yes	Count	21	96	117
		Expected Count	18.0	99.0	117.0
Total		Count	129	710	839
		Expected Count	129.0	710.0	839.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.692[a]	1	.406		
Continuity Correction[b]	.481	1	.488		
Likelihood Ratio	.668	1	.414		
Fisher's Exact Test				.408	.240
Linear-by-Linear Association	.691	1	.406		
N of Valid Cases	839				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 17.99.

b. Computed only for a 2x2 table

A/P due Q4 * Age2class Crosstabulation

			Age2class		
			Under 40	40 and above	Total
A/P due Q4	Yes	Count	24	147	171
		Expected Count	25.6	145.4	171.0
	No opinion for or against	Count	21	142	163
		Expected Count	24.4	138.6	163.0
	No	Count	63	325	388
		Expected Count	58.0	330.0	388.0
Total		Count	108	614	722
		Expected Count	108.0	614.0	722.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.165[a]	2	.558
Likelihood Ratio	1.178	2	.555
Linear-by-Linear Association	.680	1	.410
N of Valid Cases	722		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 24.38.

A/P due last month * AccountingExperience2class Crosstabulation

			AccountingExperience 2class		
			Under 10	10 and above	Total
A/P due last month	No	Count	61	659	720
		Expected Count	66.4	653.6	720.0
	Yes	Count	16	99	115
		Expected Count	10.6	104.4	115.0
Total		Count	77	758	835
		Expected Count	77.0	758.0	835.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.507[a]	1	.061		
Continuity Correction[b]	2.887	1	.089		
Likelihood Ratio	3.150	1	.076		
Fisher's Exact Test				.080	.050
Linear-by-Linear Association	3.502	1	.061		
N of Valid Cases	835				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.60.

b. Computed only for a 2x2 table

A/P due Q4 * AccountingExperience2class Crosstabulation

			AccountingExperience2class		
			Under 10	10 and above	Total
A/P due Q4	Yes	Count	19	151	170
		Expected Count	14.4	155.6	170.0
	No opinion for or against	Count	10	153	163
		Expected Count	13.8	149.2	163.0
	No	Count	32	355	387
		Expected Count	32.8	354.2	387.0
Total		Count	61	659	720
		Expected Count	61.0	659.0	720.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.772[a]	2	.250
Likelihood Ratio	2.750	2	.253
Linear-by-Linear Association	.760	1	.383
N of Valid Cases	720		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 13.81.

A/P due last month * KLTExperience2class Crosstabulation

			KLTExperience2class		
			Under 5	5 and above	Total
A/P due last month	No	Count	121	601	722
		Expected Count	123.9	598.1	722.0
	Yes	Count	23	94	117
		Expected Count	20.1	96.9	117.0
Total		Count	144	695	839
		Expected Count	144.0	695.0	839.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.595[a]	1	.440		
Continuity Correction[b]	.409	1	.523		
Likelihood Ratio	.577	1	.447		
Fisher's Exact Test				.430	.257
Linear-by-Linear Association	.594	1	.441		
N of Valid Cases	839				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 20.08.

b. Computed only for a 2x2 table

A/P due Q4 * KLTExperience2class Crosstabulation

			KLTExperience2class		
			Under 5	5 and above	Total
A/P due Q4	Yes	Count	31	140	171
		Expected Count	28.7	142.3	171.0
	No opinion for or against	Count	21	142	163
		Expected Count	27.3	135.7	163.0
	No	Count	69	319	388
		Expected Count	65.0	323.0	388.0
Total		Count	121	601	722
		Expected Count	121.0	601.0	722.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.277[a]	2	.320
Likelihood Ratio	2.391	2	.303
Linear-by-Linear Association	.039	1	.844
N of Valid Cases	722		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 27.32.

H_P4$_a$: Few preparers of financial statements who manually prepare cash flow statements would present cash payments relating to capacity acquisitions correctly in accordance with both KILA 30.1.2007 and IAS 7. H_P4$_b$: Few preparers of financial statements who manually prepare cash flow statements primarily under FAS would present cash payments relating to capacity acquisitions correctly in accordance with KILA 30.1.2007. H_P4$_c$: Few preparers of financial statements who manually prepare cash flow statements primarily under IFRS would present cash payments relating to capacity acquisitions correctly in accordance with IAS 7.

PPEtestAll

Preparing method		Frequency	Percent	Valid Percent	Cumulative Percent
Manual + PrintVersion& Manual fixes	Correct	14	2.9	2.9	2.9
	Not correct	461	97.1	97.1	100.0
	Total	475	100.0	100.0	
No manual preparing	Correct	10	2.7	2.7	2.7
	Not correct	355	97.3	97.3	100.0
	Total	365	100.0	100.0	

Binomial Test

Preparing method		Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
Manual + PrintVersion&Manual fixes	PPEtestAll Group 1	Correct	14	.03	.05	.020[a]
	Group 2	Not correct	461	.97		
	Total		475	1.00		
No manual preparing	PPEtestAll Group 1	Correct	10	.03	.05	.024[a]
	Group 2	Not correct	355	.97		
	Total		365	1.00		

a. Alternative hypothesis states that the proportion of cases in the first group < .05.

PPEtestFAS

Preparing method	FASIFRS		Frequency	Percent	Valid Percent	Cumulative Percent
Manual + PrintVersion&Manual fixes	FAS	Correct	68	15.0	15.0	15.0
		Not correct	386	85.0	85.0	100.0
		Total	454	100.0	100.0	
	IFRS	Correct	3	14.3	14.3	14.3
		Not correct	18	85.7	85.7	100.0
		Total	21	100.0	100.0	
No manual preparing	FAS	Correct	7	15.2	15.2	15.2
		Not correct	39	84.8	84.8	100.0
		Total	46	100.0	100.0	
	IFRS	Not correct	1	100.0	100.0	100.0

Binomial Test

Preparing method	FASIFRS			Category	N	Observed Prop.
Manual + PrintVersion&Manual fixes	FAS	PPEtest FAS	Group 1	Correct	68	.15
			Group 2	Not correct	386	.85
			Total		454	1.00
	IFRS	PPEtest FAS	Group 1	Not correct	18	.86
			Group 2	Correct	3	.14
			Total		21	1.00
No manual preparing	FAS	PPEtest FAS	Group 1	Not correct	39	.85
			Group 2	Correct	7	.15
			Total		46	1.00

Binomial Test

Preparing method	FASIFRS			Test Prop.	Exact Sig. (1-tailed)
Manual + PrintVersion &Manual fixes	FAS	PPEtest FAS	Group 1	.20	.004[a]
			Group 2		
			Total		
	IFRS	PPEtest FAS	Group 1	.20	.000
			Group 2		
			Total		
No manual preparing	FAS	PPEtest FAS	Group 1	.20	.000
			Group 2		
			Total		

a. Alternative hypothesis states that the proportion of cases in the first group < .2.

PPEtestIFRS

Preparing method	FASIFRS			Frequency	Percent	Valid Percent	Cumulative Percent
Manual + PrintVersion&Manual fixes	FAS	Valid	Correct	14	3.1	3.1	3.1
			Not correct	440	96.9	96.9	100.0
			Total	454	100.0	100.0	
	IFRS	Valid	Correct	1	4.8	4.8	4.8
			Not correct	20	95.2	95.2	100.0
			Total	21	100.0	100.0	
No manual preparing	FAS	Valid	Not correct	46	100.0	100.0	100.0
	IFRS	Valid	Not correct	1	100.0	100.0	100.0

Binomial Test

Preparing method	FASIFRS			Category	N	Observed Prop.
Manual + PrintVersion&Manual fixes	FAS	PPEtest IFRS	Group 1	Correct	14	.03
			Group 2	Not correct	440	.97
			Total		454	1.00
	IFRS	PPEtest IFRS	Group 1	Correct	1	.05
			Group 2	Not correct	20	.95
			Total		21	1.00
No manual preparing	FAS	PPEtest IFRS	Group 1	Correct	0	.00
			Group 2	Not correct	46	1.00
			Total		46	1.00

Binomial Test

Preparing method	FASIFRS			Test Prop.	Exact Sig. (1-tailed)
Manual + PrintVersion&Manual fixes	FAS	PPEtest IFRS	Group 1	.25	.000[a]
			Group 2		
			Total		
	IFRS	PPEtest IFRS	Group 1	.25	.019[a]
			Group 2		
			Total		
No manual preparing	FAS	PPEtest IFRS	Group 1	.25	.000[a]
			Group 2		
			Total		

a. Alternative hypothesis states that the proportion of cases in the first group < .25.

Associations with independent variable data (H_P4).

PPEtestAll * Employer Crosstabulation

Preparing method				Employer: Authorised accounting firm	Employer: Other accounting firm	Employer: Other enterprise
Manual + PrintVersion&Manual fixes	PPEtestAll	Correct	Count	6	0	8
			Expected Count	7.2	1.6	4.2
		Not correct	Count	238	55	133
			Expected Count	236.8	53.4	136.8
	Total		Count	244	55	141
			Expected Count	244.0	55.0	141.0
No manual preparing	PPEtestAll	Correct	Count	5	2	2
			Expected Count	6.1	1.4	1.2
		Not correct	Count	216	49	42
			Expected Count	214.9	49.6	42.8
	Total		Count	221	51	44
			Expected Count	221.0	51.0	44.0

PPEtestAll * Employer Crosstabulation

Preparing method				Employer: Entrepreneur	Total
Manual + PrintVersion&Manual fixes	PPEtestAll	Correct	Count	0	14
			Expected Count	1.0	14.0
		Not correct	Count	35	461
			Expected Count	34.0	461.0
	Total		Count	35	475
			Expected Count	35.0	475.0
No manual preparing	PPEtestAll	Correct	Count	1	10
			Expected Count	1.3	10.0
		Not correct	Count	48	355
			Expected Count	47.7	355.0
	Total		Count	49	365
			Expected Count	49.0	365.0

Chi-Square Tests

Preparing method		Value	df	Asymp. Sig. (2-sided)
Manual + PrintVersion&Manual fixes	Pearson Chi-Square	6.601[a]	3	.086
	Likelihood Ratio	8.500	3	.037
	Linear-by-Linear Association	.590	1	.443
	N of Valid Cases	475		
No manual preparing	Pearson Chi-Square	1.084[b]	3	.781
	Likelihood Ratio	.986	3	.805
	Linear-by-Linear Association	.114	1	.735
	N of Valid Cases	365		

a. 3 cells (37.5%) have expected count less than 5. The minimum expected count is 1.03.

b. 3 cells (37.5%) have expected count less than 5. The minimum expected count is 1.21.

PPEtestFAS * Employer Crosstabulation

Preparing method	FASIFRS				Employer: Authorised accounting firm	Employer: Other accounting firm
Manual + PrintVersion &Manual fixes	FAS	PP EtestFAS	Correct	Count	32	8
				Expected Count	35.6	7.8
			Not correct	Count	206	44
				Expected Count	202.4	44.2
		Total		Count	238	52
				Expected Count	238.0	52.0
	IFRS	PP EtestFAS	Correct	Count	0	0
				Expected Count	.9	.4
			Not correct	Count	6	3
				Expected Count	5.1	2.6
		Total		Count	6	3
				Expected Count	6.0	3.0
No manual preparing	FAS	PP EtestFAS	Correct	Count	7	0
				Expected Count	5.3	.9
			Not correct	Count	28	6
				Expected Count	29.7	5.1
		Total		Count	35	6
				Expected Count	35.0	6.0
	IFRS	PP EtestFAS	Not correct	Count	1	
				Expected Count	1.0	
		Total		Count	1	
				Expected Count	1.0	

PPEtestFAS * Employer Crosstabulation

Preparing method	FASIFRS				Employer		Total
					Other enterprise	Entrepreneur	
Manual + PrintVersion &Manual fixes	FAS	PPEtestFAS	Correct	Count	21	7	68
				Expected Count	19.5	5.1	68.0
			Not correct	Count	109	27	386
				Expected Count	110.5	28.9	386.0
			Total	Count	130	34	454
				Expected Count	130.0	34.0	454.0
	IFRS	PPEtestFAS	Correct	Count	2	1	3
				Expected Count	1.6	.1	3.0
			Not correct	Count	9	0	18
				Expected Count	9.4	.9	18.0
			Total	Count	11	1	21
				Expected Count	11.0	1.0	21.0
No manual preparing	FAS	PPEtestFAS	Correct	Count	0	0	7
				Expected Count	.6	.2	7.0
			Not correct	Count	4	1	39
				Expected Count	3.4	.8	39.0
			Total	Count	4	1	46
				Expected Count	4.0	1.0	46.0
	IFRS	PPEtestFAS	Not correct	Count			1
				Expected Count			1.0
			Total	Count			1
				Expected Count			1.0

Chi-Square Tests

Preparing method	FASIFRS		Value	df	Asymp. Sig. (2-sided)
Manual + PrintVersion &Manual fixes	FAS	Pearson Chi-Square	1.427[a]	3	.699
		Likelihood Ratio	1.365	3	.714
		Linear-by-Linear Association	1.266	1	.261
		N of Valid Cases	454		
	IFRS	Pearson Chi-Square	7.636[b]	3	.054
		Likelihood Ratio	6.794	3	.079
		Linear-by-Linear Association	3.750	1	.053
		N of Valid Cases	21		
No manual preparing	FAS	Pearson Chi-Square	2.595[d]	3	.458
		Likelihood Ratio	4.206	3	.240
		Linear-by-Linear Association	2.053	1	.152
		N of Valid Cases	46		
	IFRS	Pearson Chi-Square	.[e]		
		N of Valid Cases	1		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.09.

b. 6 cells (75.0%) have expected count less than 5. The minimum expected count is .14.

d. 5 cells (62.5%) have expected count less than 5. The minimum expected count is .15.

e. No statistics are computed because PPEtestFAS and Employer are constants.

PPEtestIFRS * Employer Crosstabulation

Preparing method	FASIFRS				Employer: Authorised accounting firm	Employer: Other accounting firm
Manual + PrintVersion&Manual fixes	FAS	PPEtestIFRS	Correct	Count	7	0
				Expected Count	7.3	1.6
			Not correct	Count	231	52
				Expected Count	230.7	50.4
		Total		Count	238	52
				Expected Count	238.0	52.0
	IFRS	PPEtestIFRS	Correct	Count	0	0
				Expected Count	.3	.1
			Not correct	Count	6	3
				Expected Count	5.7	2.9
		Total		Count	6	3
				Expected Count	6.0	3.0
No manual preparing	FAS	PPEtestIFRS	Not correct	Count	35	6
				Expected Count	35.0	6.0
		Total		Count	35	6
				Expected Count	35.0	6.0
	IFRS	PPEtestIFRS	Not correct	Count	1	
				Expected Count	1.0	
		Total		Count	1	
				Expected Count	1.0	

PPEtestIFRS * Employer Crosstabulation

Preparing method	FASIFRS				Employer: Other enterprise	Employer: Entrepreneur	Total
Manual + PrintVersion&Manual fixes	FAS	PPEtestIFRS	Correct	Count	7	0	14
				Expected Count	4.0	1.0	14.0
			Not correct	Count	123	34	440
				Expected Count	126.0	33.0	440.0
		Total		Count	130	34	454
				Expected Count	130.0	34.0	454.0
	IFRS	PPEtestIFRS	Correct	Count	1	0	1
				Expected Count	.5	.0	1.0
			Not correct	Count	10	1	20
				Expected Count	10.5	1.0	20.0
		Total		Count	11	1	21
				Expected Count	11.0	1.0	21.0
No manual preparing	FAS	PPEtestIFRS	Not correct	Count	4	1	46
				Expected Count	4.0	1.0	46.0
		Total		Count	4	1	46
				Expected Count	4.0	1.0	46.0
	IFRS	PPEtestIFRS	Not correct	Count			1
				Expected Count			1.0
		Total		Count			1
				Expected Count			1.0

Chi-Square Tests

Preparing method	FASIFRS		Value	df	Asymp. Sig. (2-sided)
Manual + PrintVersion&Manual fixes	FAS	Pearson Chi-Square	5.055[a]	3	.168
		Likelihood Ratio	7.297	3	.063
		Linear-by-Linear Association	.101	1	.750
		N of Valid Cases	454		
	IFRS	Pearson Chi-Square	.955[b]	3	.812
		Likelihood Ratio	1.339	3	.720
		Linear-by-Linear Association	.500	1	.480
		N of Valid Cases	21		
No manual preparing	FAS	Pearson Chi-Square	.[d]		
		N of Valid Cases	46		
	IFRS	Pearson Chi-Square	.[e]		
		N of Valid Cases	1		

a. 3 cells (37.5%) have expected count less than 5. The minimum expected count is 1.05.

b. 6 cells (75.0%) have expected count less than 5. The minimum expected count is .05.

d. No statistics are computed because PPEtestIFRS is a constant.

e. No statistics are computed because PPEtestIFRS and Employer are constants.

PPEtestAll * Age2class Crosstabulation

Preparing method				Age2class: Under 40	Age2class: 40 and above	Total
Manual + PrintVersion&Manual fixes	PPEtestAll	Correct	Count	3	11	14
			Expected Count	2.1	11.9	14.0
		Not correct	Count	67	393	460
			Expected Count	67.9	392.1	460.0
	Total		Count	70	404	474
			Expected Count	70.0	404.0	474.0
No manual preparing	PPEtestAll	Correct	Count	0	10	10
			Expected Count	1.6	8.4	10.0
		Not correct	Count	59	296	355
			Expected Count	57.4	297.6	355.0
	Total		Count	59	306	365
			Expected Count	59.0	306.0	365.0

Chi-Square Tests

Preparing method		Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Manual + PrintVersion&Manual fixes	Pearson Chi-Square	.508[a]	1	.476		
	Continuity Correction[b]	.109	1	.741		
	Likelihood Ratio	.459	1	.498		
	Fisher's Exact Test				.445	.342
	Linear-by-Linear Association	.507	1	.476		
	N of Valid Cases	474				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.07.

PPEtestAll * AccountingExperience2class Crosstabulation

Preparing method				AccountingExperience2class: Under 10	AccountingExperience2class: 10 and above	Total
Manual + PrintVersion&Manual fixes	PPEtestAll	Correct	Count	3	11	14
			Expected Count	1.0	13.0	14.0
		Not correct	Count	31	427	458
			Expected Count	33.0	425.0	458.0
	Total		Count	34	438	472
			Expected Count	34.0	438.0	472.0
No manual preparing	PPEtestAll	Correct	Count	0	10	10
			Expected Count	1.2	8.8	10.0
		Not correct	Count	43	310	353
			Expected Count	41.8	311.2	353.0
	Total		Count	43	320	363
			Expected Count	43.0	320.0	363.0

Chi-Square Tests

Preparing method		Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Manual + PrintVersion&Manual fixes	Pearson Chi-Square	4.368[a]	1	.037		
	Continuity Correction[b]	2.450	1	.118		
	Likelihood Ratio	3.012	1	.083		
	Fisher's Exact Test				.072	.072
	Linear-by-Linear Association	4.358	1	.037		
	N of Valid Cases	472				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 1.01.

PPEtestAll * KLTExperience2class Crosstabulation

Preparing method				KLTExperience2class		Total
				Under 5	5 and above	
Manual + PrintVersion&Manual fixes	PPEtestAll	Correct	Count	4	10	14
			Expected Count	2.1	11.9	14.0
		Not correct	Count	67	394	461
			Expected Count	68.9	392.1	461.0
	Total		Count	71	404	475
			Expected Count	71.0	404.0	475.0
No manual preparing	PPEtestAll	Correct	Count	0	10	10
			Expected Count	2.0	8.0	10.0
		Not correct	Count	73	281	354
			Expected Count	71.0	283.0	354.0
	Total		Count	73	291	364
			Expected Count	73.0	291.0	364.0

Chi-Square Tests

Preparing method		Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Manual + PrintVersion&Manual fixes	Pearson Chi-Square	2.106[a]	1	.147		
	Continuity Correction[b]	1.147	1	.284		
	Likelihood Ratio	1.754	1	.185		
	Fisher's Exact Test				.142	.142
	Linear-by-Linear Association	2.102	1	.147		
	N of Valid Cases	475				

PPEtestFAS * Age2class Crosstabulation

Preparing method	FASIFRS			Age2class: Under 40	Age2class: 40 and above	Total
Manual + PrintVersion&Manual fixes	FAS	PPEtestFAS	Correct Count	14	53	67
			Correct Expected Count	10.4	56.6	67.0
			Not correct Count	56	330	386
			Not correct Expected Count	59.6	326.4	386.0
		Total	Count	70	383	453
			Expected Count	70.0	383.0	453.0

Chi-Square Tests

Preparing method	FASIFRS		Value	df	Asymp. Sig. (2-sided)
Manual + PrintVersion&Manual fixes	FAS	Pearson Chi-Square	1.783[a]	1	.182
		Continuity Correction[b]	1.328	1	.249
		Likelihood Ratio	1.664	1	.197
		Fisher's Exact Test			
		Linear-by-Linear Association	1.779	1	.182
		N of Valid Cases	453		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.35.

PPEtestFAS * AccountingExperience2class Crosstabulation

Preparing method	FASIFRS			AccountingExperience2class		Total
				Under 10	10 and above	
Manual + PrintVersion&Manual fixes	FAS	PPEtestFAS	Correct	Count	9	59	68
				Expected Count	5.1	62.9	68.0
			Not correct	Count	25	358	383
				Expected Count	28.9	354.1	383.0
		Total		Count	34	417	451
				Expected Count	34.0	417.0	451.0

Chi-Square Tests

Preparing method	FASIFRS		Value	df	Asymp. Sig. (2-sided)
Manual + PrintVersion&Manual fixes	FAS	Pearson Chi-Square	3.728[a]	1	.054
		Continuity Correction[b]	2.827	1	.093
		Likelihood Ratio	3.214	1	.073
		Fisher's Exact Test			
		Linear-by-Linear Association	3.719	1	.054
		N of Valid Cases	451		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.13.

PPEtestFAS * KLTExperience2class Crosstabulation

Preparing method	FASIFRS			KLTExperience 2class: Under 5	KLTExperience 2class: 5 and above	Total
Manual + PrintVersion&Manual fixes	FAS	PPEtestFAS: Correct	Count	17	51	68
			Expected Count	10.6	57.4	68.0
		PPEtestFAS: Not correct	Count	54	332	386
			Expected Count	60.4	325.6	386.0
		Total	Count	71	383	454
			Expected Count	71.0	383.0	454.0

Chi-Square Tests

Preparing method	FASIFRS		Value	df	Asymp. Sig. (2-sided)
Manual + PrintVersion&Manual fixes	FAS	Pearson Chi-Square	5.312[a]	1	.021
		Continuity Correction[b]	4.511	1	.034
		Likelihood Ratio	4.773	1	.029
		Fisher's Exact Test			
		Linear-by-Linear Association	5.301	1	.021
		N of Valid Cases	454		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.63.

H_P5: Few preparers of financial statements who manually prepare cash flow statements primarily under FAS would omit material non-cash transactions from cash flow statements under FAS.

Material non-cash transactions

FASIFRS	Preparing method		Frequency	Percent	Valid Percent	Cumulative Percent
FAS	Manual + PrintVersion&Manual fixes	Omit	115	25.3	25.3	25.3
		Do not omit	339	74.7	74.7	100.0
		Total	454	100.0	100.0	
	No manual preparing	Omit	8	17.4	17.4	17.4
		Do not omit	38	82.6	82.6	100.0
		Total	46	100.0	100.0	
IFRS	Manual + PrintVersion&Manual fixes	Omit	9	42.9	42.9	42.9
		Do not omit	12	57.1	57.1	100.0
		Total	21	100.0	100.0	
	No manual preparing	Do not omit	1	100.0	100.0	100.0

Binomial Test

FASIFRS	Preparing method			Category	N	Observed Prop.
FAS	Manual + PrintVersion &Manual fixes	Material non-cash transactions	Group 1	Omit	115	.25
			Group 2	Do not omit	339	.75
			Total		454	1.00
	No manual preparing	Material non-cash transactions	Group 1	Omit	8	.17
			Group 2	Do not omit	38	.83
			Total		46	1.00
IFRS	Manual + PrintVersion &Manual fixes	Material non-cash transactions	Group 1	Omit	9	.43
			Group 2	Do not omit	12	.57
			Total		21	1.00

Binomial Test

FASIFRS	Preparing method			Test Prop.	Exact Sig. (1-tailed)
FAS	Manual + PrintVersion &Manual fixes	Material non-cash transactions	Group 1	.30	.016[a]
			Group 2		
			Total		
	No manual preparing	Material non-cash transactions	Group 1	.30	.039[a]
			Group 2		
			Total		
IFRS	Manual + PrintVersion &Manual fixes	Material non-cash transactions	Group 1	.30	.148
			Group 2		
			Total		

a. Alternative hypothesis states that the proportion of cases in the first group < .3.

Associations with independent variable data (H_P5).

Material non-cash transactions * Employer Crosstabulation

FASI FRS	Preparing method				Employer Authorised accounting firm
FAS	Manual + PrintVersion&Manual fixes	Material non-cash transactions	Omit	Count	63
				Expected Count	60.3
			Do not omit	Count	175
				Expected Count	177.7
		Total		Count	238
				Expected Count	238.0

Material non-cash transactions * Employer Crosstabulation

FASI FRS	Preparing method				Employer Other accounting firm
FAS	Manual + PrintVersion&Manual fixes	Material non-cash transactions	Omit	Count	10
				Expected Count	13.2
			Do not omit	Count	42
				Expected Count	38.8
		Total		Count	52
				Expected Count	52.0

Material non-cash transactions * Employer Crosstabulation

FASI FRS	Preparing method				Employer Other enterprise
FAS	Manual + PrintVersion&Manual fixes	Material non-cash transactions	Omit	Count	33
				Expected Count	32.9
			Do not omit	Count	97
				Expected Count	97.1
		Total		Count	130
				Expected Count	130.0

Material non-cash transactions * Employer Crosstabulation

FASIFRS	Preparing method			Employer: Entrepreneur	Total
FAS	Manual + PrintVersion &Manual fixes	Material non-cash transactions	Omit	Count: 9	115
				Expected Count: 8.6	115.0
			Do not omit	Count: 25	339
				Expected Count: 25.4	339.0
		Total		Count: 34	454
				Expected Count: 34.0	454.0

Chi-Square Tests

FASIFRS	Preparing method		Value	df	Asymp. Sig. (2-sided)
FAS	Manual + PrintVersion &Manual fixes	Pearson Chi-Square	1.210[b]	3	.751
		Likelihood Ratio	1.271	3	.736
		Linear-by-Linear Association	.037	1	.848
		N of Valid Cases	454		

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.61.

Material non-cash transactions * Age2class Crosstabulation

Preparing method	FASIFRS				Age2class: Under 40	Age2class: 40 and above
Manual + PrintVersion&Manual fixes	FAS	Material non-cash transactions	Omit	Count	22	93
				Expected Count	17.8	97.2
			Do not omit	Count	48	290
				Expected Count	52.2	285.8
		Total		Count	70	383
				Expected Count	70.0	383.0

Material non-cash transactions * Age2class Crosstabulation

Preparing method	FASIFRS				Total
Manual + PrintVersion& Manual fixes	FAS	Material non-cash transactions	Omit	Count	115
				Expected Count	115.0
			Do not omit	Count	338
				Expected Count	338.0
		Total		Count	453
				Expected Count	453.0

Chi-Square Tests

Preparing method	FASIFRS		Value	df	Asymp. Sig. (2-sided)
Manual + PrintVersion&Manual fixes	FAS	Pearson Chi-Square	1.596[a]	1	.206
		Continuity Correction[b]	1.241	1	.265
		Likelihood Ratio	1.536	1	.215
		Fisher's Exact Test			
		Linear-by-Linear Association	1.592	1	.207
		N of Valid Cases	453		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 17.77.

Material non-cash transactions * AccountingExperience2class Crosstabulation

Preparing method	FASIFRS				AccountingExperience2class
					Under 10
Manual + PrintVersion&Manual fixes	FAS	Material non-cash transactions	Omit	Count	13
				Expected Count	8.5
			Do not omit	Count	21
				Expected Count	25.5
		Total		Count	34
				Expected Count	34.0

Material non-cash transactions * AccountingExperience2class Crosstabulation

Preparing method	FASIFRS				AccountingExperience2class 10 and above	Total
Manual + PrintVersion&Manual fixes	FAS	Material non-cash transactions	Omit	Count	100	113
				Expected Count	104.5	113.0
			Do not omit	Count	317	338
				Expected Count	312.5	338.0
		Total		Count	417	451
				Expected Count	417.0	451.0

Chi-Square Tests

Preparing method	FASIFRS		Value	df	Asymp. Sig. (2-sided)
Manual + PrintVersion&Manual fixes	FAS	Pearson Chi-Square	3.402[a]	1	.065
		Continuity Correction[b]	2.685	1	.101
		Likelihood Ratio	3.125	1	.077
		Fisher's Exact Test			
		Linear-by-Linear Association	3.394	1	.065
		N of Valid Cases	451		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.52.

Material non-cash transactions * KLTExperience2class Crosstabulation

Preparing method	FASIFRS				KLTExperience2class	
					Under 5	5 and above
Manual + PrintVersion& Manual fixes	FAS	Material non-cash transactions	Omit	Count	25	90
				Expected Count	18.0	97.0
			Do not omit	Count	46	293
				Expected Count	53.0	286.0
		Total		Count	71	383
				Expected Count	71.0	383.0

Material non-cash transactions * KLTExperience2class Crosstabulation

Preparing method	FASIFRS				Total
Manual + PrintVersion&Manual fixes	FAS	Material non-cash transactions	Omit	Count	115
				Expected Count	115.0
			Do not omit	Count	339
				Expected Count	339.0
		Total		Count	454
				Expected Count	454.0

Chi-Square Tests

Preparing method	FASIFRS		Value	df	Asymp. Sig. (2-sided)
Manual + PrintVersion&Manual fixes	FAS	Pearson Chi-Square	4.344[a]	1	.037
		Continuity Correction[b]	3.747	1	.053
		Likelihood Ratio	4.100	1	.043
		Fisher's Exact Test			
		Linear-by-Linear Association	4.335	1	.037
		N of Valid Cases	454		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 17.98.

H_P6: Most of those FAS manual preparers who indicate omitting non-cash transactions from the cash flow statement, never or rarely use any essential accounting material (journal, other vouchers, bank statements, A/P reports, A/R reports or director's report) for detecting non-cash transactions.

Balance sheet usage

FASIFRS	Preparing method	Material non-cash transactions		Frequency	Percent	Valid Percent
FAS	Manual + PrintVersion&Manual fixes	Omit all	Never or rarely	4	3.5	3.5
			Often or always	111	96.5	96.5
			Total	115	100.0	100.0

Balance sheet specifications usage

FASIFRS	Preparing method	Material non-cash transactions		Frequency	Percent	Valid Percent
FAS	Manual + PrintVersion&Manual fixes	Omit all	Never or rarely	9	7.8	7.8
			Sometimes	4	3.5	3.5
			Often or always	102	88.7	88.7
			Total	115	100.0	100.0

Income statement usage

FASIFRS	Preparing method	Material non-cash transactions		Frequency	Percent	Valid Percent
FAS	Manual + PrintVersion&Manual fixes	Omit all	Never or rarely	6	5.2	5.2
			Sometimes	2	1.7	1.7
			Often or always	107	93.0	93.0
			Total	115	100.0	100.0

Notes usage

FASIFRS	Preparing method	Material non-cash transactions		Frequency	Percent	Valid Percent
FAS	Manual + PrintVersion&Manual fixes	Omit all	Never or rarely	27	23.5	23.5
			Sometimes	16	13.9	13.9
			Often or always	72	62.6	62.6
			Total	115	100.0	100.0

Director's report usage

FASIFRS	Preparing method	Material transactions	non-cash	Frequency	Percent	Valid Percent
FAS	Manual + PrintVersion&Manual fixes	Omit	Never or rarely	79	68.7	68.7
			Sometimes	8	7.0	7.0
			Often or always	28	24.3	24.3
			Total	115	100.0	100.0

Ledger usage

FASIFRS	Preparing method	Material transactions	non-cash	Frequency	Percent	Valid Percent
FAS	Manual + PrintVersion&Manual fixes	Omit	Never or rarely	38	33.0	33.0
			Sometimes	15	13.0	13.0
			Often or always	62	53.9	53.9
			Total	115	100.0	100.0

Journal usage

FASIFRS	Preparing method	Material transactions	non-cash	Frequency	Percent	Valid Percent
FAS	Manual + PrintVersion&Manual fixes	Omit	Never or rarely	82	71.3	71.3
			Sometimes	10	8.7	8.7
			Often or always	23	20.0	20.0
			Total	115	100.0	100.0

A/R usage

FASIFRS	Preparing method	Material transactions	non-cash	Frequency	Percent	Valid Percent
FAS	Manual + PrintVersion&Manual fixes	Omit	Never or rarely	75	65.2	65.2
			Sometimes	11	9.6	9.6
			Often or always	29	25.2	25.2
			Total	115	100.0	100.0

A/P usage

FASIFRS	Preparing method	Material transactions	non-cash	Frequency	Percent	Valid Percent
FAS	Manual + PrintVersion&Manual fixes	Omit	Never or rarely	74	64.3	64.3
			Sometimes	13	11.3	11.3
			Often or always	28	24.3	24.3
			Total	115	100.0	100.0

Bank statements usage

FASIFRS	Preparing method	Material transactions	non-cash	Frequency	Percent	Valid Percent
FAS	Manual + PrintVersion&Manual fixes	Omit a li c	Never or rarely	84	73.0	73.0
			Sometimes	15	13.0	13.0
			Often or always	16	13.9	13.9
			Total	115	100.0	100.0

Other vouchers usage

FASIFRS	Preparing method	Material transactions	non-cash	Frequency	Percent	Valid Percent
FAS	Manual + PrintVersion&Manual fixes	Omit a li c	Never or rarely	70	60.9	60.9
			Sometimes	23	20.0	20.0
			Often or always	22	19.1	19.1
			Total	115	100.0	100.0

Binomial Test

FASIFRS	Preparing method	Material transactions	non-cash	Category	N	Observed Prop.
FAS	Manual + PrintVersion&Manual fixes	Omit Journal usage	Group 1	Never or rarely	82	.71
			Group 2	Other	33	.29
			Total		115	1.00

Binomial Test

FASIFRS	Preparing method	Material transactions	non-cash	Test Prop.	Exact Sig. (2-tailed)
FAS	Manual + PrintVersion&Manual fixes	Omit Journal usage	Group 1	.50	.000
			Group 2		
			Total		

Binomial Test

FASIFRS	Preparing method	Material transactions	non-cash	Category	N
FAS	Manual + PrintVersion &Manual fixes	Omit	Other vouchers usage	Group 1	Never or rarely	70
				Group 2	Other	45
				Total		115

Binomial Test

FASIFRS	Preparing method	Material transactions	non-cash	Observed Prop.
FAS	Manual + PrintVersion&Manual fixes	Omit	Other vouchers usage	Group 1	.61
				Group 2	.39
				Total	1.00

Binomial Test

FASIFRS	Preparing method	Material transactions	non-cash	Test Prop.	Exact Sig. (2-tailed)
FAS	Manual + PrintVersion &Manual fixes	Omit	Other vouchers usage	Group 1	.50	.025
				Group 2		
				Total		

Binomial Test

FASIFRS	Preparing method	Material non-cash transactions		Category	N
FAS	Manual + PrintVersion&Manual fixes	Omit	Bank statements usage	Group 1	Never or rarely	84
				Group 2	Other	31
				Total		115

Binomial Test

FASIFRS	Preparing method	Material non-cash transactions		Observed Prop.
FAS	Manual + PrintVersion&Manual fixes	Omit	Bank statements usage	Group 1	.73
				Group 2	.27
				Total	1.00

Binomial Test

FASIFRS	Preparing method	Material non-cash transactions			Test Prop.	Exact Sig. (2-tailed)
FAS	Manual + PrintVersion&Manual fixes	Omit	Bank statements usage	Group 1	.50	.000
				Group 2		
				Total		

Binomial Test

FASIFRS	Preparing method	Material transactions	non-cash	Category	N	Observed Prop.
FAS	Manual + PrintVersion&Manual fixes	Omit	A/P usage	Group 1	Never or rarely	74	.64
				Group 2	Other	41	.36
				Total		115	1.00

Binomial Test

FASIFRS	Preparing method	Material transactions	non-cash	Test Prop.	Exact Sig. (2-tailed)
FAS	Manual + PrintVersion&Manual fixes	Omit	A/P usage	Group 1	.50	.003
				Group 2		
				Total		

Binomial Test

FASIFRS	Preparing method	Material transactions	non-cash	Category	N	Observed Prop.
FAS	Manual + PrintVersion&Manual fixes	Omit	A/R usage	Group 1	Never or rarely	75	.65
				Group 2	Other	40	.35
				Total		115	1.00

Binomial Test

FASIFRS	Preparing method	Material transactions	non-cash	Test Prop.	Exact Sig. (2-tailed)
FAS	Manual + PrintVersion&Manual fixes	Omit	A/R usage	Group 1	.50	.001
				Group 2		
				Total		

Binomial Test

FASIFRS	Preparing method	Material non-cash transactions		Category	N
FAS	Manual + PrintVersion &Manual fixes	Omit Director's report usage	Group 1	Never or rarely	79
			Group 2	Other	36
			Total		115

Binomial Test

FASIFRS	Preparing method	Material non-cash transactions		Observed Prop.
FAS	Manual + PrintVersion &Manual fixes	Omit Director's report usage	Group 1	.69
			Group 2	.31
			Total	1.00

Binomial Test

FASIFRS	Preparing method	Material non-cash transactions		Test Prop.	Exact Sig. (2-tailed)
FAS	Manual + PrintVersion&Manual fixes	Omit Director's report usage	Group 1	.50	.000
			Group 2		
			Total		

Journal usage

FASIFRS	Preparing method	Material non-cash transactions		Frequency	Percent	Valid Percent
FAS	Manual + PrintVersion&Manual fixes	Omit	Never	50	43.5	43.5
			2	25	21.7	21.7
			3	7	6.1	6.1
			4	10	8.7	8.7
			5	11	9.6	9.6
			6	9	7.8	7.8
			Always	3	2.6	2.6
			Total	115	100.0	100.0

Other vouchers usage

FASIFRS	Preparing method	Material non-cash transactions		Frequency	Percent	Valid Percent
FAS	Manual + PrintVersion&Manual fixes	Omit	Never	30	26.1	26.1
			2	29	25.2	25.2
			3	11	9.6	9.6
			4	23	20.0	20.0
			5	12	10.4	10.4
			6	3	2.6	2.6
			Always	7	6.1	6.1
			Total	115	100.0	100.0

Bank statements usage

FASIFRS	Preparing method	Material non-cash transactions		Frequency	Percent	Valid Percent
FAS	Manual + PrintVersion&Manual fixes	Omit	Never	50	43.5	43.5
			2	21	18.3	18.3
			3	13	11.3	11.3
			4	15	13.0	13.0
			5	7	6.1	6.1
			6	4	3.5	3.5
			Always	5	4.3	4.3
			Total	115	100.0	100.0

A/P usage

FASIFRS	Preparing method	Material non-cash transactions		Frequency	Percent	Valid Percent
FAS	Manual + PrintVersion&Manual fixes	Omit	Never	39	33.9	33.9
			2	24	20.9	20.9
			3	11	9.6	9.6
			4	13	11.3	11.3
			5	9	7.8	7.8
			6	10	8.7	8.7
			Always	9	7.8	7.8
			Total	115	100.0	100.0

A/R usage

FASIFRS	Preparing method	Material non-cash transactions		Frequency	Percent	Valid Percent
FAS	Manual + PrintVersion&Manual fixes	Omit	Never	40	34.8	34.8
			2	24	20.9	20.9
			3	11	9.6	9.6
			4	11	9.6	9.6
			5	10	8.7	8.7
			6	10	8.7	8.7
			Always	9	7.8	7.8
			Total	115	100.0	100.0

Director's report usage

FASIFRS	Preparing method	Material non-cash transactions		Frequency	Percent	Valid Percent
FAS	Manual + PrintVersion&Manual fixes	Omit	Never	44	38.3	38.3
			2	23	20.0	20.0
			3	12	10.4	10.4
			4	8	7.0	7.0
			5	14	12.2	12.2
			6	6	5.2	5.2
			Always	8	7.0	7.0
			Total	115	100.0	100.0

Associations with independent variable data (H_P6).

Journal usage 2class * Employer

FASIFRS	Preparing method	Material non-cash transactions			Employer: Authorised accounting firm	Employer: Other accounting firm	Employer: Other enterprise	Employer: Entrepreneur
FAS	Manual + PrintVersion& Manual fixes	Omit	Journal usage 2class	Never or rarely	Count	45	8	24	5
					Expected Count	44.9	7.1	23.5	6.4
				Other	Count	18	2	9	4
					Expected Count	18.1	2.9	9.5	2.6

Chi-Square Tests

FASIFRS	Preparing method	Material transactions non-cash		Value	df	Asymp. Sig. (2-sided)
FAS	Manual + PrintVersion&Manual fixes	Omit	Pearson Chi-Square	1.494[a]	3	.684
			Likelihood Ratio	1.435	3	.697
			Linear-by-Linear Association	.221	1	.638
			N of Valid Cases	115		

a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is 2.58.

Other vouchers usage 2class * Employer

FASIFRS	Preparing method	Material non-cash transactions		Employer: Authorised accounting firm	Employer: Other accounting firm	Employer: Other enterprise	Employer: Entrepreneur
FAS	Manual + PrintVersion&Manual fixes	Omit	Other vouchers usage 2class: Never or rarely Count	40	6	19	5
			Other vouchers usage 2class: Never or rarely Expected Count	38.3	6.1	20.1	5.5
			Other vouchers usage 2class: Other Count	23	4	14	4
			Other vouchers usage 2class: Other Expected Count	24.7	3.9	12.9	3.5

Chi-Square Tests

FASIFRS	Preparing method	Material transactions non-cash		Value	df	Asymp. Sig. (2-sided)
FAS	Manual + PrintVersion&Manual fixes	Omit	Pearson Chi-Square	.442[a]	3	.931
			Likelihood Ratio	.441	3	.932
			Linear-by-Linear Association	.435	1	.510
			N of Valid Cases	115		

a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is 3.52.

Bank statements usage 2class * Employer

FASIFRS	Preparing method	Material non-cash transactions			Employer: Authorised accounting firm	Employer: Other accounting firm	Employer: Other enterprise	Employer: Entrepreneur
FAS	Manual + PrintVersion& Manual fixes	Omit Bank statements usage 2class	Never or rarely	Count	48	8	23	5
				Expected Count	46.0	7.3	24.1	6.6
			Other	Count	15	2	10	4
				Expected Count	17.0	2.7	8.9	2.4

Chi-Square Tests

FASIFRS	Preparing method	Material non-cash transactions		Value	df	Asymp. Sig. (2-sided)
FAS	Manual + PrintVersion&Manual fixes	Omit	Pearson Chi-Square	2.148[a]	3	.542
			Likelihood Ratio	2.033	3	.566
			Linear-by-Linear Association	1.497	1	.221
			N of Valid Cases	115		

a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is 2.43.

A/P usage 2class * Employer

Crosstab

FAS IFRS	Preparing method	Material non-cash transactions			Employer: Authorised accounting firm
FAS	Manual + PrintVersion&Manual fixes	Omit A/P usage 2class	Never or rarely	Count	39
				Expected Count	40.5
			Other	Count	24
				Expected Count	22.5

Crosstab

FAS IFRS	Preparing method	Material non-cash transactions				Employer: Other accounting firm
FAS	Manual + PrintVersion&Manual fixes	Omit	A/P usage 2class	Never or rarely	Count	7
					Expected Count	6.4
				Other	Count	3
					Expected Count	3.6

Crosstab

FAS IFRS	Preparing method	Material non-cash transactions				Employer: Other enterprise
FAS	Manual + PrintVersion&Manual fixes	Omit	A/P usage 2class	Never or rarely	Count	24
					Expected Count	21.2
				Other	Count	9
					Expected Count	11.8

Crosstab

FAS IFRS	Preparing method	Material non-cash transactions				Employer: Entrepreneur
FAS	Manual + PrintVersion&Manual fixes	Omit	A/P usage 2class	Never or rarely	Count	4
					Expected Count	5.8
				Other	Count	5
					Expected Count	3.2

Chi-Square Tests

FASIFRS	Preparing method	Material non-cash transactions		Value	df	Asymp. Sig. (2-sided)
FAS	Manual + PrintVersion&Manual fixes	Omit	Pearson Chi-Square	2.867[a]	3	.413
			Likelihood Ratio	2.834	3	.418
			Linear-by-Linear Association	.017	1	.896
			N of Valid Cases	115		

a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is 3.21.

A/R usage 2class * Employer

Crosstab

FAS IFRS	Preparing method	Material non-cash transactions				Employer: Authorised accounting firm
FAS	Manual + PrintVersion&Manual fixes	Omit	A/R usage 2class	Never or rarely	Count	40
					Expected Count	41.1
				Other	Count	23
					Expected Count	21.9

Crosstab

FAS IFRS	Preparing method	Material non-cash transactions				Employer: Other accounting firm
FAS	Manual + PrintVersion&Manual fixes	Omit	A/R usage 2class	Never or rarely	Count	7
					Expected Count	6.5
				Other	Count	3
					Expected Count	3.5

Crosstab

FASIFRS	Preparing method	Material non-cash transactions			Employer: Other enterprise
FAS	Manual + PrintVersion&Manual fixes	Omit A/R usage 2class	Never or rarely	Count	24
				Expected Count	21.5
			Other	Count	9
				Expected Count	11.5

Crosstab

FASIFRS	Preparing method	Material non-cash transactions			Employer: Entrepreneur
FAS	Manual + PrintVersion&Manual fixes	Omit A/R usage 2class	Never or rarely	Count	4
				Expected Count	5.9
			Other	Count	5
				Expected Count	3.1

Chi-Square Tests

FASIFRS	Preparing method	Material non-cash transactions		Value	df	Asymp. Sig. (2-sided)
FAS	Manual + PrintVersion&Manual fixes	Omit	Pearson Chi-Square	2.716[a]	3	.438
			Likelihood Ratio	2.653	3	.448
			Linear-by-Linear Association	.001	1	.975
			N of Valid Cases	115		

a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is 3.13.

Director's report usage 2class * Employer

FASIFRS	Preparing method	Material transactions	non-cash		Employer: Authorised accounting firm	Employer: Other accounting firm	Employer: Other enterprise	Employer: Entrepreneur
FAS	Manual + PrintVersion& Manual fixes	Omit	Director's report usage 2class	Never or rarely	Count	46	7	21	5
					Expected Count	43.3	6.9	22.7	6.2
				Other	Count	17	3	12	4
					Expected Count	19.7	3.1	10.3	2.8

Chi-Square Tests

FASIFRS	Preparing method	Material transactions	non-cash		Value	df	Asymp. Sig. (2-sided)
FAS	Manual + PrintVersion&Manual fixes	Omit	Pearson Chi-Square		1.670[a]	3	.644
				Likelihood Ratio	1.633	3	.652
				Linear-by-Linear Association	1.609	1	.205
				N of Valid Cases	115		

a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is 2.82.

Journal usage 2class * Age2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions			Age2class: Under 40	Age2class: 40 and above	Total
Manual + PrintVersion&Manual fixes	FAS	Omit	Journal usage 2class	Never or rarely	Count	13	69	82
					Expected Count	15.7	66.3	82.0
				Other	Count	9	24	33
					Expected Count	6.3	26.7	33.0

Chi-Square Tests

Preparing method	FASIFRS	Material non-cash transactions		Value	df	Asymp. Sig. (2-sided)
Manual + PrintVersion&Manual fixes	FAS	Omit	Pearson Chi-Square	1.983[a]	1	.159
			Continuity Correction[b]	1.314	1	.252
			Likelihood Ratio	1.886	1	.170
			Fisher's Exact Test			
			Linear-by-Linear Association	1.966	1	.161
			N of Valid Cases	115		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.31.

Other vouchers usage 2class * Age2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions			Age2class: Under 40	Age2class: 40 and above	Total
Manual + PrintVersion&Manual fixes	FAS	Omit	Other vouchers usage 2class	Never or rarely	Count	12	58	70
					Expected Count	13.4	56.6	70.0
				Other	Count	10	35	45
					Expected Count	8.6	36.4	45.0

Chi-Square Tests

Preparing method	FASIFRS	Material non-cash transactions		Value	df	Asymp. Sig. (2-sided)
Manual + PrintVersion&Manual fixes	FAS	Omit	Pearson Chi-Square	.457[a]	1	.499
			Continuity Correction[b]	.187	1	.665
			Likelihood Ratio	.451	1	.502
			Fisher's Exact Test			
			Linear-by-Linear Association	.453	1	.501
			N of Valid Cases	115		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.61.

Bank statements usage 2class * Age2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions			Age2class: Under 40	Age2class: 40 and above	Total
Manual + PrintVersion&Manual fixes	FAS	Omit	Bank statements usage 2class	Never or rarely	Count	16	68	84
					Expected Count	16.1	67.9	84.0
				Other	Count	6	25	31
					Expected Count	5.9	25.1	31.0

Chi-Square Tests

Preparing method	FASIFRS	Material non-cash transactions		Value	df	Asymp. Sig. (2-sided)
Manual + PrintVersion&Manual fixes	FAS	Omit	Pearson Chi-Square	.001[a]	1	.970
			Continuity Correction[b]	.000	1	1.000
			Likelihood Ratio	.001	1	.970
			Fisher's Exact Test			
			Linear-by-Linear Association	.001	1	.970
			N of Valid Cases	115		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.93.

A/P usage 2class * Age2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions			Age2class
					Under 40
Manual + PrintVersion&Manual fixes	FAST	Omit A/P usage 2class	Never or rarely	Count	15
				Expected Count	14.2
			Other	Count	7
				Expected Count	7.8

A/P usage 2class * Age2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions			Age2class
					40 and above
Manual + PrintVersion&Manual fixes	FAST	Omit A/P usage 2class	Never or rarely	Count	59
				Expected Count	59.8
			Other	Count	34
				Expected Count	33.2

A/P usage 2class * Age2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions			Total
Manual + PrintVersion&Manual fixes	FAST	Omit A/P usage 2class	Never or rarely	Count	74
				Expected Count	74.0
			Other	Count	41
				Expected Count	41.0

Chi-Square Tests

Preparing method	FASIFRS	Material non-cash transactions		Value	df	Asymp. Sig. (2-sided)
Manual + PrintVersion&Manual fixes	FAS	Omit	Pearson Chi-Square	.174[a]	1	.676
			Continuity Correction[b]	.029	1	.865
			Likelihood Ratio	.177	1	.674
			Fisher's Exact Test			
			Linear-by-Linear Association	.173	1	.678
			N of Valid Cases	115		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.84.

A/R usage 2class * Age2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions			Age2class
					Under 40
Manual + PrintVersion&Manual fixes	FAS	Omit	A/R usage 2class	Never or rarely	Count 15
					Expected Count 14.3
				Other	Count 7
					Expected Count 7.7

A/R usage 2class * Age2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions			Age2class
					40 and above
Manual + PrintVersion&Manual fixes	FAS	Omit	A/R usage 2class	Never or rarely	Count 60
					Expected Count 60.7
				Other	Count 33
					Expected Count 32.3

A/R usage 2class * Age2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions				Total
Manual + PrintVersion&Manual fixes	FAS	Omit	A/R usage 2class	Never or rarely	Count	75
					Expected Count	75.0
				Other	Count	40
					Expected Count	40.0

Chi-Square Tests

Preparing method	FASIFRS	Material non-cash transactions		Value	df	Asymp. Sig. (2-sided)
Manual + PrintVersion&Manual fixes	FAS	Omit	Pearson Chi-Square	.105[a]	1	.745
			Continuity Correction[b]	.006	1	.940
			Likelihood Ratio	.107	1	.744
			Fisher's Exact Test			
			Linear-by-Linear Association	.104	1	.747
			N of Valid Cases	115		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.65.

Director's report usage 2class * Age2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions			Age2class: Under 40	Age2class: 40 and above	Total
Manual + PrintVersion&Manual fixes	FAS	Omit	Director's report usage 2class	Never or rarely	Count	16	63	79
					Expected Count	15.1	63.9	79.0
				Other	Count	6	30	36
					Expected Count	6.9	29.1	36.0

Chi-Square Tests

Preparing method	FASIFRS	Material non-cash transactions		Value	df	Asymp. Sig. (2-sided)
Manual + PrintVersion&Manual fixes	FAS	Omit	Pearson Chi-Square	.206[a]	1	.650
			Continuity Correction[b]	.039	1	.843
			Likelihood Ratio	.210	1	.647
			Fisher's Exact Test			
			Linear-by-Linear Association	.204	1	.652
			N of Valid Cases	115		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.89.

Journal usage 2class * AccountingExperience2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions			AccountingExperience2class: Under 10	AccountingExperience2class: 10 and above	Total
Manual + PrintVersion&Manual fixes	FAS	Omit Journal usage 2class	Never or rarely	Count	6	75	81
				Expected Count	9.3	71.7	81.0
			Other	Count	7	25	32
				Expected Count	3.7	28.3	32.0

Chi-Square Tests

Preparing method	FASIFRS	Material non-cash transactions		Value	df	Asymp. Sig. (2-sided)
Manual + PrintVersion&Manual fixes	FAS	Omit	Pearson Chi-Square	4.716[a]	1	.030
			Continuity Correction[b]	3.402	1	.065
			Likelihood Ratio	4.270	1	.039
			Fisher's Exact Test			
			Linear-by-Linear Association	4.674	1	.031
			N of Valid Cases	113		

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 3.68.

Other vouchers usage 2class * AccountingExperience2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions			AccountingExperience2class: Under 10	AccountingExperience2class: 10 and above	Total
Manual + PrintVersion&Manual fixes	FAS	Omit	Other voucher s usage 2class	Never or rarely	Count	7	63	70
					Expected Count	8.1	61.9	70.0
				Other	Count	6	37	43
					Expected Count	4.9	38.1	43.0

Chi-Square Tests

Preparing method	FASIFRS	Material non-cash transactions		Value	df	Asymp. Sig. (2-sided)
Manual + PrintVersion&Manual fixes	FAS	Omit	Pearson Chi-Square	.409[a]	1	.523
			Continuity Correction[b]	.113	1	.737
			Likelihood Ratio	.401	1	.527
			Fisher's Exact Test			
			Linear-by-Linear Association	.405	1	.524
			N of Valid Cases	113		

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 4.95.

Bank statements usage 2class * AccountingExperience2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions			AccountingExperience2class: Under 10	AccountingExperience2class: 10 and above	Total
Manual + PrintVersion&Manual fixes	FAS	Omit	Bank statements usage 2class	Never or rarely	Count	8	75	83
					Expected Count	9.5	73.5	83.0
				Other	Count	5	25	30
					Expected Count	3.5	26.5	30.0

Chi-Square Tests

Preparing method	FASIFRS	Material non-cash transactions		Value	df	Asymp. Sig. (2-sided)
Manual + PrintVersion&Manual fixes	FAS	Omit	Pearson Chi-Square	1.069[a]	1	.301
			Continuity Correction[b]	.490	1	.484
			Likelihood Ratio	1.000	1	.317
			Fisher's Exact Test			
			Linear-by-Linear Association	1.060	1	.303
			N of Valid Cases	113		

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 3.45.

A/P usage 2class * AccountingExperience2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions			AccountingExperience2class
					Under 10
Manual + PrintVersion&Manual fixes	FAS	Omit	A/P usage 2class	Never or rarely	Count 8
					Expected Count 8.4
				Other	Count 5
					Expected Count 4.6

A/P usage 2class * AccountingExperience2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions			AccountingExperience2class
					10 and above
Manual + PrintVersion&Manual fixes	FAS	Omit	A/P usage 2class	Never or rarely	Count 65
					Expected Count 64.6
				Other	Count 35
					Expected Count 35.4

A/P usage 2class * AccountingExperience2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions			Total
Manual + PrintVersion&Manual fixes	FAS	Omit	A/P usage 2class	Never or rarely	Count 73
					Expected Count 73.0
				Other	Count 40
					Expected Count 40.0

Chi-Square Tests

Preparing method	FASIFRS	Material non-cash transactions		Value	df	Asymp. Sig. (2-sided)
Manual + PrintVersion&Manual fixes	FAS	Omit	Pearson Chi-Square	.060[a]	1	.806
			Continuity Correction[b]	.000	1	1.000
			Likelihood Ratio	.060	1	.807
			Fisher's Exact Test			
			Linear-by-Linear Association	.060	1	.807
			N of Valid Cases	113		

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 4.60.

A/R usage 2class * AccountingExperience2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions			AccountingExperience2class
					Under 10
Manual + PrintVersion&Manual fixes	FAS	Omit	A/R usage 2class	Never or rarely	Count 8
					Expected Count 8.5
				Other	Count 5
					Expected Count 4.5

A/R usage 2class * AccountingExperience2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions			AccountingExperience2class
					10 and above
Manual + PrintVersion&Manual fixes	FAS	Omit	A/R usage 2class	Never or rarely	Count 66
					Expected Count 65.5
				Other	Count 34
					Expected Count 34.5

A/R usage 2class * AccountingExperience2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions				Total
Manual + PrintVersion&Manual fixes	FAS	Omit	A/R usage 2class	Never or rarely	Count	74
					Expected Count	74.0
				Other	Count	39
					Expected Count	39.0

Chi-Square Tests

Preparing method	FASIFRS	Material non-cash transactions		Value	df	Asymp. Sig. (2-sided)
Manual + PrintVersion&Manual fixes	FAS	Omit	Pearson Chi-Square	.101[a]	1	.750
			Continuity Correction[b]	.000	1	.993
			Likelihood Ratio	.100	1	.752
			Fisher's Exact Test			
			Linear-by-Linear Association	.100	1	.751
			N of Valid Cases	113		

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 4.49.

Director's report usage 2class * AccountingExperience2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions			AccountingExperience2class: Under 10	AccountingExperience2class: 10 and above	Total
Manual + PrintVersion&Manual fixes	FAS	Omit	Director's report usage 2class	Never or rarely	Count: 8	70	78
					Expected Count: 9.0	69.0	78.0
				Other	Count: 5	30	35
					Expected Count: 4.0	31.0	35.0

Chi-Square Tests

Preparing method	FASIFRS	Material non-cash transactions		Value	df	Asymp. Sig. (2-sided)
Manual + PrintVersion&Manual fixes	FAS	Omit	Pearson Chi-Square	.385[a]	1	.535
			Continuity Correction[b]	.091	1	.763
			Likelihood Ratio	.373	1	.542
			Fisher's Exact Test			
			Linear-by-Linear Association	.382	1	.537
			N of Valid Cases	113		

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 4.03.

Journal usage 2class * KLTExperience2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions			KLTExperience2class: Under 5	KLTExperience2class: 5 and above	Total
Manual + PrintVersion&Manual fixes	FAS	Omit Journal usage 2class	Never or rarely	Count	10	72	82
				Expected Count	17.8	64.2	82.0
			Other	Count	15	18	33
				Expected Count	7.2	25.8	33.0

Chi-Square Tests

Preparing method	FASIFRS	Material non-cash transactions		Value	df	Asymp. Sig. (2-sided)
Manual + PrintVersion&Manual fixes	FAS	Omit	Pearson Chi-Square	15.299[a]	1	.000
			Continuity Correction[b]	13.407	1	.000
			Likelihood Ratio	14.140	1	.000
			Fisher's Exact Test			
			Linear-by-Linear Association	15.166	1	.000
			N of Valid Cases	115		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.17.

Other vouchers usage 2class * KLTExperience2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions			KLTExperience2class: Under 5	KLTExperience2class: 5 and above	Total
Manual + PrintVersion&Manual fixes	FAS	Omit	Other voucher s usage 2class	Never or rarely	Count	10	60	70
					Expected Count	15.2	54.8	70.0
				Other	Count	15	30	45
					Expected Count	9.8	35.2	45.0

Chi-Square Tests

Preparing method	FASIFRS	Material non-cash transactions		Value	df	Asymp. Sig. (2-sided)
Manual + PrintVersion&Manual fixes	FAS	Omit	Pearson Chi-Square	5.841[a]	1	.016
			Continuity Correction[b]	4.775	1	.029
			Likelihood Ratio	5.722	1	.017
			Fisher's Exact Test			
			Linear-by-Linear Association	5.790	1	.016
			N of Valid Cases	115		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 9.78.

Bank statements usage 2class * KLTExperience2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions			KLTExperience2class: Under 5	KLTExperience2class: 5 and above	Total
Manual + PrintVersion&Manual fixes	FAS	Omit	Bank statements usage 2class	Never or rarely	Count	15	69	84
					Expected Count	18.3	65.7	84.0
				Other	Count	10	21	31
					Expected Count	6.7	24.3	31.0

Chi-Square Tests

Preparing method	FASIFRS	Material non-cash transactions		Value	df	Asymp. Sig. (2-sided)
Manual + PrintVersion&Manual fixes	FAS	Omit	Pearson Chi-Square	2.760[a]	1	.097
			Continuity Correction[b]	1.979	1	.160
			Likelihood Ratio	2.610	1	.106
			Fisher's Exact Test			
			Linear-by-Linear Association	2.736	1	.098
			N of Valid Cases	115		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.74.

A/P usage 2class * KLTExperience2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions			KLTExperience2class Under 5
Manual + PrintVersion&Manual fixes	FAS	Omit	A/P usage 2class	Never or rarely	Count 14
					Expected Count 16.1
				Other	Count 11
					Expected Count 8.9

A/P usage 2class * KLTExperience2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions			KLTExperience2class 5 and above
Manual + PrintVersion&Manual fixes	FAS	Omit	A/P usage 2class	Never or rarely	Count 60
					Expected Count 57.9
				Other	Count 30
					Expected Count 32.1

A/P usage 2class * KLTExperience2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions			Total
Manual + PrintVersion&Manual fixes	FAS	Omit	A/P usage 2class	Never or rarely	Count 74
					Expected Count 74.0
				Other	Count 41
					Expected Count 41.0

Chi-Square Tests

Preparing method	FASIFRS	Material non-cash transactions		Value	df	Asymp. Sig. (2-sided)
Manual + PrintVersion&Manual fixes	FAS	Omit	Pearson Chi-Square	.970[a]	1	.325
			Continuity Correction[b]	.561	1	.454
			Likelihood Ratio	.951	1	.330
			Fisher's Exact Test			
			Linear-by-Linear Association	.962	1	.327
			N of Valid Cases	115		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.91.

A/R usage 2class * KLTExperience2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions			KLTExperience2class
					Under 5
Manual + PrintVersion&Manual fixes	FAS	Omit	A/R usage 2class	Never or rarely	Count 14
					Expected Count 16.3
				Other	Count 11
					Expected Count 8.7

A/R usage 2class * KLTExperience2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions			KLTExperience2class 5 and above
Manual + PrintVersion&Manual fixes	FAS	Omit	A/R usage 2class	Never or rarely	Count 61
					Expected Count 58.7
				Other	Count 29
					Expected Count 31.3

A/R usage 2class * KLTExperience2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions			Total
Manual + PrintVersion&Manual fixes	FAS	Omit	A/R usage 2class	Never or rarely	Count 75
					Expected Count 75.0
				Other	Count 40
					Expected Count 40.0

Chi-Square Tests

Preparing method	FASIFRS	Material non-cash transactions		Value	df	Asymp. Sig. (2-sided)
Manual + PrintVersion&Manual fixes	FAS	Omit	Pearson Chi-Square	1.196[a]	1	.274
			Continuity Correction[b]	.734	1	.392
			Likelihood Ratio	1.168	1	.280
			Fisher's Exact Test			
			Linear-by-Linear Association	1.186	1	.276
			N of Valid Cases	115		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.70.

Director's report usage 2class * KLTExperience2class Crosstabulation

Preparing method	FASIFRS	Material non-cash transactions			KLTExperience2class		Total
					Under 5	5 and above	
Manual + PrintVersion&Manual fixes	FAS	Omit	Director's report usage 2class	Never or rarely	Count	18	61	79
					Expected Count	17.2	61.8	79.0
				Other	Count	7	29	36
					Expected Count	7.8	28.2	36.0

Chi-Square Tests

Preparing method	FASIFRS	Material non-cash transactions		Value	df	Asymp. Sig. (2-sided)
Manual + PrintVersion&Manual fixes	FAS	Omit	Pearson Chi-Square	.162[a]	1	.687
			Continuity Correction[b]	.025	1	.874
			Likelihood Ratio	.165	1	.685
			Fisher's Exact Test			
			Linear-by-Linear Association	.161	1	.688
			N of Valid Cases	115		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.83.

Appendix 5: SPSS 19 outputs regarding auditors

H_A1: Auditors of financial statements consider the cash flow statement to be the least important section of financial statements.

Descriptives

Sorted by auditing examination				Statistic	Std. Error
KHT	BS_imp	Mean		6.90	.030
		95% Confidence Interval for Mean	Lower Bound	6.84	
			Upper Bound	6.96	
		Median		7.00	
	IS_imp	Mean		6.77	.039
		95% Confidence Interval for Mean	Lower Bound	6.69	
			Upper Bound	6.84	
		Median		7.00	
	CFS_imp	Mean		5.71	.106
		95% Confidence Interval for Mean	Lower Bound	5.50	
			Upper Bound	5.92	
		Median		6.00	
	Notes_imp	Mean		6.34	.079
		95% Confidence Interval for Mean	Lower Bound	6.19	
			Upper Bound	6.50	
		Median		7.00	
HTM	BS_imp	Mean		6.91	.024
		95% Confidence Interval for Mean	Lower Bound	6.87	
			Upper Bound	6.96	
		Median		7.00	
	IS_imp	Mean		6.74	.042
		95% Confidence Interval for Mean	Lower Bound	6.66	
			Upper Bound	6.82	
		Median		7.00	
	CFS_imp	Mean		5.31	.108
		95% Confidence	Lower Bound	5.10	

		Interval for Mean	Upper Bound	5.52	
		Median		5.00	
	Notes_imp	Mean		6.55	.061
		95% Confidence Interval for Mean	Lower Bound	6.43	
			Upper Bound	6.67	
		Median		7.00	

Tests of Normality

Auditing examination		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
KHT	BS_imp	.532	163	.000	.267	163	.000
	IS_imp	.482	163	.000	.506	163	.000
	CFS_imp	.210	163	.000	.845	163	.000
	Notes_imp	.345	163	.000	.689	163	.000
HTM	BS_imp	.532	162	.000	.305	162	.000
	IS_imp	.472	162	.000	.532	162	.000
	CFS_imp	.186	162	.000	.902	162	.000
	Notes_imp	.411	162	.000	.632	162	.000

a. Lilliefors Significance Correction

Kruskal-Wallis Test

Ranks

Auditing examination		Section	N	Mean Rank
KHT	Importance	Balance sheet	163	409.83
		Income statement	163	373.88
		Cash flow statement	163	218.53
		Notes	163	303.75
		Total	652	
HTM	Importance	Balance sheet	162	414.32
		Income statement	162	374.43
		Cash flow statement	162	167.35
		Notes	162	341.90
		Total	648	

Test Statistics[a,b]

Auditing examination		Importance
KHT	Chi-Square	144.142
	df	3
	Asymp. Sig.	.000
HTM	Chi-Square	230.459
	df	3
	Asymp. Sig.	.000

a. Kruskal Wallis Test

b. Grouping Variable: Section

ANOVA

Importance

Auditing examination		Sum of Squares	df	Mean Square	F	Sig.
KHT	Between Groups	140.115	3	46.705	57.562	.000
	Within Groups	525.779	648	.811		
	Total	665.894	651			
HTM	Between Groups	257.795	3	85.932	120.154	.000
	Within Groups	460.574	644	.715		
	Total	718.369	647			

Multiple Comparisons

Importance

Bonferroni

Auditing examination	(I) Section	(J) Section	Mean Difference (I-J)	Std. Error	Sig.
KHT	Balance sheet	Income statement	.135	.100	1.000
		Cash flow statement	1.190*	.100	.000
		Notes	.558*	.100	.000
	Income statement	Balance sheet	-.135	.100	1.000
		Cash flow statement	1.055*	.100	.000
		Notes	.423*	.100	.000
	Cash flow statement	Balance sheet	-1.190*	.100	.000
		Income statement	-1.055*	.100	.000
		Notes	-.632*	.100	.000
	Notes	Balance sheet	-.558*	.100	.000

		Income statement	-.423*	.100	.000
		Cash flow statement	.632*	.100	.000
HTM	Balance sheet	Income statement	.173	.094	.398
		Cash flow statement	1.605*	.094	.000
		Notes	.364*	.094	.001
	Income statement	Balance sheet	-.173	.094	.398
		Cash flow statement	1.432*	.094	.000
		Notes	.191	.094	.253
	Cash flow statement	Balance sheet	-1.605*	.094	.000
		Income statement	-1.432*	.094	.000
		Notes	-1.241*	.094	.000
	Notes	Balance sheet	-.364*	.094	.001
		Income statement	-.191	.094	.253
		Cash flow statement	1.241*	.094	.000

Associations with independent variable data (H_A1).

Mann-Whitney Test

Ranks

Auditing examination		N	Mean Rank	Sum of Ranks
CFS_imp	KHT	163	177.72	28968.50
	HTM	162	148.19	24006.50
	Total	325		

Test Statistics[a]

	CFS_imp
Mann-Whitney U	10803.500
Wilcoxon W	24006.500
Z	-2.919
Asymp. Sig. (2-tailed)	.004

a. Grouping Variable: Auditing examination

T-Test

Group Statistics

	Auditing examination	N	Mean	Std. Deviation	Std. Error Mean
CFS_imp	KHT	163	5.71	1.355	.106
	HTM	162	5.31	1.375	.108

Independent Samples Test

		Levene's Test for Equality of Variances	
		F	Sig.
CFS_imp	Equal variances assumed	.022	.882
	Equal variances not assumed		

Independent Samples Test

		t-test for Equality of Means				
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
CFS_imp	Equal variances assumed	2.661	323	.008	.403	.151
	Equal variances not assumed	2.661	322.856	.008	.403	.151

Mann-Whitney Test

Ranks

	Big4orNot	N	Mean Rank	Sum of Ranks
CFS_imp	Big 4	103	187.39	19301.50
	Other	222	151.68	33673.50
	Total	325		

Test Statistics[a]

	CFS_imp
Mann-Whitney U	8920.500
Wilcoxon W	33673.500
Z	-3.284
Asymp. Sig. (2-tailed)	.001

a. Grouping Variable: Big4orNot

T-Test

Group Statistics

	Big4orNot	N	Mean	Std. Deviation	Std. Error Mean
CFS_imp	Big 4	103	5.87	1.210	.119
	Other	222	5.34	1.421	.095

Independent Samples Test

		Levene's Test for Equality of Variances	
		F	Sig.
CFS_imp	Equal variances assumed	5.904	.016
	Equal variances not assumed		

Independent Samples Test

		t-test for Equality of Means				
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
CFS_imp	Equal variances assumed	3.283	323	.001	.531	.162
	Equal variances not assumed	3.481	230.623	.001	.531	.153

Correlations

		CFS_imp	Age
CFS_imp	Pearson Correlation	1	-.059
	Sig. (2-tailed)		.290
	N	325	322
Age	Pearson Correlation	-.059	1
	Sig. (2-tailed)	.290	
	N	322	322

Correlations

			CFS_imp	Age
Spearman's rho	CFS_imp	Correlation Coefficient	1.000	-.039
		Sig. (2-tailed)	.	.485
		N	325	322
	Age	Correlation Coefficient	-.039	1.000
		Sig. (2-tailed)	.485	.
		N	322	322

Correlations

		CFS_imp	Auditor experience
CFS_imp	Pearson Correlation	1	-.005
	Sig. (2-tailed)		.931
	N	325	325
AuditorExperience	Pearson Correlation	-.005	1
	Sig. (2-tailed)	.931	
	N	325	325

Correlations

			CFS_imp	Auditor experience
Spearman's rho	CFS_imp	Correlation Coefficient	1.000	.010
		Sig. (2-tailed)	.	.856
		N	325	325
	AuditorExperience	Correlation Coefficient	.010	1.000
		Sig. (2-tailed)	.856	.
		N	325	325

Correlations

		CFS_imp	KHTHTMExperience
CFS_imp	Pearson Correlation	1	.009
	Sig. (2-tailed)		.876
	N	325	325
KHTHTMExperience	Pearson Correlation	.009	1
	Sig. (2-tailed)	.876	
	N	325	325

Correlations

			CFS_imp	KHTHTMExperience
Spearman's rho	CFS_imp	Correlation Coefficient	1.000	.020
		Sig. (2-tailed)	.	.715
		N	325	325
	KHTHTMExperience	Correlation Coefficient	.020	1.000
		Sig. (2-tailed)	.715	.
		N	325	325

Report

Mean

Big4orNot	BS_imp	IS_imp	CFS_imp	Notes_imp
Big 4	6.86	6.74	5.87	6.31
Other	6.93	6.76	5.34	6.51
Total	6.91	6.75	5.51	6.45

H_A2: Few auditors are aware of that a cash flow statement can be manipulated by preparers, for example, the management.

Possibility of CFS manipulation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	147	45.2	45.2	45.2
	Other	178	54.8	54.8	100.0
	Total	325	100.0	100.0	

Possibility of CFS manipulation

Auditing examination		Frequency	Percent	Valid Percent	Cumulative Percent
KHT \ alid	Agree	80	49.1	49.1	49.1
	Other	83	50.9	50.9	100.0
	Total	163	100.0	100.0	
HTM \ alid	Agree	67	41.4	41.4	41.4
	Other	95	58.6	58.6	100.0
	Total	162	100.0	100.0	

Associations with independent variable data (H_A2).

Possibility of CFS manipulation * Big4orNot Crosstabulation

			Big4orNot		
			Big 4	Other	Total
Possibility of CFS manipulation	Agree	Count	59	88	147
		Expected Count	46.6	100.4	147.0
	Other	Count	44	134	178
		Expected Count	56.4	121.6	178.0
Total		Count	103	222	325
		Expected Count	103.0	222.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	8.839[a]	1	.003		
Continuity Correction[b]	8.142	1	.004		
Likelihood Ratio	8.832	1	.003		
Fisher's Exact Test				.004	.002
Linear-by-Linear Association	8.812	1	.003		
N of Valid Cases	325				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 46.59.

b. Computed only for a 2x2 table

Possibility of CFS manipulation * Auditing examination Crosstabulation

			Auditing examination		
			KHT	HTM	Total
Possibility of CFS manipulation	Agree	Count	80	67	147
		Expected Count	73.7	73.3	147.0
	Other	Count	83	95	178
		Expected Count	89.3	88.7	178.0
Total		Count	163	162	325
		Expected Count	163.0	162.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.956[a]	1	.162		
Continuity Correction[b]	1.656	1	.198		
Likelihood Ratio	1.958	1	.162		
Fisher's Exact Test				.182	.099
Linear-by-Linear Association	1.950	1	.163		
N of Valid Cases	325				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 73.27.

b. Computed only for a 2x2 table

Possibility of CFS manipulation * Age2class Crosstabulation

			Age2class		
			Under 40	40 and above	Total
Possibility of CFS manipulation	Agree	Count	49	97	146
		Expected Count	32.6	113.4	146.0
	Other	Count	23	153	176
		Expected Count	39.4	136.6	176.0
Total		Count	72	250	322
		Expected Count	72.0	250.0	322.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	19.305[a]	1	.000
Continuity Correction[b]	18.143	1	.000
Likelihood Ratio	19.456	1	.000
Fisher's Exact Test			
Linear-by-Linear Association	19.245	1	.000
N of Valid Cases	322		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 32.65.

b. Computed only for a 2x2 table

Possibility of CFS manipulation * AuditorExperience2class Crosstabulation

			AuditorExperience2class		
			Under 10	10 and above	Total
Possibility of CFS manipulation	Agree	Count	31	116	147
		Expected Count	23.1	123.9	147.0
	Other	Count	20	158	178
		Expected Count	27.9	150.1	178.0
Total		Count	51	274	325
		Expected Count	51.0	274.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.907[a]	1	.015
Continuity Correction[b]	5.186	1	.023
Likelihood Ratio	5.893	1	.015
Fisher's Exact Test			
Linear-by-Linear Association	5.889	1	.015
N of Valid Cases	325		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 23.07.

b. Computed only for a 2x2 table

Possibility of CFS manipulation * KHTHTMExperience2class Crosstabulation

			KHTHTMExperience2class		
			Under 5	5 and above	Total
Possibility of CFS manipulation	Agree	Count	40	107	147
		Expected Count	25.8	121.2	147.0
	Other	Count	17	161	178
		Expected Count	31.2	146.8	178.0
Total		Count	57	268	325
		Expected Count	57.0	268.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17.362[a]	1	.000
Continuity Correction[b]	16.163	1	.000
Likelihood Ratio	17.545	1	.000
Fisher's Exact Test			
Linear-by-Linear Association	17.309	1	.000
N of Valid Cases	325		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 25.78.

b. Computed only for a 2x2 table

H_A3: Few auditors would require a mention in the notes or in the auditor's report if the change in current liabilities that is a result of reclassifying debt from being a long-term liability to being a current liability is reported as operating activity in the cash flow statement.

Current maturities of long-term debt as operating CF

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	145	44.6	44.6	44.6
	No	180	55.4	55.4	100.0
	Total	325	100.0	100.0	

Current maturities of long-term debt as operating CF

Auditing examination		Frequency	Percent	Valid Percent	Cumulative Percent
KHT \	Yes	72	44.2	44.2	44.2
Valid	No	91	55.8	55.8	100.0
	Total	163	100.0	100.0	
HTM \	Yes	73	45.1	45.1	45.1
Valid	No	89	54.9	54.9	100.0
	Total	162	100.0	100.0	

Associations with independent variable data (H_A3).

Current maturities of long-term debt as operating CF * Auditing examination Crosstabulation

			Auditing examination		
			KHT	HTM	Total
Current maturities of long-term debt as operating CF	Yes	Count	72	73	145
		Expected Count	72.7	72.3	145.0
	No	Count	91	89	180
		Expected Count	90.3	89.7	180.0
Total		Count	163	162	325
		Expected Count	163.0	162.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.026[a]	1	.872
Continuity Correction[b]	.002	1	.960
Likelihood Ratio	.026	1	.872
Fisher's Exact Test			
Linear-by-Linear Association	.026	1	.872
N of Valid Cases	325		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 72.28.

b. Computed only for a 2x2 table

Current maturities of long-term debt as operating CF * Big4orNot Crosstabulation

			Big4orNot		
			Big 4	Other	Total
Current maturities of long-term debt as operating CF	Yes	Count	49	96	145
		Expected Count	46.0	99.0	145.0
	No	Count	54	126	180
		Expected Count	57.0	123.0	180.0
Total		Count	103	222	325
		Expected Count	103.0	222.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.534[a]	1	.465
Continuity Correction[b]	.373	1	.541
Likelihood Ratio	.533	1	.465
Fisher's Exact Test			
Linear-by-Linear Association	.532	1	.466
N of Valid Cases	325		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 45.95.

b. Computed only for a 2x2 table

Current maturities of long-term debt as operating CF * Age2class Crosstabulation

			Age2class		
			Under 40	40 and above	Total
Current maturities of long-term debt as operating CF	Yes	Count	30	115	145
		Expected Count	32.4	112.6	145.0
	No	Count	42	135	177
		Expected Count	39.6	137.4	177.0
Total		Count	72	250	322
		Expected Count	72.0	250.0	322.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.424[a]	1	.515
Continuity Correction[b]	.267	1	.605
Likelihood Ratio	.426	1	.514
Fisher's Exact Test			
Linear-by-Linear Association	.423	1	.516
N of Valid Cases	322		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 32.42.

b. Computed only for a 2x2 table

Current maturities of long-term debt as operating CF * AuditorExperience2class Crosstabulation

			AuditorExperience2class		
			Under 10	10 and above	Total
Current maturities of long-term debt as operating CF	Yes	Count	22	123	145
		Expected Count	22.8	122.2	145.0
	No	Count	29	151	180
		Expected Count	28.2	151.8	180.0
Total		Count	51	274	325
		Expected Count	51.0	274.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.053[a]	1	.817
Continuity Correction[b]	.006	1	.938
Likelihood Ratio	.054	1	.817
Fisher's Exact Test			
Linear-by-Linear Association	.053	1	.817
N of Valid Cases	325		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 22.75.

b. Computed only for a 2x2 table

Current maturities of long-term debt as operating CF * KHTHTMExperience2class Crosstabulation

			KHTHTMExperience2class		
			Under 5	5 and above	Total
Current maturities of long-term debt as operating CF	Yes	Count	22	123	145
		Expected Count	25.4	119.6	145.0
	No	Count	35	145	180
		Expected Count	31.6	148.4	180.0
Total		Count	57	268	325
		Expected Count	57.0	268.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.013[a]	1	.314
Continuity Correction[b]	.740	1	.390
Likelihood Ratio	1.023	1	.312
Fisher's Exact Test			
Linear-by-Linear Association	1.010	1	.315
N of Valid Cases	325		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 25.43.

b. Computed only for a 2x2 table

H_A4: Few auditors would require a mention in the notes or in the auditor's report if the entity has not paid its accounts payable that were due the last month of the accounting period; furthermore, few of those who would not require such mentioning, would require a mention in the notes or in the auditor's report if the entity has not paid its accounts payable that were due Q4 of the accounting period.

A/P due last month

Auditing examination			Frequency	Percent	Valid Percent	Cumulative Percent
KHT	Valid	No	142	87.1	87.1	87.1
		Yes	21	12.9	12.9	100.0
		Total	163	100.0	100.0	
HTM	Valid	No	133	82.1	82.1	82.1
		Yes	29	17.9	17.9	100.0
		Total	162	100.0	100.0	

Binomial Test

Auditing examination			Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
KHT	A/P due last month	Group 1	No	142	.87	.75	.000
		Group 2	Yes	21	.13		
		Total		163	1.00		
HTM	A/P due last month	Group 1	No	133	.82	.75	.020
		Group 2	Yes	29	.18		
		Total		162	1.00		

A/P due Q4

Auditing examination			Frequency	Percent	Valid Percent	Cumulative Percent
KHT	Valid	Yes	48	29.4	33.8	33.8
		No opinion for or against	38	23.3	26.8	60.6
		No	56	34.4	39.4	100.0
		Total	142	87.1	100.0	
	Missing	System	21	12.9		
	Total		163	100.0		
HTM	Valid	Yes	45	27.8	33.8	33.8
		No opinion for or against	39	24.1	29.3	63.2
		No	49	30.2	36.8	100.0
		Total	133	82.1	100.0	
	Missing	System	29	17.9		
	Total		162	100.0		

Binomial Test

Auditing examination			Category	N	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)
KHT	A/P due Q4	Group 1	Yes	48	.34	.50	.000
		Group 2	Other	94	.66		
		Total		142	1.00		
HTM	A/P due Q4	Group 1	Yes	45	.34	.50	.000
		Group 2	Other	88	.66		
		Total		133	1.00		

Associations with independent variable data (H_A4).

Crosstab

			Big4orNot		
			Big 4	Other	Total
A/P due last month	No	Count	94	181	275
		Expected Count	87.2	187.8	275.0
	Yes	Count	9	41	50
		Expected Count	15.8	34.2	50.0
Total		Count	103	222	325
		Expected Count	103.0	222.0	325.0

Chi-Square Tests

	Value	df	Asym p. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	5.117[a]	1	.024		
Continuity Correction[b]	4.397	1	.036		
Likelihood Ratio	5.575	1	.018		
Fisher's Exact Test				.031	.015
Linear-by-Linear Association	5.102	1	.024		
N of Valid Cases	325				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 15.85.

b. Computed only for a 2x2 table

Crosstab

			Big4orNot		
			Big 4	Other	Total
A/P due Q4	Yes	Count	38	55	93
		Expected Count	31.8	61.2	93.0
	No opinion for or against	Count	24	53	77
		Expected Count	26.3	50.7	77.0
	No	Count	32	73	105
		Expected Count	35.9	69.1	105.0
Total		Count	94	181	275
		Expected Count	94.0	181.0	275.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.795[a]	2	.247
Likelihood Ratio	2.762	2	.251
Linear-by-Linear Association	2.289	1	.130
N of Valid Cases	275		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 26.32.

Crosstab

			Auditing examination		
			KHT	HTM	Total
A/P due last month	No	Count	142	133	275
		Expected Count	137.9	137.1	275.0
	Yes	Count	21	29	50
		Expected Count	25.1	24.9	50.0
Total		Count	163	162	325
		Expected Count	163.0	162.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.571[a]	1	.210		
Continuity Correction[b]	1.210	1	.271		
Likelihood Ratio	1.577	1	.209		
Fisher's Exact Test				.222	.136
Linear-by-Linear Association	1.567	1	.211		
N of Valid Cases	325				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 24.92.

b. Computed only for a 2x2 table

Crosstab

			Auditing examination		
			KHT	HTM	Total
A/P due Q4	Yes	Count	48	45	93
		Expected Count	48.0	45.0	93.0
	No opinion for or against	Count	38	39	77
		Expected Count	39.8	37.2	77.0
	No	Count	56	49	105
		Expected Count	54.2	50.8	105.0
Total		Count	142	133	275
		Expected Count	142.0	133.0	275.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.282[a]	2	.868
Likelihood Ratio	.282	2	.868
Linear-by-Linear Association	.066	1	.798
N of Valid Cases	275		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 37.24.

A/P due last month * Age2class Crosstabulation

			Age2class		
			Under 40	40 and above	Total
A/P due last month	No	Count	63	210	273
		Expected Count	61.0	212.0	273.0
	Yes	Count	9	40	49
		Expected Count	11.0	38.0	49.0
Total		Count	72	250	322
		Expected Count	72.0	250.0	322.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.531[a]	1	.466
Continuity Correction[b]	.294	1	.588
Likelihood Ratio	.551	1	.458
Fisher's Exact Test			
Linear-by-Linear Association	.529	1	.467
N of Valid Cases	322		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.96.

b. Computed only for a 2x2 table

A/P due Q4 * Age2class Crosstabulation

			Age2class		
			Under 40	40 and above	Total
A/P due Q4	Yes	Count	25	67	92
		Expected Count	21.2	70.8	92.0
	No opinion for or against	Count	22	55	77
		Expected Count	17.8	59.2	77.0
	No	Count	16	88	104
		Expected Count	24.0	80.0	104.0
Total		Count	63	210	273
		Expected Count	63.0	210.0	273.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.646[a]	2	.059
Likelihood Ratio	5.882	2	.053
Linear-by-Linear Association	3.977	1	.046
N of Valid Cases	273		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 17.77.

A/P due last month * AuditorExperience2class Crosstabulation

			AuditorExperience2class		
			Under 10	10 and above	Total
A/P due last month	No	Count	44	231	275
		Expected Count	43.2	231.8	275.0
	Yes	Count	7	43	50
		Expected Count	7.8	42.2	50.0
Total		Count	51	274	325
		Expected Count	51.0	274.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.128[a]	1	.721
Continuity Correction[b]	.021	1	.884
Likelihood Ratio	.131	1	.717
Fisher's Exact Test			
Linear-by-Linear Association	.128	1	.721
N of Valid Cases	325		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.85.

b. Computed only for a 2x2 table

A/P due Q4 * AuditorExperience2class Crosstabulation

			AuditorExperience2class		
			Under 10	10 and above	Total
A/P due Q4	Yes	Count	15	78	93
		Expected Count	14.9	78.1	93.0
	No opinion for or against	Count	18	59	77
		Expected Count	12.3	64.7	77.0
	No	Count	11	94	105
		Expected Count	16.8	88.2	105.0
Total		Count	44	231	275
		Expected Count	44.0	231.0	275.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.502[a]	2	.064
Likelihood Ratio	5.461	2	.065
Linear-by-Linear Association	1.316	1	.251
N of Valid Cases	275		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 12.32.

A/P due last month * KHTHTMExperience2class Crosstabulation

			KHTHTMExperience2class		
			Under 5	5 and above	Total
A/P due last month	No	Count	49	226	275
		Expected Count	48.2	226.8	275.0
	Yes	Count	8	42	50
		Expected Count	8.8	41.2	50.0
Total		Count	57	268	325
		Expected Count	57.0	268.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.097[a]	1	.756
Continuity Correction[b]	.012	1	.913
Likelihood Ratio	.099	1	.753
Fisher's Exact Test			
Linear-by-Linear Association	.096	1	.756
N of Valid Cases	325		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.77.

b. Computed only for a 2x2 table

A/P due Q4 * KHTHTMExperience2class Crosstabulation

			KHTHTMExperience2class		
			Under 5	5 and above	Total
A/P due Q4	Yes	Count	16	77	93
		Expected Count	16.6	76.4	93.0
	No opinion for or against	Count	20	57	77
		Expected Count	13.7	63.3	77.0
	No	Count	13	92	105
		Expected Count	18.7	86.3	105.0
Total		Count	49	226	275
		Expected Count	49.0	226.0	275.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.642[a]	2	.060
Likelihood Ratio	5.506	2	.064
Linear-by-Linear Association	.910	1	.340
N of Valid Cases	275		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 13.72.

H_A5: Most auditors spend the least time with the cash flow statement of all the sections of the financial statements during an annual audit of an enterprise.

Spend the least amount of time with

Auditing examination			Frequency	Percent	Valid Percent	Cumulative Percent
KHT	Valid	Income statement	10	6.1	6.3	6.3
		Cash flow statement	129	79.1	80.6	86.9
		Notes	21	12.9	13.1	100.0
		Total	160	98.2	100.0	
	Missing	System	3	1.8		
	Total		163	100.0		

HTM	Valid	Balance sheet	1	.6	.6	.6
		Income statement	11	6.8	7.0	7.6
		Cash flow statement	129	79.6	81.6	89.2
		Notes	17	10.5	10.8	100.0
		Total	158	97.5	100.0	
	Missing	System	4	2.5		
		Total	162	100.0		

Binomial Test

Auditing examination			Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
KHT	Spend the least amount of time with	Group 1	CFS	129	.81	.74	.031
		Group 2	Other	31	.19		
		Total		160	1.00		
HTM	Spend the least amount of time with	Group 1	CFS	129	.82	.74	.015
		Group 2	Other	29	.18		
		Total		158	1.00		

Associations with independent variable data (H_A5).

Spend the least amount of time with * Auditing examination Crosstabulation

			Auditing examination		
			KHT	HTM	Total
Spend the least amount of time with	Cash flow statement	Count	129	129	258
		Expected Count	129.8	128.2	258.0
	Other section	Count	31	29	60
		Expected Count	30.2	29.8	60.0
Total		Count	160	158	318
		Expected Count	160.0	158.0	318.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.054[a]	1	.816		
Continuity Correction[b]	.008	1	.929		
Likelihood Ratio	.054	1	.816		
Fisher's Exact Test				.886	.465
Linear-by-Linear Association	.054	1	.816		
N of Valid Cases	318				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 29.81.

b. Computed only for a 2x2 table

Spend the least amount of time with * Big4orNot Crosstabulation

			Big4orNot		
			Big 4	Other	Total
Spend the least amount of time with	Cash flow statement	Count	79	179	258
		Expected Count	81.9	176.1	258.0
	Other section	Count	22	38	60
		Expected Count	19.1	40.9	60.0
Total		Count	101	217	318
		Expected Count	101.0	217.0	318.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.821[a]	1	.365		
Continuity Correction[b]	.566	1	.452		
Likelihood Ratio	.806	1	.369		
Fisher's Exact Test				.361	.225
Linear-by-Linear Association	.819	1	.366		
N of Valid Cases	318				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 19.06.

b. Computed only for a 2x2 table

Spend the least amount of time with * Age2class Crosstabulation

			Age2class		
			Under 40	40 and above	Total
Spend the least amount of time with	Cash flow statement	Count	55	201	256
		Expected Count	57.5	198.5	256.0
	Other section	Count	16	44	60
		Expected Count	13.5	46.5	60.0
Total		Count	71	245	316
		Expected Count	71.0	245.0	316.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.749[a]	1	.387		
Continuity Correction[b]	.481	1	.488		
Likelihood Ratio	.727	1	.394		
Fisher's Exact Test				.393	.241
Linear-by-Linear Association	.747	1	.387		
N of Valid Cases	316				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 13.48.

b. Computed only for a 2x2 table

Spend the least amount of time with * AuditorExperience2class Crosstabulation

			AuditorExperience2class		
			Under 10	10 and above	Total
Spend the least amount of time with	Cash flow statement	Count	38	220	258
		Expected Count	40.6	217.4	258.0
	Other section	Count	12	48	60
		Expected Count	9.4	50.6	60.0
Total		Count	50	268	318
		Expected Count	50.0	268.0	318.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.021[a]	1	.312		
Continuity Correction[b]	.662	1	.416		
Likelihood Ratio	.971	1	.325		
Fisher's Exact Test				.327	.205
Linear-by-Linear Association	1.018	1	.313		
N of Valid Cases	318				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 9.43.

b. Computed only for a 2x2 table

Spend the least amount of time with * KHTHTMExperience2class Crosstabulation

			KHTHTMExperience2class		
			Under 5	5 and above	Total
Spend the least amount of time with	Cash flow statement	Count	46	212	258
		Expected Count	45.4	212.6	258.0
	Other section	Count	10	50	60
		Expected Count	10.6	49.4	60.0
Total		Count	56	262	318
		Expected Count	56.0	262.0	318.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.045[a]	1	.831		
Continuity Correction[b]	.001	1	.980		
Likelihood Ratio	.046	1	.830		
Fisher's Exact Test				1.000	.500
Linear-by-Linear Association	.045	1	.832		
N of Valid Cases	318				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.57.

b. Computed only for a 2x2 table

H_A6$_a$: Few auditors know how cash payments relating to capacity acquisitions should be presented in accordance with both KILA 30.1.2007 and IAS 7. H_A6$_b$: Few auditors know how cash payments relating to capacity acquisitions should be presented in accordance with KILA 30.1.2007. H_A6$_c$: Few auditors know how cash payments relating to capacity acquisitions should be presented in accordance with IAS 7.

PPEtestALL

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Correct	8	2.5	2.5	2.5
	Not correct	317	97.5	97.5	100.0
	Total	325	100.0	100.0	

Binomial Test

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
PPEtestALL	Group 1	Correct	8	.02	.05	.017[a]
	Group 2	Not correct	317	.98		
	Total		325	1.00		

a. Alternative hypothesis states that the proportion of cases in the first group < .05.

PPEtestFAS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Correct	64	19.7	19.7	19.7
	Not correct	261	80.3	80.3	100.0
	Total	325	100.0	100.0	

Binomial Test

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
PPEtestFAS	Group 1	Correct	64	.20	.25	.014[a]
	Group 2	Not correct	261	.80		
	Total		325	1.00		

a. Alternative hypothesis states that the proportion of cases in the first group < .25.

PPEtestIFRS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Correct	8	2.5	2.5	2.5
	Not correct	317	97.5	97.5	100.0
	Total	325	100.0	100.0	

Binomial Test

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
PPEtestIFRS	Group 1	Correct	8	.02	.05	.017[a]
	Group 2	Not correct	317	.98		
	Total		325	1.00		

a. Alternative hypothesis states that the proportion of cases in the first group < .05.

PPEtestALL

Auditing examination		Frequency	Percent	Valid Percent	Cumulative Percent
KHT	Correct	5	3.1	3.1	3.1
	Not correct	158	96.9	96.9	100.0
	Total	163	100.0	100.0	
HTM	Correct	3	1.9	1.9	1.9
	Not correct	159	98.1	98.1	100.0
	Total	162	100.0	100.0	

Binomial Test

Auditing examination			Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
KHT	PPEtestALL	Group 1	Correct	5	.03	.10	.001[a]
		Group 2	Not correct	158	.97		
		Total		163	1.00		
HTM	PPEtestALL	Group 1	Correct	3	.02	.10	.000[a]
		Group 2	Not correct	159	.98		
		Total		162	1.00		

a. Alternative hypothesis states that the proportion of cases in the first group < .1.

Binomial Test

Auditing examination			Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
KHT	PPEtestALL	Group 1	Correct	5	.03	.05	.171[a]
		Group 2	Not correct	158	.97		
		Total		163	1.00		
HTM	PPEtestALL	Group 1	Correct	3	.02	.05	.036[a]
		Group 2	Not correct	159	.98		
		Total		162	1.00		

a. Alternative hypothesis states that the proportion of cases in the first group < .05.

PPEtestFAS

Auditing examination			Frequency	Percent	Valid Percent	Cumulative Percent
KHT	Valid	Correct	41	25.2	25.2	25.2
		Not correct	122	74.8	74.8	100.0
		Total	163	100.0	100.0	
HTM	Valid	Correct	23	14.2	14.2	14.2
		Not correct	139	85.8	85.8	100.0
		Total	162	100.0	100.0	

Binomial Test

Auditing examination			Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
KHT	PPEtestFAS	Group 1	Correct	41	.25	.35	.005[a]
		Group 2	Not correct	122	.75		
		Total		163	1.00		
HTM	PPEtestFAS	Group 1	Correct	23	.14	.35	.000[a]
		Group 2	Not correct	139	.86		
		Total		162	1.00		

a. Alternative hypothesis states that the proportion of cases in the first group < .35.

Binomial Test

Auditing examination			Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
KHT	PPEtestFAS	Group 1	Correct	41	.25	.20	.064
		Group 2	Not correct	122	.75		
		Total		163	1.00		
HTM	PPEtestFAS	Group 1	Correct	23	.14	.20	.036[a]
		Group 2	Not correct	139	.86		
		Total		162	1.00		

a. Alternative hypothesis states that the proportion of cases in the first group < .2.

PPEtestIFRS

Auditing examination		Frequency	Percent	Valid Percent	Cumulative Percent
KHT	Correct	5	3.1	3.1	3.1
Valid	Not correct	158	96.9	96.9	100.0
	Total	163	100.0	100.0	
HTM	Correct	3	1.9	1.9	1.9
Valid	Not correct	159	98.1	98.1	100.0
	Total	162	100.0	100.0	

Binomial Test

Auditing examination			Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
KHT	PPEtestIFRS	Group 1	Correct	5	.03	.10	.001[a]
		Group 2	Not correct	158	.97		
		Total		163	1.00		
HTM	PPEtestIFRS	Group 1	Correct	3	.02	.10	.000[a]
		Group 2	Not correct	159	.98		
		Total		162	1.00		

Binomial Test

Auditing examination			Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
KHT	PPEtestIFRS	Group 1	Correct	5	.03	.05	.171[a]
		Group 2	Not correct	158	.97		
		Total		163	1.00		
HTM	PPEtestIFRS	Group 1	Correct	3	.02	.05	.036[a]
		Group 2	Not correct	159	.98		
		Total		162	1.00		

a. Alternative hypothesis states that the proportion of cases in the first group < .05.

Associations with independent variable data (H_A6).

Crosstab

			Big4orNot		
			Big 4	Other	Total
PPEtestALL	Correct	Count	5	3	8
		Expected Count	2.5	5.5	8.0
	Not correct	Count	98	219	317
		Expected Count	100.5	216.5	317.0
Total		Count	103	222	325
		Expected Count	103.0	222.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.596[a]	1	.058		
Continuity Correction[b]	2.285	1	.131		
Likelihood Ratio	3.282	1	.070		
Fisher's Exact Test				.115	.070
Linear-by-Linear Association	3.585	1	.058		
N of Valid Cases	325				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.54.

b. Computed only for a 2x2 table

Crosstab

			Big4orNot		
			Big 4	Other	Total
PPEtestFAS	Correct	Count	33	31	64
		Expected Count	20.3	43.7	64.0
	Not correct	Count	70	191	261
		Expected Count	82.7	178.3	261.0
Total		Count	103	222	325
		Expected Count	103.0	222.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	14.535[a]	1	.000		
Continuity Correction[b]	13.414	1	.000		
Likelihood Ratio	13.761	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	14.490	1	.000		
N of Valid Cases	325				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 20.28.

b. Computed only for a 2x2 table

Crosstab

			Big4orNot		
			Big 4	Other	Total
PPEtestIFRS	Correct	Count	5	3	8
		Expected Count	2.5	5.5	8.0
	Not correct	Count	98	219	317
		Expected Count	100.5	216.5	317.0
Total		Count	103	222	325
		Expected Count	103.0	222.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.596[a]	1	.058		
Continuity Correction[b]	2.285	1	.131		
Likelihood Ratio	3.282	1	.070		
Fisher's Exact Test				.115	.070
Linear-by-Linear Association	3.585	1	.058		
N of Valid Cases	325				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.54.

b. Computed only for a 2x2 table

Crosstab

			Auditing examination		
			KHT	HTM	Total
PPEtestALL	Correct	Count	5	3	8
		Expected Count	4.0	4.0	8.0
	Not correct	Count	158	159	317
		Expected Count	159.0	158.0	317.0
Total		Count	163	162	325
		Expected Count	163.0	162.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.500[a]	1	.479		
Continuity Correction[b]	.122	1	.727		
Likelihood Ratio	.505	1	.477		
Fisher's Exact Test				.723	.365
Linear-by-Linear Association	.499	1	.480		
N of Valid Cases	325				

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 3.99.

b. Computed only for a 2x2 table

Crosstab

			Auditing examination		
			KHT	HTM	Total
PPEtestFAS	Correct	Count	41	23	64
		Expected Count	32.1	31.9	64.0
	Not correct	Count	122	139	261
		Expected Count	130.9	130.1	261.0
Total		Count	163	162	325
		Expected Count	163.0	162.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	6.167[a]	1	.013		
Continuity Correction[b]	5.493	1	.019		
Likelihood Ratio	6.236	1	.013		
Fisher's Exact Test				.017	.009
Linear-by-Linear Association	6.148	1	.013		
N of Valid Cases	325				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 31.90.

b. Computed only for a 2x2 table

Crosstab

			Auditing examination		
			KHT	HTM	Total
PPEtestIFRS	Correct	Count	5	3	8
		Expected Count	4.0	4.0	8.0
	Not correct	Count	158	159	317
		Expected Count	159.0	158.0	317.0
Total		Count	163	162	325
		Expected Count	163.0	162.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.500[a]	1	.479		
Continuity Correction[b]	.122	1	.727		
Likelihood Ratio	.505	1	.477		
Fisher's Exact Test				.723	.365
Linear-by-Linear Association	.499	1	.480		
N of Valid Cases	325				

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 3.99.

b. Computed only for a 2x2 table

PPEtestALL * Age2class Crosstabulation

			Age2class		
			Under 40	40 and above	Total
PPEtestALL	Correct	Count	4	4	8
		Expected Count	1.8	6.2	8.0
	Not correct	Count	68	246	314
		Expected Count	70.2	243.8	314.0
Total		Count	72	250	322
		Expected Count	72.0	250.0	322.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.610[a]	1	.057
Continuity Correction[b]	2.162	1	.141
Likelihood Ratio	3.008	1	.083
Fisher's Exact Test			
Linear-by-Linear Association	3.599	1	.058
N of Valid Cases	322		

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 1.79.

b. Computed only for a 2x2 table

PPEtestFAS * Age2class Crosstabulation

			Age2class		
			Under 40	40 and above	Total
PPEtestFAS	Correct	Count	19	45	64
		Expected Count	14.3	49.7	64.0
	Not correct	Count	53	205	258
		Expected Count	57.7	200.3	258.0
Total		Count	72	250	322
		Expected Count	72.0	250.0	322.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.470[a]	1	.116
Continuity Correction[b]	1.972	1	.160
Likelihood Ratio	2.350	1	.125
Fisher's Exact Test			
Linear-by-Linear Association	2.463	1	.117
N of Valid Cases	322		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 14.31.

b. Computed only for a 2x2 table

PPEtestIFRS * Age2class Crosstabulation

			Age2class		
			Under 40	40 and above	Total
PPEtestIFRS	Correct	Count	4	4	8
		Expected Count	1.8	6.2	8.0
	Not correct	Count	68	246	314
		Expected Count	70.2	243.8	314.0
Total		Count	72	250	322
		Expected Count	72.0	250.0	322.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.610[a]	1	.057
Continuity Correction[b]	2.162	1	.141
Likelihood Ratio	3.008	1	.083
Fisher's Exact Test			
Linear-by-Linear Association	3.599	1	.058
N of Valid Cases	322		

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 1.79.

b. Computed only for a 2x2 table

PPEtestALL * AuditorExperience2class Crosstabulation

			AuditorExperience2class		
			Under 10	10 and above	Total
PPEtestALL	Correct	Count	0	8	8
		Expected Count	1.3	6.7	8.0
	Not correct	Count	51	266	317
		Expected Count	49.7	267.3	317.0
Total		Count	51	274	325
		Expected Count	51.0	274.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.527[a]	1	.217
Continuity Correction[b]	.553	1	.457
Likelihood Ratio	2.768	1	.096
Fisher's Exact Test			
Linear-by-Linear Association	1.522	1	.217
N of Valid Cases	325		

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 1.26.

b. Computed only for a 2x2 table

PPEtestFAS * AuditorExperience2class Crosstabulation

			AuditorExperience2class		
			Under 10	10 and above	Total
PPEtestFAS	Correct	Count	14	50	64
		Expected Count	10.0	54.0	64.0
	Not correct	Count	37	224	261
		Expected Count	41.0	220.0	261.0
Total		Count	51	274	325
		Expected Count	51.0	274.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.303[a]	1	.129
Continuity Correction[b]	1.757	1	.185
Likelihood Ratio	2.151	1	.143
Fisher's Exact Test			
Linear-by-Linear Association	2.296	1	.130
N of Valid Cases	325		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.04.

b. Computed only for a 2x2 table

PPEtestIFRS * AuditorExperience2class Crosstabulation

			AuditorExperience2class		
			Under 10	10 and above	Total
PPEtestIFRS	Correct	Count	0	8	8
		Expected Count	1.3	6.7	8.0
	Not correct	Count	51	266	317
		Expected Count	49.7	267.3	317.0
Total		Count	51	274	325
		Expected Count	51.0	274.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.527[a]	1	.217
Continuity Correction[b]	.553	1	.457
Likelihood Ratio	2.768	1	.096
Fisher's Exact Test			
Linear-by-Linear Association	1.522	1	.217
N of Valid Cases	325		

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 1.26.

b. Computed only for a 2x2 table

PPEtestALL * KHTHTMExperience2class Crosstabulation

			KHTHTMExperience2class		
			Under 5	5 and above	Total
PPEtestALL	Correct	Count	1	7	8
		Expected Count	1.4	6.6	8.0
	Not correct	Count	56	261	317
		Expected Count	55.6	261.4	317.0
Total		Count	57	268	325
		Expected Count	57.0	268.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.144[a]	1	.704
Continuity Correction[b]	.000	1	1.000
Likelihood Ratio	.156	1	.692
Fisher's Exact Test			
Linear-by-Linear Association	.144	1	.705
N of Valid Cases	325		

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 1.40.

b. Computed only for a 2x2 table

PPEtestFAS * KHTHTMExperience2class Crosstabulation

			KHTHTMExperience2class		
			Under 5	5 and above	Total
PPEtestFAS	Correct	Count	15	49	64
		Expected Count	11.2	52.8	64.0
	Not correct	Count	42	219	261
		Expected Count	45.8	215.2	261.0
Total		Count	57	268	325
		Expected Count	57.0	268.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.918[a]	1	.166
Continuity Correction[b]	1.443	1	.230
Likelihood Ratio	1.810	1	.178
Fisher's Exact Test			
Linear-by-Linear Association	1.912	1	.167
N of Valid Cases	325		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.22.

b. Computed only for a 2x2 table

PPEtestIFRS * KHTHTMExperience2class Crosstabulation

			KHTHTMExperience2class		
			Under 5	5 and above	Total
PPEtestIFRS	Correct	Count	1	7	8
		Expected Count	1.4	6.6	8.0
	Not correct	Count	56	261	317
		Expected Count	55.6	261.4	317.0
Total		Count	57	268	325
		Expected Count	57.0	268.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.144[a]	1	.704
Continuity Correction[b]	.000	1	1.000
Likelihood Ratio	.156	1	.692
Fisher's Exact Test			
Linear-by-Linear Association	.144	1	.705
N of Valid Cases	325		

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 1.40.

b. Computed only for a 2x2 table

H_A7: Few auditors would omit material non-cash transactions from cash flow statements under FAS.

Material non-cash transactions

Auditing examination		Frequency	Percent	Valid Percent	Cumulative Percent
KHT	Omit	64	39.3	39.3	39.3
Valid	Do not omit	99	60.7	60.7	100.0
	Total	163	100.0	100.0	
HTM	Omit	46	28.4	28.4	28.4
Valid	Do not omit	116	71.6	71.6	100.0
	Total	162	100.0	100.0	

Binomial Test

Auditing examination			Category	N	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)
KHT	Material non-cash transactions	Group 1	Omit	64	.39	.50	.008
		Group 2	Do not omit	99	.61		
		Total		163	1.00		
HTM	Material non-cash transactions	Group 1	Omit	46	.28	.50	.000
		Group 2	Do not omit	116	.72		
		Total		162	1.00		

Binomial Test

Auditing examination			Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
KHT	Material non-cash transactions	Group 1	Omit	64	.39	.35	.145
		Group 2	Do not omit	99	.61		
		Total		163	1.00		
HTM	Material non-cash transactions	Group 1	Omit	46	.28	.35	.045[a]
		Group 2	Do not omit	116	.72		
		Total		162	1.00		

a. Alternative hypothesis states that the proportion of cases in the first group < .35.

Associations with independent variable data (H_A7).

Material non-cash transactions * Big4orNot Crosstabulation

			Big4orNot		
			Big 4	Other	Total
Material non-cash transactions	Omit	Count	53	57	110
		Expected Count	34.9	75.1	110.0
	Do not omit	Count	50	165	215
		Expected Count	68.1	146.9	215.0
Total		Count	103	222	325
		Expected Count	103.0	222.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	20.885[a]	1	.000		
Continuity Correction[b]	19.749	1	.000		
Likelihood Ratio	20.387	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	20.821	1	.000		
N of Valid Cases	325				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 34.86.

b. Computed only for a 2x2 table

Material non-cash transactions * Auditing examination Crosstabulation

			Auditing examination		
			KHT	HTM	Total
Material non-cash transactions	Omit	Count	64	46	110
		Expected Count	55.2	54.8	110.0
	Do not omit	Count	99	116	215
		Expected Count	107.8	107.2	215.0
Total		Count	163	162	325
		Expected Count	163.0	162.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4.287[a]	1	.038		
Continuity Correction[b]	3.815	1	.051		
Likelihood Ratio	4.301	1	.038		
Fisher's Exact Test				.046	.025
Linear-by-Linear Association	4.273	1	.039		
N of Valid Cases	325				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 54.83.

b. Computed only for a 2x2 table

Material non-cash transactions * Age2class Crosstabulation

			Age2class		
			Under 40	40 and above	Total
Material non-cash transactions	Omit	Count	37	72	109
		Expected Count	24.4	84.6	109.0
	Do not omit	Count	35	178	213
		Expected Count	47.6	165.4	213.0
Total		Count	72	250	322
		Expected Count	72.0	250.0	322.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	12.738[a]	1	.000		
Continuity Correction[b]	11.749	1	.001		
Likelihood Ratio	12.254	1	.000		
Fisher's Exact Test				.001	.000
Linear-by-Linear Association	12.699	1	.000		
N of Valid Cases	322				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 24.37.

b. Computed only for a 2x2 table

Material non-cash transactions * AuditorExperience2class Crosstabulation

			AuditorExperience2class		
			Under 10	10 and above	Total
Material non-cash transactions	Omit	Count	24	86	110
		Expected Count	17.3	92.7	110.0
	Do not omit	Count	27	188	215
		Expected Count	33.7	181.3	215.0
Total		Count	51	274	325
		Expected Count	51.0	274.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4.716[a]	1	.030		
Continuity Correction[b]	4.043	1	.044		
Likelihood Ratio	4.538	1	.033		
Fisher's Exact Test				.036	.024
Linear-by-Linear Association	4.702	1	.030		
N of Valid Cases	325				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 17.26.

b. Computed only for a 2x2 table

Material non-cash transactions * KHTHTMExperience2class Crosstabulation

			KHTHTMExperience2class		
			Under 5	5 and above	Total
Material non-cash transactions	Omit	Count	31	79	110
		Expected Count	19.3	90.7	110.0
	Do not omit	Count	26	189	215
		Expected Count	37.7	177.3	215.0
Total		Count	57	268	325
		Expected Count	57.0	268.0	325.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	13.024[a]	1	.000		
Continuity Correction[b]	11.936	1	.001		
Likelihood Ratio	12.411	1	.000		
Fisher's Exact Test				.001	.000
Linear-by-Linear Association	12.984	1	.000		
N of Valid Cases	325				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 19.29.

b. Computed only for a 2x2 table

Appendix 6: SPSS 19/21 outputs regarding users

H_U1: Most users of financial statements use the cash flow statement mainly for predicting future cash flows or for assessing liquidity.

		Frequency	Percent	Cumulative Percent
Valid	Prediction of future cash flows	392	41.0	41.0
	Assessment of liquidity	385	40.3	81.3
	Other	20	2.1	83.4
	I don't use CFS's	159	16.6	100.0
	Total	956	100.0	

Binomial Test

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
PredictionorAssessmentUseroror Not	Group 1	Prediction&Assessment	777	.81	.75	.000
	Group 2	Others	179	.19		
	Total		956	1.00		

Associations with independent variable data (H_U1).

PredictionorAssessmentUserorNot * Age2class Crosstabulation

			Age2class		Total
			Under 40	40 and above	
PredictionorAssessmentUserorNot	Prediction or Assessment use	Count	211	562	773
		Expected Count	219.5	553.5	773.0
	Other	Count	59	119	178
		Expected Count	50.5	127.5	178.0
Total		Count	270	681	951
		Expected Count	270.0	681.0	951.0

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.435[a]	1	.119
Continuity Correction[b]	2.156	1	.142
Likelihood Ratio	2.379	1	.123
Fisher's Exact Test			
Linear-by-Linear Association	2.433	1	.119
N of Valid Cases	951		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 50.54.

b. Computed only for a 2x2 table

PredictionorAssessmentUserorNot * InvestingExperience2class Crosstabulation

			InvestingExperience2class		Total
			Under 10	10 and above	
PredictionorAssessmentUserorNot	Prediction or Assessment use	Count	309	463	772
		Expected Count	322.3	449.7	772.0
	Other	Count	88	91	179
		Expected Count	74.7	104.3	179.0
Total		Count	397	554	951
		Expected Count	397.0	554.0	951.0

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.987[a]	1	.026
Continuity Correction[b]	4.619	1	.032
Likelihood Ratio	4.939	1	.026
Fisher's Exact Test			
Linear-by-Linear Association	4.982	1	.026
N of Valid Cases	951		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 74.72.

b. Computed only for a 2x2 table

PredictionorAssessmentUserorNot * Educationsubject Crosstabulation

			Educationsubject		
			Accounting and finance	Other business studies	Other studies
PredictionorAssessmentUserorNot	Prediction or Assessment use	Count	91	125	561
		Expected Count	87.8	128.4	560.8
	Other	Count	17	33	129
		Expected Count	20.2	29.6	129.2
Total		Count	108	158	690
		Expected Count	108.0	158.0	690.0

PredictionorAssessmentUserorNot * Educationsubject Crosstabulation

				Total
PredictionorAssessmentUserorNot	Prediction or Assessment use		Count	777
			Expected Count	777.0
	Other		Count	179
			Expected Count	179.0
Total			Count	956
			Expected Count	956.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.117[a]	2	.572
Likelihood Ratio	1.132	2	.568
Linear-by-Linear Association	.136	1	.713
N of Valid Cases	956		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 20.22.

PredictionorAssessmentUserorNot * Educationlevel Crosstabulation

			Educationlevel		
			Master's degree	Bachelor's degree	Other degree
PredictionorAssessmentUserorNot	Prediction or Assessment use	Count	317	133	264
		Expected Count	317.8	134.1	262.5
	Other	Count	74	32	59
		Expected Count	73.2	30.9	60.5
Total		Count	391	165	323
		Expected Count	391.0	165.0	323.0

PredictionorAssessmentUserorNot * Educationlevel Crosstabulation

			Educationlevel	Total
			Student	
PredictionorAssessmentUserorNot	Prediction or Assessment use	Count	63	777
		Expected Count	62.6	777.0
	Other	Count	14	179
		Expected Count	14.4	179.0
Total		Count	77	956
		Expected Count	77.0	956.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.118[a]	3	.990
Likelihood Ratio	.118	3	.990
Linear-by-Linear Association	.062	1	.803
N of Valid Cases	956		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 14.42.

PredictionorAssessmentUserorNot * Yearlyinvestments2class Crosstabulation

			Yearlyinvestments2class		Total
			Under 10000	10000 or over	
PredictionorAssessmentUserorNot	Prediction or Assessment use	Count	304	472	776
		Expected Count	326.7	449.3	776.0
	Other	Count	98	81	179
		Expected Count	75.3	103.7	179.0
Total		Count	402	553	955
		Expected Count	402.0	553.0	955.0

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.472[a]	1	.000
Continuity Correction[b]	13.840	1	.000
Likelihood Ratio	14.302	1	.000
Fisher's Exact Test			
Linear-by-Linear Association	14.457	1	.000
N of Valid Cases	955		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 75.35.

b. Computed only for a 2x2 table

PredictionorAssessmentUserorNot * Portfoliovalue2class Crosstabulation

			Portfoliovalue2class		Total
			Under 100000	100000 or over	
PredictionorAssessmentUserorNot	Prediction or Assessment use	Count	380	396	776
		Expected Count	396.5	379.5	776.0
	Other	Count	108	71	179
		Expected Count	91.5	87.5	179.0
Total		Count	488	467	955
		Expected Count	488.0	467.0	955.0

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.520[a]	1	.006
Continuity Correction[b]	7.072	1	.008
Likelihood Ratio	7.572	1	.006
Fisher's Exact Test			
Linear-by-Linear Association	7.512	1	.006
N of Valid Cases	955		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 87.53.

b. Computed only for a 2x2 table

H_U2: Users of financial statements consider the cash flow statement to be the most useful financial statement section in predicting an entity's future cash flows.

Descriptives

			Statistic	Std. Error
BSUsefulnessPre	Mean		2.22	.030
	95% Confidence Interval for Mean	Lower Bound	2.16	
		Upper Bound	2.27	
IncUsefulnessPre	Mean		1.60	.027
	95% Confidence Interval for Mean	Lower Bound	1.55	
		Upper Bound	1.66	
CFSUsefulnessPre	Mean		2.56	.030
	95% Confidence Interval for Mean	Lower Bound	2.51	
		Upper Bound	2.62	
NotesUsefulnessPre	Mean		3.62	.024
	95% Confidence Interval for Mean	Lower Bound	3.57	
		Upper Bound	3.66	

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
BSUsefulnessPre	.223	936	.000	.870	936	.000
IncUsefulnessPre	.340	936	.000	.723	936	.000
CFSUsefulnessPre	.270	936	.000	.864	936	.000
NotesUsefulnessPre	.436	936	.000	.579	936	.000

a. Lilliefors Significance Correction

Kruskal-Wallis Test

Ranks

	Section	N	Mean Rank
PredictionUsefulness	Balance sheet	936	1606.50
	Income statement	936	1032.50
	Cash flow statement	936	1932.50
	Notes	936	2918.50
	Total	3744	

Test Statistics[a,b]

	PredictionUsefulness
Chi-Square	1601.343
df	3
Asymp. Sig.	.000

a. Kruskal Wallis Test

b. Grouping Variable: Section

ANOVA

PredictionUsefulness

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2002.214	3	667.405	932.148	.000
Within Groups	2677.786	3740	.716		
Total	4680.000	3743			

Multiple Comparisons

Dependent Variable: PredictionUsefulness

Bonferroni

(I) Section	(J) Section	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Balance sheet	Income statement	.613*	.039	.000	.51	.72
	Cash flow statement	-.348*	.039	.000	-.45	-.25
	Notes	-1.402*	.039	.000	-1.51	-1.30
Income statement	Balance sheet	-.613*	.039	.000	-.72	-.51
	Cash flow statement	-.962*	.039	.000	-1.06	-.86
	Notes	-2.015*	.039	.000	-2.12	-1.91
Cash flow statement	Balance sheet	.348*	.039	.000	.25	.45
	Income statement	.962*	.039	.000	.86	1.06
	Notes	-1.053*	.039	.000	-1.16	-.95
Notes	Balance sheet	1.402*	.039	.000	1.30	1.51
	Income statement	2.015*	.039	.000	1.91	2.12
	Cash flow statement	1.053*	.039	.000	.95	1.16

*. The mean difference is significant at the 0.05 level.

Associations with independent variable data (H_U2).

Kruskal-Wallis Test

Ranks

	Educationsubject	N	Mean Rank
CFSUsefulness Pre	Accounting and finance	107	515.42
	Other business studies	156	495.05
	Other studies	673	454.89
	Total	936	

Test Statistics[a,b]

	CFSUsefulnessPre
Chi-Square	7.274
df	2
Asymp. Sig.	.026

a. Kruskal Wallis Test

b. Grouping Variable: Educationsubject

ANOVA

CFSUsefulnessPre

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.977	2	2.488	3.011	.050
Within Groups	771.177	933	.827		
Total	776.154	935			

(I) Educationsubject	(J) Educationsubject	Mean Difference (I-J)	Std. Error	Sig.
Accounting and finance	Other business studies	.07219	.11412	1.000
	Other studies	.19957	.09462	.106
Other business studies	Accounting and finance	-.07219	.11412	1.000
	Other studies	.12738	.08079	.346
Other studies	Accounting and finance	-.19957	.09462	.106
	Other business studies	-.12738	.08079	.346

Kruskal-Wallis Test

Ranks

	Educationlevel	N	Mean Rank
CFSUsefulness Pre	Master's degree	383	466.75
	Bachelor's degree	163	480.57
	Other degree	316	471.49
	Student	74	438.20
	Total	936	

Test Statistics[a,b]

	CFSUsefulnessPre
Chi-Square	1.480
df	3
Asymp. Sig.	.687

a. Kruskal Wallis Test

b. Grouping Variable: Educationlevel

ANOVA

CFSUsefulnessPre

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.874	3	.291	.350	.789
Within Groups	775.280	932	.832		
Total	776.154	935			

Correlations

		CFSUsefulnessPre	Age
CFSUsefulness Pre	Pearson Correlation	1	.032
	Sig. (2-tailed)		.330
	N	936	932
Age	Pearson Correlation	.032	1
	Sig. (2-tailed)	.330	
	N	932	951

Correlations

			CFSUsefulnessPre	Age
Spearman's rho	CFSUsefulnessPre	Correlation Coefficient	1.000	.041
		Sig. (2-tailed)	.	.212
		N	936	932
	Age	Correlation Coefficient	.041	1.000
		Sig. (2-tailed)	.212	.
		N	932	951

Correlations

		CFSUsefulnessPre	InvestingExperience
CFSUsefulnessPre	Pearson Correlation	1	.039
	Sig. (2-tailed)		.239
	N	936	931
InvestingExperience	Pearson Correlation	.039	1
	Sig. (2-tailed)	.239	
	N	931	951

Correlations

			CFSUsefulnessPre	InvestingExperience
Spearman's rho	CFSUsefulnessPre	Correlation Coefficient	1.000	.033
		Sig. (2-tailed)	.	.312
		N	936	931
	InvestingExperience	Correlation Coefficient	.033	1.000
		Sig. (2-tailed)	.312	.
		N	931	951

Correlations

		CFSUsefulnessPre	YearlyInvestments
CFSUsefulnessPre	Pearson Correlation	1	-.034
	Sig. (2-tailed)		.300
	N	936	935
YearlyInvestments	Pearson Correlation	-.034	1
	Sig. (2-tailed)	.300	
	N	935	955

Correlations

			CFSUsefulnessPre	YearlyInvestments
Spearman's rho	CFSUsefulnessPre	Correlation Coefficient	1.000	.046
		Sig. (2-tailed)	.	.155
		N	936	935
	YearlyInvestments	Correlation Coefficient	.046	1.000
		Sig. (2-tailed)	.155	.
		N	935	955

Correlations

		CFSUsefulnessPre	PortfolioValue
CFSUsefulnessPre	Pearson Correlation	1	-.018
	Sig. (2-tailed)		.592
	N	936	935
PortfolioValue	Pearson Correlation	-.018	1
	Sig. (2-tailed)	.592	
	N	935	955

Correlations

			CFSUsefulnessPre	PortfolioValue
Spearman's rho	CFSUsefulnessPre	Correlation Coefficient	1.000	.062
		Sig. (2-tailed)	.	.058
		N	936	935
	PortfolioValue	Correlation Coefficient	.062	1.000
		Sig. (2-tailed)	.058	.
		N	935	955

Kruskal-Wallis Test

Ranks

	Main use of CFS's	N	Mean Rank
CFSUsefulnessPre	Prediction of future cash flows	384	416.24
	Assessment of liquidity	375	480.66
	Other	20	511.70
	I don't use CFS's	157	561.77
	Total	936	

Test Statistics[a,b]

	CFSUsefulnessPre
Chi-Square	38.785
df	3
Asymp. Sig.	.000

a. Kruskal Wallis Test

b. Grouping Variable: Main use of CFS's

ANOVA

CFSUsefulnessPre

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	32.343	3	10.781	13.509	.000
Within Groups	743.811	932	.798		
Total	776.154	935			

(I) Main use of CFS's	(J) Main use of CFS's	Mean Difference (I-J)	Std. Error	Sig.
Prediction of future cash flows	Assessment of liquidity	-.244*	.065	.001
	Other	-.328	.205	.661
	I don't use CFS's	-.519*	.085	.000
Assessment of liquidity	Prediction of future cash flows	.244*	.065	.001
	Other	-.084	.205	1.000
	I don't use CFS's	-.276*	.085	.007
Other	Prediction of future cash flows	.328	.205	.661
	Assessment of liquidity	.084	.205	1.000
	I don't use CFS's	-.192	.212	1.000
I don't use CFS's	Prediction of future cash flows	.519*	.085	.000
	Assessment of liquidity	.276*	.085	.007
	Other	.192	.212	1.000

Report

Mean

Main use of CFS's	BSUsefulnessPre	IncUsefulnessPre	CFSUsefulnessPre	NotesUsefulnessPre
Prediction of future cash flows	2.3229	1.6302	2.3724	3.6745
Assessment of liquidity	2.1413	1.6133	2.6160	3.6293
Other	2.1000	1.7000	2.7000	3.5000
I don't use CFS's	2.1465	1.4968	2.8917	3.4650
Total	2.2158	1.6026	2.5641	3.6175

Report

Mean

Educationsubject	BSUsefulnessPre	IncUsefulnessPre	CFSUsefulnessPre	NotesUsefulnessPre
Accounting and finance	2.1776	1.7757	2.7196	3.3271
Other business studies	2.1154	1.6667	2.6474	3.5705
Other studies	2.2452	1.5602	2.5201	3.6746
Total	2.2158	1.6026	2.5641	3.6175

Report

Mean

Educationlevel	BSUsefulnessPre	IncUsefulnessPre	CFSUsefulnessPre	NotesUsefulnessPre
Master's degree	2.2637	1.5875	2.5587	3.5901
Bachelor's degree	2.1534	1.5890	2.6012	3.6564
Other degree	2.1614	1.6361	2.5728	3.6297
Student	2.3378	1.5676	2.4730	3.6216
Total	2.2158	1.6026	2.5641	3.6175

H_U3: Users of financial statements consider the cash flow statement to be the most useful financial statement section in assessing an entity's liquidity.

Descriptives

			Statistic	Std. Error
BSUsefulnessAss	Mean		2.00	.032
	95% Confidence Interval for Mean	Lower Bound	1.94	
		Upper Bound	2.06	
IncUsefulnessAss	Mean		2.40	.029
	95% Confidence Interval for Mean	Lower Bound	2.34	
		Upper Bound	2.45	
CFSUsefulnessAss	Mean		1.84	.028
	95% Confidence Interval for Mean	Lower Bound	1.79	
		Upper Bound	1.90	
NotesUsefulnessAss	Mean		3.76	.018
	95% Confidence Interval for Mean	Lower Bound	3.72	
		Upper Bound	3.79	

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
BSUsefulnessAss	.251	925	.000	.826	925	.000
IncUsefulnessAss	.216	925	.000	.876	925	.000
CFSUsefulnessAss	.266	925	.000	.811	925	.000
NotesUsefulnessAss	.481	925	.000	.492	925	.000

a. Lilliefors Significance Correction

Kruskal-Wallis Test

Ranks

	Section	N	Mean Rank
AssessmentUsefulness	Balance sheet	925	1390.00
	Income statement	925	1756.00
	Cash flow statement	925	1244.00
	Notes	925	3012.00
	Total	3700	

Test Statistics[a,b]

	AssessmentUsefulness
Chi-Square	1675.582
df	3
Asymp. Sig.	.000

a. Kruskal Wallis Test

b. Grouping Variable: Section

ANOVA

AssessmentUsefulness

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2095.043	3	698.348	1020.212	.000
Within Groups	2529.957	3696	.685		
Total	4625.000	3699			

Multiple Comparisons

Dependent Variable: AssessmentUsefulness

Bonferroni

(I) Section	(J) Section	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Balance sheet	Income statement	-.396*	.038	.000	-.50	-.29
	Cash flow statement	.158*	.038	.000	.06	.26
	Notes	-1.754*	.038	.000	-1.86	-1.65
Income statement	Balance sheet	.396*	.038	.000	.29	.50
	Cash flow statement	.554*	.038	.000	.45	.66
	Notes	-1.359*	.038	.000	-1.46	-1.26
Cash flow statement	Balance sheet	-.158*	.038	.000	-.26	-.06
	Income statement	-.554*	.038	.000	-.66	-.45
	Notes	-1.911*	.038	.000	-2.01	-1.81
Notes	Balance sheet	1.754*	.038	.000	1.65	1.86
	Income statement	1.358*	.038	.000	1.26	1.46
	Cash flow statement	1.911*	.038	.000	1.81	2.01

*. The mean difference is significant at the 0.05 level.

Associations with independent variable data (H_U3).

Kruskal-Wallis Test

Ranks

	Educationsubject	N	Mean Rank
CFSUsefulnessAss	Accounting and finance	102	478.82
	Other business studies	154	449.06
	Other studies	669	463.80
	Total	925	

Test Statistics[a,b]

	CFSUsefulnessAss
Chi-Square	.893
df	2
Asymp. Sig.	.640

a. Kruskal Wallis Test

b. Grouping Variable: Educationsubject

ANOVA

CFSUsefulnessAss

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.575	2	.287	.394	.675
Within Groups	673.008	922	.730		
Total	673.583	924			

Kruskal-Wallis Test

Ranks

	Educationlevel	N	Mean Rank
CFSUsefulnessAss	Master's degree	379	459.15
	Bachelor's degree	160	467.44
	Other degree	313	455.13
	Student	73	507.00
	Total	925	

Test Statistics[a,b]

	CFSUsefulnessAss
Chi-Square	2.709
df	3
Asymp. Sig.	.439

a. Kruskal Wallis Test

b. Grouping Variable: Educationlevel

ANOVA

CFSUsefulnessAss

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.742	3	.581	.796	.496
Within Groups	671.841	921	.729		
Total	673.583	924			

Correlations

		CFSUsefulnessAss	Age
CFSUsefulnessAss	Pearson Correlation	1	-.103**
	Sig. (2-tailed)		.002
	N	925	920
Age	Pearson Correlation	-.103**	1
	Sig. (2-tailed)	.002	
	N	920	951

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

Correlations

			CFSUsefulnessAss	Age
Spearman's rho	CFSUsefulnessAss	Correlation Coefficient	1.000	-.117**
		Sig. (2-tailed)	.	.000
		N	925	920
	Age	Correlation Coefficient	-.117**	1.000
		Sig. (2-tailed)	.000	.
		N	920	951

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

Correlations

		CFSUsefulnessAss	InvestingExperience
CFSUsefulnessAss	Pearson Correlation	1	-.098**
	Sig. (2-tailed)		.003
	N	925	920
InvestingExperience	Pearson Correlation	-.098**	1
	Sig. (2-tailed)	.003	
	N	920	951

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

Correlations

			CFSUsefulnessAss	InvestingExperience
Spearman's rho	CFSUsefulnessAss	Correlation Coefficient	1.000	-.119**
		Sig. (2-tailed)	.	.000
		N	925	920
	InvestingExperience	Correlation Coefficient	-.119**	1.000
		Sig. (2-tailed)	.000	.
		N	920	951

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

Correlations

		CFSUsefulnessAss	YearlyInvestments
CFSUsefulnessAss	Pearson Correlation	1	-.002
	Sig. (2-tailed)		.958
	N	925	924
YearlyInvestments	Pearson Correlation	-.002	1
	Sig. (2-tailed)	.958	
	N	924	955

Correlations

			CFSUsefulnessAss	YearlyInvestments
Spearman's rho	CFSUsefulnessAss	Correlation Coefficient	1.000	-.080*
		Sig. (2-tailed)	.	.015
		N	925	924
	YearlyInvestments	Correlation Coefficient	-.080*	1.000
		Sig. (2-tailed)	.015	.
		N	924	955

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

Correlations

		CFSUsefulnessAss	PortfolioValue
CFSUsefulnessAss	Pearson Correlation	1	.003
	Sig. (2-tailed)		.926
	N	925	924
PortfolioValue	Pearson Correlation	.003	1
	Sig. (2-tailed)	.926	
	N	924	955

Correlations

			CFSUsefulnessAss	PortfolioValue
Spearman's rho	CFSUsefulnessAss	Correlation Coefficient	1.000	-.083*
		Sig. (2-tailed)	.	.012
		N	925	924
	PortfolioValue	Correlation Coefficient	-.083*	1.000
		Sig. (2-tailed)	.012	.
		N	924	955

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

Kruskal-Wallis Test

Ranks

	Main use of CFS's	N	Mean Rank
CFSUsefulnessAss	Prediction of future cash flows	382	472.86
	Assessment of liquidity	368	416.68
	Other	19	416.71
	I don't use CFS's	156	553.76
	Total	925	

Test Statistics[a,b]

	CFSUsefulnessAss
Chi-Square	34.408
df	3
Asymp. Sig.	.000

a. Kruskal Wallis Test

b. Grouping Variable: Main use of CFS's

ANOVA

CFSUsefulnessAss

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	27.249	3	9.083	12.943	.000
Within Groups	646.333	921	.702		
Total	673.583	924			

(I) Main use of CFS's	(J) Main use of CFS's	Mean Difference (I-J)	Std. Error	Sig.
Prediction of future cash flows	Assessment of liquidity	.179*	.061	.021
	Other	.182	.197	1.000
	I don't use CFS's	-.313*	.080	.001
Assessment of liquidity	Prediction of future cash flows	-.179*	.061	.021
	Other	.003	.197	1.000
	I don't use CFS's	-.492*	.080	.000
Other	Prediction of future cash flows	-.182	.197	1.000
	Assessment of liquidity	-.003	.197	1.000
	I don't use CFS's	-.495	.204	.091
I don't use CFS's	Prediction of future cash flows	.313*	.080	.001
	Assessment of liquidity	.492*	.080	.000
	Other	.495	.204	.091

H_U4: Most users reckon taxes should be allocated on the cash flow statement based on the activity, taking into consideration the principle of materiality.

TaxAllocationClasses

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	163	17.1	17.1	17.1
	No opinion for or against	313	32.7	32.7	49.8
	Agree	480	50.2	50.2	100.0
	Total	956	100.0	100.0	

Associations with independent variable data (H_U4).

ForTaxAllocationorNot * InvestingExperience2class Crosstabulation

			InvestingExperience2class		Total
			Under 10	10 and above	
ForTax Allocation orNot	Others	Count	214	261	475
		Expected Count	198.3	276.7	475.0
	ForTax Allocation	Count	183	293	476
		Expected Count	198.7	277.3	476.0
Total		Count	397	554	951
		Expected Count	397.0	554.0	951.0

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.268[a]	1	.039
Continuity Correction[b]	4.001	1	.045
Likelihood Ratio	4.271	1	.039
Fisher's Exact Test			
Linear-by-Linear Association	4.263	1	.039
N of Valid Cases	951		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 198.29.

b. Computed only for a 2x2 table

ForTaxAllocationorNot * Age2class Crosstabulation

			Age2class		Total
			Under 40	40 and above	
ForTax Allocation orNot	Others	Count	144	331	475
		Expected Count	134.9	340.1	475.0
	ForTax Allocation	Count	126	350	476
		Expected Count	135.1	340.9	476.0
Total		Count	270	681	951
		Expected Count	270.0	681.0	951.0

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.729[a]	1	.189
Continuity Correction[b]	1.545	1	.214
Likelihood Ratio	1.730	1	.188
Fisher's Exact Test			
Linear-by-Linear Association	1.727	1	.189
N of Valid Cases	951		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 134.86.

b. Computed only for a 2x2 table

ForTaxAllocationorNot * Educationsubject Crosstabulation

			Educationsubject			Total
			Accounting and finance	Other business studies	Other studies	
ForTaxAllocationorNot	Others	Count	63	79	334	476
		Expected Count	53.8	78.7	343.6	476.0
	For TaxAllocation	Count	45	79	356	480
		Expected Count	54.2	79.3	346.4	480.0
Total		Count	108	158	690	956
		Expected Count	108.0	158.0	690.0	956.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.685[a]	2	.158
Likelihood Ratio	3.699	2	.157
Linear-by-Linear Association	3.177	1	.075
N of Valid Cases	956		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 53.77.

ForTaxAllocationorNot * Educationlevel Crosstabulation

			Educationlevel			
			Master's degree	Bachelor's degree	Other degree	Student
ForTaxAllocationorNot	Others	Count	206	77	158	35
		Expected Count	194.7	82.2	160.8	38.3
	ForTaxAllocation	Count	185	88	165	42
		Expected Count	196.3	82.8	162.2	38.7
Total		Count	391	165	323	77
		Expected Count	391.0	165.0	323.0	77.0

ForTaxAllocationorNot * Educationlevel Crosstabulation

			Total
ForTaxAllocationorNot	Others	Count	476
		Expected Count	476.0
	ForTaxAllocation	Count	480
		Expected Count	480.0
Total		Count	956
		Expected Count	956.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.633[a]	3	.452
Likelihood Ratio	2.635	3	.451
Linear-by-Linear Association	1.708	1	.191
N of Valid Cases	956		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 38.34.

ForTaxAllocationorNot * Yearlyinvestments2class Crosstabulation

			Yearlyinvestments2class		Total
			Under 10000	10000 or over	
ForTaxAllocationorNot	Others	Count	198	278	476
		Expected Count	200.4	275.6	476.0
	ForTaxAllocation	Count	204	275	479
		Expected Count	201.6	277.4	479.0
Total		Count	402	553	955
		Expected Count	402.0	553.0	955.0

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.096[a]	1	.756
Continuity Correction[b]	.060	1	.806
Likelihood Ratio	.096	1	.756
Fisher's Exact Test			
Linear-by-Linear Association	.096	1	.756
N of Valid Cases	955		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 200.37.

b. Computed only for a 2x2 table

ForTaxAllocationorNot * Portfoliovalue2class Crosstabulation

			Portfoliovalue2class		Total
			Under 100000	100000 or over	
ForTaxAllocationorNot	Others	Count	247	229	476
		Expected Count	243.2	232.8	476.0
	ForTaxAllocation	Count	241	238	479
		Expected Count	244.8	234.2	479.0
Total		Count	488	467	955
		Expected Count	488.0	467.0	955.0

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.238[a]	1	.626
Continuity Correction[b]	.179	1	.672
Likelihood Ratio	.238	1	.626
Fisher's Exact Test			
Linear-by-Linear Association	.238	1	.626
N of Valid Cases	955		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 232.77.

b. Computed only for a 2x2 table

ForTaxAllocationorNot * CFUserOrNot Crosstabulation

			CFUserOrNot		Total
			NotCFSUser	CFSUser	
ForTaxAllocationorNot	Others	Count	101	375	476
		Expected Count	79.2	396.8	476.0
	ForTaxAllocation	Count	58	422	480
		Expected Count	79.8	400.2	480.0
Total		Count	159	797	956
		Expected Count	159.0	797.0	956.0

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.384[a]	1	.000
Continuity Correction[b]	13.733	1	.000
Likelihood Ratio	14.532	1	.000
Fisher's Exact Test			
Linear-by-Linear Association	14.369	1	.000
N of Valid Cases	956		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 79.17.

b. Computed only for a 2x2 table

H_U5$_a$: It is important for most users that the cash flow statement has been prepared in accordance with the applicable standard (KILA 30.1.2007 or IAS 7).
H_U5$_b$: Most users trust that the cash flow statement has been prepared in accordance with the applicable standard (KILA 30.1.2007 or IAS 7) if there is no mentioning otherwise in the financial statements or in the auditor's report.
H_U5$_c$: Most of those users who consider the congruence of cash flow statements and the applicable standard important trust that the cash flow statement has been prepared in accordance with the applicable standard if there is no mentioning otherwise in the financial statements or in the auditor's report.

Preparing CFS's according to standards is important

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	604	63.2	63.2	63.2
	Other	352	36.8	36.8	100.0
	Total	956	100.0	100.0	

Binomial Test

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
Preparing CFS's according to standards is important	Group 1	Agree	604	.63	.60	.024
	Group 2	Other	352	.37		
	Total		956	1.00		

Trust that audited CFS's comply with standards

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	610	63.8	63.8	63.8
	Other	346	36.2	36.2	100.0
	Total	956	100.0	100.0	

Binomial Test

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
Trust that audited CFS's comply with standards	Group 1	Agree	610	.64	.60	.009
	Group 2	Other	346	.36		
	Total		956	1.00		

Trust that audited CFS's comply with standards

Preparing CFS's according to standards is important			Frequency	Percent	Valid Percent	Cumulative Percent
Agree	Valid	Agree	495	82.0	82.0	82.0
		Other	109	18.0	18.0	100.0
		Total	604	100.0	100.0	
Other	Valid	Agree	115	32.7	32.7	32.7
		Other	237	67.3	67.3	100.0
		Total	352	100.0	100.0	

Binomial Test

Preparing CFS's according to standards is important			Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
Agree	Trust that audited CFS's comply with standards	Group 1	Agree	495	.82	.75	.000
		Group 2	Other	109	.18		
		Total		604	1.00		
Other	Trust that audited CFS's comply with standards	Group 1	Agree	115	.33	.75	.000[a]
		Group 2	Other	237	.67		
		Total		352	1.00		

a. Alternative hypothesis states that the proportion of cases in the first group < .75.

Associations with independent variable data (H_U5).

Preparing CFS's according to standards is important * Educationsubject Crosstabulation

			Educationsubject			
			Accounting and finance	Other business studies	Other studies	Total
Preparing CFS's according to standards is important	Agree	Count	74	112	418	604
		Expected Count	68.2	99.8	435.9	604.0
	Other	Count	34	46	272	352
		Expected Count	39.8	58.2	254.1	352.0
Total		Count	108	158	690	956
		Expected Count	108.0	158.0	690.0	956.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.362[a]	2	.025
Likelihood Ratio	7.516	2	.023
Linear-by-Linear Association	5.440	1	.020
N of Valid Cases	956		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 39.77.

Trust that audited CFS's comply with standards * Educationsubject Crosstabulation

			Educationsubject			
			Accounting and finance	Other business studies	Other studies	Total
Trust that audited CFS's comply with standards	Agree	Count	80	117	413	610
		Expected Count	68.9	100.8	440.3	610.0
	Other	Count	28	41	277	346
		Expected Count	39.1	57.2	249.7	346.0
Total		Count	108	158	690	956
		Expected Count	108.0	158.0	690.0	956.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16.775[a]	2	.000
Likelihood Ratio	17.346	2	.000
Linear-by-Linear Association	14.346	1	.000
N of Valid Cases	956		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 39.09.

Preparing CFS's according to standards is important * Educationlevel Crosstabulation

			Educationlevel		
			Master's degree	Bachelor's degree	Other degree
Preparing CFS's according to standards is important	Agree	Count	258	108	185
		Expected Count	247.0	104.2	204.1
	Other	Count	133	57	138
		Expected Count	144.0	60.8	118.9
Total		Count	391	165	323
		Expected Count	391.0	165.0	323.0

Preparing CFS's according to standards is important * Educationlevel Crosstabulation

			Educationlevel	
			Student	Total
Preparing CFS's according to standards is important	Agree	Count	53	604
		Expected Count	48.6	604.0
	Other	Count	24	352
		Expected Count	28.4	352.0
Total		Count	77	956
		Expected Count	77.0	956.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.587[a]	3	.055
Likelihood Ratio	7.538	3	.057
Linear-by-Linear Association	1.927	1	.165
N of Valid Cases	956		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 28.35.

Trust that audited CFS's comply with standards * Educationlevel Crosstabulation

			Educationlevel		
			Master's degree	Bachelor's degree	Other degree
Trust that audited CFS's comply with standards	Agree	Count	259	107	195
		Expected Count	249.5	105.3	206.1
	Other	Count	132	58	128
		Expected Count	141.5	59.7	116.9
Total		Count	391	165	323
		Expected Count	391.0	165.0	323.0

Trust that audited CFS's comply with standards * Educationlevel Crosstabulation

			Educationlevel	
			Student	Total
Trust that audited CFS's comply with standards	Agree	Count	49	610
		Expected Count	49.1	610.0
	Other	Count	28	346
		Expected Count	27.9	346.0
Total		Count	77	956
		Expected Count	77.0	956.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.732[a]	3	.435
Likelihood Ratio	2.722	3	.437
Linear-by-Linear Association	1.858	1	.173
N of Valid Cases	956		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 27.87.

Preparing CFS's according to standards is important * Yearlyinvestments2class Crosstabulation

			Yearlyinvestments2class		
			Under 10000	10000 or over	Total
Preparing CFS's according to standards is important	Agree	Count	264	339	603
		Expected Count	253.8	349.2	603.0
	Other	Count	138	214	352
		Expected Count	148.2	203.8	352.0
Total		Count	402	553	955
		Expected Count	402.0	553.0	955.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.910[a]	1	.167		
Continuity Correction[b]	1.727	1	.189		
Likelihood Ratio	1.916	1	.166		
Fisher's Exact Test				.175	.094
Linear-by-Linear Association	1.908	1	.167		
N of Valid Cases	955				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 148.17.

b. Computed only for a 2x2 table

Trust that audited CFS's comply with standards * Yearlyinvestments2class Crosstabulation

			Yearlyinvestments2class		
			Under 10000	10000 or over	Total
Trust that audited CFS's comply with standards	Agree	Count	262	347	609
		Expected Count	256.4	352.6	609.0
	Other	Count	140	206	346
		Expected Count	145.6	200.4	346.0
Total		Count	402	553	955
		Expected Count	402.0	553.0	955.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.593[a]	1	.441		
Continuity Correction[b]	.492	1	.483		
Likelihood Ratio	.594	1	.441		
Fisher's Exact Test				.454	.242
Linear-by-Linear Association	.592	1	.442		
N of Valid Cases	955				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 145.65.

b. Computed only for a 2x2 table

Preparing CFS's according to standards is important * Portfoliovalue2class Crosstabulation

			Portfoliovalue2class		
			Under 100000	100000 or over	Total
Preparing CFS's according to standards is important	Agree	Count	316	287	603
		Expected Count	308.1	294.9	603.0
	Other	Count	172	180	352
		Expected Count	179.9	172.1	352.0
Total		Count	488	467	955
		Expected Count	488.0	467.0	955.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.115[a]	1	.291		
Continuity Correction[b]	.978	1	.323		
Likelihood Ratio	1.115	1	.291		
Fisher's Exact Test				.314	.161
Linear-by-Linear Association	1.114	1	.291		
N of Valid Cases	955				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 172.13.

b. Computed only for a 2x2 table

Trust that audited CFS's comply with standards * Portfoliovalue2class Crosstabulation

			Portfoliovalue2class		
			Under 100000	100000 or over	Total
Trust that audited CFS's comply with standards	Agree	Count	313	296	609
		Expected Count	311.2	297.8	609.0
	Other	Count	175	171	346
		Expected Count	176.8	169.2	346.0
Total		Count	488	467	955
		Expected Count	488.0	467.0	955.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.059[a]	1	.808		
Continuity Correction[b]	.031	1	.861		
Likelihood Ratio	.059	1	.808		
Fisher's Exact Test				.840	.430
Linear-by-Linear Association	.059	1	.808		
N of Valid Cases	955				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 169.20.

b. Computed only for a 2x2 table

‘

Preparing CFS's according to standards is important * InvestingExperience2class Crosstabulation

			InvestingExperience2class		
			Under 10	10 and above	Total
Preparing CFS's according to standards is important	Agree	Count	240	359	599
		Expected Count	250.1	348.9	599.0
	Other	Count	157	195	352
		Expected Count	146.9	205.1	352.0
Total		Count	397	554	951
		Expected Count	397.0	554.0	951.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.875[a]	1	.171
Continuity Correction[b]	1.694	1	.193
Likelihood Ratio	1.871	1	.171
Fisher's Exact Test			
Linear-by-Linear Association	1.873	1	.171
N of Valid Cases	951		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 146.94.

b. Computed only for a 2x2 table

Trust that audited CFS's comply with standards * InvestingExperience2class Crosstabulation

			InvestingExperience2class		
			Under 10	10 and above	Total
Trust that audited CFS's comply with standards	Agree	Count	237	368	605
		Expected Count	252.6	352.4	605.0
	Other	Count	160	186	346
		Expected Count	144.4	201.6	346.0
Total		Count	397	554	951
		Expected Count	397.0	554.0	951.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4.523[a]	1	.033		
Continuity Correction[b]	4.237	1	.040		
Likelihood Ratio	4.509	1	.034		
Fisher's Exact Test				.034	.020
Linear-by-Linear Association	4.519	1	.034		
N of Valid Cases	951				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 144.44.

b. Computed only for a 2x2 table

Preparing CFS's according to standards is important * Age2class Crosstabulation

			Age2class		
			Under 40	40 and above	Total
Preparing CFS's according to standards is important	Agree	Count	174	428	602
		Expected Count	170.9	431.1	602.0
	Other	Count	96	253	349
		Expected Count	99.1	249.9	349.0
Total		Count	270	681	951
		Expected Count	270.0	681.0	951.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.212[a]	1	.645
Continuity Correction[b]	.149	1	.700
Likelihood Ratio	.212	1	.645
Fisher's Exact Test			
Linear-by-Linear Association	.212	1	.645
N of Valid Cases	951		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 99.09.

b. Computed only for a 2x2 table

Trust that audited CFS's comply with standards * Age2class Crosstabulation

			Age2class		
			Under 40	40 and above	Total
Trust that audited CFS's comply with standards	Agree	Count	165	441	606
		Expected Count	172.1	433.9	606.0
	Other	Count	105	240	345
		Expected Count	97.9	247.1	345.0
Total		Count	270	681	951
		Expected Count	270.0	681.0	951.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.112[a]	1	.292
Continuity Correction[b]	.960	1	.327
Likelihood Ratio	1.106	1	.293
Fisher's Exact Test			
Linear-by-Linear Association	1.111	1	.292
N of Valid Cases	951		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 97.95.

b. Computed only for a 2x2 table

Preparing CFS's according to standards is important * CFUserOrNot Crosstabulation

			CFUserOrNot		Total
			NotCFSUser	CFSUser	
Preparing CFS's according to standards is important	Agree	Count	74	530	604
		Expected Count	100.5	503.5	604.0
	Other	Count	85	267	352
		Expected Count	58.5	293.5	352.0
Total		Count	159	797	956
		Expected Count	159.0	797.0	956.0

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	22.698[a]	1	.000
Continuity Correction[b]	21.848	1	.000
Likelihood Ratio	21.978	1	.000
Fisher's Exact Test			
Linear-by-Linear Association	22.674	1	.000
N of Valid Cases	956		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 58.54.

b. Computed only for a 2x2 table

Trust that audited CFS's comply with standards * CFUserOrNot Crosstabulation

			CFUserOrNot		Total
			NotCFSUser	CFSUser	
Trust that audited CFS's comply with standards	Agree	Count	85	525	610
		Expected Count	101.5	508.5	610.0
	Other	Count	74	272	346
		Expected Count	57.5	288.5	346.0
Total		Count	159	797	956
		Expected Count	159.0	797.0	956.0

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.844[a]	1	.003
Continuity Correction[b]	8.315	1	.004
Likelihood Ratio	8.621	1	.003
Fisher's Exact Test			
Linear-by-Linear Association	8.835	1	.003
N of Valid Cases	956		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 57.55.

b. Computed only for a 2x2 table

H_U6: Most users are aware of that a cash flow statement can be manipulated by preparers, for example, the management.

Possibility of CFS manipulation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	700	73.2	73.2	73.2
	Other	256	26.8	26.8	100.0
	Total	956	100.0	100.0	

Binomial Test

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
Possibility of CFS manipulation	Group 1	Agree	700	.73	.70	.016
	Group 2	Other	256	.27		
	Total		956	1.00		

Associations with independent variable data (H_U6).

Possibility of CFS manipulation * Educationsubject Crosstabulation

			Educationsubject			
			Accounting and finance	Other business studies	Other studies	Total
Possibility of CFS manipulation	Agree	Count	66	118	516	700
		Expected Count	79.1	115.7	505.2	700.0
	Other	Count	42	40	174	256
		Expected Count	28.9	42.3	184.8	256.0
Total		Count	108	158	690	956
		Expected Count	108.0	158.0	690.0	956.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.108[a]	2	.011
Likelihood Ratio	8.519	2	.014
Linear-by-Linear Association	6.531	1	.011
N of Valid Cases	956		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 28.92.

Possibility of CFS manipulation * Educationlevel Crosstabulation

			Educationlevel		
			Master's degree	Bachelor's degree	Other degree
Possibility of CFS manipulation	Agree	Count	289	120	242
		Expected Count	286.3	120.8	236.5
	Other	Count	102	45	81
		Expected Count	104.7	44.2	86.5
Total		Count	391	165	323
		Expected Count	391.0	165.0	323.0

Possibility of CFS manipulation * Educationlevel Crosstabulation

			Educationlevel	
			Student	Total
Possibility of CFS manipulation	Agree	Count	49	700
		Expected Count	56.4	700.0
	Other	Count	28	256
		Expected Count	20.6	256.0
Total		Count	77	956
		Expected Count	77.0	956.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.201[a]	3	.241
Likelihood Ratio	3.984	3	.263
Linear-by-Linear Association	.720	1	.396
N of Valid Cases	956		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 20.62.

Possibility of CFS manipulation * Age2class Crosstabulation

			Age2class		
			Under 40	40 and above	Total
Possibility of CFS manipulation	Agree	Count	190	505	695
		Expected Count	197.3	497.7	695.0
	Other	Count	80	176	256
		Expected Count	72.7	183.3	256.0
Total		Count	270	681	951
		Expected Count	270.0	681.0	951.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.408[a]	1	.235
Continuity Correction[b]	1.222	1	.269
Likelihood Ratio	1.392	1	.238
Fisher's Exact Test			
Linear-by-Linear Association	1.407	1	.236
N of Valid Cases	951		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 72.68.

b. Computed only for a 2x2 table

Possibility of CFS manipulation * InvestingExperience2class Crosstabulation

			InvestingExperience2class		
			Under 10	10 and above	Total
Possibility of CFS manipulation	Agree	Count	284	414	698
		Expected Count	291.4	406.6	698.0
	Other	Count	113	140	253
		Expected Count	105.6	147.4	253.0
Total		Count	397	554	951
		Expected Count	397.0	554.0	951.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.207[a]	1	.272
Continuity Correction[b]	1.049	1	.306
Likelihood Ratio	1.203	1	.273
Fisher's Exact Test			
Linear-by-Linear Association	1.206	1	.272
N of Valid Cases	951		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 105.62.

b. Computed only for a 2x2 table

Possibility of CFS manipulation * Yearlyinvestments2class Crosstabulation

			Yearlyinvestments2class		
			Under 10000	10000 or over	Total
Possibility of CFS manipulation	Agree	Count	285	414	699
		Expected Count	294.2	404.8	699.0
	Other	Count	117	139	256
		Expected Count	107.8	148.2	256.0
Total		Count	402	553	955
		Expected Count	402.0	553.0	955.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.869[a]	1	.172
Continuity Correction[b]	1.672	1	.196
Likelihood Ratio	1.861	1	.173
Fisher's Exact Test			
Linear-by-Linear Association	1.867	1	.172
N of Valid Cases	955		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 107.76.

b. Computed only for a 2x2 table

Possibility of CFS manipulation * Portfoliovalue2class Crosstabulation

			Portfoliovalue2class		
			Under 100000	100000 or over	Total
Possibility of CFS manipulation	Agree	Count	352	347	699
		Expected Count	357.2	341.8	699.0
	Other	Count	136	120	256
		Expected Count	130.8	125.2	256.0
Total		Count	488	467	955
		Expected Count	488.0	467.0	955.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.574[a]	1	.449		
Continuity Correction[b]	.469	1	.494		
Likelihood Ratio	.575	1	.448		
Fisher's Exact Test				.465	.247
Linear-by-Linear Association	.574	1	.449		
N of Valid Cases	955				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 125.19.

b. Computed only for a 2x2 table

Possibility of CFS manipulation * CFUserOrNot Crosstabulation

			CFUserOrNot		Total
			NotCFSUser	CFSUser	
Possibility of CFS manipulation	Agree	Count	101	599	700
		Expected Count	116.4	583.6	700.0
	Other	Count	58	198	256
		Expected Count	42.6	213.4	256.0
Total		Count	159	797	956
		Expected Count	159.0	797.0	956.0

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.152[a]	1	.002
Continuity Correction[b]	8.568	1	.003
Likelihood Ratio	8.699	1	.003
Fisher's Exact Test			
Linear-by-Linear Association	9.142	1	.002
N of Valid Cases	956		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 42.58.

b. Computed only for a 2x2 table

H_U7: Most users reckon that there should be a mention in the notes or in the auditor's report if the entity has not paid its accounts payable that were due the last month of the accounting period.

A/P due last month

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	70	7.3	7.3	7.3
	Yes	886	92.7	92.7	100.0
	Total	956	100.0	100.0	

Binomial Test

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
A/P due last month	Group 1	Yes	886	.93	.90	.002
	Group 2	No	70	.07		
	Total		956	1.00		

A/P due Q4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	36	3.8	51.4	51.4
	No opinion for or against	19	2.0	27.1	78.6
	No	15	1.6	21.4	100.0
	Total	70	7.3	100.0	
Missing	System	886	92.7		
Total		956	100.0		

Associations with independent variable data (H_U7).

A/P due last month * Educationsubject Crosstabulation

			Educationsubject			
			Accounting and finance	Other business studies	Other studies	Total
A/P due last month	No	Count	17	17	36	70
		Expected Count	7.9	11.6	50.5	70.0
	Yes	Count	91	141	654	886
		Expected Count	100.1	146.4	639.5	886.0
Total		Count	108	158	690	956
		Expected Count	108.0	158.0	690.0	956.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18.535[a]	2	.000
Likelihood Ratio	16.090	2	.000
Linear-by-Linear Association	18.503	1	.000
N of Valid Cases	956		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.91.

A/P due last month * Educationlevel Crosstabulation

			Educationlevel				
			Master's degree	Bachelor's degree	Other degree	Student	Total
A/P due last month	No	Count	31	10	23	6	70
		Expected Count	28.6	12.1	23.7	5.6	70.0
	Yes	Count	360	155	300	71	886
		Expected Count	362.4	152.9	299.3	71.4	886.0
Total		Count	391	165	323	77	956
		Expected Count	391.0	165.0	323.0	77.0	956.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.643[a]	3	.886
Likelihood Ratio	.660	3	.883
Linear-by-Linear Association	.077	1	.782
N of Valid Cases	956		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.64.

A/P due last month * Age2class Crosstabulation

			Age2class		
			Under 40	40 and above	Total
A/P due last month	No	Count	19	51	70
		Expected Count	19.9	50.1	70.0
	Yes	Count	251	630	881
		Expected Count	250.1	630.9	881.0
Total		Count	270	681	951
		Expected Count	270.0	681.0	951.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.058[a]	1	.810
Continuity Correction[b]	.011	1	.918
Likelihood Ratio	.058	1	.809
Fisher's Exact Test			
Linear-by-Linear Association	.058	1	.810
N of Valid Cases	951		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 19.87.

b. Computed only for a 2x2 table

A/P due last month * InvestingExperience2class Crosstabulation

			InvestingExperience2class		
			Under 10	10 and above	Total
A/P due last month	No	Count	25	44	69
		Expected Count	28.8	40.2	69.0
	Yes	Count	372	510	882
		Expected Count	368.2	513.8	882.0
Total		Count	397	554	951
		Expected Count	397.0	554.0	951.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.930[a]	1	.335
Continuity Correction[b]	.702	1	.402
Likelihood Ratio	.943	1	.332
Fisher's Exact Test			
Linear-by-Linear Association	.929	1	.335
N of Valid Cases	951		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 28.80.

b. Computed only for a 2x2 table

A/P due last month * Yearlyinvestments2class Crosstabulation

			Yearlyinvestments2class		
			Under 10000	10000 or over	Total
A/P due last month	No	Count	24	46	70
		Expected Count	29.5	40.5	70.0
	Yes	Count	378	507	885
		Expected Count	372.5	512.5	885.0
Total		Count	402	553	955
		Expected Count	402.0	553.0	955.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.890[a]	1	.169
Continuity Correction[b]	1.560	1	.212
Likelihood Ratio	1.928	1	.165
Fisher's Exact Test			
Linear-by-Linear Association	1.888	1	.169
N of Valid Cases	955		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 29.47.

b. Computed only for a 2x2 table

A/P due last month * Portfoliovalue2class Crosstabulation

			Portfoliovalue2class		
			Under 100000	100000 or over	Total
A/P due last month	No	Count	34	36	70
		Expected Count	35.8	34.2	70.0
	Yes	Count	454	431	885
		Expected Count	452.2	432.8	885.0
Total		Count	488	467	955
		Expected Count	488.0	467.0	955.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.193[a]	1	.660
Continuity Correction[b]	.099	1	.752
Likelihood Ratio	.193	1	.660
Fisher's Exact Test			
Linear-by-Linear Association	.193	1	.660
N of Valid Cases	955		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 34.23.

b. Computed only for a 2x2 table

A/P due last month * CFUserOrNot Crosstabulation

			CFUserOrNot		Total
			NotCFSUser	CFSUser	
A/P due last month	No	Count	12	58	70
		Expected Count	11.6	58.4	70.0
	Yes	Count	147	739	886
		Expected Count	147.4	738.6	886.0
Total		Count	159	797	956
		Expected Count	159.0	797.0	956.0

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.014[a]	1	.905
Continuity Correction[b]	.000	1	1.000
Likelihood Ratio	.014	1	.905
Fisher's Exact Test			
Linear-by-Linear Association	.014	1	.905
N of Valid Cases	956		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 11.64.

b. Computed only for a 2x2 table

H_U8: Most users prefer the direct method for presenting the operating activities section of the cash flow statement.

Preferred method

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Indirect	109	11.4	11.4	11.4
	Direct	847	88.6	88.6	100.0
	Total	956	100.0	100.0	

Binomial Test

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
Preferred method	Group 1	Direct	847	.89	.85	.001
	Group 2	Indirect	109	.11		
	Total		956	1.00		

Associations with independent variable data (H_U8).

Preferred method * Educationlevel Crosstabulation

			Educationlevel				
			Master's degree	Bachelor's degree	Other degree	Student	Total
Preferred method	Indirect	Count	56	22	20	11	109
		Expected Count	44.6	18.8	36.8	8.8	109.0
	Direct	Count	335	143	303	66	847
		Expected Count	346.4	146.2	286.2	68.2	847.0
Total		Count	391	165	323	77	956
		Expected Count	391.0	165.0	323.0	77.0	956.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.223[a]	3	.004
Likelihood Ratio	14.463	3	.002
Linear-by-Linear Association	5.525	1	.019
N of Valid Cases	956		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.78.

Preferred method * Educationsubject Crosstabulation

			Educationsubject			
			Accounting and finance	Other business studies	Other studies	Total
Preferred method	Indirect	Count	9	16	84	109
		Expected Count	12.3	18.0	78.7	109.0
	Direct	Count	99	142	606	847
		Expected Count	95.7	140.0	611.3	847.0
Total		Count	108	158	690	956
		Expected Count	108.0	158.0	690.0	956.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.668[a]	2	.434
Likelihood Ratio	1.761	2	.415
Linear-by-Linear Association	1.665	1	.197
N of Valid Cases	956		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 12.31.

Preferred method * Age2class Crosstabulation

			Age2class		
			Under 40	40 and above	Total
Preferred method	Indirect	Count	45	64	109
		Expected Count	30.9	78.1	109.0
	Direct	Count	225	617	842
		Expected Count	239.1	602.9	842.0
Total		Count	270	681	951
		Expected Count	270.0	681.0	951.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	10.066[a]	1	.002		
Continuity Correction[b]	9.363	1	.002		
Likelihood Ratio	9.455	1	.002		
Fisher's Exact Test				.002	.001
Linear-by-Linear Association	10.056	1	.002		
N of Valid Cases	951				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 30.95.

b. Computed only for a 2x2 table

Preferred method * InvestingExperience2class Crosstabulation

			InvestingExperience2class		
			Under 10	10 and above	Total
Preferred method	Indirect	Count	48	60	108
		Expected Count	45.1	62.9	108.0
	Direct	Count	349	494	843
		Expected Count	351.9	491.1	843.0
Total		Count	397	554	951
		Expected Count	397.0	554.0	951.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.365[a]	1	.546		
Continuity Correction[b]	.250	1	.617		
Likelihood Ratio	.363	1	.547		
Fisher's Exact Test				.605	.307
Linear-by-Linear Association	.365	1	.546		
N of Valid Cases	951				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 45.09.

b. Computed only for a 2x2 table

Preferred method * Yearlyinvestments2class Crosstabulation

			Yearlyinvestments2class		
			Under 10000	10000 or over	Total
Preferred method	Indirect	Count	57	52	109
		Expected Count	45.9	63.1	109.0
	Direct	Count	345	501	846
		Expected Count	356.1	489.9	846.0
Total		Count	402	553	955
		Expected Count	402.0	553.0	955.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	5.251[a]	1	.022		
Continuity Correction[b]	4.789	1	.029		
Likelihood Ratio	5.185	1	.023		
Fisher's Exact Test				.024	.015
Linear-by-Linear Association	5.246	1	.022		
N of Valid Cases	955				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 45.88.

b. Computed only for a 2x2 table

Preferred method * Portfoliovalue2class Crosstabulation

			Portfoliovalue2class		
			Under 100000	100000 or over	Total
Preferred method	Indirect	Count	65	44	109
		Expected Count	55.7	53.3	109.0
	Direct	Count	423	423	846
		Expected Count	432.3	413.7	846.0
Total		Count	488	467	955
		Expected Count	488.0	467.0	955.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.586[a]	1	.058
Continuity Correction[b]	3.211	1	.073
Likelihood Ratio	3.609	1	.057
Fisher's Exact Test			
Linear-by-Linear Association	3.582	1	.058
N of Valid Cases	955		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 53.30.

b. Computed only for a 2x2 table

Preferred method * CFUserOrNot Crosstabulation

			CFUserOrNot		Total
			NotCFSUser	CFSUser	
Preferred method	Indirect	Count	15	94	109
		Expected Count	18.1	90.9	109.0
	Direct	Count	144	703	847
		Expected Count	140.9	706.1	847.0
Total		Count	159	797	956
		Expected Count	159.0	797.0	956.0

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.731[a]	1	.393
Continuity Correction[b]	.516	1	.473
Likelihood Ratio	.763	1	.382
Fisher's Exact Test			
Linear-by-Linear Association	.730	1	.393
N of Valid Cases	956		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 18.13.

b. Computed only for a 2x2 table