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The transition to IFRS and the value relevance of financial statements in Greece

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Abstract

We examine the combined value relevance of book value of equity and net income before and after the mandatory transition to IFRS in Greece. Contrary to our expectations, we find no significant change in the explanatory power of value relevance regressions between the two periods. The coefficients on book value of equity and net income are positive and significant in both the pre-IFRS and post-IFRS periods. However, the coefficient on book value of equity is significantly greater under IFRS, whereas we find some evidence of a decrease in the coefficient on net income. Finally, we find that market participants viewed the extra information provided by reconciliations between Greek GAAP and IFRS for 2004 figures as incrementally value relevant.

Key words: Creative accounting; Greece; IFRS implementation; Value relevance.

1. Introduction

Since January 1st 2005, European Union (EU) publicly traded companies have been required to prepare consolidated accounts on the basis of International Financial Reporting Standards (IFRS).¹ IFRS consider investors as the main users of financial statements (IASB *Framework*, par. 10). They are not ‘debt and tax oriented’, unlike the accounting regulations in code law countries such as Greece. IFRS are supposed to reflect economic gains and losses in a more timely fashion (Barth, Landsman, & Lang, 2008) and to provide more useful balance sheets than the accounting rules governing most continental European countries (Ball, 2006).

This, and prior evidence that ‘shareholder oriented’ accounting regimes have higher value relevance than ‘debt oriented’ systems (Ali & Hwang, 2000; King & Langli, 1998) have led to the expectation that accounting figures will become more value relevant in code law countries which ‘switch’ to a shareholder-oriented system such as IFRS. Considering the value relevance of book value of equity and net income as one important dimension of accounting quality (e.g. Barth et al., 2008), the implementation of IFRS in Europe provides a unique opportunity to examine accounting quality, and any changes to this quality, before and after IFRS adoption. Additionally, IFRS 1 (*First-time Adoption of International Financial Reporting Standards*) requires reconciliation statements explaining how the transition from local GAAP to IFRS affected companies’ financial statements. Drawing on prior literature indicating the usefulness of reconciliation statements for valuation purposes (e.g. Alciatore, 1993), it is expected that investors value the new information provided in the reconciliation statements.

We address two research objectives. First, we examine the change in the relationship between market values and reported figures before and after the adoption of IFRS by Greek listed companies (value relevance of Greek GAAP vs. IFRS figures). Second, we explore

whether adjustments to shareholders' equity, resulting from the adoption of specific IFRS, are incrementally value relevant to 2005 book values. The majority of these specific IFRS were expected to curtail previous creative accounting practices. Our study is the first to examine both these objectives with reference to Greece with a large set of publicly listed firms.²

Meeting these objectives addresses recent calls in the literature for more in-depth single country studies, specifically with regard to the adoption of IFRS (e.g. Schipper, 2005; Weetman, 2006). Focusing on a single country allows us to control for institutional, socio-economic and political factors that affect companies' reporting and stock market participants' investing behaviour and that are difficult to control for in an international comparative study (Ruland, Shon, & Zhou, 2007).

Greece offers an interesting setting because of its distinctive financial reporting regime, culture and socio-economic context. For example, Greece is the country with the highest score for uncertainty avoidance (out of 52) in Hofstede's (1983) study. It has a relatively young and weak accounting/audit profession (Baralexis, 2004), very weak enforcement of accounting regulation (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1998; Baralexis, 2004), and creative accounting is common (Spathis, 2002; Spathis, Doumpos, & Zopounidis, 2002; Baralexis, 2004; Kontos, Krambia-Kapardis, and Milonas in Jones (2011)).³ Nevertheless, the Greek stock market has been considered to be a developed market since 2000 (Mantikidis, 2000; FTSE, 2011). At the end of March 2006, almost 50% of the market capitalisation belonged to foreign investors (Central Security Depository, 2006). Thus, there is not only national but also international interest in the quality of Greek listed companies' financial statements. Finally, Greek GAAP⁴ differs significantly from IFRS (Ding, Hope, Jeanjean, & Stolowy, 2007), therefore companies' financial statements should have been affected considerably by the transition to IFRS.

By examining whether accounting quality changes as a result of IFRS implementation in the stakeholder and tax driven accounting environment of Greece, we contribute specifically to the debate on whether shareholder-focused accounting principles are more value relevant than the traditional continental European accounting regulations (e.g. Ball, 2006). This debate reflects on the usefulness of IFRS for investment decisions, given that IFRS consider investors the main users of financial statements. Additionally, by examining the incremental value relevance of the information provided in the reconciliation statements, we explore the usefulness of these mandatory transitional reconciliations as an indication of the market's 'evaluation' of new information. Our findings are in line with those of Christensen, Lee, and Walker (2009) and Alciatore (1993), who indicate that reconciliation statements do convey useful information to investors.

The remainder of the paper consists of four further sections, followed by a conclusion. Section 2 provides the background to the study by reviewing prior literature and the Greek accounting environment. In section 3 the research hypotheses are introduced. Section 4 describes the data employed and the research design. Section 5 reports the empirical findings.

2. Background

2.1 Adoption of IFRS: relative and incremental value relevance

Prior literature relevant to the present paper includes research on both voluntary and mandatory IAS/IFRS adoption. Below we distinguish between single country studies and studies comparing the effect of adoption in several countries.

Single country studies

In the US, Harris and Muller (1999: 309) explore the value relevance of Form 20-F reconciliation statements, including reconciliations from IAS. They find ‘limited evidence that reconciliations to US-GAAP, even under IAS, provide useful information to the market’.

In China, separate markets had been created for domestic and international investors. A-shares were available for purchase only by domestic investors, while B-shares could be acquired by foreign nationals. Companies were required to prepare financial statements for owners of A-shares using local Chinese accounting standards and to owners of B-shares using IFRS (Eccher & Healy, 2000). The two types of shares were traded at different prices. Looking at the relationship between cash flows and returns under the two accounting regimes, Eccher and Healy (2000) find that IAS financial statements are less value relevant than the local Chinese standards. These findings are confirmed by Lin and Chen (2005). However, Sami and Zhou (2004) and Liu and Liu (2007), applying a different research design, find that IFRS based accounting information is more value relevant.

In Germany, prior to the mandatory adoption of IFRS in 2005, a large number of companies had voluntarily adopted IFRS, and companies listed on a segment of the Frankfurt Stock Exchange (the ‘Neuer Markt’) were *required* to publish IFRS- or US GAAP-based financial statements (Beckman, Brandes, & Eierle, 2007). Hung and Subramanyam (2007) find no evidence that the relative value relevance of net income and book value has improved. They do find, however, that ‘book value (net income) plays a more (less) important valuation role under IAS than under HGB⁵’ and that ‘the IAS adjustments to book value are value relevant, while the adjustments to net income are value irrelevant’ (Hung & Subramanyam, 2007: 652). Schiebel (2007) finds that equity book values under German GAAP had higher value relevance than under IFRS, but Bartov et al. (2005) find higher value relevance of IFRS earnings over those prepared under German GAAP. Similar results are

reported by Jermakowicz, Prather-Kinsey, and Wulf (2007). Beckman et al. (2007) find that some individual adjustments reported in the reconciliation statements were incrementally value relevant. These mixed findings may be due to different research designs or to the fact that, prior to 2005, IFRS were in some cases adopted on a voluntary basis. Voluntary adoption was associated with a high incidence of non-compliance or incomplete compliance (e.g. Cairns, 2001), which may have negatively affected investors' perceptions of the accounting measures produced under IFRS. This may also have partly affected the Finnish study by Niskanen, Kinnunen, and Kasanen (2000), who find that individual components of reconciliations to IFRS are value relevant, but aggregate reconciliations are not.

After 2005, country studies explored the impact of mandatory IFRS adoption. Schadewitz and Markku (2007) now find that IFRS earnings and net assets reconciliation adjustments are value relevant for Finnish companies. Callao, Jarne, and Lainez (2007) report no improvement in Spanish reporting quality after IFRS adoption and Paananen (2008) documents a decrease in the relative value relevance of financial reporting in Sweden (based on 2003-2006 data). Filip and Raffournier (2010: 94) conclude for Romania that 'the replacement of the former accounting system by a more market-oriented and IFRSs-based regulation had only a limited impact on the value relevance of accounting data'. Oliveira, Rodrigues and Craig (2010) report that the implementation of IFRS in Portugal resulted in a decline in the value relevance of earnings and had no effect on the value relevance of shareholders' equity.

In a UK context, Horton and Serafeim (2009: 36) report that the 'earnings reconciliation adjustment is value relevant and has incremental price relevance over and above the UK GAAP numbers', but this is not confirmed for the shareholders' equity reconciliation adjustment. This is supported by Capkun, Cazavan-Jeny, Jeanjean, and Weiss

(2010). Horton and Serafeim (2009) also find that the specific adjustments relating to leases, tax and goodwill are incrementally value relevant.

Multi country studies

Barth et al. (2008) use a sample of companies from 21 different countries that had voluntarily adopted IFRS between 1994 and 2003. They find that companies reporting under IFRS exhibit higher value relevance than non-adopters in the same country. Capkun et al. (2010) examine companies from nine EU countries after mandatory IFRS implementation. They find that the aggregate adjustments of IFRS earnings are incrementally value relevant, but not those of book value of equity. Horton and Serafeim (2007)⁶ find that UK, French and Italian companies' earnings reconciliations on transition to mandatory IFRS implementation are incrementally value relevant, but not those of Spanish companies (which supports Callao et al., 2007 – see above). Devalle, Onali and Magarini (2010) use a sample of companies from five EU countries between 2002 and 2007 and, similar to prior studies, report mixed findings. They report increased (decreased) value relevance for earnings in Germany and France (Italy). The value relevance of the book value of equity decreased (increased) in Germany, Spain, France, and Italy (UK).

The above suggests that evidence regarding the effects of IFRS on the value relevance is mixed, especially following their mandatory implementation in the EU. Further, there is limited and inconclusive evidence regarding the usefulness of the reconciliation statements required in the first year of IFRS adoption.

We contribute to and extend this literature by adding a single country study on Greece. This sheds more light on the effect of IFRS implementation on the value relevance of companies' fundamentals, especially for countries whose national GAAP differed

significantly from IFRS, and for whom implementation was expected to result in significant impact on companies' financial statements.

2.2 The Greek accounting environment

Greek culture, politics and economics have been influenced by many international forces. During the last decades the traditional state corporatism has been modernised and modified by neo-liberal, free market influences (Caramanis, 2005). Nevertheless, Greece is considered to be a low trust society (Ballas, Hevas, & Neil, 1998), with a preference for state regulation and formalism (Ballas et al., 1998), and for detailed rules over principles and economic substance.

Traditionally, Greek companies are financed by banks and through a debt-oriented capital market (Baralexis, 2004; Tzovas, 2006). However, the Athens Stock Exchange (ASE) has been considered a developed market since 2000 (Mandikidis, 2000; FTSE, 2011) indicating an increase in the importance of raising finance from the equity markets. In late 2006, 317 companies with a total market capitalisation of €158 billion⁷ were listed. Foreign investors held 52.31% of the market capitalisation of ASE's FTSE 20 companies, 39.80% of FTSE 40, and 15.63% of Small Cap 80 companies (Central Security Depository, 2006), indicating a significant interest by foreign investors in Greek companies. ASE is classified in accordance with the International Classification Benchmark and companies are grouped into 17 'super-sectors', allowing comparison with corresponding sectors in international stock markets (ASE, 2005). The Hellenic Capital Market Commission (HCMC - 'Επιτροπή Κεφαλαιαγοράς') regulates and supervises the Greek market.

As is also the case in other continental European countries, the emphasis on debt financing encourages conservatism (Ballas, 1994). Ownership concentration is high and owners are usually involved in management and have therefore less need for financial

statements as an information source (Tzovas, 2006). Financial reporting is traditionally closely linked to taxation (Ballas et al., 1998), and companies tend to adopt aggressive tax-reducing strategies (Tzovas, 2006; Baralexis, 2004). Companies also engage in income smoothing because stakeholders (in code law countries) tend to prefer less volatile earnings (Ball, Kothari, & Robin, 2000).

Greece is a French-style civil law country (La Porta et al., 1998). In such countries, creditor and investor protection and enforcement are weak, and poor legal protection of investors correlates with high ownership concentration. This applies in Greece, in spite of recent reforms and a competitive audit market (e.g. Leventis & Caramanis, 2005). Audit and enforcement are also weak: Qualified audit reports are common, even after IFRS implementation (Grant Thornton, 2007), but do not appear to be an effective sanction (Kontoyannis, 2005).

Corporate governance regulation has been introduced and updated in line with international rules. However, as with other aspects of regulatory changes, there is a tendency for companies to comply with form rather than substance, although compliance appears to be improving (Grant Thornton & AUEB, 2005, 2006).

From 1 January 2005, IFRS have been compulsory for all Greek listed companies. However, the transition to IFRS in Greece has been problematic, partly because of the substantial differences between the two accounting regimes, but also because of a lack of preparedness of companies and accountants (cf. Spathis & Georgakopoulou, 2007; Grant Thornton & AUEB, 2003). The first annual financial statements of Greek listed companies prepared in accordance with IFRS became available at the end of March 2006.⁸

3. Differences between Greek GAAP and IFRS and research hypotheses

3.1 Differences between Greek GAAP and IFRS

The Greek accounting framework differs substantially from IFRS and has been characterised as stakeholder-oriented, tax-driven (Spathis & Georgakopoulou, 2007), and conservative (Ballas, 1994). According to Ding et al. (2007), out of 31 countries Greece has the highest number of issues absent from local GAAP that are covered by IAS ('absence score'). Additionally, Greece is the 10th most 'divergent' country (of 28) with regard to differences between national rules and IAS (Ding et al., 2007). (See Tsalavoutas and Evans (2010) for a summary of these differences). According to Ding, Jeanjean, and Stolowy (2005) 'divergence' is closely related to culture and, as we argue above, Greece has a distinctive culture. Ding et al. (2007) also identify a positive association between ownership concentration and 'absence'.

Leuz, Nanda, and Wysocki (2003: 525) state that 'outsider economies with relatively dispersed ownership, strong investor protection, and large stock markets exhibit lower levels of earnings management than insider countries with relatively concentrated ownership, weak investor protection, and less developed stock markets'. They classify Greece (along with Austria) as the country (out of 31) with the highest earnings management. Their finding is not surprising, given that Ding et al. (2007) find that 'absence' of explicit accounting rules creates opportunities for earnings management.

IFRS implementation in Greece meant inter alia that nine IAS/IFRS (see paragraph below), which introduced new accounting rules or prohibited accounting treatments that encouraged earnings management, were expected to lead to a curtailment of creative accounting (see also Tsalavoutas & Evans (2010) and Polychroniadis (2002) for more details).

Specifically, IAS 38, *Intangible Assets*, was expected to reduce shareholders' equity because its tighter recognition criteria require Greek companies to write off start-up costs and research expenses previously capitalised. IAS 19, *Retirement Benefits*, requires recognition of defined benefit liabilities for all employees in service (not only those due to retire during the following year, as under Greek GAAP). The more explicit requirements of IAS 37, *Provisions, Contingent Liabilities and Contingent Assets*, were expected to lead to an increase in provisions, and those of IAS 32 *Financial Instruments: Disclosure and Presentation* & IAS 39, *Financial Instruments: Recognition and Measurement*, to impact on the measurement of financial assets, loans and receivables investments. IAS 32 also curtailed the prior option to acquire own shares and recognise these as assets. The more stringent rules of IAS 36, *Impairment of Assets*, on recognition of impairments were expected to lead to a reduction of asset values. IAS 2, *Inventories*, also requires impairment of inventories to be recognised, while Greek GAAP merely required disclosure. Different, and more explicit, revenue recognition rules under IAS 18, *Revenue*, were expected to reduce the values of inventories and receivables. These changes were expected to result in reductions of net assets and, in some cases, to more comprehensive disclosure under IFRS.

3.2 Pre-and post-2005 relative value relevance (H1 – H2)

Lower value relevance has been reported for debt-oriented and tax influenced accounting systems (Ali & Hwang, 2000; King & Langli, 1998), including those of continental European countries that exhibit these features. As the Greek accounting framework has many features in common with the other Continental European countries, the adoption of IFRS was expected to provide more 'decision-useful' financial statements.

Barth et al. (2008) (with reference to Ashbaugh & Pincus, 2001) argue that IFRS are more restrictive than national accounting standards in limiting managers' discretion to determine accounting results. This is in line with Ball (2006: 9) who argues that

implementation of IFRS is expected to curtail the ‘discretion afforded managers to manipulate provisions, create hidden reserves, ‘smooth’ earnings and hide economic losses from public view’. Additionally, IFRS should increase transparency by mandating higher levels of disclosures (Daske & Gebhardt, 2006).

In line with these propositions and with regard to Greece in particular, Polychroniadis (2002) argues that reporting quality would improve under IFRS as the adoption of the standards listed above would reduce creative accounting practices and this would cause significantly negative impact on shareholders’ equity. In addition, as the level of mandatory disclosures is lower under Greek GAAP, IFRS will lead to more transparent financial statements.

We take into consideration two factors. First, that IFRS consider investors to be the main users of financial statements (IASB Framework, par. 10) and are not as debt and tax oriented as Greek GAAP; and second, the anticipation of improved financial reporting under IFRS. Based on these two factors it is expected that the change from Greek GAAP to IFRS should increase accounting quality in Greece. In particular, it is expected that the curtailment of creative accounting practices, as well as the more timely recognition of assets and liabilities, will result in an increase of the combined value relevance of book value of equity and net income (i.e., R^2) and in the valuation coefficients on *both* book value of equity and net income of Greek companies. In other words, Greek companies’ income statements and balance sheets will become more value relevant.

Hence, we formulate the following hypotheses, in the alternative form:

- H1: The combined value relevance of book value of equity and net income (i.e., R^2) increases after the switch from Greek GAAP to IFRS.
- H2: The value relevance of *both* book value of equity and net income increases after the switch from Greek GAAP to IFRS.

However, there are several social, political and institutional factors which may affect value relevance, and may do so to a greater extent than accounting standards (Damant, 2006; Ball, 2006; Zeff, 2007). Additionally, ‘the inherent flexibility in principles-based standards could provide greater opportunity for firms to manage earnings’ (Barth et al., 2008: 468). If investors do believe that Greek companies would apply creative accounting practices even under IFRS to the extent they did before (but perhaps in different areas), the hypotheses may not hold.

3.3 Incremental value relevance of reconciliation adjustments (H3)

The first IFRS financial statements published in 2005 incorporated a set of reconciliation statements with details of the changes in the reported financial position (shareholders’ equity) and performance (net profit) in the 2004 financial statements under Greek GAAP and under IFRS. Additionally, the restated comparative figures show what the 2004 financial statements would have been if they had been prepared in accordance with IFRS. Because of the substantial differences between IFRS and Greek GAAP, the impact of IFRS was expected to be significant. This is confirmed by a descriptive study by Tsalavoutas and Evans (2010), which employs Gray’s comparability index to measure the impact of IFRS implementation on net profit, shareholders’ equity, gearing and liquidity in Greek companies’ financial statements. It identifies a statistically significant impact on these measures for a large number of individual companies.⁹

It is therefore expected that the aggregate reconciliation adjustments should be incrementally value relevant. This expectation is in line with prior literature (e.g. Capkun et al., 2010; Horton & Serafeim, 2009). Different results and financial positions are logically to be expected when a different set of GAAP is applied for the same accounting period.¹⁰ However, aggregate net reconciliation changes may be small because significant individual

adjustments may offset each other. Therefore, the individual adjustments are likely to provide better information (see also Alciatore, 1993).

Therefore, we focus on the individual adjustments reported within shareholders' equity reconciliation statements (Niskanen et al., 2000; Beckman, 2007; Horton & Serafeim, 2009), looking first at those standards expected to curtail creative accounting practices (IAS 2, IAS 19, IAS 32, IAS 36, IAS 37, IAS 38 and IAS 39, as discussed above) (cf. Spathis, 2002; Spathis et al., 2002; Baralexis, 2004; Caramanis & Spathis, 2006). We do not examine the incremental value relevance of adjustments relating to IAS 18, because the new requirements it introduced affected very few companies in our sample.¹¹

Although not related to creative accounting practices, the incremental value relevance of the adjustments relating to four more standards (IAS 10, *Events after the Balance Sheet Date*, IAS 12, *Income Taxes*, IAS 16, *Property, Plant and Equipment*,¹² and IAS 20, *Accounting for Government Grants and Disclosure of Government Assistance*) is examined since they affect most companies in the sample. The accounting treatments these standards introduced were either absent or significantly different from the corresponding ones under Greek GAAP.

In line with prior literature (e.g. Niskanen, 2000; Beckman et al., 2007; Horton & Serafeim, 2009), we test for additional value relevance using the 2005 book values within the reconciliation statements in the 2004 shareholders' equity. Hence, we formulate the following research hypothesis, in the alternative form:

H3: Adjustments reported in the 2004 shareholders' equity reconciliation statements are incrementally value relevant.

4. Data and Research Design

4.1 Data for H1 & H2

To test hypothesis H1 and H2, we use a sample of four years before and after the adoption of IFRS in Greece (i.e., 2001 and 2008). Our initial sample comprises all non-financial companies in DataStream, with December year-ends, listed on the ASE. In line with prior research, financial companies are excluded because of the differences in the nature of their financial statement items and because they are subject to different regulations. We then exclude companies with data available only for one year (since lagged data is needed for the returns regression), early IFRS adopters and companies with negative book value. This resulted in 945 firm-year observations for the pre-IFRS period and 916 for the post-IFRS period. Table 1 reports sample composition by year and industry, indicating little variation across years.

TABLE 1 – ABOUT HERE

4.2 Data for H3

The reconciliation statements were contained in the notes of the first IFRS statements. We focus therefore only on the financial statements of firms listed on the ASE at the end of March 2006 (i.e. 317 companies, see section 2.2. above). The sample excludes five early IFRS adopters. Additionally, 11 companies with 30 June as their year-end date and 44 financial companies were also excluded. A further 76 companies were excluded because of data unavailability (e.g. they were not traded on ASE during the first four months after the publication of the 2005 annual results).¹³ However, of those 201 companies, 42 provided inadequate reconciliation disclosures (either they provided no reconciliation statements or they provided insufficient disclosures to capture and evaluate the impact of individual IFRS that we hand-collected). This left a final sample of 159 companies for testing H3.

4.3 The models employed and tests performed

The study is mainly based on the fundamental Ohlson (1995) price or ‘levels’ model which has been used extensively in prior value relevance research (e.g. Barth et al., 2008; Hung & Subramanyam, 2007). The model is as follows:

$$MV_{it} = a_0 + b_1 BVE_{it} + b_2 NI_{it} + \varepsilon_{it} \quad (\text{Eq. 1})$$

where MV_{it} is the market value of a company i four months after the end of the financial period under examination (t) (i.e. 30 April). This ensures that the accounting information is in the public domain and has been ‘absorbed’ by investors (Barth et al., 2008; Harris and Muller, 1999). BVE_{it} is the book value of net assets of company i at the end of the financial period under examination (t); NI_{it} is the net profit after tax of company i for the financial period under examination (t); and ε_{it} is the mean zero disturbance term.

In order to address the concerns relating to heteroskedasticity with regard to ‘levels’ specifications (cf. Kothari & Zimmerman, 1995), ‘Heteroskedasticity-consistent covariance matrix estimator 3 (HC3)’ is employed. This alternative method is more appropriate than White’s (1980) basic method because it produces more conservative confidence intervals (MacKinnon & White, 1985). Heteroskedasticity can also arise as a result of the presence of outliers (Gujarati, 2003: 390). Outliers are defined and excluded by using Cook’s Distance (Pallant, 2005).¹⁴

Another common problem in value relevance research is the scale bias, which may introduce heteroskedasticity. In line with prior papers (e.g. Barth & Clinch (2009), Barth et al., 2008; Hung & Subramanyam, 2007) the present study first employs a per share specification. We also perform and report our tests with the alternative specification of weighted least squares (WLS), where the deflator is the market value of equity (cf. Dechow et al., 1999; Xu, Magnan, & André, 2007).

Similar to previous studies, we also employ a returns approach as it avoids scale problems and provides insight about the earnings timeliness (Easton & Harris, 1991; Kothari & Zimmerman, 1995). Nevertheless, it should be noted that the returns specification is only able to examine H1 but not H2 given that the returns regression does not include the shareholders' equity as an independent variable. Additionally, Kothari and Zimmerman (1995: 157) suggest that the price specification 'gives more economically sensible earnings response coefficients'. The returns model is as follows:

$$R_{it} = a_1 + a_2 \Delta NI_{it} + a_3 NI_{it} + \varepsilon_{it} \quad (\text{Eq. 2})$$

where R_{it} is the return of the stock at year t , for a 12 month period ending four months after the financial year end (months -8 to +4). As in Equation 1, NI_{it} is the net profit after tax of company i for the financial period under examination (t). ΔNI_{it} represents the change of NI_{it} between years $t-1$ and t . ε_{it} is the mean zero disturbance term.

The examination of the change in the relative value relevance of accounting information is measured as the difference in the R^2 of Eq. 1 & Eq. 2 between the two periods under examination (H1). Hence, first, each regression is run separately for each period and then we employ Cramer's (1987) Z-statistic.¹⁵

The examination of the potential change in the valuation coefficients on book value of equity and net income between the two periods (H2) means testing whether there is any difference (structural change) in the above model between the two periods. This is examined by employing pre-IFRS and post-IFRS data for each company and introducing a period dummy variable in the panel data regression. This results in the following model:

$$MV_{it} = a_0 + b_1 DV + b_2 BVE_{it}^{GR\&IFRS} + b_3 BVE_{it}^{GR\&IFRS} * DV + b_4 NI_{it}^{GR\&IFRS} + b_5 NI_{it}^{GR\&IFRS} * DV + \varepsilon_{it} \quad (\text{Eq. 3})$$

MV_{it} market value of a company i four months after the end of the financial period under examination (t) (i.e. 30 April);

DV dummy variable where 1 refers to the pre-IFRS financials and 0 refers to the pre-IFRS (Greek) financials;

$BVE_{it}^{GR\&IFRS}$	year end book value of shareholders' equity (Gr GAAP & IFRS);
$BVE_{it}^{GR\&IFRS} * DV$	year end book value of shareholders' equity multiplied by the dummy variable;
$NI_{it}^{GR\&IFRS}$	net profit (Gr GAAP & IFRS);
$NI_{it}^{GR\&IFRS} * DV$	net profit multiplied by the dummy variable;
ε_{it}	is the mean zero disturbance term.

This permits the identification of a potential change to the value assigned to the aggregate figures produced under the new accounting regime as well as the direction of the change (coefficients b_3 and b_5 are of interest in this model). It is noted that we control for cross-sectional correlations clustering by firm and year (cf. Gow et al., 2010; Petersen, 2009). We also perform our tests by controlling for cross-sectional correlations clustering by industry and year but the results are qualitatively similar and we, therefore, do not discuss them further.

In order to examine the incremental value relevance of the reconciliation adjustments (H3), the aggregate differences revealed by the restated 2004 figures are introduced into Eq.1, resulting in Eq. 4 below. More specifically, the 2005 book value of shareholders equity is decomposed back to the 2004 Greek numbers and is broken down across three components: the 2004 closing values under Greek GAAP; the difference revealed by restating the 2004 figures under IFRS; and the difference between opening and closing 2005 IFRS book value of equity. Similarly, the 2005 book value of net income is broken down into three components following Capkun et al. (2010): the 2004 closing values under Greek GAAP; the difference revealed by restating the 2004 figures under IFRS; and the difference between the reported 2004 and 2005 net income under IFRS. This decomposition is in line with the notion that annual earnings follow 'a random walk with drift' (Brown, 1993). This is the first step of the decomposition applied.

This decomposition helps to examine the incremental value relevance of specific reconciling items (H3). This is because Eq. 4 is further decomposed (Eq. 5 below) by breaking down the aggregate change in equity into ten components: impact from IAS 2 & 36 (aggregated because they both deal with impairment of assets), IAS 10, IAS 12, IAS 16, IAS 19, IAS 20, IAS 32 & 39 (aggregated as companies tended to disclose this impact jointly), IAS 37, IAS 38, and the sum of the impact from all other standards (Other). Equation 4 and Equation 5 are as follows:

$$MV_{it} = a_0 + b_1 BVE_{it}^{GR} + b_2 \Delta BVE_{it}^{IFRS-GR} + b_3 \Delta BVE_{it}^{IFRS} + b_4 NI_{it}^{GR} + b_5 \Delta NI_{it}^{IFRS-GR} + b_6 \Delta NI_{it}^{IFRS} + \varepsilon_{it}$$

(Eq. 4)

$$MV_{it} = a_0 + b_1 BVE_{it}^{GR} + b_2 IAS2_36_{it} + b_3 IAS_10_{it} + b_4 IAS_12_{it} + b_5 IAS_16_{it} + b_6 IAS_19_{it} + b_7 IAS_20_{it} + b_8 IAS32_39_{it} + b_9 IAS_37_{it} + b_{10} IAS_38_{it} + b_{11} Other_{it} + b_{12} \Delta BVE_{it}^{IFRS} + b_{13} NI_{it}^{GR} + b_{14} \Delta NI_{it}^{IFRS-GR} + b_{15} \Delta NI_{it}^{IFRS} + \varepsilon_{it}$$

(Eq. 5)

MV_{it}	market value of a company i four months after the end of the financial period under examination (t) (i.e. 30 April 2006)
BVE_{it}^{GR}	2004 book value of shareholders' equity (Greek GAAP)
$\Delta BVE_{it}^{IFRS-GR}$	change in the 2004 shareholders' equity, revealed by the restated 2004 comparative figures
$IAS2_36_{it}$ IAS_10_{it} IAS_12_{it} IAS_16_{it} IAS_19_{it} IAS_20_{it} $IAS32_39_{it}$ IAS_37_{it} and IAS_38_{it}	represent the impact on the 2004 book value of shareholders' equity caused by the adoption of the corresponding standards
$Other_{it}$	aggregate impact on the 2004 book value of shareholders' equity caused by the adoption of all other standards
ΔBVE_{it}^{IFRS}	difference between the opening and closing 2005 book value of shareholders' equity under IFRS
NI_{it}^{GR}	2004 net profit after tax (Greek GAAP)
$\Delta NI_{it}^{IFRS-GR}$	change in the 2004 net profit after tax, revealed by the restated 2004 comparative figures
ΔNI_{it}^{IFRS}	difference between the reported net profit after tax in 2004 (as restated under IFRS) and the 2005 net profit after tax (this is in line with the spirit of a time series view of current net income (Brown, 1993; Capkun et al., 2010))

Any differences between the explanatory power (R^2) of Eq. 1 and Eq. 4 as well as Eq. 5 are examined with the Vuong (1989) Z-statistic.¹⁶

5. Results and discussion

5.1 Descriptive statistics

Table 2 reports figures relating to the combined value relevance of book value of equity and net income before and after the adoption of IFRS in Greece. It also provides information on the market values and returns for both periods. These descriptive statistics indicate that the mean of the market values, returns, net assets and net income has increased significantly between the pre-and post-IFRS periods. However, with the exception of returns, this is not the case for the median values as the differences between the two periods are insignificant, indicating skewed distributions.

TABLE 2 – ABOUT HERE

Table 3 reports information in relation to the variables used for testing H3. More specifically, it provides descriptive statistics on the net changes revealed by the restated 2004 figures and the individual adjustments reported in companies' reconciliation statements relating to the individual standards under examination.

TABLE 3 – ABOUT HERE

In line with expectations, the impact on both book value of equity and net income is significant, as are the individual changes to book value of equity introduced by specific standards. More specifically, Table 3 shows that the mean (median) of shareholders' equity increased by €11.00 (€0.64) million and net income increased by €2.21 (€0.12) million. The standards expected to curtail creative accounting practices did indeed cause a significant negative impact on shareholders' equity (IAS 2 and 36: €-1.34 (€0.00) million; IAS 19: €-

1.63 (€-0.30) million; IAS 32 and 39: €-3.12 (€-0.39) million; IAS 37: €-2.03 (€-0.17) million; IAS 38: €-3.15 (€-0.50) million). Arguably, this can be interpreted as an improvement of accounting quality in Greece, after IFRS implementation. However, these negative changes were cancelled out by the significant positive adjustments caused by the requirements of IAS 10, and IAS 16 (€5.11 (€0.73) million and €22.80 (€3.25) million, respectively), affecting 71% and 89% of the sample firms respectively. Additionally, the standards which introduced accounting treatments that were either different (IAS 20 on government grants impacting 62% of firms) or even absent (IAS 12 on deferred taxes relevant for 95% of firms) under Greek GAAP also caused significant impact on shareholders' equity (€-2.87 (€-0.23) million and €-3.48 (€-0.11) million, respectively).

5.2 Pre-and post-IFRS relative value relevance (H1 – H2)

Table 4 shows the results of the OLS and WLS regressions of the price model as well as those of the return model for both periods with regard to Equations 1 and 2 as well as the structural break coefficients from Equation 3.

TABLE 4 – ABOUT HERE

First, looking at the OLS price model (Panel A), the adjusted R^2 of 0.56 and 0.50 show that book values are strongly associated with the market price in both periods. In addition, both coefficients on book values of equity (0.696 and 0.975 in the pre-and post-IFRS periods respectively) and net profit (4.383 and 3.298 in the pre-and post-IFRS periods respectively) are positive and statistically significant at the 1% level. Similar evidence is provided by the WLS regression (Panel B). Second, the returns model has an adjusted R^2 of 6% and 7% for the pre-and post-IFRS periods (Panel C), a comparable number to prior studies, and the coefficient for net profit is also positive and significant in both periods (0.118 and 0.147 in the pre-and post-IFRS periods respectively).

Turning to our hypotheses, the anticipated higher combined value relevance of book values of equity and net income (i.e., higher R^2) is not confirmed. Under both the OLS and WLS regressions, a decrease in R^2 (-0.0585 & -0.0675 respectively) is identified but the results of Cramer's Z -statistic reveal that this is not significant. Under the returns model, a small increase of 0.01 in the R^2 is reported. However, this also is not significant according to Cramer's Z -statistic. This means that the expected higher accounting quality after adoption of IFRS, as expressed by higher combined value relevance of book value and net income, is not identified in the case of Greek companies. Hence, H1 is rejected. The evidence of no change in the combined value relevance of net income and book values is in line with Hung and Subramanyam (2007) with regard to Germany.¹⁷ This finding may be explained by the findings regarding H2 and the relevant discussion below.

With regard to H2, we document a significant increase in the valuation coefficients on book value of equity from Greek GAAP to IFRS (0.279 under OLS in panel A and 0.683 under WLS in panel B, both significant at the 5% level). However, we find a decrease in the coefficient on net income (-1.085 under OLS and -4.207 under WLS with only the latter significant at the 1% level). In other words, we do not find an increase in both coefficients and H2 is also rejected.

While the results are not in line with our expectations that higher quality standards (i.e., IFRS as opposed to Greek GAAP), would lead to greater value relevance of both book value of equity and net income, we document an interesting change in the weight (i.e., valuation focus) between the two items. Similar findings with regard to the increase in the coefficient on book value of equity have been reported by Hung and Subramanyam (2007) and Schiebel (2007) for Germany and by Devalle et al. (2010) for the UK. Additionally, Hung and Subramanyam (2007) report a decrease in the coefficient on net income of German

firms, Devalle et al. (2010) of Italian firms and Oliveira et al. (2010) of Portuguese firms. A possible explanation for these findings follows.

On the one hand, curtailment of creative accounting practices relating to balance sheet numbers, combined with the focus of IFRS on more timely recognition of assets and liabilities and greater use of fair values, leads to greater value relevance of book value of equity in explaining prices and an increase in the coefficient on book value of equity. In other words, balance sheet numbers become more value relevant. On the other hand, curtailment of practices that allowed significant income smoothing under Greek GAAP, combined with the introduction of fair value adjustments in the income statement (relating to unrealised gains and losses and impairments) adds greater volatility and decreases the persistence of net income. This leads to less value relevance in determining prices and to a downward shift in the coefficient on net income. In other words, income statement numbers become less value relevant. As a result, the offsetting impact of an increase in value relevance of book value of equity but a reduction of the value relevance of net income may explain the lack of increase in the overall explanatory power of the regression of prices on book value of equity and net income discussed above.

5.3 Incremental value relevance of reconciliation adjustments (H3)

We now turn to the examination of the incremental value relevance of material individual adjustments on shareholders' equity and the difference in the restated 2004 book value of net income.

Starting from Eq. 4, it is shown in Table 5 that the aggregate adjustment in the book value of shareholders' equity is only significant under the WLS regression (0.412, at the 5% level) whereas the aggregate adjustment regarding net income is significant under both the OLS and the WLS specification (3.693 and 2.201, both significant at the 5% level).

TABLE 5 ABOUT HERE

These findings provide some preliminary support for the provision of the reconciliation statements as it appears that the information provided therein is value relevant.

Turning to H3 and the incremental value relevance of adjustments resulting from the implementation of specific standards, as shown in Table 5, we find consistent evidence that under both OLS and WLS a number of adjustments are incrementally value relevant. Specifically, the coefficients regarding IAS 10 (9.011 and 12.022, respectively); IAS 12 (5.210 and 1.583); IAS 16 (0.967 and 0.523); and IAS 32 & 39 (3.824 and 0.651) are all positive and statistically significant at the 1% or 5% level, whereas, the coefficients for IAS 38 are negative (-2.960 and -1.765) and significant at the 5% and 1% level, respectively. When focusing on the decomposed model (i.e. Eq. 5), the adjustment relating to the aggregate difference between net income under Greek GAAP and the restated net income under IFRS is not significant under either the OLS or the WLS regression.¹⁸

The Vuong test comparing the adjusted R^2 of Eq. 1 and Eq. 4 shows insignificant change between these two measures (this holds under both the OLS and WLS specification). However, the Vuong test comparing the adjusted R^2 of Eq. 1 and the decomposed model (Eq. 5) shows significantly higher adjusted R^2 for Eq. 5 (by 18% under the OLS and 22% under the WLS regression). This indicates that disaggregating the book value of equity in 2005 across several components adds incremental power in explaining market values (i.e., the dependent variable).

Based on the above analyses, our alternative hypothesis H3 is supported. Adjustments reported in the reconciliation statements regarding shareholders' equity are value relevant. This finding and the significantly higher adjusted R^2 of the disaggregated model (Eq. 5), indicate that individual adjustments, rather than the aggregate net adjustments, provide better information to market participants (cf. Beckman et al., 2007). Hence, these findings support the argument for preparing reconciliation statements. These results indicate that the market is

interested in the individual changes reported in these statements, using the new information to assess what last year's financial statements would have been if they had been produced under IFRS. This appears to contradict the functional fixation literature that argues that market participants focus only on summary measures (see e.g., Hand, 1990) and we infer that the significance of the change in accounting regimes explains the usefulness of more detail (see also Christensen et al., 2009).¹⁹

We now interpret the findings regarding the adjustments in more depth. The adjustment relating to IAS 38 is significant but with a negative coefficient. IAS 38 removes from the balance sheet certain intangibles, but the market appears to perceive these capitalised expenses as providing future economic benefits and contributing to the growth of companies. The market 'reverses' these IFRS adjustments (recapitalising the intangibles). This is consistent with a large body of research in the US which shows that market participants view R&D expenditure as intangible assets when valuing a firm (e.g., Xu et al., 2007).

The positive adjustment with regard to IAS 16 is incrementally value relevant with a positive coefficient. This reinforces the notion that IFRS are standards of higher quality, i.e., providing fairer presentation of companies' assets (and liabilities) (cf. Ball, 2006). The fact that the majority of companies followed the option of IFRS 1 (see footnote 10) and restated their properties at fair value as deemed cost is perceived by the investors as providing a fairer reflection of companies' assets.

The positive adjustment with regard to dividends (IAS 10) is also found to be consistently incrementally value relevant. This also is interpreted as investors perceiving that IFRS better reflect a company's underlying economics (cf. Barth et al., 2001; Barth et al., 2008) and that investors do not perceive proposed dividends as a liability (as they were recognised under Greek GAAP).

A similar explanation may apply with regard to the aggregate adjustment relating to IAS 32 and 39. No longer recognising treasury shares as assets is perceived as a policy which results in the fairer representation of companies' fundamentals. Greek GAAP explicitly permitted companies to acquire treasury shares as a way of enhancing their share price. This was commonly done, and resulted in the overstatement of net assets.

Finally, it is worth discussing the significantly positive coefficient of the adjustment with regard to IAS 12. This mainly refers to adjustments regarding deferred tax. The concept of deferred tax did not exist under Greek GAAP. Moving to IFRS meant that most companies would have to recognise deferred tax assets or liabilities. In fact, as shown in Table 3, 95% of the companies in this sample were affected by this standard. Being incrementally value relevant, this adjustment allows for the interpretation that investors believe that these assets and/or liabilities do enhance the fairer representation of companies' fundamentals.

6. Conclusions

Prior literature suggests that Anglo-Saxon shareholder oriented accounting regimes (such as IFRS) provide more value relevant accounting information than the stakeholder regimes in Continental Europe. Therefore, the recent transition to IFRS in Europe has led to the expectation that accounting figures will become more value relevant in code law countries.

We test this proposition for a sample of Greek listed companies. Greece is selected as a single case study because it represents a small market, with a distinct accounting environment, often criticised for the inadequate quality of its reporting. Additionally, the impact of the change from Greek GAAP to IFRS has been reported to be significant.

Our findings suggest that there is no change in the combined value relevance of book value of equity and net income (i.e., R^2). This does not support the assumption that accounting quality improves after the adoption of IFRS, *if* accounting quality is defined as the

overall association between book and market values (Horton & Serafeim, 2009; Barth et al., 2008).²⁰ However, we document an increase in the valuation weight put on the book value of equity and a decrease in the valuation weight on net income, consistent with IFRS being more focused on the balance sheet and introducing more volatility and less persistence in net income.

Our findings are particularly relevant to standard setters (Barth et al., 2001: 77). Standard setters can use value relevance research findings to provide feedback on whether a change in accounting rules has improved accounting quality. Specifically, our findings contribute to the debate on whether shareholder-focused accounting principles are more value relevant for making investment decisions than traditional continental European accounting regulations. Standard setters should note that the greater emphasis on the balance sheet, but also in particular the greater noise in the income statement, have value relevance implications suggesting that there is an effect on the emphasis investors put on financial statements for their investment decisions, following IFRS' mandatory implementation (see also Ball, 2006).

We also contribute to the literature on the incremental value relevance of information provided in reconciliation statements (i.e., we explore whether the market evaluates the information provided in these statements). We find that reconciliation statements do convey useful information to investors, as the adjustments resulting from implementation of certain standards are incrementally value relevant, supporting earlier findings by Christensen et al. (2009) and Alciatore (1993) who conclude that the market assigns value to information explaining how and why a reported change has arisen.

A further policy implication arises from the fact that we were able to examine the incremental value relevance of reconciliation adjustments with regard to shareholders' equity only. As has also been indicated by Tsalavoutas and Evans (2010) and HCMC (2006), Greek companies provided incomplete transitional disclosures relating to the income statement. This

suggests that investors were lacking important information that could inform their investment decisions and highlights the concerns raised in the literature that IFRS can offer increased comparability and thus reduced information costs and information risk for investors, but only ‘provided the standards are implemented consistently’ (Ball, 2006: 11). There may therefore be a need for regulators to strengthen enforcement of compliance with IFRS mandatory disclosure requirements.

Although our findings suggest that Greek market participants do not change their attitude towards the overall value relevance of book values because these are now produced under IFRS, the findings do suggest that investors process the IFRS information differently. They consider balance sheet (income statement) numbers under IFRS more (less) value relevant than under Greek GAAP and they value the information contained in reported adjustments within the transitional reconciliation statements.

Table 1: Sample firms across year and industry.

Industry	2001	2002	2003	2004	2005	2006	2007	2008	Total
Basic Materials	23	26	26	25	26	25	24	22	197
Consumer Goods	68	73	75	75	72	70	66	65	564
Consumer Service	33	39	43	43	42	41	41	37	319
Healthcare	5	6	7	9	9	9	9	9	63
Industrials	61	67	68	66	62	62	60	51	497
Oil & Gas	1	1	2	2	2	2	2	2	14
Technology	15	21	21	20	19	21	22	20	159
Telecommunications	3	3	3	3	3	3	2	1	21
Utilities	2	2	4	4	4	4	4	3	27
<i>Total</i>	<i>211</i>	<i>238</i>	<i>249</i>	<i>247</i>	<i>239</i>	<i>237</i>	<i>230</i>	<i>210</i>	<i>1,861</i>

Industry groupings as per Industry Classification Benchmark (ICB).

Table 2: Descriptive statistics (N=1,861).

<i>Panel A: Non-deflated Variables</i>							
Variables	Total N	Mean		St. Deviation		Median	
		Pre-IFRS (N=945)	Post-IFRS (N=916)	Pre-IFRS (N=945)	Post-IFRS (N=916)	Pre-IFRS (N=945)	Post-IFRS (N=916)
MV	1,861	201.78	320.76	704.29	1,096.20	43.98	41.22
<i>Test of differences</i>		(0.005)				(0.983)	
BVE	1,861	114.65	159.04	349.06	477.03	36.50	36.78
<i>Test of differences</i>		(0.021)				(0.160)	
NI	1,861	10.56	16.57	40.84	70.04	1.47	1.50
<i>Test of differences</i>		(0.023)				(0.615)	
Δ NI	1,861	0.23	-0.46	13.91	31.20	0.05	0.01
<i>Test of differences</i>		(0.538)				(0.056)	
R	1,861	-0.31	0.04	0.45	0.49	-0.32	0.05
<i>Test of differences</i>		(0.000)				(0.000)	
NOSH	1,861	39.48	40.72	59.64	59.03	22.08	22.12
<i>Test of differences</i>		(0.653)				(0.661)	
<i>Panel B: Variables deflated by the number of outstanding shares</i>							
Variables	Total N	Mean		St. Deviation		Median	
		Pre-IFRS (N=945)	Post-IFRS (N=916)	Pre-IFRS (N=945)	Post-IFRS (N=916)	Pre-IFRS (N=945)	Post-IFRS (N=916)
MV	1,861	3.88	4.83	5.97	9.31	2.19	2.21
<i>Test of differences</i>		(0.008)				(0.619)	
BVE	1,861	2.70	3.13	4.25	5.54	1.73	2.03
<i>Test of differences</i>		(0.057)				(0.032)	
NI	1,861	0.15	0.24	0.67	1.45	0.08	0.09
<i>Test of differences</i>		(0.082)				(0.789)	
Δ NI	1,861	-0.02	-0.02	0.41	2.07	0.003	0.0009
<i>Test of differences</i>		(0.954)				(0.190)	

Financial data in €millions. €1=US\$1.2597 and €1=£0.6930 (28/4/06-FT). Two-tailed *p*-values are in parentheses. The means tested with the 'paired-samples *t*-test' and the medians tested with the 'Wilcoxon signed rank test'. *Variable definitions*: MV- Market Capitalisation as at four months after the end of the financial period under examination (*t*) (i.e. 30 April); BVE - Book value of shareholders' equity; NI - Net profit after tax; Δ NI - change of NI between years *t-1* and *t*.

Table 3: Changes according to reconciliation statements – descriptive statistics (N=159).

<i>Panel A: Non-deflated Variables</i>														
	Impact on 2004 book values		Decomposed impact on 2004 book value of Equity										Changes of 05 book values	
	$\Delta BVE^{IFRS-GR}$	$\Delta NI^{IFRS-GR}$	IAS2_36	IAS_10	IAS_12	IAS_16	IAS_19	IAS_20	IAS32_39	IAS37	IAS_38	Other	ΔBVE^{IFRS}	ΔNI^{IFRS}
Mean	11.00**	2.21**	-1.34***	5.11***	-3.48**	22.80***	-1.63***	-2.87***	-3.12***	-2.03***	-3.15***	0.75	8.43**	0.54
St. Dev.	70.30	12.20	5.64	24.60	19.20	83.90	4.48	13.10	8.80	5.07	9.47	26.40	44.60	23.60
Lower Quartile	-4.39	-0.64	-0.29	0.00	-1.73	0.13	-1.10	-1.09	-2.12	-1.63	-1.64	-1.34	-0.41	-2.28
Median	0.64	0.12**	0.00	0.73***	-0.11**	3.25***	-0.30***	-0.23***	-0.39***	-0.17***	-0.50***	0.00	0.74**	-0.26
Upper Quartile	5.37	1.36	0.00	3.02	0.87	12.90	0.00	0.00	0.00	0.00	-0.14	0.37	4.40	1.09
% Pos.	55	57	1	71	42	77	12	0	9	4	4	51	65	42
% Neg.	45	43	38	0	53	11	75	62	73	60	88	48	35	58
% Non-zero	100	100	38	71	95	89	87	62	82	64	92	99	100	100
<i>Panel B: Variables deflated by the number of outstanding shares</i>														
	Impact on 2004 book values		Decomposed impact on 2004 book value of Equity										Changes of 05 book values	
	$\Delta BVE^{IFRS-GR}$	$\Delta NI^{IFRS-GR}$	IAS2_36	IAS_10	IAS_12	IAS_16	IAS_19	IAS_20	IAS32_39	IAS37	IAS_38	Other	ΔBVE^{IFRS}	ΔNI^{IFRS}
Mean	0.15	0.05	-0.06***	0.11***	-0.07***	0.55***	-0.05***	-0.09***	-0.10***	-0.07***	-0.09***	0.01	0.21**	0.01
St. Dev.	1.10	0.33	0.22	0.26	0.30	1.02	0.10	0.20	0.23	0.16	0.16	0.73	1.27	0.56
Lower Quartile	-0.20	-0.04	-0.02	0.00	-0.10	0.01	-0.05	-0.08	-0.12	-0.08	-0.10	-0.05	-0.03	-0.12
Median	0.03	0.01**	0.00**	0.04**	0.00	0.16**	-0.02***	-0.01**	-0.02**	-0.01***	-0.03**	0.00	0.04	-0.02
Upper Quartile	0.29	0.08	0.00	0.10	0.03	0.73	0.00	0.00	0.00	0.00	-0.01	0.03	0.17	0.07

Financial data in €millions. €1=US\$1.2597 and €1=£0.6930 (28/4/06-FT). Two-tailed tests. One sample *t*-test for mean ($m \neq 0$). One sample Wilcoxon signed rank test for median ($m \neq 0$). **Significant at 5%, ***Significant at 1%. *Variable definitions:* $\Delta BVE^{IFRS-GR}$ =Change in the 2004 book value of shareholders' equity; $\Delta NI^{IFRS-GR}$ =Change in the 2004 net profit after tax; *IAS2_36, IAS_10, IAS_12, IAS_16, IAS_19, IAS_20, IAS32_39, IAS_37, IAS_38*=Change in the 2004 book value of shareholders' equity caused by the adoption of the corresponding standards; and *Other*=aggregate change in the 2004 book value of shareholders' equity caused by the adoption of all other standards; ΔBVE^{IFRS} =Change between opening and closing 2005 book value of shareholders' equity; and ΔNI^{IFRS} =Difference between 2004 and 2005 net income under IFRS.

Table 4: Pre-and post-IFRS relative value relevance of accounting information: H1 – H2.

<i>Panel A: Levels model (Panel data – OLS Regression)</i>								
(1): $MV_{it} = a_0 + b_1 BVE_{it} + b_2 NI_{it} + \varepsilon_{it}$								
(3): $MV_{it} = a_0 + b_1 DV + b_2 BVE_{it}^{GR\&IFRS} + b_3 BVE_{it}^{GR\&IFRS} * DV + b_4 NI_{it}^{GR\&IFRS} + b_5 NI_{it}^{GR\&IFRS} * DV + \varepsilon_{it}$								
<i>Period</i>	<i>Intercept</i>	<i>BVE</i>	<i>NI</i>	<i>F</i>	<i>Adj. R²</i>	<i>R²</i>	<i>Max VIF</i>	<i>N</i>
Pre-IFRS (1)	1.737 (7.68)***	0.696 (9.78)***	4.383 (8.71)***	268.99***	0.56	0.5611	1.92	922
Post-IFRS (1)	0.846 (3.22)***	0.975 (7.19)***	3.298 (5.19)***	129.88***	0.50	0.5026	1.56	884
<i>Dif</i> (3)		0.279 (2.19)**	-1.085 (-1.70)			-0.0585 z-stat: -0.2962		
<i>Panel B: Levels model (Panel data – WLS Regression)</i>								
Pre-IFRS (1)	n/a	0.614 (2.36)**	9.324 (10.34)***	51.70***		0.5047	1.92	919
Post-IFRS (1)	n/a	1.297 (6.89)***	5.117 (5.54)***	54.78***		0.4372	1.56	890
<i>Dif</i> (3)		0.683 (2.38)**	-4.207 (-6.63)***			-0.0675 z-stat: 0.3294		
<i>Panel C: Returns model</i>								
(2): $R_{it} = a_1 + a_2 \Delta NI_{it} + a_3 NI_{it} + \varepsilon_{it}$								
<i>Period</i>	<i>Intercept</i>	ΔNI	<i>NI</i>	<i>F</i>	<i>Adj. R²</i>	<i>R²</i>	<i>Max VIF</i>	<i>N</i>
Pre-IFRS (2)	-0.447 (-4.67)***	-0.037 (-0.38)	0.118 (2.48)**	21.22***	0.06	0.0585	1.36	917
Post-IFRS (2)	-0.086 (-0.64)	-0.046 (-1.97)**	0.147 (2.28)**	25.20***	0.07	0.0700	1.71	871
<i>Dif</i>						0.0115 z-stat: 0.0275		

Significant at 5%, *Significant at 1%. Outliers have been defined and excluded by using Cook's Distance as a measure. *Variable definitions:* MV_{it} = the market value of a company i four months after the end of the financial period under examination (t) (i.e. 30 April); R_{it} = the return of the stock at year t , for a twelve month period ending four months after the fiscal year end (months -8 to +4 around the fiscal year end month for each firm i); BVE_{it} = the book value of net assets of company i at the end of the financial period under examination (t); NI_{it} = the net profit after tax of company i for the financial period under examination (t); DV = dummy variable where 0 indicates Greek financials and 1 indicates IFRS financials; $BVE^{GR\&IFRS}$ = panel data values of book value of shareholders' equity; $BVE^{GR\&IFRS} * DV$ = panel data values of book value of shareholders' equity multiplied by the dummy variable; $NI^{GR\&IFRS}$ = panel data values of net profit after tax; $NI^{GR\&IFRS} * DV$ = panel data values of net profit after tax multiplied by the dummy variable; and ε_{it} is the mean zero disturbance term. Variables for the OLS and WLS levels models have been deflated by the number of shares outstanding and market value respectively. Any differences between the explanatory power (R^2) of Eq. 1 under the two periods are examined with the Cramer's (1987) Z-statistic. For Eq. 3 we control for cross-sectional correlations clustering by firm and year (cf. Gow et al., 2010; Petersen, 2008).

Table 5: Incremental value relevance of the impact disclosed in the reconciliation statements: H3.

$(1): MV_{it} = a_0 + b_1 BVE_{it} + b_2 NI_{it} + \varepsilon_{it}$ $(4): MV_{it} = a_0 + b_1 BVE_{it}^{GR} + b_2 \Delta BVE_{it}^{IFRS-GR} + b_3 \Delta BVE_{it}^{IFRS} + b_4 NI_{it}^{GR} + b_5 \Delta NI_{it}^{IFRS-GR} + b_6 \Delta NI_{it}^{IFRS} + \varepsilon_{it}$ $(5): MV_{it} = a_0 + b_1 BVE_{it}^{GR} + b_2 IAS_{2-36}_{it} + b_3 IAS_{10}_{it} + b_4 IAS_{12}_{it} + b_5 IAS_{16}_{it} + b_6 IAS_{19}_{it} + b_7 IAS_{20}_{it} + b_8 IAS_{32-39}_{it} + b_9 IAS_{37}_{it} + b_{10} IAS_{38}_{it} + b_{11} Other_{it} + b_{12} \Delta BVE_{it}^{IFRS} + b_{13} NI_{it}^{GR} + b_{14} \Delta NI_{it}^{IFRS-GR} + b_{15} \Delta NI_{it}^{IFRS} + \varepsilon_{it}$						
Variables	(1) (OLS)	(5) (OLS)	(6) (OLS)	(1) (WLS)	(5) (WLS)	(6) (WLS)
Intercept	1.319 (4.71)***	1.079 (3.65)***	0.860 (2.28)**	N/A	N/A	N/A
BVE ^{IFRS}	0.614 (4.70)***			0.379 (5.45)***		
NI ^{IFRS}	3.619 (4.08)***			2.059 (4.91)***		
BVE ^{GR}		0.679 (4.34)***	0.544 (4.14)***		0.349 (4.50)***	0.298 (5.44)***
IAS_2_36			1.725 (1.84)			-0.263 (-0.67)
IAS_10			9.011 (3.30)***			12.022 (7.55)***
IAS_12			5.210 (3.25)***			1.583 (2.08)**
IAS_16			0.967 (2.14)**			0.523 (3.29)***
IAS_19			0.204 (0.07)			-0.762 (-0.61)
IAS_20			0.797 (0.96)			0.697 (1.56)
IAS_32_39			3.824 (3.45)***			0.651 (2.73)***
IAS_37			-1.404 (-0.79)			-0.554 (-0.96)
IAS_38			-2.960 (-2.23)**			-1.765 (-3.40)***
Other			1.743 (1.72)			0.157 (0.57)
$\Delta BVE^{IFRS-GR}$		0.170 (0.06)			0.412 (2.23)**	
ΔBVE^{IFRS}		0.306 (0.43)	-0.780 (-0.73)		-0.265 (-0.52)	0.452 (0.91)
NI ^{GR}		4.544 (4.02)***	6.758 (4.05)***		2.692 (4.54)***	1.211 (1.99)**
$\Delta NI^{IFRS-GR}$		3.693 (2.08)**	0.452 (0.22)		2.201 (2.41)**	0.922 (1.19)
ΔNI^{IFRS}		4.199 (3.04)***	5.676 (3.60)***		2.118 (3.40)***	1.430 (2.96)***
<i>F</i>	45.05***	19.82***	19.50***	53.94***	17.47***	35.35***
<i>Adj R</i> ²	0.47	0.49	0.65	0.43	0.43	0.65
<i>Difference in Adj R</i> ²		0.02	0.18**		-	0.22**
<i>Mean VIF</i>	1.45	1.75	2.17	1.06	2.98	2.62
<i>Max VIF</i>	1.45	2.05	4.30	1.06	3.80	5.31
<i>N</i>	144	144	144	144	144	144

Significant at 5%, *Significant at 1%. Outliers have been defined and excluded by using Cook's Distance as a measure. Any differences between the explanatory power (adjusted R²) of Eq. 1 and Eq. 4 as well as Eq. 5 are examined with the Vuong (1989) Z-statistic. Variables for the OLS and WLS levels models have been deflated by the number of shares outstanding and market value respectively. *Variable definitions: MV_{it}* = the

market value of a company i four months after the end of the financial period under examination (t) (i.e. 30 April); BVE^{IFRS} =year end (2005) book value of shareholders' equity; NI^{IFRS} =net profit (in 2005); BVE^{GR} =2004 book value of shareholders' equity (Greek GAAP); $IAS2_36$, IAS_10 , IAS_12 , IAS_16 , IAS_19 , IAS_20 , $IAS32_39$, IAS_37 , IAS_38 =Change in the 2004 book value of shareholders' equity caused by the adoption of the corresponding standards; and $Other$ =aggregate change in the 2004 book value of shareholders' equity caused by the adoption of all other standards; ΔBVE^{IFRS} =Change between opening and closing 2005 book value of shareholders' equity; NI^{GR} =net profit (in 2004 under Greek GAAP); $\Delta NI^{IFRS-GR}$ =change in the 2004 net profit after tax, revealed by the restated 2004 comparative figures; and ΔNI^{IFRS} =Difference between 2004 and 2005 net income under IFRS; and ϵ_{it} is the mean zero disturbance term.

Notes

¹ Regulation (EC) No 1606/2002 of the European Parliament and of the Council of 19 July 2002. International Accounting Standards (IAS) were issued by the International Accounting Standards Committee (IASC) and adopted in 2001 by the restructured International Accounting Standards Board (IASB), which has since been amending them or replacing them with IFRS.

² The study of Bellas, Toudas, and Papadatos (2008) examines similar objectives, but uses a very small sample size and window. It also does not examine the incremental value relevance of the individual adjustments reported in the reconciliation statements. Additionally, it does not control for heteroskedasticity, nor carry out sensitivity tests.

³ We follow Baralexis (2004: 440), who defines creative accounting or earnings management 'as the process of intentionally exploiting or violating the GAAP or the law to present financial statements according to one's interests'.

⁴ By Greek GAAP we mean codified accounting rules, in particular Law 2190/20 and Presidential Decree (PD) 186/92 (Tax Law-known also as Code of Books and Records) and pronouncements of the Committee of Accounting Standardisation and Auditing (ELTE). This is a narrow definition of GAAP. The term 'GAAP' in other jurisdictions may refer also to professional pronouncement or non-promulgated guidance or practices (cf. Evans, 2004).

⁵ The German commercial code.

⁶ In *Report for the European Commission on the first year of implementation across the EU of International Financial Reporting Standards (IFRS) and the Fair Value Directive*, ICAEW, London.

⁷ €1=US\$1.3187 and €1=£0.6738 (31/12/06-FT).

⁸ This refers to the audited set of financial statements as defined by IAS 1 'Presentation of financial statements'. It does not refer to the full annual reports which become available later - up to 160 days after the year end (Leventis, Weetman, & Caramanis, 2005). The former have been used for the purposes of this research.

⁹ Unlike the present paper, Tsalavoutas and Evans (2010) neither explore differences in the value relevance of accounting information under the two regimes nor the incremental value relevance of the adjustments reported in the reconciliation statements on transition to IFRS. The present paper therefore pursues different objectives, and addresses different research questions, and therefore makes different contributions to research.

¹⁰ A comment made by Chris Nobes during the workshop 'Accounting in Europe' (Paris, September 2007).

¹¹ It would therefore not be appropriate/feasible, from an econometrics point of view, to test the incremental value relevance of those adjustments.

¹² Apart from the adjustments that arose because of the differences between Greek GAAP and IAS 16, we have also included under IAS 16 the adjustments that arose because companies followed the option of IFRS 1 *First-time Adoption of International Financial Reporting Standards* and restated their properties at fair value as deemed cost (paragraphs 16-19). Our rationale in including these adjustments under IAS 16 was based on the definition of the cost of an asset, found in IAS 16: 'Cost is the amount of cash or cash equivalents paid or the fair value of the other consideration given to acquire an asset at the time of its acquisition or construction or, where applicable, the amount attributed to that asset when initially recognised in accordance with the specific requirements of other IFRSs, e.g. IFRS 2 *Share-based Payment*' (emphasis added).

¹³ Shares are suspended from trading where a merger has been announced or where companies are subject to investigations by the tax authorities or by the stock market regulator. Additionally, given the (small) size of some firms, not all shares are traded frequently (simply because of lack of demand), even though they are officially listed.

¹⁴ Our tests for multicollinearity showed no signs of serious problems (the variance inflation factor (VIF) is lower than 10 for each regression; see in the tables).

¹⁵ See Kothari (2001) for a discussion and Harris, Lang, and Moller (1994), Ball et al. (2000), Arce and Mora (2002) and Sami and Zhou (2004) for examples of its use.

¹⁶ See Dechow (1994), Arce & Mora (2002), and Hung & Subramanyam (2007), among others.

¹⁷ Callao et al. (2007) also report no change in the value relevance of accounting information in Spain. However, they use a different research design which makes their results less comparable.

¹⁸ This finding is in line with the results of Horton and Serafeim (2007) with reference to Spain and Horton and Serafeim (2009) with reference to the UK.

¹⁹ We are grateful to the Editor, Mike Jones, for pointing this out.

²⁰ Our study is subject to one potential limitation: As noted by Barth et al. (2008), the relative value relevance of accounting information depends on the quality of enforcement in the respective jurisdiction. Greece accounting suffers from low quality enforcement and a high degree of earnings management. In addition, principles-based accounting systems may offer preparers the flexibility to apply creative accounting practices, which may also affect quality of accounting information provided under IFRS (Barth et al, 2008). Given the prevalence of creative accounting under the old regime, Greek investors may not know whether, how, or to what extent, the new IFRS figures have been creatively adjusted. Therefore, they may not assume IFRS financial statements to be of higher quality overall.

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