

Causes and Consequences of Choosing Historical Cost versus Fair Value

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ABSTRACT: We examine the causes and consequences of investment property firms' choice to use the historical cost or fair value model to account for their primary asset, real estate. Our examination exploits the European Union's adoption of International Financial Reporting Standards, which require firms to make this choice under *IAS 40 – Investment Property*. We hypothesize and find evidence that firms are more likely to choose the fair value model when the firm's pre-IFRS domestic standards permitted or required fair values on the balance sheet, when ownership is more dispersed, and when the firm exhibits a greater commitment to reporting transparency. We also find some evidence of opportunism, as firms adopting the fair value model report larger fair value gains than comparable "as if" figures for firms choosing the cost model. Finally, we find limited evidence that firms choosing the fair value model have lower information asymmetry and greater liquidity than those choosing the cost model. Overall, our results reveal the occurrence, causes, and consequences of variation in firms' reporting choices when differing accounting treatments are permitted.

Key Terms: *Fair value, accounting choice, IFRS, real estate, investment property, IAS 40*

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1. Introduction

The required adoption of International Financial Reporting Standards (IFRS) in the European Union (EU) effective January 1, 2005 resulted in a number of significant changes in how firms report their financial results. IFRS have been criticized both for the flexibility afforded under the standards, as well as the encroachment of the fair value paradigm. This paper examines both issues by investigating European investment property firms' choice of cost versus fair value models to report their primary assets (real estate), a choice afforded under *International Accounting Standard (IAS) 40, Investment Property*.

The adoption of IFRS, and especially the application of IAS 40 in the European investment property industry, presents a unique research opportunity. Upon adoption of IFRS, publicly-traded firms in the EU ceased application of domestic accounting standards in their consolidated accounts. This change was significant, as many of the accounting treatments and disclosures required under IFRS differed from those under the previously-applied domestic standards. Within the real estate industry, the domestic accounting standards required that investment property assets be accounted for either under the cost model (e.g., France, Germany, and Italy) or the revaluation model (e.g., the UK). Under the cost model, investment property is reported at depreciated historical cost subject to impairment testing. Under the revaluation model, investment property is reported at fair value on the balance sheet; however, changes in fair value bypass the income statement, and are recognized directly in equity.

IAS 40 substantially changed the financial reporting for this industry in the following ways. First, it eliminated the revaluation model as an allowable choice to account for investment

property assets, despite considerable support from industry constituents that this was the appropriate accounting treatment (see comment letters for the relevant exposure draft, IASC 2000). Second, it introduced the fair value model, which was not permitted under the pre-IFRS domestic standards of most European countries. Under the fair value model, investment property is reported at fair value on the balance sheet, and all changes in fair value flow through the income statement. This latter requirement would likely introduce substantial volatility in reported net income, in part owing to the cyclical nature of the real estate industry. Further, IAS 40 was significant, as it represented the first time the fair value model was adopted for long-lived non-financial assets.¹ Finally, the standard allowed firms to choose between the cost and fair value models to report their investment property in their primary financial statements; however, firms choosing the cost model must also disclose fair values in the footnotes.

We exploit this setting to provide evidence on the causes underlying a firm's decision to apply the cost versus fair value model. We hand-collect data from the financial statements of 133 publicly-traded European investment property firms, for which property reported under IAS 40 are significant assets. Consistent with predictions, empirical results reveal that a firm's previous financial reporting, ownership structure, commitment to transparency, and incentives to report higher income all affect the model choice. In particular, firms choosing the fair value model under IAS 40 are more likely to have pre-IFRS domestic accounting requirements incorporating elements of fair value reporting (through the revaluation model), and are more likely to have dispersed ownership. In addition, firms choosing the fair value model are more likely to have signaled a commitment to reporting transparency via other reporting decisions, such as the use of an external appraiser to provide fair value estimates or voluntary adoption of

¹ IFRS allow fair value reporting of non-financial assets on the balance sheet under IAS 16 (*Property, Plant and Equipment*); however, this is under the revaluation model. IFRS also require the fair value model under IAS 39 (*Financial Instruments: Recognition and Measurement*), but this is only for certain financial assets and liabilities.

IFRS prior to the mandatory application in Europe. Finally, we present some evidence that firms choose the fair value to maximize reported net income, as the recognized fair value gains on investment properties for firms choosing the fair value model are larger than comparable “as if” gains that would have been reported by firms choosing the cost model. Overall, our results are consistent with firms making reporting decisions reflective of cultural influences (i.e., the effect of pre-IFRS domestic GAAP), institutional characteristics (i.e., the firm’s ownership), and the reporting preferences (i.e., commitment to transparency).

We then examine the consequences of the cost versus fair value model choice, focusing on how equity market participants perceive this choice. Using three market measures – the bid-ask spread, the percentage of non-trading days, and trading volume – we provide some evidence that firms choosing the fair value model have lower information asymmetry and greater liquidity compared to firms choosing the cost model. While firms choosing the cost model must disclose fair values of properties in the footnotes, the above evidence suggests that market participants do not perceive, on average, that disclosure substitutes for recognition of these fair value amounts, and that firms choosing to recognize fair values benefit from a lower cost of capital.

Our paper adds to the literature in four ways. First, we add to the literature on international differences in IFRS implementation (e.g., Joos and Lang 1994; Ashbaugh and Pincus 2001) by documenting variation within and between countries in the choice between the cost and fair value models. Such variation potentially affects international comparability, and is suggestive of implications from allowing highly divergent accounting alternatives. Second, we contribute to the literature on accounting choice (e.g., Fields, Lys, and Vincent 2001) by documenting determinants for firms’ decision to report under an historical cost or fair value framework. To our knowledge, our paper is the first to explicitly analyze this choice in the

context of non-financial assets. Our findings in this regard may help standard-setters and practitioners understand both the characteristics and circumstances affecting firms' reporting choices, particularly with regards to accounting decisions involving fair value measures. In addition, because firms choosing the cost model must nonetheless disclose fair values in the footnotes, our paper relates to previous studies examining differences in financial data that are recognized versus disclosed (e.g., Ahmed, Kilic, and Lobo 2006). Specifically, we provide evidence that market participants do not view the recognition versus disclosure of fair value estimates for these property assets as substitutes, evidenced in the lower information asymmetry and greater liquidity of firms choosing the fair value model. Finally, our evidence contributes both to the general debate on fair value accounting (e.g., Watts 2006), as well as the specific debate on converging U.S. standards with international standards in the real estate industry (NAREIT 2008), by revealing both the occurrence, causes, and consequences of variation in firms' reporting choices when alternative accounting treatments are permitted.²

The remainder of this paper is organized as follows. Section 2 provides background information. Section 3 presents our hypothesis development and research design. Section 4 discusses our sample selection and descriptive statistics. Section 5 presents our empirical results. Section 6 presents several sensitivity analyses. Section 7 concludes.

2. Background

2.1 The European Investment Property Industry

² US real estate investment trusts (or REITs), which are analogous to the investment property firms we examine, currently are required to report using historical cost under US generally accepted accounting principles (GAAP). However, convergence activities between US and international standard setters indicate that the US requirement for historical cost will have to be merged with the international requirement allowing a choice between the cost and fair value models (see, for example, Phase Two of the Fair Value Option project (FASB 2007, http://www.fasb.org/project/fv_option.shtml).

The investment property industry in Europe comprises approximately 180 publicly-traded firms, with an aggregate equity market value of over €150 billion at December 31, 2005. As indicated in Table 2, while most European countries have publicly-traded investment property companies, the three largest economies (France, Germany, and the UK) account for more than half of the sample firms. Further, the UK has the largest number of firms, likely reflecting both the greater emphasis on equity markets in the UK relative to continental European countries, as well as the relatively advanced institutional features of the UK property market (e.g., as evidenced in the UK appraisal industry – see Muller and Riedl 2002).

The business model of an investment property firm involves obtaining (either through purchase, lease, or development), managing, and selling real estate in order to generate profits through rentals and/or capital appreciation. Typically, these firms either acquire legal ownership of the property through a purchase, or hold the property under a finance lease. While firms may invest in any country, the majority maintain concentrated holdings within the country of domicile. Finally, many investment property firms, particularly the larger firms, voluntarily belong to the European Public Real Estate Association (EPRA), the lead industry group established to provide a forum for, among other things, best practices for financial reporting.

2.2 Accounting for Investment Property

2.2.1. Domestic GAAP Prior to IFRS Adoption

Prior to the adoption of IFRS in Europe, investment property assets were accounted for under the domestic accounting standards applied within the firm's country of domicile. The treatment varied considerably across the European countries that are the focus of this study (see Table 2), but most may be categorized into two models: cost and revaluation. The domestic

standards of some countries (e.g., Italy) explicitly require that investment property be accounted for under the cost model; while domestic standards for several other countries *de facto* require this treatment (e.g., France, Germany), as they do not have a separate standard addressing this particular tangible asset.³ Under the cost model, investment properties are treated as most other tangible long-lived assets: depreciated over some estimate of the asset's useful life, with depreciation expense reported on the income statement. In most countries requiring the cost model, domestic standards also require some form of impairment testing.

Domestic accounting standards in several other countries, notably the UK, require that investment properties be accounted for using the revaluation model. Under this model, investment properties are presented on the balance sheet at fair value.⁴ Changes in fair value are not, however, recorded through the income statement; rather, these changes are reported directly to equity, typically an account designated as "revaluation reserve." No depreciation is reported. Finally, the domestic accounting standards for several countries (e.g., Belgium, Netherlands) allow firms the flexibility to choose either the cost or revaluation model. None of our sample countries have domestic accounting standards allowing the fair value model for this asset class.

In all countries, investment properties fall under the purview of the auditor examination, whether reported under the cost or revaluation model. However, those countries requiring the revaluation model also tend to have a more developed institutional structure incorporating additional external monitoring of provided fair values. This role is performed by appraisers, either external (that is, independent appraisal firms hired by the investment property firm) or

³ While France technically allowed revaluations of investment properties, such revaluations are taxable under the French tax code. Consequently, no French firms (at least within our sample) chose to perform property revaluations, and industry practice was to apply the cost model.

⁴ Under the applicable UK standard (Statement of Standard Accounting Practice 19, *Accounting for Investment Properties*), real estate assets are reported at "open market value." This is defined similarly to "fair value" under IAS 40: both focus on prices obtained in a market setting with informed buyers – that is, an "exit price" notion.

internal (that is, qualified individuals within the investment property firm). The UK is noteworthy, wherein the applicable domestic standard requires that property fair values be reviewed by an external appraiser at least once every five years.⁵

2.2.2. International Financial Reporting Standards and IAS 40

In June 2002 the Council of Ministers of the EU approved the so-called “IAS Regulation,” which required publicly-traded companies on European regulated markets to use IFRS as the basis for presenting their consolidated financial statements for fiscal years beginning on or after January 1, 2005.⁶ Within the investment property industry, one of the primary effects related to application of *IAS 40 – Investment Property*. IAS 40 defines investment property as

property (land or a building – or part of a building – or both) held (by the owner or by the lessee under a finance lease) to earn rentals or for capital appreciation or both, rather than for: (a) use in the production or supply of goods or services or for administrative purposes; or (b) sale in the ordinary course of business. (IAS 40.5)

Subsequent to initial recognition at cost, IAS 40 requires firms to choose between the cost and fair value models and apply the chosen policy to all of their investment property.⁷

Under the cost model, firms apply the requirements of *IAS 16 – Property, Plant and Equipment* (IAS 40.56) pertaining to this method, according to which investment property is carried at its cost less any accumulated depreciation and any accumulated impairment losses

⁵ In the U.K. the Royal Institute of Chartered Surveyors has established specific guidelines on the process of property valuation. Other countries, particularly those wherein the domestic GAAP required the revaluation model, rely on standards promulgated by the International Valuation Standards Committee.

⁶ Regulation (EC) No 1606/2002 of the European Parliament and of the Council of July 19, 2002 on the application of international accounting standards (Official Journal L 243, 9/11/2002), pp. 1-4.

⁷ As a practical matter, most firms apply either the cost or fair value models to their full portfolio of investment properties. However, two exceptions are allowed under IAS 40. First, to prevent an accounting mismatch, firms can exercise the choice between the cost and fair value models separately for two subsets of their investment property: (1) all investment property backing liabilities that pay a return linked directly to the fair value of, or returns from, specified assets including that investment property; and (2) all other investment property (IAS 40.32A). Second, lessees holding a property interest under an operating lease can choose, on a property-by-property basis, to classify that property interest as an investment property (IAS 40.6). Any such property interest classified as an investment property is accounted for under the fair value model subsequent to initial recognition.

(IAS 16.30).⁸ Notably, however, fair value must be disclosed in the footnotes, except where, under exceptional circumstances, fair value cannot be determined reliably (IAS 40.79 (e)).

Under the fair value model, investment property is carried on the balance sheet at fair value (IAS 40.33), with all changes in fair value reported in the income statement (IAS 40.35). The fair value of investment property is the price at which the property could be exchanged between knowledgeable, willing parties in an arm's length transaction (IAS 40.5). It is determined under a fair value hierarchy described in IAS 40.45-47, where the best evidence of fair value is given by current prices in an active market for similar property in the same location and condition and subject to similar lease and other contracts. Firms are encouraged, but not required, to enlist independent valuers (i.e., appraisers) with relevant qualification and experience when determining fair value (IAS 40.32).

IAS 40 is significant as it was the first time the International Accounting Standards Board (IASB) introduced a fair value accounting model for non-financial assets. Further, all firms must provide fair values for their real estate assets – either directly on the balance sheet under the fair value model choice, or within the footnotes under the cost model choice. However, since only the fair value model results in unrealized fair value gains or losses flowing through income, the choice between the two models affects reported income and net asset value volatility.⁹ Interestingly, the standard further states that firms have the option of switching from the cost model to the fair value model; in contrast, the standard explicitly states it is highly unlikely that fairer presentation will be achieved by a switch from the fair value to the cost model, which is therefore prohibited.

⁸ An exception occurs for items of investment property measured in accordance with *IFRS 5 – Non-current Assets Held for Sale and Discontinued Operations* because they are classified as held for sale, or are included in a disposal group that is classified as held for sale (IAS 40.56).

⁹ Riedl (2005) provides a detailed case study on the application of IAS 40 and its effects on reported numbers for a UK investment property firm on adoption of IFRS.

2.3 Prior Literature

This paper adds to several strands of prior research, including those examining international differences in the implementation of accounting standards, accounting choice, attributes of fair value estimates for non-financial assets, and recognition versus disclosure of accounting amounts. Prior research in international settings documents differences in the implementation of accounting standards. Several papers provide evidence that substantial reporting differences remain after convergence efforts that preceded the mandated 2005 adoption of IFRS within the EU (e.g., Tay and Parker 1990; Joos and Lang 1994). Recent papers also provide evidence of potential (e.g., Ball 2006), actual (e.g., Jermakowicz and Gornik-Tomaszewski 2006) and perceived (e.g., Daske et al. 2007) variation in IFRS implementation.

A number of studies examine the determinants of firms' choice of accounting policies (see Fields, Lys and Vincent 2001 for a review), some of which have focused on the decision to voluntarily report fair values of non-financial assets. Muller (1999) examines UK firms' voluntary decision to capitalize current value estimates of brand names acquired in a business combination, providing evidence that this decision reflects firms' attempts to minimize the cost of having to obtain shareholder approval for future acquisition or disposals. Lemke and Page (1992) investigates UK firms' compliance with a domestic standard requiring firms to supplement the regular, historical-cost based income statements and balance sheets with current cost-based counterparts. The study generally concludes that the major motivation for compliance was the ability to report lower income.

Prior research also examines the attributes of fair value estimates for non-financial assets. Two studies are particularly germane to the current study, as both focus on the UK real estate industry. Dietrich, Harris, and Muller (2001) provides evidence that fair value estimates by UK

property firms employing external appraisers are less biased and more accurate than those reported by firms employing internal appraisers. Muller and Riedl (2002) extends these findings, providing evidence that the market perceives fair value estimates of UK property firms' real estate assets as more reliable when external as opposed to internal appraisers are employed, reflected in lower bid-ask spreads for firms employing external appraisers. Similarly, Easton, Eddey and Harris (1993) and Barth and Clinch (1998) both find that voluntary tangible asset revaluations for Australian firms are generally associated with equity prices for these firms, consistent with these estimates having sufficient reliability for incorporation into share prices.

Finally, a number of papers examine the recognition versus disclosure of accounting measures (see Bernard and Schipper 1994 for a summary) with most finding that these amounts are not substitutes. Specifically, several studies employ value relevance type research designs, providing evidence that recognized amounts tend to have greater value relevance than disclosed amounts for retiree benefits other than pensions (Davis-Friday et al. 1999; Davis-Friday, Liu, and Mittelstaedt 2004) as well as derivative financial instruments (Ahmed, Kilic, and Lobo 2006). Prior papers also provide similar evidence using shorter window event study-type designs, revealing negative market reactions for write-offs that are recognized by oil firms, but not for those that are only disclosed (Aboody 1996), as well as market reactions associated with events affecting the recognition versus disclosure of stock-based compensation (Espahbodi et al. 2002). Finally, experimental evidence suggests that users differentiate between recognized versus disclosed amounts, and provide more effort to correct misstatements for amounts that are recognized versus those that are disclosed (e.g., Libby, Nelson, and Hunton 2006).

Our paper's focus on a mandated accounting choice – that between the cost and fair value models under IAS 40 upon adoption of IFRS – allows us to extend all of the above literatures.

First, we build on the literature examining international differences in the implementation of accounting standards by documenting, and exploiting, variation in firms' implementation of this choice. Related, we build on the accounting choice literature by being the first paper to examine the determinants of managers' selection between the cost and fair value models to account for long-lived tangible assets in the primary financial statements. Finally, we build on the literatures examining attributes of fair value estimates and the recognition versus disclosure of fair value amounts by examining both managers' as well as market participants' perceptions of potential differences in the nature and/or quality of information provided under the two models.

3. Hypothesis and Model Development

3.1 Causes of Firm's Choice of Cost versus Fair Value Model under IAS 40

We expect firm's choice between the cost and fair value models to be influenced by characteristics of the country of domicile and the property markets in which the firm operates, as well as those of the individual firm.

3.1.1. Hypothesis Development

Accounting practices arise endogenously as efficient responses to the demand for accounting information, and get codified in formalized accounting standards (Ball, Kothari and Robin 2000). This suggests that the prior use of particular financial reporting models may shape financial statement users' expectations of the type of information presented, and thus firms' accounting choices. Therefore, we expect firms to exercise accounting choices available under IFRS in a way consistent with the accounting required under pre-IFRS domestic GAAP. As discussed previously, there was substantial variation across countries in the type of model

applied prior to IFRS adoption (see Table 2). Thus, where demand caused national rules to require or allow fair value-type accounting treatment for investment properties under the revaluation model, we expect firms to choose the fair value model. In contrast, where reliability concerns and/or other institutional factors precluded such fair value accounting to arise endogenously, we expect firms to opt for the cost model.

H1: *Ceteris paribus*, the probability of the firm choosing the fair value model is higher where pre-IFRS domestic GAAP requires or allows investment property fair values to be reflected on the balance sheet through the revaluation model.

We note that, even where domestic GAAP allowed the revaluation model, it is unclear *ex ante* that firms domiciled in these countries would elect the fair value model under IAS 40. For example, most comment letters from UK property firms on the exposure draft for IAS 40 specifically indicated both reservations and conceptual disagreement with the use of the fair value model to account for investment properties (IASB 2000).

We also expect the choice of accounting model to reflect management concerns about the inputs into that model. In particular, concerns about the reliability of investment property fair value estimates are likely to affect this choice; indeed, standard setters view liquidity as a primary factor in the proper implementation of most accounting standards utilizing fair value notions, including IAS 40 for investment properties. The reliability of investment property fair values is likely to be a market-wide phenomenon related to the size and liquidity of the national real estate markets in which the firm operates. While all EU countries are relatively developed economies, the degree of development of the investment property industry varies considerably. This includes the actual level of property transactions in the market, as well as institutional expertise in the valuation process. These factors would, in part, determine both the extent to which firms can obtain reliable fair value estimates for their properties, as well as the extent to which users likely will rely on such estimates. In larger, more liquid real estate markets reliable

market-based fair values and model-based fair values derived using sophisticated valuation technology and expertise are more likely to be available than in smaller, less liquid markets.

H2: *Ceteris paribus*, the probability of the firm choosing the fair value model is increasing in the size and liquidity of the real estate markets in which it operates.

We further expect a firm's choice between the cost and fair value models to reflect the perceived demand for fair value information in the financial statements. A firm's financing and governance model is commonly viewed to be influential in this regard (e.g., Ball, Kothari and Robin 2000). Firms that are primarily insider-financed are more likely to cater to the payout preferences of their stakeholders (i.e., block owners), who may prefer low income volatility over transparent and timely information because information asymmetry can be resolved via other communication channels. In contrast, where outsiders provide the majority of financing, there is likely to be stronger demand for transparent reporting and public disclosure to solve the information asymmetry problem.

H3: *Ceteris paribus*, the probability of a firm choosing the fair value model is decreasing in the proportion of its shares held by insiders.

Similarly, firms competing in international real estate and capital markets are more likely to face a demand for transparent reporting. That is, as the firm's investments become more dispersed, it is more difficult for owners to assess the performance and value of the properties, consistent with owners having both greater and lower-cost information about local property markets relative to non-local markets.

H4: *Ceteris paribus*, the probability of a firm choosing the fair value model is increasing in the proportion of its international operations.

In addition, a number of constituents within the property industry, notably EPRA, have proposed that fair value accounting is more transparent reporting than historical cost accounting, as it reflects changes in the value of investment property assets on a timelier basis. To the extent

that choosing the fair value model reflects a firm’s commitment to transparent reporting, we expect it to coincide with other signals of reporting transparency, as firms have multiple mechanisms to indicate a willingness to provide enhanced reporting.

H5: *Ceteris paribus*, the probability of a firm choosing the fair value model is increasing in the firm’s commitment to transparent reporting.

Finally, the choice of cost or fair value model affords firms an opportunity to selectively choose the accounting model likely to maximize reported performance or financial position. The reporting incentives to do so can be either in the form of explicit contractual agreements based on net income or net asset value measures, or implicit incentives such as influencing equity values through reported income figures. If managers face incentives to choose the model maximizing reported performance, we expect that firms choosing the fair value model will report higher fair value gains than comparable “as if” figures for firms choosing the cost model.

H6: *Ceteris paribus*, the probability of a firm choosing the fair value model is increasing in the fair value gain the firm can report under IAS 40.

3.1.2. Empirical Model

Based on the above discussion, we propose the following logistic regression model examining a firm’s choice to adopt the fair value model rather than the cost model under IAS 40:

$$\begin{aligned}
 FV_CHOICE_i = & \beta_0 + \beta_1 PRE_GAAP_c + \beta_2 MKT_LIQ_c + \beta_3 CLOSEHELD_i + \beta_4 INTL_REV_i \\
 & + \beta_5 VOL_ADOPT_i + \beta_6 EXT_APPR_i + \beta_7 FV_GN_LS_i \\
 & + \beta_8 SIZE_i + \beta_9 DEBT_MCAP_i + \beta_{10} CFO_MCAP_i + \varepsilon_i
 \end{aligned} \tag{1}$$

FV_CHOICE is an indicator variable equal to 1 if firm *i* chooses the fair value model under IAS 40 upon adoption of IFRS, and 0 otherwise (i.e., chooses the cost model). ε is an error term.

We then include experimental variables to test the above hypotheses. First, to test H1, we include *PRE_GAAP*, an indicator variable equal to 1 if the domestic GAAP of the firm’s country

of domicile (country c), assessed just prior to IFRS adoption, allows or requires fair values of investment properties on the balance sheet (that is, under the revaluation model), and 0 otherwise. If the firm is more likely to adopt the fair value model under IAS 40 given that its pre-IFRS domestic GAAP has provisions allowing for fair value treatment on the balance sheet, then the predicted sign on β_1 is positive. To test H2, we include *MKT_LIQ* to capture the liquidity of the property markets in which firm i owns properties. We hand-collect the distribution of firm i 's property portfolio, and then calculate the percentage property market turnover weighted to reflect this by-country distribution. Turnover for each country is measured as the market value of property transactions divided by the total market value of properties; this is constructed from data obtained from the Investment Property Databank.¹⁰ To the extent more liquid property markets are commensurate with a higher likelihood of reliable investment property fair value estimates, the predicted sign on β_2 is positive.

We then include proxies to test the hypotheses relating to our firm-level measures. To test H3, we include *CLOSEHELD*, measured as the percentage of firm i 's stock held by insiders, as indicated by Worldscope and hand-collected data. If insiders are better able to obtain information regarding underlying fair values of the firm's investment properties through non-financial statement channels, then the need to obtain this information under the fair value model via the firm's financial reports is reduced, as is management's incentive to use this method. Accordingly, the predicted sign on β_3 is negative. To test H4, we include *INTL_REV*, measured as the percentage of firm i 's revenue generated from operations outside of its country of domicile per Worldscope and hand-collection. To the extent that firms having international operations are

¹⁰ The Investment Property Databank is an organization, which compiles property transactions and values from member firms, and is generally considered among the most comprehensive sources of property data for Europe. Firms voluntarily join and supply this information; the primary benefit is to obtain detailed assessments of various property market conditions.

more complex, and this leads to increased demand for fair value information through the financial statements, the predicted sign on β_4 is positive.

We then include two proxies to test H5 on whether a firm's choice to use the fair value model reflects other disclosure choices consistent with increasing financial reporting transparency. First, we include *VOL_ADOPT*, an indicator variable equal to 1 if firm *i* adopts IFRS voluntarily prior to the mandatory adoption effective 2005, and 0 otherwise (implying that it uses domestic GAAP prior to mandated IFRS adoption).¹¹ This captures the firm's overall commitment to reporting transparency (e.g., Leuz and Verrecchia 2000). Second, we include *EXT_APPR*, the hand-collected percentage of firm *i*'s investment property for which an external appraiser was used to obtain the recognized fair values (for fair value model adopters) or disclosed fair values (for cost model adopters) in the IFRS adoption year. This captures the firm's commitment to reporting transparency for the particular asset we investigate: investment property. To the extent these measures reflect credible signals of the firm's commitment to transparency, and to the extent that firms with other credible signals of reporting transparency are more likely to choose the fair value model, the predicted signs on β_5 and β_6 are positive. That is, to the extent voluntary adoption of IFRS (Leuz and Verrecchia 2002) or use of an external appraiser (Dietrich, Harris, and Muller 2001; Muller and Riedl 2002) is viewed as a credible signal of increasing transparency, firms that have voluntarily adopted IFRS or that employ an external appraiser will be more likely to adopt the fair value model.¹²

¹¹ Among our sample countries, the following permitted voluntary adoption of IFRS prior to the mandatory 2005 adoption: Belgium, Denmark, Finland, Germany, the Netherlands, and Switzerland. Note that none of our sample firms cross-list in the U.S., nor report using U.S. GAAP.

¹² Some research provides evidence that financial statement users perceive differences in the implementation of IFRS, as reflected in measures such as liquidity and cost of capital (see, for example, Daske et al. 2007). To the extent that our sample firms voluntarily adopt IFRS "in label only" (that is, without actual improvements in information quality), and this can be inferred by market participants, this should bias against our variable.

Finally, to test H6 we include *FV_GN_LS*, firm *i*'s fair value gain or loss on investment property for the IFRS adoption year. For firms choosing the fair value model, the fair value gain or loss is hand-collected from the firm's income statement. For firms choosing the cost model, the "as if" fair value gain or loss (that is, the gain or loss the firm would have recognized had they chosen the fair value model) is calculated from footnote disclosures. We then scale this by the firm's market value of equity at the end of the fiscal IFRS adoption year.¹³ If firms make accounting choices to allow the presentation of the best possible performance, then firms choosing the fair value model will report more positive fair value gains than those choosing the cost model, and the predicted sign for β_7 is positive.

We also include three control variables. First, we include *SIZE*, measured as the log of firm *i*'s market capitalization, to control for the effects of the information environment (among other factors) on this reporting decision. We also include *DEBT_MCAP*, measured as firm *i*'s debt divided by market capitalization, to control for the effects of leverage (such as covenant restrictions dictated by accounting definitions). Finally, we include *CFO_MCAP*, firm *i*'s reported cash flows from operations divided by market capitalization, to control for the firm's performance. All three variables are measured at the end of the fiscal IFRS adoption year. Because each measure may have alternative effects on the decision to use the cost or fair value model, we do not predict the signs on β_8 , β_9 , or β_{10} .

3.2 Consequences of Firm's Choice of Cost versus Fair Value Model under IAS 40

We next explore the consequences of the cost versus fair value model decision, using market measures to assess the economic consequences across this accounting choice.

¹³ Alternative scalars, such as sales or total reported assets, do not change our inferences.

3.2.1. Hypothesis Development

It is possible that market participants perceive that application of the fair value model provides higher quality information relative to application of the cost model. In particular, proponents of the fair value model suggest it reflects property value changes on a more timely basis, provides greater reliability in the reported fair value amounts due inclusion on the primary financial statements, and thus leads to an overall higher level of transparency (e.g., IASB 2000; EPRA 2006). In this case, we predict, *ceteris paribus*, that firms choosing the fair value model will have higher liquidity relative to those choosing the cost model, reflecting higher quality information under the fair value model, which leads to lower information risk and information asymmetry, and thus a lower cost of capital (e.g., Easley and O'Hara 2004).

However, it is also possible that market participants perceive information provided under the cost model to be of higher quality than that provided under the fair value model. In particular, the cost model can provide more reliable information due to its basis in transaction-based reporting. In contrast, the fair value model can reduce the reliability of reported performance (e.g., net income) and asset (e.g., net asset value) amounts owing to the increased potential for measurement error, as well as the potential increase in both the incentives for and ability of managers to misreport amounts. *Ceteris paribus*, firms choosing the fair value model will have lower information quality, and thus lower liquidity.

Finally, it is possible that market participants will perceive no difference in the quality of information across firms choosing the fair value versus cost models, as the latter are required to disclose fair value estimates of investment properties in their footnotes. Thus, market participants can perceive equivalence in the quality of investment property information that is recognized by fair value model adopters or disclosed by cost model adopters.

This discussion leads to the following two-tailed prediction, stated in alternative form:

H7: *Ceteris paribus*, measures of liquidity and information asymmetry will differ across firms choosing the fair value model versus those choosing the cost model.

3.2.2. Empirical Model

To test this prediction, we employ three measures of liquidity: the bid-ask spread, the percentage of days with no trades occurring, and trading volume. Regarding the bid-ask spread, we calculate *BID_ASK* as firm *i*'s average daily quoted spread divided by the mid-point price (Stoll 1978). Second, we examine the percentage of firm *i*'s trading days exhibiting zero returns, *ZERORET* (Bekaert, Harvey, and Lundblad 2006), which captures the liquidity in the firm's shares. Finally, we calculate *TURNOVER*, the average daily percentage of firm *i*'s common shares outstanding that are traded. All three measures are calculated using daily values for the "post-IFRS" period, defined as the six months of trading days beginning six months after firm *i*'s fiscal IFRS adoption year.

We use the above variables to conduct both univariate and multivariate analyses. For the univariate analyses, we compare *BID_ASK*, *ZERO_RET*, and *TURNOVER* across firms choosing the cost model versus those choosing the fair value model. If market participants perceive that firms choosing the fair value have higher quality information and thus lower information risk, this should lead to lower cost of capital and greater liquidity. Accordingly, we will observe fair value model adopters to have lower bid-ask spreads, a lower proportion of days in which the firm's shares do not trade, and greater turnover. In contrast, if market participants perceive that firms choosing the cost model have higher quality information for reasons outlined above, then we will observe these firms to have lower bid-ask spreads, a lower proportion of zero-return days, and greater turnover.

Regarding the multivariate analyses, we then estimate the multivariate relation to examine whether the choice of cost versus fair value model systematically relates to the above market measures. Specifically, we estimate the following model:

$$LIQ_i = \delta_0 + \delta_1 \text{Log}(MCAP)_i + \delta_2 \text{Log}(PRICE)_i + \delta_3 \text{LOSS}_i + \delta_4 \text{STDRET}_i + \delta_5 \text{FV_DUM}_i + \theta_I \quad (2)$$

LIQ_i is, alternatively, the three above market measures for firm i : $\text{Log}(BID_ASK)$, $ZERORET$, and $TURNOVER$. Note we use the log of bid-ask to be consistent with models suggesting multiplicative relations among the independent variables (e.g., Stoll 1978); in addition, we multiply $TURNOVER$ by negative one in the multivariate analysis so that liquidity is decreasing in this measure, for consistency with BID_ASK and $ZERORET$.

We then include a number of variables identified in the prior literature as determinants of observed bid-ask spreads (e.g., Lee, Mucklowe, and Ready 1993). First, we include $\text{Log}(MCAP)$, the log of firm i 's market capitalization (in euros) at the end of the fiscal IFRS adoption year. This variable controls for the effects of size-related characteristics, such as the information environment, that affect the liquidity of a firm's shares; larger firms likely have richer information environments and thus less information asymmetry and more liquidity: thus the predicted sign for δ_1 is negative. Next, we include $\text{Log}(PRICE)$, the log of firm i 's closing share price at the end of the fiscal IFRS adoption year to control for order processing costs; the predicted sign for δ_2 is negative. We also include two measures of risk: $LOSS$, an indicator variable equal to 1 if firm i reports negative net income for the fiscal IFRS adoption year, and 0 otherwise; and $STDRET$, the standard deviation of firm i 's daily stock returns, measured over the six month period beginning six months after the firms fiscal IFRS year end. The predicted sign for both $LOSS$ (δ_3) and $STDRET$ (δ_4) is positive, as higher risk should be associated with greater information asymmetry and lower liquidity.

Finally, we include *FV_DUM* to test H7. This is an indicator variable equal to 1 if the firm chooses the fair value model, and 0 otherwise (implying it chooses the cost model). If market participants perceive that adoption of the fair value model will lead to higher information quality, and thus lower information asymmetry and greater liquidity, the predicted sign for δ_5 is negative; alternatively, if market participants perceive that information quality is higher under the cost model, the predicted on for δ_5 is positive.

4. Sample Selection and Descriptive Statistics

Table 1 details our sample selection process. To maximize the relevance of the accounting choice under IAS 40, we impose several requirements to ensure that the reporting of investment property is likely a significant accounting choice for our sample firms. We begin with all firms traded on European Economic Area (EEA) stock exchanges that are classified as real estate firms in Thomson Financial Worldscope ($N = 741$).¹⁴

From this initial sample, we first exclude firms that become inactive before December 15, 2006 (e.g., due to bankruptcy, acquisition, going private), as these firms do not file financial statements under IFRS. Second, since our research question focuses on the first mandatory set of IFRS consolidated financial statements, we exclude firms that do not apply IFRS in their “IFRS Year.”¹⁵ We define “IFRS Year” as the first fiscal year beginning on or after January 1, 2005,

¹⁴ In addition to the 25 European Union (EU) Member States, the EEA at the time included Norway, Iceland, and Luxembourg. The latter three countries also adopted IFRS. Finally, we also include Switzerland, which (though not a member of the EU) adopts most EU regulation, including IFRS.

¹⁵ There are several reasons why a publicly-traded firm in the EU would not apply IFRS during its first fiscal year subsequent to mandatory adoption effective 2005. First, the IAS Regulation mandating IFRS adoption applies only to *consolidated* financial statements, and thus, is not mandated for firms without subsidiaries that do not prepare consolidated financial statements. Second, the firm was not (yet) listed on a “regulated market” (as defined in the IAS Regulation with reference to the EU’s Investment Services Directive) during its “IFRS Year.” Third, firms with only debt securities or using U.S. GAAP may postpone IFRS adoption until 2007.

for which IFRS adoption became mandatory under the IAS Regulation.¹⁶ Third, we exclude firms listed within the real estate industry, but not operating as investment property firms (e.g., operating strictly in property management or real estate brokerage). Fourth, we exclude firms that are subsidiaries, as the reporting choice under IAS 40 is unlikely to be independent of the choice made at the parent firm level. Fifth, we exclude firms for which the annual report, cost versus fair value decision, or fair value of investment property for the IFRS adoption year could not be obtained. Sixth, we exclude firms for which the fair value of investment property reported in the IFRS adoption year is less than 10% of total assets, to ensure that investment properties are a material asset for the firm. Finally, we exclude firms missing data to estimate our primary Equation (1). This results in our final sample of 133 publicly-traded investment property firms.

Table 2 provides a breakdown of our sample by country, including firms' choice of model under IAS 40, as well as a classification of the pre-IFRS domestic accounting treatment of investment property assets. While many of the smaller EAA countries are not represented, investment property firms from all major European economies appear in the sample, which includes fifteen countries. Not surprisingly, the countries with the highest representation include the UK, France, and Germany, which together represent 55% (73 out of 133) of the total sample.

The choice of cost versus fair value model under IAS 40 provides several insights. In aggregate, 27 firms (20%) chose the cost model, while 106 (80%) chose the fair value model. Closer examination indicates that the firms in nine countries exclusively chose the fair value model, most notably the UK. In two countries, firms moved mostly to fair value, with only

¹⁶ Specifically, the "IFRS Year" for firms with a December 31 fiscal-year end is for financial statements ending December 31, 2005. For firms with non-December 31 year-ends (which occur with some frequency, particularly in the UK), "IFRS Year" is the fiscal year ending in 2006 (e.g., for a March 31 fiscal-year end, "IFRS Year" is for the financial statements ending March 31, 2006).

limited application of the cost model. Four countries reveal substantial application of the cost model: France, Germany, Italy, and Spain.

Finally, the table indicates the pre-IFRS accounting treatment for investment property assets, with two primary insights. For most of the countries with firms exclusively or primarily choosing the fair value model, domestic GAAP allowed or required that these assets be accounted for using the revaluation model. Also, for countries having a large number of firms choosing the cost model, domestic standards often did not directly address investment properties as separate assets: that is, these assets were treated as property, plant, and equipment, and generally accounted for under the cost model of the domestic standards.

5. Empirical Results

5.1 The Causes of Firm's Choice of Cost versus Fair Value Model under IAS 40

Table 3 presents univariate comparisons of firms choosing the cost model versus those choosing the fair value model. Firms choosing the fair value model appear larger on average, with a mean market capitalization of €1,633 million versus €29 million for firms choosing the cost model. The proportion of property assets relative to total assets appears similar across the two groups of firms. Consistent with predictions, we note a number of differences across our experimental variables, most of which are statistically significant. In particular, firms choosing the fair value model are more likely to have pre-IFRS domestic accounting standards allowing fair values of properties on the balance sheet (*PRE_GAAP* mean of 0.037 for cost model firms, versus 0.613 for fair value firms). Firms choosing the fair value model appear to own properties in slightly more liquid markets, though differences are insignificant (*MKT_LIQ* mean for cost model firms of 0.099, versus 0.103 for fair value firms). In addition, firms choosing the fair

value model are more likely to have dispersed ownership (*CLOSEHELD* mean of 0.638 for cost model firms, versus 0.348 for fair value firms) and greater international operations (*INTL_REV* mean for cost model firms of 0.050, versus 0.141 for fair value firms). Firms choosing the fair value model appear more likely to make other reporting decisions consistent with increasing transparency (*VOL_ADOPT* mean for cost model firms of 0.074, versus 0.245 for fair value firms; *EXT_APPR* mean of 0.716 for cost model firms, versus 0.864 for fair value firms). Finally, the recognized fair value gain on investment properties appears higher for firms choosing the fair value model than the comparable “as if” figure for cost model adopters (*FV_GN_LS* of 0.048 for cost model firms, versus 0.099 for fair value firms). Among the control variables, only differences for *CFO_MCAP* are significant, with cost model firms reporting higher cash flows from operations than fair value firms.

Table 4 presents correlations for the variables used in equation (1). Under either Pearson or Spearman measures, univariate associations between our dependent variable, *FV_CHOICE* (an indicator equal to 1 if the firm chooses the fair value model, and 0 otherwise – implying that the firm chooses the cost model), and the experimental variables appear consistent with our predictions. Specifically, *FV_CHOICE* is positively associated with *PRE_GAAP*, *INTL_REV*, *VOL_ADOPT*, *EXT_APPR*, and *FV_GN_LS*, and negatively associated with *CLOSEHELD*. Only the association with *MKT_LIQ* is insignificant.

Table 5 presents the results from our logistic regression examining the determinants of firms’ choice of cost versus fair value model upon adoption of IAS 40. Sample 1 indicates results using all available observations as derived in Table 1 ($N = 133$). The overall model exhibits good explanatory power, with 92% of observations correctly predicted. Among our experimental variables, *PRE_GAAP* is positive and significant as predicted (coefficient = 3.915,

Wald statistic = 9.01), consistent with firms being more likely to choose the fair value model if the pre-IFRS domestic accounting standards of their country of domicile allowed fair values of investment properties on the balance sheet via the revaluation model. *CLOSEHELD* is negative and significant as predicted (-3.920, Wald statistic = 6.52), consistent with firms that have more dispersed ownership being more likely to choose the fair value model. *EXT_APPR* is positive and significant as predicted (3.007, Wald statistic = 7.03), consistent with firms that make other commitments to increased transparency (via use of external appraisers to provide the fair value estimates) being more likely to choose the fair value model. Finally, *FV_GN_LS* is also positive and significant as predicted (6.312, Wald stat = 2.97), indicating that firms choosing the fair value model report higher fair value gains on investment properties than comparable “as if” figures for firms choosing the cost model. The other experimental variables are insignificant. In addition, none of our control variables is significant.

Next, we estimate equation (1) applied to Sample 2 ($N = 96$), which excludes all investment property firms domiciled in the UK. We exclude the UK firms to re-examine our results for two reasons. First, the UK is generally held to have the most liquid property market and most advanced financial reporting and appraisal institutional framework among the European economies.¹⁷ Second, the UK has the largest representation within our sample, with all firms choosing the fair value model under IAS 40, implying no variation in this accounting choice from this country. The overall explanatory power is similar to Sample 1, with correctly predicted observations of 88%. Results also remain comparable to those presented above. Specifically, *PRE_GAAP* (3.494, Wald statistic = 6.05), *EXT_APPR* (2.865, Wald statistic = 6.28), and *FV_GN_LS* (6.242, Wald statistic = 2.85) are all positive and significant, and

¹⁷ For example, the UK property market value was estimated by IPD to be €241 billion at the end of 2005, versus €80 billion for the next largest market (France).

CLOSEHELD (−3.836, Wald statistic = 6.29) is negative and significant, as predicted. In addition, the coefficient estimates appear relatively stable. Overall, the findings using this alternative sample suggest our results are not attributable to the inclusion of UK firms.

Finally, we estimate equation (1) for a third group of firms, Sample 3 ($N = 59$), which includes only firms from countries in which some firms choose the cost model, and some choose the fair value model. We examine this subset to focus on countries wherein there is observable within-country variation in this reporting decision, suggesting differing management perceptions on the cost and fair value models more likely to extend beyond pre-IFRS accounting experience. The overall explanatory power remains high, with 88% of observations correctly predicted. Results contrast somewhat with those from the previous two samples. Specifically, *PRE_GAAP* is positive but no longer significant (coefficient = 1.436, Wald statistic = 0.60), suggesting previous accounting standards are not a primary explanatory variable in this decision for firms in these countries. Similar to our above results, we continue to find predicted relations for *CLOSEHELD* (coefficient = −2.878, Wald statistic = 2.52), *EXT_APPR* (3.424, Wald statistic = 4.55), and *FV_GN_LS* (7.345, Wald statistic = 3.11). Finally, we now find that an additional indicator of commitment to transparency, *VOL_ADOPT*, is now positive and significant (coefficient = 1.956, Wald statistic = 1.68), consistent with firms that make other reporting choices indicating commitment to greater reporting transparency being more likely to choose the fair value model.

Overall, these findings suggest that our results are robust to various definitions of the sample, and indicate that firms choosing the fair value model are more likely to have pre-IFRS accounting standards allowing fair value presentation on the balance sheet (H1), dispersed ownership (H3), other commitments to increasing reporting transparency (H5), and larger fair

value gains (H6). We fail to find support that market liquidity (H2) and the degree of international operations (H4) affects this reporting choice.

5.2 *The Consequences of Firm's Choice of Cost versus Fair Value Model under IAS 40*

Table 6 provides univariate results on the consequences of the model choice under IAS 40. For reasons discussed previously, we present results using the three samples identified in Table 5 and having the necessary market data available (which leads to a slight decrease in sample size). Panel A presents results using Sample 1 (All Obs), comparing market measures in the post-IFRS period across firms choosing the cost model versus those choosing the fair value model for all observations. The results provide limited evidence that firms choosing the fair value model have lower information asymmetry and higher liquidity. Specifically, firms choosing the fair value model have lower mean and median bid-ask spreads (e.g., $BID_ASK = 1.716$ for cost model adopters, versus 1.422 for fair value model adopters), a lower percentage of days with no trading (e.g., $ZERORET = 0.238$ for cost model adopters, versus 0.165 for fair value model adopters), and higher daily trading volume (e.g., $TURNOVER = 0.121$ for cost model adopters, versus 0.244 for fair value model adopters). However, only the differences for $TURNOVER$ are significant at conventional levels (p -value = 0.002 for differences in means, and 0.006 for differences in medians).

Panel B provides univariate comparisons using Sample 2 (ex-UK), which excludes firms domiciled in the UK. Panel C provides the same using Sample 3 (Mixed), which includes only firms in countries exhibiting variation in the choice of accounting model under IAS 40. Results are similar to those in Panel A: specifically, in all cases, firms choosing the fair value model

exhibit lower bid-ask spreads, a lower percentage of days with no trading, and higher trading volume. However, only in several instances are the differences significant.

Table 7 presents results from our multivariate analyses. Panel A presents regressions wherein the dependent variable is $\text{Log}(\text{BID_ASK})$, the log of the average daily percentage bid-ask spread. The panel presents regressions results across the three samples identified above. Consistent with expectations, of the control variables, $\text{Log}(\text{MCAP})$ is significantly negative as predicted, and STDRET is generally significantly positive as predicted. Neither $\text{Log}(\text{PRICE})$ nor LOSS obtain the predicted sign. Of primary interest, the indicator variable for adoption of the fair value model is consistently negative, but significant only in one sample. Specifically, FV_DUM has a coefficient of -0.171 (t -statistic = -1.10) for Sample 1, -0.327 (-2.10) for Sample 2, and -0.259 (-1.26) for Sample 3. Turning to Panel B, we provide results examining two alternative measures of liquidity: ZERORET and TURNOVER . Among the control variables, only $\text{Log}(\text{MCAP})$ is negative and significant as predicted. Regarding FV_DUM , it is negative and significant as predicted in both the regression using ZERORET (coefficient = -0.077 , t -statistic = -1.97) and that using TURNOVER (coefficient = -0.073 , t -statistic = -1.66). Overall, these analyses provide limited support that firms choosing the fair value model exhibit lower information asymmetry and greater liquidity, consistent with H7.

6. Sensitivity Analyses

6.1 Other Proxies for Commitment to Transparency

Because of the central role of transparency in the debate regarding fair value versus historical cost under IAS 40, we now explore additional proxies reflecting other reporting decisions firms make to indicate their commitment to high quality or more transparent

information. First, we examine whether this reporting choice is associated with the firm's voluntary membership in the industry trade group, EPRA. As discussed previously, EPRA, as the major real estate trade organization in Europe, provides a forum for recommendations on, among other things, best practice in financial reporting. In the case of the fair value versus cost model choice under IAS 40, EPRA was a vocal proponent that use of the fair value model constituted best practice (e.g., EPRA 2006). Second, we examine whether this reporting decision is associated with the firm's selection of audit firm: specifically, whether the firm employs a Big Four or non-Big Four audit firm. Prior research suggests larger auditors provide a stronger monitoring role (e.g., Beatty 1989, Titman and Trueman 1986); in the current context, larger audit firms are more likely to have experience both in implementing IFRS generally and in the use of fair value estimates specifically. If membership in EPRA and use of a large audit firm both reflect commitments to more transparent reporting, and if firms having these signals are more likely to choose the fair value model, we predict that firms having membership in EPRA and employing a Big Four audit firm should be more likely to choose the fair value model.

Untabulated statistics reveal that 30% of the sample firms choosing the cost model have membership in EPRA, compared to 61% of firms choosing the fair value model. Similarly, 48% of firms choosing the cost model employ a Big 4 auditor, compared to 78% of firms using the fair value model. These differences are significant at the less than 1% level. However, untabulated multivariate analyses including separate indicator variables for EPRA membership and use of a Big Four audit firm in equation (1) reveal that neither variable is significant. Inferences on the other variables are unchanged from those previously reported.¹⁸ Overall, these

¹⁸ However, when we replace our current proxies for transparent reporting, *VOL_ADOPT* and *EXT_APPR*, with the indicator variables for EPRA membership and use of a Big Four audit firm, the indicator variable for Big Four audit firm is significant at the less than 5% level across all three samples (as indicated in Table 5). This latter

results provide univariate evidence that firms choosing the fair value model appear to make other choices consistent with a commitment to greater transparency; however, the multivariate analyses provide only limited support for these additional proxies.

6.2 Differences in Property Portfolios

We also examine whether the firms choosing the cost versus fair value model differ operationally: specifically, in their property portfolios. Properties typically are classified into four major categories: retail (such as shops), office (such as office buildings), industrial (such as warehouses), and other (including residential and leisure such as hotels). Investment property firms usually have properties within several of these categories (most commonly retail and office), although the relative weighting varies considerably, and individual firms occasionally specialize in a single category. Because property market characteristics can differ across these categories (e.g., office space is often more liquid than industrial property), the composition of the firm's property portfolio may also affect the decision of cost versus fair value model under IAS 40. Accordingly, we hand-collect the percentage of the firm's investment property falling under each of the above four categories, tabulated as follows:

Firms Choosing:	% of Property in			
	Retail	Office	Industrial	Other
Cost Model ($N = 27$)	21	35	7	37
Fair Value Model ($N = 106$)	32	37	11	20

Only the difference for the "other" category is statistically significant. Overall, this suggests there are not extreme differences in the property portfolios across firms choosing the cost versus fair value model.

result, coupled with some high correlations among our proxies for commitment to transparency, suggests multicollinearity may be a concern in including all four proxies together in the multivariate specification.

7. Conclusion

This paper examines the causes and consequences of firm's choice to use the cost model or fair value model to account for its primary asset, real estate. We exploit the setting of adoption of IFRS within the EU, and the relevant standard allowing firms to choose between these models, IAS 40. Regarding the causes of this choice, our results reveal that firms choosing the fair value model are more likely to be domiciled in countries in which the pre-IFRS domestic accounting standards allowed fair values to be presented on the balance sheet through the revaluation model, suggesting prior accounting standards establish some framework affecting the reporting and implementation decisions managers make. We further document that firms choosing the fair value model are more likely to have dispersed ownership, consistent with firms having concentrated ownership relying less on the reporting of fair values through the financial statements to mitigate information asymmetry. We also provide evidence that firms choosing the fair value model are more likely to have signaled a commitment to financial reporting transparency through other reporting decisions, particularly the use of stronger external monitors such as an external appraiser and/or a large audit firm, and the voluntary adoption of IFRS before the 2005 mandate. Finally, we provide some evidence that firms choosing the fair value model do so to maximize reported net income, as the recognized fair value gains reported by adopters of the fair value model are larger than the comparable gains that would have been reported by the cost model adopters. Regarding the consequences of this choice, we provide some evidence that firms choosing the fair value model have lower information asymmetry and greater liquidity relative to those choosing the cost model, suggesting market participants do not view the required footnote disclosure of fair values by cost model adopters as equivalent to recognition of these amounts by fair value model adopters.

Overall, our paper provides insights into the occurrence, causes, and consequences of variation in a key accounting choice (application of the cost versus fair value model) for the primary assets for these firms (real estate). These insights may assist standard setters and users in understanding the factors influencing firm's current and future accounting choices, and that allowing flexibility in these financial reporting decisions may result in highly divergent choices by firms. These insights are likely also of interest to both US standard setters and managers of the almost 250 publicly traded US real estate firms (with a market capitalization of over \$300 billion at December 31, 2007), which must consider how the required historical cost basis applied under US GAAP will be converged with the IFRS requirement allowing a choice of historical cost or fair value (NAREIT 2008).

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Table 1
Sample selection

	Less	Remaining
Firms traded on European Economic Area (EEA) stock exchanges that are classified as real estate firms in Thomson Financial Worldscope		741
Less firms:		
becoming inactive before December 15, 2006	-324	417
not reporting under IFRS in “IFRS year” (2005 or 2005/2006)	-160	257
not operating in the investment property business	-55	202
that are subsidiaries	-9	193
for which no annual reports were found	-4	189
for which the cost versus fair value model decision for the “IFRS year” (2005 or 2005/2006) could not be obtained	-3	186
for which the fair value of investment property in the “IFRS year” (2005 or 2005/2006) could not be obtained	-8	178
for which the fair value of investment property in the “IFRS year” (2005 or 2005/2006) is less than 10% of total assets	-21	157
for which data necessary to estimate Equation (1) is unavailable	-24	133
Final Sample		133

This table presents the sample selection process. We begin with all publicly-traded real estate firms within the European Economic Area. We exclude firms that have become inactive; that do not report under IFRS in 2005 or 2006; that are not within the investment property business; that are subsidiaries; for which annual reports are unavailable; for which the choice of cost or fair value models could not be determined; for which the fair value of investment property (a required disclosure per IAS 40 under either model choice) could not be obtained; for which the fair value of investment properties reported in the IFRS year is less than 10% of total assets; and for which data necessary to estimate Equation (1) is unavailable.

Table 2

Country representation, model choice under IAS 40, and pre-IFRS domestic GAAP treatment for investment property assets

Country	Total Firms		Model choice under IAS 40				Pre-IFRS domestic GAAP treatment of investment property:			Notes
			Cost		Fair Value		Cost Model	Reval Model	Treated as PP&E	
	#	%	#	%	#	%				
Austria	8	6.0	1	3.7	7	6.6	X		X	
Belgium	9	6.8	0	0.0	9	8.5	X	X	X	Revaluations are allowed under certain circumstances. Revaluation is required if investment property is the firm's main activity.
Denmark	3	2.3	0	0.0	3	2.8		X		
Finland	4	3.0	0	0.0	4	3.8	X			
France	18	13.5	9	33.3	9	8.5	X		X	Revaluation is permitted, but rare in practice, as surpluses are taxed.
Germany	18	13.5	10	37.0	8	7.5	X		X	
Greece	3	2.3	0	0.0	3	2.8		X		Applies a variant of the revaluation model.
Italy	4	3.0	2	7.4	2	1.9	X			While depreciation is not mandatory; fair value is prohibited.
Netherlands	6	4.5	1	3.7	5	4.7	X	X		Disclosure of fair value is required.
Norway	1	0.8	0	0.0	1	0.9	X		X	
Poland	2	1.5	0	0.0	2	1.9	X	X	X	
Spain	5	3.8	4	14.8	1	0.9	X		X	
Sweden	9	6.8	0	0.0	9	8.5	X	X		Disclosure of fair value is required.
Switzerland	6	4.5	0	0.0	6	5.7	X	X	X	
UK	37	27.8	0	0.0	37	34.9		X		
Total	133	100.0	27	100.0	106	100.0				

This table presents descriptive data for our sample. We first present the breakdown of sample firms by country. We then present sample firms' choice of cost or fair value model under IAS 40 on adoption of IFRS. Finally, we present the pre-IFRS domestic accounting treatment for investment property assets, indicating whether domestic GAAP required the cost model ("Cost Model"), revaluation model ("Reval Model"), or allowed a choice (i.e., indicated with an "X" under both the cost and revaluation models). We

also indicate whether domestic GAAP treated investment property as a part of property, plant, and equipment (“Treated as PP&E”), that is, did not have a specific accounting standard addressing this asset class.

Table 3

Univariate analysis: the causes of firm's choice of cost versus fair value model under IAS 40

Variable	Cost Model (N = 27)		Fair Value Model (N = 106)		Differences (calculated as Fair Value Model – Cost Model)					
	Mean	Median	Mean	Median	Mean	p-value		Median	p-value	
Descriptive Variable:										
<i>MCAP</i>	929.616	418.046	1,633.425	574.719	703.810	0.045	**	156.673	0.246	
<i>IP_TA</i>	0.842	0.840	0.755	0.824	-0.088	0.276		-0.016	0.294	
Experimental Variables:										
<i>PRE_GAAP</i>	0.037	0.000	0.613	1.000	0.576	<0.001	***	1.000	<0.001	***
<i>MKT_LIQ</i>	0.099	0.087	0.103	0.090	0.003	0.595		0.003	0.704	
<i>CLOSEHELD</i>	0.638	0.706	0.348	0.324	-0.290	<0.001	***	-0.382	<0.001	***
<i>INTL_REV</i>	0.050	0.000	0.141	0.000	0.091	0.006	***	0.000	0.054	*
<i>VOL_ADOPT</i>	0.074	0.000	0.245	0.000	0.171	0.006	***	0.000	0.026	**
<i>EXT_APPR</i>	0.716	1.000	0.864	1.000	0.148	0.058	*	0.000	0.061	*
<i>FV_GN_LS</i>	0.048	0.024	0.099	0.090	0.051	0.027	**	0.066	0.001	***
Control Variables:										
<i>SIZE</i>	19.411	19.661	19.911	20.114	0.500	0.277		0.453	0.312	
<i>DEBT_MCAP</i>	0.870	0.706	0.978	0.730	0.108	0.510		0.024	0.895	
<i>CFO_MCAP</i>	0.057	0.055	0.029	0.032	-0.028	0.046	**	-0.023	0.039	**

This table compares key metrics across two sub-groups of firms: those choosing the cost model versus those choosing the fair value model under IAS 40 on adoption of IFRS. All financial variables are expressed in millions of Euros, translated from local currencies where necessary at exchange rates effective as of the financial statement dates. *, **, *** (^, ^^, ^^) indicate significance for differences of means (medians) at the less than 10%, 5%, and 1% levels, respectively. Tests of differences are one-tailed (two-tailed) for the experimental (descriptive and control) variables.

Variables are defined as:

<i>MCAP</i>	firm <i>i</i> 's market capitalization at the end of the fiscal year; obtained from Worldscope
<i>IP_TA</i>	investment property assets reported on the balance sheet for firm <i>i</i> , divided by total assets reported on the balance sheet at the end of the fiscal IFRS adoption year; obtained from Worldscope and hand-collection
<i>PRE_GAAP</i>	an indicator variable equal to 1 if the pre-IFRS domestic GAAP of the country in which firm <i>i</i> is domiciled allowed or required the fair value of investment properties on the balance sheet (i.e., under the revaluation model), and 0 otherwise (implying the cost model was used under domestic GAAP); coded from hand-collected data
<i>MKT_LIQ</i>	the percent turnover of property for the country-level property markets in which firm <i>i</i> owns investment property, weighted to reflect the country-level distribution of firm <i>i</i> 's property portfolio; obtained from hand-collection and IPD
<i>CLOSEHELD</i>	the percentage of firm <i>i</i> 's shares outstanding that are closely held at the end of the fiscal year; obtained from Worldscope and hand-collection
<i>INTL_REV</i>	the percentage of firm <i>i</i> 's revenue that is derived from outside the firm's country of domicile; obtained from Worldscope and hand-collection
<i>VOL_ADOPT</i>	an indicator variable equal to 1 if firm <i>i</i> had adopted IFRS voluntarily prior to the mandatory adoption required as of January 1, 2005, and 0 otherwise; obtained from Worldscope
<i>EXT_APPR</i>	the percentage of firm <i>i</i> 's investment property for which an external appraiser is used to obtain the recognized or disclosed fair value of investment properties provided for the IFRS adoption year; obtained from hand-collection
<i>FV_GN_LS</i>	the fair value gain or loss for firm <i>i</i> 's investment property for the IFRS adoption year, divided by the firm's market capitalization at the end of the fiscal IFRS adoption year; obtained from hand-collection of required income statement disclosures for fair value adopters, and calculated using footnote disclosures for cost model adopters
<i>SIZE</i>	the log of firm <i>i</i> 's market capitalization (adjusted to euros) at the end of the fiscal IFRS adoption year; obtained from Worldscope
<i>DEBT_MCAP</i>	firm <i>i</i> 's reported short-term plus long-term debt, divided by the firm's market capitalization at the end of the fiscal IFRS adoption year; obtained from Worldscope
<i>CFO_MCAP</i>	firm <i>i</i> 's reported cash flows from operations, divided by the firm's market capitalization at the end of the fiscal IFRS adoption year; obtained from Worldscope

Table 4

Correlations: the causes of firm's choice of cost versus fair value model under IAS 40

	<i>FV_CHOICE</i>	<i>PRE_GAAP</i>	<i>MKT_LIQ</i>	<i>CLOSEHELD</i>	<i>INTL_REV</i>	<i>VOL_ADOPT</i>	<i>EXT_APPR</i>	<i>FV_GN_LS</i>	<i>SIZE</i>	<i>DEBT_MCAP</i>	<i>CFO_MCAP</i>
<i>FV_CHOICE</i>		0.464	0.033	-0.389	0.140	0.169	0.135	0.258	0.088	-0.012	-0.180
<i>PRE_GAAP</i>	0.464		0.043	-0.368	0.009	-0.033	-0.123	0.353	0.179	-0.083	-0.252
<i>MKT_LIQ</i>	0.035	0.127		-0.044	-0.067	-0.300	0.349	0.156	0.152	-0.207	0.181
<i>CLOSEHELD</i>	-0.406	-0.373	-0.055		-0.213	-0.200	-0.063	-0.089	-0.444	0.014	0.176
<i>INTL_REV</i>	0.144	0.071	-0.089	-0.172		0.197	0.109	0.044	0.184	0.089	-0.001
<i>VOL_ADOPT</i>	0.169	-0.033	-0.271	-0.196	0.189		0.112	-0.155	-0.033	0.121	-0.220
<i>EXT_APPR</i>	0.167	-0.108	0.308	-0.085	0.072	0.085		-0.035	0.068	-0.113	0.244
<i>FV_GN_LS</i>	0.203	0.282	0.109	-0.018	-0.079	-0.166	-0.105		0.237	0.066	-0.081
<i>SIZE</i>	0.114	0.149	0.093	-0.511	0.108	-0.039	0.005	0.190		-0.143	-0.030
<i>DEBT_MCAP</i>	0.046	-0.092	-0.166	0.159	0.036	0.148	-0.122	0.199	-0.196		0.014
<i>CFO_MCAP</i>	-0.150	-0.201	0.022	0.127	-0.209	-0.126	0.229	-0.029	-0.050	0.068	

This table provides correlations for the variables used to examine a firm's choice of cost versus fair value model under IAS 40 upon adoption of IFRS. Pearson (Spearman) correlations are indicated above (below) the diagonal. *FV_CHOICE* is an indicator variable equal to 1 if the firm chooses the fair value model under IAS 40 upon adoption of IFRS, and 0 otherwise (implying the firm chooses the cost model). All other variables are defined in Table 3. Bolded figures indicate significance at the less than 10% level.

Table 5

Multivariate analysis: the causes of firm's choice of cost versus fair value model under IAS 40

Variable	Hypothesis	Predicted Sign	Sample 1 (All Obs)	Sample 2 (ex-UK)	Sample 3 (Mixed)
<i>Intercept</i>		?	3.840 (0.86)	3.904 (0.89)	0.777 (0.03)
Experimental Variables:					
<i>PRE_GAAP</i>	H1	+	3.915 (9.01) ***	3.494 (6.05) ***	1.436 (0.60)
<i>MKT_LIQ</i>	H2	+	0.024 (0.09)	0.013 (0.02)	-0.013 (0.01)
<i>CLOSEHELD</i>	H3	-	-3.920 (6.52) ***	-3.836 (6.29) ***	-2.878 (2.52) **
<i>INTL_REV</i>	H4	+	-0.202 (0.01)	-0.276 (0.02)	-0.215 (0.01)
<i>VOL_ADOPT</i>	H5	+	1.014 (0.81)	1.038 (0.85)	1.956 (1.68) *
<i>EXT_APPR</i>	H5	+	3.007 (7.03) ***	2.856 (6.28) ***	3.424 (4.55) **
<i>FV_GN_LS</i>	H6	+	6.312 (2.97) **	6.242 (2.85) **	7.345 (3.11) **
Control Variables:					
<i>SIZE</i>		+/-	-0.237 (1.58)	-0.229 (1.47)	-0.156 (0.51)
<i>DEBT_MCAP</i>		+/-	0.290 (0.59)	0.282 (0.57)	0.380 (0.70)
<i>CFO_MCAP</i>		+/-	-6.452 (1.20)	-6.369 (1.15)	-6.971 (0.99)
<i>N</i>			133	96	59
Log Likelihood			61.47 ***	41.85 ***	30.70 ***
% Concordant (discordant)			92% (8%)	88% (12%)	88% (12%)

This table presents results from logistic regressions examining a firm's choice of cost versus fair value model under IAS 40 upon adoption of IFRS. The dependent variable is *FV_CHOICE*, an indicator variable equal to 1 if the firm chooses the fair value model under IAS 40 upon adoption of IFRS, and 0 otherwise (implying the firm chooses the cost model). Sample 1 (All Obs) presents results using all available observations. Sample 2 (ex-UK) presents results excluding UK firms. Sample 3 (Mixed) presents results including only countries wherein some firms choose the cost model and some choose the fair value model. We present coefficients, with Wald Chi-square statistics shown in parentheses. *, **, *** indicate significance at the less than 10%, 5%, and 1% levels, respectively for one or two-tailed tests, as indicated.

Variables are defined as:

<i>PRE_GAAP</i>	an indicator variable equal to 1 if the pre-IFRS domestic GAAP of the country in which firm <i>i</i> is domiciled allowed or required the fair value of investment properties on the balance sheet (i.e., under the revaluation model), and 0 otherwise (implying the cost model was used under domestic GAAP); coded from hand-collected data
<i>MKT_LIQ</i>	the percent turnover of property for the country-level property markets in which firm <i>i</i> owns investment property, weighted to reflect the country-level distribution of firm <i>i</i> 's property portfolio; obtained from hand-collection and IPD
<i>CLOSEHELD</i>	the percentage of firm <i>i</i> 's shares outstanding that are closely held at the end of the fiscal year; obtained from Worldscope and hand-collection
<i>INTL_REV</i>	the percentage of firm <i>i</i> 's revenue that is derived from outside the firm's country of domicile; obtained from Worldscope and hand-collection
<i>VOL_ADOPT</i>	an indicator variable equal to 1 if firm <i>i</i> had adopted IFRS voluntarily prior to the mandatory adoption required as of January 1, 2005, and 0 otherwise; obtained from Worldscope
<i>EXT_APPR</i>	the percentage of firm <i>i</i> 's investment property for which an external appraiser is used to obtain the recognized or disclosed fair value of investment properties provided for the IFRS adoption year; obtained from hand-collection
<i>FV_GN_LS</i>	the fair value gain or loss for firm <i>i</i> 's investment property for the IFRS adoption year, divided by the firm's market capitalization at the end of the fiscal IFRS adoption year; obtained from hand-collection of required income statement disclosures for fair value adopters, and calculated using footnote disclosures for cost model adopters
<i>SIZE</i>	the log of firm <i>i</i> 's market capitalization (adjusted to euros) at the end of the fiscal IFRS adoption year; obtained from Worldscope
<i>DEBT_MCAP</i>	firm <i>i</i> 's reported short-term plus long-term debt, divided by the firm's market capitalization at the end of the fiscal IFRS adoption year; obtained from Worldscope
<i>CFO_MCAP</i>	firm <i>i</i> 's reported cash flows from operations, divided by the firm's market capitalization at the end of the fiscal IFRS adoption year; obtained from Worldscope

Table 6

Univariate analysis: the consequences of firm's choice of cost versus fair value model under IAS 40 – comparisons of market measures within the post-IFRS period

Variable	Cost Model		Fair Value Model		Differences (calculated as Cost Model – Fair Value Model)					
	Mean	Median	Mean	Median	Mean	<i>p</i> -value		Median	<i>p</i> -value	
Panel A. Sample 1 (All Obs)										
	(N = 23)		(N = 99)							
<i>BID_ASK</i>	1.716	1.101	1.422	0.769	0.294	0.464		0.332	0.125	
<i>ZERORET</i>	0.238	0.102	0.165	0.086	0.073	0.153		0.016	0.313	
<i>TURNOVER</i>	0.121	0.116	0.244	0.162	-0.123	0.002	***	-0.046	0.006	***
Panel B. Sample 2 (ex-UK)										
	(N = 23)		(N = 64)							
<i>BID_ASK</i>	1.716	1.101	1.177	0.716	0.539	0.178		0.385	0.029	**
<i>ZERORET</i>	0.238	0.102	0.163	0.102	0.075	0.118		0.000	0.640	
<i>TURNOVER</i>	0.121	0.116	0.169	0.115	-0.048	0.200		0.001	0.115	
Panel C. Sample 3 (Mixed)										
	(N = 23)		(N = 31)							
<i>BID_ASK</i>	1.716	1.101	1.426	0.561	0.290	0.578		0.541	0.083	*
<i>ZERORET</i>	0.238	0.102	0.166	0.086	0.072	0.267		0.016	0.318	
<i>TURNOVER</i>	0.121	0.116	0.141	0.120	-0.020	0.592		-0.004	0.302	

This table presents univariate comparisons of market measures within the post-IFRS period for firms choosing the cost model versus those choosing the fair value model under IAS 40 upon adoption of IFRS. The “post-IFRS” period is the six month period starting six months after the fiscal IFRS adoption year end. Panel A presents results using Sample 1 (All Obs), which includes all available observations. Panel B presents results using Sample 2 (ex-UK), which excludes UK firms. Panel C presents results using Sample 3 (Mixed), which includes only countries wherein some firms choose the cost model and some choose the fair value model. *, **, *** indicate significance at the less than 10%, 5%, and 1% levels, respectively for two-tailed tests.

Variables are defined as:

<i>BID_ASK</i>	the mean of firm <i>i</i> 's daily percentage bid-ask spread, measured over the “post-IFRS” period; calculated from Datastream
<i>ZERORET</i>	percentage of trading days for firm <i>i</i> on which the share price does not change (i.e., indicative of no trading activity), measured over the “post-IFRS” period; calculated from Datastream
<i>TURNOVER</i>	the mean daily percentage of outstanding shares traded for firm <i>i</i> , measured over the “post-IFRS” period; calculated from Datastream

Table 7

Multivariate analysis: the consequences of firm's choice of cost versus fair value model under IAS 40 – comparisons of market measures within the post-IFRS period

Panel A. Dependent variable is $\text{Log}(BID_ASK)$

	Sample 1 (All Obs)		Sample 2 (ex-UK)		Sample 3 (Mixed)	
<i>Intercept</i>	10.982 (11.54) ***	11.082 (11.60) ***	10.567 (8.37) ***	10.881 (8.74) ***	11.639 (6.84) ***	11.658 (6.89) ***
<i>Log(MCAP) (-)</i>	-0.572 (-12.03) ***	-0.567 (-11.90) ***	-0.570 (-9.20) ***	-0.565 (-9.37) ***	-0.624 (-7.57) ***	-0.614 (-7.46) ***
<i>Log(PRICE) (-)</i>	0.031 (0.63)	0.019 (0.39)	0.079 (1.34)	0.062 (1.06)	0.167 (1.92)	0.155 (1.76)
<i>LOSS (+)</i>	-0.071 (-0.21)	-0.133 (-0.39)	-0.178 (-0.45)	-0.344 (-0.87)	-0.212 (-0.44)	-0.286 (-0.60)
<i>STDRET (+)</i>	18.411 (2.13) **	17.162 (1.97) **	22.822 (2.27) **	19.531 (1.96) **	15.264 (1.13)	13.637 (1.01)
<i>FV_DUM (+/-)</i>		-0.171 (-1.10)		-0.327 (-2.10) **		-0.259 (-1.26)
<i>N</i>	122	122	87	87	54	54
<i>Adj-R²</i>	0.587	0.590	0.548	0.567	0.564	0.570

Panel B. Dependent variables are *ZERORET* or *TURNOVER*

		<i>ZERORET</i>		<i>TURNOVER</i>	
<i>Intercept</i>	+/-	2.543 (10.44) ***	2.588 (10.70) ***	1.573 (5.78) ***	1.616 (5.96) ***
<i>Log(MCAP)</i>	-	-0.113 (-9.29) ***	-0.111 (-9.20) ***	-0.098 (-7.28) ***	-0.097 (-7.16) ***
<i>Log(PRICE)</i>	-	-0.001 (-0.01)	-0.005 (-0.41)	0.065 (4.74)	0.061 (4.32)
<i>LOSS</i>	+	-0.155 (-1.80)	-0.183 (-2.13)	0.083 (0.87)	0.057 (0.59)
<i>STDRET</i>	+	-5.841 (-2.64)	-6.407 (-2.90)	0.687 (0.28)	0.152 (0.06)
<i>FV_DUM</i>	+/-		-0.077 (-1.97) **		-0.073 (-1.66) *
<i>N</i>		122	122	122	122
<i>Adj-R²</i>		0.436	0.450	0.326	0.336

This table provides multivariate analyses of the consequences of firm's choice of cost versus fair value model under IAS 40 on adoption of IFRS. Panel A presents results in which the dependent variable is $Log(BID_ASK)$, the log of firm i 's average daily percentage spread. The panel examines three samples: Sample 1 (All Obs), which includes all available observations; Sample 2 (ex-UK), which excludes UK firms; and Sample 3 (Mixed), which includes only countries wherein some firms choose the cost model and some choose the fair value model. Panel B presents results in which the dependent variable is alternatively measured as $ZERORET$, the percentage of days in which firm i 's shares do not trade, and $TURNOVER$, the average daily turnover of firm i 's common shares. All three dependent variables are measured over the "post-IFRS" period, measured as the six month period starting six months after the fiscal IFRS adoption year end. *, **, *** indicate significance at the less than 10%, 5%, and 1% levels, respectively for one or two-tailed tests, as indicated.

Variables are defined as:

$Log(MCAP)$	the log of firm i 's market capitalization at the end of the fiscal IFRS adoption year; calculated from Datastream
$Log(PRICE)$	the log of firm i 's stock price, at the end of the fiscal IFRS adoption year; calculated from Worldscope
$LOSS$	an indicator variable equal to 1 if firm i reports negative net income in the IFRS adoption year, and 0 otherwise; calculated from Worldscope
$STDRET$	the standard deviation of firm i 's daily stock returns, measured over the post-IFRS period (defined above); calculated from Datastream
FV_DUM	an indicator variable equal to 1 if firm i chooses the fair value model under IAS 40 in the fiscal IFRS adoption year, and 0 otherwise (implying it chooses the cost model); obtained from hand-collected data