The effect of using fair value accounting on fundamental analysis: Some evidence from the emerging economies

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THE EFFECT OF USING FAIR VALUE ACCOUNTING ON FUNDAMENTAL ANALYSIS: SOME EVIDENCE FROM THE EMERGING ECONOMIES

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ABSTRACT

The objective of this paper is to examine the effect of the use of the fair value model under IAS 40 of accounting for an investment property on the fundamental analysis of Barwa Company, a real estate developer company listed in Qatar Exchange. This examination of effect concentrates on whether or not this choice will have an impact on the fundamental financial analysis of the company and consequently on investors' decision-making. The research methodology depends on selecting balance sheet and income statement items that are affected by the adoption, then restating them by adjusting for the revaluation gain or loss recognized and comparing them to the original values. Profitability and financial market ratios are utilized to examine the impact on the accounting numbers. Ratios are calculated over 17 consecutive quarters from Q1-2007 to Q1-2011. The study finds that while the choice of the fair value model results in a small impact on balance sheet items, the effect on income statement items seemed to be significant. Among the accounting numbers affected, net income remains to have suffered the highest impact. Furthermore, all accounting ratios were affected by the choice. The ratios used are those of profitability and market value including profit margin ratio, the cost to income ratio, return on assets, return on equity, price/book value ratio and earnings per share. Interestingly, upward and downward market corrections for the company's share price were not associated with the company's recognition of fair value revaluation gains or losses. This suggests that the share price of the company may not be driven by the company specific characteristics, rather by different market factors. The study contributes to the literature by examining the effect of the adoption of fair value rules in IFRS on the financial information as the study documents the direct effect of the use of the fair value model in IAS 40 on accounting figures in general and reported net profit or loss in particular. Moreover, looking at Fair Value Model (FVM) from the firm fundamental perspective is important for both standard setters and shareholders. For standard setters, the results of such inquiry help to verify whether the standard on fair value reached its goal of providing the capital markets with relevant and reliable accounting information that mitigates the information gap between the firm and outsiders. For shareholders, FVM is important from both investment and contracting reasons. From an investment perspective, IAS40 has an impact on the last line of the income statement, and shareholder decision on whether to buy, hold or sell, depends mostly on the informativeness of firm reported earnings. Second, FVM has an impact on the contractual arrangements with both managers and creditors.

INTRODUCTION

The movement towards fair value accounting has become today more actively debated all around the world than ever before. Though fair value accounting has been around for decades, primarily for financial assets, the discussions today are about whether other assets and liabilities on balance sheets should be reported at fair value as opposed to historical cost. Advocates of fair value accounting argue for the use of fair value accounting for many reasons. Ball (2006) study points out that fair value accounting provides accurate and comprehensive financial statement information. Therefore, investors are given more-timely information about the economic gains and losses of the company. Also, fair value accounting allows lower managerial manipulation especially if appraisals were conducted by external appraisers (Dietrich et al., 2000). On the other hand, the fair-value opponents argue that fair value accounting increases information asymmetry as it combines realized and unrealized gains and losses and as well, it has the potential for redistributing of capital as dividends exceed realized earnings (Abdel-Khalik,2008).

The International Accounting Standards Board (IASB) considers fair value to be the most relevant measurement basis and requires a substantial portion of assets and liabilities to be measured at fair value on the balance sheet and gains or losses determined by reference to changes in assets and liabilities to be recognized in the income statement. This change from historical cost accounting to fair-value accounting is evidenced by the numerous standards issued by IASB in recent years, which require the use of fair-value models in financial accounting. One of these standards is IAS 40, which sets out the accounting treatment for investment property.

IAS 40 is significant as it marks the first time the IASB introduced a fair value accounting model for non-financial assets. It permits an entity to choose between either a fair value model with any gain or loss on revaluation to be taken to profit or loss for the period or a depreciated cost model for measurement after recognition and hence the choice between the two models affects reported income and net asset value.

This paper examines the effect of using the fair value model for accounting for investment property under IAS 40 on the fundamental analysis of Barwa Company, a real estate developer company listed in Qatar Exchange (QE). This examination of effect concentrates on whether or not this choice of fair value model under IAS 40 will have an impact on the fundamental financial analysis of the company and consequently on investors' decision-making.

Barwa company's principal activities include investing, acquiring, developing, reselling, and leasing of lands and real estate buildings and projects locally and internationally with total assets of QR 73.98 billion and a market capitalization of 14.047 billion in 2010. Investment property which makes 17% of total assets in 2010 is being accounted for under IAS 40 using the fair value model. The company appoints external

valuation specialists to carry out the valuation of the company's investment property portfolio for every reporting period. Profits realized through re-appraisal of the company's properties were always the main driver behind the increase in earnings. On quarterly average basis over the period from Q1-2007 to Q1-2011, gains realized through re-appraisal of the company's investment properties made 22% of total revenue.

The study aims to achieve two objectives. First, it provides guidance to investors and users of financial statements in general in the decision-making process so that they are not misled by accounting practices that sometimes are resorted to by firms' management to manipulate performance outcomes. Second, it helps to assess the credibility of fundamental financial analysis. With regard to the latter objective, the paper tries to deal with two broad questions. First, can fundamental financial analysis of corporate performance, which is most often widely used as a measurement tool for firms' current performance and a leading indicator of firms' future development be influenced by different accounting practices? Second, what is the intensity of the impact of the adoption of the fair value model in IAS 40 on the presentation of the financial statements and the future of the credibility of the fundamental analysis in the decision-making process?

The study finds that while the choice of the fair value model results in a small impact on balance sheet items, the effect on income statement items seemed to be significant. Among the accounting numbers affected, net income remains to have suffered the highest impact. Furthermore, all accounting ratios were affected by the choice. The ratios used are those of profitability and market value including profit margin ratio, the cost to income ratio, return on assets, return on equity, price/book value ratio and earnings per share. Interestingly, however, this impact does not have any impact on the company's share price.

The study contributes to the literature by examining the effect of the adoption of fair value rules in IFRS on the financial information as we document the direct effect of the use of the fair value model in IAS 40 on accounting figures in general and reported net profit or loss in particular. This study also builds on the literature documenting the magnitude of fundamental analysis as an evaluation tool widely used by investors and creditors to make intelligent investment and credit decisions as we examine the impact of fair value model in IAS 40 on key accounting ratios and the investment and credit decisions taken by investors and creditors. Moreover, looking at Fair Value Model (FVM) from the firm fundamental perspective is important for both standard setters and shareholders.

The study looks at FVM using the case of Barwa Company, a real estate developer company listed in Qatar Exchange (QE). Family-control is a dominant feature of small- and medium-sized enterprises in Qatar, and even typical of listed companies (Claessens et al. 2000).

LITERATURE REVIEW

The required adoption of IAS 40 -Investment Properties- in the European real estate industry effective January 1, 2005, introduced a significant change in the financial reporting for this industry that was confronted by huge criticism by many industry

constituents for its likelihood to introduce substantial volatility in reported net income, given the cyclical nature of the real estate industry. In this section we present prior studies analyzed the factors influenced the firm's choice to use the cost model or fair value model under IAS 40 to account for its investment property.

Aronsson and Högberg (2009) study the effects of implementation of IAS 40 on increased harmonization and comparability of accounting numbers of listed investment property companies within the European Union namely, Sweden, England, and Germany. results show that accounting numbers for the listed investment property companies within the EU are more harmonized and comparable today than before the implementation of IAS 40 in 2005.

Another paper by de Vicente Lama et al. (undated) investigates the extent to which listed companies in Spain and the United Kingdom between 2005 and 2008 comply with the disclosure requirements under IAS 40 and to what extent corporate characteristics are associated with compliance with this standard. Findings reveal that whereas size, profitability and the impact of fair value accounting for total assets proved to be significant determinants of the compliance with mandatory disclosure under IAS 40 in 2005 and 2008, leverage was not found to be significant in 2005 but was found as such in 2008.

Muller III et al. (2008) analyze the causes and the consequences of European real estate firm's decision to provide investment property fair values prior to the required disclosure of this information under the mandatory adoption of IFRS and IAS 40 investment property. They find that providing fair values by firms prior to the required provision under IAS 40 reflects a higher commitment by firms to increased transparency. On the other hand, Quagli & Avallone (2010) analyzes the reasons and understands the incentives behind choosing the fair value model under IAS 40 by real estate companies in European countries upon IFRS adoption. The study concludes three main drivers that led to favor the choice of fair value over the cost method: information asymmetry, contractual efficiency, and managerial opportunism.

In Finland, Lantto & Sahlström (2009) studied the impact of IFRS adoption including IAS 40 measurement rules on three major financial ratios: profitability, leverage, and liquidity. The study finds that the IFRS adoption results in changes in the magnitude of these ratios while IAS 40 is specifically responsible for the change in the return on invested capital (ROIC) indicating that it "has a decreasing impact on the denominator". Moreover, the IAS 40 partially justifies the changes in the return on equity (ROE). In Sweden, Hellman (2011) believes that fair value accounting results in a less conservative valuation of assets, thus increasing the reported values of shareholders' equity and assets, with a significant increase in book values.

Ayres, Huang and Myring 2016 study examines the effect of fair value accounting on the behavior of analysts using a large, generalizable sample of U.S. firms. By employing a measure of firms' fair value intensity, it provides evidence showing that firms with higher fair value intensity have more accurate analyst earnings forecasts,

Weijun (2007) examines the effect of the fair value accounting in IAS 40 on 32 listed companies from Hong Kong Composite Index Series, Industry Index of Property and Construction. The results show that the fair value changes on investment property reported in the financial statements provide relevant information to investors about the companies' current performance and future growth.

Other studies reveal further implications and consequences of the adoption of fair value reporting in the real estate industry. Liang & Riedl (2013) contrasted investment property firms from the UK (using fair value) and US (using historical cost), with real estate as their primary operating asset, to examine the effect of reporting model on the analysts' forecast accuracy. The results prove that the fair value reporting model improves analysts' ability to forecast the balance sheet based on net asset value, while reduces this ability at the level of net income forecasting based on earnings per share. In China, Taplin et al. (2014) find that Chinese investment property listed companies with international influence or volatility in earnings above average are more likely to use fair value than historical cost. This reveals the importance of and the need for harmonization between domestic and international regulators as well as investors.

FAIR VALUE ACCOUNTING IN OTHER INDUSTRIES

Many studies proved the fair value (evaluation) model to be more statistically correlated with the value of the firm more than the cost model. Although IAS 40 allows firms to voluntarily choose between any of the two methods, the concept of fair value and its approach are widely recommended to value properties of different industries; in this section, we will give examples about some of them. In the oil and gas industry, Wright & Cornell (2014) listed four methods that can be used to estimate the fair market value of properties in this industry as follows: the asset (cost) method, the transaction method, the market method and the income method.

Although the methods vary, reaching a fair value remains the only goal. This goal allows analysts to better evaluate and to consistently compare the performance of companies within the industry, given that they are all using the same valuation method. A big shift was observed where firms switched from the historical cost into fair value accounting. Studies were conducted within different sectors and industries to examine the effect and the value-relevance of the fair value reporting on firms' statements and financial ratios.

Wier's (2009) study examines the tradeoffs between the fair value (market-to-market) approach and the conservatism (historical cost) reporting of finished goods inventory for gold firms. The results show that the value of the inventory on balance sheet is more relevant at fair value than at historical cost. Moreover, the bottom-line figure (income) calculated using market-to-market, proved to be more value-relevant than that calculated using the historical method.

Barth et.al (1996) provides evidence from the banking sector showing that, beyond their book value, the fair value estimation of loans, securities, and long-term debts, explains a significant part of the banks stock's price and are value-relevant. Whereas at the level of insurance companies, Rodríguez-Pérez et al. (2011) argue that although switching from historical cost to fair value accounting might alter the perception of analysts regarding few firms, it will not affect the appraisal of the firm. The study finds a significant change in profitability, asset turnover, and profit margin ratios, when contrasted with historical cost ratios.

Dignah, Latiff, Karim, and Rahman 2017 study on a sample of Asian banks, improves the understanding of the information risk effect of fair value accounting by

examining the moderating role of risk disclosure in the relationship between fair value accounting and the cost of equity capital. The results show that risk disclosure mitigates the asymmetric information problem.

Demerjian, Donovan, and Larson, 2016 examine how fair value accounting affects debt contract design, specifically the use and definition of financial covenants in private loan contracts. The study find that covenant definition modification positively varies with common incentive problems attributed to fair value accounting and negatively varies with benefits attributed to fair value accounting.

Xie 2016 study investigates whether fair value accounting contributes to the procyclicality of bank lending. The study finds no evidence that fair value accounting has procyclical effects on bank lending over the past two business cycles. This is because of two reasons. First, the unrealized gains and losses on available-for- sale securities does not affect lending decisions. Second, unrealized gains and losses on available-for-sale securities are not procyclical.

Hsu and Lin 2016 attempt to provide evidence regarding manager's incentive to manipulate the disclosure of fair value measurements by examining whether the disclosure of less relevant fair value measurement is related to the odds of earnings management. Their study suggests that managers manipulate the disclosure of fair value measurement in order to manage reported earnings via the adoption of fair value option.

Chen and Gavious 2016 study explores changes in the dividend policy of companies following the adoption of fair value accounting rules. The study documents a dramatic increase in the payout ratios of firms that distributed dividends based on revaluation gains from 32 percent of realized earnings in the pre-IFRS period to 115 percent in the post-IFRS period.

Pito and Barros 2016 study examines the use of "fair value" in the Income Statements of the largest companies listed in the Portuguese exchange between 2005 and 2012. The results show that, If Portugal had not adopted "fair value" standards, its tax revenue would have been higher. Over all analyzed years and in almost all studied companies, average "fair value" adjustments are negative.

MAIN FEATURES OF IAS 40 –INVESTMENT PROPERTY

IAS 40, which became effective from 1 January 2001, is required to be applied to all property that meets the definition of "investment property" according to International Accounting Standard Board (IASB). Prior to IAS 40, investment property was accounted for under the general tangible fixed asset standard IAS 16 for property, plant, and equipment. In May 2008, the scope of IAS 40 was even extended to include property under construction or development for future use as an investment property.

IASB defines investment property as property (land or a building or part of a building or both) held (by the owner or by the lessee under a finance lease) to earn rentals or for capital appreciation or both. IASB believes that investment properties have characteristics, which sufficiently are different from owner-occupied property. Whereas investment properties have the distinguishing feature that they earn cash flows largely independently of the enterprise' other assets, owner-occupied properties earn revenues in combination with other assets normally in the production or supply process and this

difference justifies this different accounting treatment for investment properties. The most relevant feature for our interests in IAS 40 is the evaluation method. IAS 40 permits an entity to evaluate its investment properties choosing alternatively:

• Fair value model under which an investment property is carried on the balance sheet at fair value with all changes in fair value recognized in the income statement.

• Cost model under which an investment property is carried on the balance sheet in accordance with IAS 16 for property, plant, and equipment at its cost less any accumulated depreciation and impairment losses.

THE CASE STUDY PROBLEM

Under the International Accounting Standard 40 – Investment Property (IAS 40) companies must provide fair values for their investment property assets either, directly on the balance sheet under the fair value model with fair value estimates recognized in the income statement or within the footnotes under the cost model. Because only the fair value model results in unrealized fair value gains or losses flowing through the income statement, the choice between the two models, therefore, would undoubtedly affect financial reporting and pose a challenge as to the purpose and the validity of financial reporting in providing useful information to the investors and the external users of the financial statements.

The objective of this study is to estimate the impact of the adoption of IAS 40 on the fundamental analysis of Barwa Company and to reveal whether or not the fundamental analysis of Barwa Company has been substantially influenced by the choice of the fair value model under IAS 40.

ANALYSIS METHODOLOGY

As the purpose of the study is to investigate whether or not the adoption of the fair value model under IAS 40 would result in significant differences in accounting numbers and key financial ratios, we first demonstrate which financial statement items (i.e. the balance sheet items and income statement items) that have changed as a result of the adoption . Second, we analyze the difference between key financial ratios calculated before and after the adoption.

To calculate the difference and analyze the impact, we restate the values of the balance sheet and income statement items that are identified to have been affected by the adoption of the fair value model and compare them with the original values reported in the annual reports. Restated values are calculated by adjusting the affected items for the revaluation gain or loss recognized in the income statement. The calculation of the ratios is carried out on a quarterly basis for 17 consecutive quarters over the period from Q1-2007 toQ1-2011.

Balance sheet items affected by the adoption are two. First, the value of total assets as according to IAS40, the investment property should be measured at fair value in

the balance sheet. Second, the value of total equity through retained earnings as fair value changes are included in the profit for the period in which these changes arise. Income statement items affected by the same adoption are total revenue and net profit or loss for the period in which the value changes arise. Accordingly, restated values can be expressed as:

- Restated total assets = total assets as reported in the financial reports + - revaluation gain or loss

- Restated total equity = total equity as reported in the financial reports + - revaluation gain or loss

- Restated total revenue = total revenue as reported in the financial reports + - revaluation gain or loss

- Restated net profit or loss = total net profit or loss as reported in the financial reports + -revaluation gain or loss

No further adjustments are made to the restated values though we understand that the requirement of certain adjustments, such as depreciation expense and or impairment losses are deemed to be essential if the assessment of the impact of the adoption of the fair value model under IAS 40 was to be done with a reasonable amount of accuracy. Such adjustments are essentially required because if the fair value model was not adopted to account for investment property assets, these same assets would then have been accounted for using the cost model in IAS 40.Under the cost model, investment properties are carried on the balance sheet at their cost value less accumulated depreciation and impairment losses. These adjustments for depreciation expense and impairment loss were not possible due to the lack of information on the cost base of investment property assets which are carried on the balance sheet at the fair value.

To investigate the impact on the accounting numbers, we have chosen two sets of key accounting ratios: profitability ratios and financial market ratios. These aspects of performance were specifically chosen for a number of reasons. First, they are the most revealing and second, they are the most widely used and understood by the investors. Profitability ratios show how well the company utilized its resources in generating profit and shareholders' value. Profitability ratios we have used in our analysis are Profit Margin Ratio, Cost to Income Ratio, Return on Assets and Return on Equity. The market valuation ratios used are Price/Book Value Ratio and Earnings per Share.

ANALYSIS OF RESULTS

In this section, we provide the results of our analysis in two parts. First, we demonstrate the difference in the balance sheet and income statement items that are attributed to the adoption of the fair value model under IAS 40 over the study period from Q1, 2007 to Q1, 2011. Second, we examine the differences occurred in two sets of key financial ratios.

CHANGES OCCURRED IN THE BALANCE SHEET
AND INCOME STATEMENT ITEMS

Table (1) below, shows the differences in total assets, total equity, total revenue and net income that are attributed to the adoption of the fair value model under IAS 40. The results show that the differences are small for balance sheet items whereas they seem to be significant for income statement items. On one hand, total assets have experienced marginal differences and total equity has also changed by small amounts during most of the analysis period, though witnessed a relatively big difference in 2009. On the other hand, much of the impact is reflected in income statement items where sizeable differences are observed in total revenue with the highest variance (72%) noticed in 2009.

TABLE (1): YEARLY PERCENTAGE CHANGES ATTRIBUTED TO FAIR
VALUE ADOPTION UNDER IAS 40

Year Ended	Total Assets	Total Equity	Total Revenue	Net Income	Revaluation Gain (loss) to Total Revenue
2010	0.50%	3.50%	4.80%	36.30%	4.60%
2009	3.80%	37.20%	72.00%	243.50%	41.90%
2008	-0.40%	-2.40%	-8.80%	-26.30%	-9.60%
2007	1.00%	5.70%	15.90%	35.70%	13.70%

Total investment property makes only 17% of total assets as of December. 2010 and 13.3% on average over the analysis period(Q1, 2007- Q1, 2011). Furthermore, balance sheet growth attributed to the recognition of the fair value of investment property over the analysis period amounted to only QAR2.8 billion or 2.8% of total assets at the end of the first quarter of 2011. Much of this was recognized in 2009, which experienced the highest recognition of revaluation gain of around QAR 1.3 bn or 60% of total growth in total assets attributed to fair value evaluation under IAS 40 over the analysis period.

Chart 1(a) shows that total assets have not been affected significantly by the choice of fair value method under IAS 40.

CHART 1(A): EFFECT OF IMPLEMENTATION OF FAIR VALUE MODEL IN IAS 40 ON TOTAL ASSETS (QRbn)
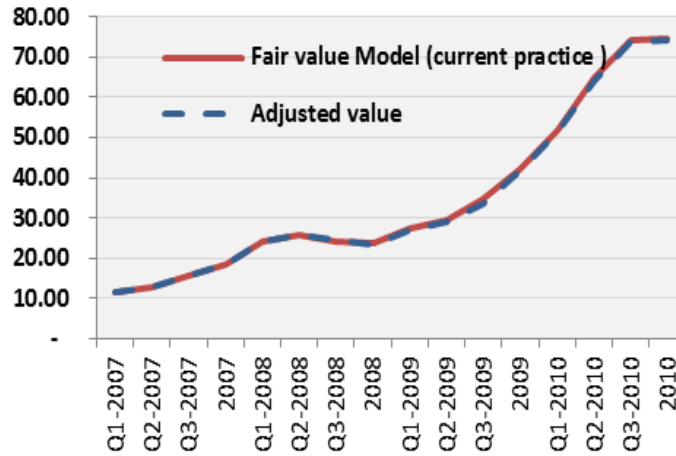

Chart 1(b) below reveals that, the impact of fair value valuation on total equity was very marginal during 2007 and 2008. This is because Barwa Company did not carry investment property on its balance sheet before Q3, 2007. Accordingly recognized valuation gain or loss was very small compared to 2009 and 2010. The impact, on average, on total equity is estimated at 1.7% during the period (2007-08) as compared to 20.2% during the period (2009-10). Much of this attributed to 2009 as explained above. As of March 2011, valuation gain has helped boost up equity by 17.8%.

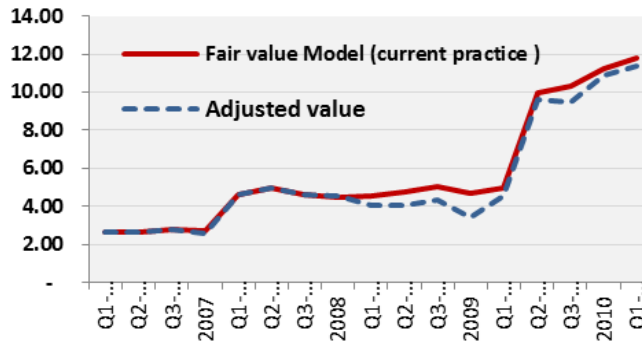**CHART 1(B): EFFECT OF IMPLEMENTATION OF FAIR VALUE MODEL IN IAS 40 ON TOTAL EQUITY (QRbn)**

Chart 2(a) demonstrates small impact on total revenue during 2007 and 2008. In 2007, the difference attributed to valuation gain is estimated at 16 % as revaluation gain represented almost 13.7% of total revenue. In 2008, revaluation loss resulted in a negative difference of 8.8% as revaluation loss estimated to have deflated total revenue by around 9.6%. However, a greater impact was reflected on the bottom line as net income was estimated to have been inflated by QR 148 million or 36% in 2007 and deflated by QR 109 or 26% in 2008. Furthermore, only minor differences were traced down on a quarterly basis over the two years 2007 and 2008.

CHART 2(A): EFFECT OF IMPLEMENTATION OF FAIR VALUE MODEL IN IAS 40 ON REVENUE (QR bn)
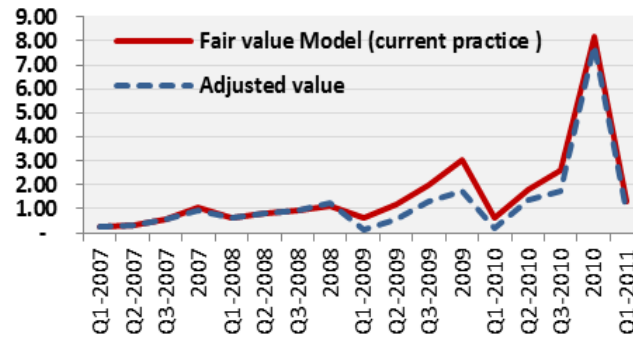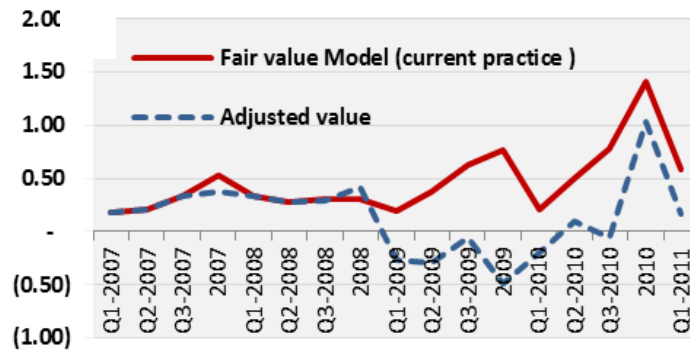

CHART 2(B): EFFECT OF IMPLEMENTATION OF FAIR VALUE MODEL IN IAS 40 ON NET INCOME (QR bn)

It is noticed that the impact has become more evident in 2009 in which revaluation gains represented 42% of total revenue, the highest over the analysis period. This helped to boost the bottom line from an estimated loss of QR 495 million to a net income of QR 766 million reported for the year. In 2010, the impact on net income continues to be significant. The difference in net income estimated at 36% and the difference in revenue and revaluation gains to total revenue stand at 4.8% and 4.6% respectively. Charts 2 (a) and (b), depict the impact on total revenue and net income respectively.

CHANGES OCCURRED IN FINANCIAL RATIOS

In this part, we show the difference in two sets of key financial ratios as we display the ratios calculated after and before the adoption of the fair value model using the formulas explained earlier in the analysis methodology section of this paper.

Profitability Ratios: Profitability analysis mainly aims to give existing and potential investors an indication of a company's current power to generate ongoing income using its pool of assets. Therefore including unrealized future gains or losses from fair value valuation is indeed going to give inaccurate or least substantially influenced profitability indicators. we include four profitability ratios as follows. (1) Profit Margin, (2) Cost to Income ratio, (3) Return on Assets (ROA), (4) Return on Equity (ROE).


TABLE (2): PROFITABILITY RATIOS (CALCULATIONS BEFORE AND AFTER THE ADJUSTMENT OF FAIR VALUE VALUATION GAIN/LOSS)

	Ratios computed under the current practice (fair value model)				Restated ratios			
Year-end	Profit margin	Cost to income ratio	ROA	ROE	Profit margin	Cost to income ratio	ROA	ROE
2010	17%	83%	1.91%	12.56%	13%	87%	1.41%	9.53%
2009	25%	75%	2.13%	15.98%	-30%	130%	-1.54%	-15.28%
2008	27%	73%	1.26%	6.88%	33%	67%	1.70%	9.12%
2007	52%	48%	3.58%	20.62%	45%	55%	2.66%	16.06%

The stability of profit margin over time is a primary indicator of a company's long-term growth potential as it measures how much out of every Riyal of revenue a company actually keeps in earnings. Chart (3) below shows that the adoption of fair value model under IAS 40 has changed the PM of Barwa Company considerably in two ways. First, the margin was driven upward almost during most of the period beginning 2009. Second,

it helped to conceal the negative trend of profit margin that persisted during most of the period from Q1 2009 up to Q3 2010.

CHART (3): EFFECT OF IMPLEMENTATION OF FAIR VALUE MODEL IN IAS 40 ON PROFIT MARGIN
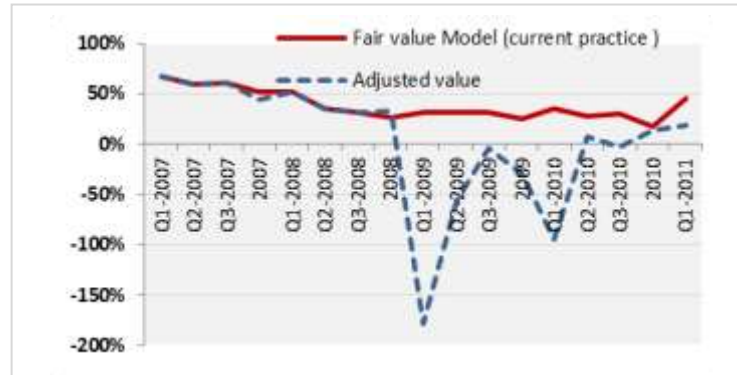
It is noticed that Barwa Company has reported lower year-end profit margin as compared to interim profit margin in the scenario before the adjustment for the fair value valuation recognized under IAS40. This can be interpreted as a sign of an attempt of income smoothing on the part of the management to dampen the fluctuations of their earnings realization which would have an impact on the company's stock price in the current period. The lowest period-end PM is reported for 2010 (17%) in the scenario before the adjustment, and for 2009 (-30%) in the scenario after the adjustment. The cost to income ratio relates total expenses to total revenue. It reflects the spending policy of a company and the management's ability to control costs. Chart (4) below shows that cost to income ratio for Barwa Company is relatively high under both scenarios. The recognition of fair value revaluation gains, however, helped to cover the surge in cost occurred after 2008 during which fair value revaluation recognized under IAS40 averaged around 40% of total revenue. In the scenario after the adjustment for fair value valuation, the cost to income ratio averaged 89% as compared to 62% in the scenario before the adjustment.

CHART (4): EFFECT OF IMPLEMENTATION OF FAIR VALUE MODEL IN IAS 40 ON COST TO INCOME RATIO
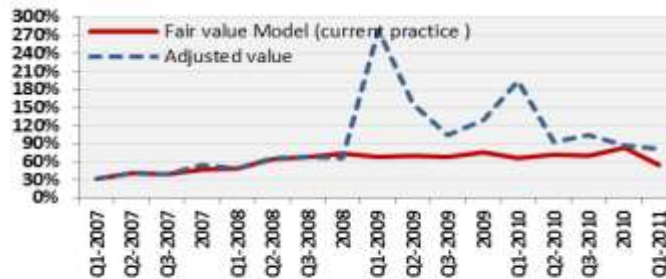
Return on assets (ROA) as a profitability indicator reflects how efficient the management is in using its pool of assets to generate earnings. Chart (5), below shows that fair value valuation has had a significant impact on ROA ratio reported by Barwa Company. The worst of the impact, however, is witnessed over the first quarter of 2009 up to the third quarter of 2010 during which ROA has averaged 1.29% in the scenario before the adjustment for fair value valuation compared to -0.26% in the scenario after the adjustment. Similarly, Chart (6) reflects an identical pattern for ROE. Over the same period, ROE has averaged 8.2% in the scenario before the adjustment for fair value valuation compared to -4.9% in the scenario after the adjustment.

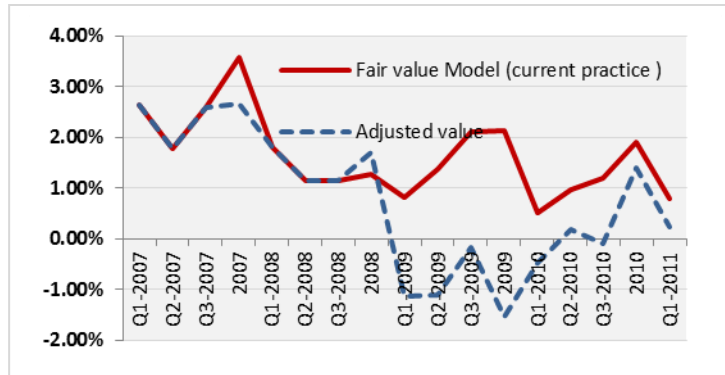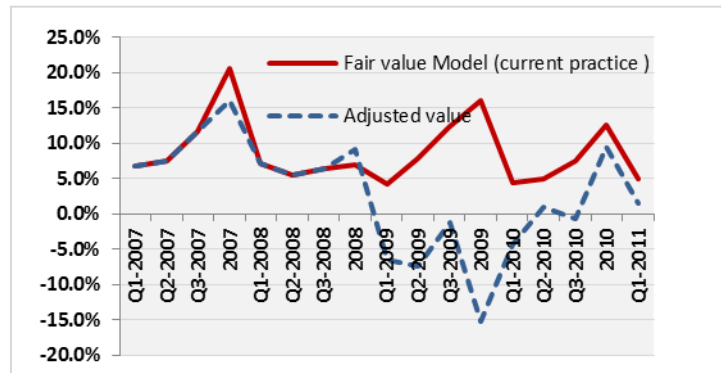**CHART (5): EFFECT OF IMPLEMENTATION OF FAIR VALUE MODEL IN IAS 40 ON ROA**

CHART (6): EFFECT OF IMPLEMENTATION OF FAIR VALUE MODEL IN IAS 40 ON ROE

Market Value Ratios

Two market ratios were examined for any possible impact on Barwa Company's economic outlook because of the recognition of fair value estimates under IAS40. **Price-to-book ratio:** Barwa Co. has very high share price relative to its assets value under both scenarios, albeit slightly higher ratio under the scenario after the adjustment for the fair value made under IAS40 as compared to the scenario before the adjustment especially during 2009 (see chart 7). Therefore, any increase in the share price in response to fair value gains recognized under IAS40 would result in driving up the company's share unreasonably even further leaving the investors with negative returns in case of downward correction by the market. Downward market correction for Barwa's share price that began mid of 2008 has occurred before any significant fair value valuation under IAS40 were taken into the company's books.

CHART (7): EFFECT OF IMPLEMENTATION OF FAIR VALUE MODEL IN IAS 40 ON PRICE/BOOK VALUE
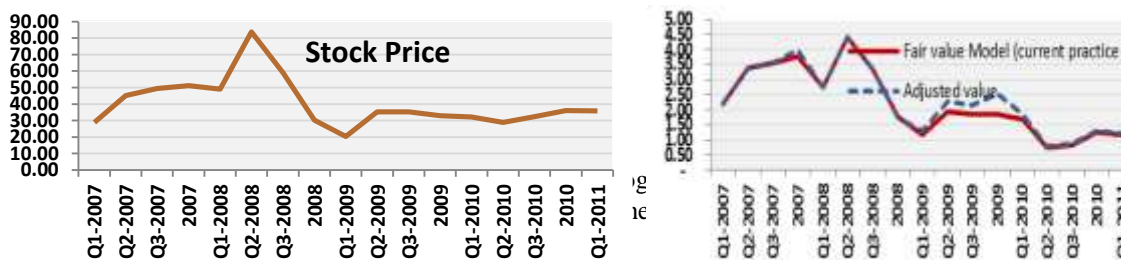
Earnings per share: Chart (8) below shows that recognition of fair value valuation has a significant impact on EPS of Barwa Company over the analysis period, EPS has averaged QR 1.71 in the scenario incorporating the fair value valuation as compared to only EPS of QR 0.51 in the scenario excluding such valuation. Furthermore, during 2009-10, the company's EPS would have dropped on average to QR -0.27 in the scenario excluding the fair value valuation as compared to EPS of QR 2 in the scenario incorporating such valuation. Company's share price, however, were not detected to have been influenced by said differences in EPS under the two scenarios.

CHART (8): EFFECT OF IMPLEMENTATION OF FAIR VALUE MODEL IN IAS 40 ON EARNINGS PER SHARE
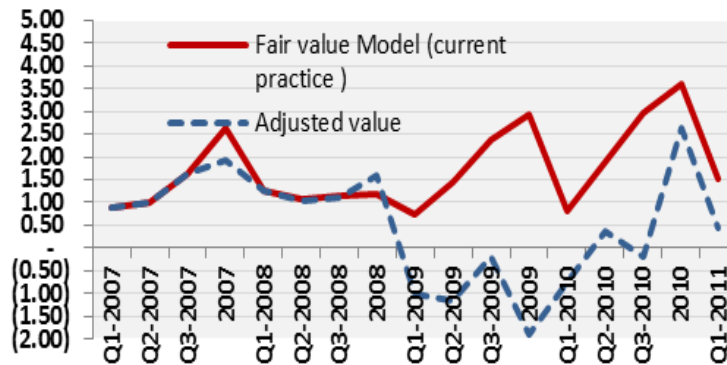
CONCLUSIONS

Whereas accounting for investment property under the fair value model results in a small impact on balance sheet items, the effect on income statement items seemed to be significant. Among the accounting numbers affected, net income remains to have suffered the highest impact. Key accounting ratios were also affected because of the adoption of the fair value model under IAS40. The profit margin of Barwa Company has changed considerably in two ways. First, the margin was driven upward almost during most of the period beginning 2009. Second, it helped to conceal the negative trend of profit margin that persisted during most of the period from Q1 2009 up to Q3 2010. Albeit the cost to income ratio of Barwa Company is relatively high under both scenarios, the recognition of fair value revaluation gains, however, helped to cover the surge in cost occurred after 2008 during which fair value revaluation recognized under IAS40 averaged around 40% of total revenue. ROA and ROE were also influenced throughout the analysis period. Market ratios have also been affected. Interestingly, however, this impact has not had any impact on the company's share price. Upward and downward market corrections for the company's share price were not associated with the company's recognition of fair value revaluation gains or losses. This suggests that the share price of the company may not be driven by the company specific characteristics, rather by different market factors.

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