Implementation of International Financial Reporting Standards and the Quality of Financial Statement Information; An Investigation of Earnings Management and Value Relevance

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Abstract

This study investigates the impact of the implementation of the International Financial Reporting Standards (IFRSs) on key financial measures of UK firms and explores their incentives to adopt IFRSs timely or early. The study also examines the volatility effects of IFRS implementation, the earnings management potential under IFRSs and the value relevance of IFRS-based financial statement information. The findings show that IFRS implementation has favourably affected the financial performance (e.g. profitability and growth potential) of firms. The study provides evidence that firms are likely to time the adoption of accounting regulation in order to influence their accounting numbers. Key motives for early adoption are size, growth, profitability and leverage, which appear to be more favourable for early adopters. Following the fair value orientation of IFRSs, the transition to IFRSs appears to introduce volatility in key income statement and balance sheet figures. The study also demonstrates that IFRS adoption reduces the scope for earnings management and leads to more value relevant accounting measures.

Keywords

Accounting policy choice, International Financial Reporting Standards, early adoption, income volatility, earnings management, value relevance

JEL Classification: M41

1 Introduction

Agency theory makes a number of predictions regarding the behaviour of managers. It would suggest that by adopting IFRSs, firms show that are acting optimally and promote financial reporting quality and investor interests (see Fields et al, 2001). For example, highly leveraged firms would adopt IFRSs in order to satisfy the needs of lenders and the requirements of debt covenants and/or avoid political attention and scrutiny (see Lambert, 2001). Healy (1985) suggests that the flexibility allowable in financial reporting may cause managers to behave opportunistically (see Burgstahler and Dichev, 1997; Weil et al, 2006). This would imply that managers might tune the timing of adoption in order to influence the reported earnings and the stock returns (DeFond and Park, 1997; Hand and Skantz, 1998; Fields et al, 2001).

Signalling theory would suggest that the timing of adoption would give an indication of firms' decision-making process and financial behaviour (see Eccles et al, 2001). For example, early adoption may signify the intention of firms to distinguish themselves and give positive signals to market participants about their managerial ability and performance (Bhushan, 1989a and 1989b; Lang and Lundholm, 2000; Watson et al, 2002). Also, the violation of debt covenants would give investors a negative signal of corporate performance with negative implications for firm creditability and future financial prospects. The combination of agency and signalling theory is possible to lead to predictions about firm financial behaviour and accounting choices and improve the understanding of financial statements (Morris, 1987).

The study focuses on the accounting choices of firms listed on the London Stock Exchange and determines whether the adoption of IFRSs has improved their financial performance. The implementation of IFRSs is compulsory for listed firms that belong to member-states of the European Union (1606/2002/EC). Given that the effective date for the adoption of IFRSs is 1 January 2005, the study shows that along with the firms that adopted within the official adoption period, i.e. normal adopters, there are firms that chose to adopt before the official period, i.e. early adopters.

The paper tests for systematic differences among UK firms given the implications of IFRSs on firm accounts and the timing of adoption. The objective of the paper is to examine the financial statement effects of the implementation of IFRSs in the UK. The period under analysis is the official period of adoption, i.e. 2005, and the pre-official adoption period, i.e. 2004. The empirical investigation concentrates in the examination of the financial effects following the transition from the UK

GAAP to the international accounting setting and the comparison between firms that adopted IFRSs before the official adoption period and firms that adopted on time. The study also investigates the volatility impact of IFRS adoption, the earnings management potential under IFRSs, and the value relevance of IFRS-based accounting reports.

A crucial question is why managers would choose to time the adoption of an accounting standard and what the related financial impact would be on firms' accounting numbers (see Bazaz and Senteney, 2001). For example, the fact that the UK is considered to be a common-law country with active stock and debt markets, a diverse base of investors, strong investor protection mechanisms and investor-oriented financial reporting[1] (Tendeloo and Vanstraelen, 2005) might have urged firms to adopt IFRSs early (pro-disclosure), and/or smoothed the transition process. In other words, the paper studies how the accounting choices of firms affect their financial behaviour and decisions, and whether firms' intention is to influence their key financial measures.

The motivation of the study relates to whether a particular accounting method/rule has real economic consequences, such that managerial decisions would need to be altered to minimise the adverse effects of the accounting change. The economic consequences of an accounting change could be mitigated by smoothing the accounting numbers and consciously timing the accounting change to suit the financial decisions of the firm (see Bazaz and Senteney, 2001). Such information would be useful for the accounting standard setting process, particularly with regard to whether stricter or more flexible financial reporting should be imposed (see Levitt, 1998).

The remaining sections of the study are as follows. Section 2 presents the theoretical background of the study. Section 3 shows the research hypotheses. Section 4 describes the data sets and the research structure of the study. Section 5 discusses the empirical findings, and Section 6 presents the conclusions and implications of the study.

2 Theoretical Background

2.1 Contribution of IFRSs

IFRSs are issued by the International Accounting Standards Board (IASB), formerly known as International Accounting Standards Committee (IASC). The main objective of IASB is "to develop, in the public interest, a single set of high quality, understandable and enforceable global accounting standards that require high quality, transparent and comparable information in financial statements and other financial reporting to help participants in the world's capital markets and other users make economic decisions" (Epstein and Mirza, 2002, p. 11).

The implementation of IFRSs would reduce the information asymmetry between informed and uninformed investors (Bushman and Smith, 2001). The reduction of uncertainty and information asymmetry would smooth the communication between managers and other related interested parties, such as shareholders, lenders, regulatory and supervisory authorities, financial analysts, etc. This would therefore tend to reduce the related agency costs that might otherwise arise (Bushman and Smith, 2001; Healy and Palepu, 2001), and would in turn tend to lead to an appreciation in stock returns, which might be unrelated to firm current financial performance (Gelb and Zarowin, 2002). Lower information asymmetry would also lead to lower costs in issuing equity capital (Glosten and Milgrom, 1985; Diamond and Verrecchia, 1991) and debt (Clarkson et al, 1996; Sengupta, 1998; Botosan and Plumlee, 2002).

The benefits of the implementation of IFRSs include the harmonisation of accounting practice across adopting countries, which in turn leads to higher comparability, lower transaction costs and enhances international investment. IFRSs also assist investors in making informed financial decisions and predictions of firm future financial performance (Street et al, 2000). IASB includes over 140 accounting bodies, representing over 100 nations. The International Organization of Securities Commissions (IOSCO) has approved the use of IFRSs for cross-border stock exchange listings. Several major stock markets, such as London, Frankfurt, Zurich, Hong Kong, Amsterdam and Rome, accept the preparation of financial statements of foreign listed companies under IFRSs. Essentially, the adoption of IFRSs gives a positive signal of higher quality accounting and transparency (Tendeloo and Vanstraelen, 2005) and would also lead to lower information asymmetry and cost of capital (Leuz and Verrecchia, 2000). Hence, it would be easier for firms implementing IFRSs to obtain debt and equity capital (El-Gazzar et al, 1999). The provision of quality accounting disclosures would tend to reduce the opportunities for earnings manipulation and enhance the stock market efficiency (Baiman and Verrecchia, 1996; Kasznik, 1999; Leuz, 2003).

The higher disclosure requirements and financial reporting quality that stem from IFRSs implies that the adoption of IFRSs gives a positive signal to investors as information asymmetry and agency costs tend to diminish (Tarca, 2004). Other explanatory proxies of the adoption of IFRSs relate to high profitability, the issuance of equity or debt capital in the adoption period, debt covenants, the differences between domestic GAAP and IFRSs (Holthausen, 1990; Sweeney, 1994; May, 1995; Ashbaugh, 2001; Cuijpers and Buijink, 2005). The effects of IFRSs would tend to have a positive impact on adopters' stock returns and other stock-related financial

performance measures, stock option schemes, etc (Matsunaga, 1995; Guidry et al, 1999; Chung et al, 2002). The response of the stock market to the implementation of IFRSs would be associated with the timing of adoption, i.e. whether firms adopted in the official adoption period or earlier, and the contribution of IFRSs compared to the domestic GAAP. The potential costs of adopting IFRSs involve costs of transition from domestic GAAP to IFRSs and costs of compliance for firms and enforcement for regulatory authorities (Carnachan, 2003). Firms' incentives to adopt IFRSs would also tend to be associated with compliance and non-compliance costs (Ball et al, 2000).[2]

2.2 Institutional Differences between IFRSs and UK GAAP
Based on the Accounting Standards Board (2003), the major differences between *IFRSs* and the equivalent UK accounting standards relate to the following issues (see also Ormrod and Taylor, 2004).

With respect to the presentation of the balance sheet and income statement, IAS 1 "Presentation of Financial Statements" appears to be less prescriptive than the UK Companies Act. For example, it requires assets and liabilities to be presented following a current/non-current distinction. Under IAS 1, the statement of total recognised gains and losses may be presented as a statement of performance, which is similar to its former form. Alternatively, it may be presented as a subset within the statement of changes in equity, although under FRS 3 these two statements are distinctive.

Under IAS 8 "Accounting Policies, Changes in Accounting Estimates and Errors", there is no distinction between fundamental errors and other material errors, while under FRS 3, restatement of financial statements is required only for fundamental errors.

Both IAS 10 "Events after the Balance Sheet Date" and SSAP 17 distinguish between adjusting events and non-adjusting events. IAS 10, however, appears to place greater emphasis on the distinction making reference to specific items, such as dividends to holders of equity instruments and dividends from subsidiaries declared after the balance sheet date, etc.

IAS 12 "Income Taxes" requires the use of deferred tax on revaluations of fixed assets. Under FRS 19, deferred tax is not required, while a rollover relief may in certain cases apply.

With regard to gains and losses on disposal of fixed assets, IAS 16 "Property, Plant and Equipment" requires the cost of the asset given up to be measured at fair value, unless the transaction lacks commercial substance or cannot be reliably measured, in which case the carrying amount

of the asset given up should apply. Under FRS 15, there is no equivalent requirement. When it comes to the review of residual values, IAS 16 requires increases in an asset's residual value to be carried out using current prices, while FRS 15 generally uses prices at the date of acquisition or latest valuation.

In contrast to SSAP 21, when leasing land and buildings, IAS 17 "Leases" requires separate treatment of land and buildings. IAS 17 particularly points out that the lease of the land should be considered as an operating lease unless the lessee gets hold of the title of property at the end of the lease contract. The lease of the building is considered as a finance or operating lease based on the lease classification criteria. Under IAS 17, the recognition of income from finance leases is based on the net investment method, while SSAP 21 requires the net cash investment method. IAS 17 requires disclosure of the total of future minimum lease payments, while SSAP 21 requires only the disclosure of information regarding the payments that are due in the next accounting period.

Under IAS 21 "The Effects of Changes in Foreign Exchange Rates", the foreign currency translation of the profit and loss statement should be performed using the average rate of exchange for the period, while SSAP 20 requires the use of the closing rate. SSAP 20 does not make a reference to the accounting treatment of goodwill, while IAS 21 states that goodwill should be treated as an asset and translated at the closing rate. Under IAS 21, when a foreign subsidiary is disposed of, the associated exchange differences should be recorded in the profit and loss statement. Under FRS 3 this treatment is not allowed.

While FRS 8 requires the disclosure of the names of transacting related parties, IAS 24 "Related Party Disclosures" requires only the disclosure of information about transactions between related parties by type of related party. In contrast to IAS 24, FRS 8 allows the transactions of subsidiaries that are 90% or more owned with other group members not to be disclosed.

Under IAS 27 "Consolidated and Separate Financial Statements", an intermediate parent company may not prepare consolidated financial statements if the parent company publishes consolidated financial statements that are in line with IFRSs. FRS 2 does not allow this exemption if the parent company is established outside the EU.

Under IAS 28 "Accounting for Investments in Associates", where an associate makes losses, the investing firm shall recognise a liability if payments or obligations have been recorded on behalf of the associate. Under FRS 9, a liability should be recognised, unless the investing firm is going to terminate the business relationship with the investee as its

associate. Although both IAS 28 and FRS 9 allow the use of the equity method of accounting for associates for the preparation of consolidated financial statements, IAS 28 does not give information about the presentation of the investor's share of its associate's profits in the financial statements.

IAS 39 "Financial Instruments: Recognition and Measurement" requires convertible loan stock to be separated between equity conversion rights and debt. FRS 4 considers convertible loan stock as a liability, unless the equity and debt components are distinguishable and separable.

Under IAS 40 "Investment Property", investment property may be measured using fair values or depreciated cost. If fair value is used, any gains and losses that may arise should be recognised in the income statement. Under SSAP 19, investment property should be measured using open market values and any arising gains and losses should be recognised in the statement of total recognised gains and losses.

2.3 Accounting Policy Choice

Accounting policy choice is associated with contractual arrangements, such as compensation schemes and debt covenants as well as asset pricing, information asymmetry, agency and political costs (Scott, 1997; Han and Wang, 1998; Francis, 2001; Lambert, 2001). The preparation of financial statements involves accounting policy choice and often requires an exercise of judgement (Jensen and Meckling, 1976; Fama, 1980). This in association with the flexibility in financial reporting, which gives firms some leeway in the implementation of accounting regulation, may give rise to opportunistic situations (Healy, 1985; Dechow and Sloan, 1991; Dye and Verrecchia, 1995; Weil et al, 2006). Such situations may be dealt with by monitoring the actions of managers and using financial analysts' forecasts of firm future performance (Nohel and Tarhan, 1998; Lundstrum, 2003). The process of monitoring, however, may be costly and in certain cases not feasible (Lamont, 1997; Shin and Stulz, 1998; Rajan et al, 2000). The use of borrowings may lead to lower agency costs (Jensen, 1986; Jensen et al, 1992; Noronha et al, 1996) since firms will have to meet certain interest payments and debt covenants, while they will be monitored by banks, financial institutions, bond rating agencies, etc. (see also Alli et al, 1993; Dempsey et al, 1993; Brous and Kini, 1994).

Managers may use discretionary accounting policies in order to improve the company financial results and their remuneration (Christie and Zimmerman, 1994; Young, 1998; Pope et al, 2000; Bushee, 2001). It follows, thus, that the timing of gains and losses recognition is important (Balsam et al, 1995; Francis et al, 1996; Gaver and Gaver, 1998). In certain cases,

managers may structure their accounting policy choice so as to transfer earnings from "good" accounting years to "bad" years (DeFond and Park, 1997; Han and Wang, 1998; Guidry et al, 1999). Alternatively, firms may defer revenue recognition into future accounting periods to reduce the current period's tax charge (Scholes et al, 1992). Managers that are entitled to stock options or bonus schemes tend to use discretionary accounting policies in order to enhance the value of their compensation of current and future periods (Healy, 1985; Watts and Zimmerman, 1990). Managers may also influence their accounting numbers in order to successfully abide by the requirements of accounting regulation or debt covenants that are embedded in their loan agreements, and thus avoid the risks of financial distress or debt covenant violation (Holthausen, 1990; Sweeney, 1994; May, 1995). This should be the case especially under significant earnings volatility and price fluctuation (Cahan, 1992; Dechow et al, 1995, 1996 and 1997; Karmon and Lubwama, 1997). Influencing firm earnings may also involve firm transactions appropriately structured, in order to lead to a desirable result, as well as timing the disclosure of good and bad news and the adoption of accounting regulation and policies (Ronen and Sadan, 1981; Gaver and Gaver, 1998; Aboody and Kaznik, 2000).

Managers are also inclined to manage the reported accounting numbers in order to influence the behaviour or response of third parties, such as government authorities, regulatory bodies, shareholders, lenders, etc., and avoid attracting attention or being subjected to scrutiny and investigation (Adiel, 1996; Eldenburg and Soderstrom, 1996; Fields et al, 2001; Doukas et al, 2005). This would intend to give positive signals to market participants and lower political and agency costs, which would in turn tend to smooth the relationship between firm and stakeholders (Easton and Harris, 1991; Kasanen et al, 1996; Abarbanell and Lehavy, 2003; Fairchild, 2003). The considerations above would tend to be more intense for larger firms, which are financially visible and easily observable in the marketplace (Moses, 1987; Jensen and Murphy, 1990; Ndubizu and Tsetsekos, 1992; Ali and Kumar, 1994; D' Souza, 1998).

Accounting measures are closely associated with stock returns since they express firms' financial performance (Holthausen and Watts, 2001; Kothari, 2001; Beaver, 2002). Firms tend to influence the reported earnings and their decision-making in order to meet financial analysts' forecasts and investors' expectations and positively affect the stock returns (Moses, 1987; Stulz, 1990; Matsunaga, 1995; Lewellen et al, 1996; Yermack, 1997; Levitt, 1998; Kasznik, 1999; Chung et al, 2002; Brown and Caylor, 2005). Evidently, firms with high profitability and positive financial ratios appear to favourably affect the stock returns (Brennan and Titman, 1994;

Lesmond et al, 1999; Rouwenhorst, 1999; Wermers, 2000; Sang-Gyung et al, 2003). The considerations above would tend to apply especially for firms that operate in a growth area, which may be inclined to influence the perceptions of financial analysts and investors in order to attract equity and debt financing (Bartov et al, 2002; Matsumoto, 2002; Skinner and Sloan, 2002; Richardson et al, 2004; Brown and Higgins, 2005; Dey, 2005).

The incentives and accounting policy choice of managers appear to significantly affect the disclosure of accounting information (Ball et al, 2000). Firms are usually more eager to disclose good information, while they tend to delay the announcement of bad information (Aboody and Kaznik, 2000). The determinants of disclosure and policy choice may relate to firm size, profitability, financial leverage, growth, stock ownership, stakeholder interests and expectations, international exposure, etc. (Lang and Lundholm, 1993; Healy and Palepu, 2001). When they plan to issue debt or equity, firms tend to adopt accounting policies that are consistent with the expectations and perceptions of the stock market in order to avoid agency-related costs and positively influence the issue (Diamond and Verrecchia, 1991; Healy and Palepu, 1993, 1995; Sengupta, 1998; Bushman and Smith, 2001). Firms that adopt controversial and questionable accounting policies tend to provide voluntary disclosures and explanations to market participants in order to avoid scepticism and adverse market reactions (Skinner, 1994). The provision of voluntary and explanatory disclosures is appreciated by financial analysts and stock market participants, and appears to favourably impact on stock returns (Blacconiere and Patton, 1994; Healy et al, 1999; Gigler and Hemmer, 2001; Gelb and Zarowin, 2002).

3 Research Hypotheses

3.1 Financial Statement Effects of IFRS Implementation

As described in Section 2.1, the adoption of IFRSs tends to enhance transparency, disclosure and comparability (see Biddle and Saudagaran, 1989). It is evident that the implementation of IFRSs reinforces stock market liquidity and leads to lower cost of capital and transaction costs, higher market value and better reputation (Leuz and Verrecchia, 2000). Hence, it would be easier for firms implementing IFRSs to obtain debt and equity capital (El-Gazzar et al, 1999). The higher disclosure requirements and financial reporting quality that stem from IFRSs implies that the adoption of IFRSs gives a positive signal to investors as information asymmetry and agency costs tend to diminish (Tarca, 2004). It appears, therefore, that firms that adopt IFRSs tend to display lower potential for earnings management and managerial discretion (Leuz and Verrecchia, 2000; Ashbaugh, 2001; Ashbaugh and Pincus, 2001; Leuz, 2003). Less subjectivity

would lead to fewer opportunities to influence reported earnings and bonuses and/or mislead investors. Hence, in countries with strong investor protection mechanisms, such as the UK, the costs of IFRS adoption would tend to be lower because the level of earnings management is lower as managers are less inclined to manipulate the reported accounting figures (Nenova, 2003; Dyck and Zingales, 2004; Renders and Gaeremynck, 2007). In contrast, in countries with weak investor protection mechanisms, the scope for earnings management would tend to be higher and the quality of financial reporting lower, implying that the costs of adopting IFRSs would be higher (Ali and Hwang, 2000; Hung, 2001).

The study examines the financial statement changes following the adoption of IFRSs and assesses the effects of adoption on key financial measures. Based on studies, such as Harris and Muller (1999) and Leuz (2003), the decision to adopt is mainly associated with profitability, growth, leverage, liquidity, firm size and investment performance. The hypothesis that is tested is as follows:

H_1 *The adoption of IFRSs is more likely to exhibit a favourable impact on firm financial measures.*

Here, the study compares the financial numbers of firms that adopted IFRSs in the official adoption period, i.e. 2005, with those reported under the UK GAAP in the pre-official adoption period, i.e. 2004. The logistic regression that is employed uses a dummy variable as the dependent variable, which is dichotomous and takes two values, i.e. 1 for firms reporting their accounting figures under IFRSs in 2005 and 0 for (the same set of) firms reporting their accounting figures under the UK GAAP in 2004. The study uses the following logit model:

$$RR_{i,t} = a_0 + a_1\ Profitability_{i,t} + a_2\ Growth_{i,t} + a_3\ Leverage_{i,t} + a_4\ Liquidity_{i,t} + a_5\ Size_{i,t} + a_6\ Investment_{i,t} + e_{i,t} \qquad (1)$$

where $RR_{i,t}$ is a dummy variable representing the regulatory regime. $RR_{i,t}$ = 1 for financial numbers reported under IFRSs and $RR_{i,t}$ = 0 for financial numbers reported under the UK GAAP,

$Profitability_{i,t}$
$Growth_{i,t}$
$Leverage_{i,t}$ are proxies used to control for firm profitability, growth, leverage, liquidity, size and investment
$Liquidity_{i,t}$ respectively (see Appendix 2),
$Size_{i,t}$
$Investment_{i,t}$
$e_{i,t}$ is the error term.

3.2 Early Adoption of IFRSs

Following the benefits that stem from the implementation of IFRSs, firms might have been inclined to adopt IFRSs before the official adoption period. Indeed, the study shows that 141 firms had adopted IFRSs before the recommended date (early adopters). The early or normal adoption decision would depend on: (a) the impact of IFRSs as opposed to the UK GAAP on firm financial performance and contractual arrangements; (b) firms' managerial incentives to smooth the reported earnings; and (c) the political cost and stock market implications of firms' decision (see Fields et al, 2001). Firms would tend to adopt a standard when adoption is likely to result in minimal adverse economic and political consequences, or when it better suits their financial situation. Alternatively, a firm might renegotiate or enter into new financial contracts to offset the adverse impacts of adoption (see Holthausen and Leftwich, 1983). Early adopters may have been more innovative in implementing accounting change, and therefore would be better prepared to adopt the IFRSs before the official adoption date. On the other hand, normal adopters may choose to wait and learn from early adopters' adoption experience before they adopt, in order to adjust their policies and strategy accordingly.

Firms might be motivated to adopt IFRSs early for a number of reasons. Firm size considerations are closely related to the magnitude of reported earnings and may therefore influence managerial behaviour (Ali and Kumar, 1994). Firms might be inclined to abide by IFRSs early in order to satisfy financial analysts and investors and improve their stock market picture (see D' Souza, 1998; Han and Wang, 1998; Kim and Kross, 1998; Kasznik, 1999; Lambert, 2001). Following that large size is likely to attract regulatory and public attention, large firms might also be inclined to adopt IFRSs early to avoid financial number scrutiny or show that they distinguish themselves and display superior managerial ability (see Watts and Zimmerman, 1978; Zimmerman, 1983). In addition, the cost of IFRS compliance might be lower for large firms (see Ball and Foster, 1982), which might also have the necessary resources and means to implement IFRSs early (Sami and Welsh, 1992).

Following that IFRS adoption tends to lead to lower information asymmetry and cost of capital, firms that seek finance in the stock and/or money markets would be inclined to adopt IFRSs early (see Frankel et al, 1995). The increase in the equity capital and financial leverage as well as the use of the capital raised would tend to make firms more visible financially and attract the attention of the market participants and authorities. Given that IFRS accounting treatment and disclosure requirements tend to satisfy investors' needs, firms that are more dependent

on equity capital might be motivated to adopt IFRSs early in order to comply with the information demands of market participants (El-Gazzar et al, 1999; Murphy, 1999). In addition, firms with high financial leverage are likely to be bound to stricter debt covenants and agency costs, and therefore they might be inclined to adopt IFRSs early in order to provide evidence to lenders and shareholders of high financial reporting quality and assurance about the credibility of the reported accounting information (Holthausen, 1990; King et al, 1990; Meek et al, 1995; Dumontier and Raffournier, 1998; Cohen, 2004; Tendeloo and Vanstraelen, 2005). Reducing information asymmetry between managers and lenders would tend to have a favourable impact on debt covenant setting (Tarca, 2004). However, firms that are close to debt covenant violation may be less eager to adopt IFRSs early, as the latter are fair value-oriented and may introduce volatility in reported earnings and interest cover ratios (see Hung and Subramanyam, 2007), which may in turn lead firms to financial distress and eventually to debt covenant violation (see May, 1995).[3] The questions relating to whether IFRS implementation is likely to introduce variability in earnings and whether firms that are close to debt covenant violation are less likely to adopt IFRSs early will be investigated later on in this study.

Firms that adopt IFRSs early are likely to be more profitable as they may be better able to absorb the adverse financial effects of IFRS adoption and costs of compliance (Li and McConomy, 1999). The benefits that stem from IFRS adoption, such as comparability, lower information asymmetry and cost of capital (see Section 2.1), can be regarded as an indicator of good management and good performance and would therefore be expected to positively impact on stock returns[4] (see Cuijpers and Buijink, 2005). Hence, profitable firms might be inclined to distinguish themselves from other firms by adopting IFRSs early in order to improve their financial profile or raise finance on better terms (Renders and Gaeremynck, 2007). Also, in their effort to maintain the favourable rates of return and/or further reinforce them, profitable firms might be motivated to adopt IFRSs early in order to make investors aware of their managerial ability and use of innovative accounting systems. This would in turn tend to further enhance firms' stock returns, market value and stock-related compensation plans (McKnight and Tomkins, 1999; La Porta et al, 2000; Reese and Weisbach, 2002). In a similar vein, firms with high growth measures are more likely to adopt IFRSs early in order to take advantage of the benefits of IFRS adoption and reinforce their development process, meet target growth rates, satisfy the expectations of investors and lenders, attract finance and improve their financial performance (see Brayshaw and Eldin, 1989; Trombley, 1989).

Following that the level of disclosure may vary between industries (see Cooke, 1991; McKinnon and Dalimunthe, 1993; Meek et al, 1995; Mitchell et al, 1995), the study uses industry classification as an additional explanatory factor of early IFRS adoption. The hypothesis that is tested is as follows:

H_2 *Given firms' financial situation, the (early or normal) IFRS adoption decision is likely to be associated with firms' intention to influence their financial measures.*

The study focuses on the identification of the motives for early adoption and the related impact on firm financial numbers. Hence, it contrasts empirically the financial attributes of early adopters to those of normal adopters, i.e. those firms that adopted IFRSs within the official adoption period. For early adopters, the study uses the financial numbers that were reported in the pre-official adoption period, i.e. 01/01/2004 - 31/12/2004. For normal adopters, the study uses the financial numbers that were reported in the official adoption period, i.e. 01/01/2005 - 31/12/2005. The logistic regression that is employed uses a dummy variable as the dependent variable, which is dichotomous and takes two values, i.e. 1 for early adopters of IFRSs and 0 for normal adopters. This categorisation is based on the examination of firms' financial statements and the identification of the timing of IFRS adoption. The study uses the following logit model:

$$TA_{i,t} = a_0 + a_1\ Profitability_{i,t} + a_2\ Growth_{i,t} + a_3\ Leverage_{i,t} + a_4\ Liquidity_{i,t} + a_5\ Size_{i,t} + a_6\ Investment_{i,t} + a_7\ CS_{i,t} + a_8\ Debt_{i,t} + a_9\ Industry_{i,t} + e_{i,t} \tag{2}$$

where $TA_{i,t}$ is a dummy variable indicating the timing of IFRS adoption. $TA_{i,t} = 1$ for early adopters and $TA_{i,t} = 0$ for normal adopters,

$CS_{i,t}$ is a dummy variable indicating the equity financing needs of firms. $CS_{i,t} = 1$ for firms that raised capital during the year of adoption and $CS_{i,t} = 0$ otherwise,

$Debt_{i,t}$ is a dummy variable indicating the debt financing needs of firms. $Debt_{i,t} = 1$ for firms that issued debt during the year of adoption and $Debt_{i,t} = 0$ otherwise,

$Industry_{i,t}$ is a dummy variable indicating industry classification. $Industry_{i,t} = 1$ for companies in the resources or utilities industries, $Industry_{i,t} = 2$ for companies in the construction or manufacturing industries and $Industry_{i,t} = 3$ for companies in the trade, transport, communications or business services industries (see Tarca, 2004). All other variables are defined as in equation (1).

Then, the study focuses on the pre-official adoption period, i.e.
2004, and tests for differences in the financial attributes and motives of
firms that chose to adopt early and those that did not. In particular, the
analysis above is repeated for early adopters as opposed to normal adopters
using financial measures reported in the pre-official adoption period. Over
the period under investigation, normal adopters had been using the UK GAAP
and had not yet adopted IFRSs. Essentially, normal adopters could be
regarded as non-adopters for 2004 as they adopted IFRSs in the official
adoption period, i.e. 2005.

3.3 Volatility and Earnings Management

As mentioned in Section 3.2, IFRSs are shareholder-oriented and encourage
the fair value approach to financial statement presentation to facilitate
investors' decision-making. Hence, under IFRSs, the financial events are
likely to be incorporated in a more timely fashion in the financial
statements (Alexander and Archer, 2001). The fair value orientation of IFRSs
is likely to introduce volatility in book values and reported earnings
(Andrews, 2005; Barth et al, 2005; Goodwin and Ahmed, 2006; Hung and
Subramanyam, 2007). Variation in accounting figures would signify lower
earnings management (Lang et al, 2003; Leuz et al, 2003; Lang et al, 2005).
Thus, IFRS adoption would tend to be associated with lower earnings
management and less smooth earnings. Lower earnings management would be
expected also because of the strong investor protection mechanisms that are
in place in the UK (see also Leuz et al, 2003). The volatility hypothesis
studies the effects of IFRS adoption on the variability of earnings, assets,
liabilities and equity. The volatility hypothesis is as follows:

H_3 *IFRS adoption is likely to introduce volatility in income statement*
       and balance sheet values.

The volatility in income statement and balance sheet values is
expressed by standard deviation. Here, the study is based on the
investigation of descriptive statistics and on the analysis of variance
using an *F*-test to account for differences in variances between the two
regulatory regimes, i.e. IFRSs and UK GAAP. The study also examines the
association between earnings volatility and firm size by splitting the
sample firms into small and large firms. The study focuses on normal
adopters using accounting numbers reported under IFRSs in the official
adoption period as opposed to their accounting numbers reported under the UK
GAAP in the pre-official adoption period. The analysis is then repeated for
early adopters using financial numbers reported in their actual adoption

period, i.e. 2004, as opposed to normal adopters using financial numbers reported in the official adoption period, i.e. 2005.

The earnings management hypothesis examines whether IFRS adoption fosters or discourages the use of earnings management to influence firm financial performance (see Leuz et al, 2003; Barth et al, 2005) and takes the following form:

H_4 *IFRS adoption is likely to reduce the scope for earnings management.*

The first earnings management test relates to the examination of a) the volatility of the change in net profit scaled by total assets, ΔNP, and b) the volatility of the change in net profit, ΔNP, to the change in operating cash flows, ΔCF. Less volatile net profit, as in (a), and less volatile net profit compared to operating cash flows, as in (b), would tend to provide evidence of earnings management. The empirical investigation, e.g. descriptive statistics and analysis of variance, as well as the sample categorisations used to test H_4 are the same used to test H_3 as described above.

The second earnings management test is about the examination of the association between accruals and cash flows. This is carried out by first studying the Pearson correlation between accruals and cash flows separately in the pre-official adoption period and the official adoption period. Here, the study uses the financial measures of normal adopters, who used the UK GAAP in the pre-official adoption period and IFRSs in the official adoption period, hence facilitating such a comparison. A negative correlation would tend to be indicative of earnings management as firms tend to influence and increase accruals when cash flows appear to be lower (Land and Lang, 2002; Myers and Skinner, 2002). Secondly, the study uses an Ordinary Least Square (OLS) regression to determine the association between accruals and cash flows as well as profitability, leverage and size. This analysis focuses on the pre-official adoption period, where both IFRS and UK GAAP users existed, and therefore a comparison between the two could be facilitated. Here, the analysis utilises all sample firms, i.e. early adopters (IFRS users) and normal adopters (UK GAAP users for the period under investigation), using financial numbers reported in the pre-official adoption period. The regression model that is used is as follows (see Tendeloo and Vanstraelen, 2005):

$$ACCR_{i,t} = a_0 + a_1 \, Profitability_{i,t} + a_2 \, Leverage_{i,t} + a_3 \, OCF_{i,t} + a_4 \, Size_{i,t} + a_5 \, FRS_{i,t} + a_6 \, FRSOCF_{i,t} + a_7 \, FRSLNMV_{i,t} + a_8 \, FRSOPM_{i,t} + a_9 \, FRSTLSFU_{i,t} + e_{i,t} \qquad (3)$$

where $ACCR_{i,t}$ is accruals scaled by total assets. As in Barth et al
                    (2001), Barth et al (2005) and Dechow and Ge (2006),
                    accruals equal earnings less cash flows from operating
                    activities,

$OCF_{i,t}$ is operating cash flow scaled by total assets,

$FRS_{i,t}$ is a dummy variable indicating the financial reporting
                    system in use.
                    $FRS_{i,t}$ = 1 for firms reporting under IFRSs and $FRS_{i,t}$ = 0
                    for firms reporting under the UK GAAP,

$FRSOCF_{i,t}$ is a variable used to examine the impact of IFRSs on the
                    association between accruals and cash flows. It is the
                    multiplication of FRS and operating cash flows (OCF),

$FRSLNMV_{i,t}$ is a variable used to examine the impact of IFRSs on the
                    association between accruals and size. It is the
                    multiplication of FRS and the natural logarithm of market
                    value (LNMV),

$FRSOPM_{i,t}$ is a variable used to examine the impact of IFRSs on the
                    association between accruals and profitability. It is the
                    multiplication of FRS and operating profit margin (OPM),

$FRSTLSFU_{i,t}$ is a variable used to examine the impact of IFRSs on the
                    association between accruals and leverage. It is the
                    multiplication of FRS and total liabilities to
                    shareholders' funds (TLSFU). All other variables are
                    defined as in equation (1).

The third earnings management test relates to the examination of earnings management goals, such as to influence accounting numbers in order to report small positive profits rather than losses (see Burgstahler and Dichev, 1997; Leuz et al, 2003), as expressed by $SPP_{i,t}$ in the logit model below.

$$RR_{i,t} = a_0 + a_1\ Profitability_{i,t} + a_2\ Growth_{i,t} + a_3\ Leverage_{i,t} + a_4\ Liquidity_{i,t} + a_5\ Size_{i,t} + a_6\ Investment_{i,t} + a_7\ CS_{i,t} + a_8\ Debt_{i,t} + a_9\ SPP_{i,t} + e_{i,t} \qquad (4)$$

where $SPP_{i,t}$ is a dummy variable indicating a measure of small
                    positive profits. $SPP_{i,t}$ = 1 if net profit scaled by total
                    assets is between 0 and 0.01 (see Lang et al, 2003; Barth
                    et al, 2005) and $SPP_{i,t}$ = 0 otherwise. All other variables
                    are defined as in equation (1).

A negative coefficient on $SPP_{i,t}$ would show that under IFRSs firms tend to manage their profit figures less frequently in order to report small positive rather than negative amounts as opposed to the UK GAAP regime. Here, the study focuses on normal adopters and compares the accounting numbers reported in the official adoption period with those reported in the pre-official adoption period.

The fourth earnings management test relates to the speed by which losses are recognised. The timely recognition of large losses should provide evidence of lower earnings management (Ball et al, 2000; Lang et al, 2005). This would suggest that in the presence of earnings management,

large losses would not tend to be frequent. In the logit model below, timely loss recognition is expressed by $LNL_{i,t}$.

$$RR_{i,t} = a_0 + a_1 Profitability_{i,t} + a_2 Growth_{i,t} + a_3 Leverage_{i,t} + a_4 Liquidity_{i,t} + a_5 Size_{i,t} + a_6 Investment_{i,t} + a_7 CS_{i,t} + a_8 Debt_{i,t} + a_9 LNL_{i,t} + e_{i,t} \qquad (5)$$

where $LNL_{i,t}$ is a dummy variable indicating a measure of timely loss recognition. $LNL_{i,t} = 1$ if net profit scaled by total assets is less than -0.20 (see Lang et al, 2003 and 2005) and $LNL_{i,t} = 0$ otherwise. All other variables are defined as in equation (1).

A positive coefficient on $LNL_{i,t}$ would suggest that under IFRSs firms tend to recognise large losses more readily than under the UK GAAP. As above, the study focuses on normal adopters and compares the accounting numbers reported in the official adoption period with those reported in the pre-official adoption period.

3.4 Value Relevance

Following the discussion presented in Section 2.1, firms reporting under IFRSs would be expected to exhibit higher quality accounting measures. Subsequently, the study would expect that the particular accounting measures display higher value relevance (Barth et al, 2001 and 2005). The hypothesis that is tested is as follows:

H_5 *Accounting measures reported under IFRSs are likely to exhibit higher value relevance.*

The first test that is used to test the above hypothesis is based on the examination of the explanatory power R^2 and the coefficients obtained from the OLS regression of share price on book value per share and net profit per share. More precisely, the study focuses first on the pre-official adoption period and applies the analysis separately for IFRS and UK GAAP users, i.e. early and normal adopters respectively, using financial numbers reported in 2004. Secondly, following that there are no UK GAAP users in the official adoption period, the study focuses on normal adopters and compares their financial numbers as reported under IFRSs in the official adoption period with those reported under the UK GAAP in the pre-official adoption period. The model used in the study is as follows (see Harris et al, 1994; Lang et al, 2003; Barth et al, 2005; Lang et al, 2005; Hung and Subramanyam, 2007):

$$P_{i,t} = a_0 + a_1 BVPS_{i,t} + a_2 NPPS_{i,t} + e_{i,t} \qquad (6)$$

where $P_{i,t}$ is total market value of equity at year-end[5] deflated by number of shares outstanding,

$BVPS_{i,t}$ is total book value of equity deflated by number of shares outstanding,

$NPPS_{i,t}$ is total net profit deflated by number of shares outstanding. All other variables are defined as in equation (1).

The second value relevance test is based on the explanatory power R^2 and the coefficients obtained from the OLS regression of profits on stock returns. High quality profits would be expected to exhibit higher association with stock returns. The research design is as described above for the first value relevance test. The model is presented below (see Barth et al, 2005; Lang et al, 2005):

$$NPP_{i,t} = a_0 + a_1\ AR_{i,t} + e_{i,t} \qquad\qquad\qquad (7)$$

where $NPP_{i,t}$ is net profit divided by beginning of year share price,
$AR_{i,t}$ is the annual stock return at year-end[6]. $AR_{i,t}$ is calculated as follows: $\dfrac{P_{it} - P_{it-1}}{P_{it-1}}$, where P_{it} is the price of security i at the end of period t, and P_{it-1} is the price of security i at the end of period $t-1$. All other variables are defined as in equation (1).

The study also examines whether the association between profits and stock returns is different for good news, i.e. positive stock returns, and bad news, i.e. negative stock returns (see Barth et al, 2005). Studying the case where firms have bad news would be more insightful for the assessment of the quality of financial reporting, because firms are less inclined to manage their accounting numbers when they have good news (Ball et al, 2000). To carry out this analysis, the study uses equation (7) separately for good and bad news subsamples. This procedure is followed separately for financial numbers reported under IFRSs and the UK GAAP as described above for the first value relevance test.

The third value relevance test relates to the examination of how the impact of using IFRSs as opposed to the UK GAAP on firm book value and net profit is associated with stock returns. The study focuses on normal adopters, who were UK GAAP users in the pre-official adoption period, and can therefore be used for the comparative analysis between the UK GAAP and IFRSs, and uses financial measures reported in the official adoption period. The OLS regression model that is used in the study is as follows (see Hung and Subramanyam, 2007):

$$AR_{i,t} = a_0 + a_1\ BVPS_{i,t} + a_2\ BVCHA_{i,t} + a_3\ NPPS_{i,t} + a_4\ NPCHA_{i,t} + e_{i,t} \qquad (8)$$

where $AR_{i,t}$ is the annual stock return at year-end[7],

$BVPS_{i,t}$ is total book value of equity under IFRSs deflated by number of shares outstanding,

$BVCHA_{i,t}$ is a variable indicating the change in firm book value following the transition from the UK GAAP regime (fiscal year 2004) to the IFRS regime (fiscal year 2005). $BVCHA_{i,t}$ is calculated as follows: [total book value of equity under IFRSs (using 2005 financial measures) – total book value of equity under the UK GAAP (using 2004 financial measures)] divided by total book value of equity under the UK GAAP (using 2004 financial measures),

$NPPS_{i,t}$ is net profit under IFRSs deflated by number of shares outstanding,

$NPCHA_{i,t}$ is a variable indicating the change in firm net profits following the transition from the UK GAAP regime (fiscal year 2004) to the IFRS regime (fiscal year 2005). $NPCHA_{i,t}$ is calculated as follows: [net profit under IFRSs (using 2005 financial measures) – net profit under the UK GAAP (using 2004 financial measures)] divided by net profit under the UK GAAP (using 2004 financial measures). All other variables are defined as in equation (1).

3.5 Evaluation of the Pre-Official and Official IFRS Adoption Periods

Using different methods of financial reporting prior to the official IFRS adoption period would signify that firms would tend to exhibit different financial characteristics in the pre-adoption period due to the different impacts on their financial statements. Following the adoption of IFRSs, firms would tend to present no substantial financial differences in the post adoption era due to the consistency in the preparation and presentation of their accounting figures. The hypothesis is as follows:

H_6 *Firms that used different methods of financial reporting prior to adoption are likely to display different financial characteristics in the pre-adoption period and no substantial financial differences in the official adoption period.*

To examine whether the IFRS regime is different to the UK GAAP regime and whether they affect firms' financial performance in a different manner, the study tests for differences in the financial numbers of firms in the pre-official adoption period and the official adoption period. In particular, the study compares the financial characteristics of early and normal adopters in the pre-official adoption period, i.e. 2004. This comparison would be expected to result in significant differences between early and normal adopters, as in the pre-official adoption period, the former had been using IFRSs, while the latter had been using the UK GAAP. Then, the study compares early and normal adopters in the official adoption

period, i.e. 2005. Here, both sets of firms have employed IFRSs, so the comparison would be expected to display no significant differences between firms. To carry out the analysis, the study develops two logit models; one model using financial numbers reported in the pre-official adoption period, and another model using financial numbers reported in the official adoption period. The logit models are respectively as follows:

$$TAP_{i,t} = a_0 + a_1\ Profitability_{i,t} + a_2\ Growth_{i,t} + a_3\ Leverage_{i,t} + a_4\ Liquidity_{i,t} + a_5\ Size_{i,t} + a_6\ Investment_{i,t} + e_{i,t} \qquad (9)$$

where $TAP_{i,t}$ is a dummy variable indicating early and normal IFRS adoption in the pre-official adoption period. $TAP_{i,t} = 1$ for early adopters and $TAP_{i,t} = 0$ for normal adopters in the pre-official adoption period. All other variables are defined as in equation (1).

$$TAO_{i,t} = a_0 + a_1\ Profitability_{i,t} + a_2\ Growth_{i,t} + a_3\ Leverage_{i,t} + a_4\ Liquidity_{i,t} + a_5\ Size_{i,t} + a_6\ Investment_{i,t} + e_{i,t} \qquad (10)$$

where $TAO_{i,t}$ is a dummy variable indicating early and normal IFRS adoption in the official adoption period. $TAO_{i,t} = 1$ for early adopters and $TAO_{i,t} = 0$ for normal adopters in the official adoption period. All other variables are defined as in equation (1).

4 Research Structure

4.1 Datasets and Empirical Methods

The analysis focuses on those firms that adopted IFRSs early or normal. The effective date for the adoption of IFRSs for listed firms that belong to member states of the European Union is 1 January 2005. The empirical analysis concentrates on the official adoption period of IFRSs, i.e. 2005, and the pre-official adoption period, i.e. 2004. The sample consists of 241 UK firms. 100 firms adopted IFRSs in the official adoption period (i.e. normal adopters), while 141 firms adopted in the pre-official adoption period (i.e. early adopters). Accounting and financial data were collected from DataStream. Information about the accounting policies of the sample firms was obtained from their financial statements, which were collected from the Financial Times Annual Report Service. All sample firms are listed on the London Stock Exchange. The analysis has excluded banks, insurance, pension and brokerage firms, as their accounting measures are not always comparable with those of industrial firms. Appendix 1 presents the industrial sector structure of the sample firms. Appendix 2 shows the explanatory variables that are employed in the empirical analysis. The research hypotheses are tested using the binary logistic regression analysis and the OLS regression analysis.

The logistic regression is useful in analysing categorical data, where the dependent variable is dichotomous and takes only two values, i.e.

0 and 1. The parameters of the logistic regression are estimated based on the maximum likelihood method, while the hypothesis testing is based on the Wald statistic. The diagnostic tests entailed an assessment of: (i) the relative significance of the estimated coefficients (p-value < 0.01; two-tailed); (ii) the magnitudes of the logit models' Studentized residuals (< ±3.0); and (iii) the naive proportional chance model (see Joy and Tollefson, 1975). All the logistic regression results reported in this study have consistently passed those tests.

The study has accounted for heteroscedasticity, autocorrelation, departure from normality and multicollinearity, where appropriate. The tests that have been performed to check the OLS assumptions are the White test and the Autoregressive Conditional Heteroscedasticity (ARCH) test for heteroscedasticity; the Durbin-Watson test and the Breusch-Godfrey test for autocorrelation; the Jarque-Bera test for the departure from normality of residuals; and the correlation coefficients among the test variables for multicollinearity.

4.2 Research Limitations

The study aims to describe the behaviour and motivation of firms to improve their financial performance with respect to the implementation of IFRSs. The accounting measures that are employed in the study are intended to explain the managerial decisions of firms. However, the behaviour and the actual decision-making of managers may not always be observable. For example, it may be hard to identify the real motives and intentions behind the decision of firms to adopt IFRSs early. In such cases, the theoretical predictions might not capture sufficiently the relation between firms' accounting policy choice and the related accounting measures, or the potential for opportunistic behaviour. It may be, for example, that firms adopt IFRSs when they display favourable financial figures, which signifies that the decision to adopt is closely related to firm financial performance (see Lang and Lundholm, 1993). Thus, the measures that are employed should only be considered as proxies for the attributes that are measured in the study.

Another major issue is the extent to which stock returns reflect firms' financial performance and how reliably may be used by investors for financial decision-making. This depends on how efficient the stock market is and how quickly investors realise the accuracy and weight of reported accounting information. For example, investors have their own expectations and set of values and therefore may interpret early adoption differently (see Dye, 1998; Verrecchia, 2001). Future research might want to consider the development of a comprehensive framework for analysing the behaviour of

firms and capturing the actions of managers. Another limitation is that the findings of the study relate to the case of the UK, where the UK GAAP is shareholder-oriented and strong investor protection mechanisms are in place, and therefore cannot be generalised to stakeholder-oriented settings (e.g. Germany) or settings with weak investor protection laws (see Hung and Subramanyam, 2007).

5 Empirical Results

5.1 Descriptive Statistics

The descriptive statistics displayed in Table 1a present the following sets of comparisons: a) financial numbers of normal adopters, i.e. first-time users, reported under the UK GAAP versus those reported under IFRSs, b) early versus normal adopters – all IFRS users – using financial numbers prevailing in the year of their actual adoption, and c) IFRS (early adopters) versus UK GAAP users (non-IFRS adopters: normal adopters to be) using financial numbers prevailing in the pre-official adoption period.

With regard to the first set of analysis, Panels A and B show that under the UK GAAP firms appear to exhibit higher accruals (ACCR). Although the particular result does not control for other factors, this would possibly indicate that under the UK GAAP firms were more likely to manage their accounting numbers than under IFRSs. This finding could also be supported by the larger negative profits (LNL) and smaller positive profits (SPP) that firms exhibit under IFRSs. Under IFRSs, firms also display higher book value of equity per share (BVPS), profitability (NPP, NPPS, SPTP, ΔNP and OPM) and leverage (LTLCE and INTCOV). Following the benefits of IFRS adoption and the fair value orientation of IFRSs, IFRSs also appear to lead to higher annual stock returns (AR) and return on assets (ROA).

Compared to normal adopters, early adopters display higher profitability (NPP, NPPS, SPTP and EPS), size (LNMV, SALESHA and NAVSH), dividend measures (DIVPAY, DIVYI and DIVSH), leverage (LTLCE) and growth (PEG). In contrast, normal adopters exhibit higher liquidity measures (CUR, QUI and CASH). Focusing on the pre-official adoption period and comparing early adopters with UK GAAP users (non-IFRS adopters), Panels A and B show that the comparison leads to findings very similar to those reported above. In addition to the results presented above, Panels A and B also show that early adopters exhibit more incidents of large negative profits (LNL) and fewer incidents of small positive profits (SPP). This would suggest that early adopters are more likely to timely recognise losses and less likely to manage their accounting figures than UK GAAP users.

Table 1b (Panels A and B) splits normal adopters into small and large firms, and examines how firms of different size respond to the transition

to IFRSs. Panel A shows that under IFRSs small adopters exhibit higher profitability (NPPS and EPS), leverage (LTLCE and INTCOV) and growth (DIVSHG). Small adopters also display higher book value of equity (BVPS) following the fair value emphasis of IFRSs. Panel B shows that for large adopters the comparison between the UK GAAP and IFRSs leads to similar findings. Here, most of the increases reported for the measures above appear to be larger for large adopters compared to those obtained for small adopters. Under IFRSs, large adopters also display evidence of lower earnings management, since they exhibit larger negative profits (LNL) and smaller positive profits (SPP) as well as lower liquidity (OCF and CFSH) and accruals (ACCR).

5.2 Financial Statement Effects of IFRS Implementation
Table 2 presents the results of the comparison between the IFRS and the UK GAAP regimes. Table 2 focuses on normal adopters and compares their financial numbers as reported under IFRSs in 2005 with the ones reported under the UK GAAP in 2004. The results provide evidence that H_1 holds, implying that IFRS implementation is more likely to exhibit a favourable impact on the financial measures of adopters. The transition to IFRSs does not appear to adversely affect firm profitability. Under IFRSs, firms tend to exhibit higher values on a number of profitability measures, such as operating profit margin (OPM), net profit margin (NPM) and earnings per share (EPS), compared to the UK GAAP regime. The higher profitability that is reported under IFRSs enables firms to distribute higher dividends to their shareholders as shown by the positive coefficient of dividend per share (DIVSH). Whether, the higher profitability observed under IFRSs is volatile or not, following the fair value orientation of IFRSs, is an issue that will be studied further below in Section 5.4. IFRS implementation has also favourably affected the growth measures of firms, as expressed by market to book value (MVBV). It appears that the transformation of firm accounts from UK-based into IFRS-based together with the international dimension and use of IFRSs as a widely-accepted financial reporting language have reinforced adopters' growth prospects. Table 2 also shows that, under IFRSs, firms tend to display higher leverage measures, i.e. long-term liabilities to capital employed (LTLCE), total liabilities to shareholders' funds (TLSFU) and interest cover (INTCOV). The higher borrowing that firms appeared to have engaged to under IFRSs may be related to the higher quality of IFRS financial reporting (see Section 2.1) that enhances the credibility of firm financial statements. This would in turn provide lenders with more certainty and information about the ability of firms to timely meet their financial obligations and would be likely to

eventually lead to more favourable borrowing terms.[8] Following the higher leverage measures and associated financial obligations that are reported for the IFRS era, Table 2 displays that firms consequently tend to exhibit lower liquidity, as shown by the negative coefficient of cash flow per share (CFSH).

5.3 Early Adoption of IFRSs

Table 3 (Panel A) presents the comparative analysis of the financial characteristics of early and normal adopters and their motives to adopt early or on time. The results show that H_2 holds, suggesting that the decision of early or normal IFRS adoption tends to be associated with firms' intention to influence their financial measures. In Panel A, the industry control variable coefficient (INDUSTRY) indicates that construction and manufacturing firms are more likely to adopt IFRSs early. In a similar vein, the size control variable coefficient (LNMV) shows that large firms also tend to adopt early. Consistent with the literature and following that they are visible and that their actions can be easily spotted, large firms are likely to be early adopters (Ayres, 1986; Iatridis and Joseph, 2006). Early adopters also appear to exhibit higher growth measures, i.e. market to book value (MVBV). This indicates that by adopting IFRSs to enhance their financial reporting system and quality of reported financial information, firms may also impress the stock and money markets and thus facilitate their growth plans (Trombley, 1989). Panel A shows that early adopters tend to have stronger equity and debt financing needs than normal adopters. In particular, in the year of their adoption, early adopters generally appeared to raise equity capital and issue debt more intensely than normal adopters, as expressed by the equity and debt financing needs dummy variables, i.e. CS and DEBT respectively. This finding is also supported by the positive coefficients of share capital to capital employed (SCCE), capital gearing (CGEAR) and interest cover (INTCOV), which are higher for early adopters. Following the benefits and impact of IFRSs on firm financial performance, as outlined in Section 2.1, IFRS adoption would tend to provide lenders with a sort of additional safety and information measure relating to the quality of the preparation of firm accounts and debt-paying ability. Thus, firms with higher leverage measures would be inclined to adopt IFRSs early. Similar considerations hold for firms that raise finance in the stock markets and need to make a good impression to investors regarding their financial reporting quality in order to positively influence the issue of share capital. The stronger financing needs of early adopters are also evidenced by the positive coefficient of the plowback ratio (PLOWB), implying that early adopters

tend to retain larger part of their profits for reinvestment purposes. The findings above are consistent with the extant literature as presented in Section 3.2 (e.g. Frankel et al, 1995; El-Gazzar et al, 1999; Murphy, 1999; Cohen, 2004; Tendeloo and Vanstraelen, 2005). Despite the higher leverage measures, Panel A shows that early adopters tend to display higher operating profit margin (OPM), indicating that early IFRS implementation has not adversely affected firm profitability, or that the IFRS transition costs and other potential adverse effects of IFRS adoption have been absorbed (see Li and McConomy, 1999; Renders and Gaeremynck, 2007).

The analysis above is repeated for early adopters as opposed to normal adopters using financial measures reported in the pre-official adoption period, i.e. 2004, where normal adopters were regarded as non-IFRS adopters. The results presented in Panel B are similar and show that early adopters tend to exhibit higher book values of equity (BVPS), size (LNMV), profitability (ROCE and NPM), leverage (CGEAR) and have raised equity capital during the year of adoption (CS). Following the higher leverage, early adopters exhibit lower cash flows per share (CFSH). Early adopters also display higher stock returns (AR) compared to non-adopters, reflecting the appreciation of the stock market regarding IFRS adoption.

5.4 Financial Statement Measures and Volatility

Table 1a (Panel C) focuses on normal adopters and compares the UK GAAP with the IFRS regime. It shows that H_3 holds, suggesting that the transition to IFRSs is likely to introduce volatility in income statement and balance sheet figures.[9] Panel C indicates that IFRS implementation appears to generally lead to greater volatility in firm profitability (NPPS, NPCHA, SPTP and ΔNP) and consequently to more volatile income-related figures, such as dividend measures (DIVPAY and DIVSH). Following the higher income volatility under IFRSs, which might have affected the income-related debt covenants, firms generally appear to experience higher volatility in leverage measures (LTLCE and TLSFU). Conversely, IFRS adoption appears to result in lower volatility in liquidity (OCF and CFSH). The higher volatility that is observed for certain income statement and balance sheet figures, including book values of equity (BVPS), is likely to be associated with the fair value orientation of IFRSs. This by no means mitigates or diminishes the positive effects of IFRS adoption that above all fosters the presentation of high quality accounting information and the reflection of the true and fair firm picture on corporate accounts. In conclusion, the higher volatility that is reported under IFRSs signifies the lower potential for earnings management and smoothing. This is also supported by the findings presented in Panels A and B, which show that under IFRSs firms

exhibit larger negative profits (LNL) and smaller positive profits (SPP). The earnings management potential under IFRSs will be further examined below.

With regard to small and large normal adopters, Table 1b (Panels A and B) indicates that for both sets the transition to IFRSs appears to introduce volatility in their key accounting measures. Panel A shows that under IFRSs small adopters exhibit higher volatility in profitability (ΔNP and EPS), leverage (LTLCE) and liquidity (CFSH). Small adopters also display more volatile book values of equity (BVPS). Like small adopters, Panel B shows that under IFRSs large adopters exhibit higher volatility in profitability (NPP, NPPS, NPCHA, SPTP, OPM and NPM), leverage (LTLCE and INTCOV) and book values of equity (BVPS). Large adopters also exhibit more volatile return on assets (ROA), while they display lower volatility in liquidity (CFSH), growth (PEG) and price to earnings (PE).

5.4.1 Income Volatility and Debt Covenant Violation
The fair value orientation of IFRSs and the resulting income volatility may give rise to financial distress or lead to debt covenant violation for adopting firms. Here, the study examines whether volatility in income and balance sheet figures has adversely affected firms' financial position. Firstly, the study focuses on normal adopters and compares their financial numbers reported in the pre-official adoption period with those reported in the official adoption period. Secondly, based on the above set of firms, the study concentrates in high risk groups, such as high debt firms[10], whose creditability and debt-paying ability might be more affected by income volatility. On both occasions, the empirical analysis is based on equation (1) and focuses on the behaviour of interest cover (INTCOV) of firms before and after official adoption (see also Ayres, 1986). Thirdly, the study also focuses on early and normal adopters using the financial numbers reported in the period of their actual adoption and is based on equation (2).

As shown in Table 2, under IFRSs normal adopters appear to display higher interest cover (INTCOV), implying that IFRS adoption and the resulting volatility in accounting figures have not adversely affected their ability to pay interest on outstanding debt and, ceteris paribus, do not lead to financial distress. Table 4 shows that under the IFRS regime high debt firms tend to display higher interest cover (INTCOV) than under the UK GAAP. This suggests that despite their higher leverage, their ability to adequately fulfil their financial obligations is not mitigated by the volatility that arises following IFRS adoption. This appears to be supported by the higher profitability (OPM) and size (LNMV) measures that

high debt firms display under the IFRS regime, which in turn strengthen the interest cover ratio. With regard to early and normal adopters, the findings presented in Table 3 are similar to those reported above and show that early adopters tend to exhibit higher interest cover (INTCOV).

5.5 Earnings Management

Table 5 examines the earnings management potential under IFRSs in comparison with the UK GAAP regime. The results show that H_4 holds, implying that IFRS adoption is likely to reduce the scope for earnings management.[11] The first earnings management test (Panel A) indicates that under IFRSs normal adopters appear to exhibit higher volatility in the change in net profit (ΔNP). This implies that under IFRSs the reported financial numbers are less smooth than those under the UK GAAP. In a similar vein, the volatility of the change in net profit to the change in operating cash flows (ΔNP/ΔCF) is higher under IFRSs, suggesting that the volatility of the change in net profit is higher than the change in operating cash flows. If firms used accruals to influence their earnings, the volatility of net profit would be expected to be lower than the volatility of operating cash flows (Barth et al, 2005).

The second earnings management test is firstly based on the correlation between accruals and cash flows. The Pearson correlation (Panel B) leads to results that are consistent with those found in Barth et al (2005) and shows that under IFRSs the association between accruals and cash flows is significantly positive and close to zero, while it appears to be negative under the UK GAAP. This indicates that IFRS implementation tends to reduce the scope for earnings management. A negative correlation between accruals and cash flows is likely to suggest that firms with low cash flows tend to increase their accruals in order to manage their reported accounting numbers. The opposite would hold in the case of a positive correlation. Panel B therefore shows that under IFRSs firms tend to exhibit less smooth earnings.

The second earnings management test is then based on the OLS regression of accruals on cash flows, profitability, leverage and size. Panel C shows that FRS, which provides an indication of the financial reporting system in use, is significantly negative. This suggests that firms reporting under the UK GAAP appear to exhibit higher accruals, indicating that they are likely to be more prone to earnings smoothing. Panel C also shows that the measure used to examine the impact of IFRSs on the association between accruals and cash flows (FRSOCF) is significantly positive, implying that firms reporting under IFRSs engage significantly less in earnings management than firms reporting under the UK GAAP. Similar

considerations apply when testing the association between accruals and profitability (FRSOPM), implying that under IFRSs firms with low profitability would not tend to increase accruals. Likewise, following the negative association between accruals and leverage (FRSTLSFU), Panel C indicates that firms reporting under IFRSs and exhibiting high leverage would not be inclined to increase accruals. In a similar vein, accruals are negatively associated with size (FRSLNMV), following that large firms would not be inclined to increase their accruals in order to avoid attracting attention and potential scrutiny.

The third earnings management test examines whether firms manage their accounting numbers to report small positive profits rather than losses. Panel D shows that SPP is significantly negative, indicating that under IFRSs firms report small positive earnings less frequently than under the UK GAAP. This finding is consistent with the results reported above and suggests that under the IFRS regime leads to the reporting of less smooth earnings.

The fourth earnings management test assesses the timely recognition of large losses in the income statement as a measure of earnings management. Based on the significantly positive coefficient of LNL, it indicates in Panel E that under IFRSs firms tend to recognise large losses more timely than under the UK GAAP. This finding shows that under the UK GAAP firms tend to smooth their earnings by delaying the recognition of large losses. Overall, following the less frequent reporting of small profits, as a means of managing earnings toward a target, and the timely recognition of large losses in the income statement, it appears that under IFRSs firms tend to engage to less earnings smoothing.

5.6 Value Relevance

Table 6 examines the quality of the accounting measures reported under IFRSs compared to the UK GAAP regime. The findings are consistent with Barth et al (2005), Tendeloo and Vanstraelen (2005) and Hung and Subramanyam (2007), and indicate that H_5 holds, suggesting that IFRS adoption is likely to lead to accounting measures that exhibit higher value relevance. Focusing on the pre-official adoption period, i.e. 2004, the first value relevance test (Table 6, Panel A) shows that compared to non-IFRS users, i.e. normal adopters, early adopters exhibit more value relevant financial measures. This is evidenced by the higher R^2 as well as the larger significantly positive coefficients of net profit per share (NPPS) and book value of equity per share (BVPS). Similar findings are obtained when focusing on normal adopters and comparing their financial numbers reported in the official adoption period with those reported in the pre-official

adoption period. The financial numbers reported under IFRSs tend to be more value relevant following the higher R^2 and the larger significantly positive coefficients of NPPS and BVPS.

The second value relevance test (Panel B) leads to similar results and indicates that with regard to the pre-official adoption period, early adopters exhibit more value relevant measures as shown by the higher R^2 and the larger significantly positive coefficient of annual stock returns (AR). Panel B shows that this is also the case for normal adopters, who appear to display more value relevant measures when reporting under IFRSs compared to the UK GAAP.

To further investigate the validity of the results above, the study splits the above sets of firms into those that report good news and those that report bad news, as expressed by the sign of stock returns. Panel C shows that in the pre-official adoption period early adopters with good news exhibit more value relevant measures than normal adopters, as shown by the higher R^2 and the larger significantly positive coefficient of AR. The same applies for the case of early adopters reporting bad news. Similar findings are obtained when examining normal adopters and comparing IFRS-based financial numbers with UK GAAP-based financial numbers. Panel D shows that under IFRSs normal adopters with good news display more value relevant measures than under the UK GAAP. The same holds when focusing on normal adopters with bad news.

The third value relevance test (Panel E) examines the quality of the accounting measures of normal adopters focusing on the change in their financial numbers that arises following the transition from the UK GAAP regime to IFRSs. Panel E indicates that under IFRSs the change in firm book value (BVCHA) and net profits (NPCHA) is significantly positive, suggesting that IFRS adoption is value relevant and has favourably affected balance sheet and income statement figures, as expressed by the change in book values and net profits respectively. The study obtains similar findings when applying the analysis above for early adopters (see Panel F). Comparing the results obtained for early and normal adopters, the study finds that the impact of IFRS implementation appears to be more sound and favourable in the case of early adopters, as shown by the higher R^2 and the larger significantly positive coefficients of BVCHA and NPCHA.

5.7 Evaluation of the Pre-Official and Official IFRS Adoption Periods
Here the study tests for differences between early and normal adopters in the official and pre-official adoption periods. As expected, Table 3 (Panel B) shows that early and normal adopters are significantly different in the pre-official adoption period, as they were using different financial

reporting systems, i.e. IFRSs and UK GAAP respectively. To recall, in the pre-official adoption period, early adopters generally tended to exhibit higher book values of equity, size, profitability, leverage and stock returns, and lower liquidity. In contrast, early and normal adopters exhibit no particular significant differences in the official adoption period (not reported here), as they use the same financial reporting system. In particular, the only significant difference that was found between early and normal adopters is size (LNMV), which of course is not affected by the IFRS adoption or non-adoption decision. The findings above show therefore that H_6 holds and imply that the two financial reporting systems display significant differences, as presented in Section 2.2, and affect firms in a different manner. Future research should concentrate in a per case detailed and distinctive examination of the reported differences between IFRSs and the UK GAAP and report how the underlying differences affect firm performance and future prospects.

6 Conclusions

In the light of the compulsory implementation of IFRSs, as of 1 January 2005, this study investigates the impact of IFRS adoption on UK firms' financial numbers as well as their incentives to adopt IFRSs timely or early. Along with the IFRS adoption implications and the timing of adoption, the study also explores major issues, such as volatility effects of IFRS implementation, earnings management potential and value relevance of IFRS-based accounting numbers. The study indicates that the two financial reporting systems display significant differences and therefore affect firms in a different manner.

Despite the transition costs, IFRS implementation has favourably affected the overall financial performance and position of firms and is likely to lead to more value relevant accounting measures (see Barth et al, 2005; Tendeloo and Vanstraelen, 2005; Hung and Subramanyam, 2007). Under IFRSs, key financial figures, such as profitability and growth, appear to be higher. Also, firms exhibit higher leverage measures, following the high IFRS financial reporting quality, which can reduce the potential uncertainty and risk that is attributed to a firm (see Ball et al, 2003) and subsequently enhance the credibility and the borrowing bargain power of firms.

The findings are consistent with positive accounting theory as an explanation of managers' choice of early adoption (see Holthausen, 1990; Fields et al, 2001; Chung et al, 2002). Firms tend to time the adoption of accounting regulation in order to reap the benefits of the high IFRS financial reporting quality and influence their accounting numbers. The

study indicates that early adopters are larger and visible in the stock market and display higher growth and leverage as well as stronger equity and debt financing needs. Early adopters also exhibit higher profitability, which would allow them to adequately cover the costs of transition to and compliance with IFRSs.

Following the fair value orientation of IFRSs, IFRS adoption is likely to introduce volatility in income statement and balance sheet figures. The reporting of less smooth accounting numbers together with the timely recognition of large losses in the income statement and the less frequent reporting of small profits, as a means of managing earnings toward a target (see Barth et al, 2005), signifies the lower potential for earnings management under IFRSs. Despite the higher volatility, adopters' interest cover ratio has not been adversely affected, implying that IFRS adoption does not lead to debt covenant violation or financial distress (see also Ayres, 1986).

6.1 Implications of the Study

This study is useful for investors, financial analysts, accounting regulators and stock market authorities. IFRS implementation standardises the accounting practice and reduces information asymmetry and the scope for earnings manipulation, thereby enhancing the stock market efficiency. The question that arises here is how accounting regulation should be improved to encompass all possible areas of accounting practice.

The study gives information about firms' behaviour relating to the introduction of accounting regulation, which is essential for accounting standard setting bodies, especially when they prepare or review a change in accounting regulation. Firms would tend to adopt an accounting policy or standard when their adoption is likely to result in minimal adverse economic consequences. In certain cases, such as the first-time adoption of IFRSs, the flexibility in financial reporting allows firms some leeway in the implementation of IFRSs, and thus gives firms the ability to adjust their accounting policies accordingly. The findings are useful for financial analysts and stock market authorities, as they enable them to reinforce the current auditing and supervisory framework and assist investors in making unbiased predictions about firms' future performance. The study also formulates the basis for studying firms' behaviour with regard to other accounting settings.

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Notes

[1] Unlike common-law countries, in code-law countries, the stock market is less active and accounting information is directed towards the needs of banks, financial institutions and the government (Ball et al, 2000; La Porta et al, 2000). This would tend to call for less public disclosure and thus enhance the scope for earnings manipulation (Leuz et al, 2003). Firms that engage into earnings manipulation practices would be reluctant to adopt IFRSs early in order to protect their private benefits (Renders and Gaeremynck, 2007). Future research should examine the association between disclosure-enhancing IFRSs, earnings manipulation and weak investor protection regimes.

[2] Given that the implementation of IFRSs is compulsory for listed firms (that operate within the EU), in certain cases where IFRS adoption proves to be burdensome and the costs of compliance exceed the costs of non-compliance, firms might consider exiting the market to escape using IFRSs and relieve their financial situation. A decision to exit the market should follow a total cost-benefit analysis taken from a long-run perspective and might apply for firms of small size and profitability. This falls outside the scope of the study and could be an object for future research. Future research should also focus on the comparison of compliance and transition costs between countries with weak and strong investor protection laws.

[3] Fair values and their effects on earnings volatility may enhance managerial discretion in order to smooth earnings, and hence may increase the scope for accounting number manipulation to avoid debt covenant violation (Al Jifri and Taylor, 2002). Also, the restatement of assets and liabilities for IFRS compliance purposes may lead to technical debt covenant violation that would not have occurred under the UK GAAP. Citron (1992a) reports that in certain cases UK banks have imposed costly terms on renegotiation of debt contracts, although the cause of violation is technical.

[4] The investigation of the stock market response to IFRS implementation falls outside the scope of this study.

[5] Following Easton (1998), Brown et al (1999), Li and McConomy (1999), Lang et al (2003), Barth et al (2005), Lang et al (2005) and Hung and Subramanyam (2007), the study also uses a lagged market value figure as of two and six months after year-end deflated by number of shares outstanding to mitigate scale issues.

[6] Following Barth et al (2005) and Lang et al (2005), the study also uses an annual stock return commencing nine months before year-end and ending three months after year-end.

[7] Following Easton (1998) and Hung and Subramanyam (2007), the study also uses a lagged twelve-month stock return.

[8] The examination of the impact of IFRS implementation on debt covenants and the comparison of debt covenant constraints before and after IFRS adoption fall outside the scope of this study.

[9] The study reaches similar findings with those presented here when comparing early with normal adopters. The results (not reported here) indicate that early and normal adopters experience more volatile earnings and balance sheet values.

[10] The categorisation of firms into low and high debt firms has been performed using the median of the gearing ratio.

[11] The findings obtained from the earnings management tests used in the analysis for early and normal adopters (not reported here) provide evidence that early adopters appear to engage to less earnings management and exhibit less smooth earnings than normal adopters.

Table 1a Early and Normal Adoption: Descriptive Statistics

	Panel A								Panel B			Panel C
	Pre-official adoption period: 2004				Official adoption period: 2005				Pair-wise *t*-tests for equality of means			Pair-wise *F*-test for equality of variances
	Early adopters (IFRS users)		Normal adopters (UK GAAP users)		Early adopters (IFRS users)		Normal adopters		Normal (1st time) 2004 vs. 2005	Early vs. normal 2004 vs. 2005	Early vs. normal 2004	Normal (1st time) adopters 2004 vs. 2005
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	UK GAAP vs. IFRS numbers	IFRS users	IFRS vs. UK GAAP users	UK GAAP vs. IFRS numbers
Test variables												
P	4.307	3.525	2.501	8.496	4.891	5.792	16.174	143.038			**	
NPP	34.908	148.513	-6.875	27.777	51.218	293.802	1.207	50.355	*	***	***	
NPPS	0.207	0.318	0.045	0.109	0.342	0.535	0.069	0.190	**	***	***	**
BVPS	0.795	5.811	0.282	1.950	0.161	0.191	0.289	1.989	*			*
BVCHA	0.206	1.262	0.900	5.594	0.063	0.426	0.929	6.013				
NPCHA	-0.166	5.527	-0.234	4.027	-0.643	26.258	0.023	45.029				*
LNL	0.175	0.186	0.170	0.378	0.050	0.218	0.180	0.327	*		***	
SPP	0.128	0.335	0.131	0.314	0.064	0.245	0.070	0.256	*		*	
SPTP	0.030	0.163	-0.086	0.281	0.031	0.183	0.026	0.287	**	**	***	**
ΔNP	-0.402	5.504	0.170	4.669	-1.631	26.770	1.139	10.382	*			*
OCF	0.101	0.113	-0.027	0.317	0.078	0.125	-0.030	0.226				*
ΔCF	-0.244	1.218	0.846	3.374	4.986	61.973	-1.510	14.791				
ACCR	-0.070	0.155	0.059	0.179	-0.046	0.159	-0.016	0.128	**			
Control variables												
Size												
LNMV	5.918	1.920	3.863	1.634	6.176	1.982	4.198	1.597		***	***	
SALESHA	3.844	4.799	1.925	3.714	4.013	4.861	1.840	3.712		***	***	
NAVSH	1.807	2.257	0.632	0.909	2.006	2.470	0.704	1.013		***	*	
SALETAS	1.051	0.782	1.395	2.567	0.940	0.767	1.512	4.571				
Investment												
DIVPAY	3.353	30.051	0.356	1.940	-2.265	42.543	-1.970	17.730		*		**
DIVYI	0.023	0.026	0.009	0.014	0.022	0.017	0.011	0.015		***	**	
DIVSH	0.100	0.133	0.022	0.046	0.146	0.269	0.036	0.097		***	*	**
ROA	0.063	0.169	-0.055	0.319	0.058	0.202	0.083	0.225	**			
PE	36.452	112.431	50.805	109.457	21.922	29.445	55.540	214.353				
AR	0.040	0.196	0.079	0.253	1.032	11.219	11.905	103.956	*			*
Growth												
MVBV	25.855	182.140	13.965	63.211	29.179	184.644	14.632	39.061				
PEG	2.231	4.833	2.055	3.958	1.512	2.459	0.734	0.750		*		
DIVSHG	0.431	3.938	0.031	0.243	0.225	0.544	0.319	0.467				
Profitability												
ROCE	0.142	0.463	-0.135	0.727	0.051	1.743	-0.065	0.409			***	
OPM	-0.121	2.166	-0.869	3.330	-0.296	5.322	0.425	7.998	*			
NPM	-0.071	1.916	-0.582	2.480	-0.326	4.913	0.230	6.305				
EPS	0.244	0.320	0.054	0.128	-0.303	6.791	0.014	0.455		***	***	
PLOWB	2.025	18.926	0.797	2.601	0.369	2.669	0.159	2.309				
Liquidity												
CFSH	0.475	0.560	0.175	0.701	0.384	0.582	0.067	0.230				*
CUR	1.680	1.785	3.031	3.792	1.611	1.813	3.390	5.107		***	***	
QUI	1.328	1.724	2.830	3.854	1.299	1.806	3.175	5.154		***	***	
CASH	0.615	1.561	1.917	3.632	0.644	1.593	2.282	5.024		***	***	

Table 1a Early and Normal Adoption: Descriptive Statistics (cntd)

	Panel A								Panel B			Panel C
	Pre-official adoption period: 2004				Official adoption period: 2005				Pair-wise t-tests for equality of means			Pair-wise F-test for equality of variances
	Early adopters (IFRS users)		Normal adopters (UK GAAP users)		Early adopters (IFRS users)		Normal adopters		Normal (1st time) 2004 vs. 2005	Early vs. normal 2004 vs. 2005	Early vs. normal 2004	Normal (1st time) adopters 2004 vs. 2005
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	UK GAAP vs. IFRS numbers	IFRS users	IFRS vs. UK GAAP users	UK GAAP vs. IFRS numbers
Leverage												
EDEBT	6.269	31.207	6.987	19.797	4.803	40.419	3.614	11.364				*
SCCE	0.144	0.197	0.284	0.306	0.166	0.435	0.642	3.328				
LTLCE	1.354	0.249	0.251	0.249	1.305	4.094	0.445	0.889	*	*	***	**
INTCOV	0.735	112.321	-12.333	59.302	3.025	69.087	6.431	60.114	**			
TLSFU	0.601	10.150	1.235	2.692	2.507	5.434	1.732	5.094				**
CGEAR	-0.294	19.089	0.405	1.907	0.177	12.936	0.701	1.856				

(*), (**), (***) indicate statistically significant factors at 10%, 5% and 1% level respectively .

Table 1b Small and Large Normal Adopters: Descriptive Statistics

	Panel A						Panel B					
	Small normal adopters				t-test	F-test	Large normal adopters				t-test	F-test
	Under UK GAAP: 2004		Under IFRSs: 2005		(for means)	(for std deviation)	Under UK GAAP: 2004		Under IFRSs: 2005		(for means)	(for std deviation)
	Mean	Standard Deviation	Mean	Standard Deviation			Mean	Standard Deviation	Mean	Standard Deviation		
Test variables												
P	2.377	11.818	29.800	202.409			2.626	2.474	2.547	2.543		
NPP	-14.602	31.044	0.310	39.359			0.852	21.755	2.104	59.390		**
NPPS	0.001	0.058	0.002	0.038	*		0.084	0.127	0.136	0.250	**	**
BVPS	0.231	0.055	0.246	1.533	*	*	0.330	0.188	0.362	2.666	*	*
BVCHA	0.271	0.734	0.203	0.468			1.528	7.868	1.661	8.488		
NPCHA	0.276	4.598	0.032	2.618			-0.744	3.365	0.013	63.775		**
LNL	0.340	0.479	0.220	0.418			0.005	0.055	0.140	0.141	*	
SPP	0.095	0.274	0.080	0.274			0.165	0.351	0.060	0.240	*	
SPTP	-0.204	0.358	0.018	0.247			0.031	0.060	0.035	0.122		*
ΔNP	1.050	5.879	0.097	11.115		**	-0.707	2.866	2.180	9.593		
OCF	-0.163	0.344	-0.097	0.283			0.108	0.218	0.037	0.118	**	
ΔCF	0.746	3.567	-3.036	20.727			0.944	3.207	0.015	2.764		
ACCR	0.041	0.128	-0.021	0.124			0.077	0.219	-0.010	0.132	*	
Control variables												
Investment												
DIVPAY	0.083	0.271	-4.144	25.003			0.628	2.717	0.204	0.579		
DIVYI	0.004	0.008	0.006	0.011			0.014	0.016	0.016	0.017		
DIVSH	0.004	0.012	0.022	0.104			0.041	0.058	0.051	0.089		
ROA	-0.175	0.415	0.118	0.266			0.065	0.064	0.051	0.130		*
PE	55.968	91.529	91.909	369.976			45.644	117.518	19.166	11.254		**
AR	0.100	0.303	23.901	146.797			0.061	0.228	-0.092	0.357		
Growth												
MVBV	5.555	12.216	10.525	10.228			22.377	88.209	18.743	46.757		
PEG	2.911	6.102	0.791	1.011			1.192	1.922	0.676	0.641		***
DIVSHG	0.016	0.161	0.339	0.393	***		0.046	0.305	0.292	0.497	**	
Profitability												
ROCE	-0.385	0.934	-0.199	0.370			0.114	0.262	0.070	0.404		
OPM	-1.965	4.688	-0.972	2.840			0.219	0.241	1.820	10.489		**
NPM	-1.408	3.340	-0.935	2.708			0.241	0.868	1.403	8.132	*	*
EPS	-0.003	0.060	0.012	0.597	*	**	0.111	0.152	0.020	0.203		
PLOWB	1.110	2.452	-0.129	4.274			0.483	2.732	0.443	0.588		
Liquidity												
CFSH	0.014	0.072	0.026	0.096		**	0.336	0.967	0.108	0.307	*	*
CUR	3.889	4.543	4.437	6.251			2.174	2.628	2.346	3.424		
QUI	3.790	4.583	4.240	6.303			1.870	2.669	2.104	3.445		
CASH	2.881	4.664	3.247	6.305			0.954	1.733	1.310	3.098		
Leverage												
EDEBT	7.320	15.254	5.455	15.933			6.655	22.234	1.765	6.568		
SCCE	0.431	0.330	1.183	4.686			0.136	0.190	0.112	0.234		
LTLCE	0.240	0.243	0.349	0.481	**	**	0.258	0.254	0.542	1.076	*	*
INTCOV	-21.813	78.835	0.726	30.186	**		-2.862	32.143	12.138	80.259		*
TLSFU	1.445	2.457	1.221	3.843			1.024	2.918	2.243	6.094		

TABLE 2 Logistic Regression Analysis **TABLE 3 Logistic Regression Analysis** **TABLE 4 Logistic Regression Analysis**

Financial Statement Effects of IFRS Implementation (Normal adopters: 2004 vs. 2005)

Early Adoption of IFRSs — **Panel A** Early: 2004 vs. normal: 2005 — **Panel B** Early vs. normal adopters: 2004

High Debt Firms and Debt Covenant Violation (Normal adopters with high debt: 2004 vs. 2005)

Variables	Coefficients	Variables	Coefficients	Variables	Coefficients	Variables	Coefficients
NPM	3.0511 * (1.7036)	INDUSTRY	1.3641 * (0.7252)	BVPS	0.0187 * (0.0109)	INTCOV	3.7157 * (1.4106)
LTLCE	17.3923 ** (8.9066)	LNMV	1.7314 *** (0.5277)	LNMV	0.0515 ** (0.0262)	OPM	2.6877 * (1.3358)
TLSFU	34.7967 ** (14.9929)	MVBV	3.8677 *** (1.3602)	CFSH	-0.0675 ** (0.0347)	LNMV	1.4442 * (0.5494)
MVBV	10.0738 * (6.0626)	PLOWB	3.9753 *** (1.3716)	ROCE	0.0925 * (0.0526)	Constant	0.5997 (0.5613)
INTCOV	1.1745 *** (0.3150)	SCCE	31.3356 *** (10.8732)	NPM	0.2372 ** (0.0815)		
CFSH	-7.2581 ** (3.7359)	CS	6.8484 *** (2.0990)	CGEAR	0.0096 ** (0.0042)		
SALETAS	0.017 (0.0436)	DEBT	1.0286 *** (0.2531)	CS	0.012 * (0.0064)		
DIVSH	17.2164 ** (8.4761)	CGEAR	1.0048 *** (0.4196)	AR	0.0085 ** (0.0037)		
OPM	2.2999 * (1.4308)	OPM	20.948 *** (7.1811)	Constant	4.7075 (2.9634)		
EPS	9.238 *** (3.5788)	INTCOV	1.039 *** (0.4470)				
Constant	-28.532 (14.1503)	Constant	0.6975 (0.3020)				
Model χ^2	26.052 ***		80.517 ***		67.963 **		65.745 ***
% correctly classified	75 ***		91.262 ***		79.424 ***		77.267 ***
Sample size	$N_0=100, N_1=100$		$N_0=100, N_1=141$		$N_0=100, N_1=141$		$N_0=50, N_1=50$

*** , ** and * indicate statistical significance at the 1%, 5% and 10% level (two-tailed) respectively. All the explanatory variables were entered/removed from the logistic regression using a step-wise procedure with a p-value of 0.05 to enter and a p-value of 0.10 to remove. The Wald statistic was used to test the null hypothesis that each coefficient is zero.

Table 5 Earnings Management: UK GAAP vs. IFRSs

Panel A Earnings Volatility	Normal adopters Under UK GAAP: 2004 Standard deviation	Normal adopters Under IFRSs: 2005 Standard deviation	F-test
Volatility of ΔNP	4.669	10.382	*
Volatility of ΔNP/ΔCF	8.477	136.914	**

Panel B Correlation Between Accruals and Cash Flows

	Normal adopters Under UK GAAP: 2004 Correlation Coefficient	Normal adopters Under IFRSs: 2005 Correlation Coefficient	Significance
Correlation of ACCR and OCF	-0.470	0.104	***

Panel C OLS Regression of Accruals on Firm Financial Measures
(Early adopters - IFRS users and normal adopters - UK GAAP users: 2004)

Variables	Coefficients
TLSFU	0.0679
	(0.0721)
OCF	0.0024
	(0.0026)
SALETAS	0.0843
	(0.1131)
FRS	-0.133 **
	(0.0630)
FRSOCF	0.0202 *
	(0.0110)
FRSLNMV	-0.0551 ***
	(0.010)
FRSOPM	0.0045 ***
	(0.0004)
FRSTLSFU	-0.0491 ***
	(0.0112)
ROA	-0.0306
	(0.0501)
Constant	-0.002
	(0.0112)
R^2 adj.	0.842
Sample size	N=241

Panel D Logistic Regression Extract: Small Positive Profits
(Normal adopters: 2004 vs. 2005)

SPP	-17.6787 **
	(7.6300)

Panel E Logistic Regression Extract: Large Negative Losses
(Normal adopters: 2004 vs. 2005)

LNL	1.6363 ***
	(0.6307)

***, ** and * indicate statistical significance at the 1%, 5% and 10% level (two-tailed) respectively.

TABLE 6 Value Relevance: UK GAAP vs. IFRSs

Panel A OLS Regression of Price on Book Value per Share and Net Profit per Share

Normal adopters - UK GAAP users: 2004		Early adopters - IFRS users: 2004	
Variables	Coefficients	Variables	Coefficients
NPPS	6.0430 ***	NPPS	13.4400 ***
	(0.79)		(1.5889)
BVPS	0.8282 ***	BVPS	22.4130 ***
	(0.044)		(6.8132)
Constant	1.1490	Constant	3.0033
	(0.182)		(0.2923)
R^2 adj.	0.284		0.351
Sample size	N=100		N=141

Normal adopters - UK GAAP users: 2004		Normal adopters - IFRS users: 2005	
Variables	Coefficients	Variables	Coefficients
NPPS	6.0430 ***	NPPS	8.0781 ***
	(0.79)		(2.9268)
BVPS	0.8282 ***	BVPS	13.4109 ***
	(0.044)		(3.0323)
Constant	1.1490	Constant	17.9927
	(0.182)		(15.9697)
R^2 adj.	0.284		0.320
Sample size	N=100		N=100

Panel B OLS Regression of Net Profit deflated by Price on Stock Returns

Normal adopters - UK GAAP users: 2004		Early adopters - IFRS users: 2004	
Variables	Coefficients	Variables	Coefficients
AR	6.2450 **	AR	58.3472 **
	(2.8378)		(24.9345)
Constant	0.9210	Constant	31.0905
	(2.2723)		(14.3790)
R^2 adj.	-0.0131		0.1212
Sample size	N=100		N=141

Normal adopters - UK GAAP users: 2004		Normal adopters - IFRS users: 2005	
Variables	Coefficients	Variables	Coefficients
AR	6.2450 **	AR	17.8853 *
	(2.8378)		(9.7712)
Constant	0.9210	Constant	8.1894
	(2.2723)		(17.1041)
R^2 adj.	-0.0131		0.1010
Sample size	N=100		N=100

*** , ** and * indicate statistical significance at the 1%, 5% and 10% level (two-tailed) respectively.

TABLE 6 Value Relevance: UK GAAP vs. IFRSs (cntd)

Panel C OLS Regression of Net Profit deflated by Price on Stock Returns

Normal adopters - UK GAAP users with good news: 2004		Early adopters - IFRS users with good news: 2004	
Variables	Coefficients	Variables	Coefficients
AR	9.0632	AR	291.5812 ***
	(9.6091)		(88.5181)
Constant	-2.5788	Constant	5.6995
	(3.1841)		(25.0611)
R^2 adj.	-0.0032		0.1541
Sample size	N=100		N=141

Normal adopters - UK GAAP users with bad news: 2004		Early adopters - IFRS users with bad news: 2004	
Variables	Coefficients	Variables	Coefficients
AR	0.0387 ***	AR	26.8742 *
	(0.0123)		(14.6041)
Constant	2.7663	Constant	7.7831
	(1.4721)		(4.3391)
R^2 adj.	-0.0561		0.3202
Sample size	N=100		N=141

Panel D OLS Regression of Net Profit deflated by Price on Stock Returns

Normal adopters - UK GAAP users with good news: 2004		Normal adopters - IFRS users with good news: 2005	
Variables	Coefficients	Variables	Coefficients
AR	9.0632	AR	0.2778 *
	(9.6091)		(0.151)
Constant	-2.5788	Constant	1.8325
	(3.1841)		(2.3341)
R^2 adj.	-0.0032		0.1401
Sample size	N=100		N=100

Normal adopters - UK GAAP users with bad news: 2004		Normal adopters - IFRS users with bad news: 2005	
Variables	Coefficients	Variables	Coefficients
AR	0.0387 ***	AR	1.2722 *
	(0.0123)		(0.7041)
Constant	2.7663	Constant	-7.9325
	(1.4721)		(12.6031)
R^2 adj.	-0.0561		0.1017
Sample size	N=100		N=100

*** , ** and * indicate statistical significance at the 1%, 5% and 10% level (two-tailed) respectively.

TABLE 6 Value Relevance: UK GAAP vs. IFRSs (cntd)

Panel E OLS Regression of Stock Returns on Book Value and Net Profit Change
(Normal adopters - IFRS users: 2005)

Variables	Coefficients
BVPS	0.6776 *
	(0.3516)
BVCHA	1.1777 *
	(0.6693)
NPPS	0.716 **
	(0.3137)
NPCHA	1.4876 **
	(0.6494)
Constant	0.056
	(0.0195)
R^2 adj.	0.0311
Sample size	N=100

Panel F OLS Regression of Stock Returns on Book Value and Net Profit Change
(Early adopters - IFRS users: 2004)

Variables	Coefficients
BVPS	0.0897 ***
	(0.0330)
BVCHA	1.3630 **
	(0.6213)
NPPS	1.2975 *
	(0.7323)
NPCHA	2.0052 **
	(0.8925)
Constant	0.6218
	(0.0540)
R^2 adj.	0.0332
Sample size	N=141

***, ** and * indicate statistical significance at the 1%, 5% and 10% level (two-tailed) respectively.