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Is fair value accounting really fair? A discussion of pros and cons with fair value measurement

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Introduction

One of the most significant changes that have taken place in accounting for publicly traded companies during the past decade is that fair values are much more frequently used than earlier. The International Financial Reporting Standards, which are used by E.U. member-states from 2005, require that fair values can or shall be used in the measurement of, for example, pension liabilities, biological assets (including forest), investment properties and different types of financial assets and liabilities (including derivatives). Assets and liabilities are also measured at their fair value in business combinations as well as when impairment losses are recognized. The fair value model means that fair values of assets and liabilities are reported on the balance sheet. Unrealized changes in fair values of, for example, biological assets, held for trading financial instruments and investment properties are reported in the income statements.

Fair values have their advocates as well as critics. The purpose of this article is to review some arguments put forward in the debate and to offer some own observations.

I will first of all briefly present two examples that illustrate possible problems with fair values: Tornator owns forest previously owned by StoraEnso and is one of the largest owners of forest in Finland. In 2007, the company's net

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sales were € 63.5 million and the profit was € 151 million. The reason for the high profit, in comparison with net sales, is that the increase in the fair value of forest during the year was € 170.1 million and this amount was, in accordance with the IFRS-standards, recognized as a gain in the income statement although it was an unrealized gain.

Land Securities is the largest commercial property company in the U.K. In 2011 the company's revenues were £ 702 million and its profit £ 1244 million. The company reported in 2011 an unrealized change in fair values of investment properties totaling £ 794 million.[1]

Two relevant questions are: What is the quality of profits from unrealized changes in fair values? What is the overall quality of fair values?

Overview of fair value measurement under IFRS

Before I present some views related to the questions above, I will give a brief overview of how fair values are measured. Starting from 2013, all guidance on fair value measurement is included in the standard IFRS 13. The standard defines fair value as "…price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date" (IFRS 13.9). An orderly transaction is a transaction in which the asset or liability has been exposed to the market prior to the measurement date so as to allow marketing activities that are usual or customary. A forced liquidation is not an orderly transaction. Furthermore, it is pointed out that an entity should measure fair value assuming market

participants act in their economic best interest (IFRS 13.22).

Some examples of assets that have to or can be measured at fair value are: shareholdings, derivatives (e.g., a forward contract to buy or sell currency), biological assets (such as forest) and investment properties (for example, a building held to earn rentals).

Obviously, it is easier to estimate the fair value for some of these assets than for other ones. Shares of publicly traded companies are commonly traded at an active market and the fair value at the balance sheet date can, with a few exceptions, be calculated as the product of the quoted price and the quantity held (for more details, see IFRS 13.76–80). If a derivative (for example, a forward contract to buy or sell currency) is not traded at an active market its value typically can (with more or less imprecision) be calculated based on publicly available data, such as, interest rates and forward currency rates. However, in other situations the fair value measurement has to be based on internally generated input variables, such as expected net cash flows from the asset. For example, assume a real estate company owns a shopping mall. Shopping malls are not frequently sold, and furthermore, the location is likely to have great impact on the value. This may imply that a valuation based on prices for similar shopping malls is not a viable option. Thus, the best estimate of the fair value of the shopping mall might be the present value of the expected net cash flows that the shopping mall will generate. However, the drawback is that future cash flows are neither observable nor verifiable by external parties.

Nevertheless, IFRS allows companies to use observable as well as unobservable (for example, expected cash flows) input variables in fair value measurements. However, IFRS 13.72

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1 The figures are taken from the Annual Reports of Tornator and Land Securities Group. The Annual Reports are available at: www.tornator.fi and www.landsecurities.com.

stipulates that companies in the first hand should base the fair value measurement on quoted prices in active markets (for example, the price of shares at the balance sheet date), in the second hand on observable inputs (for example, price per square-meter for similar buildings) and in the third hand on unobservable inputs (for example, expected cash flows). These valuations are called Level 1, Level 2 and Level 3 valuations respectively. Table 1 summarizes the main features of fair value measurement under IFRS.

However, even if Level 2 valuations in general are likely to be more reliable than Level 3 valuations, I do not think a strict adherence to the fair value hierarchy always results in the best possible valuation. Consider a real estate company that rents out office space. Assume also some comparable premises in similar locations have been sold during the previous year but the number of deals is small. Thus, it would in principle be possible to use the prices per square-meter as the basis for a Level 2 valuation.

However, assume the premises are leased out at long-term contracts to solvent tenants. Thus, it is possible to get reliable estimates of future net cash flows and it is likely that the price (if the premises would be sold) would be closer to the discounted net cash flows than a valuation based on the price per square meter for completed deals. However, a word by word reading of IFRS 13 suggests that a Level 2 valuation should be used. This may be a dilemma under IFRS 13 that came into effect from the beginning of 2013. Discounted cash flows based valuations have been common for investment properties and it will be interesting to see if IFRS 13 will have any influences on the methods used for the fair value measurements of investment properties.

Pros and Cons with Fair Values

Fair values have their critics and advocates and fair values have generated a heated debate by policy makers, practitioners and academics (e.g., Power 2010). Table 2 summarizes some views expressed about fair values.

According to paragraph OB2 in IASB conceptual framework for financial reporting, "The objective of …financial reporting is to provide financial information about the reporting entity that is useful to existing and potential investors, lenders…about providing resources to the entity. Those decisions involve buying, selling or holding equity and debt instruments, and providing or settling loans and other forms of credit."

Advocates claim fair values are useful for investors and increase transparency. This argument can best be explained by assuming that fair value is estimated by a market price obtained from an active, well informed and competitive market. Under these conditions, the fair value will be free from subjective intentions and beliefs of the current owner of the asset (Zijl and Whittington 2006: 126). The balance sheet would in that case provide most of the information needed by investors and a simple comparison of the book value with the market price would provide useful information: if the fair value of the net assets of a company would be considerably higher than the market value of the shares, the balance sheet information would give strong signals that a decision to buy shares in the company would be a good investment, and vice versa. In fact, Penman (2007) claims that with all assets and liabilities recorded on the balance sheet at fair value, the book value of equity reports the market value of equity, that is, the price-to-book will be 1.

A common criticism, which is also presented in Table 2, is that "Fair value accounting

TABLE 1: A summary of fair value measurement under IFRS

Definition of fair value:	"…price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date" (IFRS 13.9)
Fair value hierarchy:	"The fair value hierarchy gives the highest priority to quoted prices (unadjusted) in active markets for identical assets or liabilities (Level 1 inputs) and the lowest priority to unobservable inputs (*Level 3 inputs*)." (IFRS 13.72)
Level 1 valuation:	"…quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date" (IFRS 13.76) If an asset or liability is traded in several markets, the price at the principal market, or in absence of a principal market, the most advantageous market for the asset or liability is used (IFRS 13.78)
Level 2 valuation:	"Level 2 inputs include the following: (a) quoted prices for similar assets or liabilities in active markets. (b) quoted prices for identical or similar assets or liabilities in markets that are not active. (c) inputs other than quoted prices that are observable for the asset or liability…" (for example, interest rates, implied volatilities, prices per square meter) (See IFRS 13.82 and B35)
Level 3 valuation:	"Unobservable inputs shall be used to measure fair value to the extent that relevant observable inputs are not available, thereby allowing for situations in which there is little, if any, market activity for the asset or liability at the measurement date." (IFRS 13.87) Examples of unobservable inputs are the use of historical volatility as an estimate of future volatility in the valuation of an option, as well as the use of future cash flows in calculations of present values (see IFRS 13.B36).

TABLE 2: Some views about fair values

View	Source
"Fair value accounting will enhance uniformity, comparability and transparency of financial reporting by real estate companies…"	European Public Real Estate Association (EPRA) Best practices recommendations 2011, p.16
"The use of fair value can confuse interpretation of a company's operational results. Fair value accounting is less reliable, allows greater manipulation of results and introduces volatility"	Association of French Financial Analysts Source: Hawkins et al. (2008)
"It's ridiculous to apply fair value accounting to assets that have no market…" "All this volatility we now have in reporting and disclosure, it's just absolute madness."	Christopher Whalen, managing director of risk research firm Institutional Risk Analytics. Source: Chasan (2008)

is less reliable, allows greater manipulation of results…" (Hawkins et al. 2008). Given the subjectivity inherent in the measurement of fair values when the asset or liability is not traded at an active market, this criticism is understandable. However, the question is how significant are the reliability problems? Below is a sample of findings from different settings in which fair values are used.

Benston (2006) studied the use of fair values in Enron, the energy giant that failed in 2002. He found fair values were used to overstate revenues and net income in the company. Benston believe that Enron's use of fair value accounting was substantially contributing to the failure of the company and suggests that the Enron experience shows there are reasons to be cautious with particularly Level 3 fair value accounting.

However, Enron is just one case, is lack of reliability a more general problem? Dechow et al. (2010) studied securitization activities. Estimates of discount rates, default rates and prepayment rates are necessary in order to calculate the value of sold receivables and securitization gains. Dechow et al. studied whether the estimates are used for earnings management purposes and found some support for this prediction. However, Barth and Taylor (2010) point out that there could be other reasons for the findings in the study than the use of discretion in estimating fair values.

Fair values estimates are also required for goodwill impairment tests. These fair values are typically based on predicted cash flows, and are therefore, Level 3 fair values. Ramanna and Watts (2012) studied whether goodwill impairments are used for earnings management purposes. They found some evidence of association between goodwill non-impairment and CEO compensation and debt-covenant violation concerns.

Table 3 presents some own preliminary evidence for the real estate sector. An, admittedly imprecise, indicator that something can be wrong with fair values is the price-to-book ratio in an industry in which most assets are measured at fair values. The rationale for this is that if assets as well as liabilities would be measured at their fair values, the intrinsic value of the company's equity can be received by subtraction. Furthermore, assuming investors pay exactly the fundamental value per share, the price-to-book ratio will be 1 (compare Penman 2007: 36). Thus, a price-to-book well below 1 indicates fair values are too high. The international accounting standard on impairment also recognizes this by suggesting that an indicator of impairment is that "the carrying amount of the net assets of the entity is more than its market capitalization" (IAS 36.12d). Indeed, irrational investors may imply that share prices are below their fundamental values. The stock market has been significantly affected by bad news during the past years, and a number of studies suggests that stock markets overreact to good and bad news (e.g., DeBondt and Thaler 1985; Antoniou et al. 2006).

However, with this forewarning, I use the price-to-book ratio for investment property companies using the fair value model as an indicator of whether something could be wrong with fair values in the real estate sector.[2] The sample is from Sundgren et al. (2013) and includes 71 companies whose investment properties make up the vast majority of all assets. The sample includes companies from the E.U. Table

2 Companies are under IAS 40 allowed to choose between the fair value model and cost model for investment properties (see IAS 40.30).

TABLE 3: Price-to-book ratios for publicly listed real estate companies in the EU

	All companies	Nordic countries	Central European countries, Britain and Ireland	Southern European countries
2011				
Mean	0.90	0.92	0.92	0.48**
(median)	(0.88***)	(1.05)	(0.88***)	(0.51)
N	73	20	49	4
2010				
Mean	0.85**	0.76**	0.90	0.57**
(median)	(0.78***)	(0.83*)	(0.78***)	(0.60)
N	71	19	48	4
2009				
Mean	0.93	0.85	0.98	0.61*
(median)	(0.67***)	(0.73***)	(0.65***)	(0.68)
N	70	18	49	3

Notes: *, **, ***is significant at the 0.10, 0.05 and 0.01 levels respectively. A t-test has been used to test whether the averages are significantly different from 1 and a sign test has been used to test if the median is significantly different from 1. The price-to-book-ratio is calculated as the price per share two months after the balance sheet date divided by the book value per share at the balance sheet date. Variables are taken from the Amadeus data-base.

3 reports the price-to-book ratios separately for companies from Nordic countries (Denmark, Finland and Sweden), central European countries including Britain (Austria, Belgium, Britain, France, Germany, Ireland and Netherlands), and two southern European countries (Italy and Greece).

It can be seen from the table that the mean and median price-to-book ratios are lower than 1. The price-to-book ratios are more or less at similar levels in the Nordic countries as in central Europe. The figures in the table indicate the ratios are lower in southern Europe, although the figures need to be interpreted with great care because the number of observations is very small. In sum, these figures indicate the concerns about the reliability might be justified, at least during such economic conditions that

we have experienced during the past years.

Another claim presented in Table 2 is that fair values introduce volatility. Sylvie Mathérat, former general secretary of the French banking commission, has according to Hawkins et al. (2008) claimed that "the main problem of fair value accounting is the volatility of earnings". In the general case, I do not think this is a problem. On the contrary, I argue that the volatility may increase transparency. The argument is straightforward: Investors, lenders and creditors are likely to be interested in the amount, timing and uncertainty of the prospects for future net cash inflows to a company (see IASB Conceptual framework for financial reporting, para. OB33). Fluctuations in fair values may include information about the uncertainty of future cash inflows: high fluctuations in fair values indicate

high risk. Thus, although it might be frustrating for managers to report fair value increases and decreases that are beyond their control, this variation in fair values may include information valuable for users of financial statements. Indeed, if the volatility is of an artificial nature, there are some grounds for the concern. For a discussion of this issue, see Plantin et al. (2008).

A final comment displayed in Table 2 is that: "It's ridiculous to apply fair value accounting to assets that have no market…" and that "All this volatility we now have in reporting and disclosure, it's just absolute madness."

While there might be some justification for some of these concerns, it is also important to remember that companies' views about fair values tend to correlate with the change in fair values. Haldane (2011) points out that the fair value debate is not a new one. In the U.S., it has a history stretching back at least a century, and a clear historical pattern has emerged. Fair value accounting principles have been popular and gained ground when things are going well in the economy and lost support when it has got tough.

Disclosures about methods and assumptions provide at least a partial solution to problems with reliability

The shortcomings of fair values raise two questions: First, what features of accounting, if any, improve the reliability of fair values, and secondly, are there superior alternatives. I continue with these two questions.

Related to the first question, adequate disclosures about the methods applied and assumptions used are arguably crucial for the reliability of Level 2 and Level 3 fair value measurements. If disclosures are adequate, investors have the opportunity to evaluate the quality of the assumptions underlying the fair value measurement in order to gain an understanding of whether the assumptions are conservative, neutral or optimistic. I also think high quality disclosures have an important pre-emptive effect: if managers know investors and other users of financial statements have the opportunity to scrutinize the assumptions, it reduces the incentives to use overly optimistic assumptions.

For example, Citicon, a Finnish real estate company, that uses discounted cash flow calculations as the method to value their investment properties, discloses information about the discount rate used, expected vacancies, expected growth in operating expenses, among other assumptions used in DCF calculations. Such disclosures make it possible for investors and other users of financial statements to evaluate the assumptions applied.

Indeed, the problem with extensive and detailed disclosure requirements is that there might be an information overload. The total length of Nokia's consolidated financial statements in 2012 is 52 pages. The disclosures in the notes to the consolidated financial statements make up 46 pages, which is almost 90 % of the total length of the financial statements. It is pointed out in a recent discussion paper by the European Financial Reporting Advisory Group (EFRAG), that there is a strong consensus in the financial community that disclosures in the notes to the financial statements have become unmanageable (EFRAG 2012: 6).

Although I think the arguments advanced in this publication have many merits, fair value measurements have to be backed up with extensive and detailed disclosures. Actually, the current disclosure requirements may be even too general in their scope. In an ongoing project, we study the quality of fair value measurement disclosures for publicly traded real estate companies in the EU (Sundgren et al. 2013).

We analyze data before the adoption of IFRS 13 and the disclosure requirements were also then general in their scope as they only required that "the methods and significant assumptions applied in determining the fair value of investment property…" should be disclosed (see IAS 40.75d). The standard does not, for example, specifically stipulate that the discount rate should be disclosed if discounted cash flow calculations were used, although the discount rate is an important input variable in a discounted cash flow valuation. Sundgren et al. (2013) find great variety in the amount of information disclosed between companies and that the disclosure quality varies between countries.

Cost – the natural alternative to fair value measurement

We concluded above that there might sometimes be problems with fair value measurements and that the severity of the problems are likely to intensify if markets are illiquid and if input variables in valuation models are imprecise and unobservable.

However, no measurement model is perfect, and as Laux and Leutz (2009) point out, in discussing the potential problems with fair value accounting, it is important to also consider alternatives. Traditionally, historical cost has been used for a large amount of assets, and a measure of cost is probably also the only viable alternative for assets such as financial instruments, investment properties and holdings of forest.

Historical cost has also its limitations. Ryan (2008: 5) points out the following problems with historical cost:

i. The more persistent earnings under the cost method can lull investors into believing that earnings are more persistent than it actually is,

ii. long-term fixed-income investment positions acquired at different times are accounted for using different balance sheet amounts and discount rates and

iii. firms can manage their earnings through selective realization of unrealized gain and loss positions.

The first point is straightforward but the latter ones require some explanation. Loans, receivables and held-to-maturity investments are under IAS 39 measured using amortized cost method. Amortized cost means that the "effective interest method" is used for the calculation of the asset (or liability) value in the balance sheet, and for the calculation of interest revenue (or expense). Essentially, this method means that the internal rate of return is calculated and the balance sheet amount will equal the present value of future interest and principal payments using the internal rate of return as the discount rate (see IAS 39.9 for full definitions and more details).

Assume now a company has purchased government bonds by a country that has encountered a recession accompanied with increasing bond yields. Assume the company purchased government bonds both when the yields were low and high. The bonds purchased when prices were higher, and consequently yields lower, will have a higher balance sheet value and will earn lower interest revenue than bonds purchased when market values were lower even if the fair value of the bonds were the same today.

Related to point three above, if the company would need money and wants to minimize its short-term losses, it should of course sell the bonds with the higher amortized cost.

Conclusions

The title of this article is how fair is fair value accounting and it is time to answer the ques-

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DISCUSSION

tion. It can be concluded that fair value measurement has its pluses and minuses. Fair values are likely to be relevant for investors and other users of financial statements but Level 2 and Level 3 measurements are also vulnerable for manipulation, which is evidenced by empirical research in the area. However, cost that is the natural alternative to fair value accounting, is also suffering from several shortcomings.

So how fair are fair values? I think it is difficult to get a unanimous answer to the question from the literature but my personal view is that fair values are fair enough. However, it is important that fair value measurements are supplemented with high quality disclosures about the methods used and assumptions applied in the fair value calculations. ■

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