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Abstract

In this study, we examine whether the mandatory adoption of IFRS by Turkish listed companies in 2005 was successful in practice and what role firm and country level factors played in the adoption. We determine the firm-specific factors that affect the degree of change in both measurement and disclosures by conducting a multivariate analysis. Further, we conduct interviews with external auditors to throw light on the challenges associated with adoption and the outcomes of adoption. We find that while the standards clearly impact certain accounts, adoption is not uniform across accounts. The overall measurement change is positively associated with auditor prominence and gearing, and negatively associated with the degree of free float. With regard to disclosures, we find that although there are some improvements, the vast majority of the disclosure items required by IFRS were not disclosed. Auditor type, size, and the degree of foreign ownership of shares exert a positive impact on the overall improvement in disclosures. Our interview analysis reveals that the dominance of tax laws, the lack of enforcement, corporate governance issues, and inadequate management information systems were all significant constraints to the successful adoption of IFRS.

Keywords: International Financial Reporting Standards, Measurement, Disclosure, Mandatory IFRS adoption, Turkey.

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1. Introduction

The adoption of International Financial Reporting Standards (IFRS) was an important development for companies not only within the European Union (EU) but also for those companies situated on the periphery of Europe. Turkey, as an emerging economy that has close political and economic ties with the EU, provides us with a valuable case in this regard, with Turkish companies presenting their accounts in accordance with IFRS on a voluntary basis from 2003 and on a mandatory basis from 2005.

The adoption of accounting standards involves adherence in a regulatory sense, although it may not ultimately lead to adoption in practice as 'converge(nce) *de facto* is less certain than convergence *de jure*' (Ball, 2006, p.11). Implementation implies the end point of a process of harmonization, consistent with Rahman *et al.*'s (2002) dimensions of output and outcome: the output of comparable accounting information under IFRS, and the outcome of the increased capital market efficiency conferred. In this study, we examine mandatory adopters in Turkey to understand whether IFRS adoption has changed the measurement of the accounts and disclosure practices. We further test whether firm-specific factors, such as auditor type, firm size, gearing, free float, foreign ownership, and industry type influence the extent of the implementation of IFRS. In addition we conduct interviews with auditors to discuss their reflections on the initial implementation period in terms of both country level and firm level influencing factors. We study mandatory as opposed to voluntary adopters because the latter are driven by the desire for increased international exposure (Young and Guenther, 2003) and its concomitant capital market

advantages (Cuijpers and Buijink, 2005; Karamanou and Nishiotis, 2009) and are thus more likely to engage fully in both the disclosure and measurement changes required. In contrast, mandatory adoption results from a state mandate and is therefore coercive given that companies often do not welcome it (Jermakowicz and Gornik-Tomaszewski, 2006).

The orientation and strength of prevailing legal and taxation systems are important country specific factors (Nobes, 1998; Ball, 2001), particularly where tax-based financial statements take precedence over IFRS accounting. In Turkey, for example, the statutory books and records are maintained under tax law rules with a very strong enforcement mechanism. Such rules exhibit a very low tolerance for the exercise of professional judgment, thereby inhibiting an emphasis on independence which comes with the adoption of principles-based standards (Gray, 1988). Secrecy, prudence and uniformity (Gray, 1988; Perera and Baydoun 2007) can explain the lack of application of measurement and disclosure practices observed during mandatory adoption. For example, the reluctance of management to apply new accounting standards and the inadequacy of the uniform chart of accounts constrain the response to the application of IFRS.

In this study, we examine two dimensions of change, measurement and disclosure change. To study whether companies have implemented IFRS measurement practices successfully, we first analyse the former financial reporting standards (FFRS) and new financial reporting standards (NFRS) which are compliant with IFRS at the time of adoption. We determine both the differences between these two sets of standards and how they are expected to affect the accounts of Turkish companies. We then compare the financial statements prepared in 2004 in accordance with FFRS with the comparative 2004 NFRS financial statements prepared during the adoption year. For disclosures, we compare the 2004 FFRS disclosures with the 2005 NFRS disclosures and measure

the degree of similarity between them using Jaccard similarity coefficients. Finally, we measure the improvement in the disclosures.

Our key study results are as follows. We find that although there have been statistically significant changes in the measurement of the accounts in six of the nine standards analysed (IASs 12, 17, 19, 21, 24 and 40), for two of these (IASs 12 and 21), the application is somewhat uneven across our sample. For one (IAS 17), the changes are due mainly to reclassification, while the remaining three standards (IASs 22, 36 and 39) have not generated a significant change in the accounts. Thus, although the standards clearly impact certain accounts, adoption is not uniform across them. The impact of NFRS adoption on key ratios is marginal, with the exception of non-current to total assets and long-term debt to equity ratios, which evidence a small but significant increase. For balance sheet line items, we find that the increase in total assets and equity is marginally significant. In our regression models, we investigate the impact of firm-specific factors on changes in ratios, key line items, and total measurement. We find that gearing has a negative effect on the degree of change in long-term debt to equity, auditor size has a negative effect on the degree of change in both total assets and total liabilities, free float positively affects the degree of change in total assets, and firm size is a positive driver of the degree of change in total liabilities. Finally, total measurement change is positively related to auditor size/prominence and gearing, and negatively related to the degree of free float.

With regard to disclosure practice and regulation harmony, the vast majority of the disclosure items studied were neither adopted nor disclosed by Turkish companies, due to the lack of skills or resources to cope with the new set of accounting standards, the irrelevance of the standard to

the nature of an individual company, or to unobserved factors. The disclosure improvement regression models reveal that factors such as auditor size/prominence, firm size and foreign ownership of shares are positive determinants of such improvement. A wealth of results emerged from the interviews with auditors who admitted to providing significant support in the preparation of audit reports during the transition. The most problematic standards for companies were identified as those relating to fair value, impairment, financial instruments, and any standard where the principles-based nature of IFRS came into play. In practice, tax law rules still dominated in the absence of strong enforcement of IFRS. Corporate governance issues, low free-float, inadequate management information systems, and the reluctance to disclose in accordance with IFRS compounded adoption issues. Furthermore, our interview results suggest that limitations in both the knowledge and the experience of preparers present a significant barrier to successful adoption.

Our paper contributes to the IFRS adoption empirical literature by focusing not only on de jure but also ultimate de facto adoption. Our innovation is to examine not only measurement and disclosure change, but also to present some triangulation by means of auditor interviews which provided reflection after the event. This enables us to contextualise the multifaceted and complex nature of IFRS adoption not only in terms of what has changed but also in terms of the drivers of, and constraints to, the effective adoption of IFRS. Our paper illustrates the challenges faced by international policy makers, standard setters, and accounting professionals when implementing principles-based standards in an emerging, code-law based country characterised by strong tax rules and uniformity in accounting culture.

The remainder of the paper is organized as follows. Section 2 reviews the existing literature on the impact of IFRS adoption on companies and drivers of the extent of IFRS adoption, as well as explaining the accounting environment and financial reporting standards in Turkey. Section 3 describes the sample selection procedure, the data, and goes on to discuss the research methods employed. Section 4 discusses and synthesises the results, and Section 5 goes on to summarise and conclude.

2. Literature Review

2.1. IFRS adoption, its influences and its impact on companies

As the literature surrounding IFRS accounting is extensive, we focus on studies which examine the impact of IFRS adoption on companies and the drivers of the extent of IFRS adoption. Cross-country studies concerning the impact of IFRS adoption include: those with an international focus such as Hodgdon *et al.* (2009); those which look at regional country groupings such as Macias and Muino (2011) who examine European countries; and studies that look at comparative groupings such as Delvaille *et al.* (2005) who study France, Germany and Italy. The cross-country studies tend to focus on the degree of adoption, its broader relative merits, issues with particular standards, and institutional compliance mechanisms. In contrast, individual country studies tend to focus on the preparedness of those countries, a more technical discussion of the relative merits, and an assessment of the impact on the accounts and on line items.

On the face of it, the adoption of IFRS has been a great success. Of the 200 EU companies studied by the ICAEW (2007), 198 disclosed full compliance with IFRS and two disclosed partial compliance. However, the ICAEW find that the impact of IFRS adoption on companies varies significantly across countries depending on the initial degree of similarity between national GAAP

and IFRS. The report notes that stakeholders envisaged significant comparability benefits, though more in terms of measurement than disclosure. However, such benefits must be set against the costs of adoption in terms of increased cost and complexity (Jermakowicz and Gornik-Tomaszewski, 2006; Callao *et al.,* 2007; and Ionascu *et al.,* 2007).

Arguably the most important impact on a company is in relation to its position and performance. For Continental European countries such as Belgium (Jermakowicz, 2004; Jermakowicz and Gornik-Tomaszewski, 2006), Germany (Beckman *et al.,* 2007; Hung and Subramanyam, 2007), and Greece (Iatridis and Rouvolis 2009), the impact is on asset values, equity, and net income, with increased volatility in book values and net income. In contrast, in the case of U.K. companies, Aisbitt (2006) finds that IFRS adoption had an insignificant effect on the equity, though the impact on line items could be significant in relation to financial analysis and contractual obligations. In other regions, Goodwin *et al.* (2008) find that adoption leads to decreases in earnings and equity, and increases in liabilities and leverage ratios in Australian companies. Peng *et al.* (2008) find a reduction in the earnings gap in Chinese companies. Finally, Jones and Finley (2011) find evidence of significant reductions in the variability of ratio measures following IFRS adoption in EU countries and Australia.

The ultimate success or failure of IFRS adoption by companies is driven by both country-specific and firm-specific factors. Country-specific factors identified in the existing literature include: politico-economic factors and financial system orientation, the impact of taxation, country-specific problems with individual standards, the preparedness of key stakeholders, implementation and enforcement issues, and the impact of culture and language. Daske *et al.* (2008) find in their

international study that market liquidity improves, the cost of capital falls, and equity valuations increase on mandatory adoption, though only in countries where transparency and enforcement is strong.

Accounting disclosure is influenced by cultural, economic, political, and corporate factors in an international (Archambault and Archambault, 2003) or country-specific context (Assenso-Okofo *et al.*, 2009), with external (internal) factors more important to the accounting advancement of developing (developed) countries (Cooke and Wallace, 1990; HassabElnaby *et al.,* 2003). Ball *et al.* (2000) argue that simply mandating new accounting standards is tantamount to "window dressing" unless it is accompanied by wholesale revision of accounting infrastructure. The orientation of the financial system can exert an important influence (Nobes, 1998), with lower accounting value relevance in bank- as opposed to equity-orientated systems (Ali and Hwang, 2000). Important country differentiators here include the degree of public accountability to outside investors (Sellhorn and Gornik-Tomaszewski, 2006), the legal environment (Hope, 2003; Soderstrom and Sun, 2007), and the degree of experience of dealing with principles-based accounting and exercising judgment (Hoogendoorn, 2006; ICAEW, 2007).

Code-law orientated countries traditionally placed greater emphasis on taxation when reporting financial numbers (Ball, 2001), and this in turn gives rise to a significant impediment to accounting convergence in EU countries (Larson and Street, 2004). The tension between the capital markets orientation of IFRS versus the tax-driven nature of some national accounting regimes is seen as a key obstacle to IFRS convergence (Street, 2002). This is compounded by relatively strong tax as opposed to GAAP enforcement (Cooke and Wallace, 1990), and the reluctance of national finance

ministries to relinquish regulatory power over accounting (Sucher and Jindrichovska, 2004; ROSC, 2006). Countries can have three different accounting systems in place: IFRS, a national commercial code, and tax accounting, as observed in the case of Germany, leading to greater complexity and cost (Haller and Eierle, 2004).

Individual standards, particularly those relating to financial instruments and fair value, can themselves prove problematic to IFRS implementation. The absence of liquid markets in fair value accounting (Ball, 2006; ICAEW, 2007) presents particular challenges, as do financial instruments, pensions, purchase accounting, and impairment (Hoogendoorn, 2006), and asset write-offs, provisions, reserves, and accruals (Beckman *et al.*, 2007).

The degree of preparation by the profession and by companies can impact on the success of IFRS adoption. Problems can arise due to weaknesses in the accounting profession (Perera and Baydoun, 2007), the educational and training needs of accountants (Wong, 2004), and an absence of clear leadership or inadequate financial resources (Tokar, 2005). In relation to preparers, problems could arise in relation to similar concerns over training and resources (Abd-Elsalam and Weetman, 2003; Simga-Mugan and Hosal-Akman, 2005; ICAEW, 2007; Alp and Ustundag, 2009).

For IFRS adoption to be effective and de facto rather than merely de jure, strong implementation guidance and subsequent enforcement are essential. Inhibitors to IFRS adoption identified in the existing literature include: a perceived lack of guidance for preparers (Larson and Street, 2004) and auditors (Schipper, 2005), alongside the absence of uniform interpretation (Jermakowicz and Gornik-Tomaszewski, 2006); the perceived complexity of the standards and a knowledge shortfall

(Alp and Ustundag, 2009), resulting in auditors becoming involved in statement preparation (Hoogendoorn, 2006); and a lack of enforcement resulting from inadequate legal underpinning (Alp and Ustundag, 2009) or the absence of accompanying legal reforms (Al-Shammari *et al.*, 2008).

Cultural differences can also impact accounting systems (Gray, 1988; Nobes, 1998). Ding *et al.* (2005) find that culture is more important than legal origin in explaining divergences from IAS. Related to culture is language, which can create a barrier to compliance (Abd-Elsalam and Weetman, 2003) and ultimately to IFRS adoption (Perera and Baydoun, 2007).

A number of existing empirical studies explore the impact of firm-specific factors on IFRS adoption. When ownership is concentrated, we tend to see less effective IFRS adoption (Ball *et al.*, 2000). This is due to lower accounting transparency, less effective accounting systems, and the presence of family-controlled firms (Chau and Gray, 2002). In their study, Rahman *et al.* (2002) find harmonisation between Australia and New Zealand in how mandatory measurement and disclosure are influenced by industry membership. They find these are negatively related to decentralisation and positively related to auditor type, whereas voluntary disclosure categories are influenced negatively by size and positively by ownership concentration. In a similar though more international study, Jaafar and McLeay (2007) observe that international exposure and company size are significant factors. Guerreiro *et al.* (2008) find the degree of preparedness for IFRS in Portuguese companies to be positively related to size, the degree of internationalisation, and being audited by a 'Big Four' firm, but negatively related to profitability. Al-Shammari *et al.* (2008) find that IAS compliance in Gulf Cooperation Council countries varies both across countries and across

companies due to differences in company size, leverage, internationality, and industrial membership. Finally, Hodgdon *et al.* (2009) examine international compliance and find it to be positively related to auditor size/prominence after controlling for size, profitability, gearing, and international diversification.

2.2 Accounting environment and financial reporting standards in Turkey

A number of regulatory bodies shape the accounting rules and practices of Turkish firms. Of these, the Ministry of Finance was traditionally of central importance, with all enterprises required to follow the Turkish Procedural Tax Law. The Law has precedence over all other accounting regulations, regulates accounting measurement rules, and was designed for tax and disclosure requirement purposes rather than for the purposes of financial reporting. In 1992 the Ministry introduced Accounting System Implementation Regulation guidelines to bridge the gap between financial reporting principles and tax rules. These guidelines prescribe generally accepted accounting principles, a uniform chart of accounts, and a financial statement presentation format.

The Capital Markets Board of Turkey (CMB) is the regulation-setting body for registered firms in Turkish capital markets. The CMB played a major role in the development of national accounting standards for listed firms prior to 2008, including the voluntary adoption of IFRS in 2003 and the mandatory adoption in 2005. In 2008, the CMB assigned its standard-setting role to the Turkish Accounting Standards Board (TASB) (CMB, 2008, XI/29). The latter issued Turkish Accounting Standards which are directly translated versions of IFRS. The TASB was merged with the Public Oversight, Accounting and Auditing Standards Authority established in 2011. This authority now issues TAS.

The Turkish Commercial Code (1956) regulated the board of directors in relation to their responsibility for ensuring a true and fair view in the financial statements and established the basic principles of firm accounts until 1 July 2012, after which the New Commercial Code (2011) came into effect. This code requires Turkish firms to comply with TAS, though the ultimate decision making authority regarding the qualification criteria remains with the Board of Ministers. As a result, all registered firms, financial institutions and those exceeding certain threshold criteria are required[1] to prepare their financial statements in accordance with TAS from 1 January 2013.

This study focuses on the mandatory adoption of IFRS in Turkey. In 2003, the CMB issued new financial reporting standards consistent with IFRS (NFRS) (CMB, 2003, XI/25) to replace the former financial reporting standards (FFRS) (CMB, 1989, XI/1, XI/5; 2001, XI/19, XI/20, XI/21). From January 1, 2005, NFRS were effective in order to facilitate the adoption of IFRS by listed firms in Turkish capital markets. This gave rise to many changes to ensure that national standards complied with IFRS. We can observe the transition for mandatory adopting firms by comparing the FFRS used until December 31, 2004 with the NFRS in the transition period from 1 January 2005 with reference to the key changes summarised in Table 1.

[Insert Table 1 here]

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[1] The decision of the Board of Ministers (Decree No: 2012/4213) relating to external audit and financial reporting requirements is published in the Official Gazette (No: 28537, 23.1.2013). The generic threshold criteria require any two of the following to hold in two consecutive years: (i) total assets should be equal to or exceed 150 million TL (85.83 million USD), (ii) annual net sales should be equal to or exceed 200 million TL (114.44 million USD), (iii) the number of employees should be equal to or exceed 500.

There are significant measurement and disclosure differences in accounting standards (between NFRS and FFRS) in relation to finance leases, the translation of foreign investments, provisions on pension costs, financial instruments, impairment and construction contracts. Further differences arise from the recognition of taxes, the classification of related parties, and the treatment of investment property. However, some of these standards, such as those concerning related party transactions, derivatives, construction contracts or the translation of foreign investments, may not apply universally due to differences in industry or firm-specific circumstances. In the case where NFRS provides accounting policy choices (e.g. accounting for investment property), or in the case where the application of inflation accounting is required under FFRS, there may be no difference between the two standards. For example, the FFRS allowed the capitalisation of foreign exchange losses but it changed under NFRS to IAS 23 whereby such costs are expensed as incurred. However, the requirement of FFRS for inflation accounting to tackle hyperinflation in 2004 eliminated the significant effect of foreign exchange rate changes and therefore we do not expect to observe a significant decrease in non-current assets resulting from this change.

As discussed earlier, legal systems can influence financial reporting practice (Ball, 2001; Hoogendoorn, 2006; Hope, 2003; ICAEW, 2007; Soderstrom and Sun, 2007). According to Ball (2001), the stakeholder model is the main driver in common-law countries, whereas under code law tax and political factors are more important accounting drivers. Further, Jaggi and Low (2000) argue that common law country firms tend to disclose more than firms operating in a code law countries with French or German origins. La Porta *et al.* (2006) note that Turkey is classified as a country of French legal origin in relation to securities law.

Certain aspects of FFRS show a significant impact from tax legislation. For example, under FFRS, profits or losses on construction contracts were recognised at completion date whereas under NFRS, complying with IAS 11, revenues and expenses are recognised in relation to the stage of completion at the balance sheet date. In addition, the impairment assessment for tangible and intangible assets under IAS 36 represents a new practice for Turkish firms. Consistent with tax legislation, impairment review was not required under FFRS, whereas under NFRS, it is required for positive goodwill balances and for non-current assets.

A very significant impact of NFRS on the financial accounts is the application of the new measurement rules for financial assets and liabilities under IAS 32 and IAS 39, e.g. the use of the effective interest rate method and the reclassification of accounts. Further, Turkish firms face significant challenges with mandatory disclosure requirements under NFRS. For example, there were no specific disclosure requirements relating to the fair value of financial instruments under FFRS (Simga-Mugan and Hosal-Akman, 2005). In addition, the application of fair value to investment property (IAS 40) might lead to significant changes in equity values. The impact on investment property could also be monitored in relation to the value of different non-current asset classes. A further classification effect on FFRS based accounts is expected for related party transactions (IAS 24), requiring firms to reclassify related party receivables and liabilities under NFRS.

Under NFRS, the majority of Turkish firms are expected to exhibit asset/liability changes due to significant temporary differences between tax based asset or liability values and their carrying amounts recognised under NFRS (IAS 12). However, this may not be the case for all lease

contracts. Under FFRS, financial lease contracts were treated as operating leases, which did not comply with IAS 17 (Simga-Mugan and Hosal-Akman, 2005) and led to an increase in assets and liabilities for firms which lease. However, the tax legislation adoption of IAS 17 during the second half of 2003 might have reduced the differences in practice in accounting for financial lease contracts, though the change was only applied to those lease contracts signed after the effective date, with retrospective application not allowed.

Under NFRS, Turkish firms are for the first time required to employ actuarial assumptions at the balance sheet date, including the discount factor and inflation rate, to determine their pension obligations in accordance with IAS 19. Under FFRS, firms could capitalise foreign exchange losses arising from funding property, plant and equipment as a part of acquisition costs (Simga-Mugan and Hosal-Akman, 2005), and were required to use selling rates for foreign liabilities. With the introduction of NFRS (IAS 21), these two differences were eliminated, potentially leading to a change in the accounts.

The extent of measurement and disclosure changes expected in the financial accounts following the adoption of NFRS might in practice be driven by a range of industry and firm-level factors. For example, the impact of NFRS on measurement and disclosure levels may not be uniform across industries (Goodwin *et al.*, 2008) as, for example, lease and construction contracts are more common in manufacturing than in service sector firms. Another example is goodwill reporting, which in our study concerns mainly manufacturing firms which control subsidiaries. Therefore, the nature of operations can impact significantly upon disclosure and measurement practices (Rahman *et al.*, 2002).

Firm size is a significant 'determinant of disclosure and accounting policy choice' and a 'discriminator for accounting quality' (Rahman *et al.*, 2002, p.53; Goodwin *et al.*, 2008, p.102, respectively). Therefore, in the case of Turkey firm size might be a key driver of success for NFRS adoption in the transition period (Alp and Ustundag, 2009). For example, larger companies might have the resources to recruit better qualified employees in terms of IFRS expertise or to hire specialist consultants. A recent study of Turkish firms reveals a positive relationship between size and disclosure levels (Esen and Sakin, 2009), though Curuk (2009) finds that the size of assets is not a significant characteristic.

Big Four auditors, who have an incentive to enforce high quality earnings, control 64.6% of the market in Turkey (Francis and Wang, 2008). Firms audited by the Big Four are likely to experience a greater response to NFRS, particularly in relation to disclosure (Esen and Sakin, 2009), along with stronger investor protection (Francis and Wang, 2008), though the latter is moderated in French civil law countries (La Porta *et al.*, 1998). The financial statements are largely produced to satisfy the contracting demands of financial institutions in countries with stronger creditor protection by demonstrating a prudent approach to assets but an aggressive approach to liabilities (Soderstrom and Sun, 2007). Thus, the impact of the new regime may be greater in highly geared Turkish firms.

The extent of foreign investor ownership is an important determinant of the demand for financial information (Soderstrom and Sun, 2007; Kinnunen *et al.*, 2000), with foreign ownership likely to increase the level of disclosure and the demand for more accurate information. The impact of

NFRS may also be influenced by the level of free float, whereby lower ownership concentration improves disclosure (Rahman *et al.*, 2002). Further, as discussed earlier, family-controlled firms are reluctant to disclose information in excess of strict legal requirements (Chau and Gray, 2002). However, in the case of Turkey, Esen and Sakin (2009) find that higher free float is associated with lower rather than higher disclosure. They explain this result with the negative relation between the strength of corporate governance and the degree of free float in their sample. In the research design discussed in the next section, we examine how we test the impact of these factors on the measurement and disclosure changes arising from the adoption of NFRS.

3. Data and Methodology

In this section, we describe the financial statement data gathered for Turkish mandatory IFRS adopting companies and present the statistical methods employed to analyse the significance of both measurement and disclosure change as a result of adoption. We then discuss the firm-specific factors computed to enable a consideration of the impact of adoption on key financial ratios for Turkish companies. Finally, in addition to the statistical testing of firm-specific factor sub-samples to gauge the impact of IFRS adoption on company measurement and disclosure, we also discuss the interviews undertaken for a sample of external auditors. The interviews elicit further evidence regarding the factors which influence the adoption or otherwise of individual accounting standards.

3.1 Turkish company financial statement data

The companies studied in the financial accounting data analysis are drawn from the Istanbul Stock Exchange (ISE) for the transition period which ended December 31, 2005. On this date, companies were required to revise their comparative and audited balance sheets on a mandatory basis

according to the NFRS (CMB, 2003, XI/25) for the year ended December 31, 2004. Only those companies applying NFRS for the first time on a mandatory basis are included, and financial and investment institutions are excluded due to their special financial reporting characteristics. Table 2 gives the detail of the final sample of 106 companies, representing 69% of total mandatory adopters and a total market capitalization of $15.3 billion, or 24% of the capitalization of non-financial companies. The sectoral distribution and market capitalization of the companies are given in Table 3.

[Insert Tables 2 and 3 here]

The sample companies applied NFRS for the first time on a mandatory basis in their financial statements for the year to December 31, 2005, including restated 2004 comparatives. According to the new regulation (CMB, 2003, XI/25), first-time adopters were only required to restate 2004 balance sheets in compliance with NFRS, whilst restated income statements were not required. Further, they were not required to provide information on the changes in their accounting policies or a reconciliation statement with comparative figures for FFRS and NFRS. We therefore focus only on the published balance sheets prepared under the two sets of standards. In other words, the balance sheets and disclosure notes as of December 31, 2004 restated on an NFRS basis are compared to the balance sheets produced and disclosed by identical companies for the same reporting date in accordance with FFRS. Because the data collected contained neither restated income statement line items for 2004 nor a reconciliation statement, this creates some difficulty in analysing the changes. In particular, earnings and shareholders' equity reconciliation adjustments

are not available and thus changes in income statement items, including the restated current-year profit for NFRS, could not be analysed on an item by item basis.

We collect the data from company balance sheets as published on the ISE website and we reclassify the data based on the FFRS according to the format used in NFRS balance sheets, with all data and accompanying information representing audited information. The scope of the financial accounting analysis includes balance sheets, accompanying disclosure notes, company annual reports, and company websites.

3.2 Testing for measurement change

The first approach of our empirical methodology addresses the following research question:

RQ1: Has measurement of the financial accounts changed since the mandatory adoption of IFRS?

We determine the extent of measurement change following the mandatory adoption of IFRS by comparing individual FFRS and NFRS balance sheet line items. We select these balance sheet items and accounts based on the differences between FFRS and NFRS measurement requirements. We expect measurement change in the accounts in relation to 10 standards. We eliminate IAS 11 as it is an industry-specific standard and our dataset contains only five construction companies. For each balance sheet item and account, we calculate the difference between the NFRS and FFRS values. To eliminate the effect of size, we scale the change by FFRS total assets[2]:

$$Measurement\ Change = \frac{NFRS\ value - FFRS\ value}{FFRS\ Total\ Assets} \qquad (1)$$

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[2] We chose not to use the FFRS item as the scaling measure because some items were not required under FFRS, resulting in a division by zero in many of the standards.

Given that line items may not be normally distributed, we compute both a t-test and a Wilcoxon signed rank test to assess the significance of change. To eliminate the effects of extreme values, we trim the outlier observations that are more than two standard deviations from the mean. Once we have determined the extent of change as a result of IFRS adoption in both statistics by examining line items, an important question is whether this has produced a significant impact on key financial position measures and ratios for the companies in our sample. Five balance sheet ratios are tested to gauge the impact of change: (i) the current ratio to gauge short-term liquidity risk; (ii) the long-term debt-equity ratio to gauge long-term financial risk; (iii) the short to long-term debt ratio to proxy debt maturity structure; (iv) the equity to total assets ratio to gauge the company's equity cushion; and (v) non-current assets to total assets to proxy company asset structure. We also test the impact on total assets, total liabilities, shareholders' equity, and retained earnings. For each ratio and balance sheet measure, we test the change with a t-test and a Wilcoxon signed rank test.

3.3 Testing for disclosure change

The second approach addresses the following research question:

RQ2: Has disclosure of the financial accounts changed since the mandatory adoption of IFRS?

To answer this question, we employ a number of measures. We first compare the regulation harmony of FFRS and NFRS to understand the level of similarity of the requirements under these regulations. We then calculate the practice harmony of FFRS and NFRS and compare the degree of similarity between regulation and practice. Finally, we calculate disclosure improvement under each standard to understand the improvement in disclosure practice.

(i) Regulation harmony of the disclosure requirements

To determine whether there is a significant change in accounting disclosure requirements following the mandatory adoption of IFRS, we compare the mandatory disclosure items of NFRS with those of FFRS for each selected accounting standard. In total, we identify 138 mandatory disclosure items under 10 selected accounting standard categories on the basis of NFRS, whereby each category is considered to be a key change for Turkish companies. We record a '1' when a particular NFRS disclosure item is required by FFRS and a '0' when it is not required by FFRS. The matching coefficient for FFRS and NFRS for each accounting disclosure category is calculated to determine the degree of similarity as follows:

$$The\ matching\ coefficient = \frac{number\ of\ exact\ matches\ between\ FFRS\ and\ NFRS}{total\ disclosure\ items\ in\ each\ category} \qquad (2)$$

(ii) The practice harmony of accounting disclosure

To determine whether there is a significant change in accounting disclosure practice we compare the financial information disclosed by Turkish companies before and after the mandatory adoption of NFRS. A comparison of FFRS disclosure practices with NFRS practices is conducted by mandatory disclosure category. The information for each disclosure item within each category is collected for each company. The disclosure items are first compared for compliance with NFRS and then with FFRS. We record a '1' when a company disclosed a particular item and a '0' when it did not, consistent with Rahman *et al*. (2002). A Jaccard coefficient is computed to measure the degree of similarity between the disclosure practice under NFRS and FFRS, consistent with Krzanowski (2000). The four categories of possible pair-wise comparisons between disclosure practice of NFRS and FFRS are given in the Jaccard coefficient matrix below:

| | | Company A | |
| | | FFRS | |
		1	0
Company A	1	a	b
NFRS	0	c	d

In the matrix, a and d are the number of exact matches within a category when comparing NFRS and FFRS. The term a shows the number of exact matches in relation to presence and the term d shows the number of exact matches in relation to absence. The terms b and c represent the number of exact mismatches within a category. To determine the degree of similarity in disclosure practice, the Jaccard coefficient for i items in a category disclosed by each company (double presence, hereafter referred to as 'DP') is calculated as:

$$DP_i = \frac{a}{a+b+c} \qquad (3)$$

We also compute a Jaccard coefficient for i items in a category *not* adopted or disclosed by each company (double absence, hereafter referred to as 'DA') and this is calculated as:

$$DA_i = \frac{d}{d+b+c} \qquad (4)$$

Finally, the mean of the two Jaccard coefficients (DP and DA) is separately computed for each disclosure category to provide an overview of the extent of disclosure practice by category.

(iii) The computation of disclosure improvement

Finally, to understand how disclosure practices have improved with NFRS, we compute the improvement coefficient for i items in a category disclosed by each company (disclosure improvement, hereafter referred to as '*DI'*) as follows:

$$DI_i = \frac{b}{a+b+c+d} \qquad (5)$$

This coefficient helps us to determine whether there was a significant improvement in individual standards after the adoption of NFRS.

3.4 Examining the impact of firm and country-specific factors on IFRS adoption

Whilst the extent of change in measurement and disclosure for Turkish mandatory adopters is informative as an empirical result, it does not in itself provide us with an understanding of the drivers of that change. This section examines the drivers of change in terms of measurable empirics and in terms of narrative explanation from the perspective of Turkish auditing firms. The question that we seek to address here is:

RQ3: Do firm-specific factors exert an influence on the extent of adoption of IFRS?

In terms of empirical testing, we identify a number of firm-specific factors whose effect on measurement and disclosure can be tested. To examine the impact of the firm-specific factors, we estimate models of measurement change and disclosure improvement. For measurement change, our dependent variables are the changes in five balance sheet based ratios, the changes in total assets, total liabilities, equity and retained earnings, and total absolute measurement change. To arrive at the total absolute measurement change score, referred to in our results as total

measurement change, we take the absolute value of the measurement change score for each accounts item and sum these for each firm. With regard to disclosure improvement, our dependent variables are the disclosure improvement scores for each individual standard and total disclosure improvement which is simply the sum of all disclosure improvement scores scaled by the total disclosure requirements of NFRS.

Consistent with the extant literature (Rahman *et al.*, 2002; Christensen *et al.*, 2007; Peng *et al.*, 2008; Guerreiro *et al.*, 2008; Al-Shammari *et al.*, 2008; and Hodgdon *et al.*, 2009), and following our discussion in Section 2.2, we examine the following firm characteristics as drivers of measurement change and disclosure improvement as a result of: auditor type, firm size, gearing, free float, foreign ownership, and industry type. The direction of relation in summarised in Table 4.

[Insert Table 4 here]

We expect that there will be a positive association between audit quality and the degree of compliance with the NFRS requirements. As Big Four audit firms have more experience regarding IFRS, and they can transfer knowledge from their international partners, we expect that measurement and disclosure will change more when companies are audited by these larger Big Four firms as opposed to other smaller audit firms. With regard to firm size, we expect that larger companies will have the resources to hire better quality and better trained accountants, with an ability to produce an expert opinion on the valuation of the company's assets and liabilities. Furthermore, the greater exposure of such companies to international markets should also lead to higher quality financial statements. Consequently, we expect a positive relation between firm size

and measurement change and disclosure improvement. We employ the natural logarithm of market capitalisation on the adoption date of the NFRS as our firm size variable. The gearing ratio is a good proxy for a company's external financing needs, and companies with greater external financing are more likely to produce higher quality financial statements in order to reduce information asymmetry and decrease the cost of their financing. Thus we expect greater measurement change and disclosure improvement for higher geared firms. We use the FFRS financial statements to compute the ratio of long-term liabilities to long-term liabilities and equity as our gearing measure.

Free float measures shareholder diffusion for each firm. We expect that companies with a higher proportion of publicly traded shares will be less prone to the influence of insider shareholders, and will maintain stronger governance mechanisms. As a result, their financial statements and their disclosure should be more compliant with NFRS, and we expect higher measurement change and disclosure improvement for such firms. We collect the free float figures from the 2005 annual reports. The foreign ownership of publicly traded shares is another factor that we consider as a determinant of measurement change and disclosure improvement as this variable gauges international stakeholder influence on the company. International investors require high quality and transparent financial statements which comply with international standards and thus companies with higher international investor ownership should experience higher measurement change and disclosure improvement. We collect shareholder information from the 'Investor Profile in Turkey' report produced by The Association of Capital Market Intermediary Institutions of Turkey (ACMII) and compute the mean of this variable over the period 2003-2005. Finally, we use industry type to control for industry differences with a simple dummy for manufacturing versus

non-manufacturing membership. We estimate the following two models to identify the impact of firm-specific factors on measurement change and disclosure improvement:

Model 1:

$Measurement_i$

$$= \beta_0 + \beta_1 Auditor_i + \beta_2\ Size_i + \beta_3 Gearing_i + \beta_4\ FreeFloat_i$$
$$+ \beta_5\ ForeignOwnership_i + \beta_6\ Industry_i + \varepsilon_i$$

$$(6)$$

Model 2:

$$Disclosure_i = \beta_0 + \beta_1 Auditor_i + \beta_2\ Size_i + \beta_3 Gearing_i + \beta_4\ FreeFloat_i$$
$$+ \beta_5\ ForeignOwnership_i + \beta_6\ Industry_i + \varepsilon_i$$

$$(7)$$

Where:

$Measurement_i$: Measurement changes in individual ratios, changes in total assets, total liabilities, equity and retained earnings, and total absolute measurement change of the asset and liability accounts for firm i.

$Disclosure_i$: Disclosure improvement scores for each standard and total disclosure improvement score for firm i.

$Auditor_i$: 'Big Four' dummy, taking the value of 1 if firm i is audited by a Big Four auditor and 0 otherwise.

$Size_i$: Natural logarithm of market capitalisation of firm i.

$Gearing_i$: Gearing ratio for firm i, computed as FFRS Long-term Liabilities / (FFRS Long-term Liabilities + FFRS Equity).

$FreeFloat_i$: Ratio of the number of shares traded on the ISE to total number of shares for firm i.

$ForeignOwnership_i$: Average ratio of publicly traded shares that are held by foreign investors to total publicly traded shares for firm i.

$Industry_i$: Industry dummy for firm i, taking the value of 1 for manufacturers and 0 otherwise.

In addition to the empirical analysis of the impact of the firm-specific factors, the analysis of audit firm interviews enables us to examine narratives relating to the variation in auditor experience across firm characteristics, as well as gaining some perspective on the influence of country-specific factors. The question we seek to address here is:

RQ4: What are auditor perceptions of the effect of firm-specific and country-specific factors on the mandatory adoption of IFRS?

For the country-specific factors, we explore the narrative and identify key coded concepts such as the impact of language, financial orientation, governance, the type of internal reporting, and perceptions regarding the role of the accountant in the adoption process. The survey interviews are conducted with a sample of external auditors to determine perceptions of the factors that drive the extent of adoption, enabling us to determine the factors that give companies a particular predisposition for or against full adoption of IFRS. In December 2010, six interviews were conducted. Five of these were semi-structured face-to-face interviews in Turkey with senior audit managers and audit partners involved in the external audit process during the transition period. Each interview was conducted on the interviewee's premises and lasted around 90 minutes. The interviewees were all familiar with IFRS and work for both 'Big Four' and 'non-Big Four' audit firms in Turkey. The sixth interview was conducted with a former Big Four audit manager by email. The list of the six interviewees along with the interview date, their professional designation

and their current position is provided in Table 5. The face-to-face interviews were not audio-recorded in order to elicit a more candid response on the potentially sensitive issues involved; instead detailed notes were taken and transcribed thereafter. The form of the interview was semi-structured, with a list of pre-prepared questions and open discussion where points required elaboration. A thematic conceptual matrix is prepared to provide a summary clustering of the issues and themes emerging to enable evaluation (Miles and Huberman, 1994).

[Insert Table 5 here]

4. Results of the empirical and interview analyses

This section discusses the results of the empirical analyses to test for the extent of measurement and disclosure change, changes in key balance sheet items, and the impact of firm-specific factors following IFRS adoption. Further we review the narrative findings from the interview analysis in terms of both country level and firm level drivers of change.

4.1 Analytical results of the tests of measurement change

Table 6 presents the results of the statistical tests of measurement change categorised by individual accounts and associated accounting standards. We discuss the results standard by standard, rather than by accounts item as each standard impacts a number of accounts.

[Insert Table 6 here]

IAS 12 Income Taxes

Deferred tax assets and liabilities have increased significantly with the adoption of IFRS. This finding is consistent with expectations because under FFRS there was no requirement to recognize

deferred taxes whereas with the introduction of IAS 12, companies had to recognise the temporary differences. This will result in either a deferred tax asset or a liability account reported on the balance sheet. However, it is surprising to note that 14 companies (13.2%) reported neither deferred tax assets nor liabilities. Considering the important differences between tax-based valuation requirements and the NFRS measurement principles, it would be quite exceptional under the new regime if a company did not record temporary differences and avoided recording deferred tax liabilities or assets.

IAS 17 Leases

Finance lease obligations increased significantly, and thus IAS 17 gave rise to a measurement difference for these accounts. 24 companies (22.6%) reported finance lease obligations. 20 of these companies are manufacturing companies in the metal (2), machinery (3), chemicals and petroleum products (3), construction materials (2), food (3), paper (3), and textile and leather (4) industries. Two companies operate in the technology industry and the remaining two companies operate in healthcare and tourism services. Although manufacturing companies are dominant in the leasing group, this reflects the distribution of our full sample with 83 (78.3%) manufacturing and 23 (21.7%) non-manufacturing companies. The average (median) change for companies that reported finance lease obligations is 0.38% (0.14%). Further examination of these companies reveals a major reclassification between financial liabilities and finance lease obligations, suggesting that recognition leads mainly to reclassification. Indeed, of the 24 companies that have finance lease obligations, we found 19 cases with an exact match in the change in financial liabilities. The remaining cases are either due to re-measurement or are not traceable from the disclosures. The other account relating to finance leases is property, plant and equipment (PPE), as according to

IAS 17 finance leased assets are capitalised. The results show no significant change in this account which could have been affected by standards such as IAS 36 or IAS 40, thus it is not possible to isolate the measurement effects of IAS 17. Analysis of the disclosures of companies reporting finance lease obligations was inconclusive because none of them indicated which assets were leased.

IAS 19 Employee Benefits

Provision for employee benefits declined significantly, consistent with expectations as only a lump sum benefit of possible payments on termination benefits was required to be recognised at each reporting date under FFRS. Furthermore, there were no requirements for the company to discount termination benefits falling due more than 12 months henceforth or to provide a formal plan for termination. However, companies began to recognise the present value of expected retirement benefits at the reporting date after the adoption of NFRS. This account decreased for 75 (70.1%) companies and increased for 9 (8.4%) companies, whereas 22 (20.8%) companies did not change the value of their employee benefit provision.

IAS 21 The Effects of Changes in Foreign Exchange Rates

FFRS required companies to value monetary assets denominated in foreign currencies with buying rates and it requires them to value monetary liabilities in foreign currency with selling rates. Under NFRS, this requirement is lifted and companies employ the buying rate, resulting in a lower valuation of monetary liabilities. An analysis of financial liabilities showed that some of the decrease in this account was indeed caused by this standard. Another effect here concerns the translation differences reported in equity. Only two companies from the entire sample reported

translation differences under equity. However there are six other companies in the sample that have foreign subsidiaries. These companies did not report any translation differences under equity.

IAS 22 Business Combinations

We expect a decrease in goodwill here as NFRS requires an impairment review. However, the change is not statistically significant for the 27 companies (22 positive, 5 negative goodwill) which reported goodwill in their FFRS accounts, whereas under NFRS nine of the companies decreased their goodwill, including seven which wrote it off completely. The average (median) change of the companies reporting goodwill, though not reported in this table, is -0.25% (0.00%). The t-test and Wilcoxon results are also insignificant.

IAS 24 Related Party Transactions

The NFRS requirements for the presentation of related party transactions are more explicit and detailed than those of FFRS and we expect a proportion of trade receivables and payables to be reclassified as related party transactions. Mean changes in trade receivables and receivables from related parties are -1.59% and 2.17%, and for trade payables and related party payables are -0.94% and 1.68%, respectively. Detailed analysis of these accounts not reported here shows that they are highly correlated and that there is major reclassification from trade receivables and payables into related party accounts.

IAS 36 Impairment of Assets

Whereas FFRS did not require companies to carry out impairment tests and recognise impairment losses, NFRS requires an impairment test and requires companies to write down when impairment

indicators exist. As the transition year was the first year that the companies had to test for impairment, we expected that there should be major write-downs of PPE, goodwill and other intangible assets. The results show that only intangible assets (excluding goodwill) decreased significantly. Detailed analysis of the accounts reveals that some assets previously classified as intangibles were either transferred to property, plant and equipment or to goodwill accounts. Disclosure analysis shows that there no evidence of impairment tests being carried out under NFRS.

IAS 39 Financial Instruments

Consistent with expectations, trade receivables and payables fell significantly and much of the change is due to reclassification of these accounts into related party accounts. The change in the financial assets account that represents long-term financial investments is insignificant. Financial liabilities experienced a significant fall of 0.11%. However, much of this change is related to finance lease obligations and re-measurement using a different currency in the manner discussed under IAS 21.

IAS 40 Investment Property

There is a significant increase in the investment properties account. While only 13 companies (12.3%) in our sample reported investment properties, the average (median) increase is 0.55% (0.56%).

In sum, we find that the changes in IAS 12, IAS 17, IAS 19, IAS 21, IAS 24, and IAS 40 are statistically significant, consistent with expectations. However as discussed under the relevant standards, we have observed uneven application of IAS 12 and IAS 21 in many companies, which

suggests that these standards have not been applied by all companies. The changes in the relevant accounts in response to IAS 17 are due largely to reclassification. Furthermore, IAS 22, IAS 36 and IAS 39 had no observed effect on measurement changes. These results show that although some accounts were affected during the transition period, measurement principles of the new standards have not been applied uniformly for all firms which adopt these standards on a mandatory basis.

Table 7 presents statistics and the results of tests to determine the effect of NFRS adoption on the structure of the balance sheet.

[Insert Table 7 here]

The table shows that the mean and median have not changed significantly for the current ratio, short-term debt to long-term debt, and equity capital to total assets. However, the non-current assets to total assets ratio exhibits a change that is significant in terms of both the t-test and the Wilcoxon signed rank test, showing that NFRS increased the weight of non-current assets in the asset mix of companies following adoption. The long-term debt to equity ratio is significant in the Wilcoxon signed-rank test which shows that the median change of this ratio between FFRS and NFRS is significantly different from zero. We find that while the mean values of the individual balance sheet line items have increased, the changes are insignificant in the t-tests, though the median changes in both total assets and equity are significant at the 10% level in the Wilcoxon test. Thus, the impact of NFRS adoption on balance sheet key ratios and line items is marginal at best.

Table 8 presents the relationship between firm-specific factors and ratio changes. The industry variable is not significant in any of the regressions, thus we report our results excluding this variable. We estimate 10 different regression models, with each ratio and balance sheet element as a dependent variable in turn. In addition, we present a model with the total absolute measurement change for the assets and liability accounts as the dependent. The F-statistics show that only the change in the long-term debt to equity ratio, total assets change, total liability change, and total absolute measurement change can be explained by the independent variables. For the remaining ratios and balance sheet measures, there is no evidence of a significant impact of the independent variables chosen as firm-specific factors. For the sake of completeness we report all the models and model coefficients, even if a particular regression model is not significant.

[Insert Table 8 here]

We find that the gearing ratio can explain the variation in the change of the long-term debt to equity ratio. The sign of this variable is negative, which indicates that with the adoption of NFRS, a company that has a higher gearing ratio experiences less change in the long-term debt to equity ratio. This indicates that highly geared firms are affected in a more positive (or less negative) fashion than low-geared firms in terms of capital structure. It is possible to deduce that geared companies were more careful in the valuation of their long-term liabilities because they did not want to see further deterioration in their gearing ratios.

For changes in total assets and liabilities, we find that audit firm type is significant. The negative coefficient here indicates that companies that are audited by Big Four audit firms have experienced less positive or more negative change in their assets and liabilities when compared to the companies audited by smaller firms. The average changes in total assets and liabilities for Big Four (other) audited companies are -1.98% (1.24%) and -4.12% (2.71%), respectively, showing decreases in these items. This demonstrates that Big Four audit firms employed a different approach to the application of NFRS that generates lower values for assets and liabilities. Considering that the Big Four audit firms have more experience regarding IFRS and can transfer this knowledge from their international partners, the significant differences across audit firms might indicate inconsistencies in the application of NFRS for mandatory adopters in Turkey. Firm size is positively associated with liability change, though it is not significant for the change in total assets. This result shows that NFRS produced a detrimental effect on firms' capital structures. For the change in total assets we find that free float is a significant positive factor: companies that have more shares traded in the stock market were more positively affected by NFRS in terms of new asset values.

Our final measure is total absolute measurement change. This variable is the absolute value of the change in the asset and liability accounts. We aim to measure the extent rather than the direction of change here. Audit firm type and gearing are positively associated with the change whereas free float is negatively associated with the change. These results indicate that the accounts of companies audited by Big Four audit firms and those that have higher gearing ratios have changed more than non-Big Four audited firms and those with lower gearing. However, the change is less for

companies that have a higher percentage of shares publicly traded. We find no significant relationship between measurement change and the foreign ownership of shares.

4.2 Analytical results of disclosure change

The results of the regulation harmony, practice harmony, and disclosure change tests are presented in Table 9. Regulation harmony shows the degree of similarity between the mandatory disclosure requirements of FFRS and NFRS whereas the practice harmony measures show Jaccard coefficients for exact matches in each disclosure category. The coefficients range from zero to one, with a DP (double presence) coefficient of 1.000 suggesting that accounting disclosures after the adoption of NFRS are perfectly in harmony with the disclosure practice before adoption (FFRS). For the sake of completeness, a DA (double absence) coefficient of 1.000 suggests that the required items within the disclosure categories are neither adopted nor disclosed in either set of accounting standards, and thus the DA coefficient identifies non-adopted or rarely adopted accounting standards. One limitation here is that it is extremely difficult to determine the actual rationale for companies not adopting or disclosing accounting practices, an observation made in an earlier study by Rahman *et al.* (2002). Finally, disclosure improvement shows the extent of improvement in the disclosures after NFRS are adopted. Columns VII and X show the average number of exact matches within a disclosure category whereas the average number of mismatches within a category are shown in columns VIII and IX. Column XI represents the number of exact matches in each disclosure category between the disclosure requirements under NFRS and FFRS. Table 10 presents the effects of firm-specific factors on disclosure improvement. We exclude the industry variable from our regressions as it is not significant in any of the models.

In total, we analyse 138 disclosure items for 10 standards that we expect to change as a result of NFRS in our sample of 106 companies. The regulation harmony results (column III) show the extent of similarity coefficients between FFRS and NFRS disclosure requirements. The highest similarity in terms of regulation is observed for IAS 24 where 37.5% (6 disclosure items) of the 16 disclosure requirements under NFRS were also required under FFRS. This finding is consistent with our expectations because the CMB places importance on related party transactions to prevent the hidden distribution of profits to related parties and requires significant disclosures concerning such transactions. Therefore there were extensive disclosure requirements in FFRS regarding related party disclosures. The practice harmony (DP) result is consistent; it suggests that in practice IAS 24 is the standard that companies followed in their existing disclosure practices, with a limited improvement of only 1.2% (0.349 items) on average. This result shows that NFRS did not improve disclosure practice and that companies merely continued with their existing practices. However, our regression results show that there are firm level differences in terms of improvement in this standard. Companies that are audited by Big Four audit firms, which are larger and are highly geared, improved their IAS 24 disclosures to a great extent.

The disclosure requirement for goodwill under IAS 22 is the second standard with the highest degree of similarity in terms of regulation. One third (2 out of 6) of the disclosure requirements under NFRS were also required under FFRS. These requirements are to disclose goodwill amortisation and the problems in determining fair values of assets and liabilities. With regard to practice harmony, 21 out of 27 companies disclosed information on goodwill amortisation.

However, none of the companies disclosed potential problems in determining fair value. This was observed as a significant issue in the interviews. The greatest improvement was observed in the disclosure of the goodwill amortisation line item in the income statement and the reconciliation of goodwill amounts. When firm-specific factors are considered, it is observed that audit firm type is negatively associated with the improvement in this standard, indicating that companies not audited by the Big Four improved their disclosures to a greater extent. When we analyze the data in greater depth, we find that only two companies that reported goodwill in their accounts are audited by Big Four audit firms. On the other hand, as expected, firm size is positively associated with disclosure improvement because larger firms are those that consolidated their financial statements. To analyse whether there exist firm-specific differences between companies that report goodwill, we repeat the same regression with these companies. The insignificant F-statistic of this regression (not reported here) indicates that there are no variations to distinguish the extent of disclosure improvement of consolidated companies.

The degree of similarity in regulation harmony is 18.2% for IAS 19. There are 11 disclosure items required under NFRS but only two items match the disclosure requirements of FFRS. The similarity arises largely from two disclosure items relating to provisions for termination benefits. In practice, a large number of companies disclosed these items. Consequently, the similarity coefficient (DP) between FFRS and NFRS in relation to IAS 19 was found to be 0.454. An improvement of 19.6% (2.689 disclosure items) was achieved mainly through disclosing the nature of the obligation and the major assumptions relating to termination benefits. The firm-specific factors regression has low explanatory power and the only factor that is significant is audit firm

type, which demonstrates that Big Four audited firms improved their disclosures under this standard more than other firms.

We observe the greatest improvement in disclosure practices for IAS 12. Only 1 out of 14 of the requirements was similar to FFRS. NFRS companies increased their disclosures and added on average 4.538 items to their existing disclosure. However, 8.462 items remain, which are not disclosed under NFRS. The F-statistic for this regression is insignificant, demonstrating that there are no firm-specific differences in terms of improvement in this standard.

IAS 32 is the standard with the highest disclosure requirements and two of these were also required by FFRS. The practice harmony result confirms that the requirements are applied in practice for this standard. There is significant improvement in terms of items disclosed. NFRS gave rise to a difference in application because 25.132 items have not been disclosed. This raises the question of whether the items have not been applied due to their lack of relevance or due to problems in their application. Based on the regression, we find that the use of Big Four audit firms is a significant factor in the improvement under this standard, demonstrating that problems in application for companies audited by smaller audit firms is a plausible explanation.

The disclosure of the accounting policy for borrowing costs in IAS 23 as required under FFRS was also required by NFRS. However, we observe that Turkish companies did not disclose this accounting policy under NFRS.. This practice is consistent with expectations because the capitalization of borrowing costs arising from inflation, particularly foreign exchange differences,

was eliminated due to the application of inflation accounting under FFRS. We also observe no difference in this standard due to firm-specific factors.

The remaining standards IAS 17[3], IAS 21, IAS 36 and IAS 40[4] have zero similarity coefficients in relation to regulation, whereby companies had to apply these disclosures for the first time, and thus we expect some significant improvement here. However, the improvement is only marginal and the DA coefficients are close to 1, revealing that companies were reluctant to apply these new standards because they require the generation of new information which companies were not prepared to disclose. Within these standards, only IAS 21 is affected by a firm-specific factor, in this case, audit firm type. We can explain much of the variation in improvement in this standard by being audited by a Big Four audit firm.

Finally, the DA coefficients were typically large, and overall 111 disclosure items out of 138 within ten categories were neither adopted nor disclosed by Turkish companies in 2005. It can be argued that non-adoption here might result from a company not having operations relevant to a particular standard or for other reasons we cannot observe. However, this might also imply that at the point of mandatory adoption, Turkish companies were not adequately prepared to cope with the new set of accounting standards that required more effort, appropriate skills and the application of adequate resources. Based on our multivariate model, we find that audit firm type, size, and the foreign ownership of shares have a positive effect on the improvement in the overall disclosures. Thus, preparers in companies not audited by Big Four, which are smaller and have shares that do

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[3] Applying the tests to the 24 companies that report finance lease obligations on their balance sheets improved the results only marginally. For example disclosure improvement increased to 5.16% (1.040 items).
[4] Applying the tests to the 13 companies that report investment properties on their balance sheets also improved the results only marginally. Here, disclosure improvement increased to 4.14% (0.540 items).

not attract foreign investors, preferred to keep disclosure items to a minimum in 2005. The interviews with auditors discussed below shed further light on disclosure issues.

4.3 A narrative analysis of the firm-specific and country-specific drivers of adoption

Here, we discuss interviews with a sample of external auditors. We used these interviews to determine perceptions of the impact of firm and country level factors on mandatory adoption. We examined them in relation to the overall impact of adoption and the role of key parties involved.

(i) The impact of adoption

Broadly, the perception of interviewees on the auditor's report is consistent with the scope set out by the International Standard on Auditing (ISA) 700 (IAASB, 2012). However, most of the auditors interviewed admitted to providing significant support in the preparation of the audit reports in 2005. This was due to the lack of experience and knowledge of preparers of IFRS (interviewee I3), inadequate local information resources (interviewee I6), or their focus instead on producing tax-based statements (interviewee I5) because of their stronger enforcement compared with IFRS, the latter consistent with Ball *et al.* (2000) and Cooke and Wallace (1990). Evidently, the transition to IFRS in the case of Turkey requires both training (Alp and Ustundag, 2009) and a new mind set to be successful, with enforcement creating adequate incentives to this end.

Table 11 lists the standards presenting the biggest challenges faced by auditors during the audit process. Determining the fair value of assets and liabilities was a significant issue, due to an inability to determine the market value of certain products at the balance sheet date (interviewee I1) or to test the fair value of assets at the purchase date. This was usually resolved by using internal

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benchmarks and other techniques or by assuming that asset values were equal to the inflation-adjusted carrying amounts (interviewees I2 and I4).

[Insert Table 11 here]

Companies appeared to misunderstand impairment, arguing that the value of an asset never changes (interviewee I5). Most were not familiar with NFRS (Simga-Mugan and Hosal-Akman, 2005). The absence of long-term plans or adequate management information systems meant that many companies failed to identify and measure cash generating units in impairment (interviewees I1 and I2). While impairment should have significantly impacted companies that adhere to IAS 36, in practice its impact was limited due to such company shortcomings. This result is consistent with the findings in our measurement and disclosure analyses of little evidence of impairment tests being conducted under NFRS.

Ball *et al.* (2000) argue that it is difficult to encourage the definition and disclosure of financial risks unless a company changes its internal managerial reports to IFRS. Inadequate management information systems (MIS) mean classification of financial instruments was problematic (interviewee I4), and financial risks under IFRS 7 (formerly IAS 32) were not well defined in companies, particularly in relation to foreign resources (interviewee I1). Although we found significant improvement in terms of certain items disclosed by Turkish firms in 2005, particularly for those audited by the Big Four, we observed that a significant number of the mandatory disclosure items were not disclosed in practice. Adherence to a uniform chart of accounts within company accounting systems proved problematic for the production of sufficient data for IFRS-

based financial reporting, and in particular for segment reporting since it was 'not designed to produce sufficient data for operating segments' (interviewee I1).

Finally, the principles-based nature of IFRS was itself an issue due to the estimates and judgment required. In relation to substance over form, interviewee I5 noted that accountants avoided making judgments in relation to, for example, revenue recognition criteria, giving rise to an uneven implementation of IFRS, consistent with Ball (2006).

(ii) The role of parties and overcoming adoption difficulties

Here we review the key results arising from the interview phase in terms of enforcement, corporate governance and the role of accountants. There are several enforcement mechanisms for the financial reporting of listed companies in Turkey. Firstly, compliance with IFRS as regulated and monitored by the CMB, whereby statement correction can be enforced when audited statements and audit opinions warrant further investigation, though in practice the extent of this investigation is unclear (ROSC, 2006, p.19). Secondly, compliance with the Turkish Commercial Code (1956), which provides a statutory framework for the financial reporting of companies, does not comply with IFRS[5].

Tax law financial reporting requirements provide the most influential and powerful enforcement mechanism, requiring statements to be prepared in compliance with tax accounting principles and following the Uniform Chart of Accounts. Interviewee I1 emphasized the dominance of tax law rules, while 'there is no such penalty system for IFRS.' The issues here are the absolute priority

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[5] The new Commercial Code published in 2011 replaces the existing requirements, with the new financial reporting standards based on IFRS from 2013.

given to tax accounting rules and lack of consistency in measuring accounts under IFRS. In 2005, there was little incentive to comply fully with the latter, with a stronger incentive required to ensure improvement (Ball *et al.*, 2000).

Good governance and successful IFRS implementation require efficient MIS. Ball *et al.* (2000) note that accounting practice is a function of corporate governance and as such is expected to affect the economic decisions of senior managers. In Turkey, the corporate governance code was adopted in 2003 and is voluntary, requiring only a compliance report. As a result, the OECD (2006) regard Turkey as having high quality governance standards, though it notes issues around concentrated ownership with dominant family shareholders (Yurtoglu, 2000), low free float, and the dominance of controlling shareholders. In our study, the role of the Board of Directors was seen as pivotal to successful IFRS implementation. Where the Board considered accounting as mere 'bookkeeping', transition to IFRS was found to be unsuccessful (interviewee I3), and it was felt that the internal audit function should remain under the control of the Board (interview I4). On the subject of control, family-controlled companies were reluctant to provide detailed information or to conduct appropriate tests for the fair value of assets such as land and buildings (interviewee I3). Owners were regarded as the sole authority for reporting decisions (interviewee I5), particularly in the absence of good governance and the cost burden of recruiting adequate accounting professionals (interviewee I4).

The interviews revealed that MIS data did not produce efficient or sufficient information for the requirements of IFRS as such systems were not designed for this purpose (interviewee I3), and IFRS required great improvements in internal control and risk management systems (interviewees

I2 and I4). The definition and disclosure of financial risks under IFRS 7 (formerly IAS 32) was considered particularly problematic, as was the classification of operational versus investment properties under IAS 40 (interviewees I1 and I4).

Accountants played a significant role in IFRS implementation in Turkey. The technical knowledge and experience of company accountants was seen as a key success factor by interviewees. This was augmented by training provided by the Big Four and the Union of Chambers Public Accountants and Sworn-in Certified Public Accountants of Turkey (TURMOB) during the transition period (interviewee I2). Evidently accountants, and particularly those in family-controlled companies, were reluctant to provide more public disclosure in 2005 (interviewee I5), particularly in the case of segmental reporting where they felt doing so would provide sensitive information to competitors (interviewee I2). The results are consistent with Gray's (1988) secrecy hypothesis and the secrecy and uniformity discussed in Perera and Baydoun (2007). To improve the success of IFRS adoption, it was felt in general that accountants should be involved in the standard setting process, consistent with Ali and Hwang, (2000), Choi and Mueller (1992), and Alp and Ustundag (2009) though this would require more advanced technical knowledge (interviewee I6). Most interviewees argued that language was not a barrier to implementation, and interviewee I4 found that the translated version of the standards reached a wider range of interest groups.

5. Conclusion

This paper examines the extent of change in measurement and disclosures following the mandatory adoption of IFRS in Turkish listed companies. In so doing, we examine the impact of both firm

and country-specific factors which influence the extent of that change. We establish six key results. First, in terms of measurement change, we find that there are significant changes in six of the nine standards analysed (IASs 12, 17, 19, 21, 24 and 40), though the changes in two of these standards (IASs 12 and 21) are uneven across our sample, and for one standard (IAS 17) the change is mainly due to reclassification.

Second, other than a significant increase in the non-current to total assets ratio, there is little evidence of change when we compare FFRS and NFRS across key financial ratios and other balance sheet measures. Further, while key balance sheet measures such as total assets, total liabilities, equity, and retained earnings increased with the introduction of NFRS, the extent of that increase is marginally significant only for the median changes of total assets and equity. Evidently, the adoption of IFRS had little measureable impact on the balance sheet.

Third, we find that there is significant change in some disclosure items for IAS 12, IAS 19, IAS 22 (goodwill), and IAS 32, with very modest disclosure improvements in relation to the remaining standards IAS 17, IAS 21, IAS 36, and IAS 40, even though we expected some significant improvement here. We observe that around 80% of the disclosure items within the ten disclosure categories studied were neither adopted nor disclosed by Turkish companies. It can be argued that the non-adoption of disclosure items might result from a company not having operations relevant to a particular standard or for other reasons which we cannot observe. However, this might also imply that during the mandatory adoption period, Turkish companies were not adequately prepared to cope with the new set of accounting standards as these demanded greater effort, skills and resources.

Fourth, firm-specific factors, such as auditor type, company size, gearing, the degree of free float, and the degree of foreign share ownership do not have any impact on the changes in financial ratios except the negative effect of gearing on the change in the long-term debt to equity ratio. This indicates that companies with higher gearing ratios have seen their long-term debt to equity ratio reduced, thereby reducing financial distress risk upon IFRS adoption. We find that companies that are audited by Big Four audit firms have decreased their total assets and liabilities, demonstrating the different approaches employed across audit firms. Furthermore, firm size is positively associated with the change in total liabilities. When the total absolute measurement change in the accounts is considered, we find that the overall extent of change is higher for companies that are audited by Big Four audit firms and those which are highly geared, and lower for companies that have higher free float. We find no significant difference with regard to industry type.

Fifth, when we examine the impact of firm-specific factors on disclosure improvement, it is clearly evident that greater auditor size/prominence and larger company size are associated with a significant improvement in disclosure, whereby Big Four firms in particular produce a positive impact for their client companies. Furthermore, total disclosure improvement is also positively associated with the degree of foreign share ownership.

Finally, the interviews revealed some interesting observations that help to explain the extent of change or stasis. Our findings indicate that during the 2005 mandatory transition period to IFRS, companies struggled to produce IFRS compliant financial statements due to a lack of company knowledge and experience of IFRS. Further, it was evident that tax-based statements were

prioritised over and above IFRS accounting preparation, particularly given the stronger enforcement associated with the former compared to the latter. In terms of the most challenging standards, the largest obstacles were presented in relation to fair value accounting in the absence of benchmarks, asset impairment as a somewhat foreign concept, and the classification of financial instruments where management information systems typically do not comply with IFRS requirements. One major obstacle remains the adherence of IFRS to principles-based standards which require the exercise of judgement, a concept unfamiliar to many mandatory adopters in Turkey in the preparation of financial statements. Robust corporate governance practice was difficult in the presence of concentrated and/or family ownership and low free float, leading many to consider IFRS adoption a burden rather than an opportunity for better information provision for stakeholders.

The contributions of our study are as follows. First, we document a detailed analysis of the process of adoption of IFRS for Turkish companies, highlighting the issues which arise for mandatory as opposed to voluntary adopters. Second, we look not only at measurement change but also compare it with changes in disclosure, focusing on the difference between regulation and practice change. Third, we examine change by both standard and line item where the analysis permits, providing us with an analysis that might otherwise be opaque in the presence of counter-balancing effects. Finally, our paper combines both empirical and narrative analysis so that we not only determine the extent of change in companies but also determine auditor perception of the promoters and inhibitors of that change.

The findings of this paper will be of interest to academics following international accounting harmonisation from an emerging markets perspective. Additionally, the findings provide useful context and insight to support the effective implementation of principles-based standards in a prominent European periphery emerging country. We draw attention to the challenges faced by standard setters, accounting professionals, and domestic and international policy makers in their attempt to achieve consistency in practice. Furthermore, the issues surrounding the adoption of IFRS are still topical given that the IASB continues to make significant changes to the existing standards and to introduce new standards. As the standards evolve, dealing with these changes generates an extra burden for those companies without the means and motivation to prepare financial statements to the standard of quality required by the IASB. This paper provides a better understanding of the issues faced in the mandatory adoption of IFRS and a recommendation that regulators ensure firms are ready for such transition before proceeding with adoption.

A major limitation of this study concerns the availability of data because companies were not required to produce a reconciliation statement during the transition period. As a result, we had to trace the changes somewhat indirectly by studying the relationship between the accounts and the standards. Furthermore, the companies were not required to present comparative income statements and thus we were unable to study the effects of mandatory adoption on profit for the transition year. This study focused solely on the mandatory adoption of Turkish companies, thus while the findings may be relatable, they may not necessarily be generalised to other countries.

References

Abd-Elsalam, O.H., & Weetman, P. (2003). Introducing International Accounting Standards to an emerging capital market: Relative familiarity and language effect in Egypt. *Journal of International Accounting, Auditing and Taxation,* 12, 63-84.

Aisbitt, S. (2006). Assessing the effect of the transition to IFRS on equity: The case of the FTSE 100. *Accounting in Europe,* 3, 117-133.

Ali, A. & Hwang, L.S. (2000). Country-specific factors related to financial reporting and the value relevance of accounting data. *Journal of Accounting Research,* 38, 1-21.

Alp, A. & Ustundag, S. (2009). Financial reporting transformation: Experience of Turkey. *Critical Perspectives on Accounting,* 20, 680-699.

Al-Shammari, B., Brown, P. & Tarca, A. (2008). An investigation of compliance with International Accounting Standards by listed companies in the Gulf Co-Operation Council Member States. *The International Journal of Accounting,* 43, 425-447.

Archambault, J.J. & Archambault, M.E. (2003). A multinational test of determinants of corporate disclosure. *The International Journal of Accounting,* 38, 173-194.

Assenso-Okofo, O., Ali, M.J. & Ahmed, K. (2009). The development of accounting and reporting in Ghana. *The International Journal of Accounting,* 46, 459-480.

Ball, R., Kothari, S., & Robin, A. (2000). The effect of international institutional factors on properties of accounting earnings. *Journal of Accounting and Economics,* 29, 1-51.

Ball, R. (2001). Infrastructure requirements for an economically efficient system of public financial reporting and disclosure. *Brookings-Wharton Papers on Financial Services*, 127-169.

Ball, R. (2006). International Financial Reporting Standards (IFRS): pros and cons for investors. *Accounting and Business Research,* 36, 5-27.

Beckman, J., Brandes, C. & Eierle, B. (2007). German reporting practices: An analysis of reconciliation from German Commercial Code to IFRS or US GAAP. *Advances in International Accounting,* 20, 253-294.

Capital Markets Board of Turkey, CMB (1989, XI/1), Sermaye Piyasasında Mali Tablo ve Raporlara İlişkin İlke ve Kurallar Hakkında Tebliğ XI/1, [Accounting Standards Act], *Resmi Gazete* 20064 (29.1.1989).

CMB (1989, XI/5), Sermaye Piyasasında Mali Tablo ve Raporlara İlişkin İlke ve Kurallar Hakkında Tebliğe Ek Tebliğ XI/5, [Accounting Standards Act], *Resmi Gazete* 20387 (29.12.1989).

CMB (2001, XI/19), Vadeli İşlem ve Opsiyon Sözleşmelerinin Muhasebesine İlişkin Usul ve Esaslar Hakkında Tebliğ XI/19, [Accounting Standard for Futures and Options Contracts], *Resmi Gazete* 24506 (27.8.2001).

CMB (2001, XI/20), Yüksek Enflasyon Dönemlerinde Mali Tabloların Düzeltilmesine İlişkin Usul ve Esaslar Hakkında Tebliğ XI/20, [Accounting Standard for Financial Reporting in Hyperinflationary Economies], *Resmi Gazete* 24597 (28.11.2001).

CMB (2001, XI/21), Sermaye Piyasasında Konsolide Mali Tablolara ve İştiraklerin Muhasebeleştirilmesine İlişkin Usul ve Esaslar Hakkında Tebliğ XI/21, [Accounting Standard for Consolidated Financial Statements and Investment in Associates], *Resmi Gazete* 24582 (13.11.2001).

CMB (2003, XI/25), Sermaye Piyasasında Muhasebe Standartları Hakkında Tebliğ XI/25, [Accounting Standards Act in compliance with IFRS], *Resmi Gazete* 25290 (15.11.2003).

CMB (2008, XI/29), Sermaye Piyasasında Finansal Raporlamaya Iliskin Esaslar Tebliği XI/29, [Financial Reporting Act in capital markets], *Resmi Gazete* 26842 (9.4.2008).

Callao, S., Jarne, J.I. & Lainez, J.A. (2007). Adoption of IFRS in Spain: Effect on the comparability and relevance of financial reporting. *Journal of International Accounting, Auditing and Taxation,* 16, 148-178.

Chau, G.K. & Gray, S.J. (2002). Ownership structure and corporate voluntary disclosure in Hong Kong and Singapore. *The International Journal of Accounting,* 37, 247-265.

Choi, F. & Mueller, G. (1992). International Accounting. (2nd Ed.). New Jersey: Prentice Hall.

Christensen, H.B., Lee, E. & Walker, M. (2007). Cross-sectional variation in the economic consequences of international accounting harmonization: The case of mandatory IFRS adoption in the UK. *The International Journal of Accounting,* 42, 341-379.

Cooke, T.E. & Wallace, R.S.O. (1990). Financial disclosure regulation and its environment: A review of further analysis. *Journal of Accounting and Public Policy,* 9, 79-110.

Cuijpers, R. & Buijink, W. (2005). Voluntary adoption of non-local GAAP in the European Union: a study of determinants and consequences. *European Accounting Review*, 14(3), 487–524.

Curuk, T. (2009). An analysis of the companies' compliance with the EU disclosure requirements and corporate characteristics influencing it: A case study of Turkey. *Critical Perspectives on Accounting,* 20, 635–650.

Daske, H., Hail, L., Leuz, C., & Verdi, R. (2008). Mandatory IFRS reporting around the world: Early evidence on the economic consequences. *The Initiative on Global Markets,* The University of Chicago Graduate School of Business, Working Paper, 12.

Delvaille, P., Ebbers, G. & Saccon, C. (2005). International financial reporting convergence: Evidence from three Continental European countries. *Accounting in Europe,* 2, 137-164.

Ding, Y., Jeanjean, T. & Stolowy, H. (2005). Why do national GAAP differ from IAS? The role of culture. *The International Journal of Accounting,* 40, 325-350.

Esen, Ö.M. & Sakin, T. (2009). Dipnot açiklama yükümlülüklerine uyum: IMKB 100 endeksinde yer alan reel sektör firmalarinin durumu uzerine bir arastirma. [Compliance with disclosure requirements: The case of the real sector firms listed on the ISE100]. *Yönetim*, 64, 112-124.

Francis, J.R. & Wang, D. (2008). The joint effect of investor protection and Big 4 audits on earnings quality around the world. *Contemporary Accounting Research,* 25, 157-191.

Goodwin, J., Ahmed, K. & Heaney, R. (2008). The effects of International Financial Reporting Standards on the accounts and accounting quality of Australian firms: A retrospective study. *Journal of Contemporary Accounting and Economics,* 4, 89-119.

Gray, S.J. (1988). Towards a theory of cultural influence on the development of accounting systems internationally. *ABACUS,* 24, 1-15.

Guerreiro, M., Rodrigues, L. & Craig, R. (2008). The preparedness of companies to adopt International Financial Reporting Standards: Portuguese evidence. *Accounting Forum,* 32, 75-88.

Haller, A. & Eierle, B. (2004). The adaptation of German accounting rules to IFRS: A legislative balancing act. *Accounting in Europe,* 1, 27-50.

HassabElnaby, H.R., Epps, R.W., & Said, A.A. (2003). The impact of environmental factors on accounting development: An Egyptian longitudinal study. *Critical Perspectives on Accounting,* 14, 273-292.

Hodgdon, C., Tondkar, R.H., Adhikari, A., & Haress, D. W. (2009). Compliance with International Financial Reporting Standards and auditor choice: New evidence on the importance of the statutory audit. *The International Journal of Accounting,* 44, 33 – 55.

Hoogendoorn, M. (2006). International accounting regulation and IFRS implementation in Europe and beyond – Experiences with first-time adoption in Europe. *Accounting in Europe,* 3, 23-26.

Hope, O-K. (2003). Firm-level disclosures and the relative roles of culture and legal origin. *Journal of International Financial Management and Accounting,* 14, 218-248.

Hung, M. & Subramanyam, K. (2007). Financial statement effects of adopting international accounting standards: The case of Germany. *Review of Accounting Studies,* 12, 623-657.

Iatridis, G. & Rouvolis, S. (2009). The post-adoption effects of the implementation of International Financial Reporting Standards in Greece. *Journal of International Accounting, Auditing and Taxation,* 19, 55-65.

IAASB (2012). The International Standard on Auditing (ISA) 700. Available at http://www.ifac.org/publications-resources/2012-handbook-international-quality-control-auditing-review-other-assurance-a.

ICAEW (2007). EU implementation of IFRS and the Fair Value Directive: A report for the European Commission, *Institute of Chartered Accountants in England and Wales*. Available at http://ec.europa.eu/internal_market/accounting/docs/studies/2007-eu_implementation_of_ifrs_summary.pdf.

Ionascu, I., Ionascu, M., Olimid, L. & Calu, D. (2007). An empirical evaluation of the costs of harmonizing Romanian accounting with international regulations (EU Directives and IAS/IFRS). *Accounting in Europe,* 4, 169-206.

Jaafar, A. & McLeay, S. (2007). Country effects and sector effects on the harmonization of accounting policy choice. *ABACUS,* 43, 156-189.

Jaggi, B. & Low, P.Y. (2000). Impact of culture, market forces, and legal system on financial disclosures. *The International Journal of Accounting*, 35, 495-519.

Jermakowicz, E.K. (2004). Effects of adoption International Financial Reporting Standards in Belgium: The evidence from BEL-20 companies. *Accounting in Europe,* 1, 51-70.

Jermakowicz, E.K. & Gornik-Tomaszewski, S. (2006). Implementing IFRS from the perspective of EU publicly traded companies. *Journal of International Accounting & Taxation,* 15, 170-196.

Jones, S. & Finley, A. (2011). Have IFRS made a difference to intra-country financial reporting diversity? *British Accounting Review,* 43, 22-38.

Karamanou, I. & Nishiotis, G.P. (2009). Disclosure and the cost of capital: Evidence from the market's reaction to firm voluntary adoption of IAS. *Journal of Business Finance & Accounting*, 36 (7-8), 793-821.

Kinnunen, J., Niskanen, J. & Kasanen, E. (2000). To whom are IAS earnings informative? Domestic versus foreign shareholders' perspectives. *European Accounting Review,* 9, 499-517.

Krzanowski, W.J. (2000). *Principles of multivariate analysis: A user's perspective.* New York: Oxford University Press.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A. & Vishny, R.W. (1998). Law and finance. *Journal of Political Economy,* 106, 1113-1155.

La Porta, R., Lopez-de-Silanes, F. & Shleifer, A. (2006). What works in securities laws? *Journal of Finance,* LXI, 1-32.

Larson, R. K., & Street, D.L. (2004). Convergence with IFRS in an expanding Europe: Progress and obstacles identified by large accounting firms' survey. *Journal of International Accounting, Auditing & Taxation,* 13, 89-119.

Macias, M. & Muino, F. (2011). Examining dual accounting systems in Europe. *The International Journal of Accounting,* 46, 51-78.

Miles, M.B., & Huberman, A.B. (1994). *Qualitative data analysis: An expanded sourcebook.* (2nd Ed.). California: Sage Publications.

Nobes, C. (1998). Towards a general model of the reasons for international differences in financial reporting. *ABACUS,* 34, 162-187.

OECD (2006). *Corporate governance in Turkey: Pilot study,* OECD, Available at http://www.oecd.org/document/61/0,3746,en_33873108_33873854_37552829_1_1_1_1, 00.html.

Peng, S., Tondkar, R., van der Lan Smith, J. & Harless, D. (2008). Does convergence of accounting standards lead to the convergence of accounting practices? A study from China. *The International Journal of Accounting,* 43, 448-468.

Perera, H. & Baydoun, N. (2007). Convergence with International Financial Reporting Standards: The case of Indonesia. *Advances in International Accounting,* 20, 201-224.

Rahman, A. Perera, H. & Ganesh, S. (2002). Accounting practice harmony, accounting regulation and firm characteristics. *ABACUS,* 38, 46-77.

ROSC (2006). Report on the observance of standards and codes, "Accounting and Auditing," World Bank.

Schipper, K. (2005). The introduction of International Accounting Standards in Europe: Implications for international convergence. *European Accounting Review,* 14, 101-126.

Sellhorn, T. & Gornik-Tomaszewski, S. (2006). Implications of the 'IAS Regulation' for research into the international differences in accounting systems. *Accounting in Europe,* 3, 187-217.

Simga-Mugan, C. & Hosal-Akman, N. (2005). Convergence to International Financial Reporting Standards: The case of Turkey. *International Journal of Accounting, Auditing and Performance Evaluation,* 2, 127-139.

Soderstrom, N.S. & Sun, K.J. (2007). IFRS adoption and accounting quality: A review. *European Accounting Review,* 16, 675-702.

Street, D.L. (2002). Benchmarking national accounting standards against IAS: Summary of results. *Journal of International Accounting, Auditing, and Taxation,* 11, 77-90.

Sucher, P. & Jindrichovska,I. (2004). Implementing IFRS: A case study of the Czech Republic. Accounting in Europe, 1, 109-141.

The Association of Capital Market Intermediary Institutions of Turkey (2003 and 2005). Investor profile in Turkey (equity ownership), Available at http://www.tspakb.org.tr/eng/DesktopDefault.aspx?tabid=76 .

Tokar, M. (2005). Convergence and the implementation of single set of global standards: The real-life challenge. *Accounting in Europe,* 2, 47-68.

Turkish Commercial Code (1956), No: 6762, Official Gazette No: 9353.

Turkish Commercial Code (2011), No: 6103, Official Gazette No: 27846.

Wong, P. (2004). Challenges and successes in implementing international standards: Achieving convergence to IFRSs and ISAs. *International Federation of Accountants*, New York.

Young, D. & Guenther, D.A. (2003). Financial reporting environments and international capital mobility. *Journal of Accounting Research*, 41(3), 553-579.

Yurtoglu, B.B. (2000). Ownership, control and performance of Turkish listed firms. *Empirica, 27*: 193–222.

Table 1 Comparison of the former FRS and the new FRS

Accounts/ Methods	IAS/ IFRS	FFRS (CMB, 1989; 2001)	NFRS (CMB, 2003)	Expected impact on accounts
Construction contracts	IAS 11	Construction contracts are measured using the completed contract method.	Contract revenues and expenses associated with a construction contract are recognised with reference to the stage of completion of the contract activity at balance sheet date (the percentage of completion method).	Decrease or increase in assets, liabilities and equity
Income taxes	IAS 12	Deferred tax application is not required.	Deferred tax assets or liabilities are recognised in the balance sheet.	Increase in assets and/or liabilities
Leases	IAS 17	Payment of finance lease instalments are recognised as interest expenses for lessees or gains for lessors in the income statement at payment date.	Finance lease is recognised as an asset at the lower of fair value or present value against a liability for lessees, and a receivable for lessors at initial date.	Increase in assets and liabilities and positive or negative change in equity
Employee benefits	IAS 19	Recognition and measurement of long-term employee benefits are limited to undiscounted termination benefits. Actuarial and present value approaches are not applicable.	Post-employment benefits falling due in more than 12 months are discounted. Employee benefits as well as actuarial gains and losses are recognised in financial statements. Present value of defined benefits and fair value of plan	Decrease in liabilities but increase in equity

assets are recognised
in the balance sheet.

Table 1 Comparison of the former FRS and the new FRS (continued)

Accounts/ Methods	IAS/ IFRS	FFRS (CMB, 1989; 2001)	NFRS (CMB, 2003)	Expected impact on accounts
The effects of changes in foreign exchange rates	IAS 21	Foreign trade and financial payables are stated at sell rates. No specific rules are required for translation of foreign financial statements.	Foreign trade and financial payables are stated at buy rates. Translation of financial statements must follow the rules in IAS 21. Translation exchange differences from a functional currency into a different presentation currency are recognised as a separate component of equity if a functional currency is not the currency of a hyperinflationary economy. Translation exchange differences are recognised as an expense in the income statement if a functional currency is the currency of a hyperinflationary economy.	Decrease in foreign trade and financial liabilities and increase in equity
Business combinations	IAS 22	Goodwill arising from consolidation is recognised in non-current assets and amortised up to 20 years. Impairment is not applicable.	All intra-group transactions are eliminated. Goodwill is amortised up to 20 years and accepted as a separate item in non-current assets. It is subject to an impairment test, when necessary.	Decrease in assets and equity

Borrowing costs	IAS 23	Borrowing costs are capitalised until non-current assets are ready to use. Capitalisation of foreign exchange losses is optional after the period when non-current assets are used and amortised over the useful life of the asset.	Borrowing costs are recognised as an expense in the period in which they are incurred, except to the extent that they are attributable to qualifying assets.	Decrease in assets and equity is not expected due to application of inflation accounting in 2004
Related party transactions	IAS 24	It is required, but the scope is much narrower than for IAS 24 i.e. key trade receivables/payables from/to related parties are not classified separately.	It is required.	Classification effects on related accounts but no change in equity

Table 1 Comparison of the former FRS and the new FRS (continued)

Accounts/ Methods	IAS/ IFRS	FFRS (CMB, 1989; 2001)	NFRS (CMB, 2003)	Expected impact on accounts
Financial Instruments	IAS 32-39	Marketable securities traded on stock exchanges are valued at average of last 5 days market value and non-traded securities are valued at cost. Impairment test is not required to securities valued at cost. Held to maturity investments are stated at cost plus interest accrued at balance sheet date. Effective interest rate application is not required. Trade receivables over three months due on balance sheet date and trade payables are discounted by a short term discount rate disclosed by the Central Bank of Turkey. Derivatives are not recognised on the balance sheet and hedge accounting is not required.	Financial assets, financial liabilities and derivatives are valued at fair value through profit or loss. Held to maturity investments, loans and receivables are stated at amortised cost. Effective interest rate application is required. Available for sale investments are measured at fair value if they are quoted on a stock exchange. Unquoted securities are measured at cost. Derivative financial instruments are recognised in financial statements. Hedge accounting is optional. Embedded derivatives are separated from their host contract. Impairment test is also required for financial instruments stated at cost.	Decrease or increase in financial instruments and equity
Impairment of assets	IAS 36	Impairment tests are not applicable and impairment losses are not recognised.	Impairment tests are required and impairment losses are recognised.	Decrease in non-current assets and equity

Investment property	IAS 40	Investment property is not classified as a separate account from tangible assets and is recognised at cost. Depreciation is applicable over the useful life of the asset.	Investment property is classified in a different account. Investment properties are valued at fair value or cost.	Increase in investment property and decrease in non-current assets

Note: The full set of NFRS complied with IAS/IFRS issued up to November 2003. Companies listed on the ISE were allowed to present financial statements prepared under IFRS during the transaction date. The CMB did not issue the amended NFRS to cover all changes made in IAS/IFRS. NFRS was therefore not updated with the latest version of IFRS until 2008 (CMB, 2008, XI/29).

Table 2 The company financial accounting data sample

Sample	Number of companies
Initial sample	304
Less financial and investment institutions	68
Less voluntary adopters	82
Less firms with missing data	48
Final sample	106

Table 3 Sectoral break-down and market capitalisation of sample companies

Sector	Number of companies	Market capitalisation $thousands
Basic Metal	7	391,431
Chemical, Petroleum, Plastic	10	4,850,916
Electricity	2	291,404
Food, Beverage	11	293,515
Holding and Investment	3	325,616
Information Technology	5	331,721
Metal Products, Machinery	11	1,222,181
Non-Metal Mineral Products	16	5,653,156
Sports	1	169,778
Textile, Leather	23	568,513
Tourism	6	557,099
Transportation	1	87,653
Wholesale and Retail Trade	4	329,502
Wood, Paper, Printing	6	215,599
Total	**106**	**15,288,084**

Note: Exchange rate employed for currency translation: (US$:TRY1.35).

Table 4 The expected relationship between firm characteristics and changes in NFRS

Firm characteristic	Expected impact on measurement	Expected impact on disclosures
Industry type	No prediction	No prediction
Auditor type	Positive relation	Positive relation
Free float	Positive relation	Positive relation
Foreign ownership	Positive relation	Positive relation
Size	Positive relation	Positive relation
Gearing	Positive relation	Positive relation

Table 5
Details of the Turkish audit firm interviewees

Date of interview	Interviewee	Professional designation	Current position
21-Dec-10	I1	CA, CPA	Deputy managing partner
22-Dec-10	I2	CPA	Principal auditor and board member
22-Dec-10	I3	CPA	Partner
23-Dec-10	I4	CPA	Partner
28-Dec-10	I5	CPA	Managing partner
30-Dec-10	I6	CPA	University lecturer (former principal auditor)

Table 6 Results of the measurement tests

Accounts	Related Standards	Expected Impact	Companies Reporting	Mean	t-stat	Median	Wilcoxon
Trade Receivables	IAS 24 IAS 39	- -	106	- 1.59%	- 4.449***	0.02%	0.000
Receivables from Related Parties	IAS 24	+	84	2.17%	4.658***	0.21%	0.000
Deferred Tax Assets	IAS 12	+	56	1.12%	6.566***	0.00%	0.000
Financial Assets	IAS 39	+ / -	78	0.02%	0.401	0.00%	0.432
Property, Plant and Equipment	IAS 17 IAS 36 IAS 40	+ - -	106	- 0.27%	-0.760	0.00%	0.888
Intangible Assets (excluding Goodwill)	IAS 36	-	94	- 0.18%	-2.736**	0.00%	0.002
Goodwill	IAS 22 IAS 36	- -	27	0.01%	0.180	0.00%	0.744
Investment Properties	IAS 40	+	13	0.05%	2.251**	0.00%	0.008
Trade Payables	IAS 21 IAS 24 IAS 39	- - -	106	- 0.94%	- 3.952***	-0.07%	0.000
Payables to Related Parties	IAS 24	+	96	1.68%	4.354***	0.24%	0.000
Deferred Tax Liabilities	IAS 12	+	59	0.72%	4.350***	0.00%	0.000
Provision for Employee Benefits	IAS 19	-	106	- 0.85%	- 8.104***	-0.70%	0.000

Finance Lease Obligation	IAS 17	+	24	0.05%	3.923***	0.00%	0.001
Financial Liabilities	IAS 21 IAS 39	- + / -	96	- 0.11%	-2.033**	0.00%	0.000

*, **, and ***: Significant at 10%, 5% and 1%, respectively. The Wilcoxon signed rank test results present probability values. The null hypothesis for the Wilcoxon signed rank test is that the median difference between two distributions is zero.

Table 7 The impact of IFRS adoption on company financial ratios

Ratio	Mean	t-stat	Median	Wilcoxon
Current Ratio	0.01	0.521	0.00	0.634
LT Debt to Equity	0.00	-0.533	0.00	0.016
ST Debt to LT Debt	-0.09	-1.752*	0.00	0.372
Equity to Total Assets	0.00	0.711	0.00	0.258
NC Assets to Total Assets	0.01	3.159***	0.00	0.000
Total Assets	0.67%	1.391	0.03%	0.058
Total Liabilities	1.41%	0.874	-0.27%	0.560
Equity	2.35%	1.580	1.16%	0.051
Retained Earnings	3.71%	0.544	0.60%	0.703

*, **, and *** Significant changes at 10%, 5% and 1% levels, respectively.
The Wilcoxon signed rank test results present probability values. The null
hypothesis for the Wilcoxon signed rank test is that the median difference
between two distributions is zero.

Table 8 The impact of firm-specific factors on the changes in the ratios and balance sheet measures

	Current Ratio Change	LT Debt to Equity Change	ST to LT Debt Change	Equity to TA Change	NCA to TA Change	Total Assets Change	Total Liabilities Change	Equity Change	Retained Earnings Change	Total Measurement Change
Intercept	-0.181	-0.097	-0.781	0.114	0.121	0.072	-0.504	0.467	1.335	0.271
	(-0.338)	(-0.085)	(-0.269)	(1.440)	(1.107)	(1.126)	(-2.354)**	(2.337)**	(1.444)	(1.845)*
Auditor	0.147	0.065	0.153	0.023	0.005	-0.025	-0.118	0.013	0.026	0.070
	(1.380)	(0.286)	(0.251)	(1.496)	(0.230)	(-1.894)*	(-2.755)***	(0.340)	(0.138)	(2.351)**
Size	0.014	0.028	0.033	-0.006	-0.008	-0.004	0.031	-0.026	-0.075	-0.007
	(0.480)	(0.450)	(0.203)	(-1.446)	(-1.248)	(-1.202)	(2.634)***	(-2.328)**	(-1.472)	(-0.871)
Gearing	-0.094	-1.870	0.121	-0.031	0.038	-0.001	-0.035	0.002	-0.335	0.066
	(-0.906)	(-4.763)***	(0.213)	(-1.155)	(1.776)*	(-0.045)	(-0.844)	(0.026)	(-1.848)*	(2.302)**
Free Float	0.008	-0.520	-0.143	-0.009	0.051	0.042	-0.027	-0.024	0.130	-0.092
	(0.042)	(-1.228)	(-0.134)	(-0.304)	(1.272)	(1.791)*	(-0.343)	(-0.315)	(0.384)	(-1.724)*
Foreign Own.	-0.123	-0.123	-0.312	0.039	0.055	-0.015	0.030	0.226	0.555	0.072
	(-0.454)	(-0.207)	(-0.210)	(0.945)	(0.985)	(-0.375)	(0.279)	(2.185)**	(1.175)	(0.946)
F-Statistics	0.838	5.906***	0.044	1.064	1.611	2.591**	2.484**	1.694	1.178	3.251***
Adjusted R^2	-0.008	0.195	-0.049	0.003	0.028	0.077	0.067	0.034	0.009	0.097

*, **, and *** Significant probabilities at 10%, 5% and 1% levels, respectively.

The dependent variables are the company financial ratios and the aggregate absolute measurement change. The independent variables are: Auditor which takes the value of 1 if the company is audited by a Big Four audit firm and zero otherwise; natural logarithm of market capitalisation (Size) as a proxy for company size; FFRS gearing ratio (Gearing); ratio of shares traded publicly on the ISE (FreeFloat); average ratio of publicly traded shares owned by foreign investors (Foreign Own.).

Table 9 Results of tests comparing disclosure practice harmony and disclosure regulation harmony

I	II	III	IV	V	VI	VII*	VIII*	IX*	X*	XI
							Number of items in			
						Number of exact matches in practice	of items in practice harmony	Number of items in practice harmony	Number of exact matches in practice	Number of exact matches in
	Number of		Practice Harmony (Double	Practice Harmony (Double		practice harmony	which	which	harmony	regulation
Standards	disclosure Items	Regulation Harmony	Presence)	Absence)	Disclosure Improvement	(Presence)	improved	deteriorated	(Absence)	harmony
			DP_i	DA_i	DI_i					
						a	b	c	d	
IAS12	14	0.071	0.191	0.651	0.303	1.000	4.538	0.000	8.462	1.000
IAS17	21	0.000	0.000	0.977	0.022	0.000	0.490	0.000	20.510	0.000
IAS19	11	0.182	0.454	0.688	0.196	1.830	2.689	0.170	6.311	2.000
IAS21	5	0.000	0.000	0.784	0.213	0.000	1.066	0.000	3.933	0.000
IAS22	6	0.333	0.088**	0.872	0.040	0.264	0.490	0.179	5.066	2.000
IAS23	3	0.333	0.000	0.403	0.274	0.000	0.792	1.000	1.208	1.000
IAS24	16	0.375	0.777**	0.929	0.012	3.264	0.349	0.575	11.811	6.000
IAS32	33	0.061	0.200	0.801	0.164	1.642	5.868	0.358	25.132	2.000
IAS36	16	0.000	0.000	0.992	0.007	0.000	0.132	0.000	15.868	0.000
IAS40	13	0.000	0.000	0.993	0.007	0.000	0.085	0.000	12.915	0.000
	138					8.000	16.499	2.282	111.216	14.000

Disclosure practice harmony is tested by means of Jaccard coefficients and disclosure regulation harmony is tested by means of exact matches.

*VII, VIII, IX and X represent average numbers across 106 companies.

**Missing values in the calculation of Jaccard coefficients (DP) are recorded as zero. The coefficients do not change when the data are tested with missing values except in the case of IAS 22 and IAS 24. The Jaccard coefficients for IAS 22 and IAS 24 when missing values are discarded are 0.245 and 0.784, respectively.

Table 10 The impact of firm-specific factors on disclosure improvement

	IAS 12	IAS 17	IAS 19	IAS 21	IAS 22	IAS 23	IAS 24	IAS 32	IAS 36	IAS 40	Total DI
Intercept	0.286	-0.035	0.049	0.062	-0.442	0.253	-0.227	0.159	-0.024	-0.015	0.051
	(3.285)***	(-0.559)	(0.261)	(0.639)	(-2.149)**	(1.399)	(-2.195)**	(2.043)**	(-0.549)	(-0.400)	(1.668)*
Auditor	0.033	0.007	0.073	0.081	-0.080	0.058	0.040	0.061	-0.006	-0.003	0.020
	(1.830)*	(0.550)	(1.944)*	(4.124)***	(-1.934)*	(1.587)	(1.935)*	(3.889)***	(-0.681)	(-0.330)	(3.282)***
Size	0.001	0.003	0.007	0.007	0.031	0.000	0.011	0.000	0.002	0.001	0.004
	(0.832)	(0.796)	(0.707)	(1.322)	(2.722)***	(-0.048)	(1.904)*	(-0.009)	(0.776)	(0.574)	(2.121)**
Gearing	-0.014	-0.009	-0.026	0.019	0.013	-0.035	0.040	0.006	0.000	-0.003	-0.003
	(-0.814)	(-0.708)	(-0.716)	(1.017)	(0.319)	(-0.976)	(1.977)*	(0.386)	(0.032)	(-0.351)	(-0.443)
Free Float	-0.020	0.018	-0.008	0.033	-0.053	0.018	-0.001	-0.028	-0.003	-0.003	-0.006
	(-0.635)	(0.813)	(-0.118)	(0.934)	(-0.700)	(0.275)	(-0.027)	(-0.980)	(-0.180)	(-0.236)	(-0.511)
Foreign Own.	0.035	0.029	0.102	-0.077	0.128	0.090	0.041	0.051	0.011	0.028	0.031
	(0.788)	(0.913)	(1.065)	(-1.559)	(1.221)	(0.973)	(0.771)	(1.293)	(0.487)	(1.425)	(1.983)**
F-Statistics	1.488	0.774	1.955*	5.137***	2.613**	1.099	3.508***	4.779***	0.256	0.639	7.265***
Adjusted R^2	0.023	-0.011	0.044	0.165	0.071	0.005	0.107	0.153	-0.037	-0.017	0.230

*, **, and *** Significant probabilities at 10%, 5% and 1% levels, respectively.

The dependent variables are the disclosure improvement scores between NFRS and FFRS for each standard, and for the aggregate improvement score (Total DI). The independent variables are: Auditor which takes the value of 1 if the company is audited by a Big Four audit firm and zero otherwise; natural logarithm of market capitalisation (Size) as a proxy for company size; FFRS gearing ratio (Gearing); ratio of shares traded publicly on the ISE (FreeFloat); average ratio of publicly traded shares owned by foreign investors (Foreign Own).

Table 11 Auditor perceptions of the most challenging standards

Challenging accounting standards	Some examples of issues in the adoption of IFRS	Interviewee identifier
IAS 11 Construction contracts	Clashes with tax accounting practices	I3
IAS 14 Segment reporting	Insufficient data due to uniform chart of accounts; Lack of information systems	I1, I2, I4, I5
IAS 18 Revenue	Substance over form; Interest income in sales	I1, I5
IAS 22 Business combinations - Goodwill	Determining goodwill	I2
IAS 24 Related parties	Absence of fair value in group transactions	I1, I4
IAS 27 Group accounts	Intra-group relationships; Indirect interests	I5
IAS 31 Joint venture	Accounting method in a jointly controlled company	I5
IAS 32-39 & IFRS 7 Financial Instruments	Absence of fair value; Amortised cost; Risk disclosures and lack of risk management; Internal control systems; Classifications in loans; Sensitivity analysis	I1, I2, I3, I4, I5
IAS 36 Impairment of assets	Absence of fair value; Cash Generating Units; Impairment test	I1, I2, I4, I5
IAS 40 Investment property	Classification issues between operating and non-operating assets	I1, I4