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Value-relevance of presenting changes in fair value of investment properties in the income statement: evidence from Hong Kong

Stella So and Malcolm Smith*

Abstract—This study investigates the value-relevance of the revision introduced in HKAS 40 (2004) ‘Investment Property’ on the presentation of changes in the fair value of investment properties. The revision follows that introduced in IAS 40 (2000) as Hong Kong adopted the International Financial Reporting Standards in 2005. As introduced in IAS 40 (2000), HKAS 40 (2004) requires that companies choosing to adopt the fair value model have to present changes in the fair value of investment properties in the income statement. Previously under the Hong Kong accounting standard SSAP 13 (2000), such changes were presented primarily in the revaluation reserve. Using both a three-day short window centred around the earnings announcement date and a 12-month long window, this study provides evidence that investors value the HKAS 40 (2004) revision in the presentation of the changes in fair value of investment properties. Based on a sample of listed property companies in Hong Kong during 2004–2006, the results of this study show a significantly higher market price reaction and returns association when changes in fair value of investment properties are presented in the income statement. The results of this study are of interest not only to academic researchers, but to practitioners and standard setters as they assess the decision usefulness of the revised presentation.

Keywords: financial reporting; Hong Kong; investment; property; fair value

1. Introduction

This study examines the value-relevance of the accounting information reported as a consequence of Hong Kong Accounting Standard No. 40 ‘Investment Property’ (HKICPA, 2004), hereafter HKAS 40 (2004), on the presentation of changes in fair value of investment properties. The date 1 January 2005 marked the beginning of a new era when accounting standards in Hong Kong became fully converged with International Financial Reporting Standards (IFRS). As part of the final phase of the convergence, a number of new accounting standards which are word-for-word equivalents of the IFRSs were issued to replace the existing pronouncements. HKAS 40 (2004) is one of them. Following International Accounting Standards No. 40 ‘Investment Properties’ (2000) (IASB, 2000), hereafter IAS 40 (2000),¹ HKAS 40 (2004) requires that companies choosing to adopt the fair value model must present changes in the fair value of investment properties in the income statement. Previously under Statement of Standard

Accounting Practice No. 13 ‘Accounting for Investment Properties’ (HKSA, 2000), hereafter SSAP 13 (2000), such changes (labelled, however, as open market value² changes) were presented

¹ The fair value model discussed in this paper is introduced in IAS 40 (2000). Although it had been revised in 2003 and superseded by IAS 40 (2003) (IASCF, 2008a), the revision in 2003 is related to clarification of aspects of property interest that are held under an operating lease and is therefore of no relevance to this study. Of relevance to this study are the fair value model and the required presentation of fair value changes of investment properties in the income statement under the fair value model, which were introduced in IAS 40 (2000). Throughout this paper, reference is therefore made to IAS 40 (2000) and not to IAS 40 (2003).

² SSAP 13 (2000) adopted the definition of open market value from the Hong Kong Institute of Surveyors which defined it as the best price at which an interest in a property might reasonably be expected to be sold at the date of valuation assuming a willing seller, a reasonable period in which to negotiate the sale taking into account the nature of the property and the state of market, that values will remain static during that period, that the property will be freely exposed to the open market, and that no account will be taken of any additional bid by a purchaser with a special interest (HKSA, 2000). The IASB defines fair value as the amount for which an asset could be exchanged between knowledgeable, willing parties in an arm’s length transaction (IASCF, 2008a). The former IASB, in its Basis for Conclusions on IAS 40 (2000), states that its concept of fair value for investment properties is similar to the International Valuation Standards Committee (IVSC) concept of market value. IVSC defines market value as the estimated amount for which an asset should exchange on the date of valuation between a willing buyer and a willing seller in an arm’s length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently and without compulsion (IASCF, 2008c).

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primarily³ in a different location, the revaluation reserve.

Changes in the fair value of investment properties, whether increases or decreases, represent gains or losses which are unrealised. There have been concerns that the inclusion and presentation of such unrealised gains and losses in the income statements might lead to undue increases in earnings volatility and investor confusion (HKSI, 2006). The former International Accounting Standards Committee (IASC) argues, however, in its Basis for Conclusions on IAS 40 (2000) that such presentation provides the most relevant and transparent view of the financial performance of investment properties (IASCF, 2008c). After all, the objective of financial statements is not to smooth profit figures (McBride, 2006), but to reflect economic reality for economic decision making (IASCF, 2008b).

The replacement of SSAP 13 (2000) by HKAS 40 (2004) in Hong Kong thus provides a unique opportunity for this study to examine the issues relating to the impact of the presentation location, whether in the income statement or revaluation reserve, for changes in fair value of investment properties. The results of this study will have implications for companies around the world that prepare their financial statements using International Financial Reporting Standards.

Like all other value-relevance studies, this study use share prices and share returns to infer whether investors consider accounting information to be sufficiently relevant and reliable to be useful in making investment decisions (Maines and Wahlen, 2006; Landsman, 2007). Value-relevance tests are generally joint tests of relevance and reliability⁴ (Barth et al., 2001), where reliability is more than agreement about a measure (measurement verifiability), but also involves the correspondence between description, classification and presentation (representational faithfulness), of the phenomenon it purports to represent (IASCF, 2008b; Maines and Wahlen, 2006). This study examines the relevance and reliability of the HKAS 40 (2004) revision on the presentation of changes in fair value of investment properties, by evaluating the revision's ability to impact upon the abnormal share returns to investors.

There are three distinct issues which motivate this study.

First, while the efficient market hypothesis suggests that the presentation location of accounting information is not valued by investors, results from prior research have shown otherwise (e.g. Hirst and Hopkins, 1998; Maines and McDaniel, 2000; Barth et al., 2003; Hirst et al., 2004; Chambers et al., 2006; and Lee et al., 2006). The presentation location of an accounting amount affects not only its relevance but also its reliability (IASCF, 2008b; Maines and Wahlen, 2006). Given

these prior findings and associated theory, it is surprising that Owusu-Ansah and Yeoh (2006) find no difference whether unrealised gains (losses were not studied) on investment properties in New Zealand are reported in the income statement or revaluation reserve. Further research is therefore needed to provide more evidence about the impact of presentation location generally, and of changes in fair value of investment properties in particular.

Second, existing research (see Landsman (2007) for a detailed summary) focuses on financial assets and liabilities (Barth, 1994; Barth et al., 1995, 1996, 2006); Eccher et al., 1996; Nelson, 1996, Carroll et al., 2003; Hirst et al., 2004; Hodder et al., 2006; Danbolt and Rees, 2008) and employee share options (Espahbodi et al., 2002; Robinson and Burton, 2004). While there are studies on non-financial assets, for intangible assets and tangible long-lived assets (e.g. Barth and Clinch, 1998; Aboody et al., 1999; Muller and Riedl, 2002) and on investment properties (i.e. Dietrich et al., 2001; Owusu-Ansah and Yeoh, 2006), the empirical evidence is largely based on fair value disclosures in the notes to the accounts from the 1990s. More studies should be conducted using data after the implementation of the fair value accounting standards (e.g. IAS 39 'Financial Instruments: Recognition and Measurement', and HKAS 40 'Investment Property' studied in this study).

³ Under SSAP 13 (2000), investment properties were to be included in the balance sheet at their open market value and changes in the open market value were to be recognised primarily in the revaluation reserve, i.e. in the revaluation reserve unless (1) its balance was insufficient to cover a deficit, in which case the amount by which the deficit exceeded the revaluation reserve balance was to be charged to the income statement; and (2) a revaluation surplus subsequently arises, this surplus was to be credited to the income statement to the extent of the deficit previously charged (HKSA, 2000).

⁴ This paper assumes the application of the Framework for the Preparation and Presentation of Financial Statements published by the former International Accounting Standards Committee (IASC) in 1989 and re-adopted by the International Accounting Standards Board (IASB) in 2001 (hereafter Framework (1989), IASCF, 2008b). In Framework (1989), relevance and reliability are two of the four principal qualitative characteristics of decision-useful financial statements (IASCF, 2008b). Information is relevant if it influences the economic decisions of users by helping them evaluate past, present or future events or confirming, or correcting, their past evaluations. Information is reliable when it is free from material error and bias and can be depended upon by users to represent faithfully that which it purports to represent or could reasonably be expected to represent. Of note is that the term reliability in Framework (1989) has been proposed to be replaced by 'faithful representation' in the Exposure Draft of an Improved Conceptual Framework for Financial Reporting, jointly published in May 2008 by the IASB and the US Financial Accounting Standards Board (FASB). The boards considered that faithful representation encompasses all the key qualities that Framework (1989) includes as aspects of reliability and therefore proposed the replacement. No attempt is however made in this paper to anticipate the outcome of the exposure draft, which is expected to be finalised in the first half of 2009.

Third, Hong Kong is a world-recognised centre for property construction, development and investment (KPMG China and Hong Kong, 2004) and the total market capitalisation of its property industry (conglomerates/consolidated enterprises excluded) in 2006 was HK\$13,249bn, representing 11% of the total market capitalisation of all Hong Kong Stock Exchange Main Board equities (HKSE, 2005, 2006). Investment property is a significant component of many company balance sheets in Hong Kong and the way it is accounted for has become an issue of prominent interest in Hong Kong in 2005–2006 (McBride, 2006).

This study employs a sample of listed companies from the Hong Kong property industry and examines whether the relevance and reliability of disclosures are enhanced through the adoption of HKAS 40 (2004) and the reporting of changes in fair value of investment properties in the income statement. Only companies from the property industry are included because these companies are expected to hold substantial levels of investment properties on their balance sheets and their earnings are thus likely to be more sensitive to the adoption of HKAS 40 (2004). Depending on the sample company's accounting year-end, and the incidence of early adoption of HKAS 40 (2004), the sample period in this study extends from 2004 to 2006.

Using models adapted from Easton and Harris (1991), Amir et al. (1993) and Barth (1994), results from this study provide evidence on the higher value-relevance of presenting fair value gains or loss in the income statement versus presenting them in the revaluation reserve. The higher value-relevance is found to be evident in both the short-window market reaction to the release of annual earnings announcements and the long-window market-adjusted annual returns. Taken together, our results give support to the HKAS 40 (2004) presentation which investors appear to value more than previously under SSAP 13 (2000).

The paper proceeds as follows. Section 2 describes related prior research and Section 3 details the research method employed. Section 4 discusses the empirical results, and the paper concludes in Section 5 with a summary and discussion of research opportunities.

2. Related prior studies

IAS 40 (2000) represents the first time that the IASB permits a fair value model for non-financial assets (IASCF, 2008c). Under the fair value model, investment properties are carried at fair values and changes in fair value, whether up or down, are included in the profit or loss for the period and presented in the income statements. Supporters of the fair value model believe that fair values give users of financial statements more useful information than other measures, such as depreciated cost, and

changes in fair value are inextricably linked as integral components of the financial performance of an investment property and are therefore presented in the income statements (IASCF, 2008c). Although IAS 40 (2000) permits entities to choose between a fair value model or a cost model, the Basis for Conclusions on IAS 40 (2000) states clearly that it is highly unlikely that a subsequent change from the fair value model to the cost model can be made on the grounds of more appropriate presentation (IASCF, 2008c).

However, Penman (2007) does not entirely agree; he evaluates historical cost and fair value accounting from two perspectives – equity valuation and stewardship and concludes that while fair value accounting is a plus at a conceptual level, the minuses add up with fair value implemented as exit price (whether estimated or observed in active markets) and the problems with historical cost accounting remains unresolved.

Singleton-Green (2007) summarises the problems of fair value accounting as: (1) the lack of active markets for most assets and liabilities, which means that most fair value measurements are estimates and are highly subjective and potentially unreliable; (2) costly information, especially for smaller companies; and (3) the recognition of profits based on fair values, which mean that unrealised profits or losses from changes in fair value are recognised, and result in greater volatility and unpredictability. This study focuses on the third issue, the presentation of changes in fair value of investment properties, in the income statement versus the revaluation reserve.

Empirical studies assessing the relevance and reliability of fair value accounting versus historical cost-based accounting focus on financial instruments, and the results from these studies are generally mixed. Barth (1994) finds that, for a sample of US banks with data from 1971–1990, disclosed fair value estimates of investment securities provide significant incremental⁵ explanatory power for bank share prices beyond that provided by historic costs. Fair value gains and losses of investment securities (constructed from two annually disclosed fair value estimates) are, however, found to have no significant incremental explanatory power for annual returns (changes in share price), due to the increased measurement errors (Barth, 1994). Similar results are obtained in Barth et al. (1995), Barth et al. (1996), Eccher et al. (1996) and Nelson (1996), all using bank data. Results from Carroll et al. (2003) differ; instead of using bank data, they sample closed-end mutual funds which typically have investment securities (report-

⁵ According to Biddle et al. (1995), an incremental comparison determines whether one accounting measure provides information content beyond that provided by another.

ed at fair values) comprising virtually all their assets and with negligible liabilities and other assets. This is an advantage because the potential problem introduced by measuring some assets and liabilities at fair value but others at historical cost, is eliminated. Significant association between share prices and the fair value of investment securities, as well as between share returns and fair value securities gains and losses are found. To examine whether differences in the reliability of the fair value of investment securities affect investors' assessments of the usefulness of the information, Carroll et al. (2003) examine the association between share prices and fair values across different fund types and find that in all cases, including those traded in thin markets, there is a significant association between the share prices and fair values.

In contrast, Danbolt and Rees (2008), using UK data, report no support for full fair value accounting. While fair value income is considerably more value-relevant than historic cost income, the higher relevance disappears in the presence of changes in fair value accounting balance sheet values. Danbolt and Rees (2008) interpret their results as evidence of the absence of an obvious advantage from adopting fair value income accounting if fair value balance sheet values are available to the user.

Value-relevance research studies the association between fair value estimates and share prices or returns. Sloan (1999) comments that while this association provides evidence that investors find fair value estimates to be relevant, the inferences regarding reliability are indirect and limited by the fact that share prices reflect many factors other than the fair value estimates. Dietrich et al. (2001) subsequently use a direct approach to investigate the reliability of mandatory annual fair value appraisal estimates by chartered surveyors for UK investment properties and find that appraisal estimates understate actual selling prices but are considerably less biased and more accurate meas-

ures of selling price than respective historical costs. Dietrich et al. (2001) also find that the reliability of appraisal estimates increases when monitored by external appraisers and Big Six auditors.

The New Zealand (hereafter NZ) SSAP No. 17 'Accounting for Investment Properties and Properties Intended for Sale' (NZSA, 1989) previously allowed NZ companies the choice of recognising unrealised gains or losses either in the income statement, or as movements in an investment property revaluation reserve, unless the total of the reserve was insufficient to cover a deficit, in which case the amount of deficit was to be charged in the income statement as part of operating results. The NZ equivalent of IAS 40 came into effect on 1 January 2005, resulting in the elimination of the choice of recognising unrealised gains in the revaluation reserve. Owusu-Ansah and Yeoh (2006) investigate the relative value-relevance of the two alternative accounting treatments for unrealised gains on investment properties, based on a sample of NZ companies over the period 1990 to 1999, when the choice was still available. Their results show that recognition of unrealised gains in the income statement is not superior to recognition of unrealised gains in the revaluation reserve in terms of their value-relevance. However, Owusu-Ansah and Yeoh (2006) include only companies with positive changes in the value of their investment properties.

Taken together, findings from prior studies of firms in the US, UK and Australian capital markets during the 1990s suggest that investors have been provided with fair value information (whether recognised or disclosed) that is generally reliable and relevant (whether fair value estimated by management or independent valuer). More research should be undertaken to test empirically whether relevance and reliability improve after the implementation of the fair value standards on financial instruments (e.g. IAS 39) and with the extension of fair value accounting to non-financial assets (i.e. IAS 40).

Like Owusu-Ansah and Yeoh (2006), this study examines the extension of fair value accounting to investment properties and the presentation of their fair value changes in the income statements (rather than in the revaluation reserve) in particular. Unlike Owusu-Ansah and Yeoh (2006), this study employs data from accounting periods when the related fair value accounting standard HKAS 40 is implemented. Comparison is then made with those from the immediate pre-implementation accounting periods when SSAP 13 (2000) was in effect. Also, unlike Owusu-Ansah and Yeoh (2006), this study includes companies with both increases and decreases in fair values and uses a return model adapted from Easton and Harris (1991), Amir et al. (1993) and the earnings capitalisation approach⁶ from Barth (1994).

⁶ Two approaches are developed and used in Barth (1994), the market value approach and the earnings capitalisation approach. The former examines balance sheet items, the latter examines income statement items. Owusu-Ansah and Yeoh (2006) use a modified version of the market value approach, which is however not considered in this study. The market value approach is based on a valuation model where the market value of equity equals a firm's assets minus its liabilities on its balance sheet (Barth, 1994). The market value approach is useful if the asset being studied is reported differently in different balance sheets, for example, at historical cost or fair value because of the choice permitted for investment securities in Barth (1994). In this study, investment properties are reported in the balance sheet either under SSAP 13 (2000) at open market values or under HKAS 40 (2004) at fair values. Similar amounts will be reported in the balance sheets under SSAP 13 (2000) and HKAS 40 (2004). On the other hand, the earnings figures in the income statements are different, depending on which accounting standard is followed, which explains why this study has chosen to use the earnings capitalisation model.

3. Research method

Data for this study are collected from two sources. The financial statement data and results announcement dates are derived from the published financial statements downloaded from <http://www.hkex.com.hk>. The Morgan Stanley Capital International (hereafter MSCI) Equity Hong Kong Index is used in this study as the proxy for equity market return in Hong Kong. The equity market data including the MSCI Equity Hong Kong Index are obtained from Reuters 3000Xtra.

Companies are eligible for selection if throughout the sample period 2003–2006: (1) they are in the property industry; (2) they are listed in the Main Board of the Hong Kong Stock Exchange; (3) they report investment properties in their financial statements; and (4) there is no change of accounting year-end. These sampling criteria yield an initial sample of 92 companies.

Each company in the sample is studied twice, first in its final accounting period using SSAP 13 (2000), and then in its first accounting period using HKAS 40 (2004).

Two approaches are used in this study, the short-window event study approach and the longer window return-earnings associations approach.

In both approaches, three⁷ control variables are added to control for their potentially confounding effects, including firm size and leverage which are commonly controlled for in value-relevance studies (e.g. Fan and Wong, 2002). Market-wide property price level in Hong Kong as proxied by the Centa-City Index⁸ is also included as the analysis in this study involves comparison of data collected across different time periods.

3.1. Short-window event study

The short-window event study approach is based on the information or signalling perspective (Beaver, 1981) on the decision usefulness of financial reporting, a perspective that has dominated fi-

ancial accounting theory and research since Ball and Brown (1968). The information perspective posits that investors, in response to the release of a company's financial statements, will analyse the statements for new and unexpected information and revise their beliefs about the company's future performance, causing movements in the company's share prices and resulting in abnormal returns to investors (Ball and Brown, 1968). Thus financial statement information is considered decision-useful if it is new and unexpected, and results in abnormal returns to the investors. Easton and Harris (1991) confine financial information to reported income or earnings from the income statement and develop a model relating earnings level and earnings change to abnormal return, as follows:

$$R_{jt} - E[R_{jt}] = a_1 + a_2 \{A_{jt} / P_{jt-1}\} + a_3 \{(A_{jt} - A_{jt-1}) / P_{jt-1}\} + e_{jt}$$

where:

R_{jt} is the return on security j at time t ,

$E[R_{jt}]$ is the expected return on security j at time t ,

A_{jt} is the accounting earnings per share of firm j over the time period $t-1$ to t ,

A_{jt-1} is the accounting earnings per share of firm j over the prior time period $t-2$ to $t-1$, and

P_{jt-1} is the beginning-of-period security price per share at $t-1$

To evaluate the value-relevance of the HKAS 40 (2004)'s revised presentation of gains and losses in fair value of investment properties in the income statement, earnings are partitioned into two components: (1) earnings before gains and losses in fair value of investment properties; and (2) gains and losses in fair value of investment properties, as in Barth (1994). Both components are then scaled by total market value. In this study, the gains and losses in fair value of investment properties, as scaled by total market value, are assumed to have an expectation of zero as changes in fair value generally arise from random walk processes,⁹ should be transitory in nature (Barth, 1994; Chambers et al., 2006) and represent unexpected information.

An abnormal return in this study is measured by the difference between the company's return during the period and the return on the market portfolio, i.e. $R_{jt} - R_{mt}$, where R_{mt} is the return based on the market portfolio at time t , also known as the market-adjusted rate of return (Amir et al., 1993). Market-wide return is removed and the abnormal return obtained thus represents company-specific returns. Brown and Warner (1980) find the market-adjusted rate of return to perform reasonably well under a wide variety of conditions when compared

⁷ As HKAS 40 (2004) encourages, but does not mandate, external independent valuation for investment properties, and SSAP 13 (2000) only requires such a valuation at least every three years, whether or not there is an independent valuation should therefore be controlled for in this study. However subsequent data analysis shows that all the companies sampled in this study engage an external independent valuation appraiser for their investment properties during all the sample year-ends regardless of whether SSAP 13 (2000) or HKAS 40 (2004) is adopted. There is therefore no such need to include a control variable for independent valuation in this study.

⁸ The Centa-City Index is a monthly index based on all transaction records as registered with the Land Registry in Hong Kong, to reflect market-wide property price levels during the month in Hong Kong.

⁹ Changes in fair value of investment properties may behave as a random walk with drift, resulting in a non-zero expected value. The drift may be reflecting the change in the market-wide property price levels, which is therefore controlled for in this study.

with the more conventional market model used in Ball and Brown (1968) and other studies (e.g. Ball and Kothari, 1991).

In order to evaluate the value-relevance of a company's reporting of gains and losses in fair value of investment properties in the income statement, this study assesses how investors respond to such information when it first becomes publicly available, by observing the company's share price movements during a short window of three days surrounding the company's results announcement. In Hong Kong, the Hong Kong Stock Exchange Listing Rules require its Main Board listed companies to publish preliminary results the next business day after approval by the board of directors and in any event not later than four months after the date upon which the financial period ended. The preliminary results include announcements of balance sheets and income statements together with most of the notes to the accounts which have been audited and agreed by the companies' auditors and will be published in the annual reports. The preliminary results announcement day is therefore identified as the day when the information on the reporting of gains and losses in fair value of investment properties first becomes publicly available.

Because during a three-day short window there are relatively few company-specific events other than the results announcement, a three-day short-window association between the abnormal returns and accounting information released in the results announcement suggests that the accounting information is responsible for the abnormal return and provides new decision-useful information to investors. Other information in the preliminary results announcement might also be responsible for the abnormal return, for example, a change in company strategy. However, by including only companies from the property industry, where investment properties comprise a large proportion of company assets and fair value gains and losses, a large earn-

ings source, the effects from other information are therefore narrowed in this short-window analysis.

The regression equation (1) below is used to evaluate the differential value-relevance of the HKAS 40 (2004)'s required reporting of gains and losses in fair value of investment properties in the income statement, using a three-day short window approach as adapted from Easton and Harris (1991), Amir et al. (1993) and Barth (1994) (omitting company j and year t subscripts). A differential intercept dummy variable AFTER is used to indicate whether HKAS 40 (2004) or SSAP 13 (2000) is adopted during the accounting year.

$$\begin{aligned} AR^S = & \alpha_1 + \alpha_2 \text{ AFTER} + \alpha_3 \text{ EARNB} & (1) \\ & + \alpha_4 \Delta \text{EARNB} + \alpha_5 \text{ IPVC} \\ & + \alpha_6 \text{ EARNB} * \text{ AFTER} \\ & + \alpha_7 \Delta \text{EARNB} * \text{ AFTER} + \alpha_8 \text{ IPVC} * \text{ AFTER} \\ & + \alpha_9 \text{ FIRM SIZE} + \alpha_{10} \text{ LEVERAGE} \\ & + \alpha_{11} \text{ CCINDEX} + \varepsilon \end{aligned}$$

where:

AR^S is the three-day buy-and-hold¹⁰ abnormal return (adjusted for dividends and share splits), centred around the preliminary results announcement day, calculated using the market-adjusted return.

AFTER is a dummy variable to indicate whether HKAS 40 (2004) or SSAP 13 (2000) is in effect during the accounting year. AFTER is set equal to one if HKAS 40 (2004) is adopted for the first time during the accounting year, and zero otherwise.

EARNB is the earnings before gains and losses. In the case of HKAS 40 (2004) this is measured as earnings before gains and losses in fair value of investment properties. In the case of SSAP 13 (2000) this is measured as the earnings before deficits in open market value of investment properties in excess of the revaluation reserve, or surpluses in open market value of investment properties in excess of any deficits previously charged to the income statement (see footnote 3). EARNB is scaled by the total market value at the first day of the fifth month after the beginning of the accounting year.

ΔEARNB is the difference between EARNB in the current year and EARNB in the prior year, scaled by the total market value at the first day of the fifth month after the beginning of the accounting year.

IPVC is the gains and losses in fair value of investment properties recognised in the income statement as required by HKAS 40 (2004), or the investment properties' open market value increases and decreases disclosed in the notes

¹⁰ While there is disagreement in the literature regarding the method for calculating long-run abnormal returns because of the inherent right-skewed non-normal distribution problem (Lyon et al., 1999), the choice of method is not so important for the measurement of short-run abnormal returns (Fama, 1998, Jakobsen and Voetmann, 2003). Because a horizon of three to five years is referred to in the literature as long-run, both the three-day short-window and 12-month long-window abnormal returns in this study provide short-run returns. Commonly used abnormal returns in event studies are buy-and-hold abnormal returns (BHAR) (monthly abnormal returns compounded) and cumulative abnormal returns (CAR) (monthly abnormal returns summed and averaged). Lyon et al. (1999) suggests BHAR is suitable in answering the question of whether sample firms earned abnormal returns over a particular period of time, while CAR is preferred where sample firms persistently earn abnormal monthly returns. Fewer data are collected for BHAR because the monthly returns compounded are simply the annual return; BHAR is therefore used in this study.

to the accounts, scaled by the total market value at the first day of the fifth month after the beginning of the accounting year.

FIRM SIZE is the natural logarithm of the book value of the total assets at the beginning of the accounting year.

LEVERAGE is the ratio of the book value of debt to the total assets at the beginning of the accounting year.

CCINDEX is the difference between the Centa-City Index at the end and the beginning of the accounting year, divided by the beginning index amount.

The focus of this study is on the significance of the differential slope coefficient α_8 of the interaction variable IPVC*AFTER which reflects the significance of the differential causal effect of the change in the accounting standard requirement. A positive and significant β_8 gives support for the higher informativeness of the changes introduced by HKAS 40 (2004) in the presentation of changes in fair value of investment properties.

The coefficients α_6 and α_7 of EARNB*AFTER and Δ EARNB*AFTER reflect the differential causal effect of the HKAS 40 revision on earnings and earnings change amounts before the open market value/fair value change of investment properties (i.e. EARNB and Δ EARNB). Because the HKAS 40 revision is not concerned with such earnings and earnings change, coefficients α_6 and α_7 should be of no significance. However, as a result of the full convergence of HKFRS with IFRS in Hong Kong in 2005, there are other financial reporting requirement changes taking place concurrently with HKAS 40 (2004). These other reporting changes may interact with EARNB and Δ EARNB to cause an effect on the abnormal returns. The sign and significance of α_6 and α_7 reflect the differential causal value relevance of these other reporting changes. They are, however, outside the scope of this study and no prediction is made about them.

The coefficients α_3 and α_4 represent the effects of EARNB and Δ EARNB in three-day short windows when SSAP 13 (2000) is adopted in the financial statements (i.e. when AFTER equals zero). Although most related prior studies find earnings and/or earnings change to be significant in explaining abnormal returns, they do not measure the effects over short windows. When short windows are used, the results are mixed. For example, Amir et al. (1993) finds no market reaction to either earnings or earnings change around five-day announcement windows (and interprets this as reflecting an inability to differentiate the news

clearly), while Haw et al. (1999) report significant price reaction using three-day windows. Also, because EARNB and Δ EARNB in this study are earnings and earnings change before investment properties' value change, they are less likely to be transitory (i.e. less likely to be 'surprises') and may show a weaker relationship with the abnormal returns. In contrast, α_5 for IPVC may show a stronger relationship. Results from Barth et al. (1990 and 1994) give support to these predictions.

3.2. Long-window abnormal return – unexpected earnings association

This study also extends the returns window to a longer period of 12 months. While a three-day short window association between abnormal return and accounting information suggests that the latter is causing the former, this is not a valid claim when the association is evaluated over a long window. A longer window opens the returns up to a host of other value-relevant events. Share prices reflect all available information, not just the accounting information. As a result, it cannot be claimed that the reported accounting information causes the abnormal return during the 12-month-long window period. The most that can be claimed is that the reported accounting information and the abnormal return are associated.

The regression equation (2) for the long window is basically the same as equation (1) for the short window, except abnormal return is measured over 12 months rather than three days.

$$\begin{aligned} AR^L = & \beta_1 + \beta_2 \text{ AFTER} + \beta_3 \text{ EARNB} \\ & + \beta_4 \Delta \text{ EARNB} + \beta_5 \text{ IPVC} \\ & + \beta_6 \text{ EARNB} * \text{ AFTER} \\ & + \beta_7 \Delta \text{ EARNB} * \text{ AFTER} + \beta_8 \text{ IPVC} * \text{ AFTER} \\ & + \beta_9 \text{ FIRM SIZE} + \beta_{10} \text{ LEVERAGE} \\ & + \beta_{11} \text{ CCINDEX} + \varepsilon \end{aligned} \quad (2)$$

where:

AR^L is the buy-and-hold¹¹ abnormal return (adjusted for dividends and share splits), for the 12 months beginning the first day of the fifth month after the beginning of the accounting year, calculated using market adjusted return.

The Hong Kong Stock Exchange Listing Rules allow the Hong Kong Main Board listers to publish their annual financial statements (as part of the preliminary results announcements) at the latest by the last day of the fourth month after the accounting year-end. The 12-month window in this study therefore corresponds to the 12 months ending on this day (i.e. 12 months beginning eight months prior to and ending four months after the accounting year).

As with the short window regression, the higher value-relevance in the longer run of the HKAS 40

¹¹ See footnote 10.

Table 1
First time adoption of HKAS 40 (2004)

<i>Financial statements year-end</i>	<i>No. of companies adopting HKAS 40 (2004) for the first time</i>
31 December 2004	3 ^e
31 March 2005	4 ^e
30 April 2005	1 ^e
30 June 2005	7 ^e
31 July 2005	2 ^e
31 December 2005	45
31 March 2006	22
30 April 2006	1
30 June 2006	5
31 July 2006	2
Total	92

^e Early adoption of HKAS 40 (2004)

(2004) presentation of gains and losses in fair value of investment properties in the income statement is assessed by a positive and significant value of β_8 .

Predictions similar to those for the earlier three-day short window (or no prediction) are made for the other variables, except stronger relationships are expected because association rather than causation is studied in 12-month windows.

4. Empirical results

Although HKAS 40 (2004) allows a free choice between cost and fair value models, all 92 companies in the initial sample chose to adopt the fair value model.

All the 92 companies are retained for data analysis, with extreme variable values verified against their sources. Since no procedural errors or extraordinary events are identified, all the data collected for the 92 companies are retained for the subsequent analysis.¹²

Each company is evaluated twice, in two consecutive accounting years before and after the adoption of HKAS 40 (2004).

Table 1 describes the distribution of accounting year-ends, years of last-time following of SSAP 13 (2000) and years of first-time adoption of HKAS 40 (2004) for the 92 companies in this study. Appendix A details their identities. Most companies have March 31 or December 31 accounting year-ends, and adopt HKAS 40 (2004) for the first time in 2005 or 2006. While HKAS 40 (2004) mandates adoption for annual periods beginning on or after 1 January 2005, 17 companies choose to adopt HKAS 40 (2004) early.¹³

Tables 2A and 2B contain descriptive statistics for the 92 sample companies in the study during the year(s) when HKAS 40 (2004) is adopted for

the first time compared to the year(s) when SSAP 13 (2000) is adopted for the last time.

On the whole, when companies apply HKAS 40 (2004) for the first time, they are experiencing higher earnings and higher market values and offering their investors higher abnormal returns; this may be attributable to the strong economy in Hong Kong in 2005 and 2006. The Centa-City Index has indeed been increasing during the sample period, although at a significantly lower rate when HKAS 40 (2004) is applied for the first time. Firm size and Centa-City index changes are both controlled for in this study. Also all independent variables in this study are scaled by the company's beginning market value. Results show a significant increase in the proportion of investment properties relative to total assets, from 0.345 when SSAP 13(2000) is applied to 0.403 when HKAS 40 (2004) is applied.

There is also an indication of higher earnings volatility¹⁴ as a result of applying HKAS 40 (2004). The mean gains and losses in fair value of investment properties are HK\$827m which is almost equal to the earnings before such gains and losses of HK\$848m. In contrast, the mean investment properties open market value excess deficits or surpluses of HK\$24m amounts to only 3% of

¹² Unreported findings show that similar results are obtained if all extreme variable values are excluded.

¹³ Unreported t-test results show early adopters to have significantly higher mean amounts of total assets, investment properties, total earnings and market values. Unreported regression results show similar results when a dummy variable to indicate early adopters is included in the regression equations.

¹⁴ The increased volatility may be limited to our sample period (2004–2006). As volatility should be a function of year-over-year change, we need to examine more years in order to conclude whether or not an increase in volatility has resulted from applying HKAS 40 (2004).

Table 2A
Descriptive statistics for financial statement and market data (2004–2006)
92 companies

	N	Mean	SD	Max	Min
Selected market and economic variables					
<i>When HKAS 40 (2004) is adopted for the first time</i>					
Company's market value (HK\$m)	92	9,511	25,642	178,887	41
Centa-City Index change	92	0.067	0.081	0.315	-0.038
<i>When SSAP 13(2000) is adopted for the last time</i>					
Company's market value (HK\$m)	92	7,488	22,623	174,070	21
Centa-City Index change	92	0.278	0.096	0.459	0.072
<i>Paired sample t-tests of mean differences (HKAS 40 (2004) over SSAP 13) (t-value in parenthesis)</i>					
Company's market value (HK\$m)	92	2,023 ***			
		(4.114)			
Centa-City Index change	92	-0.211 ***			
		(-20.723)			
Selected financial statement variables					
<i>When HKAS 40 (2004) is adopted for the first time</i>					
Total assets (HK\$m)	92	15,996	34,459	196,720	95
Investment properties (HK\$m)	92	6,069	15,068	116,733	0
Investment properties to total assets	92	0.403	0.348	1.547	0
Debt to total assets	92	0.182	0.149	0.790	0
Total earnings	92	1,675	3,478	20,038	-571
<i>When SSAP 13(2000) is adopted for the last time</i>					
Total assets (HK\$m)	92	14,837	32,684	198,860	43
Investment properties (HK\$m)	92	5,022	12,654	100,775	0
Investment properties to total assets	92	0.345	0.308	1.289	0
Debt to total assets	92	0.162	0.156	0.536	0
Total earnings	92	1,055	2,569	18,180	-213
<i>Paired sample t-tests of mean differences (HKAS 40 (2004) over SSAP 13) (t-value in parenthesis)</i>					
Total assets (HK\$m)	92	1,159 ***			
		(3.662)			
Investment properties (HK\$m)	92	1,047 ***			
		(3.704)			
Investment properties to total assets	92	0.058 **			
		(2.405)			
Debt to total assets	92	0.020			
		(1.583)			
Total earnings	92	620 ***			
		(4.049)			

^aIPFVGL: Gains and losses in fair value of investment properties (reported in income statement under HKAS 40 (2004))

^bIPOMVEDS: Investment properties' open market value excess deficits and surpluses (reported in income statement under SSAP 13)

^cIPOMVC: Investment properties' open market value changes (disclosed in notes to the accounts under SSAP 13)

* Significant at the 10% level

** Significant at the 5% level

*** Significant at the 1% level

Table 2B
Descriptive statistics for regression variables (2004–2006)
92 companies

	N	Mean	SD	Max	Min
Regression variables					
<i>When HKAS 40 (2004) is adopted for the first time</i>					
Short-window abnormal return	92	-0.005	0.063	0.217	-0.191
Long-window abnormal return	92	0.156	0.543	1.911	-0.997
Earnings before IPFVGL ^a (HK\$m)	92	848	2,125	11,794	-1,897
Earnings change before IPFVGL ^a (HK\$m)	92	105	755	3,184	-2,851
IPFVGL ^a (HK\$m)	92	827	2,052	12,982	-20
<i>When SSAP 13 (2000) is adopted for the last time</i>					
Short-window abnormal return	92	-0.013	0.064	0.175	-0.372
Long-window abnormal return	92	0.152	0.563	2.649	-1.158
Earnings before IPOMVEDS ^b (HK\$m)	92	757	1,773	10,601	-216
Earnings change before IPOMVEDS ^b (HK\$m)	92	316	847	6,777	-459
IPOMVEDS ^b (HK\$m)	92	24	146	886	-784
IPOMVC ^c (HK\$m)	92	312	1,110	8,139	-784
<i>T-tests of mean differences (HKAS 40 (2004) over SSAP 13) (t-value in parenthesis)</i>					
Short-window abnormal return	92	0.008 (0.94)			
Long-window abnormal return	92	0.004 (0.06)			
Earnings before IPFVGL ^a / IPOMVEDS ^b (HK\$m)	92	91 (1.02)			
Earning change before IPFVGL ^a / IPOMVEDS ^b (HK\$m)	92	-211 * (-1.66)			
IPFVGL ^a / IPOMVC ^c (HK\$m)	92	515 *** (3.793)			

^aIPFVGL: Gains and losses in fair value of investment properties (reported in income statement under HKAS 40 (2004))

^bIPOMVEDS: Investment properties' open market value excess deficits and surpluses (reported in income statement under SSAP 13)

^cIPOMVC: Investment properties' open market value changes (disclosed in notes to the accounts under SSAP 13)

* Significant at the 10% level

*** Significant at the 1% level

Table 3
Earnings volatility

	N	Mean	SD	Max	Min
<i>Applying HKAS 40 (2004)</i>					
Earnings volatility (number of standard deviations)	92	0.947	0.728	1.788	-0.167
<i>Applying SSAP 13 (2000)</i>					
Earnings volatility (number of standard deviations)	92	0.419	0.589	1.747	-0.190

Paired-sample *t*-test results:

Paired differences: 0.528 number of standard deviations

t (91) = 4.679

p = 0.000

the earnings before such excess deficits or surpluses of HK\$757m.

Further indication of higher earnings volatility¹⁵ is available in Table 3 showing the results of a paired-sample t-test performed to compare the earnings volatility before and after the application of HKAS 40 (2004). Earnings volatility is expressed as the number of standard deviations from a five-year mean (mean of the earnings of the five years ending on the year of HKAS 40 (2004) application). Earnings volatility is significantly higher after the adoption of HKAS 40 (2004) ($t = 4.678, p = 0.000$).

4.1. Short window event study

Table 4 reports the regression results from the estimation of equation (1). Results for the short-window event study provide evidence that the presentation of changes in fair value of investment properties in the income statements as required by HKAS 40 (2004) is more informative to investors than the presentation required by SSAP 13 (2000). Investors respond to the information on changes in fair value in the income statement, as released in the results announcement, causing abnormal returns. The coefficient α_8 of the interaction variable IPVC*AFTER in equation (1) is positive and significant at the 5% level ($p = 0.022$).

As expected, neither earnings (EARNB) nor earnings change before investment properties' open market value/changes in fair value (Δ EARNB) is significant in explaining the abnormal return within the short window when SSAP 13 (2000) is adopted in the financial statements.

Although the overall R^2 is only 1.0%, this is consistent with the results from prior short-window studies.

All the coefficients are positive except that of investment properties' value changes (i.e. IPVC), which is negative (but not statistically significant). Barth et al. (1990) and Barth (1994) also find similar negative coefficients for securities market price gains and losses and interpret them as evidence of a market that perceives that securities gains and losses are used to smooth earnings.

4.2. Long-window abnormal return – unexpected earnings association

The regression results for the long window abnormal return and unexpected earnings association are reported in Table 4. As the window opens wider, the earnings before changes in open market value or fair value (i.e. EARNB) in equation (2) also become significant at the 5% level and the overall adjusted R^2 increases to 17.7%. This is

consistent with the results from prior studies using long windows where significance of earnings is found together with higher overall R^2 .

The coefficient β_8 of the interaction variable IPVC*AFTER in equation (2) is positive and significant at the 10% level ($p = 0.069$), consistent with the result from the short window regression in this study. This result conflicts with that from Owusu-Ansah and Yeoh (2006), who find that the recognition of unrealised gains in the income statement is not superior to that in the revaluation reserve in terms of value-relevance. However, the results from this present study are more persuasive on a number of grounds: (1) Owusu-Ansah and Yeoh (2006) is based on data from the 1990s before the fair value accounting requirement came into effect, while our study is based on the actual reactions from investors to the implementation of the fair value model (i.e. HKAS 40 (2004)) compared to their previous reaction under SSAP 13 (2000); (2) this study has a cleaner test setting as we use only the earnings capitalisation approach which focuses on income statement items, whereas Owusu-Ansah and Yeoh (2006) adopt a market value approach which examines balance sheet items. This latter approach is not appropriate since the values of investment properties (open market value or fair value) reported in balance sheets are similar, before and after the change in accounting requirements (see footnote 6); (3) the sample companies in this present study belong to a single industry – property; as detailed earlier, the effects from other information are narrower if the sample is restricted to those companies drawn only from the property industry. Property companies are expected to have more precise value estimates for their investment properties, but the Owusu-Ansah and Yeoh (2006) sample includes companies from different industries; (4) the findings of this present study have greater generality, in that they embrace companies with both value increases and decreases, while Owusu-Ansah and Yeoh (2006) confine their sample to those companies with positive changes in values only.

The coefficient β_6 of the interaction variable EARNB*AFTER in equation (2) is also positive and significant at the 10% level ($p = 0.092$). This gives support for the value-relevance of other financial reporting changes that are taking place concurrently with HKAS 40 (2004) as a result of the full convergence of HKFRS with IFRS in Hong Kong in 2005. These other reporting changes interact with the earnings before changes in the fair value of open market value or fair value of investment properties (i.e. EARNB) to result in a stronger association with abnormal returns.

As with the results from equation (1) for the short window, all the coefficients are positive except those of IPVC and Δ EARNB*AFTER, which

¹⁵ We also test the change in volatility after controlling for the change in the market-wide property price levels (measured by the Centa-City Index). Similar results are obtained.

Table 4
Regression results

	<i>AR^S Equation (1)</i>	<i>AR^L Equation (2)</i>
Intercept	-0.101 * (-1.72)	-1.561 *** (-3.37)
AFTER	0.009 (0.57)	0.121 (0.99)
EARNB	0.010 (0.51)	0.327 ** (2.19)
Δ EARNB	0.000 (0.00)	0.168 (1.29)
IPVC	-0.024 (-1.49)	-0.076 (-0.60)
EARNB *AFTER	0.025 (0.77)	0.439 * (1.70)
Δ EARNB *AFTER	0.001 (0.05)	-0.230 (-1.34)
IPVC *AFTER	0.062 ** (2.31)	0.392 * (1.83)
FIRM SIZE	0.003 (1.28)	0.066 *** (3.12)
LEVERAGE	0.005 (0.16)	0.124 (0.49)
CCINDEX	0.047 (0.85)	0.693 (1.58)
<i>Adj. R²</i>	0.010	0.177
<i>N</i>	184	184

AR^S = three-day buy-and-hold abnormal return (adjusted for dividends and share splits), centred around the preliminary results announcement day, calculated using the market-adjusted return

AR^L = buy-and-hold abnormal return (adjusted for dividends and share splits), for the 12 months beginning the first day of the fifth month after the beginning of the accounting year, calculated using the market-adjusted return

AFTER = a dummy variable to indicate whether HKAS 40 (2004) or SSAP 13 is in effect during the accounting year. AFTER is set equal to one if the new HKAS 40 (2004) is adopted for the first time during the accounting year, and zero otherwise

EARNB = earnings before gains and losses in fair value of investment properties recognised under the new HKAS 40 (2004), OR the earnings before investment properties' open market deficits in excess of the revaluation reserve balance or investment properties' subsequent open market value surpluses in excess of the deficits previously charged to the income statement, recognised under the old superseded SSAP 13. EARNB is scaled by the total market value at the first day of the fifth month after the beginning of the accounting year

ΔEARNB = difference between EARNB in the current year and EARNB in the prior year, scaled by the total market value at the first day of the fifth month after the beginning of the accounting year

IPVC = gains and losses in fair value of investment properties recognised in the income statement as required by the new HKAS 40 (2004), OR the investment properties' open market value increases and decreases disclosed in the notes to the accounts, scaled by the total market value at the first day of the fifth month after the beginning of the accounting year

FIRM SIZE = natural logarithm of the book value of the total assets at the beginning of the accounting year

LEVERAGE = ratio of the book value of debt to the total assets at the beginning of the accounting year

CCINDEX = difference between the Centa-City Index at the end and at the beginning of the accounting year, divided by the beginning index amount

* significant at the 10% level

** significant at the 5% level

*** significant at the 1% level

are negative (but not statistically significant).

4.3. Sensitivity analysis

If the earnings partitioning approach developed in Barth (1994) is to be followed exactly in this study, the variable IPVC (changes in fair value of investment properties) should be equal to the excess open market value deficits or surpluses recognised in the income statement for the accounting year when SSAP 13 (2000) is followed. This study has chosen to use the open market value increases or decreases (as disclosed in the notes to the accounts), in order to be consistent with the fair value gains and losses that are used to measure the variable IPVC when HKAS 40 (2004) is adopted. A sensitivity analysis is conducted using the excess open market value deficits or surpluses when SSAP 13 (2000) is followed and similar results are obtained.

Another sensitivity analysis is conducted using the Hong Kong Hang Seng Composite Index as the proxy for equity market return in Hong Kong, and again, similar results are found. The Hong Kong Hang Seng Composite Index covers 90% of the market capitalisation of the shares listed on the Main Board of SEHK and there are currently 200 constituent shares in this index.

5. Conclusions

Part of the debate about the adoption of fair value accounting for investment properties is on the value-relevance of presenting changes in fair value

in the income statement, compared to reporting such changes in the revaluation reserve. This study informs this debate by providing evidence on the value-relevance of the presentation of changes in fair value in the income statement for Hong Kong listed companies in the properties industry. Results show a significant market price reaction to investment properties' fair value change information as included in companies' annual results announcements. Results also show a significant association between the market-adjusted annual share returns and the presentation of the investment properties' fair value change in the income statement. These results strongly suggest that investors appear to place more value on HKAS 40 (2004)'s presentation of changes in fair value of investment properties in the income statement, when compared with the presentation in the revaluation reserve under SSAP 13 (2000). The results also support the existing literature on the value-relevance of presentation locations of accounting amounts in general.

The results from this study also have implications for companies around the world that prepare their financial statements using International Financial Reporting Standards.

However, because all the companies in our sample choose to adopt the fair value model, we do not have a control group of companies that do not adopt the fair value model. We cannot therefore eliminate the possibility that our results are driven by other events happening at the same time as the adoption of HKAS 40 (2004).

Appendix A 92 companies in the sample (184 firm-standard)

	<i>SEHK Code</i>		<i>Accounting year-end</i>	<i>Last time following SSAP 13</i>	<i>First time adoption of HKAS 40 (2004)</i>
1	1	Cheung Kong (Holdings) Ltd	31 December	2003	2004
2	154	Beijing Development (Hong Kong) Ltd	31 December	2003	2004
3	758	Junefield Department Store Group Ltd	31 December	2003	2004
4	35	Far East Consortium International Ltd	31 March	2004	2005
5	172	Goldbond Group Holdings Ltd	31 March	2004	2005
6	277	Tern Properties Co Ltd	31 March	2004	2005
7	412	Heritage International Holdings Ltd	31 March	2004	2005
8	735	Oriental Investment Corporation Ltd	30 April	2004	2005
9	10	Hung Lung Group Ltd	30 June	2004	2005
10	12	Henderson Land Development Company Ltd	30 June	2004	2005
11	83	Sino Land Company Ltd	30 June	2004	2005
12	97	Henderson Investment Ltd	30 June	2004	2005
13	101	Hang Lung Properties Ltd	30 June	2004	2005
14	131	Cheuk Nang (Holdings) Ltd	30 June	2004	2005
15	247	Tsim Sha Tsui Properties Ltd	30 June	2004	2005
16	488	Lai Sun Development Co Ltd	31 July	2004	2005
17	1125	Lai Fung Holdings Ltd	31 July	2004	2005
18	14	Hysan Development Company Ltd	31 December	2004	2005

Appendix A
92 companies in the sample (184 firm-standard) (continued)

	<i>SEHK Code</i>		<i>Accounting year-end</i>	<i>Last time following SSAP 13</i>	<i>First time adoption of HKAS 40 (2004)</i>
19	24	Burwill Holdings Ltd	31 December	2004	2005
20	28	Tian An China Investment Company Ltd	31 December	2004	2005
21	34	Kowloon Development Company Ltd	31 December	2004	2005
22	41	Great Eagle Holdings Ltd	31 December	2004	2005
23	56	Allied Properties (HK) Ltd	31 December	2004	2005
24	66	MTR Corporation Ltd	31 December	2004	2005
25	68	Lee Hing Development Ltd	31 December	2004	2005
26	75	Y.T. Reality Group Ltd	31 December	2004	2005
27	89	Tai Sang Land Development Ltd	31 December	2004	2005
28	106	Shenzhen Hing-Tech Holdings Ltd	31 December	2004	2005
29	115	Grand Field Group Holdings Ltd	31 December	2004	2005
30	123	Guangzhou Investment Company Ltd	31 December	2004	2005
31	127	Chinese Estate Holdings Ltd	31 December	2004	2005
32	132	China Investment Holdings Ltd	31 December	2004	2005
33	141	Great China Holdings Ltd	31 December	2004	2005
34	156	Lippo China Resources Ltd	31 December	2004	2005
35	169	China Fair Land Holdings Ltd	31 December	2004	2005
36	171	Silver Grant International Industries Ltd	31 December	2004	2005
37	173	K. Wah International Holdings Ltd	31 December	2004	2005
38	184	Keck Seng Investments (Hong Kong) Ltd	31 December	2004	2005
39	201	Magnificent Estates Ltd	31 December	2004	2005
40	219	Shun Ho Technology Holdings Ltd	31 December	2004	2005
41	230	Onfem Holdings Ltd	31 December	2004	2005
42	242	Shun Tak Holdings Ltd	31 December	2004	2005
43	251	SEA Holdings Ltd	31 December	2004	2005
44	257	China Everbright International Ltd	31 December	2004	2005
45	258	Tomson Group Ltd	31 December	2004	2005
46	286	G-Prop (Holdings) Ltd	31 December	2004	2005
47	366	Luks Industrial (Group) Ltd	31 December	2004	2005
48	373	Allied Group Ltd	31 December	2004	2005
49	431	Greater China Holdings Ltd	31 December	2004	2005
50	588	Beijing North Star Co Ltd	31 December	2004	2005
51	604	Shenzhen Investment Ltd	31 December	2004	2005
52	617	Paliburg Holdings Ltd	31 December	2004	2005
53	635	Playmates Holdings Ltd	31 December	2004	2005
54	649	Shimao International Holdings Ltd	31 December	2004	2005
55	683	Kerry Properties Ltd	31 December	2004	2005
56	688	China Overseas Land & Investment Ltd	31 December	2004	2005
57	730	Shougang Concord Grand (Group) Ltd	31 December	2004	2005
58	878	Soundwill Holdings Ltd	31 December	2004	2005
59	898	Multifield International Holdings Ltd	31 December	2004	2005
60	1200	Midland Holdings Ltd	31 December	2004	2005
61	1207	Shanghai Real Estate Ltd	31 December	2004	2005
62	2355	Baoye Group Company Ltd	31 December	2004	2005
63	20	Wheelock and Company Ltd	31 March	2005	2006
64	22	Mexan Ltd	31 March	2005	2006
65	49	Wheelock Properties Ltd	31 March	2005	2006
66	88	Tai Cheung Holdings Ltd	31 March	2005	2006
67	129	Asia Standard International Group Ltd	31 March	2005	2006
68	160	Hon Kwok Land Investment Company Ltd	31 March	2005	2006
69	163	Emperor International Holdings Ltd	31 March	2005	2006
70	164	Premium Land Ltd	31 March	2005	2006
71	166	New Times Group Holdings Ltd	31 March	2005	2006

Appendix A
92 companies in the sample (184 firm-standard) (continued)

	SEHK Code		Accounting year-end	Last time following SSAP 13	First time adoption of HKAS 40 (2004)
72	202	Interchina Holdings Co Ltd	31 March	2005	2006
73	213	National Electronics Holdings Ltd	31 March	2005	2006
74	224	Pioneer Global Group Ltd	31 March	2005	2006
75	237	Safety Godown Co Ltd	31 March	2005	2006
76	278	Wah Ha Realty Company Ltd	31 March	2005	2006
77	287	Winfair Investment Company Ltd	31 March	2005	2006
78	298	Chuang's China Investments Ltd	31 March	2005	2006
79	480	HKR International Ltd	31 March	2005	2006
80	499	Hycomm Wireless Ltd	31 March	2005	2006
81	711	Chun Wo Holdings Ltd	31 March	2005	2006
82	1036	Winsor Properties Holdings Ltd	31 March	2005	2006
83	1124	Costal Greenland Ltd	31 March	2005	2006
84	2340	Synergies Holdings Ltd	31 March	2005	2006
85	288	Berjaya Holding (HK) Ltd	30 April	2005	2006
86	16	Sun Hung Kai Property Ltd	30 June	2005	2006
87	17	New World Development Co Ltd	30 June	2005	2006
88	54	Hopewell Holdings Ltd	30 June	2005	2006
89	659	NWS Holdings Ltd	30 June	2005	2006
90	917	New World China Land Ltd	30 June	2005	2006
91	193	Capital Estate Ltd	31 July	2005	2006
92	1191	China Rich Holdings Ltd	31 July	2005	2006

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