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# Comprehensive Income Reporting

- The attitude of producers and users of financial statements

## Master thesis

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## Abstract

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**Title:** Comprehensive Income Reporting – The attitude of producers and users of financial statements

**Background:** On 1 January 2009 amendments to IAS 1 concerning the presentation of comprehensive income came into force. The amendments were one outcome of the IASB's performance reporting project with the purpose of enhancing the usefulness of information presented in the income statement. It is now required to present certain items, referred to as other comprehensive income, in a statement of comprehensive income which can be either a single statement or two statements where net income and other comprehensive income are presented separately.

**Research objectives:** We examine whether the presentation of other comprehensive income provides useful information. Additionally, we examine whether the one or two statement approach to comprehensive income reporting is more appropriate in providing investors with information. These issues will be examined from the perspective of producers and users of financial statements respectively.

**Research design:** The attitude of producers to comprehensive income reporting is examined by means of an annual report study, a study of comment letters and an interview with one producer whereas the attitude of users is examined by means of a statistical association study.

**Limitations:** The annual report study examines the time period 2008–2009 and is restricted to the Swedish market whereas the statistical study examines the time period 2006–2010 and focuses on European markets. Throughout the paper, 'users' refers to investors.

**Empirical findings:** Our results suggest that producers do not consider other comprehensive income relevant in evaluating firm performance but that users take it into account, although they regard net income as more value relevant. Accordingly, the IASB's requirements regarding comprehensive income reporting can be considered legitimate in terms of enhancing the usefulness of information available to investors. Our results indicate that other comprehensive income contains useful information for evaluating firm performance, but that net income is much more value relevant. Hence, the two statement approach to comprehensive income reporting may seem appropriate.

**Further research:** Further research could clarify differences in attitudes to other comprehensive income between producers and users. Additionally, it could examine whether the importance of other comprehensive income has increased over time after the amendments to IAS 1 came into force. It could also control for parameters not taken into account in this paper that might impact the perceived relevance of other comprehensive income.

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# 1 Introduction

## 1.1 Background to the problem

In this paper we address the question whether other comprehensive income is considered relevant in evaluating firm performance and, if that is the case, whether the information content of this performance reporting measure is regarded different from that of the ordinary net income measure. By addressing these questions we aim at contributing to the discussion about if other comprehensive income should be reported and in what way.

Why, then, is the question of reporting interesting? As pointed out by Fields, Lys and Vincent (2001, p. 256) there is no need for accounting and accounting regulation in the case of complete and perfect markets. Under such circumstances, accounting numbers are fully transparent and any information about firm performance is easily obtainable. Consequently, the choice of accounting methods and standards has no effect on the wealth of users of accounting statements (Holthausen and Leftwich, 1981, p. 81). However, Fields et al. (2001, p. 256) are of the opinion that markets are in fact imperfect and incomplete, which makes accounting disclosures and accounting-based contracts useful. With this perspective, accounting does matter and which accounting numbers are reported and in what way can have an impact on users of financial statements.

The question of income reporting has been much discussed and there has been a long-standing debate in the accounting profession between the ‘all-inclusive’, or ‘comprehensive income’, and the ‘current operating performance’ concepts of reporting income (Dhaliwal, Subramanyam and Trezevant, 1999, p. 44). If comprehensive income reporting is not applied, items can be reported directly in the balance sheet and such items are referred to as ‘dirty surplus items’. Comprehensive income accounting is beneficial in the sense that it identifies all sources of value created in one number and makes the distinction in the statement of changes in equity between value-creating items, or income, and non-value-creating dividends explicit (Penman et al., 1997, pp. 120-121). On the other hand, clean surplus income determination has the disadvantage of potentially including line items that lack any information as transitory earnings are shown to be relatively immaterial in valuation models (Ohlson, 1999, pp. 159-160).

Comprehensive income reporting is of current interest as the International Accounting Standards Board (IASB) published an exposure draft in 2006 with proposed amendments to IAS 1,<sup>1</sup> concerning among other things the presentation of comprehensive income<sup>2</sup>. The exposure draft was one outcome of the IASB’s performance reporting project which was initiated in 2001 with the purpose of enhancing the usefulness of information presented in the

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<sup>1</sup> IAS 1, Presentation of Financial Statements sets overall requirements for the presentation of financial statements, guidelines for their structure and minimum requirements for their content (IAS 1 Introduction, IN, 1)

<sup>2</sup> *Total comprehensive income* is defined in IAS 1, Presentation of Financial Statements as the change in equity during a period resulting from transactions and other events, other than those changes resulting from transactions with owners in their capacity as owners (IAS 1.7)

income statement.<sup>3</sup> After having taken responses to its exposure draft into account, the IASB issued a revised version of IAS 1 which came into force on 1 January 2009 (IAS 1, Basis for Conclusions, BC, 9). The main objective of the amendments was that information in the financial statements would be aggregated on the basis of shared characteristics (IAS 1 Introduction, IN, 2). One outcome of this objective is the new requirements regarding the reporting of changes in equity. IAS 1 now requires that total comprehensive income for the period is presented and that, for each component of equity, a comparison between the carrying amount at the beginning and the end of the period is made, separately disclosing changes resulting from 1) profit or loss 2) each item of other comprehensive income and 3) transactions with owners in their capacity as owners (IAS 1.106). It is not, as the previous version stated, permitted to present items of income and expense not recognized in profit or loss directly in the statement of changes in equity<sup>4</sup> (IAS 1 IN 13). Such items are presently referred to as *other comprehensive income* which is defined in IAS 1 as items of income and expense that are not recognized in profit or loss as required or permitted by other IFRSs (IAS 1.7). All components of profit or loss as well as other comprehensive income shall be presented in a statement of comprehensive income which can be either a single statement or two statements where one is a separate income statement, displaying components of profit and loss, and the other is a statement of comprehensive income, displaying components of other comprehensive income (IAS 1.81).

To be able to answer whether other comprehensive income is considered a relevant performance reporting measure with different information content than net income we perform an annual report study and a statistical study focusing on the producers and users of financial statements respectively. Henceforth, the research problem will be referred to as *the attitude of producers and users of financial statements to comprehensive income reporting*.

The paper proceeds as follows. The continuation of chapter 1 introduces our research objectives and problem statement. In chapter 2 we present our literature review. We discuss research design issues in chapter 3. Chapter 4 reports the results from our study and presents an analysis of them. The paper concludes with a summary of its major findings in chapter 5.

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<sup>3</sup> In April 2004 the IASB and the Financial Accounting Standards Board (FASB) decided to initiate a joint project on financial statement presentation aiming at reforming all statements included in a complete set of financial statements. The IASB renamed its performance reporting project in March 2006 and thenceforth it was referred to as the ‘financial statement presentation project’ (IAS 1 BC 7-8).

<sup>4</sup> The previous version of IAS 1 required the presentation of an income statement including items of income and expense recognized in profit or loss. Items of income and expense not recognized in profit or loss were to be presented in the statement of changes in equity together with owner changes in equity (IAS 1 IN 13).

## 1.2 Research objectives – contributions of the study

As earlier mentioned, one objective of the IASB financial statement presentation project was to enhance the usefulness of information presented in the income statement. In this paper, our primary focus is whether the reporting of other comprehensive income provides useful information and, hence, if the requirements regarding comprehensive income reporting can be considered legitimate from an information perspective. Additionally, we address the question of reporting format and whether the one or two statement approach to comprehensive income reporting is more appropriate in providing useful information. Examining alternative performance reporting measures is especially important as income is often used to summarize firm performance.

Extensive research has been done on comprehensive income reporting and how different performance reporting measures affect users of financial statements. Examples include Cheng, Cheung and Gopalakrishnan (1993) who studied the relevance of comprehensive income as compared to net income and Dhaliwal et al. (1999) who conducted a statistical study measuring the association between different income measures and returns. We use the models developed in such studies in one part of our paper, but have a different setting as we focus on Europe and examine another time period.<sup>5</sup> In terms of scope, our paper differs from earlier research in that it not only focuses on the users of financial statements but also examines the attitude of the producers of such statements to comprehensive income reporting. We also address the question of reporting format and whether one or two statements of comprehensive income is more appropriate in providing useful information.

## 1.3 Problem statement

*Do producers and users of financial statements consider other comprehensive income relevant in evaluating firm performance and do they regard the information content of net income different from that of other comprehensive income?*

Throughout this paper, ‘producers of financial statements’, or ‘producers’, refers to firms listed on European markets and ‘users of financial statements’, or ‘users’, refers to those who invest in such firms. Our choice of investors as the users to focus on is in line with the fact that the IASB points them out as the primary users of financial statements.<sup>6</sup>

Our problem statement will be examined by means of testing a number of hypotheses which will be developed in sections 3.2.1 and 3.3.1.

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<sup>5</sup> For instance, Cheng et al. (1993, p. 198) examined the time period 1972–1989 and their sample consisted of those firms that had the COMPUSTAT and CRSP data required by the study available. Dhaliwal et al. (1999, p.49) examined the years 1994 and 1995 and their sample consisted of all firms that had the COMPUSTAT and CRSP data needed for their study available for those years. COMPUSTAT data are available for both U.S and other firms whereas CRSP data are available for U.S firms only. In our study we focus on European firms and study the time period 2006–2010.

<sup>6</sup> In the Framework several users are mentioned. Examples are investors, employees, lenders, suppliers and customers. However, it is also stated that the provision of financial statements that meet the investors’ needs will also meet most of the needs of other users (Framework for the Preparation and Presentation of Financial Statements, p. 9–10)

## 2 Literature review

As pointed out by Fields et al. (2001, p. 256) in the case of complete and perfect markets there is no need for accounting and accounting regulation. Holthausen and Leftwich (1983, pp. 81-83) state that in a world where contracting and monitoring costs, encompassing such costs as those to evaluate contracts and become informed about performance, are zero, accounting information can be considered fully transparent. In such a world, users construct their own measures of firm performance and, in the extreme case, discard reported accounting numbers because they can collect alternative information for their decisions. Consequently, the choice of accounting methods and standards has no effect on the wealth of users of accounting statements and there is no role for accounting. Nevertheless, as the authors point out, managers and regulators still choose certain accounting techniques systematically due to tradition, folklore, or simply imitation and, hence, a clustering of particular accounting techniques by industry can be observed.

However, Fields et al. (2001, p. 256) are of the opinion that markets are in fact imperfect and incomplete making accounting disclosures and accounting-based contracts useful. Holthausen and Leftwich (1983, p.83) state that if contracting and monitoring costs exist, choices of accounting methods affect the value of the firm and the wealth of users of accounting numbers because these costs prevent them from obtaining the underlying information. Changes in accounting rules have economic consequences because they change the distribution of firms' expected cash flows between different stakeholders. Fields et al. (2001, p. 259) also recognize this fact and state that managers may choose accounting methods in self interest.

As stated above, accounting can have economic consequences and, consequently, different accounting choices made by firms can have different effects on important stakeholders. Watts and Zimmerman (1990, p. 135) summarize the discussion about the positive accounting theory which tries to explain why firms make different accounting choices by drawing a parallel between such choices and the wealth effect they have on important stakeholders. An important term is 'contracting costs', which includes for example information costs, bankruptcy costs and agency cost, and an accounting choice may be explained by the costs it entails. Another predominant theory explaining accounting choice is the institutional theory. DiMaggio and Powell (1983, pp. 150–152) describe it as institutional isomorphism, or homogenization, and state that organizations are subjected to three different pressures from their surroundings. The first is coercive isomorphism, implying that the organization is affected by other organizations which it depends upon or by expectations from society. The second is mimetic isomorphism where organizations imitate other organizations to handle different kinds of uncertainty. The third form of isomorphism is normative and is explained by the fact that professionals are an important part of organizations. This fact can result in homogenization because the professionals in a specific field have the same foundation of formal education and may be a part of a larger professional network.

As earlier mentioned, in the case of imperfect markets accounting matters and the question how a transaction or circumstance shall be accounted for is of interest. One accounting area where the question how to report has been much discussed is income reporting. According to

Dhaliwal et al. (1999, p. 44) there has been a long-standing debate in the accounting profession between the ‘all-inclusive’, or ‘comprehensive income’, and the ‘current operating performance’ concepts of reporting income.<sup>7</sup> Comprehensive income reporting is of particular current interest paying to the IASB’s amendments to IAS 1. As Cauwenberge and De Beelde (2007, p. 3) note, the IASB performance reporting project deals with the all-inclusive income concept since its main objective is to create a comprehensive income statement that will categorize and display all components of income.

Proponents of the all-inclusive income concept consider comprehensive income measures superior in describing firm performance since they include all changes in net assets during a period from sources other than owners (Dhaliwal et al., 1999, p. 45). Arguments in favor of comprehensive income reporting are that it identifies all sources of value created in one number and makes the distinction in the statement of changes in equity between value-creating items, or income, and non-value-creating dividends explicit. Furthermore, according to Penman et al. (1997, pp. 121–122), comprehensive income enhances the usefulness of accounting income for valuing equities and evaluating management performance, forces management and analysts to consider all aspects of wealth and yields a clean articulation of the income statement, balance sheet and cash flow statement. Cauwenberge and De Beelde (2007, p. 4) note that the IASB Framework in principle endorses clean surplus accounting since both revenue and gains are included in income, but that many individual standards have departed from the clean surplus rule. Examples of standards with such departures are IAS 16 (Revaluation of Property, Plant and Equipment), IAS 21 (Foreign Exchange Gains/Losses on Translation of Net Investment) and IAS 39 (Unrealized Gains/Losses on Available for Sale Instruments). If such departures are used extensively, and many items are reported directly in equity, there is a risk that equity will become a ‘dumpster for an amorphous and growing mass of important information’ (Beresford, Johnson and Reither, 1996, p. 70).

On the other hand, proponents of the current operating performance concept consider the ability of income to reflect the firm’s long-term cash flow prospects diminished by the inclusion of extraordinary and non-recurring items in income (Dhaliwal et al., 1999, p. 45). Informational accounting research models measuring the covariation between an accounting income number and a market value metric have often found this measure to be quite low. One possible explanation is the existence of transitory earnings making changes in accounting numbers less persistent and, consequently, less informative to the market. Accordingly, a deviation from clean surplus accounting might be justified (Cauwenberge and De Beelde 2007, p. 11). Ohlson (1999, pp. 159–160), although admitting that clean surplus income

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<sup>7</sup> The all-inclusive income concept is based on the clean surplus relation, which in its most elementary form states that the book value of equity at the end of a period is equal to the book value of equity at the beginning of the period increased by net income and decreased by dividends. Hence, this relation requires that all non-owner changes in equity flow through the income statement making the link between the balance sheet and total recognized income and expense explicit (Thinggaard and Wagenhofer, 2006, p. 38–39). On the other hand, under the current operating performance concept extraordinary and nonrecurring revenues, expenses, gains and losses are excluded from income (Dhaliwal et al., 1999, p. 44) Such income items are reported directly in the balance sheet and are referred to as ‘dirty surplus items’ (Penman et al., 1997, p. 120).



determination may be advantageous since it includes all transactions that create or destroy value, concludes that clean surplus income determination has the disadvantage of potentially including line items that lack any information since transitory earnings are shown to be relatively immaterial in valuation models. According to Pope and Wang (2005, p. 402) ‘core’ earnings, or dirty surplus earnings, may be the relevant information in an accounting-based valuation model whereas transitory earnings add value only if they enhance the insight into the information dynamics needed to identify relevant valuation parameters. Another possible explanation to the low explanatory power for returns of accounting income numbers is the increasing impact of business change in today’s society. Lev and Zarowin (1999, p. 383) conclude that the inability of accounting to treat change<sup>8</sup> and its consequences has led to a decline in the information content of financial data over time. Their study covered the time period 1978–1996.

Extensive empirical research has addressed the usefulness to investors of reporting comprehensive income. These studies have typically been association studies investigating by means of regression which performance measure has the greatest explanatory power for stock returns. Cheng et al. (1993, pp. 201–202) came to the conclusion that comprehensive income has the least explanatory power of the earnings measurements comprehensive income, net income and operating income. The authors presented two alternative explanations to the results with very different implications. One possible explanation is that comprehensive income really contains little relevant information to investors. On the other hand, it could be old habit that makes investors focus on the earnings measurements they are used to and, if that is the case, comprehensive income could be considered more relevant if it became part of ordinary financial reporting. Cahan, Courtenay, Gronewoller and Upton (2000, p. 1297) focused their study on the assessment of items classified as other comprehensive income conducted by an investor evaluating a firm. As opposed to Cheng et al., they reached the conclusion that comprehensive income is more useful than net income but that the examined items of other comprehensive income individually do not add any valuable information. Dhaliwal et al. (1999, p. 64) conducted a similar study and found no clear evidence that comprehensive income is more strongly associated with returns than net income and, accordingly, concluded that their results do not support the claim that income measured on a comprehensive basis is a superior measure of firm performance.

Other studies have addressed the reporting format for comprehensive income. Hirst and Hopkins (1998, p. 47,69) studied how different types of comprehensive income reporting formats affected buy-side equity analysts when they conducted stock price estimations of companies that upwardly managed their income through their available-for-sale marketable securities portfolio. The formats studied were the income statement and the statement of changes in equity. The study showed that when comprehensive income was reported in the income statement, both firms that managed their earnings and those that did not were valued by the analysts in an equal fashion. On the other hand, when comprehensive income was

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<sup>8</sup> The authors regard innovative activities; such as investments in research and development, information technology, brands and human resources, as the major initiator of change in developed economies.

reported in the statement of changes in equity the valuation judgments differed. Hirst and Hopkins concluded that the presentation of comprehensive income has an impact on the judgments of equity analysts and that the statement of changes in equity is not as effective in communicating value-relevant information as the income statement.

### **3 Research design**

#### **3.1 Literature review**

In the selection of research we have searched through *Journal of Accounting and Economics*, *Journal of Accounting Research* and *Accounting Review* between 1980 and today to find articles related to our study. Through such relevant articles we have found further references. We have also conducted more generic search in the database Business Source Premier. The search words used were 'IAS 1', 'accounting choice', 'comprehensive income reporting' and different variations and combinations of these. Only peer-reviewed articles have been used to ensure the quality of the research.

Worth noticing is that much research has been carried out in the United States where the Financial Accounting Standards Board (FASB) is the standardizing authority. There are differences between IAS 1 and the U.S. GAAP equivalent SFAS 130 concerning among other things reporting and display of comprehensive income. SFAS 130 permits firms to display comprehensive income and its components either in one or two statements of financial performance or in a statement of changes in equity whereas IAS 1 only permits the first option (IAS 1 BC 106). This difference is something to bear in mind when reading American research but does not, however, make this research irrelevant to us as it has to a large extent concerned how different performance reporting measures are assessed by users of financial statements which is also examined in this paper.

#### **3.2 Attitude of the producers**

One part of our problem statement has producers of financial statements in view and aims at examining whether they consider other comprehensive income relevant in evaluating firm performance and if they regard the information content of net income different from that of other comprehensive income. Below we present the method used and develop the hypotheses to be tested in order to investigate these questions. Additionally, we provide a description of how our data was collected and present the sample used in this part of our paper.

##### **3.2.1 Method and development of hypotheses**

The attitude of the producers to comprehensive income reporting will be examined by means of an annual report study examining the annual reports of Swedish firms.<sup>9</sup> As a complement to this study, we read the comment letters to the IASB Exposure Draft to IAS 1<sup>10</sup> because the attitude of the producers to comprehensive income reporting can, to some extent, be revealed by these. We focus on comments to the question regarding the presentation of other

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<sup>9</sup> Our choice to focus on Swedish firms will be described later in this section.

<sup>10</sup> In the Exposure Draft the IASB invited comments to the proposed amendments and formulated questions that respondents were encouraged to answer.

comprehensive income, in the Exposure Draft referred to as ‘components of recognized income and expense’.

Our choice to conduct an annual report study is explained by a desire to obtain results that are general in nature. Such results require a large number of observations that are unbiased. An annual report study enables us to obtain many observations since we gather the information ourselves and are not dependent on answering frequencies. Such a study also provides us with unbiased observations as we do not only study firms of a particular size, from a particular industry or limit us to those firms that voluntarily answer our questions. Our observations are also unbiased in the sense that they capture the producers’ opinions about comprehensive income reporting through their actions rather than through their expressed attitudes about the subject.

As some form of operating income measure is often what is communicated, we start off from the assumption that producers of financial statements do not consider other comprehensive income relevant in evaluating firm performance. To be able to decide whether this assumption is valid or not we focus on those parts of the annual reports where it is up to the producers to decide what to communicate and, hence, where they have the opportunity to present only those measures they consider relevant in evaluating firm performance. Our belief is that if firms perceive an accounting measure relevant for this purpose, they present it in these parts. Hence, we formulate the following hypothesis as a starting point for this part of our study.

*H<sub>P1</sub>: Producers of financial statements do not make any voluntary disclosures about other comprehensive income in their annual reports.*

The parts of the annual reports studied are summaries of accounting measures; such as multi-year overviews and diagrams, key ratios and the board of directors’ report.<sup>11</sup> Should the producers not consider other comprehensive income relevant in evaluating firm performance, it is unlikely that they make any voluntary disclosures related to this measure.

Since we start off from the assumption that producers do not consider other comprehensive income relevant in evaluating firm performance we also suppose that they regard the information content of net income different from that of other comprehensive income. Accordingly, we assume that they consider reporting a transaction in net income different from reporting it in other comprehensive income. To decide whether this assumption is valid we focus on the financial parts of the annual reports. However, much of what is reported in the financial statements is provided by requirements and the producers have no possibility to reveal their attitudes to a certain accounting area through these statements. Consequently, to be able to test whether producers consider reporting a transaction in net income different from reporting it in other comprehensive income it is necessary to find an accounting area that has been affected by the amendments to IAS 1 *and* where producers actually have a choice on how to report. Hence, they do not necessarily have to comply with the new requirements but

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<sup>11</sup> It is not altogether up to the producers what to disclose in the board of directors’ report. According to Årsredovisningslagen (ÅRL 6:1) it shall include a true and fair view of the development of the firm’s operations, financial position and result. How this objective should be achieved is not explicitly stated and the firms are given some leeway in deciding what disclosures to make.

can show their attitude towards them by choosing either to embrace them or stop applying them altogether.

Several accounting areas were affected by the amendments to IAS 1 concerning comprehensive income reporting. The components of other comprehensive income are; changes in revaluation surplus, actuarial gains and losses on benefit plans, gains and losses arising from translating the financial statements of a foreign operation, gains and losses from investments in equity instruments measured at fair value through other comprehensive income in accordance with IFRS 9 and the effective portion of gains and losses on hedging instruments in a cash flow hedge (IAS 1.7). However, only cash flow hedge accounting is optional<sup>12</sup> and firms not choosing to apply it do not have to report anything related to cash flow hedges in other comprehensive income. Hence, in our annual report study we focus on cash flow hedge accounting.<sup>13</sup>

As earlier mentioned, after the amendments to IAS 1 came into force it is no longer permitted to present items of income and expense not recognized in profit or loss, or other comprehensive income, directly in the statement of changes in equity. Such items now have to be presented in a statement of comprehensive income. If producers perceive a difference between reporting a transaction in the ordinary income statement and this statement of comprehensive income it can be argued that they should have continued applying cash flow hedge accounting after the amendments to IAS 1 came into force. If they, on the other hand, do not recognize such a difference they should not find cash flow hedge accounting worthwhile. Hence, the following hypothesis is formulated as a starting point for this part of our study:

*H<sub>P2</sub>: The use of cash flow hedge accounting did not decrease between 2008 and 2009.*

To decide whether firms use cash flow hedge accounting or not we started off by reading the note ‘Accounting Policies’<sup>14</sup> (usually note 1 or 2) where most firms have a heading named ‘hedge accounting’ or ‘derivatives and hedge accounting’ under which they state whether they apply hedge accounting or not. To verify that firms describing cash flow hedge accounting in these notes also apply it in practice we examined the statement of changes in equity and the statement of comprehensive income (the latter available for 2009 only). Firms applying cash

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<sup>12</sup> For a hedging relationship to qualify for hedge accounting certain conditions must be met (IAS 39.88). Firms are not required to fulfill these conditions and, hence, hedge accounting can be considered optional. There are costs associated with hedge accounting concerning for instance personnel and IT systems (Ericsson, 2010, p. 23) which may discourage firms from using hedge accounting.

<sup>13</sup> Hedge accounting is essentially a way to circumvent normal accounting restrictions to allow the effects of the hedged item and the hedging instrument to be matched and affect the result in the same period (Ericsson 2010, p. 4). If a cash flow hedge qualifies for hedge accounting, the portion of the gain or loss on the hedging instrument that is determined to be an effective hedge shall be recognized in other comprehensive income. The ineffective portion of the gain or loss shall be recognized in profit or loss (IAS 39.95). This way of accounting differs from how derivatives are normally accounted for.

<sup>14</sup> According to IAS 1.117 an entity shall disclose significant accounting policies that are relevant to an understanding of the financial statements.

flow hedge accounting report value changes in cash flow hedging instruments in the statement of changes in equity and, in 2009, in the statement of comprehensive income as well. However, these statements do not reveal whether firms ceased the use of cash flow hedge accounting during the financial year. To detect such changes in accounting policies we also read the notes where firms make disclosures about hedge accounting.<sup>15</sup> Such disclosures are often made in notes named ‘Financial Risk Management’, ‘Financial Instruments’ or ‘Financial risk management and financial instruments’.

In this part of our paper we focus on Sweden because it is dependent on its export to a large extent (Statistiska Centralbyrån 2010, p. 5) and is situated on the edge of a large currency area which makes it susceptible to changes in the value of the Swedish Krona. The use of cash flow hedges and hedge accounting should therefore be of interest for many large Swedish firms. As a matter of consistency and practicality we focus on Sweden throughout this part of our paper except in the part where we study comment letters.

After conducting the annual report study we came to the conclusion that some firms were of particular interest in exploring the attitudes of producers to comprehensive income reporting. One such firm was Volvo (as will be shown in section 4.1.2) and we contacted them and interviewed one of their employees. The interview treated how Volvo has chosen to account for cash flow hedges and included a broader discussion about other comprehensive income.

### 3.2.2 Data collection

To get a list of Swedish firms we used Retriever which is a database where information about such firms is gathered and can be filtered by, for instance, different segments on the stock exchange. The list was created on 3 February 2011. The annual reports studied are primarily those from 2008 and 2009, but for firms with other fiscal years than 1 January to 31 December the annual reports 2008/2009 and 2009/2010 have been used. The annual reports were gathered from Årsredovisningsdatabasen, a database located at <http://www.ar.fek.su.se> which aims at collecting annual reports from firms listed on the Swedish stock exchange. For some firms the annual reports were not included in the database and were manually downloaded from the firm’s website or from Retriever.

### 3.2.3 Sample

The firms included in our annual report study are the 262 Swedish firms<sup>16</sup> listed on the OMX Nordic List (the segments Small Cap, Mid Cap and Large Cap and the market Stockholm) in both 2008 and 2009. Since we examine a topic related to the requirements issued by the IASB, only those firms that have prepared their consolidated financial statements in accordance with International Financial Reporting Standards (IFRS) are of interest. Eighteen firms did not fulfill this criterion, because they were subjected to takeovers in 2009 or because they are subsidiaries not constructing consolidating financial statements, and were therefore excluded. Accordingly, we ended up with a sample containing 244 firms which can be viewed in Figure 3.1. In the study of voluntary disclosures we examine the annual reports from 2009

<sup>15</sup> According to IFRS 7.22–24 an entity shall make certain disclosures related to hedges.

<sup>16</sup> Throughout this paper, the term ‘Swedish firms’ refers to those firms that according to Bokföringslagen have to construct an annual report (BFL 6:1) and send it to Bolagsverket (ÅRL 8:3).

only. Our choice to focus solely on this year is explained by the fact that, although the items constituting other comprehensive income are the same in 2008 and 2009, the reporting of other comprehensive income as a summary measure did not exist in 2008.

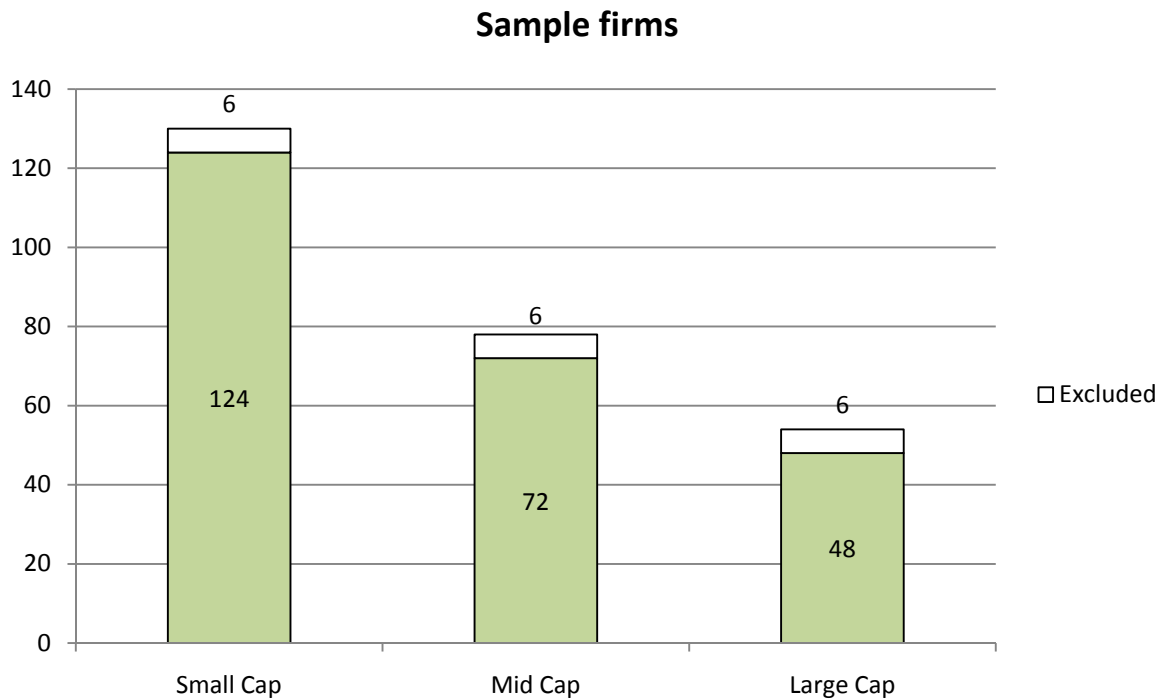


Figure 3.1 *The sample used in our annual report study. In the figure, firms have been divided by market segment.*

### 3.3 Attitude of the users

The other part of our problem statement has users of financial statements in view and aims at examining whether they consider other comprehensive income relevant in evaluating firm performance and if they regard the information content of net income different from that of other comprehensive income. Below we present the method used and develop the hypotheses to be tested in order to investigate these questions. Additionally, we provide a description of how our data was collected and present the sample used in this part of our paper.

#### 3.3.1 Method and development of hypotheses

The attitude of the users to comprehensive income reporting will be examined by means of a statistical study examining the associations between returns and the different performance reporting measures net income and other comprehensive income.

As Lev and Zarowin (1999, p. 354) point out, statistical associations reflect the consequences of investors' actions whereas measures based on questionnaires or interviews reflect their opinions and beliefs. Other advantages of a statistical study are that the results are not influenced by any potential prejudices of the authors and are general in nature. As we believe that the investors' actions most properly capture their attitude to comprehensive income reporting and as we attempt to test clearly defined hypotheses where we need a large amount of observations, we consider an association study appropriate. Through this study we aim at clarifying associations between different accounting measures and market data. We

acknowledge that an interview study, as opposed to our statistical study, would have provided us with detailed opinions of a selection of investors enabling us to address the question why these associations exist. However, this question is beyond the scope of this study.

In this part of our paper we examine all European markets as a restriction to the Swedish market would result in an insufficient number of observations. We examine the time period 2006–2010. The model applied in this part of our paper is developed by using Easton and Harris' model (1991, pp. 21–29) from their study investigating earnings as an explanatory variable for returns. They start out from the idea that book value, or owners' equity, and market value, or price, are both 'stock' variables indicating the wealth of the owners of the firm and regard accounting earnings and security returns as the related 'flow' variables. Easton and Harris develop the following regression model:

$$R_{jt} = \frac{(\Delta P_{jt} + d_{jt})}{P_{jt-1}} = \alpha_{t0} + \alpha_{t1} * \left( \frac{A_{jt}}{P_{jt-1}} \right) + \varepsilon_{jt}$$

where  $R_{jt}$  is returns of firm  $j$  over the time period  $t-1$  to  $t$ ,  $P_{jt}$  is the price per share of firm  $j$  at the time  $t$ ,  $d_{jt}$  is dividends paid per share of firm  $j$  over the time period  $t-1$  to  $t$ ,  $A_{jt}$  is accounting earnings per share of firm  $j$  over this time period and  $\varepsilon_{jt}$  is the error term. The left-hand side of the equation is an expression for returns. In words, the equation states that earnings divided by beginning-of-period price is a variable explaining returns.

The regression results in an  $R^2$  of 7.5%<sup>17</sup> suggesting that earnings are associated with returns. In addition to the regression above, Easton and Harris conduct a multivariate analysis including a second variable representing change in earnings. However, the addition of this variable into the regression model increases  $R^2$  in only 8 of the 19 years examined. Because of the ambiguous contribution of the earnings change variable it will be excluded from our model. Cheng et al. (1993) use the model developed by Easton and Harris in their study examining the usefulness of different performance measures. Since this study examines a similar issue as our, we find it appropriate to use this model. The equation developed by Easton and Harris will be used as a starting point for our statistical study where  $A$  is replaced by net income ( $NI$ ).

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<sup>17</sup>  $R^2 = \frac{SSR}{SST}$  is the multiple coefficient of determination, where SSR = sum of squares due to regression and SST = total sum of squares. It represents the proportion of the variability in the dependent variable that can be explained by the relationship between the dependent and the independent variables. (Anderson, Sweeney, Williams, Freeman and Shoemith, 2007, p. 508)

Hence, our basic regression model is:

$$R_{jt} = b_{con} + b_{NI} * \left( \frac{NI_{jt}}{P_{jt-1}} \right) + \varepsilon_{jt}$$

where  $R_{jt} = \frac{(\Delta P_{jt} + d_{jt})}{P_{jt-1}}$ ,  $P_{jt}$  is the price per share of firm  $j$  at the end of fiscal year  $t$ ,  $d_{jt}$  is dividends paid per share of firm  $j$  over that year,  $NI_{jt}$  is net income per share of firm  $j$  in year  $t$  and  $\varepsilon_{jt}$  is the error term.

Earlier studies have found that other comprehensive income has little to contribute in explaining returns.<sup>18</sup> Hence, we start off from the assumption that users do not take other comprehensive income into account when evaluating firm performance and hypothesize that if other comprehensive income is included as an independent variable in the model above the explanatory power for returns will not increase.

*H<sub>U1</sub>: The addition of other comprehensive income into the model does not significantly increase the explanatory power for returns.*

To test  $H_{U1}$  we conduct a regression and examine whether the addition of a second independent variable, other comprehensive income (*OCI*), into our basic simple linear regression model significantly increases the explanatory power for returns, or  $R^2$ . Our regression model including *OCI* as an independent variable reads:

$$R_{jt} = b_{con} + b_{NI} * \left( \frac{NI_{jt}}{P_{jt-1}} \right) + b_{OCI} * \left( \frac{OCI_{jt}}{P_{jt-1}} \right) + \varepsilon_{jt}$$

where  $OCI_{jt}$  is other comprehensive income per share of firm  $j$  in year  $t$ .

Should  $H_{U1}$  be false, we are also interested in to what extent other comprehensive income is relevant to investors evaluating firm performance and whether they regard the information content of net income different from that of other comprehensive income. As net income is often emphasized in the communication with investors we believe it is the primary financial performance reporting measure to users of financial statements. Hence, the following hypothesis is formulated:

*H<sub>U2</sub>: Coefficient of NI > Coefficient of OCI*

### 3.3.2 Data collection

The database Datastream Advance 4.0 (henceforth referred to as Datastream) was used to gather data for our statistical study. Datastream provides financial data and enabled us to download large quantities of data to Excel where we structured it further. To begin with, we

<sup>18</sup> See for instance Change et al. (1993) and Dhaliwal et al. (1999).



created a list of all European firms available in the Datastream search engine. This list contained information about each firm including a unique code from the database. We used these codes to gather data for each of the firms.

Since we are studying amendments to IAS 1 we limit our study to firm years when IFRS was followed and, consequently, the variable *WC07536 Accounting Standards Followed* was used to eliminate firm years not fulfilling this criterion. Furthermore, firms with other fiscal years than 1 January to 31 December were eliminated by using the variable *WC05350 Date Of Fiscal Year End*. The reason these firms were eliminated is that, as will be described later, we also used a variable representing market price to obtain the price per share at the end of the fiscal year. For firms with other than calendar fiscal years, Datastream delivers the value for this variable on 31 December irrespective of the date of fiscal year end. Additionally, we collected variables needed to examine our regression model:

$$R_{jt} = b_{con} + b_{NI} * \left( \frac{NI_{jt}}{P_{jt-1}} \right) + b_{OCI} * \left( \frac{OCI_{jt}}{P_{jt-1}} \right) + \varepsilon_{jt}$$

where

$$R_{jt} = \frac{(\Delta P_{jt} + d_{jt})}{P_{jt-1}}$$

As can be seen, the returns variable is made up of variables related to price and dividends. Hence, we also collected the variables *WC05001 Market Price Year End* and *WC05376 Common Dividends (Cash)*. Throughout our study, all measures are on a per share basis and, consequently, we also collected the variable *NOSH Number Of Shares*. Since we use net income as an independent variable in our regression we used the variables *WC01651 Net Income Before Preferred Dividends* and *WC01501 Minority Interest Income Statement* which together make up net income for the period. Additionally, it can be seen from the model above that we need a variable representing other comprehensive income to carry out our regression. However, Datastream does not contain any variable for either other or total comprehensive income and therefore we created a proxy for total comprehensive income. In doing so, we used the fact that the total change in equity during a year is made up of owner and non-owner changes. Since total comprehensive income is the same as all non-owner changes in equity it can be calculated by subtracting all owner changes in equity from the total change in equity. Subsequently, other comprehensive income can be obtained by subtracting net income from total comprehensive income. To be able to calculate the change in equity during a year we used the variable *WC 03501 Common Equity*. In order to calculate total comprehensive income we also needed a measure capturing owner changes in equity. The owner changes in equity that we took into account are represented by the variables *WC05376 Common Dividends (Cash)*, *WC 04251 Net Proceeds From Sale/Issue Of Common & Preferred* and *WC 04751 Common/Preferred Purchased, Redeemed, Retired, Converted*. Furthermore, the variable *WC01505 Discontinued Operations* was used. This variable was subtracted from values for net income as discontinued operations can be considered irrelevant

in the valuation conducted in the market. Table 3.1 below summarizes the variables used in our study.

Variable	Name	Description
WC07536	Accounting Standards Followed	Shows whether the firm follows IFRS, U.S. GAAP or some local standards.
WC05350	Date Of Fiscal Year End	Represents the year, month and day the company closes its books at the end of its fiscal period.
WC05001	Market Price Year End	Represents the closing price of the company's stock at its fiscal year end.
WC05376	Common Dividends (Cash)	Represents the total cash dividends paid on the company's common stock during the fiscal year. It excludes dividends paid to minority shareholders.
NOSH	Number Of Shares	Represents the total number of ordinary shares that represent the capital of the company. The amount is updated whenever new tranches of stock are issued or after capital charges.
WC01651	Net Income Before Preferred Dividends	Represents income after all operating and non-operating income and expense, reserves, income taxes, minority interest and extraordinary items.
WC01501	Minority Interest Income Statement	Represents the portion of earnings/losses of a subsidiary pertaining to common stock not owned by the controlling company or other members of the consolidated group.
WC03501	Common Equity	Represents common shareholders' investment in a company.
WC04251	Net Proceeds From Sale/Issue Of Common & Preferred	Represents the amount a company received from the sale of common and/or preferred stock.
WC04751	Common/Preferred Purchased, Redeemed, Retired, Converted	Represents funds used to decrease the outstanding shares of common and/or preferred stock. It includes for instance repurchase of stock.
WC01505	Discontinued Operations	Represents the earnings of a division or segment of business that the company wants to discontinue or dispose in the near future.

Table 3.1 *The Datastream variables used in our statistical study.*

Our proxy was calculated in the following manner:

$$TCI_t = WC03501_t - WC03501_{t-1} - (-WC05376_t + WC04251_t - WC04751_t)$$

Other comprehensive income was then calculated by using the fact that it consists of the difference between total comprehensive income and net income:

$$OCI_t = TCI_t - WC01651_t$$

Worth noticing is that *WC03501 Common Equity* represents common shareholders' equity only and *WC05376 Common Dividends (Cash)* excludes dividends paid to minority shareholders. Hence, our proxy represents *TCI* attributable to majority shareholders and when

we calculated other comprehensive income we subtracted net income attributable to these shareholders. Consequently, our *OCI* variable represents other comprehensive income attributable to majority shareholders.

To test how well our proxy approximates total comprehensive income we tested it by comparing calculated total comprehensive income with total comprehensive income in the annual report from 2009 for a selection of Austrian, Belgian and German firms.<sup>19</sup> The results from this test are presented below in Table 3.2.

Firm name	Proxy	TCI*	Difference**	Difference %***	Explanation
Adva	3,124	1,967	1,157	58.8	Stock options
Geneart	244	184	60	32.6	Stock options
Ageas	1,214,000	1,540,000	-326,000	-21.17	Wrong Datastream values for equity
Agfa Gevaert	21,000	21,000	0	0	
Andritz	132,959	127,765	5,194	4.07	Change of consolidation range, other changes
Arseus	19,833	19,553	280	1.43	Share-based payments
Zetes Industries	5,387	5,325	62	1.16	Share-based payments
Atrium European Real Estate	99,610	-448,502	548,103	122.21	Issue of par value shares
Barco	-58,909	-59,241	332	0.56	Share-based payments
Bekaert	200,133	202,275	-2,142	-1.06	Effect of acquisitions and disposals, share-based payments, equity reclassification
Belgacom	927,000	906,000	21,000	2.32	Wrong Datastream value for dividends
BKS Bank	47,130	52,984	-5,854	-11.05	Other changes
Beta Software Systems	1,155	1,155	0	0	

<sup>19</sup> We chose to perform the test of our proxy on firms from these countries as their annual reports are easily accessible.

Intercell AG	-14,976	-20,557	5,581	27.15	Employee share-option plan, wrong Datastream value for equity in 2008
Geratherm Medical	-2,302	-2,309	7	0.30	
GFK	64,207	62,646	1,561	2.49	Other changes
Ackermans and Van Haaren	127,642	127,156	486	0.38	Other changes
Renk	44,598	44,598	0	0	

\* Total comprehensive income from the 2009 annual report. \*\* Difference = Proxy-TCI. \*\*\* Difference / TCI.

Table 3.2 *Test of our proxy for total comprehensive income on a selection of Austrian, Belgian and German firms in 2009. Values in thousands of euro. The explanation column states why there is a difference between our proxy and total comprehensive income from the annual report and makes explicit which owner changes in equity our proxy has not taken into account.*

As can be seen from Table 3.2, our proxy for total comprehensive income is not flawless and other owner changes in equity than those represented by the three variables taken into account do exist. It appears from the explanation column that the largest differences between our proxy and the numbers presented in the annual reports pertain to stock option programs, wrong Datastream values and the issue of par value shares.

In order to improve our proxy we searched for a Datastream variable capturing changes in equity related to stock options. The variable *WC 04301 Proceeds From Stock Options* represents the amount a company receives from employee stock options. However, values related to this variable were not available for many firms. Furthermore, although the description in Datastream reads that ‘when no breakdown is available items are included in net proceeds from sale of stock’ (*WC 04251 Net Proceeds From Sale/Issue Of Common & Preferred*), when checking the variables from Datastream we found that the same value was sometimes included in both *WC 04301* and *WC 04251*.<sup>20</sup> Hence, by including *WC 04301 Proceeds From Stock Options* in our proxy we would run the risk of deteriorating it by double counting certain values. Accordingly, we chose not to take this variable into account and neglect transactions related to stock options in cases when they are not included in *WC 04251 Net Proceeds From Sale/Issue Of Common & Preferred*.

The fact that Datastream sometimes delivers values that are not in accordance with those of the annual reports is unfortunate but difficult to do anything about. To some extent this fact can be explained by the wording used by the producers of financial statements. For instance, Datastream includes items reported under the heading ‘reserves’ but not those reported under

<sup>20</sup> For instance, for Adva the same values were reported for *WC 04301* and *WC 04251*.

the heading ‘unrealized gains and losses’ in the variable representing equity, although the items are the same. We did not find any Datastream variable related to the issue of par value shares. However, values related to the issue of shares are normally included in the variable *WC 04251 Net Proceeds From Sale/Issue Of Common & Preferred*<sup>21</sup> and hence we regard our proxy as capturing such transactions appropriately in most cases.

### 3.3.3 Sample

Every firm for which we have all the information required for a particular year is an observation. Hence, our observations consist of firm years. Since we examine the five year time period 2006–2010 we can receive a maximum of five observations for each firm. Our original list from Datastream consisted of 22,932 firms from the following markets: Austria, Belgium, Bulgaria, Channel Islands, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Macedonia, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine, and United Kingdom. The number of observations in our sample was decimated as we excluded firms which had other than calendar fiscal years and firm years when IFRS was not applied. We also had to exclude several firm years because Datastream did not deliver information about them. After these exclusions we ended up with a total of 14,569 observations for which we had all the required information.

Before we conducted our regressions we examined our data set to identify outliers, observations very different from most others, which might bias our results. The scatter

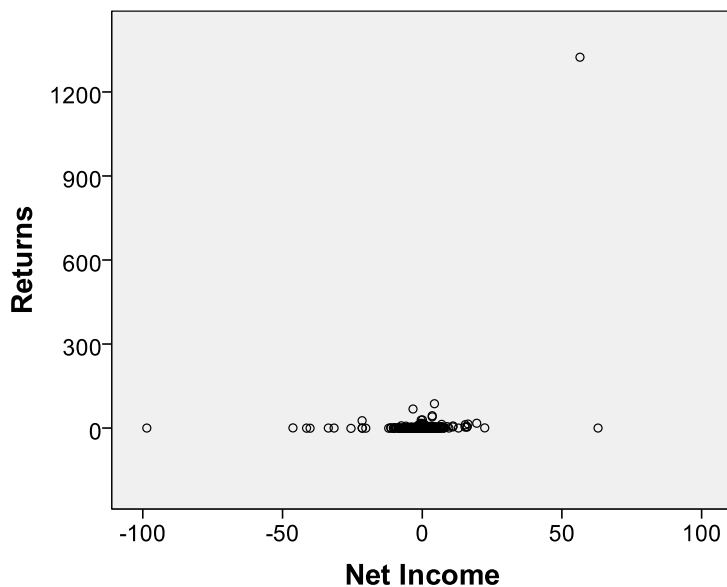


diagram in Figure 3.2 shows some obvious outliers. We identified the outliers more accurately by using standardized residuals and observations with an absolute value of the standardized residual exceeding two were treated as outliers.<sup>22</sup> However, all outliers do not necessarily exert a strong influence on the results obtained. Observations exerting such strong influence are referred to as influential observations and can be

Figure 3.2 Scatter diagram with net income as the independent variable and returns as the dependent variable.

<sup>21</sup> For instance, for GFK the value reported for *WC 04251* represents the value for new shares issued in the annual report.

<sup>22</sup> A standardized residual is the residual ( $y_i - \hat{y}_i$ ) divided by its standard deviation  $s_{y_i - \hat{y}_i}$  (Anderson et al., 2007, p. 533). Standardizing residuals is the same as converting them into z-scores and in a normally distributed sample 95% of z-scores should lie between -1.96 and +1.96 (Field, 2005, p. 164).

identified by using Cook’s distance<sup>23</sup> which is a measure of the overall influence of a case on the model. Observations with values of Cook’s distance greater than one can be considered influential. Consequently, observations were excluded from our sample if they had an absolute value greater than two for their standardized residuals *and* a Cook’s distance greater than one. Our Cook’s distance measures were based on the model including both net income and other comprehensive income as independent variables. After these exclusions we ended up with a total of 14,552 observations. Table 3.3 provides descriptive statistics for the variables used in our regressions.

Descriptive statistics			
Variable	Mean	Standard Deviation	Mean absolute value*
Returns	0.0993	0.9053	0.4956
NI	-0.0096	1.0493	0.2331
OCI	0.0128	0.5513	0.1231

\*Mean value when negative values have been converted to positive

Table 3.3 *Descriptive statistics for the variables used in our regressions. All variables are measured on a per share basis and have been divided by beginning-of-period price.*

We calculated the variance inflation factor (VIF) to detect potential multicollinearity, or correlation among our independent variables net income and other comprehensive income. With a Pearson correlation coefficient of -0.176 between the independent variables the variance inflation factor amounted to 1.032 and was not regarded as problematic.<sup>24</sup>

To be able to create reliable significance tests in a regression, homoskedasticity, or that the error term’s variance is the same for any given value of the independent variable, is required. The opposite is heteroskedasticity which can be detected by the fact that the points in a scatter diagram plotting the standardized residuals of a regression against the standardized predicted values have the shape of a funnel. If heteroskedasticity is detected it is necessary to adjust the ordinary least square test statistics as the t- and F-statistics are no longer t-and F-distributed, entailing a possibility that the significance level for each independent variable and the model are faulty. Such an adjustment is done by computing heteroskedasticity-robust standard errors which are valid even if the error term does not have constant variance. By viewing a scatter diagram we detected a tendency towards heteroskedasticity in our sample and, hence, adjusted the standard errors. The actual method for creating heteroskedasticity-robust standard errors is beyond the scope of this paper but is described by for example Wooldridge (2006). We used a Wald test to receive the robust equivalents of the F- and t-tests.

<sup>23</sup> Cook’s distance measure,  $D_i$ , uses both the leverage of an observation and its residuals to determine whether it is influential. The measure is calculated in the following manner:  $D_i = \frac{(y_i - \hat{y}_i)^2}{(p-1) * s^2} * \frac{h_i}{(1-h_i)^2}$  where  $h_i$  is the leverage for observation  $i$ ,  $p$  is the number of independent variables and  $s$  is the standard error of the estimate (Anderson et al., 2007, p. 595).

<sup>24</sup> The variance inflation factor was calculated in the following manner:  $VIF = \frac{1}{1-R^2} = \frac{1}{1-0.176^2} = 1.032$ . VIF values of ten or more are regarded as problematic (Anderson et al., 2007, p. 578).

Figure 3.3 shows the observations in our sample divided by market.

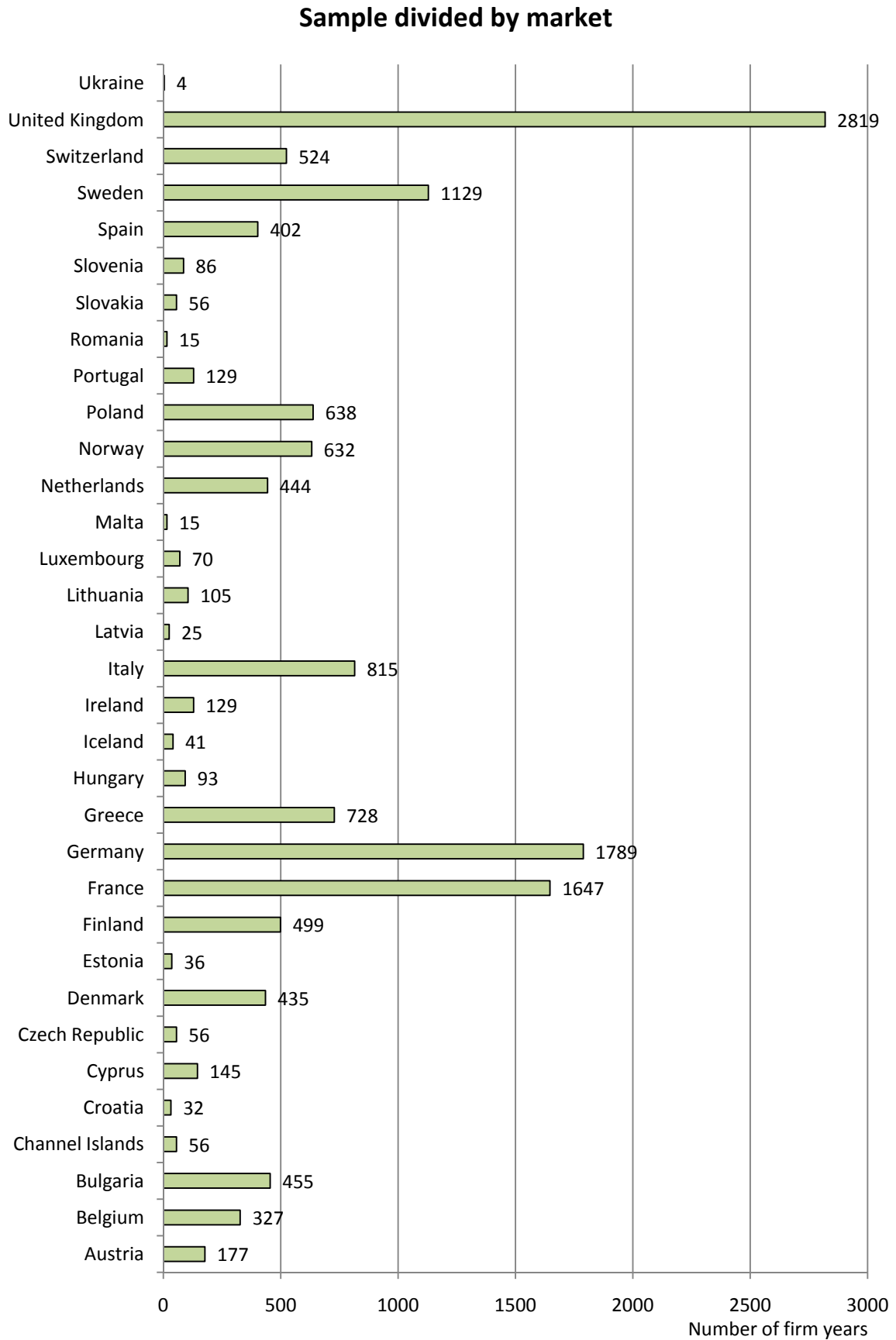


Figure 3.3 *Observations in our sample divided by market.*

## 4 Empirical analysis

In this chapter we present the results of our annual report study and statistical association study aiming at examining the attitudes to comprehensive income reporting of producers and users of financial statements respectively.

### 4.1 Attitude of the producers

As a complement to our annual report study we studied the comment letters of producers concerning the presentation of comprehensive income. The results of this study are presented below.

The first part of our annual report study is a study of voluntary disclosures and aims at exploring whether producers consider other comprehensive income relevant in evaluating firm performance by means of examining whether they make any voluntary disclosures about it. The second part of our annual report study focuses on cash flow hedge accounting as a means to examine whether producers regard the information content of net income different from that of other comprehensive income.

#### 4.1.1 Attitude of the producers to the exposure draft

In the Exposure Draft from 2006 the IASB formulated eight questions and invited respondents to comment them. The fifth question read:

*Do you agree that entities should be permitted to present components of recognized income and expense either in a single statement or in two statements?*

*If so, why is it important to present two statements rather than a single statement?*

*If you do not agree, why? What presentation would you propose for components of recognized income and expense that are not included in profit or loss? (ED, p.7)*

Figure 4.1 summarizes the attitudes in the comment letters sent to the IASB concerning the first part of question five, whether the components of recognized income and expense<sup>25</sup> should be presented in a single statement or in two statements. We have studied the comment letters from producers of financial statements and organizations representing such producers. Other respondents; such as auditing firms, accounting institutes and accounting standards boards, were excluded.

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<sup>25</sup> As earlier mentioned, components of recognized income and expense are now referred to as other comprehensive income and in this part of our paper these terms are used interchangeably.



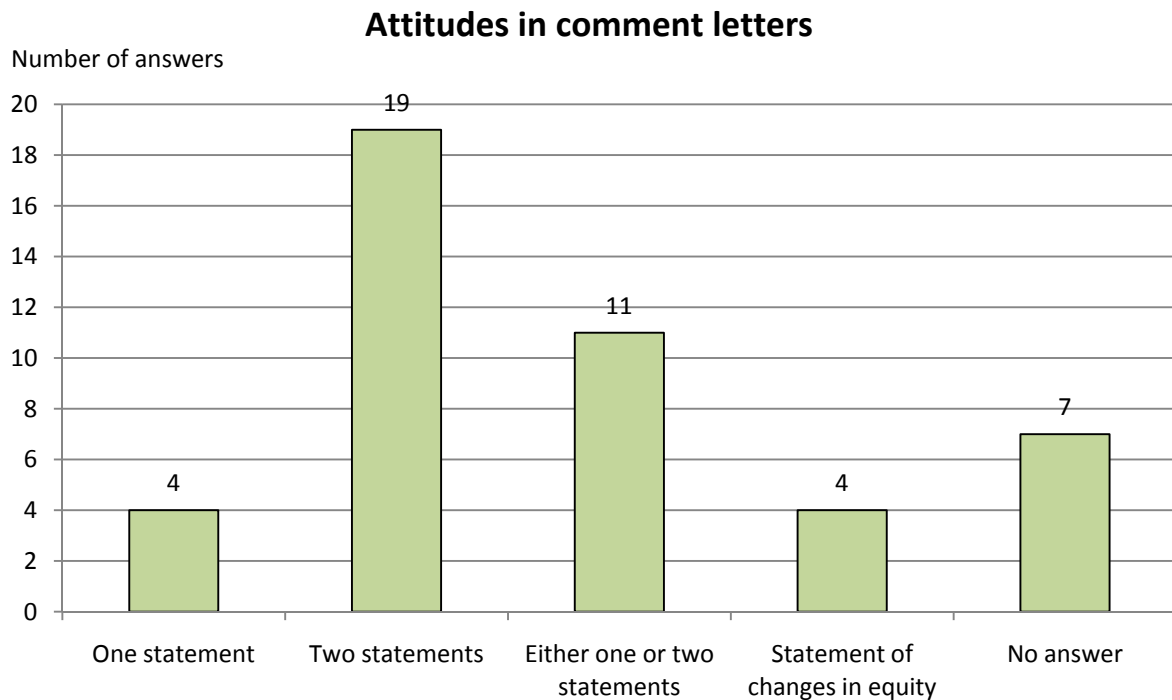


Figure 4.1 *Summary of attitudes in comment letters from producers of financial statements and organizations representing such producers concerning the question whether entities should be permitted to present components of recognized income and expense either in a single statement or in two statements.*

As can be seen from Figure 4.1, a majority of the respondents were of the opinion that two statements should be the mandated format or that firms should have a choice between the single statement and the two statement approach. For instance, the BG Group plc considered a two statement approach more appropriate as it aids the understanding of performance (BG Group plc Comment Letter). Rio Tinto was of the same opinion and regarded such items as the mark to market of cash flow hedges and actuarial gains and losses as not related to the underlying performance of the business for the current period. The firm was of the opinion that the inclusion of these, frequently very large, items in the income statement would make that statement less meaningful (Rio Tinto Comment Letter). The same idea was brought forward by UBS that stated that certain items, such as foreign currency translation adjustments and derivatives used in cash flow hedges, are recognized as components of equity because they are not indicative of an entity's performance (UBS Comment Letter). Shell believed that two statements are necessary to segregate valuation measures influenced by estimation techniques from other measures (Shell Comment Letter). Nippon Keidanren (Japan Business Federation) brought forward the opinion that net income is an important indicator for investors to understand the result of their investment in the entity and to forecast its future profitability and cash flows. Therefore, two statements that present net income at the bottom of the income statement is [more] useful than a single statement which presents net income as a subtotal (Nippon Keidanren Comment Letter).

On the other hand, some respondents expressed preference for the single statement approach. The DFCG considered a two statement presentation inappropriate as it would lead to focus

remaining on the traditional income statement and that preparers as well as users would tend to ignore the impact of other income or expense recognized in equity (DFCG Comment Letter). Four respondents did not prefer any of the alternatives but considered the presentation of other comprehensive income directly in equity appropriate if the statement of changes in equity contains notes explaining which changes are attributable to owners versus non-owners. For instance, BNP Paribas did not find it necessary to transfer components of non-owner changes in equity outside the statement of changes in equity to achieve a clear presentation of the owner changes in equity. Instead, the firm was of the opinion that segregating the three categories owner, non-owner and net income within the statement of changes in equity by use of appropriate sub-totals would achieve the same level of clarity (BNP Paribas Comment Letter). Some respondents did not address question number five in their comment letters. Of these respondents, several did not consider it possible to make a decision about the presentation format until the more fundamental issues to be discussed in phase B<sup>26</sup> were resolved. For instance, the British Bankers' Association stated that they did not believe that a conclusive view could be taken in isolation from the issues to be discussed under phase B (British Bankers' Association Comment Letter).

#### 4.1.2 Results of the annual report study

Only nine of the 244 firms examined made any voluntary disclosures about other comprehensive income. Table 4.1 presents their respective types of disclosures.

Firm	Type of disclosure
Skanska	Presents a table in the Board of Directors' Report of comprehensive income for the year and comments each individual OCI-item.
Lindab International	Presents, in the Board of Directors' Report, the value of total comprehensive income and what items constitute other comprehensive income.
Wallenstam	Presents, in the Board of Directors' Report, the value of total comprehensive income and what items constitute other comprehensive income.
Catena	Presents, in the Board of Directors' Report, the value of total comprehensive income, the value of other comprehensive income and the items constituting it.
ORC Software	Presents, in the multi-year overview, the value of other comprehensive income and total comprehensive income.
Systemair	Presents, in the Board of Directors' Report, the value of other comprehensive income.
HQ Bank	Presents, in the multi-year overview, the value of other comprehensive income and total comprehensive income.
Midsona	Presents, in the Board of Directors' Report, the value of total comprehensive income, the value of other comprehensive income and the items constituting it.
Pricer	Presents, in the Board of Directors' Report, the value of other comprehensive income.

Table 4.1 *The firms in our sample that made any voluntary disclosures about other comprehensive income.*

<sup>26</sup> The IASB has divided the financial statement presentation project into two phases; phase A and B, where phase B will address fundamental questions relating to presentation and display of information in the financial statements (IAS 1 BC 8).

As can be seen from the table above, none of the firms examined presented key ratios including other comprehensive income. Instead, those firms that made disclosures about other comprehensive income made them either in a multi-year overview or in the board of directors' report.

In our study of cash flow hedge accounting the firms were classified in two steps. They were given the value 1 if they used cash flow hedge accounting in 2008 and 2 if they did not. The same classification was applied for 2009. Hence, firms receiving two 1s used cash flow hedge accounting both years, firms with two 2s did not use it any of the years and firms with a combination of a 1 and a 2 either stopped using it or started using it in 2009.

Figure 4.2 shows the number of firms in each category whereas Figure 4.3 shows how we conducted our classification and gives examples of firms classified into different categories.

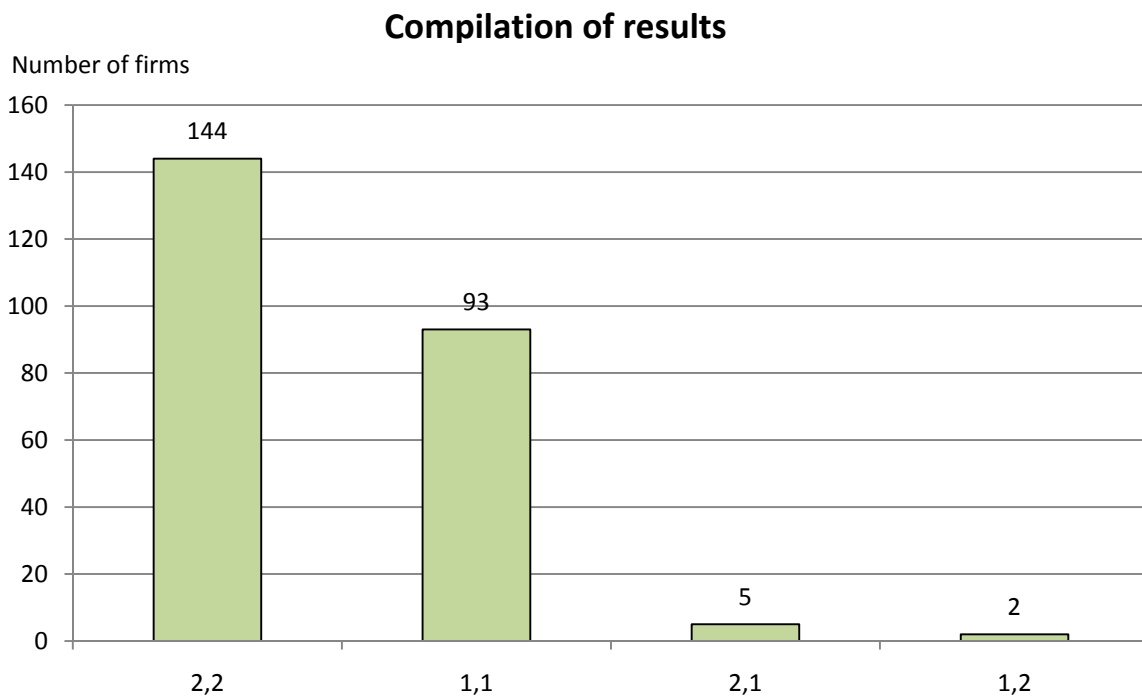


Figure 4.2 Column 2,2 represents firms that did not use cash flow hedge accounting either 2008 or 2009, 1,1 represents firms that used cash flow hedge accounting both years whereas firms that changed their accounting policies are represented by column 2,1 and 1,2. 2,1 represents firms that started using cash flow hedge accounting in 2009 and 1,2 represents firms that stopped using it in 2009.

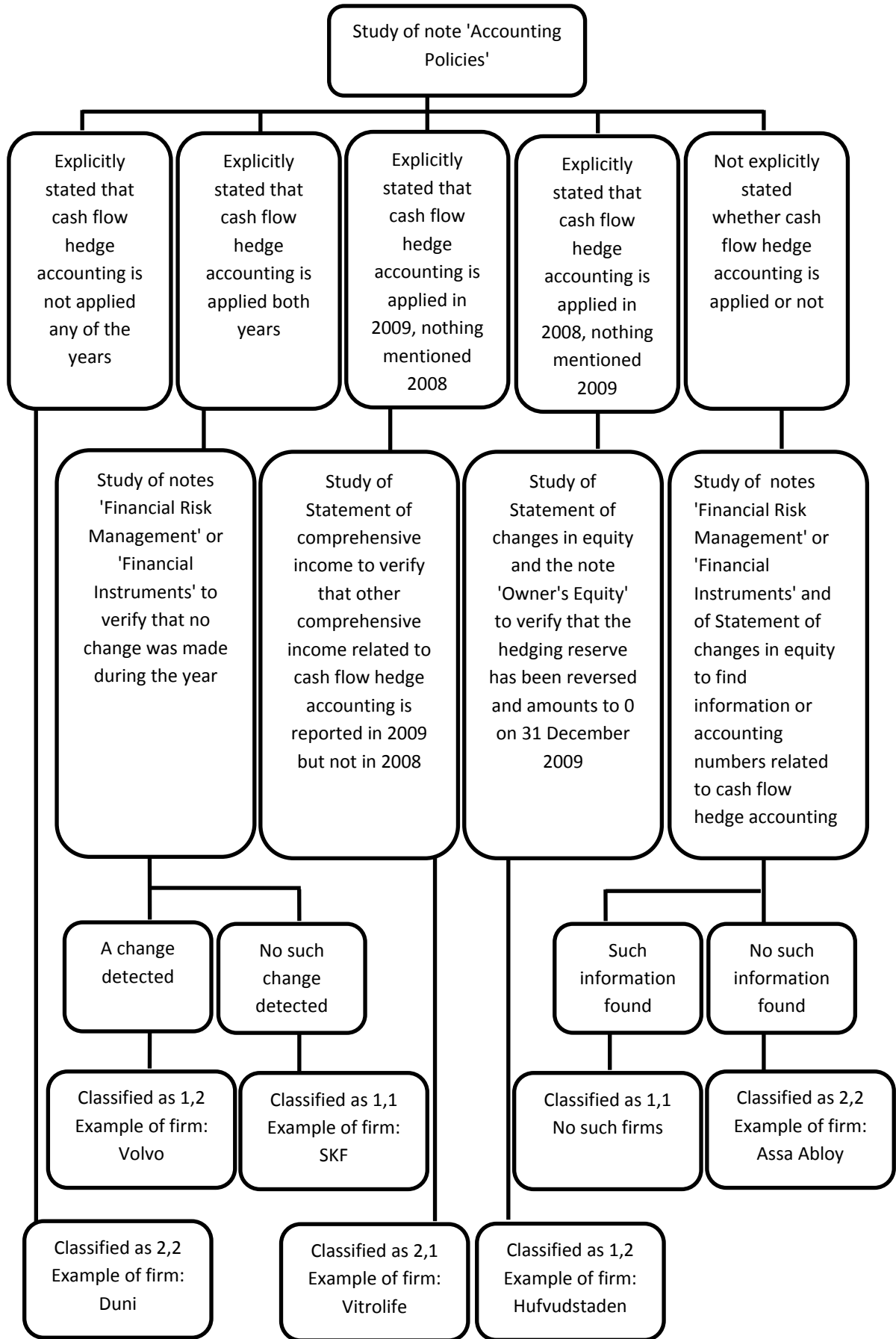


Figure 4.3 How the firms were classified.

As can be seen from Figure 4.2, only seven of the firms examined changed their application of cash flow hedge accounting between 2008 and 2009. Five firms; Loomis, Vitrolife, Cellavision, Lindab International and SSAB, started to use cash flow hedge accounting in 2009.<sup>27</sup> Only two firms, Volvo and Hufvudstaden, stopped applying it in 2009 and acted in a way contradicting  $H_{P2}$ . To be able to decide whether these firms' change in accounting policies was caused by the fact that they do not regard the information content of net income different from that of other comprehensive income, the reasons behind this change have to be taken into account. Volvo's reasons were revealed in an interview with Anna Sikström, IFRS Accounting Expert at Volvo.

Through this interview we learned that Volvo's change in accounting policy was actually not related to the amendments to IAS 1. The change regarding cash flow hedge accounting was instead carried out due to the, in Sikström's view, improper model for hedge accounting in IAS 39. The model is simply not fitted to Volvo's way of handling risk related to currency and interest rate fluctuation, and being able to comply with it requires huge administrative resources. According to Sikström, being able to present unrealized effects in other comprehensive income (OCI) is not worth the effort of meeting the terms of IAS 39 and instead Volvo has chosen to account for its cash flow hedges in the income statement. Since Volvo is a global concern with SEK as its functional currency, it often applies cash flow hedges to both internal and external cash flows and will continue to do so without applying cash flow hedge accounting. Sikström points out however, that if the requirements regarding hedge accounting did not exist she would rather present the information in OCI as she considers such items different from the income statement.

There are many reasons for the distinction between the income statement and OCI. The main reason, in Sikström's opinion, is that the income statement should end in net income which is the performance measure that shows management's ability to govern the firm's assets. OCI is made up of a variety of items, many of which are hard to handle. Sikström takes pensions as an example and states that as pensions are to be revaluated partly due to fluctuations in the discount rate it could have huge effects on net income if such revaluations were not dealt with in OCI. As the discount rate is not something a firm's management has any influence over, it would be wrong to evaluate management on a performance measure containing revaluation of pensions. Another reason, according to Sikström, for treating OCI as different is that if the related items, by some future amendment to IAS 1, were brought up in the income statement investors and analysts would still adjust for them. As the firm's management often focuses on the same accounting numbers as the investors this could create a gap between the result presented in the income statement and the result commented in the first part of the quarterly

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<sup>27</sup> Loomis started to use interest rate swaps classified as cash flow hedges in 2009 (Loomis Annual Report 2009, p. 46) whereas Vitrolife states in the annual report that forward and future contracts relating to forecasted cash flows are classified as cash flow hedges in 2009 (Vitrolife Annual Report 2009, p. 51–52). For 2008, CellaVision states that the requirements in IAS 39 regarding hedge accounting are not met and, hence, hedge accounting is not applied (CellaVision annual report 2008, p. 32). Lindab International did not engage in hedging activities in 2008 (Lindab International Annual Report 2008, p. 87) and SSAB did not use cash flow hedges in 2008 (SSAB Annual Report 2008, p. 97).

and annual reports. This is something that should be avoided if possible as it makes the reports less cohesive. Sikström also mentioned that she has received very few questions about the OCI-items which has led her to believe that analysts and investors are not very interested in them. However, over time the attitude of the investors and analysts could change when they become more accustomed to OCI and when they get a better understanding of what it really consists of. Sikström believes there is a need for education in the subject. To sum up, Volvo's change in accounting policy regarding cash flow hedge accounting had nothing to do with the amendments to IAS 1. Our results from the annual report study indicated that Volvo did not see any difference between reporting a transaction in OCI and reporting it in net income, but the comments from Sikström show that she in fact considers these performance measures utterly different.

## 4.2 Attitude of the users

Below we present the results of our statistical association study aiming at examining whether users of financial statements consider other comprehensive income relevant in evaluating firm performance and whether they regard the information content of net income and other comprehensive income different.

In the following we conduct several regressions all of which are summarized in Table 4.2. As a starting point we use returns as the dependent variable and net income as the independent variable. Hence, in our first regression, Regression 1, we use the following model:

### Regression 1:

$$R_{jt} = (\Delta P_{jt} + d_{jt}) / P_{jt-1} = b_{con} + b_{NI} * \left( \frac{NI_{jt}}{P_{jt-1}} \right) + \varepsilon_{jt}$$

As can be seen from the F- and t-values,<sup>28</sup> both the model and the independent variable are significant at the  $\alpha \leq 1\%$  level. The coefficient<sup>29</sup> shows in what way the independent variable is related to returns. The net income variable has a coefficient of 0.093 implying that, all else equal, a one unit increase in net income causes an increase in returns of 0.093 units. The value of adjusted  $R^2$  shows how well the model explains the variation in returns. We use adjusted  $R^2$  because unadjusted  $R^2$  generally increases solely because more independent variables are added to the model and, consequently, the impact of an added variable may be overestimated.

Table 4.2 shows that adjusted  $R^2$  amounted to 1.2% which indicates that net income has very low explanatory power for returns. One possible explanation for our results is that many of the observations in our sample have negative values for net income. As shown by Hayn

<sup>28</sup> The F-value shows the ratio of the explained average variability to the unexplained average variability in the model and is used to test the overall significance of the model (Field, 2005) whereas the t-value is used to test if a regression coefficient is significantly different from zero.

<sup>29</sup> Our coefficients are unstandardized and we do not make use of beta coefficients as our independent variables are on the same scale. See Wooldridge (2006, pp. 195–196) for a discussion on beta coefficients.

(1995) losses are less informative for returns than profits as losses are regarded as temporary since investors always have the opportunity to liquidate the firm instead of being exposed to perpetual losses. In accordance with her results, it can be argued that negative income measures are not value relevant in explaining returns and that there is a difference between positive and negative net income measures in their explanatory power for returns. Hence, in the following we conduct a regression controlling for the sign of net income by using a dummy variable assuming the value 1 for negative net income measures and 0 for positive. However, we do not believe that it is the sign of net income in itself that affects the explanatory power for returns, but the combined effect of the level of the net income measure and the sign of it. Consequently, we also take the interaction effect<sup>30</sup> between these two variables into account. In Regression 2 we use the following model:

**Regression 2:**

$$R_{jt} = \frac{(\Delta P_{jt} + d_{jt})}{P_{jt-1}} = b_{con} + b_{NI} * \left( \frac{NI_{jt}}{P_{jt-1}} \right) + b_D * \text{Dummy neg NI} + b_{DNI} * \text{Dummy neg NI} * \left( \frac{NI_{jt}}{P_{jt-1}} \right) + \varepsilon_{jt}$$

The coefficient  $b_D$  accounts for the base effect that a negative sign of net income in itself has on returns whereas the interaction term accounts for the interaction effect that net income and a negative sign of net income have on returns. Expressed in another way, the interaction effect captures the fact that positive and negative net income measures may explain returns differently. If  $b_D$  and  $b_{DNI}$  are significant, the dummy variables representing negative income measures will enhance our models explanatory power for returns. Our prediction is that, all else equal, negative income measures lead to lower values of return and, hence, that  $b_D$  and  $b_{DNI}$  assume negative values. As can be seen from Table 4.2, it is clear that the introduction of dummy variables has had a large effect on the value of adjusted  $R^2$ . In the study performed by Hayn (1995, p. 127) the exclusion of loss years almost tripled  $R^2$ . The effect on  $R^2$  in our study was much larger which is likely explained by the fact that loss years constitute 30.6% of our sample whereas they only make up 19.6% of the sample used in Hayn's study. The implication of the increase in  $R^2$  between Regression 1 and 2 is that the model used in Regression 2 has a higher explanatory power for returns than the model without the dummy variables.

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<sup>30</sup> An interaction effect is the combined effect of two or more predictor variables on an outcome variable (Field, 2005, p. 734)

Model test	Regression 1			Regression 2			Regression 3		
Adjusted $R^2$	0.012			0.071			0.076		
F-value	171.971*			371.384*			301.859*		
Likelihood $\text{Chi}^2$	170.986*			1073.843*			1160.337*		
Independent variable test	$b$	t-value	Wald $\text{Chi}^2$	$b$	t-value	Wald $\text{Chi}^2$	$b$	t-value	Wald $\text{Chi}^2$
NI	0.093	13.114*	12.813*	0.453	28.754*	60.598*	0.456	29.010*	66.723*
Dum Neg	-	-	-	-0.198	-12.236*	116.43*	-0.196	-12.097*	113.25*
Dum Neg $\times$ NI	-	-	-	-0.482	-27.284*	66.038*	-0.479	-27.181*	70.525*
OCI	-	-	-	-	-	-	0.122	9.312*	10.519*
N**	14,552			14,552			14,552		

\* Significant at the  $\alpha \leq 1\%$  level. \*\* N is the number of observations in the regression.

Table 4.2 Summary of our regressions. All regressions use returns, or change in price per share increased by dividends per share divided by beginning-of-period price per share, as the dependent variable. In Regression 1, net income per share divided by beginning of period price per share is the independent variable. In Regression 2, one dummy variable for negative net income measures and one dummy variable for the interaction between negative net income measures and net income are added to the model. In Regression 3, other comprehensive income per share divided by beginning-of-period price per share is added to the model. Likelihood  $\text{Chi}^2$  and Wald  $\text{Chi}^2$  are the outcomes of the Wald test and constitute the heteroskedasticity-robust equivalents of the F- and t-statistics.

As a final step we add a variable for other comprehensive income to our model.

**Regression 3:**

$$R_{jt} = (\Delta P_{jt} + d_{jt}) / P_{jt-1} = b_{con} + b_{NI} * \left( \frac{NI_{jt}}{P_{jt-1}} \right) + b_D * \text{Dummy neg NI} \\ + b_{DNI} * \text{Dummy neg NI} * \left( \frac{NI_{jt}}{P_{jt-1}} \right) + b_{OCI} * \left( \frac{OCI_{jt}}{P_{jt-1}} \right) + \varepsilon_{jt}$$

$R^2$  increased from 7.1% to 7.6% between Regression 2 and 3, an increase that is statistically significant. The coefficient of net income, 0.456, is significantly greater<sup>31</sup> than that of other

<sup>31</sup> This has been established by using the t statistic approach described by Wooldridge (2006, p. 149) to test whether  $\theta = b_{NI} - b_{OCI} = 0$ . The t statistic can be written as:  $t = \hat{\theta} / se(\hat{\theta})$ . To obtain the standard error for  $\theta$ , we rewrite our regression model using the fact that  $\theta = b_{NI} - b_{OCI}$  entailing  $b_{NI} = \theta + b_{OCI}$ . Substituting  $b_{NI}$  in our regression model gives:

$$R_t = b_{con} + \theta * NI + b_{OCI} * (NI + OCI) + b_D * \text{Dummy neg NI} + b_{DNI} * \text{Dummy neg NI} * NI$$

In the rewritten model,  $\theta$  appears explicitly and a regression of this model gives

$\theta = 0.334$  and  $se(\hat{\theta}) = 0.020$ . Accordingly,  $t = \frac{0.334}{0.020} = 16.7$  and  $\theta = b_{NI} - b_{OCI} = 0$  is not valid at any conventional level of significance.



comprehensive income which amounts to 0.122. In comparison with earlier studies<sup>32</sup> our  $R^2$  measures are low. To some extent this might be explained by the fact that we examine a more recent time period since Lev and Zarowin have shown that there has been a decline in the information content of financial data over time.

### 4.3 Test of hypotheses

After presenting the results from our annual report study and statistical association study we go on to test the hypotheses developed in sections 3.2.1 and 3.3.1, aimed at examining our problem statement:

*Do producers and users of financial statements consider other comprehensive income relevant in evaluating firm performance and do they regard the information content of net income different from that of other comprehensive income?*

The first two hypotheses,  $H_{P1}$  and  $H_{P2}$ , have producers of financial statements in view.  $H_{P1}$  was developed to examine the first part of our research problem, whether producers consider other comprehensive income relevant in evaluating firm performance.

*$H_{P1}$ : Producers of financial statements do not make any voluntary disclosures about other comprehensive income in their annual reports.*

Our results show that most Swedish firms did not make any voluntary disclosures about other comprehensive income in 2009. These findings support  $H_{P1}$  and, consequently, this hypothesis cannot be rejected. In line with this conclusion we find support for the idea that producers of financial statements do not consider other comprehensive income relevant in evaluating firm performance. However, we have assumed that if firms perceive an accounting measure relevant in evaluating firm performance they make voluntary disclosures about it. We recognize that this assumption is not necessarily valid and although firms consider other comprehensive income relevant for such evaluations they may still not make any voluntary disclosures about it. For instance, how key ratios are presented could be dependent on how they are usually presented by other firms. In Sweden, the computation of key ratios has to a large extent been affected by the introduction of a standard, co-created by BAS-kontogruppen and Statistics Sweden, for the calculation of these ratios (BAS-kontogruppen, 2006). Our assumption may also be invalid in the sense that firms may have other reasons for making voluntary disclosures than providing information relevant for evaluation purposes. For instance, producers may consider voluntary disclosures as a means to explain items in the financial statements and the decision to make disclosures about other comprehensive income may be based entirely on a desire to make investors understand the new item in the income statement.

Nevertheless, we regard our assumption as reasonable and find support for the idea that producers of financial statements do not consider other comprehensive income relevant in evaluating firm performance. This finding is also supported by the comments from Anna

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<sup>32</sup> See for instance Cheng et al. (1993) and Dhaliwal et al. (1999).

Sikström who was of the opinion that the income statement should end in net income which is the performance measure that shows management's ability to govern the firm's assets.

$H_{P2}$  was developed to examine the second part of our research problem, whether producers regard the information content of net income different from that of other comprehensive income.

*$H_{P2}$ : The use of cash flow hedge accounting did not decrease between 2008 and 2009.*

Overall, our results show that Swedish firms did not change their use of cash flow hedge accounting between 2008 and 2009. These findings support  $H_{P2}$  and, consequently, this hypothesis cannot be rejected. As earlier mentioned, hedge accounting is both time and money consuming and it is not altogether easy to construct hedging relationships qualifying for hedge accounting. Hence, firms choosing to apply hedge accounting must perceive benefits that make it worthwhile. Our result, that firms to a large extent have chosen to continue the application of hedge accounting, indicates that such benefits were still perceived in 2009 although the effective portion of gains and losses on hedging instruments in a cash flow hedge then had to be presented in other comprehensive income. Accordingly, we find support for the idea that producers of financial statements consider reporting a transaction in net income different from reporting it in other comprehensive income and, hence, regard the information content of net income different from that of other comprehensive income. If no such difference were perceived by the producers it is unlikely that they would be willing to spend time and money on cash flow hedge accounting. This finding is also supported by the comments from Anna Sikström who pointed out that if the requirements regarding hedge accounting did not exist, Volvo would rather present the information in OCI as such items are regarded as different from the income statement.

However, we also recognize that there may be other reasons why firms choose to continue the application of cash flow hedge accounting than the perception of a difference between net income and other comprehensive income. As earlier mentioned, Holthausen and Leftwich (1983) state that even if accounting does not matter and an accounting choice has no particular wealth effect, managers still choose certain accounting techniques systematically due to, for instance, tradition and imitation which leads to a clustering of particular accounting techniques by industry. DiMaggio and Powell (1983) are of the opinion that homogenization can be a result of organizations imitating each other and employing professionals with the same formal education. In accordance with these studies, the decision of most Swedish firms to continue the application of cash flow hedge accounting in 2009 may not be a result of a perceived difference between net income and other comprehensive income, but of tradition, imitation of other firms in the same industry or the fact that many professionals have the same approach to accounting. Firms that have applied cash flow hedge accounting for several years may seek continuity in their accounting practices and may have invested time and money in organizing departments handling this form of accounting. Hedge accounting may also have become the norm in the industry in which the firm resides and something that the firm applies without further reflection. As Ericsson (2010) points out, the fact that a firm has a history of using hedges should not be neglected when explaining why firms decide to make use of them. It is possible that the same is valid for hedge accounting

and the habit of use might be the reason why firms choose to continue the application of hedge accounting.

Another possible reason why firms have continued to use cash flow hedge accounting is related to wealth effects on important stakeholders. Watts and Zimmerman (1990) conclude that such wealth effects are important when a firm makes an accounting choice and Fields et al. (2001) state that managers may choose accounting methods in self interest. In her paper studying incentives for hedging and hedge accounting in the presence of a moral hazard problem, Pirchegger (2006, p. 129) assumes that managerial compensation is based on accounting income and concludes that her results suggest that there are possible agency costs occurring from hedge accounting if accounting income is used as performance measure. Consequently, the fact that managers have compensation plans based on net income may be another reason that the use of cash flow hedge accounting has not decreased.

To sum up, we have reached the decision to reject neither  $H_{P1}$  nor  $H_{P2}$ . Hence, we find support for the idea that producers of financial statements do not consider other comprehensive income relevant in evaluating firm performance and that they consider reporting a transaction in net income different from reporting it in other comprehensive income. These findings are supported by the results from our examination of comment letters to the exposure draft. Comments, such as those from Rio Tinto and UBS, indicate that firms do not regard other comprehensive income indicative of firm performance. Additionally, the fact that most respondents considered the two statement approach an important option indicates that they consider the information content of net income different from that of other comprehensive income.

The next two hypotheses have users of financial statements in view.  $H_{U1}$  was developed to examine the first part of our research problem, whether users consider other comprehensive income relevant in evaluating firm performance.

*$H_{U1}$ : The addition of other comprehensive income into the model does not significantly increase the explanatory power for returns.*

Our regression with both net income and other comprehensive income as independent variables resulted in an  $R^2$  of 7.6% as compared to 7.1% for our regression with only net income as the independent variable. Hence, our hypothesis  $H_{U1}$  can be rejected and the addition of other comprehensive income into the model does increase the explanatory power for returns significantly. The rejection of  $H_{U1}$  implies that users of financial statements do consider other comprehensive income relevant in evaluating firm performance.

Since  $H_{U1}$  can be rejected, it is also appropriate to test our hypothesis  $H_{U2}$  which was developed to examine the second part of our research problem, whether users regard the information content of net income different from that of other comprehensive income.

*$H_{U2}$ : Coefficient of NI > Coefficient of OCI*

From our regression with two independent variables, the coefficients of net income and other comprehensive income amount to 0.456 and 0.122 respectively. Since  $0.456 > 0.122$   $H_{U2}$

cannot be rejected. The fact that the coefficient of net income is larger implies that returns depend on net income to a larger extent than on other comprehensive income. This result supports the idea that users of financial statements regard net income as more relevant in evaluating firm performance than other comprehensive income.

To sum up, we have reached the decision to reject  $H_{U1}$  but not  $H_{U2}$ . Hence, we find support for the idea that users of financial statements consider other comprehensive income relevant in evaluating firm performance and that they regard the information content of net income different from that of other comprehensive income. Our findings are opposed to those of Cheng et al. (1993) and Dhaliwal et al. (1999) who conclude that other comprehensive income does not contribute in explaining returns. However, worth noticing is that Cheng et al. control for industry category and when this control is omitted, their results show that the explanatory power for returns,  $R^2$ , increases significantly when other comprehensive income is added into a regression model with net income as the independent variable. Instead, our findings are in line with those of Cahan et al. (2000) who find that other comprehensive income increases the model's explanatory power. However, their model is structured in a different way and is conducted on a small sample from a single market which makes comparing our results difficult.

## 5 Conclusions

Our results suggest that producers of financial statements do not consider other comprehensive income relevant in evaluating firm performance and that they regard net income as more appropriately capturing the achievements of an entity. We also find support for the idea that users of financial statements take other comprehensive income into account when evaluating firm performance, although they regard net income as more value relevant.

In accordance with our results, the IASB's requirements regarding comprehensive income reporting can be considered legitimate in terms of enhancing the usefulness to investors of information presented in the income statement. Our results indicate that other comprehensive income contains useful information for evaluating firm performance, but that net income is much more value relevant. Hence, with the attitudes of producers and users of financial statements in mind, the two statement approach to comprehensive income reporting may seem appropriate. With this format, other comprehensive income is easily available but at the same time separated from net income which remains an accentuated performance measure.

Our results indicate that producers and users of financial statements have different attitudes to the relevance of other comprehensive income in the evaluation of firm performance. Further research could aim at clarifying why these differences exist. Additionally, an association study comparing the relevance to investors of other comprehensive income before and after the amendments to IAS 1 came into force could contribute in answering the question whether the amendments have really resulted in enhanced usefulness of information presented in the income statement. Such a study could address the question of the impact of different reporting formats, which is an interesting question partly due to the conclusion reached by Hirst and Hopkins (1998) that the statement of changes in equity is not as effective in communicating value-relevant information as the income statement. Should the relevance to investors of other

comprehensive income have increased over time, a study of what information firms choose to disclose concerning other comprehensive income could address the question whether such disclosures have consequently become more extensive. At the time of our study, the requirements concerning comprehensive income reporting have only been in effect for just over two years and, hence, we consider such comparison studies premature.

Our results show that other comprehensive income increases the explanatory power for returns but that the coefficient of net income is larger than that of other comprehensive income. However, we have not taken parameters such as the state of the market and type of industry into account and it is possible that controlling for such parameters would alter the explanatory power of other comprehensive income. For instance, it is possible that investors take other comprehensive income into account to a greater extent in some types of industry than in others. Furthermore, the time period examined in this paper encompasses a financial crisis and investors may regard other comprehensive income less relevant under such economic conditions and, instead, value alternative information. Further research could control for these parameters in order to make clear if and to what extent other comprehensive income contains relevant information to investors.

## 6 References

### 6.1 Literature

- Anderson et al. (2007) *Statistics for business and economics*, London: Thomson Learning
- BAS-kontogruppen (2006) *BAS Nyckeltal*, Stockholm: Nordstedts Juridik
- Beresford, D. R., Johnson, L. T., and Reither, C. L. (1996) ‘Is a Second Income Statement Needed?’, *Journal of Accountancy*, Vol. 181, Issue 4, pp. 69–72
- Cahan, S. et al. (2000) Value Relevance of Mandated Comprehensive Income Disclosures, *Journal of Business Finance & Accounting*, Vol. 27, Issue 9/10, pp. 1273–1301
- Cauwenberge, P. V. and De Beelde, I. (2007) On the IASB Comprehensive Income Project: An Analysis of the Case for Dual Income Display, *ABACUS*, Vol.43, No. 1, pp. 1–26
- Cheng, A. et al. (1993) On the Usefulness of Operating Income, Net Income and Comprehensive Income in Explaining Security Returns, *Accounting & Business Research*, Vol. 23, Issue 91, pp. 195–203
- Dhaliwal, D. et al. (1999) Is comprehensive income superior to net income as a measure of firm performance?, *Journal of Accounting and Economics*, Vol. 26, Issues 1-3, pp. 43–67
- DiMaggio, P. and Powell, W. (1983) The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields, *American Sociological Review*, Vol. 48, No. 2, pp. 147–160
- Easton, P. D and Harris, T. S (1991) Earnings as an Explanatory Variable for Returns, *Journal of Accounting Research*, Vol. 29, No. 1, pp. 19–36
- Ericsson, F. (2010) *Säkringsredovisning*, Lund: Lund Business Press
- FAR SRS Förlag AB (2010) *Samlingsvolymen 2010. Redovisning*
- Field, A. (2005) *Discovering Statistics Using SPSS*, London: SAGE Publications Inc
- Fields, T. D. et al. (2001) Empirical research on accounting choice, *Journal of Accounting and Economics*, Vol. 31, Issues 1–3, pp. 255–307
- Hayn, C. (1995) The information content of losses, *Journal of Accounting and Economics*, Vol. 20, Issue 2, pp. 125–153
- Hirst, E. and Hopkins, P. (1998) Comprehensive income reporting and analysts’ valuation judgments, *Journal of Accounting Research*; Supplement, Vol. 36 Issue 3, pp. 47–75
- Holthausen, R., Leftwich, R. (1983) The economic consequences of accounting choice: implications of costly contracting and monitoring, *Journal of Accounting and Economics*, Vol 5, pp. 77–117
- International Accounting Standards Board. Exposure Draft of Proposed Amendments to IAS 1 Presentation of Financial Statements: a revised presentation (2006) [www.iasb.org](http://www.iasb.org)
- International Accounting Standards Board. *Framework for the Preparation and Presentation of Financial Statements* (Part B) London: IASB, 2010
- International Accounting Standards Board. *International Accounting Standard no.1: Presentation of Financial Statements*. (Part A and B) London: IASB, 2010

- International Accounting Standards Board. *International Accounting Standard no.39: Financial Instruments: Recognition and Measurement*. (Part A and B) London: IASB, 2010
- Lev, B. and Zarowin, P. (1999) The Boundaries of Financial Reporting and How to Extend Them, *Journal of Accounting Research*, Vol. 37, No. 2, pp. 353–385
- Ohlson, J. A. (1999) On transitory earnings, *Review of Accounting Studies*, Vol. 4, No. 3–4, pp. 145–162
- Penman, S. H. et al. (1997) An Issues Paper on Comprehensive Income, *Accounting Horizons*, Vol. 11 No. 2, pp. 120–126
- Pirchegger, B. (2006) Hedge Accounting Incentives for Cash Flow Hedges of Forecasted Transactions, *European Accounting Review*, Vol. 15, No. 1, pp. 115–135
- Pope, P. F. and Wang, P. (2005) Earnings components, accounting bias and equity valuation, *Review of Accounting Studies*, Vol. 10, No.4, pp. 387–407
- Statistiska Centralbyrån, *Sveriges ekonomi – Statistiskt perspektiv*, Mars 2010
- Thinggaard, F. and Wagenhofer A. (2006) Performance Reporting – The IASB’s Proposed Formats of Financial Statements in the Exposure Draft of IAS 1, *Accounting in Europe*, Vol. 3, Issue 1, pp. 35–63
- Watts, R. and Zimmerman, J. (1990) Positive Accounting Theory: A Ten Year Perspective, *Accounting Review*, Vol. 65 No.1, pp. 131–156
- Wooldridge, J. M. (2006) *Introductory Econometrics: a modern approach*, Mason: Thomson Learning

## 6.2 Databases

Business Source Premier: [web.ebscohost.com.ezproxy.ub.gu.se](http://web.ebscohost.com.ezproxy.ub.gu.se) Accessed from 2011-01-21 to 2011-03-29

Datastream Advance 4.0

Retriever: [www.retriever.se](http://www.retriever.se) Accessed 2011-02-03

Årsredovisningsdatabasen: [www.ar.fek.su.se](http://www.ar.fek.su.se) Accessed 2011-02-03