Value Relevance of Comprehensive Income and Its Components: Evidence from Major European Capital Markets

Stephen W. Lin*

Florida International University

And

Olivier J. Ramond§**

Jean-François Casta***

Universite of Paris Dauphine, Paris, France

February 2007

*Stephen W. Lin is based in the School of Accounting, College of Business Administration, Florida International University, University Park, Miami, Florida 33199. E-mail : lins@fiu.edu

, * both Olivier J. Ramond and Jean-François Casta are based in the University of Paris, Dauphine, Place du Maréchal de Lattre de Tassigny, 75016 Paris, France. Their respective contact email address are: olivier.ramond@dauphine.fr and jean-francois.casta@dauphine.fr

§ Corresponding author

The authors gratefully acknowledge financial support from the Europlace Institute of Finance (EIF), Euronext Fundation. This research is part of the EIF project "*On the Relevance of Reporting Comprehensive Income under IAS / IFRS*".

Value Relevance of Comprehensive Income and Its Components:

Evidence from Major European Capital Markets

Abstract

This study investigates the extent to which three key summary accounting income figures, namely operating income, net income and comprehensive income, provide value-relevant information to investors in Germany, France, Italy, Spain and the UK. Using a large sample over the pre-IAS-compliance period 1992-2004, we find that all these three accounting income measures are statistically associated with share returns in any of the countries under analysis although our results show some disparities in the degree of 'usefulness' across country samples. Our main results are then threefold. We first provide evidence that comprehensive income is less value-relevant than both the bottom-line and operating income figures in all the sample countries. Second, our results show that aggregate other comprehensive income (or dirty surplus flow) is value-relevant and provides incremental price-relevant information beyond net income in most of the sample countries. This finding is rather different from the existing literature based in the US and UK that suggests other comprehensive income is generally not value-relevant especially when it is not separately disclosed in financial statements. Finally, we find that increased transparency on reporting other comprehensive income in financial statements as required by the UK (FRS3) and US (SFAS130) accounting standards may have warranted a stronger statistical association between firm share returns and comprehensive income. This last finding therefore strongly supports the ideology underlying the IASB/FASB joint project on 'Performance Reporting', and also provides evidence supporting Beaver's (1981) and Hirst and Hopkins' (1998) psychology-based financial reporting theory.

Keywords: Value-relevance, comprehensive income, other comprehensive income, performance reporting

JEL Classification: M41, G12, G31

Data availability: All data are available from sources outlined in the text.

Value Relevance of Summary Accounting Income Measures:
Evidence from Major European Capital Markets

1. INTRODUCTION

In October 2003, the International Accounting Standards Board (IASB) and the US Financial Accounting Standards Board (FASB) (collectively, the Boards) formed a Joint International Group (JIG) whose objective is to lead up to a project that could establish new international accounting standards on reporting financial performance. This project was initially entitled "Performance Reporting: Reporting Comprehensive Income[1], and is mainly concerned with the presentation and disclosure of financial performance information in financial statements under the current international and US GAAPs. As stated by the Boards, the financial reporting standards resulting from this project would intend:

> "*to establish standards for the presentation of information in order to enhance the usefulness of that information in assessing the financial performance and financial position of an entity*"
>
> (IASB, Project Overview, 25th of October 2004).

Accordingly, any standards derived from this project will introduce the first generally recognised principles on reporting financial performance into the IFRS accounting framework. As argued by some academics and professionals (e.g. Linsmeier et al, 1997; Barker, 2004), this project is especially well-timed because the proliferation of alternative and inconsistent financial performance measures are prejudicial to high-quality financial reporting, which is not only essential to any well-informed investment decisions but is also propitious to efficient capital markets.

Although limited to the technical display of certain accounting items and measures in financial statements, this project has indirectly induced a great controversy while enforcing IAS-complying firms to disclose in their financial statements a highly divisive accounting figure named 'comprehensive income' under the US and UK GAAPs. According to the FASB's Statement of Financial Accounting Concepts N°6, *Elements of Financial Statements* (1985), 'comprehensive income' (also called 'all-inclusive income' or 'clean-surplus income') is defined as "*the change in equity [net assets] of a business enterprise during a*

period from transactions and other events and circumstances from nonowner sources. It includes all changes in equity during a period except those resulting from investments by owners and distributions to owners" (SFAC No. 6, paragraph 12). Comprehensive income differs from the traditional bottom-line or net income measure as it encompasses dirty surplus items, often termed 'other comprehensive income' (OCI) by standard-setters, i.e. the accounting items that are directly taken to shareholders' equity and bypass the income statement. They currently include, under IAS, foreign currency translation gains and losses, actuarial gains and losses, and asset revaluations.

Consistent with this 'all-inclusive' view of income, the *IASB's Exposure Draft of Proposed Amendments to IAS 1 'Presentation of Financial Statements'*, issued in March 2006, first time in history introduces the concept of 'total recognised income and expense', defined as "*the change in equity of an entity during a period from transactions and other events other than those resulting from contributions by and distributions to equity holders in their capacity as equity holders*" (IASB, 2006, BC 17: 78). As a consequence, this newly promulgated accounting item does not only directly make echo to a US old-fashioned terminology of 'Comprehensive Income'[2] but also extend a long-history debate on the current operating and all-inclusive concept of income into the EU from the US. Before this change, European firms did not pay much attention to this grey area of financial reporting.

The opponents of comprehensive income argue that there are two main issues in relation to dirty surplus accounting under the current IASB proposal. First, OCI items may mis-measure firm performance and value (Barker, 2004) and worsen agency problems because it could make earnings manipulation by managers much easier (Robinson, 1991; CFA Institute, 2005). A more alarming consequence is to reduce the informativeness and quality of accounting numbers (Cope, Johnson and Reither, 1996). Second, individual dirty surplus items are mainly determined by local accounting standards from which managers will have certain degree of discretion over these items. Since various dirty surplus items may be recognized by different countries due to their nation's unique legal, cultural, institutional, and social environment, it hinders the use of accounting numbers, especially net income, in cross-country comparisons and threatens investors' understanding of accounting information reported by international firms (Linsmeier et al, 1997; CFA Institute, 2005). It could also reduce the credibility of accounting information. In its famous 1993 report entitled '*Financial Reporting in the 1990s and Beyond*', the Chartered Financial Analysts (CFA) Institute[3], one

of the largest and most influential international financial statement user groups, argue that "*We have profound misgivings about the increasing number of wealth changes that elude disclosure on the income statement. Yet individual items may be interpreted differently. That calls for the display of comprehensive income that allows components of different character to be seen and evaluated separately.*" (AIMR, 1993: 63). In a similar vein, the CFA Institute recently maintained its thought arguing "*To be useful in making the(se) assessments [of a company's economic resources, the claims to those resources and changes in them, including measures of an entity's performance], reported information must be timely, accurate, understandable, and comprehensive. The financial statements must recognize, as they occur, all events or transactions that affect the value of the company's net assets and, hence, common shareowner's wealth.*" (CFA Institute, 2005: 10).

On the other hand, supporters of dirty surplus accounting have repetitively justified this practice on the grounds that it helps produce a finer performance measure that is based on 'normal operations' and has predictive ability (Kiger and Williams, 1977; Black, 1993; Brief and Peasnell, 1996). In the same streamline of thoughts, Black (1980; 1993) contents that financial statement users including analysts, stockholders, creditors, managers, tax authorities and even economists really want an earnings figure that measures value, not value creation. Accordingly, one of the major issues raised by the IASB project deals with whether the format of reporting financial performance makes any difference in an efficient capital market. This question is of much interest for small investors than those well equipped investors such as institutional investors because sophisticated investors can obtain the information they need through different information channels, such as direct communication with firm managers. Reporting financial performance practice for publicly listed companies is crucial because it could reduce information asymmetry between firm managers and investors (Leuz and Verrecchia, 2000; Bushman and Smith, 2001), which in turn would affect international capital allocations (Ball, 1995). However, very little effort has been made so far to evaluate the economic consequences of reporting financial performance in the literature. As a result, it is widely believed that the Boards need more care while setting a standard for this purpose (Barker, 2003; 2004).

To evaluate the potential economic consequences of regulating reporting financial performance practice worldwide, this study uses a large international sample to provide some preliminary evidence on the usefulness of the key summary financial performance measures

that are most concerned by the users of account especially investors. Most of the previous studies in this area have largely focused on UK and US stock markets. It also has become an important issue for many countries in the world especially in continental Europe because all the publicly listed firms in European stock exchanges hade to adopt the International Accounting Standards since the 1st of January 2005. This study uses panel data from five major EU countries and investigates the extent to which three key summary financial performance measures, including operating income, net income, and comprehensive income, provide value relevant information for investors' decision making *before* the adoption of the International Accounting Standards. This research design allows us to enhance our understanding of the usefulness of various income measures among countries with different legal, social, and economic environment. In addition, our empirical results may help the Boards in evaluating whether summary financial performance measures should be disclosed in financial statements, and whether comprehensive income provides any incremental value relevant information for investors and should be legitimately introduced into the new coming international accounting standards, given the importance of decision relevance of accounting information addressed in the IASB *1989 Conceptual Framework*, and eventually supersede the traditional net income figure.

The remainder of the paper proceeds as follows. Section 2 discusses prior research. Section 3 develops the testable hypotheses. Section 4 and 5 describes our sample selection criteria and research models, respectively. Empirical results are reported and discussed in section 6. Robustness tests are performed and discussed in section 7. Final section summarizes and concludes.

2. PRIOR STUDIES

Since the seminal work on earnings components by Easton and Harris (1991) and Amir, Harris and Veuti (1993), value-relevance research has been widely recognized while analysing the usefulness and the informativeness of accounting figures (Barth, Beaver and Landsman, 2001). However, some authors (*see* Holthausen and Watts, 2001) urged that such studies have limited or even no implication for standard setters since they are mainly based on research models that cannot provide any inferences for standard setting. Barth et al (2001), however, argue that value-relevance research anchors on the use of widely accepted valuation

models and therefore can help assess how well accounting figures reflect information used by equity investors in their economic decisions, and accordingly provides insights into questions of interests to standard setters. More specifically, in an international accounting standards context, this approach can be justified on the ground that the *IASB 1989 Conceptual Framework* requires that "*information must be relevant to the decision-making needs of users*", i.e. " […] *it influences the economic decisions of users by helping them evaluate past, present or future events or confirming, or correcting, their past evaluations*" (IASB, Conceptual Framework, 1989, par. 26). Moreover, many empirical studies have used this research methodology to examine the value-relevance of various summary accounting income figures including comprehensive income in the US and UK. These studies can be divided into two categories, that is, US *SFAS 130* comprehensive income-based studies and the studies dealing with US *SFAS 130* comprehensive income alike outside the US[4].

Most of the previous studies in this area are based in the US. Using a large US sample over the pre-*SFAS 130* period 1972-1989, Cheng et al (1993) find that both conventional summary accounting income measures, i.e. operating income and net income, dominate comprehensive income in terms of the explanatory power of earnings for returns. They also report that differences between net income and operating income i.e. non-operating items, including exceptional and extraordinary items provide incremental value-relevant information beyond operating income. Nevertheless, Cheng et al (1993) fail to find any statistical significance for the difference between net income and comprehensive income, i.e. dirty surplus items. Using US data for the period 1995-1996, Dhaliwal et al (1999) re-examine this issue by investigating the value-relevance of comprehensive income and its major three components as required by *SFAS 130*. They find that the only component of comprehensive income that improves the association between income and return is the marketable securities adjustment. Further evidence suggests that this finding is driven by financial firms. As a result, they conclude that comprehensive income does not provide significant value-relevant information beyond net income.

Chambers et al (2006), however, argue that the weak results documented in the previous studies are caused by significant measurement errors in the examined variables. This is because US firms were not required to report the actual amounts of comprehensive income and its components in financial statements before SFAS 130 became effective in 1997. Researchers therefore needed to estimate these items with potentially significant measurement

errors before 1997. Chambers et al (2006) define the 'estimated' comprehensive income as '*as if* comprehensive income' to be distinct from the '*as reported* comprehensive income' that is the actual comprehensive income reported in the financial statements[5] after the SFAS 130 became effective in 1997. The latter income figure can only be obtained through hand collection.

Chambers et al (2006) find that other comprehensive income and its components, including foreign currency translation gains/losses, marketable security adjustments, and pension liability adjustments, are never priced by the market in the pre-*SFAS 130* period (1994-1997), but are positively priced in the post-*SFAS 130* period ((1998-2001) for their S&P 500 index firms. They conclude that as reported comprehensive income and its components are price-relevant, and provide incremental price-relevant information beyond net income although net income still dominates comprehensive income in predicting future net income and operating cash flow. In a very similar study, using a sample of NYSE firms during the pre-(1994-1996) and post-(1998-2003) *SFAS 130* period, Kanagaretnam et al (2005) find evidence that as if comprehensive income and its components are all value-relevant for non-financial firms although the post-*SFAS 130* sample exhibits much stronger statistical associations. In addition, they confirm that net income dominate comprehensive income as a predictor of future firm operating performance. Using as if comprehensive income and its components, Biddle and Choi (2006) find consistent results supporting the value-relevance of comprehensive income and its components after controlling for prior year comprehensive income. They also find comprehensive income dominates net income in predicting future net income and operating cash flow.

Several studies have used international data. Using a small UK sample, O'Hanlon and Pope (1999) find that dirty surplus components are not price-relevant except extraordinary items even when using various measurement intervals. In the UK *Financial Reporting Standard N°3* (1993) context, Lin (2006) find dirty surplus items such as extraordinary items, foreign currency translation gains/losses, reversal of written goodwill, and other items are all value-relevant and provide incremental value-relevant information beyond net income using UK data for the period 1993-1998. Using a small New-Zealand sample, Cahan et al (2000) do not find any evidence on the value-relevance of comprehensive income and its components. Similarly, using Australian data over the period 1988-1997, i.e. the pre-*AASB N°1018* '*Statement of Financial Performance*' period, Brimble and Hodgson (2005) document that

comprehensive income exhibit lower value relevance than net income, and that dirty surplus components have very minor price information content even after considering non-linear setting.

In summary, previous empirical evidence on the value-relevance of comprehensive income and its components are generally mixed. Interestingly, all these studies are based in English Speaking countries where Anglo-American accounting system dominates. The main features of this accounting system are principles-based and equity capital market-oriented. Managerial discretion over accounting recognition and disclosure has played an important role under this accounting system. It is likely that managerial discretion over the recognition of comprehensive income and its components may have significantly reverse effect on their potential link with firm value. In contrast, continental European countries such as Germany and France adopted a more rules-based and credit capital market- and tax-oriented accounting system, where managerial discretion has played a less important role in deciding comprehensive income and its components. Investors may be able to understand and correctly use the information in a more efficient and effectively way in these countries. Hence, using a large sample firms from five major European countries this study provide further empirical evidence on the value-relevance of comprehensive income and its components, underlying the IASB / FASB joint project on '*Performance Reporting*'. Research hypotheses are discussed next.

3. HYPOTHESES DEVELOPMENT

The hypotheses developed in this section refer to the IASB/FASB '*Performance Reporting*' joint project and the literature regarding the value-relevance of comprehensive income and its components. More precisely, we focus on the following four major issues which underlie the debates surrounding the above joint project:

1) Are comprehensive income and its components value-relevant?
2) Does comprehensive income, at an aggregate level, provide incremental value-relevant information beyond net income and operating income?
3) Does 'other comprehensive income' provide incremental value-relevant information beyond traditional net income?

4) Can we observe differences in value-relevance between 'reported comprehensive income' and 'non-reported comprehensive income'? In other words, is 'comprehensive income' more value-relevant when it is clearly disclosed on the face of the financial statements than when it is not?

Different from the previous studies, we investigate the above issues using international data because we believe the value relevance of comprehensive income and its components could be conditional on a nation's unique socio-economic environment. We predict that the value relevance of comprehensive income and its components is different between countries where the principles (or market-oriented) or rules (or credit-oriented) based accounting systems are used respectively.

The above four issues are investigated in this study through the following five hypotheses. Under the IAS, European firms were previously required to clearly identify and disclose both operating profit[6] and its components on the face of the P&L if they are material (*IAS1 v2003*, par. 75; the IASB Conceptual Framework, pars. 29-30). Although operating profit has not been clearly defined in any international accounting standard, the IASB regards it as an important income summary measure (*IAS 1 v2005*, BC 12 and 13). If the IASB standard-setter is correct in the assessment of the decision relevance of operating income, then the following hypothesis should be true.

H_{01}: operating profit is value- relevant and provides incremental value-relevant information beyond net income

Comprehensive income and dirty surplus items have been at the centre of one of the major accounting debates among accounting profession and academia for several decades. As discussed earlier, this debate involves two very different concepts of accounting income, that is, current operating and dirty surplus accounting. Analysts have regularly expressed dissatisfaction not with what is reported in the present-day statements of income, but rather with what is not reported in them (CFA Institute, 2005). More specifically, their discontent is about the present practice of directly taking certain items of comprehensive income to equity (Foster and Hall, 1996). For example, in its 1993 report, the CFA Institute argued that there seems no conceptual basis for allowing certain accounting items to be directly taken to equity and bypass the income statement. Since these items are not currently included in the statement

of income or financial performance, the accounting treatment for comprehensive income and its components is still not determined. In addition, without a sound reporting of the 'all-inclusive' earning through a dedicated statement "much effort is required of analysts to locate and evaluate all of the income statement items that can have a bearing on their forecasts of the future and the valuation of the firm" (CFA, 2005: 10).

Opponents of dirty surplus accounting, however, assert that excluding transitory items from earnings help investors' valuation process. Skinner (1999) argues that empirical studies have for the most part failed to provide evidence that other comprehensive income has implications for a firm's future operating performance or cash flows. He also argues that other comprehensive income mainly include "accounting adjustments that are difficult to interpret economically and which sophisticated analysts tend to ignore in estimating future earnings and cash flows". Similarly, White et al (1998, quoted in Skinner, 1999) conclude these items add undoubtedly noise to reported earnings and are therefore meaningless in any valuation process.

Following Skinner's (1999) claims, one may expect that comprehensive income is less value-relevant than other conventional summary income figures since investors are more interested in using recurrent earnings for valuation purpose. On the other hand, CFA Institute (2005) argues that dirty surplus items are important information that is absolutely necessary for the securities analysis and valuation purposes. As a result, the above two competing theories can be empirically verified through the following hypothesis:

> H_{02}: Comprehensive income, at an aggregate level, is value-relevant and provides incremental value-relevant information beyond net profit and operating profit.

Some FASB and IASB board members overtly claim that investors and other users of accounts have over emphasized net income and earnings per share (*see* for instance, Foster and Hall, 1996). They, however, believe that "if the components of comprehensive income become more transparent, analysts and other users of financial statements will be more likely to focus on those individual components in evaluating the quality of earnings and in assessing the likelihood that past reported income can be used to forecast future financial performance" (Foster and Hall, 1996: 19). In this respect, it has been argued that "the new figure [i.e.

'comprehensive income'] will shine a bright, embarrassing light on items that are now buried in shareholders' equity" (MacDonald, 1997) and will permit to measure and recognize the economic activities and events affecting a company's operations (CFA, 2005).

In parallel of the above normative claims, psychology-based financial reporting research that focuses on the presentation and display of accounting information document that financial statement users are more likely to use information when it is provided in a clear, simple manner (e.g. Johnson, Payne, and Bettman, 1988; Harper, Meister and Strawser, 1987, 1991). In this sense, Hirst and Hopkins (1998: 1) note: "research in psychology suggests that information will not be used unless it is both available and readily processable (i.e. clear)". Similarly, Beaver (1981) carves out the rationale of accounting regulation under the efficient market hypothesis stating that if accounting regulation makes the market more efficient with respect to a richer information set, then the price effects may be expected as a result of accounting disclosures. Consistent with this analysis, Sanbonmatsu et al (1997) find evidence that if individuals perceive information to be more important (e.g. other comprehensive income and its components, may be perceived to be more important once they are disclosed as part of comprehensive income), they weight this information more heavily in their decision making if the informational environment is finer[7].

From an EU standard-setting point of view, disclosure of comprehensive income is already required in the UK since 1993. Indeed, UK FRS 3 "*Reporting Financial Performance*", first issued in October 1992, explicitly requires the reporting of a comprehensive income item through the Statement of Total Recognized Gains & Losses (hereafter, STRGL). The STRGL is defined by FRS 3 as "a primary financial statement that includes the profit or loss for the period together with all movements in reserves reflecting recognised gains and losses attributable to shareholders" and therefore looks quite similar to the Statement of Total Recognized Income and Expense (STRIE) promulgated by the IASB IAS 1 amendment.

Therefore, following Beaver (1981) and Hirst and Hopkins (1998), the following hypothesis is expected to be empirically verified:

H_{03}: Comprehensive income is more value-relevant, and provides more incremental price information beyond net income in the UK than any other continental European countries.

As shown previously, proponents of reporting comprehensive income include the CFA Institute, one of the largest and most influential user groups. As depicted in its 1993 report, the CFA Institute believes comprehensive income is needed for better and more useful financial reporting in several areas, including reporting the impact of changing in fair values of marketable securities and all other non-owner changes in equity that currently are reported as equity adjustments. Stepping the CFA's proposals and the *US SFAS 130* disclosure requirements, the IASB issued in March 2006 an amendment draft focusing on the disclosure of a firm's other comprehensive income providing that it is value-relevant and provides incremental value-relevant information beyond net income. If the authors of the IAS 1 amendment draft are correct, the following hypothesis should be true:

H_{04}: Other comprehensive income is price-relevant and provides incremental price information beyond net income.

Again, following the psychological finding suggested by Hirst and Hopkins (1998) and the disclosure theory suggested by Beaver (1981), we predict the information contained in dirty surplus in the UK should be reflected into share price better than other continental European countries due to the fact that the STRGL has been required by FRS3 since 1993. As a result, the following hypothesis is expected to be empirically verified:

H_{05}: Other comprehensive income is more price-relevant and provides more incremental price information beyond net income in the UK than in any other European country.

The value relevance of accounting information has been widely examined through the statistical association between share return and accounting numbers in the accounting literature. In other words, one possible economic consequence of accounting information disclosure is directly linked to the change in share price. Following Roll (1988) and Lev (1989), this study uses the explanatory power of examined accounting items for share returns (i.e. R^2 statistic) to investigate their usefulness[8] for investors (or the capital market overall) and a way to test the previously developed hypotheses.

Using a large sample from European listed firms obtained from DATASTREAM and WORLDSCOPE databases, we examine the information set perspective of *IASB "Performance Reporting" Project* through the above five hypotheses. The details of sample selection and data collection are summarised in section 5. The next section describes the major steps of the research design methodology.

4. RESEARCH DESIGN

Our research design to investigate the above five hypotheses is briefly discussed as follows.

(i) Comprehensive income and other comprehensive income

In European countries, including the five countries under analysis in this study (i.e. UK, France, Germany, Italy, and Spain), dirty surplus accounting items and practices vary widely from one national accounting framework to another one. Since it would be too costly to deal with country-specific dirty surplus components, we choose to use a proxy for other comprehensive incomes inspired from the Ohlson's (1991) clean surplus relationship. The articulation between balance sheet amounts, accounting flows, dividends and capital changes for each accounting period, *t*, is then defined as follows (company subscript suppressed):

$$BV_t \equiv BV_{t-1} + N_t - d_t + CI_t \quad (1a)$$

Or:

$$CI_t \equiv \Delta BV_t - N_t + d_t \quad (1b)$$

Where Δ denotes a change between periods t-1 and t; *BV* denotes the book value of ordinary shareholders' funds; *N* denotes the firm's total equity issued; *d* denotes annual cash dividends and *CI* denotes the firm's comprehensive income. Moreover, since comprehensive income is defined here as an 'all inclusive income', it can be stated that:

$$CI_t \equiv NI_t + DS_t \quad (1c)$$

Where *NI* denotes the firm's bottom-line income (or net income) and *DS* denotes dirty surplus items or other comprehensive income. Substituting expression (1c) into (1a) and (1b), it is straightforward to rewrite these two latter equations respectively as follows:

$$BV_t \equiv BV_{t-1} + N_t - d_t + E_t + DS_t \quad (1d)$$

$$DS_t \equiv \left[\Delta BV_t - N_t\right] - \left[E_t - d_t\right] \quad (1e)$$

Where $[\Delta BV_t - N_t]$ represents the movement of shareholders' funds and $[E_t - d_t]$ denotes the annual income that the firm decides to reintroduce in its cyclical activities (i.e., the "firm self-funding item"; *see* Beaver (1981)) for the accounting period *t*. Relationship (1e) does underline that there are three important flow statements underlying the IASB project like in *UK FRS 3* (that does not include the balance sheet). $[E_t - d_t]$ appears in the profit and loss account (which constitutes a sub-statement in the *IASB* project), change in *BV* and change in capital appears in the reconciliation of the movements in shareholders' funds (called in the IASB project, 'statement of changes in equity'); *DS* appears in the STRIE (i.e. the statement of comprehensive income). Therefore, equations (1b) and (1e) provide proxies respectively for comprehensive income and for the yearly dirty surplus accounting flow[9]. These proxies will be used in the research models described hereafter.

(ii) Modelling background

The idea that market capitalization and book value are closely related to each other as being the two faces of the same coin of shareholders' equity "stock" values has been widely documented in the financial literature in the past two decades (e.g. Harris and Ohlson (1987); Lev (1989); Easton and Harris (1991)). However, links observed between share price, earnings, dirty surplus and other movements in shareholders' funds have seldom been formerly demonstrated. In a UK earnings-return association study, Lin (2006) proposes an Ohlson (1995) model-based approach to examine the above relationships. We thus considers an Ohlson (1995)-based model taking the following form for each financial period t:

$$P_t = k\left(\varphi CI_t - d_t\right) + (1-k)BV_t + \alpha V_t \quad (2)$$

Where *P* denotes the firm's share price at time *t*; *CI* denotes comprehensive income per share, *d* is the firms' annual dividend per share; *V* denotes additional information about future earnings that is not reflected in current earnings and book value for period *t*; *k* is a factor for weighting the contribution of change in book value, i.e. $\phi CI - d$, versus book value levels in

the explanation of stock price, and ϕ, α are other estimated parameters. As underlined by Ohlson (1995), this valuation model states that a firm value is a weighting sum of a book value model, i.e. BV_t, and an earnings model, i.e. $\varphi CI_t - d_t$.

A more simplified form of the above model has frequently been investigated in the return-earnings relationship literature (e.g. Easton & Harris (1991); O'Hanlon & Pope (1999)):

$$P_t = \alpha_0 + \alpha_1 BV_t + \alpha_2 CI_t + \varepsilon_t \tag{3}$$

Where *P* denotes the firm's share price adjusted for dividend, *BV* denotes the firm's book value per share, *CI* denotes the firm's comprehensive income (or earnings) per share and the subscript *t* denotes the accounting period.

To avoid encountering scale effect in the return-earning regression statistics, some previous studies (e.g. Cheng et al (1993); Easton (1999)) have proposed another modelling specification that turns the dependent variable, i.e. share price *P*, into a share return variable. Following this, model (3), expressed for every financial period *t*, is then transformed to:

$$RET_t = \beta_0 + \beta_1 \frac{CI_t}{P_{t-1}} + \beta_2 \frac{\Delta CI_t}{P_{t-1}} + u_t \tag{4}$$

Where *RET* is the firm's average cumulative share return[10], *P* is the firm's cum-dividend share price, *CI* is comprehensive income per share and *ΔCI* is the change in comprehensive income per share during each accounting period t. Using the relationship (1c), it is straightforward to rewrite (4) as:

$$RET_t = \beta_0 + \beta_1 \left(\frac{NI_t + OCI_t}{P_{t-1}} \right) + \beta_2 \left(\frac{\Delta NI_t + \Delta OCI_t}{P_{t-1}} \right) + u_t \tag{5a}$$

Or

$$RET_t = \beta_0 + \beta_1 \frac{NI_t}{P_{t-1}} + \beta_1 \frac{OCI_t}{P_{t-1}} + \beta_2 \frac{\Delta NI_t}{P_{t-1}} + \beta_2 \frac{\Delta OCI_t}{p_{t-1}} + u_t \tag{5b}$$

It is noteworthy that following Ohlson's (1989; 1995) framework, the assumption on the coefficients of CI, i.e. β_1 and β_2, might not be verified given earnings reported in the profit

and loss account have higher persistence than dirty surplus items that are reported in the statement of total recognised incomes and expenses (Pope and Wang, 2005).

Similarly to Ohlson (1999) and Pope and Wang (2005), we propose to investigate the following extended model that allows for more flexible considerations:

$$RET_t = \gamma_0 + \gamma_1 \frac{NI_t}{P_{t-1}} + \gamma_2 \frac{\Delta NI_t}{P_{t-1}} + \gamma_3 \frac{OCI_t}{P_{t-1}} + \gamma_4 \frac{\Delta OCI_t}{p_{t=1}} + u'_t \tag{5c}$$

Model (5c) is then further developed to investigate the value-relevance of each earnings component. The following subsection presents the research approach adopted in this study.

(iii) Value -Relevance Models for Earnings Components

Consistent with Lin's (2006) and Cheng et al's (1993) methodologies, comprehensive income (or earnings) in model (5b) is then decomposed into the typical functional P&L structure. To compare the information content between three different summary measures of financial performance and test our five hypotheses, we estimate model (5c) for each key performance measure and its components, and for each of our five country samples:

$$RET_t = \gamma_0^{'} + \gamma_1^{'} \frac{OPIN_t}{P_{t-1}} + \gamma_2^{'} \frac{\Delta OPIN_t}{P_{t-1}} + \omega_t^{'} \tag{6a}$$

$$RET_t = \gamma_0^{"} + \gamma_1^{"} \frac{NI_t}{P_{t-1}} + \gamma_2^{"} \frac{\Delta NI_t}{P_{t-1}} + \omega_t^{"} \tag{6b}$$

$$RET_t = \gamma_0^{(3)} + \gamma_1^{(3)} \frac{CI_t}{P_{t-1}} + \gamma_2^{(3)} \frac{\Delta CI_t}{P_{t-1}} + \omega_t^{(3)} \tag{6c}$$

$$RET_t = \gamma_0^{(4)} + \gamma_{(1)}^{(4)} \frac{NI_t}{P_{t-1}} + \gamma_2^{(4)} \frac{\Delta NI_t}{P_{t-1}} + \gamma_3^{(4)} \frac{OCI_t}{P_{t-1}} + \gamma_4^{(4)} \frac{\Delta OCI_t}{p_{t=1}} + \omega_t \tag{6d}$$

Accordingly, our five hypotheses can be reformulated into the following five null hypotheses:

H_{01}: $R^2_{NI|OPIN} \equiv R^2_{NI} - R^2_{OPIN} = 0$

H_{02}: $R^2_{CI|NI} \equiv R^2_{CI} - R^2_{NI} = 0$

H_{03}: $R^2_{NI,DS|NI} \equiv R^2_{NI,DS} - R^2_{NI} = 0$

H_{04}: $R^2_{CI(UK)|CI(EU)} \equiv R^2_{CI(UK)} - R^2_{CI(EU)} = 0$

H_{05}: $R^2_{NI,DS(UK)|\ NI,DS(EU)} \equiv R^2_{NI,DS(UK)} - R^2_{NI,DS(EU)} = 0$

Where $R^2_{P|Q}$ denotes an increase in adjusted-R^2 due to variable P, conditional on variable Q and $R^2_{P,Q}$ denotes the adjusted-R^2 due to P and Q[11].

(iv) Nested and non nested statistical tests

Following previous studies, whether earnings components and dirty surplus items provide incremental value-relevant information over aggregate earnings is measured by the difference in adjusted *R*-squared values between nested models and its statistical significance (using *F*-test), and the statistical significance of the slope coefficients of examined variables. In the case of non-nested models' comparison, the likelihood-ratio-based Vuong's (1989) test is implemented. Easton and Sommers (2003) document that the scale effect gives rise to overwhelming *R*-squared values in price-level regressions. This study uses only share returns associated with panel data and therefore should not encounter this peculiar econometrical issue.

The details of sample selection and data description are shortly discussed in the next section.

5. SAMPLE SELECTION AND DATA DESCRIPTION

We initially collected accounting data for all the listed companies on the UK, German, French, Italian and Spanish stock markets available from DATASTREAM and WORLDSCOPE for the period 1992-2004[12]. Since the international accounting standards are effective in EU from 2005 onwards, we do not include this year in the sample. This is because we believe the content of comprehensive income and its components may have been changed due to the accounting differences between the international GAAPs and national GAAPs in our four continental European countries. We therefore leave the value-relevance of comprehensive income after the adoption of the international GAAPs for future research. Using the level 6 industrial classification in DATASTREAM, coded INDC6[13], we deleted sample observations with INDC6 spanning from 8000 to 8999 (i.e. financial sectors). We

exclude these firms because of their unique regulatory environment and financial reporting practice.

'Comprehensive Income' is not clearly reported on the face of financial statements during the test period in four of our five sample countries, including Germany, France, Italy and Spain[14] although the information to construct it is readily available from financial statements[15]. Neither DATASTREAM nor WORLDSCOPE provide a separate item for comprehensive income[16]. Subsequently, we manually computed comprehensive income using the following well-known clean-surplus formula[17]:

$$CI_t \equiv \Delta BV_t + d_t - N_t \qquad (1b)$$

Where BV_t denotes the book value of ordinary and preference shareholders' funds at the end of period t; N_t denotes new equity issued during period t; and d_t denotes dividends paid to all shareholders during the year.

More precisely, our empirical tests use the following accounting items in DATASTREAM and WORLDSCOPE to construct the variables in model 1(b):

$BV \equiv$ Ordinary Share Capital (Item #301) + Reserves (Item #304)
+ Preference Capital (Item #306)[18]

$d \equiv$ Dividends Paid (Item #434)

$N \equiv$ Total Equity Issued (Item #406)[19]

As a result, firms with missing accounting data in DATASTREAM or WORLDSCOPE were deleted from the sample. We also excluded firms whose financial markets data are not available in DATASTREAM. Besides, in order to avoid the impact of potential outliers on our empirical results, we deleted top and bottom 1% extreme observations for each variable of interest. Table 1 exhibits a breakdown by country of the sample size before and after deleting outliers for each model used in the analysis.

[INSERT TABLE 1 ABOUT HERE]

6. EMPIRICAL RESULTS

(i) Univariate and bivariate statistics

The descriptive statistics of all the variables examined in this study are reported in Table 2. Accounting variables are reported on a per share basis, and are deflated by prior year end share price. Panel A shows that the mean (median) value of comprehensive income is -0.010 (0.041) in the UK, -0.018 (0.024) in Germany, 0.032 (0.049) in France, 0.023 (0.036) in Italy and 0.092 (0.069) in Spain, respectively. The mean (median) value of net income is -0.021 (0.049) in the UK, -0.036 (0.032) in Germany, 0.033 (0.052) in France, 0.008 (0.038) in Italy and 0.061 (0.070) in Spain, respectively. Net income appears to be smaller than comprehensive income except in France. The Mann-Whitney-Wilcoxon two-tailed test shows that comprehensive income (*CI*) and net income (*NI*) are significantly different except in Spain and Italy. We further examine the distribution of the other comprehensive income (OCI) in these two countries. Unreported Student's *t*-test shows that *OCI* in the Italian and Spanish samples is statistically different from zero at a 1% level. We therefore expect that both *NI* and *CI* provide different value-relevant information amongst the examined samples. Spain has the highest amount of *OCI* (i.e. 3.10%) in comparison with UK, (1.20%), Germany (1.70%) and Italy (1.50%). France is the only country with very small negative OCI (i.e. -0.10%)

Panel B exhibits the Pearson and Spearman rank correlation coefficients for all the variables under analysis. It shows that *OCI* is negatively correlated to net income (*NI*) and operating income *(OPI)* for all the examined countries[20] except Spain, and positively correlated to comprehensive income (*CI*) and change in comprehensive income (ΔCI).

[INSERT TABLE 2 ABOUT HERE]

(ii) Price relevance of performance components

Unreported Shapiro-Wilks statistics show that most of the examined performance components are not normally distributed, indicating that potential outliers might still drive the OLS statistics. To overcome this problem, two sets of regression results are provided for

comparison and robustness test purposes. The first set of results use 'reported' summary accounting measures as independent variables (i.e. the conventional OLS method); the second set of results uses the ranks of reported summary accounting measures as independent variables (i.e. the ranking method). They are reported in Panels A and B, respectively throughout Tables 3 to 6. The ranking method, inspired from Fama and McBeth's (1973) zero-investment portfolio construction methodology, has been used in many empirical studies (e.g. Abarbanell and Bushee, 1998; Raedy, 2000; Lin, 2006) to standardise all the explanatory variables in order to reduce the impact of potential outliers, and to fit the potential non-linear relationship between share return and accounting numbers better.

Panel A of Table 3 reports regression results for the value relevance of operating income across five EU countries. Results indicate that the slope coefficients of the level of and change in operating income (*OPI* and *ΔOPI*, respectively) are value relevant in all the five cases. However the usefulness of operating income for investors, as proxied by the regression *R*-squared values, appears to vary across our sample countries. Operating income appears to explain the variation of share return better for French and Italian firms. Theses findings are also confirmed by the ranking OLS method reported in Panel B. Panel B shows that (1) *R*-squared values are consistently higher than those using the conventional OLS method, indicating that the ranking method fits the relation between share return and earnings components better; (2) both *OPI* and *ΔOPI* are statistically significant at the 1% level, suggesting operating income is indeed value relevant; (3) slope coefficients are consistently lower than those using the conventional OLS method, suggesting that the ranking method alleviates the influence of outliers; (4) *R*-squared value is higher for French (16.59%) and Italian (16.62%) samples, indicating that following Lev's (1989) framework, operating income is more 'useful' in these two countries than UK, Germany and Spain.

In summary, results reported in Table 3 suggest that operating income is value relevant in all the examined countries although it appears to be more 'useful' for investors in both France and Italy. We find evidence supporting H_{01} in the sense that operating income is value relevant. Table 6 reports the evidence on whether operating income provides incremental price information beyond net income.

[INSERT TABLE 3 ABOUT HERE]

Table 4 reports the results for the value relevance of net income using both the conventional and ranking OLS regression models. It shows that net income is consistently associated with return in all the examined countries. The level of and change in net income are statistically significant at the 1% (5%) level in Germany, France, Italy and Spain (UK) except in Italy for the change in net income under the conventional OLS method. Besides, conventional OLS *R*-squared values are consistently higher in the French, Italian and Spanish samples, suggesting that net income is more 'useful' for investors in these countries than in the UK or Germany. In addition, it is worth noting that adjusted *R*-squared values of German sample in Panel A of Tables 3 and 4 appear lower than that of France, Italy and Spain. Leuz and Wüstemann (2005) justify this finding on the ground that insider information and trading are commonly spread on the German market due to its bank-oriented financing system. Subsequently, private information diffusion coupled with insider trading could have reduced the contemporaneous association of accounting numbers with share returns.

Using the ranking OLS regression, Panel B shows that (1) the *R*-squared values of model (6b) ranges from 10.42% to 27.78% and are much higher than those using the conventional OLS method (ranging from 4.88% to 14.80%); (2) the slope coefficients of level of and change in net income (*NI* and *ΔNI*, respectively) are much smaller (except in Germany where they are higher and in UK where they are almost equal) than those using the conventional OLS regression model; (3) *NI* and *ΔNI* appear to be positively associated with share return at the 1% level in all the cases. The ranking regression fits the association between share return and net income better, and effectively reduces the impact of extreme observations on the OLS regression. Using the both regressions, UK firms appear to have lowest *R*-squared value, indicating that *NI* contains less value-relevant information in the UK in comparison with other European counterparts.

[INSERT TABLE 4 ABOUT HERE]

Table 5 reports results for the value relevance of comprehensive income. Panel A of Table 5 shows that both level of (*CI*) and change in comprehensive income (*ΔCI*), respectively are positively and statistically associated with share return at least at the 5% level except Italy and Spain where change in comprehensive income is insignificant. Panel B reports results using the ranking OLS method. Again, we find that the *R*-squared values using the ranking

regression (ranging from 6.38% to 20.75%) are much higher than those using the conventional OLS regression (ranging from 3.57% to 9.56%). Besides, *R*-squared values are consistently higher for German, French and Italian samples (13.55%, 14.92% and 20.75%, respectively). In summary, we find evidence supporting H_{02} in the sense that comprehensive income is value-relevant in all the examined countries. Table 6 reports the evidence on whether comprehensive income provides incremental price information beyond net income and operating income.

[INSERT TABLE 5 ABOUT HERE]

In summary, tables 3, 4, and 5 indicate that operating income, net income, and comprehensive income are all statistically associated with share return. It appears that net income and comprehensive income are more useful for investors, measured by the *R*-squared values, for continental European countries especially for the Latin countries, namely France, Italy and Spain. Interestingly, UK investors do not value these two measures of income as much as their continental European counterparts. They appear to emphasise on operating income instead. The above findings are further confirmed in the Panel A of Table 6. It shows that the mean and median *R*-squared values for all the models are consistently lower when UK samples are included except operating income. This indicates that net income and comprehensive income are more useful in continental European countries than UK. Operating income appears to be the favourite measure of income for UK investors. This is consistent with Lin (2006) who documents that operating income provide incremental price-relevant information beyond pre-tax earnings in the UK over the post-*FRS 3* period 1993-1998. It is also consistent with US evidence from Cheng et al (1993) that operating income is more associated with share return than net income and comprehensive income. In summary, the above results provide no evidence to support H_{03} in the sense that comprehensive income in the UK is not as useful as that in continental European countries, and it does not provide incremental price information beyond net income.

To further test H_{01} and H_{02}, we also need to investigate whether one measure of income dominates the other. This study uses the Vuong's (1989) non-nested test to evaluate the statistical difference in *R*-squared values from models (6a), (6b), and (6c). Panel B of Table 6 shows that comprehensive income is less value-relevant than net income at the 1% significance level in all the cases. Besides, Vuong's statistics also show that comprehensive

income exhibits less value-relevance than operating income at the conventional significance levels in UK, France and Germany (only using the ranking regression). Consistent with our previous finding, net income dominates operating income in Germany and Italy when using both methods, and in France and Spain when using the ranking method only. Operating income appears to dominate net income in our UK sample. This interesting finding could be caused by the fact that operating income has been reported by UK firms on the face of profit and loss account since FRS3 became effective in 1993 if it is not earlier. In contrast, European investors may not be familiar with this item especially when it is not defined clearly in any accounting standards yet. Overall, we find no evidence supporting H_{01} in the sense that operating income provides incremental price information beyond net income for our continental European countries, although there is evidence to support this hypothesis in the UK.

Furthermore, we also find no evidence supporting H_{02} in the sense that comprehensive income does not provide incremental price information beyond net and/or operating income for all the examined countries. H_{03} is also rejected due to the fact that comprehensive income in the UK is not as value-relevant (useful) as it is to other European countries, and that it does not provide more incremental price information beyond net income than that in other continental European countries. These findings are robust for both conventional and ranking regressions.

[INSERT TABLE 6 ABOUT HERE]

Table 7 reports the results for the incremental value relevance of other comprehensive income beyond net income. Panel A shows that the level of *OCI* is negatively associated with share return for Germany and France, but the change in *OCI* is positively associated with return for all the countries except Spain. Again, we find that *R*-squared value is higher for France, Italy and Spain. Panel B, using the ranking OLS regression, shows that the slope coefficients of level of and change in other comprehensive income are significant at the conventional levels after controlling for net income (except Spain where change in other comprehensive income is not significant). Italy, France, and Germany appear to have much higher *R*-squared values than UK and Spain. In summary, we find evidence on supporting H_{03} in the sense that dirty surpluses are value-relevant and provide incremental price information beyond net income for all the examined countries. We also find that aggregate OCI and/or CI are value-relevant for all the examined countries, and provide incremental price information beyond net income.

Our results also show that other comprehensive income is generally more useful for the investors in continental European countries than UK. We therefore find no evidence supporting H_{05}.

[INSERT TABLES 7 ABOUT HERE]

Table 8 summarises the sign of slope coefficients and the significance of *OCI* and Δ*OCI* from both conventional and ranking OLS regressions. Panel A shows that level of *OCI* is significant at less than 5% level only if its coefficient is negative. On the other hand, all the change in *OCI* is consistently positive and significant at less than 5% level except Spain. Panel B shows that the probability of *OCI* being significantly associated with share return is 60% if its slope coefficient is negative, although the expected probability is only 12.5%. Using the Chi-square Good-of-fit test, the difference is significant at the 1% level. This result is driven by Germany, France and Italy. On the other hand, the probability of Δ*OCI* being significantly associated with share return is 80% if its slope coefficient is positive although the expected probability is only 12.5%. Again the Chi-square Good-of-fit test suggests the difference is significant at the 1% level. This result is driven by UK, Germany, France and Italy, indicating that an increase in *OCI* is perceived as a good signal by investors on the UK, German, French and Italian stock markets.

The above results are contrary to the findings of Cheng et al (1993), Dhaliwal et al (1999), Pope and O'Hanlon (1999), and Chambers et al (2005), who report that the aggregate other comprehensive income is not priced in the pre-*SFAS 130* period, i.e. when it is not clearly reported in the financial statements. However, our finding is consistent with Kanagaretnam et al (2005), Biddle and Choi (2006), and Lin (2006). We therefore provide further evidence supporting H_{04} in the sense that dirty surplus is value-relevant and provides incremental price information beyond net income.

Panel C shows that other comprehensive income provides incremental value-relevant information beyond net income in all the examined countries. More precisely, using the conventional / *ranking* OLS regression, model (6d) has 0.21% / *0.19%* (i.e. 4.30% / *1.82%* increase) higher *R*-squared value than model (6b) in the UK, while in the continental European countries model (6d) presents on average 0.52% / *0.88%* (i.e. 4.61% / *3.59%* increase). Again, this finding supports H_{04}. However, accordingly, dirty surplus items appear

to provide more incremental price information beyond net income in continental European countries than UK. As a result, we cannot find evidence supporting H_{05}.

[INSERT TABLES 8 ABOUT HERE]

7. SENSITIVITY TEST

To investigate whether the above findings are sensitive to how share return is calculated, we provides two robustness checks by replacing raw return in models (6a) to (6d) with abnormal return derived from the market-adjusted and market models. Unreported results suggest that aggregate other comprehensive income, i.e. *OCI*, does not appear to provide statistically significant incremental price information beyond aggregate net income for Germany and Italy when abnormal return is derived from the market model. Moreover, in some cases, the sign of the coefficients are consistent with our previous finding but their statistical significance have been reduced, indicating that results using abnormal return appears to be weaker than those using raw return. Finally, *R*-squared values using the abnormal return derived from the market model appear to be weaker than those using the raw return and abnormal return derived from the market-adjusted model respectively.

As noted previously, many EU firms, especially German listed firms, have adopted US, UK and international GAAPs prior to the IAS-compliance transition date because of cross-listing regulatory requirements or accounting policy choice. This study uses the following two methods to investigate the potential impacts of these early adopters on our empirical results. Firstly, we add an early adopter dummy variable to our regression model, shown as follows:

$$RET_t = \lambda_0 + \lambda_1 . D_t . \frac{I_t}{P_{t-1}} + \lambda_2 . D_t . \frac{\Delta I_t}{P_{t-1}} + \lambda_3 . \frac{I_t}{P_{t-1}} + \lambda_4 . \frac{\Delta I_t}{P_{t-1}} + \varepsilon_t \qquad (6e)$$

Where *RET* is the firm's average cumulative share return as defined previously; *D* is a dummy variable taking the value 1 if the company is an early adopter of IFRS and 0 otherwise; *P* is the firm's cum-dividend share price; *I* is an accounting income measure and *ΔI* is the change in the accounting income measure (i.e. operating income, net income, or comprehensive

income) during period *t*. More precisely, the dummy variable, D_t, takes the value 1 for the period *t* if the firm meets at least one of the following two criteria:

1) The firm must publish its financial statements under the International, US or UK GAAPs at the end of period *t*. This information was originally collected from the WorldScope database. Besides, since the German sample contains more early adopters than any of the three other continental countries, we double checked the data from WordlScope by referring to the reports issued by the German ASB in July 2005. When data appear to differ between these two sources, we referred to the GASB information. Moreover, missing data is dealt with based on the following two rules: (i) when one year data is missing between two identical year data, we assume that the missing data is same as the collected data; (ii) when a firm publishes its financial statements under local GAAPs for more than two consecutive years, we presume that the firm also followed local GAAPs during the preceding years.

2) The firms are already cross-listed on the UK or the US stock market at the end of period *t*. Wordscope data are double checked with the non-US listed firms listing provided by the NYSE Group on 30th October 2006.

As a result, if the accounting income measures of early adoption firms provide incremental price relevant information beyond those of other firms, then we should be able to observe a significant λ_1 and/or λ_2.

The numbers of early adopters are presented by countries and by years in Table 9. It shows that Germany early adopters represent about 27.6% of the entire Germany sample firms, while early adopters only represent around 5% of the entire sample firms in other three European countries. OLS regression results of model (6e) for Germany, France, Italy and Spain are reported in Table 10.

[INSERT TABLES 9 ABOUT HERE]

Results exhibited in Table 10 indicate that only German and French early adopters have significant impact on the regression estimators. In the German (French) sample, early adopters impact positively (negatively) the relationship between the accounting income

measure (except operating income) and share return. Interestingly, we find that all the *R*-squared values increase after controlling for early adopters for Germany except for the net income model. This finding also applies to France except for the operating income model. In contrast, Italy has higher *R*-squared value only for the comprehensive income model. All the *R*-squared values decrease after controlling for early adopters for Spain. As a result, we conclude that the other comprehensive income of German, French, and Italian early adoption firms provides incremental value relevant information beyond net income after controlling for early adopters.

[INSERT TABLES 10 ABOUT HERE]

The second robustness test simply deletes early adoption firms from each country. Table 9 shows that Germany has more early adoption firms than any other continental countries. In contrast, UK firms were not allowed to adopt IFRS before 2005. Tables 11 to 14 report the results based on the models 6(a) to 6(d) after deleting early adoption firms. We find that the level of and change in the three accounting income measures (i.e. net, operating and comprehensive income) are generally statistically significant using both the conventional OLS (Panel A) and ranking (Panel B) models. Aggregate *OCI* and change in *OCI* are also generally statistically significant except that both items are not significant for Spain. Panel C shows that *R*-squared values are (significantly) reduced after deleting early adoption firms in France and Spain (Germany). However, aggregate *OCI* and change in *OCI* in the UK, Germany and Italy appear to have provided more value-relevant information (proxied by higher price increase in *R*-squared values and percentage of change in *R*-squared values) than in Spain and France. After excluding outliers, Italy has the highest percentage of increase and increase in *R*-squared values, followed by UK and Germany. The results above suggest that other comprehensive income is value relevant even after controlling for or deleting early adoption firms, and provides incremental value relevant beyond net income. Moreover, we find that the adoption of IFRS, US, or UK accounting standards appear to have increased the explanatory power of other comprehensive income for share return in continental European countries except in Italy. This could be caused by the fact that the early adopters are normally cross-listed firms and are generally larger than the late adopters. They normally have larger amount of aggregate other comprehensive income than the late adopters. More importantly, our result also indicate that clear disclosure on other comprehensive income and its components in financial statements as required by the UK (i.e. FRS3) and US (i.e. SFAS130)

accounting standards may have warranted a stronger statistical association between firm share returns and other comprehensive income.

[INSERT TABLES 11 ABOUT HERE]

[INSERT TABLES 12 ABOUT HERE]

[INSERT TABLES 13 ABOUT HERE]

[INSERT TABLES 14 ABOUT HERE]

8. SUMMARY AND CONCLUSION

This study examines the extent to which three major summary measures of income as considered by *IASB/FASB joint 'Performance Reporting' project* provide value-relevant information for investors' decision making. Empirical evidence shows that operating income, net income and comprehensive income are all statistically associated with share returns in all five EU countries under analysis (namely, UK, Germany, France, Italy and Spain). However, we find comprehensive income provides much less value-relevant information than bottom-line net income and operating income in all the sampled countries. We also find that aggregate other comprehensive income is value-relevant and provides incremental price-relevance beyond net income in most of the continental European countries. This is very different from the finding documented in the US and UK based earnings components literature, suggesting that empirical evidence from Anglo-American studies may not be extended to the continental European financial reporting environment. More interestingly, we find that early adopters especially in Germany significantly increase the explanatory power of other comprehensive income for share return. This indicates that clear disclosure on other comprehensive income and its components in financial statements as required by the UK (i.e. FRS3) and US (i.e. SFAS130) accounting standards may have warranted a stronger statistical association between firm share returns and other comprehensive income. This finding seems to support the ideology underlying the IASB/FASB joint project on Performance Reporting and provides evidence supporting Beaver's (1981) and Hirst and Hopkins' (1998) psychology-based financial reporting theory. It would therefore give rise to a twofold issue.

Our analysis is however subject to three caveats. First, like Cheng et al (1993) and Dhaliwal et al (1999), our samples are based on '*as if* comprehensive income' figures in all country samples except UK. As documented by Chambers et al (2005), 'as reported comprehensive income' might give rise to very different findings. Second, we suspect dirty surplus practices to vary manifestly amongst the countries under analysis because of the difference in environmental setting. This concern should be taken into account while comparing statistical results between two different countries. Finally, our findings so far only apply for pre-*IAS*-compliance period (i.e. 1993-2004). Further research should examine the impact of the adoption of the international accounting standards on the usefulness of comprehensive income when data becomes available.

ENDNOTES

[1] The IASB board originally split up the "Performance Reporting" project into two segments (A and B). Segment A entitled "Financial Statement Presentation" is mainly concerned with addressing what should constitute a complete set of financial statements under IAS. Amongst other fundamental statements, it proposes through an amendment to the IAS 1 standard issued in March 2006 to introduce a comprehensive income statement, labelled "Statement of Recognised Income and Expense". Segment B deals with the totals and subtotals that should be displayed in each financial statement made mandatory by the previous project phase.

[2] In order to ease the comparison between our empirical results and the ones exhibited and discussed by the abundant US-sample-based literature, the terminology 'comprehensive income' will be used all along this study. In addition, it is worth noting that none of the comprehensive income figures promulgated by the FASB or the IASB are strictly speaking 'all-inclusive income'. Indeed, on the one hand, US FAS 130 Comprehensive Income, promulgated in June 1997, does not include all US GAAPs items that bypass the income statement such as unearned or deferred compensation expense and reduction of shareholder's equity related to employee ownership plans (ESOPs) (*see SFAS 130*, par. 109-19). On the other hand, other recognised income and expense under IAS (i.e. IASB other comprehensive income items) only includes changes in revaluation surplus, gains / losses arising from translating the financial statements of a foreign operation, gains / losses on remeasuring available-for-sale financial assets, the effective portion of gains / losses on hedging instruments in a cash flow hedge, and actuarial gains / losses on defined benefit plans (IAS 1, amendment draft, par. 7).

[3] Formerly the Association for Investment Management and Research (AIMR).

[4] Consistent with the research design and sampling methodology used in this study, only empirical findings related to non-financial firms will be discussed hereafter.

[5] SFAS 130 allows other comprehensive income to be reported in statement of financial performance, a combined statement of income and comprehensive income statement, or statement of shareholders' equity although FASB prefers the first two statements.

[6] IASB and US-based terminologies (respectively operating profit and operating income) are used interchangeably in this study.

[7] Ohlson (1979: 214) defines 'a finer information environment' as "an environment in which the set of available state descriptors is a superset as compared with some alternative (coarser) environment". Given this, he then shows theoretically that the variability of the stock price is more important in a finer environment.

[8] Consistent with previous studies (e.g. Cheng et al, 1993), usefulness is defined here as the relative information content and incremental information content of an accounting figure. For a more formal definition and analysis of an accounting item's 'usefulness', *see* Lev (1989: 156).

[9] These definitions are only proxies for the *US SFAS 130*'s framework and the IASB project for the reasons discussed in footnote 2.

[10] We calculated share return starting from the beginning of the financial period to 4, 5, 6 months after the year end respectively for each firm. We then took the average of the three values for each firm. Three different time horizons are used since we suspect some firms to release their earnings components information later than others. Other proxies for the firm security return are proposed in the robustness check section of this study.

[11] In nested models, the increase in R^2 associated with adding an explanatory variable is consistent with the *F*-test indicating that the explanatory variables are jointly significant. Thus, measuring the increase in adjusted R^2 can be interpreted as a measure of the marginal contribution of the added explanatory variable. For further details, *see* Kmenta (1986: 593-595).

[12] The period of analysis will be shortened by one year observation (i.e. 1993-2004) because of the comprehensive income variable construction.

[13] INDC6 is the most detailed industrial classification available under DATASTREAM. This industrial breakdown is based on the New FTSE / DJ Industry classification benchmark (ICB) (similar to the US SIC 4 classification scheme) and comprises up to 83 sub-sectors.

[14] Like Spanish, French and Italian GAAPs, German accounting standards codified in the German Commercial Code ('Handelsgesetzbuch' – HGB) do not require explicitly the disclosure of the comprehensive income figure. However, it is worth noting that most of the companies quoted on the Frankfurt stock market publish their financial statements under either US GAAPs or IFRS standards since 2001. In this sense, Leuz and Wüstemann (2003) report that in 2002, already 41% (39%) of the DAX 100 Index firms were applying IAS (US) accounting standards. Much emphasis on this point is then required while discussing OLS results related to the German firms sample.

[15] More specifically, financial statements published under local GAAPs in these four European continental countries, i.e. Germany, France, Italy and Spain, all clearly disclose the accounting components needed for the comprehensive income computation on the face of statement of shareholders' equity movements (respectively entitled, "Eigenkapitalentwicklung", "Tableau de variation des capitaux propres", "Prospetto delle variazoni del patrimonio netto" and "Estado del cambio de los fondos propios").

[16] Similarly, Chambers et al (2005) note that 'comprehensive income' is not yet fully reported in any machine-readable database although major financial databases, such as COMPUSTAT, already report a number of items directly related to it. During our investigation, we found that DATASTREAM or WORLDSCOPE propose neither any Comprehensive Income related items nor Comprehensive Income as a stand-alone item. After further investigation, we find this observation to be extendable to EXTEL and I/B/E/S.

[17] Empirical studies encountering this problem commonly use two different but equivalent ways. While some studies (e.g. O'Hanlon & Pope, 1999) use the formula as described above, others (e.g. Cheng et al, 1993; Dhaliwal et al, 1999) compute comprehensive income, following US FAS 130 definition, i.e. as the sum of change in retained earnings, and preferred and common dividends. Besides, Lin (2006) uses a slightly different version of our formula considering 'share repurchases' into the computation of the firm capital change.

[18] These three items are summed up under the DATASTREAM [WORLDSCOPE] item "Total Share Capital & Reserves" (#307) ["Common Equity" (#WC03501) and "Preferred Stock" (#WC03451)].

[19] According to DATASTREAM definitions, the "Total Equity Issued" item represents the amount a company received from the sale of common and/or preferred stock. It includes amounts received from the conversion of debentures or preferred stock into common stock, exchange of common stock for debentures, sale of treasury shares, shares issued for acquisitions and proceeds from stock options. "Total Equity Issued" and "Dividend Paid" are set to zero while missing from the database.

[20] A similar negative correlation is exhibited although not discussed in Cheng et al's (1993) US-based study.

TABLE 1: Summary Income Measures and Sample Observations

	Observations ***Before*** Deleting Outliers	Observations ***After*** Deleting Outliers*
Model (6a): **Operating Income**		
- *United-Kingdom*	8,183	7,915
- *Germany*	5,090	4,900
- *France*	4,249	4,123
- *Italy*	1,239	1,198
- *Spain*	756	733
Model (6b): **Net Income**		
- *United-Kingdom*	8,165	6,983
- *Germany*	4,849	4,173
- *France*	4,017	3,564
- *Italy*	1,258	1,107
- *Spain*	759	667
Model (6c): **Comprehensive Income**		
- *United-Kingdom*	7,403	7,186
- *Germany*	4,804	4,643
- *France*	3,987	3,865
- *Italy*	1,168	1,138
- *Spain*	694	677
Model (6d): **Net Income and Other comprehensive income**		
- *United-Kingdom*	7,340	6,983
- *Germany*	4,400	4,173
- *France*	3,750	3,564
- *Italy*	1,165	1,107
- *Spain*	694	667

***** Top and bottom 1% of the observations were deleted to avoid outliers. In addition, in order the examine the potential value-relevance of other comprehensive income items beyond net income, observations impeding to compare models (6d) with (6d) were deleted.

TABLE 2: Descriptive Statistics

Panel A. Descriptive Statistics for the Dependent and Independent Variables

Variable	N	Mean	Median	StdDev	Skewness	Kurtosis
UK						
Share Return	7,895	0.034	0.051	0.289	-0.480	1.296
Comprehensive Income	8,031	-0.010	0.041	0.247	-2.407	11.256
Change in Comprehensive Income	7,151	0.028	0.008	0.338	2.461	18.312
Other comprehensive income	8,031	0.012	-0.001	0.134	2.711	18.235
Change in Other comprehensive income	7,136	0.002	0.000	0.193	0.928	14.577
Net Income	8,031	-0.021	0.049	0.245	-3.352	14.443
Change in Net Income	7,992	0.021	0.008	0.278	2.644	21.749
Operating Income	7,934	0.053	0.085	0.171	-1.978	7.367
Change in Operating Income	7,896	0.015	0.010	0.124	1.571	11.840
Germany						
Share Return	4,608	-0.104	0.015	0.725	-1.262	2.699
Comprehensive Income	4,666	-0.018	0.024	0.333	-2.238	14.203
Change in Comprehensive Income	4,273	0.041	0.001	0.520	2.489	17.765
Other comprehensive income	4,666	0.017	0.000	0.146	2.899	16.786
Change in Other comprehensive income	4,270	-0.015	0.000	0.227	-0.996	13.386
Net Income	4,666	-0.036	0.032	0.323	-2.911	15.246
Change in Net Income	4,605	0.051	0.005	0.407	3.649	24.086
Operating Income	4,603	-0.065	0.012	0.414	-5.849	71.056
Change in Operating Income	4,535	0.051	0.007	0.303	2.988	17.038
France						
Share Return	3,888	0.106	0.116	0.462	-0.273	0.539
Comprehensive Income	3,963	0.032	0.049	0.152	-1.617	7.954
Change in Comprehensive Income	3,673	0.007	0.004	0.192	1.336	13.251
Other comprehensive income	3,963	-0.001	0.000	0.069	1.338	17.761
Change in Other comprehensive income	3,663	-0.007	0.000	0.103	-0.701	13.419
Net Income	3,963	0.033	0.052	0.142	-2.137	9.785
Change in Net Income	3,910	0.015	0.006	0.146	2.325	17.225
Operating Income	3,940	0.079	0.082	0.162	-0.544	4.589
Change in Operating Income	3,913	0.014	0.008	0.124	1.171	8.273

Italy						
Share Return	1,210	0.068	0.083	0.445	-0.140	-0.239
Comprehensive Income	1,236	0.023	0.036	0.178	-0.686	7.998
Change in Comprehensive Income	1,143	0.005	0.003	0.239	1.013	9.408
Other comprehensive income	1,236	0.015	0.000	0.111	4.654	30.622
Change in Other comprehensive income	1,141	-0.001	0.000	0.154	1.335	12.929
Net Income	1,236	0.008	0.038	0.155	-2.506	9.179
Change in Net Income	1,225	0.008	0.004	0.154	1.088	10.711
Operating Income	1,209	0.041	0.047	0.204	-0.858	6.956
Change in Operating Income	1,202	0.005	0.004	0.131	0.660	7.407
Spain						
Share Return	734	0.256	0.255	0.436	0.606	1.459
Comprehensive Income	745	0.092	0.069	0.206	2.303	13.538
Change in Comprehensive Income	683	0.037	0.007	0.214	2.406	11.592
Other comprehensive income	745	0.031	-0.001	0.172	4.275	21.643
Change in Other comprehensive income	682	0.015	0.000	0.163	2.721	15.947
Net Income	745	0.061	0.070	0.119	-2.341	14.511
Change in Net Income	738	0.021	0.008	0.133	4.966	52.909
Operating Income	738	0.095	0.099	0.129	-1.126	7.123
Change in Operating Income	735	0.018	0.009	0.104	2.572	17.942

Panel B. Pearson*Spearman rank* correlation coefficients

UK Sample (N = 6,946)

	CI	ΔCI	OCI	ΔOCI	NI	ΔNI	OPI	ΔOPI
CI	1.000	*0.477*	*0.259*	*0.309*	*0.761*	*0.295*	*0.608*	*0.232*
ΔCI	0.378	1.000	*0.252*	*0.525*	*0.261*	*0.630*	*0.137*	*0.422*
OCI	0.357	0.313	1.000	*0.529*	*-0.250*	*-0.133*	*-0.177*	*-0.094*
ΔOCI	0.285	0.534	0.595	1.000	*-0.025*	*-0.123*	***0.016***	*-0.047*
NI	0.823	0.203	-0.237	-0.066	1.000	*0.394*	*0.771*	*0.303*
ΔNI	0.228	0.769	-0.083	-0.129	0.288	1.000	*0.196*	*0.626*
OPI	0.594	0.036	-0.095	0.020	0.676	0.027	1.000	*0.302*
ΔOPI	0.122	0.446	-0.021	**-0.007**	0.140	0.529	0.176	1.000

German Sample (N = 4,121)

	CI	ΔCI	OCI	ΔOCI	NI	ΔNI	OPI	ΔOPI
CI	1.000	*0.445*	*0.275*	*0.273*	*0.814*	*0.329*	*0.604*	*0.199*
ΔCI	0.262	1.000	*0.256*	*0.530*	*0.281*	*0.695*	*0.145*	*0.472*
OCI	0.342	0.256	1.000	*0.503*	*-0.146*	***-0.023***	*-0.118*	***0.003***
ΔOCI	0.275	0.489	0.511	1.000	***0.020***	*-0.032*	***0.021***	***0.016***
NI	0.887	0.150	-0.131	0.039	1.000	*0.375*	*0.726*	*0.214*
ΔNI	0.143	0.868	**0.002**	**-0.010**	0.150	1.000	*0.193*	*0.615*
OPI	0.517	-0.075	-0.182	0.039	0.635	-0.108	1.000	*0.260*
ΔOPI	0.030	0.548	0.025	**0.012**	**0.019**	0.621	0.039	1.000

French Sample (N = 3,586)

	CI	ΔCI	OCI	ΔOCI	NI	ΔNI	OPI	ΔOPI
CI	1.000	*0.492*	*0.323*	*0.252*	*0.846*	*0.408*	*0.622*	*0.308*
ΔCI	0.445	1.000	*0.271*	*0.525*	*0.355*	*0.726*	*0.249*	*0.508*
OCI	0.397	0.319	1.000	*0.529*	*-0.063*	***-0.017***	*-0.098*	***-0.021***
ΔOCI	0.278	0.580	0.541	1.000	***0.007***	***-0.015***	***0.004***	***-0.009***
NI	0.884	0.321	-0.078	**0.027**	1.000	*0.463*	*0.741*	*0.347*
ΔNI	0.344	0.807	**-0.001**	**-0.013**	0.374	1.000	*0.322*	*0.677*
OPI	0.637	0.189	-0.071	0.040	0.728	0.203	1.000	*0.405*
ΔOPI	0.236	0.541	**-0.006**	**0.017**	0.253	0.652	0.343	1.000

Italian Sample (N = 1,094)

	CI	ΔCI	OCI	ΔOCI	NI	ΔNI	OPI	ΔOPI
CI	1.000	*0.452*	*0.338*	*0.270*	*0.839*	*0.392*	*0.538*	*0.220*
ΔCI	0.512	1.000	*0.365*	*0.635*	*0.286*	*0.704*	*0.164*	*0.388*
OCI	0.511	0.477	1.000	*0.504*	***-0.030***	*0.085*	*-0.063*	***-0.002***
ΔOCI	0.376	0.765	0.635	1.000	***0.032***	*0.099*	***0.033***	***0.042***
NI	0.762	0.228	-0.167	**-0.047**	1.000	*0.422*	*0.647*	*0.263*
ΔNI	0.383	0.716	**0.049**	0.098	0.403	1.000	*0.253*	*0.567*
OPI	0.437	0.148	-0.090	**0.014**	0.569	0.213	1.000	*0.344*
ΔOPI	0.219	0.425	**-0.001**	0.104	0.251	0.544	0.407	1.000

Spanish Sample (N = 670)

	CI	ΔCI	OCI	ΔOCI	NI	ΔNI	OPI	ΔOPI
CI	1.000	*0.566*	*0.588*	*0.388*	*0.722*	*0.391*	*0.512*	*0.287*
ΔCI	0.546	1.000	*0.425*	*0.727*	*0.353*	*0.564*	*0.251*	*0.358*
OCI	0.853	0.540	1.000	*0.545*	***0.044***	*0.070*	***0.034***	***0.063***
ΔOCI	0.515	0.855	0.610	1.000	***0.057***	***0.034***	***0.037***	***0.042***
NI	0.575	0.197	**0.063**	**0.028**	1.000	*0.512*	*0.672*	*0.336*
ΔNI	0.239	0.577	0.078	0.069	0.335	1.000	*0.353*	*0.569*
OPI	0.383	0.105	**0.042**	**0.028**	0.667	0.157	1.000	*0.449*
ΔOPI	0.200	0.291	**0.035**	**0.022**	0.327	0.523	0.429	1.000

Panel A exhibits univariate statistics for the models' independent and dependent variables. Descriptive statistics are reported by countries. The samples comprise all firms listed on the London, Frankfurt, Paris, Milan and Madrid stock exchanges whose data necessary to the modelling process described previously are available under DATASTREAM for the financial period 1992-2004.
Share return is the firm's yearly raw share return calculated as the average of cumulated share return for 16, 17 and 18 months, from 12 months prior through 4, 5 and 6 months after the fiscal year end month (month 0). Return index, market value, net income and operating income have been obtained from DATASTREAM. Comprehensive income is computed as the yearly change in book value, i.e. 'Ordinary Share Capital' (DS Item #301) + 'Reserves' (Item #304) + 'Preference Capital' (DS Item #306), minored by 'total equity issued' (DS Item #406) and augmented by dividends paid (DS Item #434). All accounting variables are on a per share basis and are deflated by prior fiscal year end share price. Observations within the top and bottom 1% are excluded to avoid potential outliers' issues.

Panel B reports Pearson and Spearman rank correlation coefficients for the independent variables used in the analysis. The number of observations for every variable in each sample is equivalent to the one reported in Panel A. Pearson and Spearman correlation coefficients which are NOT significant at a 10% level are reported in bold characters. Consistent with Panel A, all the above accounting numbers are on a per share basis and are deflated by prior year end share price.

CI	Comprehensive income
ΔCI	Change in comprehensive income
OCI	Other comprehensive income
ΔOCI	Change in other comprehensive income
NI	Net income
ΔNI	Change in net income
OPI	Operating income
ΔOPI	Change in operating income

TABLE 3: Price Relevance of Operating Income

Table 3 exhibits the empirical results from the following OLS regression:

$$RET_t = \beta_0 + \beta_1 \frac{OPI_t}{P_{t-1}} + \beta_2 \frac{\Delta OPI_t}{P_{t-1}} + u_t \qquad (6a)$$

Where RET_t is the firm's raw share return, OPI_t is operating income per share and ΔOPI_t is the change in operating income per share for each accounting period t. RET_t is calculated here as the average of cumulated share return for 16, 17 and 18 months, from 12 months prior through 4, 5 and 6 months after the fiscal year end month (month 0). All variables except RET_t are deflated by last financial period end firm's cum-dividend share price P_{t-1}. Panel A presents the coefficients and *t*-statistics from conventional OLS regressions for each country sample. Following Abarbanell and Bushee (1998), we calculated the scale decile rank for each independent variable used in equation (6a) by ranking the values of the variables into ten portfolios (with ranks 0-9). The decile numbers obtained were then deflated by nine so that the constructed independent variable ranges on a positive unitary standardized interval. Panel B exhibits the coefficients and *t*-statistics obtained from ranking OLS regressions.
The following notations are used across panels: *p<.1; **p<.05; ***p<.01.

Panel A. Conventional OLS Model

	UK	GERMANY	FRANCE	ITALY	SPAIN
β_0	0.01*	-0.15***	0.03***	0.03***	0.19***
	(1.90)	(-13.14)	(3.48)	(2.71)	(9.69)
β_1	0.45***	0.05***	0.80***	0.53***	0.63***
	(23.92)	(6.87)	(18.58)	(8.41)	(4.89)
β_2	0.20***	0.40***	0.49***	0.31***	0.49***
	(7.81)	(10.89)	(8.48)	(3.21)	(3.06)
N	7,915	4,900	4,123	1,198	733
Adj. R^2	8.32%	3.30%	11.32%	8.70%	6.39%
F-statistic	359.98***	84.61***	264.07***	58.07***	26.03***

Panel B. Ranking OLS model

	UK	GERMANY	FRANCE	ITALY	SPAIN
β_0	-0.15***	-0.73***	-0.26***	-0.29***	-0.01
	(-22.29)	(-32.16)	(-18.30)	(-11.24)	(-0.36)
β_1	0.27***	0.71***	0.45***	0.46***	0.36***
	(26.38)	(21.52)	(19.80)	(11.65)	(6.53)
β_2	0.10***	0.46***	0.28***	0.24***	0.17***
	(9.68)	(14.10)	(12.34)	(6.00)	(3.09)
N	7,915	4,900	4,123	1,198	733
Adj. R^2	11.55%	14.82%	16.59%	16.62%	10.50%
F-statistic	517.81***	427.10***	411.07***	120.43***	43.98***

TABLE 4: Price Relevance of Net Income

Table 4 exhibits the empirical results from the following OLS regression:

$$RET_t = \beta_0 + \beta_1 \frac{NI_t}{P_{t-1}} + \beta_2 \frac{\Delta NI_t}{P_{t-1}} + u_t \qquad (6b)$$

Where RET_t is the firm's raw share return, NI_t is net income per share and ΔNI_t is the change in net income per share for each accounting period t. RET_t is calculated here as the average of cumulated share return for 16, 17 and 18 months, from 12 months prior through 4, 5 and 6 months after the fiscal year end month (month 0). All variables except RET_t are deflated by last financial period end firm's cum-dividend share price P_{t-1}. Panel A presents the coefficients and *t*-statistics from conventional OLS regressions for each country sample. Following Abarbanell and Bushee (1998), we calculated the scale decile rank for each independent variable used in equation (6b) by ranking the values of the variables into ten portfolios (with ranks 0-9). The decile numbers obtained were then deflated by nine so that the constructed independent variable ranges on a positive unitary standardized interval. Panel B exhibits the coefficients and *t*-statistics obtained from ranking OLS regressions. The following notations are used across panels: *p<.1; **p<.05; ***p<.01.

Panel A. Conventional OLS Model

	UK	GERMANY	FRANCE	ITALY	SPAIN
β_0	0.03***	-0.11***	0.05***	0.03***	0.14***
	(10.14)	(-9.81)	(6.54)	(2.80)	(7.70)
β_1	0.27***	0.63***	1.13***	1.11***	1.14***
	(17.37)	(17.58)	(19.68)	(12.35)	(7.35)
β_2	0.03**	0.23***	0.35***	0.12	0.53***
	(2.48)	(8.65)	(6.54)	(1.34)	(3.97)
N	6,983	4,173	3,564	1,107	667
Adjusted R^2	4.88%	9.17%	13.60%	14.80%	11.07%
F-statistic	180.22***	211.70***	281.59***	97.17***	42.50***

Panel B. Ranking OLS model

	UK	GERMANY	FRANCE	ITALY	SPAIN
β_0	-0.13***	-0.73***	-0.31***	-0.35***	-0.08***
	(-18.54)	(-34.45)	(-22.05)	(-14.79)	(-2.67)
β_1	0.26***	0.88***	0.55***	0.65***	0.40***
	(23.91)	(26.36)	(23.01)	(16.88)	(7.54)
β_2	0.06***	0.37***	0.27***	0.15***	0.21***
	(5.08)	(11.08)	(11.28)	(3.80)	(4.06)
N	6,983	4,173	3,564	1,107	667
Adj. R^2	10.42%	22.01%	23.68%	27.78%	16.88%
F-statistic	407.04***	589.72***	553.90***	213.92***	68.73***

TABLE 5: Price Relevance of Comprehensive Income

Table 5 exhibits the empirical results from the following OLS regression:

$$RET_t = \beta_0 + \beta_1 \frac{CI_t}{P_{t-1}} + \beta_2 \frac{\Delta CI_t}{P_{t-1}} + u_t \qquad (6c)$$

Where RET_t is the firm's raw share return, CI_t is comprehensive income per share and ΔCI_t is the change in comprehensive income per share for each accounting period t. RET_t is calculated here as the average of cumulated share return for 16, 17 and 18 months, from 12 months prior through 4, 5 and 6 months after the fiscal year end month (month 0). All variables except RET_t are deflated by last financial period end firm's cum-dividend share price P_{t-1}. Panel A presents the coefficients and *t*-statistics from conventional OLS regressions for each country sample. Following Abarbanell and Bushee (1998), we calculated the scale decile rank for each independent variable used in equation (6c) by ranking the values of the variables into ten portfolios (with ranks 0-9). The decile numbers obtained were then deflated by nine so that the constructed independent variable ranges on a positive unitary standardized interval. Panel B exhibits the coefficients and *t*-statistics obtained from ranking OLS regressions.
The following notations are used across panels: *p<.1; **p<.05; ***p<.01.

Panel A. Conventional OLS Model

	UK	GERMANY	FRANCE	ITALY	SPAIN
β_0	0.03***	-0.14***	0.06***	0.03**	0.19***
	(9.92)	(-13.00)	(8.36)	(2.46)	(11.09)
β_1	0.20***	0.38***	0.70***	0.71***	0.38***
	(14.19)	(12.60)	(14.66)	(9.32)	(4.40)
β_2	0.03***	0.13***	0.14***	0.04	0.03
	(3.09)	(6.28)	(3.76)	(0.66)	(0.32)
N	7,186	4,643	3,865	1,138	677
Adj. R^2	3.57%	4.99%	7.64%	9.56%	3.88%
F-statistic	134.02***	122.97***	160.84***	61.18***	14.68***

Panel B. Ranking OLS model

	UK	GERMANY	FRANCE	ITALY	SPAIN
β_0	-0.09***	-0.65***	-0.23***	-0.30***	0.01
	(-12.40)	(-29.30)	(-15.89)	(-12.13)	(0.43)
β_1	0.23***	0.75***	0.49***	0.58***	0.42***
	(19.30)	(20.88)	(19.43)	(14.20)	(7.15)
β_2	0.01	0.26***	0.15***	0.11***	0.01
	(0.58)	(7.15)	(6.08)	(2.76)	(0.18)
N	7,186	4,643	3,865	1,138	677
Adj. R^2	6.38%	13.55%	14.92%	20.75%	9.85%
F-statistic	209.90***	364.98***	339.85***	149.94***	38.00***

TABLE 6: Comparisons of Adjusted-R^2 between UK and other European Countries

Table 6 reports adjusted-R^2 and Vuong's (1989) *z*-statistic used in the discussion of hypotheses 1 and 2 of our research design. Panel A exhibits adjusted-R^2s for the four earnings components model performed under conventional and ranking OLS regressions. Results are displayed by country. The last four columns exhibit the mean (median) of adjusted-R^2s for each earnings components model used in the analysis. Panel B reports Vuong's (1989) *z*-statistic used to test the difference in significance amongst our non-nested performance components models. These models are represented by their dependent variables, i.e. *OPI*, *NI* and *CI* respectively. The following notations are used: *p<.1; **p<.05; ***p<.01.

Panel A. Adjusted-R^2 (in %) for earnings components models

							UK sample excluded		UK sample included	
Independent Variable(s)	Regression Method	UK	Germany	France	Italy	Spain	Mean	Median	Mean	Median
Model (6c): Comprehensive Income	OLS	3.57	4.99	7.64	9.56	3.88	6.52	6.32	5.93	4.99
	Ranking	6.38	13.55	14.92	20.75	9.85	14.77	14.24	13.09	13.55
Model (6d): Net Income and Other comprehensive income	OLS	5.09	10.09	13.69	15.69	11.26	12.68	12.48	11.16	11.26
	Ranking	10.61	23.29	24.09	29.49	16.99	23.47	23.69	20.89	23.29
Model (6b): Net Income	OLS	4.88	9.17	13.60	14.80	11.07	12.16	12.34	10.70	11.07
	Ranking	10.42	22.01	23.68	27.78	16.88	22.59	22.85	20.15	22.01
Model (6a): Operating Income	OLS	8.32	3.30	11.32	8.70	6.39	7.43	7.55	7.61	8.32
	Ranking	11.55	14.82	16.59	16.62	10.50	14.63	15.71	14.02	14.82

TABLE 6 (continued)

Panel B: Vuong's (1989) *z*-statistic for non-nested performance components models

		UK		Germany		France		Italy		Spain	
Null-Hypothesis		OLS	Ranking	OLS	Ranking	OLS	Ranking	OLS	Ranking	OLS	Ranking
NI > CI	Likelihood ratio	48.00	144.88	31.86	169.04	76.70	151.31	30.82	50.67	20.40	23.52
	Variance ω^2	0.03	0.05	0.03	0.13	0.06	0.11	0.10	0.13	0.22	0.10
	z-statistic	3.30***	7.61***	2.69***	7.47***	5.43***	7.52***	3.00***	4.35***	1.69**	2.95***
	N	6,841	6,841	4,072	4,072	3,523	3,523	1,071	1,071	659	659
OPI > CI	Likelihood ratio	156.97	192.54	-22.69	37.19	64.56	38.46	-7.08	-18.21	8.55	2.11
	Variance ω^2	0.10	0.10	0.16	0.18	0.12	0.18	0.16	0.27	0.13	0.12
	z-statistic	6.05***	7.51***	-0.88	1.36*	3.10***	1.54*	-0.55	-1.08	0.94	0.24
	N	6,841	6,841	4,072	4,072	3,523	3,523	1,071	1,071	659	659
NI > OPI	Likelihood ratio	-108.97	-47.67	54.55	131.84	12.14	112.86	37.90	68.88	11.84	21.41
	Variance ω^2	0.09	0.06	0.15	0.14	0.11	0.15	0.18	0.23	0.19	0.11
	z-statistic	-4.30***	-2.31**	2.18**	5.57***	0.63	4.96***	2.75***	4.41***	1.07	2.46***
	N	6,841	6,841	4,072	4,072	3,523	3,523	1,071	1,071	659	659

TABLE 7: Incremental Price Relevance of Other comprehensive income

Table 7 exhibits the empirical results from the following OLS regression:

$$RET_t = \beta_0 + \beta_1 \frac{NI_t}{P_{t-1}} + \beta_2 \frac{\Delta NI_t}{P_{t-1}} + \beta_3 \frac{OCI_t}{P_{t-1}} + \beta_4 \frac{\Delta OCI_t}{P_{t-1}} + u_t \quad (6d)$$

Where RET_t is the firm's raw share return, NI_t is net income per share, ΔNI_t is the change in net income per share, OCI_t is other comprehensive income per share, and ΔOCI_t is the change in other comprehensive income per share for each accounting period t. RET_t is calculated here as the average of cumulated share return for 16, 17 and 18 months, from 12 months prior through 4, 5 and 6 months after the fiscal year end month (month 0). All variables except RET_t are deflated by last financial period end firm's cum-dividend share price P_{t-1}. Panel A presents the coefficients and *t*-statistics from conventional OLS regressions for each country sample. Following Abarbanell and Bushee (1998), we calculated the scale decile rank for each independent variable used in equation (6b) by ranking the values of the variables into ten portfolios (with ranks 0-9). The decile numbers obtained were then deflated by nine so that the constructed independent variable ranges on a positive unitary standardized interval. Panel B exhibits the coefficients and *t*-statistics obtained from ranking OLS regressions. The following notations are used across panels: *p<.1; **p<.05; ***p<.01.

Panel A. Conventional OLS Model

	UK	GERMANY	FRANCE	ITALY	SPAIN
β_0	0.03***	-0.10***	0.05***	0.04***	0.14***
	(10.12)	(-8.87)	(6.71)	(3.05)	(7.52)
β_1	0.27***	0.60***	1.11***	1.12***	1.11***
	(16.60)	(16.45)	(19.20)	(12.29)	(7.20)
β_2	0.04***	0.24***	0.35***	0.09	0.52***
	(2.94)	(8.98)	(6.61)	(0.96)	(3.88)
β_3	-0.04	-0.28***	-0.26**	-0.23	0.18
	(-1.21)	(-3.26)	(-2.02)	(-1.57)	(1.46)
β_4	0.09***	0.37***	0.18**	0.37***	-0.00
	(3.91)	(6.69)	(2.13)	(3.55)	(-0.01)
N	6,983	4,173	3,564	1,107	667
Adj. R^2	5.09%	10.09%	13.69%	15.69%	11.26%
F-statistic	94.70***	118.12***	142.34***	52.51***	22.16***
$\beta_3 + \beta_4$	0.04***	0.14***	0.02	0.13***	0.09*
	(3.32)	(4.13)	(0.39)	(2.59)	(1.66)

TABLE 7 (continued)

Panel B. Ranking OLS Model

	UK	GERMANY	FRANCE	ITALY	SPAIN
β_0	-0.13***	-0.76***	-0.33***	-0.38***	-0.11***
	(-13.56)	(-26.59)	(-17.44)	(-12.53)	(-2.75)
β_1	0.25***	0.83***	0.54***	0.65***	0.40***
	(22.37)	(24.66)	(22.69)	(16.89)	(7.56)
β_2	0.06***	0.39***	0.27***	0.14***	0.21***
	(5.47)	(11.85)	(11.49)	(3.61)	(3.97)
β_3	-0.03***	-0.21***	-0.08***	-0.14***	0.09*
	(-2.76)	(-5.88)	(-3.10)	(-3.51)	(1.68)
β_4	0.05***	0.29***	0.11***	0.21***	-0.04
	(4.08)	(8.21)	(4.53)	(5.27)	(-0.67)
N	6,983	4,173	3,564	1,107	667
Adj. R^2	10.61%	23.29%	24.09%	29.49%	16.99%
F-statistic	208.26***	317.71***	283.77***	116.77***	35.14***
$\beta_3 + \beta_4$	0.02**	0.14***	0.03	0.10***	0.01
	(2.15)	(4.53)	(1.25)	(2.89)	(0.16)

TABLE 8: Significance and Valuation-Sign of Other comprehensive incomes

Panel A reports coefficients' sign and statistical significance (p-value) of other comprehensive income (*OCI*) and change in other comprehensive income (*ΔOCI*) obtained from model (6d) under conventional and ranking OLS regressions. Empirical results are exhibited by country sample. Coefficients in bold are not significant at a 10% level. Panel B exhibits the number of positive and negative signs for the *OCI, ΔOCI* and (*OCI + ΔOCI)* coefficients. These results are then split up taking into account whether the OLS coefficients are significant at a 1% level. Panel C presents the incremental value-relevance of other comprehensive income as measured by the absolute and relative difference in adjusted R^2 between models (6b) and (6d).

Panel A. Statistical significance and signs of other comprehensive income variables

		UK		Germany		France		Italy		Spain	
		OLS	Ranking	OLS	Ranking	OLS	Ranking	OLS	Ranking	OLS	Ranking
Other comprehensive income (*OCI*)	Sign	**<0**	<0	<0	<0	<0	<0	**<0**	<0	**>0**	>0
	Significance (p-value in %)	**22.49**	0.58	0.11	<.01	4.39	0.20	**11.78**	0.05	**14.46**	9.30
Change in OCI (*ΔOCI*)	Sign	>0	>0	>0	>0	>0	>0	>0	>0	**<0**	**<0**
	Significance (p-value in %)	<.01	<.01	<.01	<.01	3.30	<.01	0.04	<.01	**98.84**	**50.62**
OCI + ΔOCI	Sign	>0	>0	>0	>0	**>0**	**>0**	>0	>0	>0	**>0**
	Significance (p-value in %)	0.09	3.18	<.01	<.01	**69.52**	**21.06**	0.96	0.40	9.80	**87.01**

TABLE 8 (continued)

Panel B. Distribution of the OLS coefficients' signs of other comprehensive income variables

	Positive signs		Negative signs		Total
	Significant at a 10% level	Non-significant at a 10% level	Significant at a 10% level	Non-significant at a 10% level	
OCI					
- frequency	1	1	6	2	10*
- *in %*	*10%*	*10%*	*60%*	*20%*	*100%*
ΔOCI					
- frequency	8	0	0	2	10*
- *in %*	*80%*	*0%*	*0%*	*20%*	*100%*
OCI + ΔOCI					
- frequency	7	*3*	0	0	10*
- *in %*	*70%*	*30%*	*0%*	*0%*	*100%*

* derived from multiplying five (countries) by two (different signs).

Panel C. Incremental value-relevance of other comprehensive income variables

		UK		Germany		France		Italy		Spain		Mean (UK excluded)	
		OLS	Ranking	OLS	Ranking	OLS	Ranking	OLS	Ranking	OLS	Ranking	OLS	Ranking
Incremental value-relevance (Change in adj. R^2)	Absolute value	0.21	0.19	0.92	1.28	0.09	0.41	0.89	1.71	0.19	0.11	0.52	0.88
	Relative value	4.30	1.82	10.03	5.82	0.66	1.73	6.01	6.16	1.72	0.65	4.61	3.59

TABLE 9: Number of early adopters of IFRS by country and by year over the period 1992-2004

Table 9 exhibits the number and percentage of early adopters using a breakdown by sampled country and by year over the pre-IAS-compliance period of analysis 1992-2004.

	Germany		**France**		**Italy**		**Spain**	
Year	*N*	*%*	*N*	*%*	*N*	*%*	*N*	*%*
2004	381	60.9	52	8.2	23	8.7	8	7.8
2003	372	57.2	45	7.1	22	8.3	8	7.8
2002	361	54.1	41	6.5	21	7.9	8	7.8
2001	286	45.2	36	5.7	20	7.5	8	7.8
2000	257	40.9	31	4.9	20	7.5	8	7.8
1999	131	24.7	31	4.9	19	7.2	6	5.8
1998	81	15.9	30	4.7	16	6.0	5	4.9
1997	45	9.0	29	4.6	13	4.9	4	3.9
1996	20	4.2	22	3.5	11	4.2	4	3.9
1995	13	2.7	19	3.0	10	3.8	3	2.9
1994	9	1.9	17	2.7	6	2.3	3	2.9
1993	8	1.7	12	1.9	6	2.3	3	2.9
1992	7	1.5	11	1.7	5	1.9	3	2.9
Total firm-year observations	**1,971** out of 7,130	**27.6%**	**376** out of 8,216	**4.58%**	**192** out of 3,445	**5.57%**	**71** out of 1,339	**5.30%**

TABLE 10: Early Adopters Sensitivity Tests

Conventional OLS Model with CUMRET

Independent variable(s)		*N*	*F-value*	*Adj. R²*	*Intercept*	D_t*I_t	$D_t*\Delta I_t$	I_t	ΔI_t	D_t*OCI_t	$D_t*\Delta OCI_t$	OCI_t	ΔOCI_t
GERMANY													
- Operating Inc.	(6a)	4,297	47.65***	4.16%+	-0.08***	0.06	0.02	0.15***	0.37***				
- Net Inc.	(6b)	4,386	98.81***	8.19%-	-0.08***	-0.01	0.19***	0.54***	0.15***				
- Comprehensive Inc.	(6c)	4,052	72.83***	6.62%+	-0.09***	-0.15**	0.15***	0.44***	0.08***				
- Net Inc. and OCI	(6d)	3,921	32.60***	10.26%+	-0.08***	-0.05	0.20***	0.62***	0.15***	-0.53***	0.36***	0.05	0.10
FRANCE													
- Operating Inc.	(6a)	4,123	131.97***	11.27%-	0.03***	0.02	-0.01	0.80***	0.49***				
- Net Inc.	(6b)	3,898	149.54***	13.23%+	0.06***	-0.46*	0.03	1.10***	0.34***				
- Comprehensive Inc.	(6c)	3,865	82.17***	7.75%+	0.06***	-0.56**	0.32*	0.73***	0.14***				
- Net Inc. and OCI	(6d)	3,564	71.74***	13.70%+	0.05***	-0.49*	0.05	1.13***	0.36***	-0.42	0.23	-0.23*	0.17*
ITALY													
- Operating Inc.	(6a)	1,198	29.30***	8.63%-	0.03***	-0.07	0.41	0.53***	0.29***				
- Net Inc.	(6b)	1,222	40.68***	11.50%-	0.06***	0.04	0.09	0.92***	0.13				
- Comprehensive Inc.	(6c)	1,138	31.28***	9.62%+	0.03**	0.17	0.22	0.68***	0.03				
- Net Inc. and OCI	(6d)	1,107	26.38***	15.50%-	0.04***	0.01	0.30	1.12***	0.05	-0.27	0.06	-0.21	0.36***
SPAIN													
- Operating Inc.	(6a)	733	13.09***	6.19%-	0.19***	-0.27	0.73	0.64***	0.48***				
- Net Inc.	(6b)	738	17.44***	8.18%-	0.19***	-0.49	1.31	0.92***	0.40***				
- Comprehensive Inc.	(6c)	677	7.62***	3.76%-	0.19***	-0.35	0.57	0.39***	0.01				
- Net Inc. and OCI	(6d)	667	11.20***	10.90%-	0.14***	-0.41	1.07	1.11***	0.50***	-0.08	0.22	0.18	-0.01

The sign "+" ("-") indicates greater (smaller) R-squared values in comparison with the models without early adopter interaction terms;
The following notations are used: *p<.1; **p<.05; ***p<.01.

TABLE 11: Price Relevance of Operating Income (results from *non-early adopters*)

Table 11 exhibits the empirical results from the following OLS regression for the non-early adopters:

$$RET_t = \beta_0 + \beta_1 \frac{OPI_t}{P_{t-1}} + \beta_2 \frac{\Delta OPI_t}{P_{t-1}} + u_t \qquad (6a)$$

Where RET_t is the firm's raw share return, OPI_t is operating income per share and ΔOPI_t is the change in operating income per share for each accounting period t. RET_t is calculated here as the average of cumulated share return for 16, 17 and 18 months, from 12 months prior through 4, 5 and 6 months after the fiscal year end month (month 0). All variables except RET_t are deflated by last financial period end firm's cum-dividend share price P_{t-1}. Panel A presents the coefficients and *t*-statistics from conventional OLS regressions for each country sample. Following Abarbanell and Bushee (1998), we calculated the scale decile rank for each independent variable used in equation (6a) by ranking the values of the variables into ten portfolios (with ranks 0-9). The decile numbers obtained were then deflated by nine so that the constructed independent variable ranges on a positive unitary standardized interval. Panel B exhibits the coefficients and *t*-statistics obtained from ranking OLS regressions.
The following notations are used across panels: *p<.1; **p<.05; ***p<.01.

Panel A. Conventional OLS Model

	GERMANY	FRANCE	ITALY	SPAIN
β_0	-0.01	0.03***	0.03***	0.20***
	(-0.71)	(3.66)	(2.64)	(10.06)
β_1	0.18***	0.80***	0.53***	0.60***
	(8.48)	(18.09)	(8.00)	(4.55)
β_2	0.33***	0.49***	0.29***	0.49***
	(9.07)	(8.33)	(2.83)	(3.01)
N	2,846	3,826	1,084	674
Adj. R^2	5.05%	11.56%	8.36%	6.28%
F-statistic	76.75***	251.14***	50.45***	23.56***

Panel B. Ranking OLS model

	GERMANY	FRANCE	ITALY	SPAIN
β_0	-0.40***	-0.27***	-0.29***	-0.01
	(-18.45)	(-17.67)	(-10.59)	(-0.07)
β_1	0.52***	0.45***	0.46***	0.33***
	(16.60)	(19.35)	(11.07)	(5.83)
β_2	0.25***	0.28***	0.23***	0.19***
	(8.13)	(11.88)	(5.61)	(3.31)
N	2,846	3,826	1,084	674
Adj. R^2	13.16%	16.84%	16.23%	10.08%
F-statistic	216.71***	388.48***	105.99***	38.79***

TABLE 12: Price Relevance of Net Income (results from *non-early adopters*)

Table 12 exhibits the empirical results from the following OLS regression for the non-early adopters:

$$RET_t = \beta_0 + \beta_1 \frac{NI_t}{P_{t-1}} + \beta_2 \frac{\Delta NI_t}{P_{t-1}} + u_t \qquad (6b)$$

Where RET_t is the firm's raw share return, NI_t is net income per share and ΔNI_t is the change in net income per share for each accounting period t. RET_t is calculated here as the average of cumulated share return for 16, 17 and 18 months, from 12 months prior through 4, 5 and 6 months after the fiscal year end month (month 0). All variables except RET_t are deflated by last financial period end firm's cum-dividend share price P_{t-1}. Panel A presents the coefficients and *t*-statistics from conventional OLS regressions for each country sample. Following Abarbanell and Bushee (1998), we calculated the scale decile rank for each independent variable used in equation (6b) by ranking the values of the variables into ten portfolios (with ranks 0-9). The decile numbers obtained were then deflated by nine so that the constructed independent variable ranges on a positive unitary standardized interval. Panel B exhibits the coefficients and *t*-statistics obtained from ranking OLS regressions. The following notations are used across panels: *p<.1; **p<.05; ***p<.01.

N.B.: All early adopters have been dropped out from the sample

Panel A. Conventional OLS Model

	GERMANY	FRANCE	ITALY	SPAIN
β_0	-0.03***	0.05***	0.03**	0.15***
	(-3.16)	(6.30)	(2.43)	(7.83)
β_1	0.62***	1.15***	1.12***	1.11***
	(16.03)	(19.60)	(11.70)	(7.10)
β_2	0.13***	0.35***	0.09	0.51***
	(4.40)	(6.35)	(0.91)	(3.76)
N	2,555	3,292	991	612
Adjusted R^2	10.73%	14.21%	14.41%	11.03%
F-statistic	154.58***	273.60***	84.42***	38.93***

Panel B. Ranking OLS model

	GERMANY	FRANCE	ITALY	SPAIN
β_0	-0.46***	-0.32***	-0.35***	-0.07**
	(-22.40)	(-21.79)	(-14.36)	(-2.14)
β_1	0.70***	0.55***	0.66***	0.40***
	(21.86)	(22.47)	(16.29)	(7.07)
β_2	0.16***	0.28***	0.15***	0.21***
	(5.00)	(11.38)	(3.65)	(3.70)
N	2,555	3,292	991	612
Adj. R^2	20.97%	24.60%	28.45%	16.22%
F-statistic	339.94***	538.10***	198.01***	60.23***

TABLE 13: Price Relevance of Comprehensive Income (results from *non-early adopters*)

Table 13 exhibits the empirical results from the following OLS regression for the non-early adopters:

$$RET_t = \beta_0 + \beta_1 \frac{CI_t}{P_{t-1}} + \beta_2 \frac{\Delta CI_t}{P_{t-1}} + u_t \qquad (6c)$$

Where RET_t is the firm's raw share return, CI_t is comprehensive income per share and ΔCI_t is the change in comprehensive income per share for each accounting period t. RET_t is calculated here as the average of cumulated share return for 16, 17 and 18 months, from 12 months prior through 4, 5 and 6 months after the fiscal year end month (month 0). All variables except RET_t are deflated by last financial period end firm's cum-dividend share price P_{t-1}. Panel A presents the coefficients and *t*-statistics from conventional OLS regressions for each country sample. Following Abarbanell and Bushee (1998), we calculated the scale decile rank for each independent variable used in equation (6c) by ranking the values of the variables into ten portfolios (with ranks 0-9). The decile numbers obtained were then deflated by nine so that the constructed independent variable ranges on a positive unitary standardized interval. Panel B exhibits the coefficients and *t*-statistics obtained from ranking OLS regressions.
The following notations are used across panels: *p<.1; **p<.05; ***p<.01.

Panel A. Conventional OLS Model

	GERMANY	FRANCE	ITALY	SPAIN
β_0	-0.03***	0.06***	0.03**	0.20***
	(-3.02)	(8.13)	(2.06)	(10.94)
β_1	0.44***	0.73***	0.69***	0.38***
	(13.20)	(14.78)	(8.48)	(4.25)
β_2	0.08***	0.14***	0.03	0.01
	(3.24)	(3.45)	(0.44)	(0.16)
N	2,635	3,577	1,020	622
Adj. R^2	7.83%	8.00%	8.88%	3.73%
F-statistic	112.97***	156.55***	50.72***	13.04***

Panel B. Ranking OLS model

	GERMANY	FRANCE	ITALY	SPAIN
β_0	-0.41***	-0.24***	-0.30**	0.02
	(-19.49)	(-15.70)	(-11.53)	(0.70)
β_1	0.64***	0.50***	0.57***	0.42***
	(18.39)	(19.31)	(13.26)	(6.77)
β_2	0.13***	0.15***	0.12***	0.01
	(3.73)	(5.93)	(2.75)	(0.07)
N	2,635	3,577	1,020	622
Adj. R^2	16.12%	15.59%	20.41%	9.60%
F-statistic	254.26***	331.45***	131.77***	34.01***

TABLE 14: Incremental Price Relevance of Other comprehensive income (results from *non-early adopters*)

Table 14 exhibits the empirical results from the following OLS regression for the non-early adopters:

$$RET_t = \beta_0 + \beta_1 \frac{NI_t}{P_{t-1}} + \beta_2 \frac{\Delta NI_t}{P_{t-1}} + \beta_3 \frac{OCI_t}{P_{t-1}} + \beta_4 \frac{\Delta OCI_t}{P_{t-1}} + u_t \quad (6d)$$

Where RET_t is the firm's raw share return, NI_t is net income per share, ΔNI_t is the change in net income per share, OCI_t is other comprehensive income per share, and ΔOCI_t is the change in other comprehensive income per share for each accounting period t. RET_t is calculated here as the average of cumulated share return for 16, 17 and 18 months, from 12 months prior through 4, 5 and 6 months after the fiscal year end month (month 0). All variables except RET_t are deflated by last financial period end firm's cum-dividend share price P_{t-1}. Panel A presents the coefficients and *t*-statistics from conventional OLS regressions for each country sample. Following Abarbanell and Bushee (1998), we calculated the scale decile rank for each independent variable used in equation (6b) by ranking the values of the variables into ten portfolios (with ranks 0-9). The decile numbers obtained were then deflated by nine so that the constructed independent variable ranges on a positive unitary standardized interval. Panel B exhibits the coefficients and *t*-statistics obtained from ranking OLS regressions. The following notations are used across panels: *p<.1; **p<.05; ***p<.01.

N.B.: All early adopters have been dropped out from the sample

Panel A. Conventional OLS Model

	GERMANY	FRANCE	ITALY	SPAIN
β_0	-0.03***	0.05***	0.04***	0.14***
	(-3.05)	(6.48)	(2.70)	(7.62)
β_1	0.62***	1.13***	1.12***	1.09***
	(15.51)	(19.14)	(11.49)	(6.96)
β_2	0.13***	0.36***	0.05	0.50***
	(4.50)	(6.41)	(0.56)	(3.68)
β_3	-0.01	-0.23*	-0.20	0.18
	(-0.07)	(-1.75)	(-1.37)	(1.41)
β_4	0.13**	0.17**	0.36***	-0.01
	(2.11)	(1.96)	(3.34)	(-0.10)
N	2,555	3,292	991	612
Adj. R^2	10.86%	14.27%	15.31%	11.16%
F-statistic	78.84***	138.04***	45.77***	20.23***
$\beta_3 + \beta_4$	0.08**	0.02	0.13***	0.08
	(2.15)	(0.47)	(2.58)	(1.49)

Panel B. Ranking OLS Model

	GERMANY	FRANCE	ITALY	SPAIN
β_0	-0.50***	-0.34***	-0.38***	-0.10**
	(-17.86)	(-17.03)	(-12.03)	(-2.35)
β_1	0.69***	0.55***	0.65***	0.40***
	(21.16)	(22.16)	(16.27)	(7.11)
β_2	0.17***	0.28***	0.14***	0.20***
	(5.33)	(11.56)	(3.54)	(3.63)
β_3	-0.05	-0.08***	-0.16***	0.10
	(-1.44)	(-3.12)	(-3.79)	(1.63)
β_4	0.13***	0.11***	0.22***	-0.03
	(3.70)	(4.27)	(5.28)	(-0.59)
N	2,555	3,292	991	612
Adj. R^2	21.34%	25.00%	30.40%	16.32%
F-statistic	174.27***	275.29***	109.22***	30.85***
$\beta_3 + \beta_4$	0.10***	0.02	0.09**	0.01
	(3.43)	(1.04)	(2.44)	(0.22)

Panel C. Incremental value-relevance of other comprehensive income variables

		UK		Germany		France		Italy		Spain	
		OLS	Ranking	OLS	Ranking	OLS	Ranking	OLS	Ranking	OLS	Ranking
After excluding early adopters											
Incremental value-relevance *Change in adj. R^2	Absolute value*	0.21	0.19	0.13	0.37	0.06	0.40	0.90	1.95	0.13	0.10
	Relative value %	4.30	1.82	1.21	1.76	0.42	1.63	6.25	6.85	1.18	0.62
Before excluding early adopters											
Incremental value-relevance *Change in adj. R^2	Absolute value*	0.21	0.19	0.92	1.28	0.09	0.41	0.89	1.71	0.19	0.11
	Relative value %	4.30	1.82	10.03	5.82	0.66	1.73	6.01	6.16	1.72	0.65

9. REFERENCES

Abarbanell, J.S. and B.J. Bushee (1988). 'Abnormal Returns to a Fundamental Analysis Strategy', *The Accounting Review*, January, 73(1), pp.19-45.

Accounting Standards Board (1992). 'Financial Reporting Standard N°3: Reporting Financial Performance', *IAS Publications*, October, London, UK.

Amir, E., T.S. Harris and E.K. Veuti (1993). 'A Comparison of the Value-Relevance of US vs. Non-US GAAP Accounting Measures Using Form 20-F Reconciliations, *Journal of Accounting Research*, 31, pp.230-64.

Association for Investment Management and Research (AIMR) (1993). '*Financial Reporting in the 1990's and Beyond'*, Charlottesville, Virginia: AIMR.

Ball, R. (1995). 'Making Accounting More International: Why, How, and How Far Will It Go?', *Journal of Applied Corporate Finance*, Fall, 8(3), pp.19-29.

Barker, R. (2003). 'Global Accounting Is Coming', *Harvard Business Review*, April, pp.24-5.

Barker, R. (2004). 'Reporting Financial Performance', *Accounting Horizons*, 18(2), pp.157-72.

Barth, M.E., W.H. Beaver and W.R. Landsman (2001). 'The Relevance of the Value-Relevance Literature for Financial Accounting Standard Setting: Another View', *Journal of Accounting and Economics*, 31, pp.77-104.

Beaver, W. (1981). '*Financial Reporting: an Accounting Revolution'*. Prentice-Hall Contemporary, Englewood Cliffs, N.J.: Prentice-Hall.

Biddle, G. and J.H. Choi (2006). 'Is Comprehensive Income Useful?', *Journal of Contemporary Accounting and Economics*, 2(1), June, forthcoming.

Black, F. (1980). 'The Magic in Earnings: Economic Earnings vs. Accounting Earnings', *Financial Analysts Journal*, November-December, pp.19-24.

Black, F. (1993). 'Choosing Accounting Rules', *Accounting Horizons*, 7, pp.1-17.

Brief, R. P. and K.V. Peasnell (eds.) (1996). '*Clean Surplus: a Link between Accounting and Finance'*, New York: Garland Publishing.

Brimble, M. and A. Hodgson (2004). 'The Value Relevance of Comprehensive Income and Components for Industrial Firms', *Working Paper*, Griffith University, Brisbane, Australia.

Bushman, R.M. and A.J. Smith (2001). 'Financial Accounting Information and Corporate Governance', *Journal of Accounting and Economics*, 32, pp.237-333.

Cahan, S.F., S.M. Courtenay, P.L. Gronewoller and D.R. Upton (2000). 'Value Relevance of Mandated Comprehensive Income Disclosure', *Journal of Business Finance and Accounting*, 27 (9) & (10), November-December, pp.1273-301.

Chambers, D., T.J. Linsmeier, C. Shakespeare and T. Sougiannis (2005). 'An Evaluation of SFAS n°130 Comprehensive Income Disclosures', *Working Paper*, University of Kentucky, Lexington.

Chartered Financial Analysts (CFA) Institute (2005). '*A Comprehensive Business Reporting Model: Financial Reporting for Investors*', October, Charlottesville, Virginia, 66p.

Cheng, A., J. Cheung and V. Gopalakrishnan (1993). 'On the Usefulness of Operating Income, Net Income and Comprehensive Income in Explaining Security Returns', *Accounting and Business Research*, 23, n°91, pp.195-203.

Cope, A.T., L.T. Johnson and C.L. Reither (1996). 'The Call for Reporting Comprehensive Income', *Financial Analysts Journal*, March/April, 52(2), pp.7-12.

Dhaliwal, D., K. Subramnayam and R. Trezevant (1999). 'Is Comprehensive Income Superior to Net Income as a Measure of Firm Performance?', *Journal of Accounting and Economics*, 26, pp.43-67.

Easton, P. (1999), 'Security Returns and Value Relevance of Accounting Data', *Accounting Horizons*, December, 3, pp.399-412.

Easton, P. and T. Harris (1991), 'Earnings as an Explanatory Variable for Returns', *Journal of Accounting Research*, Spring, pp.19-36.

Easton, P. and G. Sommers (2003), 'Scale and the Scale Effect in Market-based Accounting Research', *Journal of Business Finance & Accounting*, January/March, 30(1) & 2, pp.25-55.

Fama, E. and J. McBeth (1973). 'The Cross-Section of Expected Stock Returns', *Journal of Finance*, June, 47, pp.427-65.

Financial Accounting Standards Board (1997). 'Statement of Financial Accounting Standard N°130: Reporting Comprehensive Income', *FASB*, June 1997.

Foster, N. and N.L. Hall (1996). 'Reporting Comprehensive Income: Shedding More Light on Items Reported Directly in Equity', *CPA Journal*, October, 66(10), pp.16-9.

Harper, R., W. Meister and J. Strawser (1987). 'The Impact of New Pension Disclosure Rules on Perceptions of Debt', *Journal of Accounting Research*, autumn, pp.327-30.

Harper, R., W. Meister and J. Strawser (1991). 'The Effect of Recognition Versus Disclosure of Unfunded Postretirement Benefits on Lenders' Perceptions of Debt', *Accounting Horizons*, September, pp.50-6.

Harris, T. and J. Ohlson (1987). 'Accounting Disclosures and the Market Valuation of Oil and Gas Properties', *The Accounting Review*, October, pp.651-70.

Hirst, E., and Hopkins, P. (1998). 'Comprehensive income reporting and analysts' valuation judgments', *Journal of Accounting Research*, 36 (Supplement), pp.47-75.

Holthausen, R.W., and R.L. Watts (2001). 'The Relevance of the Value-Relevance Literature for Financial Accounting Standard Setting', *Journal of Accounting and Economics*, 31, pp.3-75.

International Accounting Standards Board (IASB) (2006). 'Exposure Draft of Proposed Amendments to IAS 1 Presentation of Financial Statements', *IASCF*, March, 103p.

Johnson, E. J., J.W. Payne and J.R. Bettman (1988). 'Information Displays and Preference Reversals', *Organizational Behavior and Human Decision Processes*, 42, pp.1-21.

Kanagaretnam, K., R. Mathieu and M. Shehata (2005). 'Usefulness of Comprehensive Income Reporting in Canada', *Working Paper*, February, McMaster University, Ontario, Canada.

Kiger, J. E. and J.R. Williams (1977). 'An Emerging Concept of Income Presentation', *Accounting Historians Journal*, 4 (2), pp.63-77.

Kmenta, J. (1986). '*Elements of Econometrics*', McMillan ed.

Leuz, C. and R.E. Verrecchia (2000). 'The Economic Consequences of Increased Disclosure', *Journal of Accounting Research*, 38 (Supplement), pp.91-124.

Leuz, C. and J. Wüstemann (2003). 'The Role of Accounting in the German Financial System' *in* Krahnen, J.P. and H. Reinhard (2003). '*The German Financial System*', Chapter 14, Oxford University Press, London.

Lev, B. (1989). 'On the Usefulness of Earnings and Earnings Research: Lessons and Directions from Two Decades of Empirical Research', *Journal of Accounting Research*, Supplement, pp.153-92.

Lin, S. (2006). 'Testing the Information Set Perspective of UK Financial Reporting Standard N°3: Reporting Financial Performance', *Journal of Business, Finance and Auditing*, forthcoming.

Linsmeier, T.J., Gribble, R., Jennings R.G., Lang, M.H., Penman, S.H., Petroni, K.R., Shores, D., Smith, J.H. and Warfield, T.D. (1997). 'An Issues Paper on Comprehensive Income', *Accounting Horizons*, June, 11(2), pp.120-6.

McDonald, E. (1997). 'Heard on the Street: FASB Rule Will Offer Walk on Wild Side', *Wall Street Journal*, 30th of September, p.C1.

O'Hanlon, J. and P. Pope (1999). 'The Value Relevance of U.K. Dirty Surplus Accounting Flows', *British Accounting Review*, 31, 459-482.

Ohlson, J.A. (1979). 'Residual Analysis and the Private Value of Information', *Journal of Accounting Research*, autumn, pp.506-27.

Ohlson, J.A. (1989). 'Accounting Earnings, Book Value, and Dividends: The Theory of the Clean Surplus Equation', *Unpublished Paper*, Columbia University, USA.

Ohlson, J.A. (1991). 'The Theory of Value and Earnings, and an Introduction to the Ball-Brown Analysis', *Contemporary Accounting Research*, 7, pp.1-19.

Ohlson, J.A. (1995). 'Earnings, Book Values, and Dividends in Equity Valuation', *Contemporary Accounting Research*, 11(2), pp.661-78.

Ohlson, J.A. (1999). 'Earnings, Book Values, and Dividends in a Stewardship Setting with Moral Hazard', *Contemporary Accounting Research,* 16 (3), pp.525-40.

Pope P.F. and P. Wang (2005). 'Earnings Components, Accounting Bias and Equity Valuation', *Review of Accounting Studies*, 10, pp.387-407.

Raedy, J. (2000). 'A Reconciliation of Stock Market Anomalies', *Working paper*, University of North Carolina, Chapel Hill.

Robinson, L.E. (1991). 'The Time Has Come to Report Comprehensive Income', *Accounting Horizons*, 5(2), pp.107-12.

Roll, R. (1988). 'R^2', *Journal of Finance*, July, pp.541-66.

Sanbonmatsu, D., F. Kardes, S. Posvac and D. Houghton (1997). 'Contextual Influences on Judgement Based on Limited Information', *Organizational Behavior and Human Decision Processing*, March, pp.251-64.

Skinner, D.J. (1999). 'How Well Does Net Income Measure Firm Performance? A Discussion of Two Studies', *Journal of Accounting and Economics*, 26, pp.105-11.

Vuong, Q.H. (1989). 'Likelihood Ratio Tests for Model Selection and Non-nested Hypotheses', *Econometrica*, March, 57(2), pp.307-33.

White, G., A. Sondhi and D. Fried (1998). '*The Analysis and Use of Financial Statements*', 2nd edition, New York, NY: John Wiley & Sons.

Zeff, S.A. (1978). 'The Rise of Economic Consequences', *The Journal of Accountancy*, December, pp.56-63.