Tsalavoutas I (2011) Transition to IFRS and compliance with mandatory disclosure requirements: What is the signal?, *Advances in Accounting*, 27 (2), pp. 390-405.

This is the peer reviewed version of this article

TRANSITION TO IFRS AND COMPLIANCE WITH MANDATORY DISCLOSURE REQUIREMENTS: WHAT IS THE SIGNAL?

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I thank the Institute of Chartered Accountants of Scotland for funding this study. I gratefully acknowledge helpful comments received from Paul André, Dionysia Dionysiou, Alan Goodacre, Lisa Evans, Sidney Gray, David Hatherly, Darren Henry, Vivien Beattie, Mike Smith, Donna Street as well as from the participants and, in particular, the discussant Clare Roberts of the '14th Financial Reporting and Business Communication Conference' (Bristol, UK, July 2010) and the participants of the '6th workshop on European Financial Reporting' (Stirling, UK 2010) regarding various different sections of this paper. I also appreciate Professor Chris Nobes' and Professor Pauline Weetman's examination of my PhD thesis, from which the paper is derived. All remaining errors or omissions are mine.

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ABSTRACT

The present study, *first*, examines 153 Greek listed companies' compliance with all IFRS mandatory disclosure requirements during 2005. *Second*, the present research complements and extends prior literature in the following way. The unique setting i.e., measuring compliance with IFRS mandatory disclosure requirements during the first year of IFRS implementation, allows for examination of the possibility that the change in the 2004 shareholders' equity and net income, as a result of the adoption of IFRS, constitute explanatory factors for compliance. Thus, this study hypothesises that, in addition to the financial measures and other corporate characteristics that prior literature identifies as proxies for explaining compliance, a significant change in fundamental financial measures, because of the change in the accounting regime, may also explain compliance based on the premises of the relevant disclosure theories. The findings confirm these hypotheses. *Third*, this study makes a methodological contribution on measuring compliance with all IFRS mandatory disclosure requirements by using two different index methods (cf. Street and Gray, 2001; Tsalavoutas *et al.,* 2010) and pointing out the different conclusions may be drawn as a result.

Key words: Compliance, IFRS, mandatory disclosures, Greece.

1. Introduction

One of the main objectives of the IASB is to produce enforceable standards (IASCF Constitution, paragraph 2). This is stressed because it is well documented that companies do not comply with accounting standards' mandatory disclosures (see section 2). This evidence is in line the argument that the existence of legislation and enforcing bodies does not guarantee compliance (Yeoh, 2005). Therefore, the possibility of uniform application of IFRS across different jurisdictions after 2005 has been heavily questioned (Ball, 2006; Nobes, 2006; Larson and Street, 2004; Soderstrom and Sun, 2007; Zeff, 2007; Weetman, 2006), arguing that the implementation of high quality standards [as IFRS claim to be] may not necessarily lead to high quality reporting. The present study addresses these concerns and contributes to the literature in the following three ways.

First, it examines 153 Greek listed companies' compliance with all IFRS mandatory disclosures during 2005. This sample represents approximately 48% of companies listed on Athens Stock Exchange (ASE) at the end of March 2006, resulting in the study being one of the very few large scale single country academic studies which examine companies' level of compliance with all IFRS mandatory disclosures after IFRS implementation in 2005 in EU countries.

Second, in line with prior studies, drawing on capital market based theories, agency theory, and cost based theories, this study tests several variables as proxies for the factors related to the compliance identified. These determinants include size, gearing, profitability, liquidity, industry and audit firm size. However, beyond this, the present research complements and extends prior literature in the following way. The unique setting, i.e. measuring compliance with IFRS mandatory disclosures during the first year of IFRS implementation, allows also for examination of the possibility that the change in the 2004 shareholders' equity and net income, as a result of the adoption of IFRS, constitute also explanatory factors for compliance. Thus, this study hypothesises that *inter alia* not only financial measures can be proxies for explaining compliance as derived by relevant theories. In addition, a significant change in fundamental financial measures, because of the change in the accounting regime, may also explain compliance based on the premises of the relevant disclosure theories. The rationale behind these tests is

the following. Considering the implications deriving from the assumptions of agency and signalling theory, managers would have strong incentives to assess the "compliance risk" (cf. Adams, 1994), i.e. to assess trade-off between agency costs or signalling effects and the impact on their companies' financial positions as this caused by the transition to IFRS.

Third, the review of the pertinent literature to the present study indicates that the majority of prior studies examining compliance with national accounting standards' or IAS/IFRS mandatory disclosures apply only one disclosure index method. However, the findings of Street and Gray (2001) and Tsalavoutas et al. (2010) indicate that the findings of similar studies may be substantially biased because of the method employed for measuring compliance. On that basis, this study uses the two most commonly used disclosure index methods (Cooke's method and the PC Method – see section 3 for more details) and tests the significance of the differences in the compliance scores identified. Additionally, it explores the implications of the application of both methods with regard to determinants of compliance with IFRS mandatory disclosures. In contrast to Street and Gray (2001), this study considers as valid findings only the compliance determinants being significant under both methods.

Greece offers a suitable as well as an interesting setting because of its distinctive financial reporting environment. The accounting/audit profession is relatively young (Baralexis, 2004) and enforcement of accounting regulation is very weak (La Porta *et al.*, 1998; Baralexis, 2004). Hence, it is highly probable that this background would allow for large differences of compliance levels across listed companies compared to Anglo-Saxon countries. Additionally, ASE is regarded as a developed market since 2000 (Mantikidis, 2000; FTSE, 2009) and almost 50% of the market capitalisation belonged to foreign investors at the end of March 2006 (Central Security Depository, 2006). Thus, there is not only national, but also international interest in the quality of Greek listed companies' financial statements.

The findings can be summarised as follows. The average level of compliance with IFRS mandatory disclosures approximates to 80% (depending on the disclosure index method employed). In fact, the scores calculated under the PC method are significantly lower from those calculated under Cooke's dichotomous approach. The change on net income and shareholders' equity, as a result of the transition to

IFRS, as well as audit firm size, are significantly associated with the extent to which companies comply. These findings are interpreted based on the particular characteristics of the Greek context and the premises of signalling, agency and political costs theories. However, similar to Street and Gray's (2001) study, not all factors appearing to explain compliance scores under the PC Method are the same as those appearing significant under Cooke's dichotomous approach. More specifically, industry classification appears to be a significant explanatory factor of compliance under the PC Method but not under Cooke's method.

The compliance levels identified and the determinants significantly correlated with them are expected to be of particular interest to regulators and standard setters as well as to academics who may wish to conduct similar studies. This is not only because of the relatively low compliance levels identified but also because it is shown that the adjustments reported in the reconciliation statements on transition to IFRS relate to companies' "compliance behaviour" (cf. Jenkinson, 1996; Adams, 1994), with regard to mandatory disclosures at least.

Additionally, with reference to the methods employed, these findings should alert researchers who plan to use these methods to the implications of their own findings and the care that needs to be taken in their interpretation. They also raise an opportunity for further research by questioning the validity of the findings of prior research which applied only one of the two methods. Finally, these results should also alert practitioners who read academic studies the results of which are based only one disclosure index method.

The remainder of the paper is organised as follows. Section 2 discusses the findings of the prior relevant literature. Drawing on the relevant disclosure theories, the research hypotheses are also developed in this section. Section 3 describes the data employed and the research design. Section 4 provides the results and discussion of empirical findings. Section 5 concludes.

2 Literature review and development of hypotheses

2.1 Compliance with national standards' mandatory disclosures

Table 1 provides a summary of the reviewed disclosure studies that examined compliance with national standards and regulations. These studies are classified according to the chronological order of the financial year examined (i.e. not year of publication).

TABLE 1 - ABOUT HERE

From the 16 studies identified, four examine companies' compliance during the late 1980s, 11 during the 1990s and only one study examines compliance after 2000. In contrast to the present study, none of those is focused on a developed country, based on a recent sample. Additionally, with the exception of Ali et al. (2004) which is a multi-country study and Owusu-Ansah and Yeoh (2005) who examine a sample of 50 companies over a four year period, the remaining studies use significantly smaller samples than the present study. Only the study of Craig and Diga (1998) employs a sample of a similar size (145 companies) although it is a multi-country study.

Furthermore, 14 out of the 16 studies employ only one disclosure index method (the commonly used dichotomous approach, see section 3). Naser and Nuseibeh (2003) employ the commonly used dichotomous approach and a weighted index based on the mean and median responses of seven users of financial statements in the country which the study focuses (i.e. Saudi Arabia). Patton and Zelenka (1997) follow the commonly used dichotomous approach with two more alternatives, a "somewhat broader" and a "broad" index (Patton and Zelenka, 1997: 609).

It is acknowledged that the studies reviewed focus on companies operating in significantly different institutional settings (including enforcement) and thus caution is needed when one tries to compare their findings and draw conclusions. In fact, Craig and Diga (1998) identify significantly different compliance levels across countries in the ASEAN region. Additionally, the samples refer to different periods, and all studies employ self-constructed indices[1] which may increase subjectivity of the scoring process.[2]

Nevertheless, it is notable, that these studies reach similar conclusions. It is common that companies do not comply fully with national accounting standards' disclosure requirements. In particular, compliance levels are very rarely close to or even higher than 90%, with the majority of studies reporting average compliance levels of approximately 70% to 80%. Great variability in the compliance scores is also documented.

With reference to Greece, there is only one study (Vlachos, 2001) which examines listed companies' compliance with the disclosure items mandated by the Greek GAAP.[3] The sample consists of 74 companies' financial statements with reference to the year 1996. He finds an average compliance level of 89% with a small standard deviation of 2.3%.

However, it is noted that the findings of this study have to be treated with caution because they may be biased towards companies that provided high levels of disclosures. At that time, very few companies provided in public notes to the financial statements thus, those that provided an annual report might have been "committed" to higher disclosure levels. Another feature of Vlachos' (2001) research is that:

> …the study also captures an element of voluntary disclosure (as in the case of Wallace et al., 1994 and Wallace and Naser, 1995). This is because the information items required to be disclosed (mandatory information) have been disaggregated into sub-elements of information that should or could have been disclosed; usually the disclosure of those sub—elements of information is essentially a matter of managerial choice (Barrett, 1976) (Vlachos, 2001: 9)

Finally, at that period, ASE was an emerging market which implies that financial statements were of less importance compared to the period under investigation (2005) when ASE is considered to be a developed market (Mandikidis, 2000; FTSE, 2009).

2.2 Compliance with IAS/IFRS mandatory disclosures

Table 2 provides a summary of the reviewed disclosure studies examining compliance with IFRS (referred to as IAS before 2001).

TABLE 2 - ABOUT HERE

The levels of compliance with IAS/IFRS mandatory disclosures shown in Table 2 look very similar to those regarding disclosures mandated by other national standards, as illustrated in Table 1. It is common that companies do not comply fully with IAS/IFRS disclosure requirements and low compliance levels are not rare. A great variability in the compliance scores is also documented.[4]

In line with Craig and Diga (1998), Tower et al. (1999), Street and Gray (2001) and Al-Shammari et al. (2008) provide empirical evidence that this depends on the companies' country of domicile, i.e. compliance levels depend on the particular financial reporting system of each country. This further supports the argument that adoption of IAS/IFRS would not necessarily lead to higher provision of mandatory disclosures.

Another feature of the studies reviewed is that their samples refer, mainly, to the late 1990s and early 2000s. With the exception being the working paper of Fekete et al. (2008), none of the academic studies examines compliance with IFRS mandatory disclosures after their implementation in the EU in 2005. Even those studies that include companies from the early 2000s examine compliance with older versions of IAS, i.e. not the revised IAS and newly introduced IFRS which were intended to provide a "stable platform" regarding the first years of IFRS mandatory implementation in the EU. Fekete et al. (2008) focus on compliance with the requirements of four standards (IFRS 3, IAS 27, IAS 28 and IAS 31) and the sample consists only of 17 Hungarian companies.

The two surveys of SEC and of the Institute of Chartered Accountants in England and Wales (ICAEW) provide also some preliminary evidence regarding EU companies' levels of compliance with IFRS mandatory disclosures after 2005. However, their findings are mainly descriptive in nature. Thus, the SEC reported that they "have not yet reached any comprehensive conclusions about companies' overall compliance with, or consistency in application of, IFRS".[5]

A further finding of this review is that Al-Shiab (2003) reports low average compliance scores compared to other studies examining compliance with IAS disclosure requirements in emerging markets in a similar period (e.g. Hassan et al. (2006) with regard to Egypt). More specifically, companies' level of compliance ranged from 45% to 56%. Although this may depend on the specific characteristics of the

financial reporting system in Jordan, it is also attributable to the different method used for measuring compliance. This tends to produce more "conservative" (i.e. lower) compliance scores (Tsalavoutas et al., 2010).

Additionally, similar to the studies discussed in the previous sub-section, the majority of studies employ only one disclosure index method for measuring compliance with IAS/IFRS mandatory disclosures (the commonly used dichotomous approach). Street and Gray (2001) use both this method and the one that Al-Shiab uses but do not test the significance of the differences in the compliance scores identified. It is worth mentioning that they find different significant associations under each method between the dependent variable (compliance score) and a number of independent variables.[6]

Finally, there is very little evidence regarding Greek listed companies' compliance with IAS/IFRS. In particular, only Cairns (2001) includes financial statements of Greek listed companies (three) which claimed that they had adopted IFRS in addition to Greek GAAP.[7] He reports that only one of the three companies provided full IFRS consolidated financial statements. The other two did not provide cash flow statements and accounting notes.

The consistent findings of low compliance with IFRS or other national accounting standards' mandatory disclosures allow for the conclusion that, although companies are expected to comply with the mandated disclosures, they rarely do so in full. Therefore, these findings provide solid grounds for the concerns regarding the "quality" of financial statements after the adoption of IFRS in the EU (e.g. Nobes, 2006; Weetman, 2006; Ball, 2006; Schipper, 2005). With regard to the present study, they suggest that compliance levels with IFRS mandatory disclosures may also be low for Greek listed companies.

From a methodological point of view, the present study also claims more robust findings compared to those provided by prior studies. In particular, the present research employs two methods for measuring compliance with IFRS mandatory disclosures and tests the significance of the differences in the compliance scores identified. As a consequence, this study considers as valid findings only the determinants of compliance being significant under both methods.

Finally, these reviews also illustrate that there is no recent large scale academic study exploring

companies' compliance with all IFRS mandatory disclosures after 2005 (or other national standards' mandatory disclosures in general). The present study addresses this gap in the literature and contributes to the recent calls for this type of research.

2.3 Development of hypotheses

Prior studies have suggested and tested several variables as explanatory factors for compliance with mandatory disclosures. This approach perceives disclosures as an endogenous choice that is related to companies' fundamentals or other characteristics. In accordance with Camfferman and Cooke (2002), with reference to Lang and Lundholm, (1993), these are classified as: structure-related; performance-related; and market-related variables.

The category of *structure-related* variables includes characteristics that usually are stable over time. Consistent with prior literature, the two considered here are size and gearing (e.g. Al-Shiab, 2003; Abd-Elsalam and Weetman, 2003, Ali et al., 2004; Akhtaruddin, 2005; Al-Shammari et al., 2008). However, based on the mixed findings of the prior literature, although an association between these two variables and companies' levels of compliance is hypothesised, no prediction regarding the sign of the relationships is attempted.

Further, a company's performance is sensitive to time conditions. Hence, management holds information that should be transmitted to investors in order to reduce information asymmetries regarding companies' performance within the period (Lang and Lundholm, 1993). In that context, the *performance-related* variables which can be proxies for performance are liquidity and profitability (Street and Gray, 2001; Al-Shiab, 2003; Glaum and Street, 2003; Ali et al., 2004; Akhtaruddin, 2005). However, profitability shares a similar limitation with size. The direction of its relationship with companies' levels of disclosures cannot be hypothesised. This is justified by the inconclusive findings of prior research.

Finally, *market-related* variables have been argued to be relatively stable over time and more within companies' control. The present study employs two market-related variables: audit firm size and industry type (cf. Patton and Zelenka 1997; Street and Gray, 2001; Glaum and Street, 2003; Abd-Elsalam and

Weetman, 2003). Although the direction of the relationship between industries type with companies' levels of disclosures cannot be hypothesised, a positive relationship between companies' extent of disclosures and audit firm size is hypothesised. The latter is based on the consistent evidence found in the prior literature.

However, as argued above, the present research complements and extends prior literature by testing two further variables which could fall under the *structure-* and *performance related* categories of variables, respectively. More specifically, the unique setting, i.e. measuring compliance with IFRS mandatory disclosures during the first year of implementation, allows also for examination of the possibility that the change in the 2004 shareholders' equity and net income, as a result of the adoption of IFRS, constitute also explanatory factors for compliance. Thus, this study hypothesises that the behaviour of managers regarding the amount of overall disclosures provided may be influenced by the impact of IFRS on company key measures, as this can be assessed through the reconciliation statements and the 2004 restated comparative figures.

Research has indicated that information reported in reconciliation statements is perceived as meaningful by investors (e.g. Christensen et al., 2010), who are considered to be among the main users of financial statements by the IFRS *Framework*. Therefore, the present study examines the extent of companies' compliance with mandatory disclosures for the 2005 financial period. Within the notes accompanied the 2005 financial statements, the impact caused on shareholders' equity and net income for 2004, as a result of the transition to IFRS, became known to the users of the financial statements.

The Greek context is particularly relevant because there is evidence that Greek companies' financial statements were affected significantly by the transition to IFRS, as a result of the significant differences between IFRS and Greek GAAP (Grant Thornton, 2006; HCMC, 2006; Tsalavoutas and Evans, 2010). This evidence suggests that a structural change in the financial position of Greek companies took place on transition to IFRS. Shareholders' equity, and in turn gearing and liquidity, were affected significantly. Thus, the present research also considers, as a third *structure-related* variable, the impact on 2004 shareholders' equity as a result of the transition to IFRS. It also considers as a third *performance-related*

variable, the impact on 2004 net income as a result of the transition to IFRS. The rationale for this investigation in further discussed below.

On transition to IFRS, several intangible assets were derecognised, treasury shares were derecognised, whilst inventories and other assets were impaired. Additionally, deferred tax assets were recognised and land and buildings were revalued. Furthermore, liabilities increased, as a result of the recognition of pension related and other provisions for example. Hence, companies' shareholders' equity (and thus size and gearing) would be affected considerably. (See Tsalavoutas and Evans, 2010 for supporting evidence on these issues). This has particular relevance for the present study as the assumption that a company's structure, as this expressed in the balance sheet, may stay stable over time may not be valid when companies moved to IFRS.

This becomes more important when one considers the findings of prior literature indicating that companies' levels of compliance with mandatory disclosures are associated with shareholders' equity (e.g. Tai et al., 1990). Thus, a significant change in that measure, as a result of the introduction of IFRS could have profound implications on managers' "compliance behaviour", with reference to mandatory disclosures. This change was easily observable to users of the financial statements by looking at the reconciliation statements. There was no need for a user to have the previous year's financial statements to compute the impact on the difference between the two measures. On that basis, managers of Greek companies may be very sensitive to how users of the financial statements would interpret a large difference in the two figures. Considering the implications deriving from the assumptions of agency and signalling theory, managers would have strong incentives to assess the "compliance risk" (cf. Adams, 1994), i.e. to asses trade-off between agency costs or signalling effects and the impact on their companies' financial positions as this caused by the transition to IFRS

Companies which faced a significant positive adjustment could provide higher levels of mandatory disclosures, in accordance with signalling theory. It is highly probable that managers would try to "exploit" this positive change by arguing that their companies' financial position was not reflected accurately in the past because of the low quality of Greek GAAP. Thus, a positive relationship between

the impact on shareholders' equity (as a result of the transition to IFRS) and companies' compliance with mandatory disclosures may be identified.

In contrast, under agency theory, managers may well be under pressure to "communicate" why such an improvement on companies' financial position arises, to pre-empt allegations of a significant change being due to fraudulent accounting practices. Additionally, companies with a significant negative impact will be under more pressure to explain why companies' financial position appears to be worse under the higher quality accounting standards (i.e. IFRS) which are believed to reflect companies' assets and liabilities more accurately. Thus, the following hypothesis is tested:

Hypothesis 1 (H1) - There is an association between changes in shareholders' equity (as a result of the transition to IFRS) and the extent to which companies comply with IFRS mandatory disclosures.

As far as the hypothesis regarding the impact on 2004 net income is concerned, the rationale is the following. One major problem of the relationships between managers and shareholders is the fact that what investors may perceive as an optimal level of performance may differ from what is perceived by managers. In fact, managers may be in favour of a satisfactory but not an optimal level (Smith, 1976; Leventis, 2001).

In the Greek environment, where findings of earnings management have been consistently reported (Leuz et al., 2003; Caramanis and Lennox, 2008), the difference between management and shareholders on what is perceived to be optimal levels of performance might be more distinct. The introduction of IFRS was expected to cause a significant impact on companies' restated absolute values of net income regarding 2004 indicating curtailment of the creative accounting practices followed under Greek GAAP. The impact identified across a large number of companies by HCMC (2006), Grant Thornton (2006) and Tsalavoutas and Evans (2010) confirms this expectation.

A significant difference in the restated figure might have a profound effect on managers' rational decision with regard to the extent to which they would comply with IFRS mandatory disclosures. A

significant positive change would allow them to claim that previous year's performance was low, not because of their inefficiency but because Greek GAAP was of poor quality, i.e. it produces conservative reported performance. Thus, in line with signalling theory, high provision of mandatory disclosures would be expected. This would encourage them to provide as much information as possible to claim that the company was performing well but the accounting rules did not allow for this to be reflected on the financial statements.

Drawing on agency theory, such an approach would be used to provide convincing information to the users of the financial statements that low profitability was not a result of creative accounting practices. However, also within the framework of agency theory, reporting substantially improved restated income values may trigger the suspicion of shareholders under the rationale that this improvement is a result of a "transitional big bath". Hence, again, more disclosures might be provided but not necessarily with the intention to signal better performance. This would also facilitate the minimisation of agency costs. In contrast, a significantly negative restated performance would raise concerns of shareholders. This would imply that the performance last year was actually worse than had been reported originally and thus management would have to explain, through the provision of increased disclosures, why this was the case. Further, it has been argued that companies with excessive profits may attract government's attention (Watts and Zimmerman, 1978; Deegan and Unerman, 2008). Thus, firms of which the restated profit levels were affected substantially would consider the political costs that may derive from such a change. Accordingly, this might have affected their "compliance behaviour" (cf. Jenkinson, 1996) in 2005.

Therefore, it is hypothesised that companies' levels of compliance with mandatory disclosures is associated with the impact caused on the restated net income values regarding 2004. On that basis, the following hypothesis is formed:

Hypothesis 2 (H2) - There is an association between changes in net income (as a result of the transition to IFRS) and the extent to which companies comply with IFRS mandatory disclosures.

3 Data and research design

3.1 Data

There were 317 companies listed on the ASE at the end of March 2006. The sample excludes five early IFRS adopters and 44 financial companies. Additionally, 11 companies with 30 June as their year end date are excluded. (Companies with a later reporting date may have 'learned' from the disclosures provided by companies reporting earlier. Hence, to avoid bias these companies were excluded.) Furthermore, six companies which changed auditors between 2004 and 2005 were excluded. (As discussed above audit firm size is supposed to stay stable over time.) 56 further companies had to be excluded because of data unavailability. This leaves a sample of 195 firms.

However, from those companies, 42 provided inadequate reconciliation disclosures. They either did not provide the reconciliation statements required or provided insufficient disclosures to allow for an evaluation of the impact caused by the implementation of individual IFRS. Accordingly, they were excluded because omission of this information would not allow for examination of the hypotheses tested. This leaves a final sample of 153 companies. The market values were acquired from ASE in electronic format. The line items from the 2005 financial statements were hand collected.

3.2 Measuring compliance with IFRS mandatory disclosure requirements

As discussed above, one of the main contributions of this study is that it reports more robust findings as far as the compliance scores measured and the corporate characteristics associated with the levels of compliance identified. This is because two methods for measuring compliance have been employed simultaneously. These are the following. The unweighted disclosure index where compliance is calculated as the ratio of the total items disclosed to the maximum possible score applicable for that company. This the most common approach for determining compliance with disclosure requirements by a company (e.g. Hodgdon et al., 2008; Ali et al., 2004; Glaum and Street, 2003; Abd-Elsalam and Weetman, 2003; Street and Gray, 2001; Street and Bryant, 2000; Craig and Diga, 1998; Patton and Zelenka; 1997; Cooke, 1996; Ahmed and Nicholls, 1994; Wallace et al., 1994). This study refers to this

method as "Cooke's dichotomous approach". (Aljifri (2008) also refers to this method by using the same term.)

However, this kind of disclosure index has an important limitation: the number of disclosure items required by different standards varies considerably. Some standards require a large number of items to be disclosed (e.g. IAS 1 'Presentation of financial statements) while some others require only a few (e.g. IAS 2 'Inventories'). This may become a significant problem when studies examine compliance with IFRS (or other sets of standards') mandatory disclosures. As a result, "…standards which require more items to be disclosed or, in other words, standards with more items included in the index are unintentionally and indirectly not treated equally with those that require fewer items to be disclosed" (Al-Shiab, 2003: 222).

An alternative method that avoids this problem is the "Partial Compliance (PC) unweighted approach" (hereafter PC method) employed by Street and Gray (2001),[8] Al-Shiab (2003, 2008) and Tsalavoutas et al. (2010). According to this approach, "the degree of compliance for each company is measured by adding the degree of compliance for each standard and then dividing this sum by the number of standards applicable to each company" (Al-Shiab 2003: 223).

Street and Gray (2001) use both methods but do not test the significance of the differences in the compliance scores identified. Interestingly, they find different significant associations under each method between the dependent variable (compliance score) and a number of independent variables. This study uses both methods and like Tsalavoutas et al. (2010) tests the significance of the differences in the compliance scores identified. However, it extends prior literature by exploring the implications of the application of both methods with regard to the factors appearing to explain compliance with IFRS mandatory disclosures. Only the compliance determinants that appear to be significant under both methods are considered as valid findings

Initially, a scoring sheet which included 509 items required to be disclosed by IFRS extant at the end of April 2006 (excluding six standards[9]) was constructed.[10] Then, to ensure the content validity of the initial research instrument,[11] it was reviewed independently by other two researchers. After receiving their comments and suggestions, any remaining ambiguities were discussed with a fourth experienced

academic.[12] The final disclosure checklist included 481 mandatory items, required by 31 standards, as extant in April 2006. Table 3 shows the number of items identified by each researcher, and the final index.

TABLE 3 – ABOUT HERE

The differences in the number of items initially identified by the author and the independent researchers for some standards (e.g. IAS 8, 14 and 38) illustrates the need for carrying out this verification process. These differences arose because (i) the same disclosure items were required by multiple standards (i.e. duplication), (but should only be included once), and (ii) different judgement relating to the level of disaggregation (see above).

To ensure the reliability of the research instrument,[13] the author and the two independent researchers scored 10 randomly selected companies. Then the findings of the three researchers were compared. Given that the final research instrument had been agreed by all investigators, differences in the compliance scores across the investigators were not significant.[14]

Measurement of variables

There is a wide variation among prior studies on the surrogates selected for corporate characteristics that may be related to compliance with companies' disclosures.[15] This variation mainly depends on the data being available and may be also a reason for the mixed findings in the prior literature regarding the corporate characteristics related to companies' levels of compliance with mandatory disclosures. Table 4 illustrates, what measures have been used in the present study with regard to the three groups of variables under examination.

TABLE 4 – ABOUT HERE

Table 5 provides a summary of the descriptive statistics of the surrogates employed. It is noted that the square root of the independent variables is utilised in this study as a transformation method for the independent variables that are not normally distributed (cf. Pallant, 2005; Fielding and Gilbert, 2004).

TABLE 5 – ABOUT HERE

Consistent with prior literature (e.g. Tsalavoutas and Evans, 2010), the descriptive statistics in Table 5 indicate that companies' shareholders' equity was significantly affected on transition to IFRS. In fact, for the companies used in this study, shareholders' equity under Greek GAAP was, on average, materially higher (11%) than the restated figure under IFRS. However, more companies faced a positive impact on transition to IFRS with regard to this measure (median being 0.99). This indicates that there are several companies where the negative impact is material which drives the average score (of the index) upwards. In fact, an analysis of the frequencies of this variable (not tabulated) indicates that, out of the 74 facing a negative impact, only 26 companies faced a non-material change. The remaining 48 faced a change of more than 10%. Accordingly, companies' "financial structure" (i.e. the proportion of shareholders' equity to other balance sheet items) changed significantly.

Table 5 also illustrates that the majority of companies in the sample (85) faced a negative change in the 2004 net profit as reported under Greek GAAP and the corresponding restated figure under IFRS. Additionally, it illustrates that, on average, net income was 29% higher under Greek GAAP compared to the restated figure under IFRS, suggesting that a large number of companies faced a material negative change in this measure. In fact, an analysis of the frequencies of this variable (not tabulated) indicates that, out of the 85 facing a negative impact, only 20 companies faced a non-material change. The remaining 65 faced a change of more than 10%.

Multivariate analyses - Transformation of the dependent variable

Ordinary Least Squares (OLS) is the most commonly used technique in disclosure studies (Leventis, 2001) where the dependent variable is the compliance/disclosure score and the independent variables include the factors discussed above. Hence, this approach is also followed here.

However, using a ratio in a regression model may result in the model producing prediction of probabilities greater than one (Al-Shiab, 2003). This problem may arise because the dependent variable is bounded (i.e. lies between 1 and 0) (Cooke, 1998). Additionally, the compliance score may not be normally distributed and thus the major assumption of the classical OLS regression, i.e. that the dependent variable is normally distributed, is violated.

To mitigate this problem, it is common, researchers to employ transformations of the dependent variables in disclosure studies. This is in line with Cooke (1998: 211) who explains that in these types of studies "the dependent variable is a metric ratio and therefore can be legitimately transformed, where necessary, and used in regression analysis".

Cooke (1998) compares and contrasts some of these methods by employing them in two case studies so as to explore the implications for research in disclosure studies. For one case study the log of the odds ratio of the dependent variable provided the best fit, whereas for the second case study the rank data provided the best fit. Thus he concludes that the "success" of each method depends on the structure of the data (ibid: 223) and that "no one procedure is best but that multiple approaches are helpful to ensure the results are robust across methods" (Cooke, 1998: 209).

Following this proposition, the present research employs two regressions to control for problems that may rise because of the data structure. It follows prior studies which have transformed the dependent variable to percentiles ranks (e.g. Botosan, 1997; Cheng and Courtenay, 2006)[16] and also those that have employed the log of the odds ratio (e.g. Al-Shammari et al. 2008; Makhija and Patton, 2004; Al-Shiab, 2003; Inchausti, 1997).[17]

The log of the odds ratio is computed as follows:

$$Y = \log\left(\frac{p}{1-p}\right) \qquad \text{(Eq. 1)}$$

where Y = the transformed level of compliance and p = the ratio of companies' compliance computed with the disclosure methods explained above. These two techniques are applied with regard to both methods for measuring compliance employed here (i.e. the PC method and Cooke's dichotomous approach). It is acknowledged that although this transformation surpasses the problem of having a bounded dependent variable it is not always able to correct for kurtosis and skewness (Cooke, 1998).

Percentile ranks are computed in the following way:

$$\text{(Rank-1) / (Sample size – 1)} \qquad \text{(Eq. 2)}$$

This yields the percentile of a firm's rank within the sample where percentiles range from 0 (for the lowest ranking firm) to 1 (for the highest-ranking firm). In line with Botosan and Plumlee (2002), companies are ranked in ascending order, so that companies with higher level of compliance receive higher rank. Rank transformations have the advantage to be distribution free (McCabe, 1989) and they correct for kurtosis and skewness; they "are also relatively insensitive to outliers". (Cooke, 1998: 212). On that basis, the following OLS regression model is employed:

$$CS_j = a_0 + a_1 SIZE_j + a_3 GEA_j + a_3 EQUCOI_j + a_4 ROS_j + a_5 EARCOI_j + a_6 LIQ_j + a_7 AUD_j + a_8 IND_j + \varepsilon_j \qquad \text{(Eq. 3)}$$

where CS_j is the transformed compliance score, measured either with the PC method or Cooke's method; $SIZE_j$ is the square root of market value; GEA_j is the square root of total debt to total assets in 2005; $EQUCOI_j$ is the square root of the difference between shareholders' equity in 2004 under Greek GAAP and the restated figure under IFRS, measured by Gray's comparability index; ROS_j is the square root of pre-tax profit on sales in 2005; $EARCOI_j$ is the square root of the difference between net income in 2004, under Greek GAAP, and the restated figure under IFRS, measured by Gray's comparability index; LIQ_j is the square root of current assets to current liabilities in 2005; AUD_j is a dummy variable where 1 represents companies with a "Big 4" auditor and 0 otherwise and IND_j is a dummy variable where 1 represents manufacturing companies and 0 otherwise; and ε_j is the mean zero disturbance term.

Interpreting the results of the multivariate analyses

Consistent with Cooke (1998), Abd-Elsalam and Weetman (2003) and Leventis and Weetman (2004) perceive the minimisation of the MSE as the best criterion for selecting a model in disclosure studies. In line with these studies, herein, the interpretation of the findings of the multivariate analyses is primarily based on the significance of the independent variables as these are reported in the regression with the lowest MSE. Thus, when the MSE of a regression is substantially higher than the others, such a regression is not considered providing a good fit for the data.

However, Cooke (1998: 215) argues that "in most disclosure studies prediction is not the purpose of the study, but rather an explanation of the variability of the disclosure scores is sought". However, multivariate analysis allows for an examination of the relationship between the dependent variable (transformed compliance score in this case) and "each of the corporate characteristics (independent variables), while simultaneously controlling for the effects of other independent variables in the model" (Vlachos, 2001: 190). Thus, the best fir for the data may not be of a major concern (Al-Shiab, 2003).

One of the main assumptions of the classical linear regression model is that there is no multicollinearity among the independent variables. In this study, multicollinearity was checked with a variance inflation factor (VIF)>10 as a threshold (Gujarati, 2003: 262) and the VIF values are reported for each regression. Additionally, in order to address the concerns relating to heteroskedasticity, the present study employs "Heteroskedasticity-consistent covariance matrix estimator 3 (HC3)". This alternative method tends to produce better results than White's (1980) basic method because it produces confidence intervals which tend to be even more conservative (MacKinnon and White, 1985). Heteroscedasticity can arise as a result of the presence of outliers (Gujarati, 2003: 390). This issue is also considered in the present study and outliers are defined and excluded by using Cook's Distance as a measure (Fielding and Gilbert, 2004; Pallant, 2005). These two approaches control for a further important assumption of the classical linear regression that of homoscedasticity.

4. Main findings

The findings regarding the extent to which Greek companies complied with IFRS mandatory disclosures in 2005 are presented in Table 6. Additionally, the compliance scores under both the PC method and Cooke's approach are shown separately.

TABLE 6 – ABOUT HERE

Arguably, a relative degree of non-compliance with IFRS disclosure requirements might have been expected in countries with substantially different financial reporting regimes compared to IFRS, during the first year of IFRS implementation. However, the findings in Table 6 illustrate a relatively low average level of compliance with IFRS mandatory disclosures in 2005 by Greek listed companies. This approximates to 80% (actual levels depend on the method employed for measuring compliance). Table 6 also indicates that there is considerable variation in the compliance scores identified: standard deviations are 10% or 8%, depending on the method employed for measuring compliance. Additionally, only 20% (approximately) of the companies examined complied at a level higher than 90%.

These findings are consistent with evidence suggesting low enforcement mechanisms in Greece in general and, in particular, the lenient approach taken by the regulator regarding compliance with IFRS during the first years of their implementation (cf. Avlonitis, 2007; Vroustouris, 2007). They also reflect on the tendency of Greek companies not to provide high levels of disclosures (cf. Vlachos, 2001; Tsakumis, 2007). Possibly, they also indicate the low familiarity of Greek accountants and auditors regarding IFRS requirements.

The relatively high non-compliance levels identified confirm the concerns expressed in the literature regarding the role that enforcement mechanisms play in the achievement of a successful level of comparability across jurisdictions that adopt IFRS (e.g. Ball, 2006; Nobes, 2006; Weetman, 2006; Giner and Rees, 2005; Schipper, 2005). In fact, the findings of the present study are in favour of the argument raised by Nobes and Parker (2008) that low enforcement mechanisms may result in *de facto* voluntary compliance with IFRS.

Although caution is needed, if one makes the 'heroic' assumption that results of studies measuring compliance with mandatory disclosures in different countries are comparable, these findings are similar to prior studies investigating compliance with mandatory disclosures in emerging capital markets (e.g. *Hong Kong* (Tai et al., (1990); *Bangladesh* (Ahmed and Nicholls, 1994); *Spain* (Wallace et al. 1994); *Czech Republic* (Patton and Zelenka, 1997); *Zimbabwe* (Owusu-Ansah, 1998)). It is notable that these studies refer to samples relating to the late 1980s or early/mid 1990s and in countries where low enforcement has been indicated. Additionally, these findings are significantly lower than the results of Vlachos (2001) who examined Greek listed companies' compliance with Greek law requirements 10 years before the period covered in the present study. (However, as discussed above, Vlachos' (2001) results might be biased upwards). Thus, these compliance levels do not reflect the compliance levels that would be expected to be identified in a developed market (as is ASE) nowadays.

Methodological considerations

Consistent with the findings of Street and Gray (2001) and Tsalavoutas et al. (2010), it is shown that the two methods employed produce significantly different compliance scores. The "paired sample t-test" indicates that Cooke's method produces significantly higher scores than the PC method. Additionally, the "Wilcoxon test" indicates that the ranking of companies based on the compliance scores changes depending on the method employed.[18] Thus, care is needed when one reads the findings of a study examining compliance with IFRS disclosure requirements, if only one method has been used.

This is further supported when one looks at the frequencies regarding the compliance scores below the threshold of 80%. When compliance has been measured with the PC method, approximately 50% of the companies belong to this category. However, when the commonly used method is employed, approximately 30% of the companies appear in this category. Al-Shiab (2003) implements only the PC method and this might be a reason for reporting substantially lower compliance scores compared to studies in other emerging markets for a similar period (e.g. Hassan et al. (2006) with reference to Egypt.) At the same time, the findings of prior studies using only "Cooke's method" may report relatively inflated scores (depending on the number of items from each accounting standard included in the research

instrument). As discussed above, only the study of Street and Gray (2001) uses the two methods simultaneously and their findings provide preliminary support for this argument. However, they do not test statistically the differences between the scores produced under the two different methods.

In line with the approach taken by Tsalavoutas et al. (2010), to illustrate the potential of misleading results under Cooke's method, the corresponding findings are provided in Table 7, after having excluded the compliance score with the disclosure requirements of IAS 1. As was indicated previously, IAS 1 contains the larger number of items required to be disclosed. Additionally, it deals mainly with presentational issues and not with measurement and recognition issues. (In fact, the results in the next section indicate that the majority of companies tend to comply with its requirements and thus driving the overall compliance score upwards).

TABLE 7 – ABOUT HERE

The results in Table 7 are in line with the findings by Tsalavoutas et al. (2010). The average score reduces by only 1% for the PC method and median score remains the same. However, the average score for Cooke's method reduces dramatically by 7% and the median by 5%.[19] Thus, the results of the two methods now become very similar. However, although the absolute difference between the scores produced by the two methods is smaller it continues to be significantly different. More specifically, the average compliance scores under Cooke's approach are marginally lower than those of the PC method.

Most importantly, the frequencies regarding the companies found under the 80% threshold remain the same for the PC method whereas they change dramatically for the scores under Cooke's approach: from being 33.3% previously, they increase to 56.2% after excluding IAS 1. Similar is the case for the percentage of companies being in the range between 90-100%. From representing 22% previously, they represent only 6.5% after excluding IAS 1, as far as Cooke's method is concerned. The corresponding figure reduces only by 1.3% with reference to the PC method.

These findings illustrate how sensitive the scores produced under Cooke's method might be to the number of items mandated by the standards included in the research instrument. Thus, arguably,

misleading conclusions about the extent to which companies comply with mandatory disclosures may be drawn. Accordingly, these findings strengthen the proposition for researchers to employ both methods when conducting this type of research, so as to avoid producing misleading findings. This may also have econometric implications regarding the findings relating to the factors explaining compliance. (The findings of Street and Gray (2001), as well as those provided below, support this argument.)

Compliance with the disclosure requirements of each standard separately

Table 8 provides the descriptive statistics regarding the compliance scores for each standard separately. Compliance scores across standards have been ranked in a descending order on the basis of the average score. *N* indicates the number of companies for which each standard was relevant. The standard deviation of compliance scores is also of relevance for the purposes of this study.

TABLE 8 – ABOUT HERE

Some key observations worth discussion. IAS 10 is the standard with the highest average compliance score. This is because the majority of companies complied with the relatively straight-forward requirement of disclosing "the date when the financial statements were authorised for issue and who gave that authorisation" (paragraph 17). However, measuring compliance with this standard may entail high subjectivity because it is not always evident if a post-balance sheet event has incurred. Hence, it is not always evident whether disclosure is omitted or there is no event to be disclosed.

IAS 1 follows with an average compliance score of 95% and this standard exhibits the lowest standard deviation (5%). This suggests that most companies have complied with virtually all the standard's requirements. A possible explanation is that it is relatively easy for companies to comply with this standard since much of the required information is basic (e.g. name of the entity, description of operations, provision of financial statements, and key items to be included in the financial statements). Thus, complying with the requirements of this standard does not imply high proprietary costs (Al-Shammari, 2005).

A relatively high compliance score is also exhibited by IAS 18 but with a very high standard deviation (22%). This reflects the fact that many companies do not disclose "the amount of each significant category of revenue recognised during the period" (paragraph 35b). This non-disclosure indicates the proprietary costs may exist when disclosing this kind of information. The case of IAS 20 (government grants) is also similar. On the one hand, the policy adopted with regard to government grants was disclosed. On the other hand, a large proportion of the companies remained silent regarding "the nature and extent of government grants recognised in the financial statements and an indication of other forms of government assistance from which the entity has directly benefited" (paragraph 39b).

Finally, it is observed that standards that introduced new measurement and/or recognition requirements compared to Greek GAAP (cf. Tsalavoutas and Evans, 2010), exhibit very low average levels of compliance. They also exhibit significantly high variability of compliance scores. The case for the standards requiring disclosures that involve high proprietary costs is also similar. Some examples include the following: IAS 40 (72%, sd: 22%); IFRS 3 (72%, sd: 31%); IAS 14 (71%, sd: 25%); IAS 37 (70%, sd: 24%); IAS 19 (64%, sd: 27%); IAS 28 (63%, sd: 31%); IAS 17 (51%, sd: 29) ; and IAS 36 (50%, sd: 35%).

The figures in Table 8 also indicate also indicate that there were companies which did not provide any of the information required by these standards (i.e. compliance score was zero). 10 companies were silent in respect of the disclosures required by IAS 17, five in respect of IAS 36, and five in respect of IAS 19. On a more positive note, there were some companies that exhibited full compliance with the requirements of those standards. 11 in respect of IAS 17 and 11 in respect of IAS 36 but only one in respect of IAS 19.

It is noteworthy that, although the instances of qualified reports were not few, none of the qualifications was referring to non-compliance with IFRS disclosure requirements.

Multivariate analyses

This section reports the findings of the multivariate analyses for testing H1 & H2. Focusing on the findings reported in Table 9, it can be seen that all regression models are significant at 1% level (F values). This indicates that the proposed corporate characteristics explain a significant part of the

variation of the levels of compliance with IFRS mandatory disclosures. Additionally, it is observed that all of the variance inflation factors (VIF) are lower than two, indicating that there is no concern of multicollinearity between the independent variables.[20]

Moreover, it is shown that the regressions where the dependent variable is the compliance scores transformed by using the log of the odds ratio, report a high mean square error (MSE). In fact, it is substantially higher than that of the regression where the dependent variable has been transformed into percentile ranks. Consistent with the prior literature (e.g. Cooke, 1998; Abd-Elsalam and Weetman, 2003; Leventis and Weetman, 2004) and with the criterion set (i.e. minimum MSE), the discussion that follows concentrates on the regression models with the percentile ranks as the dependent variable.[21] Finally, it is highlighted that the analysis regarding the regression referring to the PC method is based on 146 observations whereas that using Cooke's method is based on 145 observations. This is because there is an additional observation appearing to be influential and has been treated as an outlier with regard to Cooke's method.

TABLE 9 – ABOUT HERE

The adjusted R^2 indicates that the corporate characteristics selected for the purposes of this study explain at 39% (PC method) or 35% (Cooke's method) the variation in companies' levels of compliance with mandatory disclosures. The findings of these analyses indicate a significantly positive association (at 1%) between type of audit firm and levels of compliance with mandatory disclosures. Additionally, they indicate that the difference between 2004 net profit, as reported under Greek GAAP, and the corresponding restated figure under IFRS is associated with companies' levels of compliance with IFRS mandatory disclosures. A significantly negative association (at 1%) is identified. Furthermore, a significantly positive association (at 1% or at 5%) between the difference of 2004 shareholders' equity, as reported under Greek GAAP, and the corresponding restated figure under IFRS and companies' levels of compliance with IFRS mandatory disclosures is reported.

Focusing on the coefficients, it is indicative that the highest weighted variable is audit firm type. This is followed by the change in 2004 shareholders' equity and the change in 2004 net profit, as a result of the transition to IFRS.

On that basis, H1 and H2 are supported. It can be concluded that companies with a "Big 4" auditor, exhibited more positive changes in their restated IFRS 2004 net profit figure and exhibited more negative changes in their restated IFRS 2004 shareholders' equity figure, comply most with IFRS mandatory disclosures. Reflecting on the development of hypotheses, these are not surprising findings and can be interpreted in the following way.

Considering prior evidence that companies' levels of compliance with mandatory disclosures are associated with shareholders' equity (cf. Tai et al., 1990), and in line with what agency theory posits, company managers may well be under pressure to "communicate" and explain why their financial position appears to be worse under the higher quality accounting standards (i.e. IFRS) which are believed to reflect companies' assets and liabilities more accurately. This would also pre-empt allegation of such a significant change being due to fraudulent accounting practices under Greek GAAP. Additionally, such a negative impact would indicate poorly managed companies and this, according to the "market discipline" perspective, would jeopardise management's reputation. Hence, higher levels of compliance with IFRS mandatory disclosures facilitate minimisation of agency costs.

Additionally, the finding regarding the change in the 2004 net profit (i.e. that the more positive the change the higher the compliance levels) can be interpreted with the propositions of signalling theory. Within this framework, it could be suggested that management provides extended levels of compliance to communicate that previous year's performance was low, not because of their inefficiency but because Greek GAAP was of poor quality, i.e. the previous accounting regime produced conservative reported performance. This meets the objective of signalling that their companies had performed well in terms of profitability but the accounting rules did not allow this to be reflected on the financial statements. Accordingly, in this way, the managers of these companies try to "screen" their companies from those

remaining (i.e. the majority) which faced a negative change. Thus, "non-lemon owners have an incentive to communicate" (Spence, 1974: 93) in order to avoid the adverse selection problem.

Furthermore, this finding can also be consistent with the propositions of agency theory. Managers may well be under pressure to "communicate" the reasons for such an improvement in companies' restated profitability. This would pre-empt allegation that such a significant change is due to fraudulent accounting practices. In particular, reporting substantially improved restated profitability may trigger the suspicion of shareholders under the rationale that this improvement is a result of a "transitional big bath" leading to misleading perceptions about companies' profitability levels and, potentially, good future prospects (Inchausti, 1997). Hence, higher disclosures facilitate the minimisation of agency costs in this respect.

Finally, in line with the premises of political costs theory, a positive change could well be interpreted as companies intentionally reporting lower profits under Greek GAAP so as not to attract the public eye. Accordingly, companies whose restated profitability was affected significantly positively might be more concerned that this change may trigger political action with reference to past performance. Thus, higher compliance levels may reflect management's efforts to minimise political action.

The positive association between audit firm size and the extent to which Greek companies comply with IFRS mandatory disclosures is consistent with the prior literature pertinent to this study (e.g. Tai et al., 1990; Ahmed and Nicholls, 1994; Wallace and Naser, 1995; Patton and Zelenka 1997; Street and Gray, 2001; Glaum and Street, 2003). Several inferences can be drawn from this finding. First, these results confirm the preliminary evidence shown by Tsalavoutas and Evans (2010) regarding the instances of non-compliance with IFRS 1, i.e. no provision of reconciliation statements, and the relationship with audit firm size. Second, these findings are in line with the proposition that large and international audit companies may have greater competence and expertise on IFRS (cf. Dumontier and Raffournier, 1998). In fact, according to Tsalavoutas and Evans (2010), "Big 4" audit companies could attract experienced employees from their foreign operations to assist in the transition process in Greece. Additionally, greater

audit effort by large audit firms is well documented in Greece. Hence, this expertise and competence could justify the higher levels of compliance identified.

As far as theoretical considerations are concerned, these findings indicate strong evidence of the applicability of agency and signalling theories with regard to Greek listed companies' compliance with IFRS mandatory disclosures. In particular, higher earnings management as well as lower audit effort are well documented in Greece for companies with small audit firms. Thus, employing a "Big 4" audit firm acts as a monitoring mechanism and satisfies the need for transparency and better quality financial statements. This leads to a reduction of agency costs.

Additionally, considering this context in Greece, managers may also intentionally employ a "Big 4" firm as a signal of high accounting quality. This would allow them to "screen" their companies from those employing small audit firms which are associated with higher earnings management as well as lower audit effort. At the same time, employing a "Big 4" auditor would indeed result in higher compliance with mandatory disclosures (see discussion above). In fact, Hodgdon et al. (2009) illustrate in a multi-country study that compliance with IFRS mandatory disclosures is positively associated with auditor choice.

Methodological considerations

The results in Table 9 confirm the findings by Street and Gray (2001) and the corresponding expectations regarding the different significant associations between corporate characteristics and compliance levels, because of the use of different methods for measuring compliance. Use of the PC method only, would have reported that industry type is also a factor associated with the extent to which companies comply with IFRS mandatory disclosures. In contrast, this would not have been the case if Cooke's method had followed only.

One could argue that these differences, may be attributed to the fact that one additional observation is included in the tests with reference to compliance scores being measured by using the PC method. To explore if this is the case, the previous analyses have been repeated by excluding this observation. The

results (not tabulated) indicate that although the size of the coefficients change slightly the overall findings do not change. Industry type continues to be significantly negatively associated with the extent of companies' compliance under the PC method. However, it remains insignificant under Cooke's method. These results allow for the conclusion that the influential observation does not affect the overall findings, i.e. the fact that different corporate characteristics appear to be significant having followed a different method for measuring compliance.

To be consistent with the previous discussion, further explorations have been carried out by excluding IAS 1. The corresponding findings are presented in Table 10 and refer to the same companies that the main findings refer to (i.e. Table 9).

It is shown that the results do not change when IAS 1 is excluded. Industry type continues to be significant under the PC method but insignificant under Cooke's method. Accordingly, although excluding the "influential" standard (i.e. IAS 1) leads to more similar scores between the two methods (see Table 7) the corporate characteristics associated with compliance levels differ when the two methods employed simultaneously.

TABLE 10 – ABOUT HERE

Considering all multivariate analyses, a significant association between non-manufacturing companies and the extent to which Greek companies comply with IFRS mandatory disclosures it is shown when the scores have been measured by using only the PC method.[22]

Accordingly, it is concluded that there is no clear evidence that industry type is associated with companies' levels of mandatory disclosures. Neither the finding with reference to the PC method nor the corresponding one with regard to Cooke's method are considered as robust for making generalisations and drawing conclusions.

5 Conclusions

The present study builds on and contributes to literature examining compliance with national accounting standards and/or IAS/IFRS. It contributes to this literature in the following three ways. *First*, it adds a large scale academic study examining compliance with all IFRS mandatory disclosures after 2005 in the EU. *Second*, it provides evidence regarding the implications of the use of different methods for measuring compliance with mandatory disclosures. *Third*, it provides evidence regarding the explanatory factors of compliance levels with IFRS mandatory disclosures, during the first year of IFRS implementation.

The findings of the present study illustrate a relatively low average level of compliance with IFRS mandatory disclosures in 2005 by Greek listed companies. This approximates to 80% (actual levels depend on the method employed for measuring compliance). It is also indicative that there is considerable variation in the compliance scores identified: standard deviations are 10% or 8%, depending on the method employed for measuring compliance. These compliance levels, which may be considered low for a developed market, reflect on the lenient approach of the regulator regarding compliance with IFRS during the initial period of their implementation.

Further analyses, on a standard by standard basis, indicate that standards that introduced new measurement and/or recognition requirements compared to Greek GAAP, exhibit very low average levels of compliance. They also exhibit significantly high variability of compliance scores. Similar is the case for the standards require disclosures that involve high proprietary costs. Additionally, there were instances where companies did not provide any of the information required by specific standards.

Overall, the relatively high non-compliance levels identified confirm the concerns expressed in the literature regarding the role that enforcement mechanisms play in the achievement of a successful level of comparability across jurisdictions that adopt IFRS (e.g. Ball, 2006; Nobes, 2006; Weetman, 2006; Giner and Rees, 2005; Schipper, 2005). In fact, the findings of the present study are in favour of the argument raised by Nobes and Parker (2008: 195) that "weak legislation, lack of resources and ineffective audit profession in some EU countries make compliance with IFRS in practice voluntary".

Further, the present study provides strong evidence that companies having the following characteristics comply most with IFRS mandatory disclosures in 2005: those having a "Big 4" auditor; those exhibited more positive changes in their restated IFRS 2004 net profit figure; and those exhibited more negative changes in their restated IFRS 2004 shareholders' equity figure.

With regard to the two restated measures, as discussed above, there have been consistent findings of earnings management by Greek listed companies. The areas of creative accounting practices followed under Greek GAAP were expected to be curtailed with the introduction of IFRS. Accordingly, the latter was expected to cause a significant impact on companies' financial statements. The findings by Tsalavoutas and Evans (2010); HCMC (2006) and Grant Thornton (2006) indicate that implementation of IFRS *inter alia* did indeed have a significant impact on the financial reported position and performance of Greek listed companies. In many instances this significant impact appears to be material. On that basis, the findings of the present study indicate that such a significant change, in companies' restated measures, has acted as a driving factor for companies' compliance with IFRS overall mandatory disclosure requirements in 2005. Hence, the results of this study indicate that the compliance risks that managers bear are heavily dependent on the impact caused on their companies' financial position and performance, as a result of the adoption of IFRS. Additionally, propositions of agency and signalling theories provide the basis for interpreting these findings.

As far as audit firm size is concerned, considering the particular context of Greece, these findings are consistent with prior evidence that higher earnings management as well as lower audit effort are well documented for companies with small auditors. Thus, employing a "Big 4" audit firm acts as a monitoring mechanism and satisfies the need for transparency and better quality financial statements. This leads to a reduction of agency costs and results in higher levels of compliance.

Finally, from a methodological point of view, the findings of this study provide strong evidence that using only one method for measuring compliance with mandatory disclosures may produce misleading perception about the extent to which companies comply with the standards' requirements. Beyond this, using only one method may also have implications with regard to the explanatory factors that appear to be

significantly associated with the levels of compliance identified. Accordingly, this study suggests simultaneous use of both the commonly used dichotomous approach and the PC method as they were employed in this study.

Accordingly, the findings of this research should be of particular interest to researchers aiming to conduct studies on compliance with IFRS mandatory disclosure requirements. They should also be of particular interest to practitioners reading studies reporting compliance with IFRS mandatory disclosure requirements.

A major strength of the study is that the results are time specific, i.e. focusing on the first year of mandatory implementation of IFRS. However, this might also present a limitation. It may give a misleading perception about companies' compliance behaviour. Prior research indicates that companies' disclosures increase overtime (e.g. Hassan *et al.,* 2006; Peng *et al.,* 2008). Thus, the relatively low levels of disclosures identified might be an outcome of preparers' low familiarity with the disclosure requirements of the new standards. Consequently compliance levels may improve in the future.

Additionally, the findings of the present research suggest that the impacts reported in companies' reconciliation statements with regard to shareholders' equity and net income are associated with compliance levels in 2005. However, in the years to follow companies will not have to produce reconciliation statements and thus these explanatory factors will not be testable. As a result, future research could explore what are the most important determinants of compliance with IFRS mandatory disclosures after 2005.

NOTES

[1] The exception is the study of Tai et al. (1990) which uses an index provided by an audit firm.

[2] An indication of the potential impact of the structure of the research instrument and different sample is provided if one examines the findings of Ali et al. (2004) and Akhtaruddin (2005). The latter focuses explicitly on Bangladesh and examines the extent of mandatory disclosures by 94 listed companies in 1999. Ali et al. (2004) *inter alia* examine a sample of 118 companies from Bangladesh with reference to 1998. Akhtaruddin's (2005) research instrument includes fewer items than that of Ali et al. (2004) and he finds substantially lower levels of compliance. More specifically, he finds that, on average, companies disclose 44% of the items of information mandated by the accounting standards whilst Ali et al. (2004) report a compliance score of 78%. This example illustrates that researchers need to be cautious when making comparisons of findings of studies having implemented different research design.

[3] By Greek GAAP is meant 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).

[4]The argument about caution needed when comparing findings of such studies also applies here.

[5] http://www.sec.gov/divisions/corpfin/ifrs_staffobservations.htm (last accessed on 8 June 2009)

[6] Tower et al. (1999) is the only other study employing two methods for measuring compliance with IAS mandatory disclosures. They follow a similar approach to that of Patton and Zelenka (1997) discussed above.

[7] Daske et al. (2007) indicate that there were very few Greek listed companies that had adopted IAS/IFRS prior to 2005 on a voluntary basis.

[8] The results of this study have also been published in 2002: Street and Gray (2002).

[9] These standards represented the IASB's 'stable platform' and were the standards required to be implemented in 2005. The six standards excluded are: IAS 26 'Accounting and Reporting by Retirement Benefit Plans'; IAS 29 'Financial Reporting in Hyperinflationary Economies'; IAS 30 'Disclosures in the Financial Statements of Banks and Similar Financial Institutions'; IAS 34 'Interim Financial Reporting'; and IFRS 4 'Insurance Contracts'. These standards are not relevant for the purposes of this study because they do not apply to the Greek sample companies. IAS 39 'Financial Instruments: Recognition and Measurement' is also excluded as it covers only the recognition and measurement aspects of financial instruments; disclosure and presentation are covered by IAS 32 (which is included in the research instrument).

[10] The 'Deloitte Touche Tohmatsu IFRS Presentation and disclosure checklist 2005' and the corresponding PricewaterhouseCoopers checklist were also consulted in this process. However, neither was adopted because they had been structured according to categories (e.g. disclosures related to the balance sheet).

[11] Content validity indicates whether the instrument 'adequately measures the concept of interest' (Vlachos, 2001, 184 with reference to Sekaran, 1992) (i.e., in this case, compliance with disclosure requirements). It is usually established when the items which are supposed to measure the concept are evaluated by a group of expert judges to ensure that they in fact do so (Kidder & Judd, 1986). This is a common approach in the literature (e.g. Camfferman & Cooke (2002), Al-Shiab (2003), Vlachos (2001) and Cooke (1992)).

[12] The first independent researcher is a Professor of Accounting and a Chartered Accountant. The second independent researcher is a senior financial accounting and reporting analyst, with more than 12 years experience in the field. Prior to this he was employed in the banking industry for more than 20 years.

[13] Reliability is concerned with the accuracy of measurement, i.e. how well the concept under investigation is being measured (Vlachos, 2001 with reference to Sekaran, 1992), and the precision, stability and consistency of measurement. Stability refers to the ability of the instrument to measure the concept of interest consistently, independent of timing and conditions. The main threat to reliability derives from the subjective judgment exercised in completing the research instrument (Vlachos, 2001).

[14] The results are available on request. Only four of those companies are included in the final sample.

[15] It is acknowledged that there is vast literature regarding the corporate characteristics related to companies' voluntary levels of disclosures. However, the references here focus on studies examining the explanatory factors of compliance with mandatory disclosures as they are more relevant to the purposes of the present study.

[16] This is not a non-parametric percentile ranks regression (e.g. Abd-Elsalam and Weetman, 2003;

Leventis and Weetman, 2004a; Lang and Lundholm, 1996). (The independent variables have not been transformed into to ranks. As discussed above, their transformation is based on their square root. This avoids the use of non-parametric regression which produces less powerful results (cf. Leventis, 2001)). Only each company's compliance score is transformed into percentile ranks. This transformation of the dependent variable effectively measures the relative levels of disclosure of the companies within the sample (Cheng and Courtenay, 2006). It also allows for the comparison of the results with those of the OLS regression using the log of the odds ratio as a dependent variable.

[17] Two more types of OLS regressions have also been conducted: one with using the actual (untransformed) compliance score as the dependent variable (e.g. Mangena and Tauringana, 2007; Alsaeed, 2006; Akhtaruddin, 2005; Owusu-Ansah and Yeoh, 2005; Ali et al., 2004; Glaum and Street, 2003; Tower et al., 1999); and one which uses the natural logarithm of the compliance score as the dependent variable (i.e. a log-lin model, cf. Hodgdon et al. (2009) and Lopes and Rodrigues (2007)). The results are similar to those identified by the two main techniques presented herein so their presentation is suppressed for reasons of economy.

[18] I am grateful to Vivien Beattie for pointing this out.

[19] Wilcoxon signed rank tests and Paired sample t-tests were conducted and illustrated that these changes (decreases) are significant at 1%.

[20] A Pearson correlation matrix (not tabulated) also indicates that there is no concern of collinearity between the independent variables employed in these analyses. No association higher than 0.5 exists.

[21] It is noted that the regressions with the log of the odds ratio as the dependent variable tend to report very similar results.

[22] In fact, this variable appears to have larger weight in the multivariate analyses (as indicated by the size of the coefficients) from the earnings comparability index.

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Tables

Table 1: Prior research on compliance with national standards' mandatory disclosures.

Authors	Country	Year	Sample	Research instrument	No. of disclosure index methods employed	Findings
Tai et al. (1990)	Hong Kong	1986	76	Disclosure checklist provided by a (then) 'Big 8' audit firm	1	Average compliance: 78%. Very low compliance levels regarding specific areas (e.g. 49% in relation to depreciation)
Cooke (1992)	Japan	1988	35	Self-constructed index	1	Average compliance: 95%. Standard deviation: 3%.
Solas (1994)	Jordan	1988	45	Self-constructed index	1	Average compliance: 46.35%. Standard deviation: 1%.
Ahmed and Nicholls (1994)	Bangladesh	1988	63	Self-constructed index	1	Only four companies exhibit compliance above 90%. 37 companies are to be found in the range of 60-80%.
Abayo et al. (1993)	Tanzania	1990	51	Self-constructed index	1	Average compliance: 53%. Range between 31% and 72%.
Wallace and Naser (1995)	Hong Kong	1991	80	Self-constructed index	1	Average compliance: 73%. Range between 55% and 87%
Wallace et al. (1994)	Spain	1991	50	Self-constructed index	1	Average compliance: 59%. Range between 29% and 80%.
Naser and Nuseibeh (2003)	Saudi-Arabia	1992 & 1999	67	Self-constructed index	2	In contrast to other studies, they *inter alia* report a high degree of compliance (average: 89%).
Owusu-Ansah and Yeoh (2005)	New Zealand	1992 1993 1996 1997	50	Self-constructed index	1	Compliance levels increased throughout this period from an average of 78% in 1992 to an average of 88% in 1997. The standard deviation of the scores has dropped as well (from 4.3% 1992 to 2.87% in 1997).
Patton and Zelenka (1997)	Czech Republic	1993	50	Self-constructed index	3	They report large variability in the compliance scores: from 25% to 80%.

Table 1 (continued): Prior research on compliance with national standards' mandatory disclosures.

Authors	Country	Year	Sample	Research instrument	No. of disclosure index methods employed	Findings
Craig and Diga (1998)	Singapore, Malaysia, Indonesia, the Philippines & Thailand	1993	145	Self-constructed index	1	Relatively low mean levels of disclosures, ranged from 51% - 61%.
Owusu-Ansah (1998)	Zimbabwe	1994	49	Self-constructed index	1	Average compliance: 74%. Relatively small standard deviation (5%).
Vlachos (2001)	Greece Cyprus	1996	74 50	Self-constructed index	1	Average compliance: 89% Small standard deviation of 2.3%. (With reference to the 74 Greek companies)
Ali et al. (2004)	India, Pakistan & Bangladesh	1998	566	Self-constructed index	1	Average compliance approximately 80% for each country. Relatively large average standard deviation of 8%
Akhtaruddin (2005)	Bangladesh	1999	94	Self-constructed index	1	Average compliance: 44% Small standard deviation (1.2%).
Aljifri (2008)	United Arab Emirates	2003	31	Self-constructed index	1	Average compliance: 67% Small standard deviation (11%).

Table 2: Prior research on compliance with IAS/IFRS mandatory disclosures.

Authors	Country	Year	Sample	Research Instrument	No. of disclosure index methods employed	Findings
Abd-Elsalam and Weetman, (2007)	Egypt	1991/ 1992 1995/ 1996	72 (only 20 for 1991/ 1992)	Self-constructed index	1	Compliance of 76% in the first period with a standard deviation of 5%. Compliance increase in the second period (84%) but standard deviation also increases (7%).
Abd-Elsalam and Weetman, (2003)	Egypt	1995/ 1996	72	Self-constructed index	1	Average compliance: 83%. This was 73% when referring to the newly introduced disclosure items. It was even lower (36%) when referring to items which hadn't been translated to the Arabic language.
Hassan et al. (2006)	Egypt	1995-2002	77	Self-constructed index	1	Average compliance score for the entire period: 90%.
Al-Shiab (2003)	Jordan	1995-2000	50	Self-constructed index	1	Companies' level of compliance ranged between 45% and 56%.
Street et al. (1999)	12 Different countries	1996	49	Self-constructed index	1	20 companies complied in full. For the remaining companies, compliance with individual standards was relatively low.
Al-Shammari et al. (2008)	Bahrain, Oman and Kuwait	1996 - 2002	137	Self-constructed index	1	Compliance increased over time, from 68% in 1996 to 82% in 2002. Significant variation of compliance levels across different countries is reported.

Table 2 (Continued): Prior research on compliance with IAS/IFRS mandatory disclosures.

Authors	Country	Year	Sample	Research instrument	No. of disclosure index methods employed	Findings
Tower et al. (1999)	Australia, Hong Kong, Malaysia, Philippines, Singapore and Thailand	1997	60	Self-constructed index	2	Average compliance: 91%. Standard deviation: 4%.
Street and Bryant (2000)	17 Different countries	1998	82	Self-constructed index	1	The results indicate that the overall level of compliance was less than 75%. Large variability in the compliance levels is also identified in this study with companies exhibiting low levels of compliance with several individual standards.
Street and Gray (2001)	32 Different countries	1998	279	Self-constructed index	2	Companies' level of compliance ranged from 60% to 93%.
Peng et al. (2008)	China	1999 & 2002	79	Self-constructed index	1	Companies exhibit a relatively high compliance with the items mandated by Chinese GAAP (97% for both years). The compliance with IAS requirements improves from 86% in 1999 to 90% in 2002.
Sucher and Alexander (2002)	Czech Republic	1999	22	KPMG IAS disclosure checklist	Survey	A significant degree of non-compliance is reported. None of the companies fully complied with the five standards under review.
Cairns (2001)	29 Different countries (mainly in EU)	1999-2000	165	Survey	Survey	The study reveals that only 62% of the companies examined fully complied with the IAS.
Glaum and Street (2003)	Germany	2000	100 IAS 100 US GAAP	Ernst & Young disclosure checklist	1	Levels of compliance with IAS ranged from 41.6% to 100%, with an average of 81%. This was significantly lower compared to the compliance with US GAAP (87%).

Table 2 (Continued): Prior research on compliance with IAS/IFRS mandatory disclosures.

Authors	Country	Year	Sample	Research instrument	No. of disclosure index methods employed	Findings
Gebhardt and Heilmann (2004)	Germany	2000	59 (with reference to IAS)	Self-constructed index	1	Compliance was particularly low for IAS 7.
Securities and Exchange Committee (SEC) (2006)	Different countries	2005	100	Survey	Survey	With regard to disclosures in particular, some of the areas identified include the following: revenue recognition, goodwill and intangible assets, financial instruments, leases and contingent liabilities.
ICAEW (2006), on behalf of the European Commission	Different European countries	2005	200	Survey	Survey	This survey *inter alia* identifies some compliance issues regarding disclosures relating to: business combinations, goodwill and impairment testing.
Fekete et al. (2008)	Hungary	2006	17	Self-constructed index	1	Average compliance: 62%. 5 companies exhibiting compliance levels lower than 50% and 2 exhibiting full compliance.

Table 3: Ensuring the validity of the research instrument: Items identified by each researcher and in the final index.

	Items suggested by the author	Items suggested by an independent researcher	Items suggested by a second independent researcher	Final index (after a 4th person's advice)
IAS 1	74	76	72	72
IAS 2	9	8	8	8
IAS 7	10	10	10	10
IAS 8	6	21	8	16
IAS 10	5	4	4	4
IAS 11	9	8	8	8
IAS 12	14	11	11	11
IAS 14	26	25	21	20
IAS 16	17	15	15	15
IAS 17	23	19	19	19
IAS 18	4	3	3	3
IAS 19	23	23	23	23
IAS 20	3	3	3	3
IAS 21	9	8	8	8
IAS 23	3	3	3	3
IAS 24	18	17	17	17
IAS 27	11	11	11	11
IAS 28	13	11	13	13
IAS 31	7	8	8	8
IAS 32	31	31	31	31
IAS 33	8	8	7	7
IAS 36	38	38	39	39
IAS 37	17	15	15	15
IAS 38	18	16	14	14
IAS 40	19	19	20	21
IAS 41	23	23	23	23
IFRS 1	17	14	14	14
IFRS 2	15	12	12	12
IFRS 3	25	20	20	20
IFRS 5	11	10	10	10
IFRS 6	3	3	3	3
Total	**509**	**493**	**473**	**481**

Table 4: Summary of the determinants of compliance with IFRS mandatory disclosures tested in this study.

Variable	Measurement	Expected Sign
Structure-related		
Size	Market value	+ -
Gearing	Total debt to total assets	+ -
Change in the 2004 shareholders' equity figure as a result of the adoption of IFRS,	Gray's comparability index with regard to 2004 shareholders' equity (EquCoI)	+ -
Performance-related		
Profitability	Pre-tax profit to net sales (ROS)	+ -
Change in the 2004 net profit figure as a result of the adoption of IFRS	Gray's comparability index with regard to 2004 net profit (EarCoI)	+ -
Liquidity	Current assets to current liabilities	+ -
Market-related		
Audit firm size	Dummy variable: 1 if the audit firm is a 'Big 4', 0 otherwise	+
Industry	Dummy variable: 1 if a company is manufacturing, 0 otherwise	+ -

Table 5: Descriptive statistics of the structure-related variables employed.

Statistics	***Market capitalisation**	**Gearing**	**‡EquCoI**	**ROS**	**‡EarCoI**	**Liquidity**
Mean	274	0.29	1.11	0.04	1.29	2.13
SD	934	0.17	0.74	0.17	3.81	5.17
Min.	2	0	0.35	-0.97	-20.60	0.15
Max.	10,016	0.68	8.86	0.66	32.05	61.43
Median	46	0.29	0.99	0.05	0.96	1.40
Skewness	8.191	-0.025	8.180	-2.228	3.629	10.416
Kurtosis	79,584	-0.589	84.465	12.975	42.103	116.883
Kolmogorov-Smirmov (Sig)	0.000	0.200*	0.000	0.000	0.000	0.000
Normality rejected	Yes	No	Yes	Yes	Yes	Yes

*€ millions. €1=US$1.2597 and €1=£0.6930 (28/4/06-FT). ‡It is noted that a value larger than 1.0 implies that the measure examined (e.g. shareholders' equity) is higher under Greek GAAP than under IFRS. This indicates a negative impact as a result of the adoption of IFRS. Similarly, a value lower than 1.0 implies that the measure examined is lower under Greek GAAP than under IFRS, implying a positive impact.

Table 6: Frequency and distribution of compliance scores (*N*=153).

Compliance Score	**PC method**		**Cooke's method**	
50 - 59	6	3.9%	0	0.0%
60 - 69	18	11.8%	8	5.3%
70 - 79	56	36.6%	42	28.0%
80 - 89	46	30.1%	70	46.7%
90 - 100	27	17.6%	33	22.0%
N	*153*	*100.0%*	*153*	*100.0%*
Mean	0.79		0.83	
SD	0.10		0.08	
†*Paired sample t-test*	-12.267***			
Min	0.50		0.62	
Max	0.95		0.97	
Skewness	-0.43		-0.51	
Kurtosis	-0.51		-0.49	
Kolmogorov	0.013		0.001	
Normality rejected	Yes		Yes	
Median	0.78		0.83	
‡Wilcoxon	-9.416***			

†Compares the mean differences across the compliance scores measured by the two different methods. ‡Compares the median differences across the compliance scores measured by the two different methods.

Table 7: Frequency and distribution of compliance scores, excluding IAS 1 (*N*=153).

Compliance Score	**PC method**		**Cooke's method**	
40-49	1	0.7%	1	0.7%
50 - 59	9	5.9%	12	7.8%
60 - 69	24	15.7%	30	19.6%
70 - 79	48	31.4%	43	28.1%
80 - 89	46	30.1%	57	37.3%
90 - 100	25	16.3%	10	6.5%
N	*153*	*100.0%*	*153*	*100%*
Mean	0.78		0.76	
SD	0.10		0.11	
†*Paired sample t-test*	5.644***			
Min	0.48		0.46	
Max	0.94		0.95	
Skewness	-0.45		-0.50	
Kurtosis	-0.49		-0.46	
Kolmogorov	0.013		0.081	
Normality rejected	Yes		Yes	
Median	0.78		0.78	
‡Wilcoxon	-5.659***			

†It compares the mean differences across the compliance scores measured by the two different methods. ‡It compares the median differences across the compliance scores measured by the two different methods.

Table 8: Frequency and distribution of compliance scores for each standard separately.

Standards	*N*	Mean	SD	Minimum	Maximum	Median
IAS 10	153	0.96	0.13	0.00	1	1.00
IAS 1	153	0.95	0.05	0.69	1	0.96
IAS 33	153	0.92	0.22	0.00	1	1.00
IAS 16	152	0.92	0.11	0.55	1	1.00
IFRS 2	12	0.90	0.26	0.14	1	1.00
IAS 7	153	0.90	0.16	0.44	1	1.00
IAS 18	153	0.89	0.22	0.00	1	1.00
IAS 38	133	0.89	0.18	0.00	1	1.00
IAS 27	120	0.88	0.21	0.00	1	1.00
IAS 2	153	0.87	0.20	0.00	1	1.00
IAS 20	106	0.86	0.24	0.00	1	1.00
IFRS 1	153	0.86	0.13	0.40	1	0.80
IAS 11	16	0.81	0.24	0.25	1	0.88
IAS 32	150	0.80	0.19	0.25	1	0.83
IAS 24	153	0.77	0.25	0.00	1	0.80
IAS 12	153	0.74	0.18	0.17	1	0.83
IAS 41	11	0.73	0.22	0.25	1	0.70
IAS 23	149	0.73	0.44	0.00	1	1.00
IAS 40	40	0.72	0.22	0.17	1	0.73
IFRS 3	49	0.72	0.31	0.00	1	0.80
IAS 21	115	0.71	0.42	0.00	1	1.00
IAS 14	95	0.71	0.25	0.00	1	0.75
IAS 37	106	0.70	0.24	0.13	1	0.71
IAS 31	18	0.64	0.27	0.20	1	0.67
IAS 19	152	0.64	0.27	0.00	1	0.78
IAS 28	71	0.63	0.31	0.00	1	0.67
IFRS 5	13	0.61	0.40	0.00	1	0.67
IAS 17	93	0.51	0.29	0.00	1	0.50
IAS 8	153	0.51	0.43	0.00	1	0.60
IAS 36	52	0.50	0.35	0.00	1	0.50
IFRS 6	1	0.50	-	0.50	0.5	0.50

Table 9: Multivariate analyses: associations between corporate characteristics and levels of compliance with IFRS mandatory disclosures.

Variables	PC Method				Cooke's Method			
	Percentile Ranks	**VIF**	**Log of the Odds**	**VIF**	**Percentile Ranks**	**VIF**	**Log of the Odds**	**VIF**
Intercept	*0.202*		*0.935**		*0.383*		*1.752****	
Size	0.006	1.51	0.004	1.50	-0.005	1.53	-0.023	1.51
Gearing	-0.088	1.30	-0.131	1.28	-0.090	1.30	-0.082	1.27
EquCo_I	**0.165*** **	1.20	**0.331*** **	1.18	**0.114** **	1.18	**0.150***	1.18
Profitability	-0.127	1.44	-0.068	1.41	0.135	1.47	0.250	1.41
Ear_Co_I	**-0.022*** **	1.18	**-0.049*** **	1.18	**-0.018*** **	1.09	**-0.032*** **	1.18
Liquidity	0.006	1.22	0.008	1.21	0.026	1.20	**0.018***	1.21
Auditor	**0.392*** **	1.35	**0.920*** **	1.36	**0.407*** **	1.03	**0.821*** **	1.36
Industry	**-0.087** **	1.02	**-0.191** **	1.03	-0.059	1.02	-0.090	1.02
F	*20.82****		*20.42****		*18.43****		*16.96****	
Adj. R^2	*0.39*		*0.41*		*0.35*		*0.36*	
MSE	*0.050*		*0.239*		*0.054*		*0.203*	
N	*146*		*145*		*145*		*144*	

*Significant at 10%, **Significant at 5%, ***Significant at 1%.

Table 10: Multivariate analyses: associations between corporate characteristics and levels of compliance with IFRS mandatory disclosures, excluding IAS 1.

Variables	PC Method				Cooke's Method			
	Percentile Ranks	**VIF**	**Log of the Odds**	**VIF**	**Percentile Ranks**	**VIF**	**Log of the Odds**	**VIF**
Intercept	*0.175*		*0.841*		*0.194*		*0.954**	
Size	0.008	1.51	0.006	1.50	0.006	1.53	-0.002	1.51
Gearing	-0.090	1.30	-0.129	1.28	-0.102	1.30	-0.078	1.27
EquCo_I	**0.171*** **	1.20	**0.343*** **	1.18	**0.129*** **	1.18	**0.206** **	1.18
Profitability	-0.143	1.44	-0.082	1.41	0.064	1.47	0.107	1.41
Ear_Co_I	**-0.022*** **	1.18	**-0.050*** **	1.18	**-0.017*** **	1.09	**-0.034*** **	1.18
Liquidity	0.005	1.22	0.006	1.21	0.015	1.20	-0.004	1.21
Auditor	**0.389*** **	1.35	**0.926*** **	1.36	**0.408*** **	1.03	**0.886*** **	1.36
Industry	**-0.090** **	1.02	**-0.196** **	1.03	-0.062	1.02	-0.106	1.02
F	*21.18****		*20.32****		*18.80****		*17.56****	
Adj. R^2	*0.40*		*0.42*		*0.38*		*0.40*	
MSE	*0.050*		*0.244*		*0.051*		*0.216*	
N	*146*		*145*		*145*		*144*	

*Significant at 10%, **Significant at 5%, ***Significant at 1%.