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An International Exploration of Financial Reporting Practices in the Real Estate Industry

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The adoption of the new International Financial Reporting Standards (IFRS), by allowing the option of fair value accounting for real estate investment properties, has dramatically altered the landscape of financial reporting for real estate firms worldwide. In this exploratory study, by examining the financial statements and disclosures of 45 international real estate firms, we demonstrate that the implementation of IFRS has affected financial reporting practices in the real estate industry. We find that under the IFRS, companies place emphasis on market asset valuations, vis-à-vis alternative metrics for current performance. We also find that most real estate firms in our sample choose to report fair values for investment properties in their financial statements rather than the notes to the financial statements. Finally,

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there is a wide variation in firm disclosures with regards to the determinants of fair market values.

Keywords

International Real Estate; Investment Properties; Performance Measurement; International Financial Reporting Standards (IFRS); Fair Value Accounting

1. Introduction

The adoption of the new International Financial Reporting Standards (IFRS) by the European Union (EU) and many other countries since 2005, which allow the option of fair value accounting for real estate assets, has dramatically altered financial reporting for the real estate industry. The European convergence to the IFRS started when the European Parliament passed a resolution in March 2002 that required all EU publicly traded companies to prepare IFRS-compatible financial statements. Since its adoption in 2005, around 7,000 EU publicly traded companies are required to employ the IFRS. The adoption of the IFRS by the EU has prompted many other countries to harmonize their national standards with the IFRS.[1] As of the end of 2009, more than 120 countries and jurisdictions require or permit the use of the IFRS.[2] For the U.S., the largest market in the world, the Financial Accounting Standards Board (FASB) has devised a "roadmap" for the convergence to IFRS. In summary, the adoption of IFRS represents an unprecedented change for financial reporting across the globe, and international real estate firms must now adapt to the new IFRS reporting requirements.

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[1] For instance, the Australian Accounting Standards Board (AASB) had been working towards converging to the IFRS and since January 1, 2005, Australian companies are required to follow the Australian equivalent of the IFRS. In New Zealand, the Accounting Standards Review Board (ASRB) and the Financial Reporting Standards Board (FRSB) had devised their New Zealand equivalents to IFRS and recommended early adoption of the new standards with mandatory adoption on January 1, 2007. The Hong Kong Institute of Certified Public Accountants had fully converted the Hong Kong Financial Reporting Standards to the IFRS at the end of 2004, with the new standards effective for the financial periods starting January 1, 2005. For Singapore, the Council on Corporate Disclosure and Governance (CCDG) had devised a plan for changes to the financial reporting framework since 2004 to converge its local accounting standards with the IFRS. In May 2006, the Singaporean accounting standards and IFRS were almost identical despite minor differences in certain standards.

[2] Source: www.iasplus.com

Under the IFRS, companies are *required* to report fair values for investment properties including unrealized gains and losses, with the *option* of reporting fair value estimates either in the financial statements or note disclosures.[3] While the U.S. real estate industry traditionally argues that depreciation expense is based on historical cost and incorrectly assumes that real estate asset values predictably diminish over time, the IFRS allows companies to disregard bookkeeping depreciation expenses. Given that investment properties typically represent a substantial proportion of a non-service provider real estate company's total assets, the recognition of unrealized gains and losses for these assets and the ability to exclude depreciation expenses could have significant impact upon performance measurement of real estate firms.

While several prior studies have examined the subsequent capital market impact of the adoption of the IFRS by real estate firms (e.g., Daske et al. 2007; Fortin et al. 2011), there have been sparse analyses about how financial reporting has changed.[4] In this exploratory study, we examine financial statements for a set of international real estate firms in order to ascertain how fair value accounting has altered reporting practices. In a sample of 45 international real estate firms that follow the IFRS, we hand-collect detailed financial statements and disclosure information to analyze financial reporting subsequent to the adoption of the IFRS in 2005.

We first examine performance (income) measurement for international real estate firms under the IFRS. The mandatory inclusion of *accounting* depreciation in the calculation of net income in the U.S. has prompted industry participants (for example, the National Association of Real Estate Investment Trusts) to assert that net income is an insufficient profitability measure for a real estate company.[5] Consequently, the bulk of the U.S. publicly traded real estate investment industry uses a *voluntary* current performance measure, Funds from Operations (FFO), as an alternative to net income, that is generally calculated by adding back the amount of *real estate-specific* depreciation to net income and related gains and losses on real estate assets. In contrast to a restated performance measure, such as the voluntary FFO, real estate firms that adopt IFRS fair value accounting on their financial statements are *required* to recognize fair values for investment properties *without* depreciation. Arguably, if accounting depreciation is eliminated, the IFRS net income may improve the usefulness of the net income measures and

[3] In addition, companies also have the *option* to revalue their owner-occupied properties at fair values.
[4] The only study that we are aware of is Navarro-Galera, Pérez-López, and Rodríguez-Ariza (2010), in which they conduct a survey study on financial directors, for a sample of construction companies, on their perceptions of fair value accounting.
[5] Accounting depreciation is most commonly calculated as straight-line depreciation and deemed an inappropriate approximation of the true economic depreciation of real estate assets (Ben-Shahar, Margalioth and Sulganik, 2009).

may reduce the need for FFO. As a counterpoint, since fair value adjustments include *unrealized* gains and losses, investors may seek a “realized” measure, excluding these unrealized gains and losses, and the need for FFO may remain.

Our findings suggest that most firms that are utilizing the IFRS do not report FFO, although most of them report traditional general alternative performance measures as well, such as earnings before interest and tax (EBIT) or earnings before interest, tax, depreciation and amortization (EBITDA). We also find that international real estate firms that are using the IFRS appear to emphasize current market asset valuation by reporting alternative valuation measures, such as net asset values (NAV).

Next, we specifically examine the effect of the adoption of fair value accounting under the IFRS on the reporting of investment property information. Following the adoption of the IFRS, companies have two accounting options for investment properties: (1) on the balance sheet at fair values and on the income statement with unrealized gains and losses (i.e., the fair value model), or (2) on the balance sheet at cost; and notes used to disclose fair values on the financial statements (i.e., the cost model). Although fair values are required to be reported *somewhere* in the financial statements, managers have a choice to *not* report fair values on the balance sheet and the associated unrealized fair value gains and losses on the income statement. The choice of the fair value model versus the cost model has pros and cons. In upward buoyant real estate markets, it might be beneficial for real estate companies to adopt the fair value model in order to report unrealized gains on the income statement. Of course, unrealized gains and losses can be substantial, relative to a real estate company’s rental and other income. As a result, this may lead to income volatility as real estate values fluctuate with market conditions. Thus, managers may feel that it is not beneficial to include unrealized gains and losses in net income, and may continue to employ the cost model in accounting for investment properties, with fair value information de-emphasized and relegated to the notes to the financial statements.

Our findings indicate that the sample international real estate firms have predominantly chosen to use the fair value model to account for investment properties, and over the sample period, firms report unrealized gains on investment properties that on average exceeded than 50% of the net income.

Finally, the IFRS require firms to provide additional details about the assumptions and methodology for the valuation of investment properties. We assess the quality of disclosures about real estate fair values by examining the following questions: (1) do companies disclose the use of external appraisers and explicitly state the standards and methodologies used in the calculation of fair values? (2) Do companies provide property-level fair value details about investment properties? (3) What constitutes the *“best practices”* in the industry? Our findings show that while international real estate firms generally provide extensive fair value disclosures, there appears to be substantial cross-sectional firm variation on the determinants of fair values, and the quality of fair value disclosures.

Our study contributes to the real estate literature by providing detailed documentation with regard to the reporting practices of international real estate firms subject to the IFRS, and provides significant insights on the international trend of financial reporting in the real estate industry. Given that the U.S. is also adopting similar fair value standards with regard to investment properties,[6] it is expected the majority of real estate entities in the world would be following these standards in the foreseeable future. Therefore, it is of utmost importance for real estate managers and investors alike to understand the implications of the new financial reporting standards on the real estate industry.

The remainder of the paper is organized as follows. In Section 2, we discuss the reporting practices of real estate companies prior to the adoption of the IFRS, and the development of the new IFRS for real estate properties. Section 3 outlines the sample selection process and describes our sample firms. Section 4 presents our hypotheses and findings, and the last section concludes.

2. Existing Reporting Practices of Real Estate Companies and the New IFRS

In financial reporting, net income, computed according to the Generally Accepted Accounting Principles (GAAP), is traditionally recognized as the key summary statistic for company performance. U.S. real estate companies are required to record properties at historical costs and include depreciation expenses in the calculation of net income. However, net income may not accurately reflect the profitability of real estate assets because of depreciation expense (See NAREIT National Accounting Bulletin, 2002). As a consequence, FFO was developed. Yet, there has been a continual debate about the reliability of FFO vis-à-vis GAAP net income; and adding to the heat, but not necessarily shedding light, academic researchers have generated mixed evidence about the usefulness of FFO versus net income.[7]

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[6] The FASB has also issued an accounting standards update to be implemented in 2011 to achieve convergence with the IFRS on the accounting for investment properties. The proposed new rules will require companies to report their investment properties at fair values on the balance sheet and on the income statement (Price Waterhouse Coopers, 2010).

[7] See, for example, Fields, Rangan, and Thiagarajan, 1998; Gore and Stott, 1998; Vincent, 1999; Graham and Knight, 2000; Stunda and Typpo, 2004; Downs and Güner, 2006; Hayunga and Stephens, 2009; Ben-Shahar, Sulganik and Tsang 2011.

Prior to the adoption of IFRS, international real estate companies employed several different accounting methods for their investment properties. For example, the U.K. government dictated that investment properties were to be revalued every year. The revalued amount was reported on the balance sheet, with the changes in property market value recorded as a reserve in shareholders' equity. The New Zealand standards mirrored the standards in the U.K., but managers had the option to recognize changes in investment property market value as a revaluation reserve or unrealized gains or losses in the income statement. In Hong Kong, investment properties were carried at fair market values with changes in the fair market values recorded in revaluation reserves; when a revaluation reserve is calculated as an accumulated deficit, a loss must be recognized on the income statement. In Australia, there were no specific accounting standards to guide the reporting of investment properties prior to the adoption of the IFRS. Academic research in the pre-IFRS era, which studied investment properties for U.K. and Australian companies, shows that fair value estimates are less biased and not surprisingly, more accurate reflections for selling prices than historical costs (e.g., Aboody, Barth and Kasznik, 1999; Dietrich, Harris and Muller, 2001; Danbolt and Rees, 2004; and Barth and Clinch, 1998).

In an effort to harmonize financial reporting practices across its member countries, the International Accounting Standards Board (IASB) developed the IFRS, which contains specific rules for investment properties, the *IAS 40 Investment Properties*. The IAS 40 requires investment properties to be initially booked at cost, but allows managers to choose between measuring investment properties at fair values or at cost subsequent to the initial recognition. If investment properties are measured at fair values, the associated gains and losses that arise from changes in fair values should be included in the income statement. If investment properties are accounted for at cost, the IAS 40 nonetheless requires that the assessment of the fair values be disclosed in the notes to the financial statements. In addition, the standards require disclosures of the methods and assumptions applied to determine fair values and whether an independent appraiser has been employed.[8]

3. Sample Selection and Data Description

As of January 2005, which is the adoption date for the IFRS, there were 247 real estate firms that represent 20 countries in the FTSE EPRA/ NAREIT

[8] The IASB also developed similar rules for property, plant and equipment under the IAS 16. Under the IAS 16, companies can choose to report their owner-occupied properties by using the cost model or the revaluation model. Given that international real estate companies hold properties for investment purposes and classify the majority of their real estate assets as investment properties, we focus on their reporting practices under the IAS 40.

Global Real Estate Index.[9] Sixteen of the 20 countries (jurisdictions) follow the IFRS or have IFRS-equivalent standards and are included in our sample selection process: Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Hong Kong, Italy, Netherlands, New Zealand, Singapore, Spain, Sweden, and the U.K.

Our research requires time-consuming, detailed analysis of financial statement information in combination with hand-collected data. We obtain a sample of firms for our analysis by choosing, in each of the 16 countries, the firm with the largest market capitalization (and with sufficient data) for inclusion in the analysis.[10] To address the concerns that our analysis focuses only on large firms or the industry leader in each country, we augment the sample in two ways. First, we select the firm with the smallest market capitalization in each of the 16 countries in the index. By doing so, we add another 13 firms to the sample, as there is only one firm in the index for Austria, Greece and New Zealand. Second, we select an additional 16 firms, randomly drawn from the remainder of the index population (that employ the IFRS).[11] Our final sample consists of 45 firms.

Table 1 lists the sample firms with country of operation, sub-industry classification and market capitalization (as of January 1, 2005).[12] Financial information has been collected from the financial statements, available from company websites and Capital IQ. Our sample firms consist of two groups: real estate development firms (24 companies) and real estate investment trusts (REITs, 21 companies). We observe significant country differences in the firm structure (e.g., all sample firms chosen from Netherlands are REITs and all sample firms chosen from Hong Kong are real estate development firms); this is likely caused by the differences in real estate markets, legal and regulatory structures, and institutions.

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[9] Although there are other major indices (e.g., MSCI Global Real Estate Index) that track real estate firm performance around the world, we elect to include firms that are listed in the FTSE EPRA/ NAREIT Global Real Estate Index because the constituent companies in this index are subject to stricter requirements. For example, they must be traded on an official stock exchange, have a minimum market capitalization of $200 million USD for Asian and North American stocks or €50 million for European stocks, and are required to provide audited annual reports in English.

[10] This also ensures that firms in each of the 16 countries are represented in our sample.

[11] We made one exception and specifically include the GPT Group from Australia in the random sample, since it provides detailed qualitative disclosures for its real estate assets and facilitates our discussion on the ‘best practices’ in the industry.

[12] We collect financial statements over the period of 2005-2009. However, we find that while the financial reporting practices of firms are different across firms, the practices do not change within firms across time. Hence, we choose 2005, the first year that the IFRS was adopted, as the base year to conduct our analysis.

Table 1 Sample of International Firms

	Country	Firm	Industry Classification*	Market Capitalization (as of January 1, 2005 in € millions)*
1	Australia	FKP Property Group	Real Estate Development	296
2	Australia	GPT Group	Diversified REITs	4,348
3	Australia	Westfield Group	Retail REITs	15,844
4	Austria	Immofinanz Imm. Ag.	Real Estate Development	1,774
5	Belgium	Belfimmo	Office REITs	737
6	Belgium	Cofinimmo	Office REITs	1,067
7	Belgium	Intervest Offices	Office REITs	345
8	Belgium	Warehouses De Pauw	Industrial REITs	340
9	Denmark	Sjaelso Gruppen	Real Estate Development	178
10	Denmark	TK Development	Real Estate Development	54
11	Finland	Citycon	Real Estate Development	257
12	Finland	Sponda	Real Estate Development	567
13	Finland	Techonopolis Plc.	Real Estate Development	94
14	France	Fonciere des Regions	Diversified REITs	860
15	France	Gecina	Diversified REITs	4,114
16	France	Klepierre	Retail REITs	2,916
17	France	Unibail	Retail REITs	5,187
18	Germany	Deutsche Wohnen	Real Estate Development	113
19	Germany	IVG Immobilien	Real Estate Development	1,396
20	Greece	Babis Vovos International	Real Estate Development	397
21	Hong Kong	Hang Lung Properties Ltd.	Real Estate Development	4,200
22	Hong Kong	Kowloon Development	Real Estate Development	461
23	Hong Kong	Sino Land Company	Real Estate Development	3,130
24	Hong Kong	Sun Hung Kai Properties	Real Estate Development	17,740
25	Italy	Aedes	Real Estate Development	389
26	Italy	Beni Stabili	Diversified REITs	1,285
27	Italy	Risanamento	Real Estate Development	552

(Continued…)

(Table 1 continued)

	Country	Firm	Industry Classification*	Market Capitalization (as of January 1, 2005 in € millions)*
28	Netherlands	Corio	Retail REITs	2,951
29	Netherlands	Rodamco Europe	Retail REITs	5,235
30	Netherlands	VastNed Offices	Office REITs	439
31	Netherlands	Wereldhave	Diversified REITs	1,716
32	New Zealand	Kiwi Income Property Trust	Diversified REITs	703
33	Singapore	Allgreen Properties	Real Estate Development	514
34	Singapore	Capitaland	Real Estate Development	2,427
35	Singapore	Hongkong Land	Real Estate Development	4,207
36	Spain	Immobiliaria Colonial	Real Estate Development	291
37	Spain	Metrovacesa	Real Estate Development	2,305
38	Sweden	Castellum	Real Estate Development	1,094
39	Sweden	Klovern	Real Estate Development	229
40	Sweden	Wihlborgs Fastigheter	Real Estate Development	1,566
41	United Kingdom	British Land	Diversified REITs	6,149
42	United Kingdom	Capital Shopping Center	Retail REITs	3,497
43	United Kingdom	Hammerson	Retail REITs	3,390
44	United Kingdom	Land Securities	Diversified REITs	9,250
45	United Kingdom	Primary Health Properties	Specialized REITs	71

* *Source:* Capital IQ

4. Hypotheses and Findings

4.1 Performance Measurement

Do real estate companies, subject to the IFRS, report FFO or other similar alternative performance (income) metrics? On the one hand, the IFRS allows companies to recognize real estate investment properties at fair values *without* accounting depreciation, thus reducing the need to report FFO. On the other hand, the IFRS requires the inclusion of *unrealized* gains and losses when fair values are reported on the financial statements. Hence, investors may prefer or require alternative performance measures. We present our first hypothesis (in alternative form) as follows:

> H_1: *Under the IFRS, real estate firms do not report alternative performance measures.*

We find that only one firm in our sample (i.e., Deutsche Wohnen of Germany) reports FFO. It appears that the widespread adoption of FFO in the U.S. does not have a worldwide appeal. However, many companies choose to provide EBIT or EBITDA in their financial statements. There are a few companies that report other performance measures. In total, there are 31 firms out of 45 that provide some form of alternative performance. Statistically, our sample real estate firms are likely to provide alternative additional performance measures (statistically significant at the 5% level).[13] Table 2 summarizes the performance (income) metrics that are being reported by our sample firms.

Table 2 Definitions of Alternative Performance (Income) Measures

Panel A: FFO-type Measures	
Distributable Income	Income available for distribution
EBIT	Earnings before interest and taxes
EBITDA	Earnings before interest, taxes, depreciation and amortization
EPS (excluding fair value gains and losses)	Earnings per share that excludes the effect of fair value gains and losses on earnings
Funds Available for Distribution (FAD)	Amount of capital available for dividend distribution
Recurring Income	Income excluding non-recurring items
Gross Operating Cash Flow	Net profits for the years plus depreciation, amortization and write-downs plus disposals at book value
Panel B: Operational Measures	
Financial Occupancy Rate	Rental income as a percentage of rental value
Rental Income per Square Meter	Annualized rental income divided by lettable area
Panel C: Financial Ratios	
Equity/ Investment Property Ratio	Amount of equity capital to value of investment property
Property Result per Share	Fair value gains or losses / number of shares outstanding
Surplus Ratio	Net operating income / rental income
Total Passing Rent to Total Market Value Ratio	Total passing rent / market value of property portfolio
Total Passing Rents to Total Net Book Value Ratio	Total passing rent for the year / total net book value

[13] We conduct a binomial test of difference on the sampling distribution based on 45 observations (two-sided test).

The IFRS requires fair value accounting for investment properties, providing a more realistic valuation of the company's fixed assets. This procedure, of course, should reduce the need for supplementary disclosures on asset valuation. However, the emphasis of fair value accounting may also cause investors to focus on asset valuation, instead of current company performance. Consequently, investors may demand more information on company assets, including alternative asset valuation measures. We present our second hypothesis (in alternative form) as follows:

> *H_2: Under the IFRS, real estate firms do not report alternative measures for asset valuation.*

We find a whopping 39 out of 45 firms report some form of alternative asset valuation measure; our univariate binomial test shows that the companies are likely to report an alternative asset valuation measure (statistically significant at 1%). Most companies report NAV, either in the financial statements or notes to the financial statements. NAV is in spirit similar to fair values, except it adjusts for debt. Many companies also report some form of *adjusted* NAV. For example, some companies explicitly state that they are following the guidelines published by the European Public Real Estate Association (EPRA) for reporting NAV. Some companies provide triple net liquidation NAV. In summary, our findings indicate that companies are eager to provide supplementary measures for asset valuation, well beyond reporting the fair values of real estate properties. Table 3 summarizes the definitions of the various valuation metrics.

Do international real estate firms have an income-statement focus (by providing alternative performance measures) or a balance-sheet focus (by providing alternative valuation measures)? The U.S. REIT industry commonly emphasizes the reporting of alternative performance measures, such as FFO. Table 4 contains a summary matrix for international real estate firms that report alternative performance and valuation metrics. We divide the sample of companies into two groups: (1) firms that have a balance sheet focus, and provide supplemental information about asset values; and (2) firms that have an income statement focus, and provide supplemental information about bottom-line net income. This table shows that most companies report both balance sheet and income statement variables (27 firms). However, a substantially higher proportion of companies disclose balance sheet versus income statement information (39 vs. 31 firms). We compare the proportions by using a binomial test and find that the difference is significant at 5%. In contrast to the income statement focus of the U.S. firms, it appears that firms subject to the IFRS have adopted a balance sheet approach, providing alternative valuation measures for the company assets.

Table 3 Definitions of Alternative Measures for Asset Valuation

Net Asset Value (NAV)	Fair value of the property portfolio less debt
Adjusted Net Asset Value	NAV excluding the capital gain or loss effect on the fair value of properties
Adjusted Shareholders' Equity	Shareholders' equity excluding the capital gain or loss effect on the fair value of properties
Equity in Ratio to Land Portfolio	Shareholders' equity / fair value of investment portfolio
European Public Real Estate Association Net Asset Value (EPRA NAV)	Net assets + surplus on trading properties, excluding fair value adjustments for debt and related derivatives + deferred taxation on revaluations and capital allowances and the effect of those shares potentially issuable under employee share schemes
Leverage Property	Interest-bearing liabilities as a percentage of the carrying amount of the properties
Loan to Value Ratio	Total carrying amount of debt / property assets adjusted for deferred tax
Net Financial Resource	Total equity attributable to equity holders - minority Interest + net financial position
Net Invested Capital	(Non Current Assets + Current Assets) - (Non Current Liabilities + Current Liabilities)
Revalued Net Asset (when reporting investment portfolio at cost)	Shareholder's equity + unrealized capital gains
Triple Net Liquidation NAV	Shareholders' equity + unrealized capital gains on asset + adjustment to unrealized capital gain taxes, transfer taxes and disposal costs + market-to-market fixed-rate debt
Increase in Land Bank	Increase in land inventory held for development or investment

Table 4 Number of Firms Reporting Balance Sheet and Income Statement Variables

		Alternative Valuation Measures		
		Provided	Not Provided	Total
Alternative Performance Measures	Provided	27	4	31
	Not Provided	12	2	14
	Total	39	6	45

4.2 Fair Value Reporting for Real Estate Investment Properties

With the adoption of the IFRS, accounting for investment properties must meet IAS 40 requirements which cause a company to report the fair values in the financial statements or notes. The reporting of fair values on the financial statements would allow companies to recognize unrealized gains from investment properties in net income, but introduce potential income volatility from value cycles over time. Companies might elect not to report fair values for investment properties on the financial statement, but instead provide this information in the notes to the financial statements. We test this hypothesis as:

H_3: *Under the IFRS, real estate firms choose to report fair values for investment properties in the notes to the financial statements.*

Table 5 shows the frequency of companies that report investment properties by using the cost model (in the notes to the financial statements) versus the fair value model (in financial statements). We find that 82.22% of our sample companies (37 firms) directly report fair values for investment properties in the financial statements.

Table 5 Cost vs. Fair Value Models by Sample Firms

	Country	**Firm**	**Cost Model vs. Fair Value Model**	**Fair Value Gains and Losses as % of Net Income**
1	Australia	FKP Property Group	Fair Value	103.78%
2	Australia	GPT Group	Fair Value	62.06%
3	Australia	Westfield Group	Fair Value	66.86%
4	Austria	Immofinanz Imm. Ag.	Fair Value	78.11%
5	Belgium	Belfimmo	Fair Value	1.99%
6	Belgium	Cofinimmo	Fair Value	3.18%
7	Belgium	Intervest Offices	Fair Value	(10.55)%
8	Belgium	Warehouses De Pauw	Fair Value	26.57%
9	Denmark	Sjaelso Gruppen	Cost Model	N/A
10	Denmark	TK Development	Fair Value	55.26%
11	Finland	Citycon	Fair Value	77.7%
12	Finland	Sponda	Fair Value	(17.23)%
13	Finland	Techonopolis Plc.	Fair Value	9.61%
14	France	Fonciere des Regions	Fair Value	81.05%
15	France	Gecina	Fair Value	60.49%
16	France	Klepierre	Cost Model	N/A
17	France	Unibail	Fair Value	82.54%
18	Germany	Deutsche Wohnen	Cost Model	N/A
19	Germany	IVG Immobilien	Cost Model	N/A
20	Greece	Babis Vovos International	Fair Value	156.21%

(Continued…)

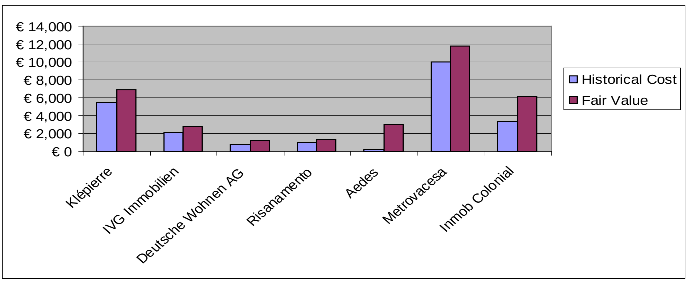
(Table 5 continued)

	Country	Firm	Cost Model vs. Fair Value Model	Fair Value Gains and Losses as % of Net Income
21	Hong Kong	Hang Lung Properties Ltd.	Fair Value	79.30%
22	Hong Kong	Kowloon Development	Fair Value	47.79%
23	Hong Kong	Sino Land Company	Fair Value	35.32%
24	Hong Kong	Sun Hung Kai Properties	Fair Value	53.81%
25	Italy	Aedes	Cost Model	N/A
26	Italy	Beni Stabili	Fair Value	12.63%
27	Italy	Risanamento	Cost Model	N/A
28	Netherlands	Corio	Fair Value	65.80%
29	Netherlands	Rodamco Europe	Fair Value	(12.75)%
30	Netherlands	VastNed Offices	Fair Value	(65.87)%
31	Netherlands	Wereldhave	Fair Value	52.00%
32	New Zealand	Kiwi Income Property Trust	Fair Value	20.80%
33	Singapore	Allgreen Properties	Fair Value	N/A (revaluation reserve)
34	Singapore	Capitaland	Fair Value	(4.46)%
35	Singapore	Hongkong Land	Fair Value	115.46%
36	Spain	Immobiliaria Colonial	Cost Model	N/A
37	Spain	Metrovacesa	Cost Model	N/A
38	Sweden	Castellum	Fair Value	68.40%
39	Sweden	Klovern	Fair Value	41.69%
40	Sweden	Wihlborgs Fastigheter	Fair Value	174.20%
41	United Kingdom	British Land	Fair Value	93.28%
42	United Kingdom	Capital Shopping Center	Fair Value	154.38%
43	United Kingdom	Hammerson	Fair Value	107.41%
44	United Kingdom	Land Securities	Fair Value	78.04%
45	United Kingdom	Primary Health Properties	Fair Value	130.85%
		Fair Value Model Used	**82.22% (37 firms)**	
		Cost Model Used	**17.78% (8 firms)**	
		Avg. Fair Value Gains & Losses as % of Net Income		**57.94%**

Companies that choose the fair value accounting model are required under the IAS 40 to report the changes in fair values as gains or losses on the income statement. The importance of these gains and losses to the overall performance of the companies is shown in the last column of Table 5. On average, changes for the fair values of investment properties represent 57.94% of the net income. Our findings indicate that the use of the IAS 40 allows companies to report substantially larger net incomes in 2005. The significant positive impact on net income from fair value gains in 2005 suggests fair value changes are likely to cause net income to be volatile over real estate market cycles. In unreported results and as might be expected, we find that the reduction in fair values had large unfavorable impact for net income during the financial crisis of 2008-2009 for a subset of our sample firms.[14]

There is a related lynchpin issue elicited by the new IFRS regulation: does the switch from historical cost to fair value accounting substantially affect the reported values of real estate assets on the balance sheet? Although companies that use the fair value model no longer need to disclose historical cost, companies that choose the cost model provide the depreciated and un-depreciated historical cost in addition to fair value information. This enables us to examine the differences between historical cost and fair values for this sub-sample of firms. In Figure 1, we compare the depreciated historical costs and fair values for investment properties (for firms that adopted the cost model). Since the values of real estate assets, in general, have risen over time, we find that fair values are higher than the historical costs for all firms. On average, fair values are 144% of the depreciated historical costs and 134% of un-depreciated historical costs. We suspect that firms that choose the fair value method may even have a higher ratio of fair values to depreciated historical costs relative to their peers, which provide them with additional motivation to utilize fair values in financial statements.

Figure 1 Comparison of Historical Costs and Fair Values for Firms that use the Cost Model (in millions of €)



[14] Under the IAS 40, change in method is permitted only if this results in a more appropriate presentation. However, the IAS 40 also explicitly states that it is highly unlikely to justify a change from fair value to the cost method. Consequently, we find that none of the sample firms changed accounting methods during the financial crisis.

4.3 Disclosure of Appraisers, Standards, Methodologies and Property Information

In this section, we examine real estate asset related disclosures. We evaluate four elements for asset disclosures: (1) the use of external appraisers for assessing fair values, (2) the adoption of standards for appraisals and valuation, (3) the identification of methodologies for determining fair values, and (4) the extent of property-level fair value information.

Prior research (e.g., Dietrich, Harris and Muller 2001) shows that the presence of external appraisers improves the reliability of fair value estimates. Table 6 contains information about the number of firms that explicitly list the appraisers who conduct fair value appraisals. Forty out of 45 firms (88.89%) choose to rely on external rather than internal appraisals. Table 6 also documents the number of appraisers that the firms employ in the determination of fair values. Many firms employ more than one appraiser, and on average, our sample companies retain three appraisers. Overall, international real estate firms in our sample, by engaging external appraisers, seem committed to improving the reliability as well as the creditability of fair value estimates.

Table 6 External Appraisers Disclosed by Sample Firms

	Country	Firm	External Appraisers Used & Disclosed	Number of Appraisers
1	Australia	FKP Property Group	No	N/A
2	Australia	GPT Group	Yes	8
3	Australia	Westfield Group	Yes	12
4	Austria	Immofinanz Imm. Ag.	Yes	3
5	Belgium	Belfimmo	Yes	1
6	Belgium	Cofinimmo	Yes	5
7	Belgium	Intervest Offices	Yes	4
8	Belgium	Warehouses De Pauw	Yes	1
9	Denmark	Sjaelso Gruppen	No	N/A
10	Denmark	TK Development	Yes	0
11	Finland	Citycon	Yes	1
12	Finland	Sponda	No	N/A
13	Finland	Techonopolis Plc.	Yes	1
14	France	Fonciere des Regions	Yes	3
15	France	Gecina	Yes	3
16	France	Klepierre	Yes	5
17	France	Unibail	Yes	3
18	Germany	Deutsche Wohnen	Yes	1
19	Germany	IVG Immobilien	No	N/A

(Continued…)

(Table 6 continued)

	Country	**Firm**	**External Appraisers Used & Disclosed**	**Number of Appraisers**
20	Greece	Babis Vovos International	Yes	1
21	Hong Kong	Hang Lung Properties Ltd.	Yes	1
22	Hong Kong	Kowloon Development	Yes	1
23	Hong Kong	Sino Land Company	Yes	1
24	Hong Kong	Sun Hung Kai Properties	Yes	2
25	Italy	Aedes	Yes	1
26	Italy	Beni Stabili	Yes	1
27	Italy	Risanamento	Yes	2
28	Netherlands	Corio	No	N/A
29	Netherlands	Rodamco Europe	Yes	5
30	Netherlands	VastNed Offices	Yes	9
31	Netherlands	Wereldhave	Yes	2
32	New Zealand	Kiwi Income Property Trust	Yes	4
33	Singapore	Allgreen Properties	Yes	1
34	Singapore	Capitaland	Yes	13
35	Singapore	Hongkong Land	Yes	1
36	Spain	Immobiliaria Colonial	Yes	1
37	Spain	Metrovacesa	Yes	4
38	Sweden	Castellum	Yes	1
39	Sweden	Klovern	Yes	1
40	Sweden	Wihlborgs Fastigheter	Yes	4
41	United Kingdom	British Land	Yes	5
42	United Kingdom	Capital Shopping Center	Yes	6
43	United Kingdom	Hammerson	Yes	3
44	United Kingdom	Land Securities	Yes	1
45	United Kingdom	Primary Health Properties	Yes	1
		Disclosure Percentage	**88.89% (40 firms)**	
		Average Number of Appraisers		**3.075**

We next examine whether companies disclose the appraisal and valuation standards used in the determination of fair values. Table 7 shows the number of firms that disclose their valuation standards and the standards adopted. We find that 42.22% of the companies disclose the standards utilized for determining fair values. Companies that disclose valuation standards commonly follow the International Valuation Standards (14 firms), and the Appraisal and Valuation Manual by the Royal Institution of Chartered Surveyors (7 firms). Other disclosed standards include the Real Estate Appraisal Guidelines followed by Klépierre of France.

Table 7 Fair Value Standards Disclosed by Sample Firms

	Country	Firm	Fair Value Standards Used & Disclosed	Fair Value Standards Adopted
1	Australia	FKP Property Group	No	N/A
2	Australia	GPT Group	No	N/A
3	Australia	Westfield Group	No	N/A
4	Austria	Immofinanz Imm. Ag.	Yes	1
5	Belgium	Belfimmo	Yes	1
6	Belgium	Cofinimmo	Yes	1
7	Belgium	Intervest Offices	Yes	1
8	Belgium	Warehouses De Pauw	No	N/A
9	Denmark	Sjaelso Gruppen	No	N/A
10	Denmark	TK Development	No	N/A
11	Finland	Citycon	Yes	1
12	Finland	Sponda	Yes	1
13	Finland	Techonopolis Plc.	No	N/A
14	France	Fonciere des Regions	No	N/A
15	France	Gecina	No	N/A
16	France	Klepierre	Yes	3
17	France	Unibail	No	N/A
18	Germany	Deutsche Wohnen	No	N/A
19	Germany	IVG Immobilien	Yes	1
20	Greece	Babis Vovos International	No	N/A
21	Hong Kong	Hang Lung Properties Ltd.	No	N/A
22	Hong Kong	Kowloon Development	No	N/A
23	Hong Kong	Sino Land Company	Yes	1
24	Hong Kong	Sun Hung Kai Properties	No	N/A
25	Italy	Aedes	No	N/A
26	Italy	Beni Stabili	Yes	2

(Continued…)

(Table 7 continued)

	Country	**Firm**	**Fair Value Standards Used & Disclosed**	**Fair Value Standards Adopted**
27	Italy	Risanamento	No	N/A
28	Netherlands	Corio	No	N/A
29	Netherlands	Rodamco Europe	Yes	1 & 2
30	Netherlands	VastNed Offices	Yes	2
31	Netherlands	Wereldhave	No	N/A
32	New Zealand	Kiwi Income Property Trust	No	N/A
33	Singapore	Allgreen Properties	No	N/A
34	Singapore	Capitaland	No	N/A
35	Singapore	Hongkong Land	Yes	1
36	Spain	Immobiliaria Colonial	No	N/A
37	Spain	Metrovacesa	Yes	1 & 2
38	Sweden	Castellum	No	N/A
39	Sweden	Klovern	No	N/A
40	Sweden	Wihlborgs Fastigheter	Yes	1
41	United Kingdom	British Land	Yes	2
42	United Kingdom	Capital Shopping Center	Yes	2
43	United Kingdom	Hammerson	Yes	1 & 2
44	United Kingdom	Land Securities	Yes	1
45	United Kingdom	Primary Health Properties	No	N/A
		Disclosure Percentage	**42.22% (19 firms)**	
		1. International Valuation Standards		**73.68% (14 firms)**
		2. Royal Institute of Chartered Surveyors		**36.84% (7 firms)**
		3. Other Standards		**5.26% (1 firm)**

We then examine whether companies disclose the methodology applied in determining fair values to obtain some insights on how firms and appraisers determine the fair values of real estate assets. Table 8 reports information about valuation methodologies utilized by real estate firms. We find that 73.33% of our sample firms disclose valuation methodologies, and the three most common methodologies used are i) discounted cash flow (21 firms), ii) income capitalization (19 firms), and iii) market value comparables (6 firms).[15] Many firms adopt multiple valuation approaches to determine fair values.

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[15] The values determined by using the discounted cash flow model is the present

Table 8 Fair Value Methodologies Disclosed by Sample Firms

	Country	Firm	Fair Value Methods Used & Disclosed	Fair Value Methods Adopted
1	Australia	FKP Property Group	Yes	2
2	Australia	GPT Group	No	N/A
3	Australia	Westfield Group	Yes	1 & 3
4	Austria	Immofinanz Imm. Ag.	Yes	1
5	Belgium	Belfimmo	Yes	1
6	Belgium	Cofinimmo	No	N/A
7	Belgium	Intervest Offices	No	N/A
8	Belgium	Warehouses De Pauw	Yes	1
9	Denmark	Sjaelso Gruppen	No	N/A
10	Denmark	TK Development	Yes	1
11	Finland	Citycon	Yes	1
12	Finland	Sponda	Yes	2
13	Finland	Techonopolis Plc.	Yes	1
14	France	Fonciere des Regions	Yes	1 & 2 & 3
15	France	Gecina	Yes	1 & 2 & 3
16	France	Klepierre	Yes	1 & 2
17	France	Unibail	Yes	1 & 3
18	Germany	Deutsche Wohnen	Yes	1
19	Germany	IVG Immobilien	Yes	1 & 2
20	Greece	Babis Vovos International	Yes	1 & 2
21	Hong Kong	Hang Lung Properties Ltd.	No	N/A
22	Hong Kong	Kowloon Development	Yes	2
23	Hong Kong	Sino Land Company	Yes	2
24	Hong Kong	Sun Hung Kai Properties	Yes	2
25	Italy	Aedes	No	N/A
26	Italy	Beni Stabili	Yes	1 & 2
27	Italy	Risanamento	Yes	1 & 2 &3
28	Netherlands	Corio	Yes	2
29	Netherlands	Rodamco Europe	No	N/A
30	Netherlands	VastNed Offices	Yes	2
31	Netherlands	Wereldhave	Yes	1
32	New Zealand	Kiwi Income Property Trust	Yes	2 & 3
33	Singapore	Allgreen Properties	Yes	2
34	Singapore	Capitaland	No	N/A
35	Singapore	Hongkong Land	No	N/A
36	Spain	Immobiliaria Colonial	Yes	1
37	Spain	Metrovacesa	No	N/A

(Continued…)

expected value of the cash flows generated by each property in the portfolio. The values derived from the income-capitalization model are the annual stabilized net operating income divided by an appropriate CAP rate. The market value comparable approach uses recent similar property sales transactions, and adjusts for comparability.

(Table 8 continued)

	Country	Firm	Fair Value Methods Used & Disclosed	Fair Value Methods Adopted
38	Sweden	Castellum	Yes	1
39	Sweden	Klovern	Yes	1
40	Sweden	Wihlborgs Fastigheter	Yes	1
41	United Kingdom	British Land	No	N/A
42	United Kingdom	Capital Shopping Center	Yes	2
44	United Kingdom	Hammerson	Yes	2
44	United Kingdom	Land Securities	No	N/A
45	United Kingdom	Primary Health Properties	Yes	2
		Disclosure Percentage	**73.33% (33 firms)**	
		1. Discounted Cash Flows		**63.64% (21 firms)**
		2. Market Comparables		**57.58% (19 firms)**
		3. Capitalization Rate		**18.18% (6 firms)**

Lastly, we examine the extent of property-level fair value information disclosed by firms. The IFRS does not require property level information and valuation; only aggregated fair value information has to be provided. However, we find that many firms voluntarily report more detailed fair value information on investment properties. Table 9 reports the number of firms that report detailed fair value information. We find that while 15 firms provide only aggregate information, 17 firms provide segmented, aggregated property-level fair value details, and 12 firms provide fair value estimates for specific properties.

There does not appear to be regional or country-specific notable patterns about the use of appraisers and standards disclosure (See Tables 6 and 7). Tables 8 and 9 show some country-specific preferences for fair value methodologies and fair value property disclosures. For example, French companies seem to adopt multiple valuation approaches in determining fair values. Companies in the U.K. and Hong Kong predominantly rely on market comparables to determine fair values. Companies in Sweden predominantly use discounted cash flows to determine fair values. Table 9 also suggests that firms in the U.K. uniformly disclose fair value details of investment properties at the segment-level.

Table 9 Level of Fair Value Estimates Disclosed by Sample Firms

	Country	Firm	Fair Value Details Disclosed in Notes	Level of Fair Value Details
1	Australia	FKP Property Group	Yes	2
2	Australia	GPT Group	Yes	3
3	Australia	Westfield Group	Yes	3
4	Austria	Immofinanz Imm. Ag.	Yes	2
5	Belgium	Belfimmo	Yes	2
6	Belgium	Cofinimmo	Yes	1
7	Belgium	Intervest Offices	Yes	2
8	Belgium	Warehouses De Pauw	Yes	2
9	Denmark	Sjaelso Gruppen	No	N/A
10	Denmark	TK Development	Yes	3
11	Finland	Citycon	Yes	3
12	Finland	Sponda	Yes	1
13	Finland	Techonopolis Plc.	Yes	3
14	France	Fonciere des Regions	Yes	2
15	France	Klepierre	Yes	1
16	France	Gecina	Yes	1
17	France	Unibail	Yes	2
18	Germany	Deutsche Wohnen	Yes	1
19	Germany	IVG Immobilien	Yes	3
20	Greece	Babis Vovos International	Yes	1
21	Hong Kong	Kowloon Development	Yes	3
22	Hong Kong	Hang Lung Properties Ltd.	Yes	1
23	Hong Kong	Sino Land Company	Yes	1
24	Hong Kong	Sun Hung Kai Properties	Yes	3
25	Italy	Aedes	Yes	2
26	Italy	Beni Stabili	Yes	1
27	Italy	Risanamento	Yes	1
28	Netherlands	Corio	Yes	2
29	Netherlands	Rodamco Europe	Yes	1
30	Netherlands	VastNed Offices	Yes	3
31	Netherlands	Wereldhave	Yes	2
32	New Zealand	Kiwi Income Property Trust	Yes	3
33	Singapore	Allgreen Properties	Yes	3
34	Singapore	Capitaland	Yes	1
35	Singapore	Hongkong Land	Yes	1
36	Spain	Immobiliaria Colonial	Yes	1
37	Spain	Metrovacesa	Yes	2
38	Sweden	Castellum	Yes	2

(Continued…)

(Table 9 continued)

	Country	**Firm**	**Fair Value Details Disclosed in Notes**	**Level of Fair Value Details**
39	Sweden	Klovern	Yes	3
40	Sweden	Wihlborgs Fastigheter	Yes	1
41	United Kingdom	British Land	Yes	2
42	United Kingdom	Capital Shopping Center	Yes	2
43	United Kingdom	Land Securities	Yes	2
44	United Kingdom	Hammerson	Yes	2
45	United Kingdom	Primary Health Properties	Yes	2
		Disclosure Percentage	**97.78% (44 firms)**	
		1. Single Measure		**34.09% (15 firms)**
		2. Segment-Level Fair Value Details		**38.64% (17 firms)**
		3. Property-Level Fair Value Details		**27.27% (12 firms)**

4.4 Best Reporting Practices

In this section, we provide a qualitative analysis on the reporting practices of our sample firms to infer the best reporting practices for real estate companies. As there is substantial cross-sectional variation in the amount of disclosure for investment properties, we find that several companies provide informational disclosures beyond the minimum IFRS reporting requirements. Although some of these reporting choices may not be voluntary, and sometimes are necessitated by the regulatory rules in specific countries, we believe they may serve as useful guidance for the provision of improved fair value information to investors. We describe the addition of useful, sometimes non-mandatory, accounting information as *"best reporting practices,"* mostly from our evaluation of the quality of the financial statement information. While some firms disclose additional information in the notes to the financial statements, for the most part, this type of information is presented in the annual report, outside of the financial statements. We have identified two areas of especially important supplementary disclosures: (1) property level information, and (2) external valuation reports.

As mentioned, the IFRS only requires aggregate fair value information to be disclosed by firms. Some companies nonetheless provide detailed description of fair values for specific properties. For example, the Westfield Group presents in the notes to its financial statements details about each property's fair value, its carrying value on the books, its original cost, the name of the most recent retained independent valuator, and the date of the latest valuation. This disclosure spans three and a half pages of the firm’s financial statements. The Intervest Offices of Belgium transcends Westfield in its disclosures and presentation, by providing the rental income and occupancy rate for each property. The IVG Immobilien of Germany provides similar disclosure information to that of Intervest, although it adds EBIT for each property. It also reports interesting operational data, such as the date that each building was acquired, and the date that it was last refurbished. The most striking example of detailed and enhanced information is disclosed by the GPT Group of Australia. For each property, it discloses the date of acquisition, physical description of the building, sales, net income, latest valuation date, a detailed description of the valuation method, including discount rates employed for the discounted cash flows, as well as the major property tenants.

By disclosing the date for the external appraisals, corporations enhance the ability of the marketplace to judge the reliability of fair values. By disclosing the property earnings or cash flows, occupancy rate, and discount rate, market participants can, in principle, reconstruct property valuations.

Several corporations include disclosures about the “Report by the Real Estate Expert,” or a so-called “Valuation Certificate” or “Report of the Valuers.” This is an independent report that varies in length from a thirteen line report in Singapore (e.g., Hongkong Land) to a multiple-pages, detailed description in Spain (e.g., Metrovacesa) issued by a surveyor that describes the valuation process and results obtained in the valuation. These types of reports potentially benefit users of the financial statements. Again, many of these supplemental disclosures are not required by the IFRS, but we believe the provision of such information improves the quality of the financial statements.

5. Conclusion

In this study, we have examined the accounting reporting practices of 45 international real estate companies from 16 countries. We have documented and analyzed reporting practices subsequent to the adoption of the IFRS. The international real estate industry has embraced IFRS fair value reporting, as most firms choose to adopt fair value reporting in their financial statements to account for investment properties. As a result, the net income for most sample firms has substantially increased by the fair value adjustments for real estate assets. The real estate gains represent on average more than 50% of reported net income in 2005, which by itself might provide an incentive to adopt the fair value accounting rules of the IFRS.

For the bulk of the sample firms, external valuators are retained to generate fair values. Many firms employ several external appraisers to evaluate investment properties. Many firms disclose the standards and methodologies used in the determination of fair values, and a significant number of firms provide information beyond minimum IFRS requirements, including property-level fair value details. We believe that these disclosures on fair value improve the transparency of financial statements for real estate entities.

Finally, several firms transcend the basic IFRS disclosure requirements. Some provide detailed property-by-property operating information, such as occupancy rates. For other firms, an independent valuator report, somewhat similar to an auditor's report, is attached to the financial statements. These types of disclosures represent the *"best practices"* that might be considered for adoption by the real estate industry.

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