BS-Thesis
In Business Administration

Fair value accounting

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Abstract

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The thesis is devoted to fair value accounting. Fair value accounting implies that assets and liabilities get measured and reported in firm’s financial statements at their market value.

The purpose of the thesis is to analyze the conceptual foundations of fair value accounting.

The thesis is organized in the following way. First, origins and development of fair value accounting are discussed. Second, overview of fair value accounting is presented. The overview includes definition of fair value, measurement and disclosure of fair value and its impact on financial statements. Thirdly, opposite viewpoints on fair value accounting are presented, including comparison of fair value accounting and historical cost accounting and brief overview of other measurement bases. Finally, the last part deals with the current financial crisis and role of fair value accounting in it. Recent developments under US GAAP and IFRS are presented.

The thesis is based on various textbooks and articles in periodicals. Some information was found on the internet, on the official website of IFRS, US GAAP, and on other websites.
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**Introduction**

The essential characteristics of accounting are: the identification, measurement, and communication of financial information about economic entities to interested parties. Financial statements are the principal means through which a company communicates its financial information to those outside it. Financial statements are of no importance within themselves; the importance of financial statements lies in information they provide to statement users. Users of these financial reports include investors, creditors, managers, unions, and government agencies. The selection of the measurement base, used in preparation of financial statements, is one of the most significant problems of accounting. For example, investors may wish to know the amount of income earned over a given period of time. Various amounts of income would be determined, depending upon the method used to measure income as several methods are available. Measurement is a key aspect of financial reporting.

The traditional basis of accounting has, for a long time, been historical cost, although it has been modified in various ways. Over the past years financial accounting has been moving away from measuring certain assets and liabilities at historical cost and more toward fair value. Currently, a mixture of both types of measurements as well as other measurement bases are required (or allowed) under US GAAP and IFRS. Although financial reporting is unlikely to entirely get away from mixed attributes, the accounting standard setters are expanding their emphasis on fair value accounting because they believe it provides more relevant information to users of financial statements. The accounting standard setters believe that in today’s rapidly changing business environment the financial statements should reflect the underlying economic reality of the companies rather than the summary of past transactions.

The main goal of this thesis is to analyze conceptual foundations of fair value accounting. The work consists of four chapters. The first chapter is devoted to origins and development of fair value accounting. The second chapter presents an overview of fair value accounting, including its definition, impact on financial statements, and its advantages and disadvantages. Brief overview of alternative measurement bases is presented. The third chapter talks about recent financial crisis and role of fair value accounting in it. The fourth chapter discusses recent developments under US GAAP and IFRS.
The thesis is based on various textbooks and periodicals. Some information was found on the internet, on the official website of IFRS, US GAAP, and on other websites.
1 Origins and development of fair value accounting

At the dawn of the 21st century, the appearance of fair value accounting is often presented as an innovation. Yet fair value was not invented recently and the concept has had some form of legitimacy as a way of accounting for asset values in the past but has always been superseded by historical cost accounting or incorporated into ‘mixed measurement’ practices.

1.1 Historical perspective

There are very few papers that have examined fair value accounting from an historical perspective.

Richard (2005) is one of the few historical studies on fair value, examining its use in France and Germany in the nineteenth century. It shows that although valuation at cost would seem to predominate in the first European regulations (ca. 1673–1800), a special kind of fair value valuation was highly recommended by the legal community after 1800 and left its mark on German and French accounting regulations for the whole of the 19th century and even beyond that.

Watanabe (2007) is another interesting study on the evolution of accounting. It examines changes that occurred during the Industrial Revolution in Britain. The emergence of large-scale organizations such as railways in the 1840s raised shareholders’ concerns about the form and content of financial statements. The railways were the first industry to raise massive sums of money from the general public, and railway managers were therefore obliged to tackle the new problem of valuing long-lived capital assets. A method of evaluation by market value for fixed assets appeared. But it is not certain whether valuation at market value was a popular method or not in those days.

1.2 Fair value accounting in the twentieth century

Prior to the development of mandatory accounting standards companies had significant latitude in selecting their own accounting practices and policies. Use of market value was common practice in the early-twentieth century. During this period, balance sheets often included upward revaluations of long-term assets such as property, plant, equipment, and intangible assets. A survey of 208 large industrial firms in United States between 1925 and 1934 (Fabricant, 1936) shows that 75% of
the sample firms recorded upward or downward asset revaluations during this period, including 70 write-ups of property, plant, and equipment, seven write-ups of intangibles, and 43 write-ups of investments. Moreover, prior to 1938, banks and other financial institutions were required to report their loans and financial holdings at market values. During the economic recession the market values of these assets have dropped. Banks had to mark down their holdings, report losses and reduce their capital. In order to maintain the legally required minimum capital adequacy ratio, banks had to curtail their loans. This act negatively affected business activities and intensified the economic crisis. Later, the market value method of valuation in the financial industry was replaced by the historical cost method (Barlev & Haddad, 2003).

The concept of fair value gained prominence again as a result of the 1980's Savings & Loan crisis in the United States. Banks, which held many financial assets at historical cost, were undergoing financial strains. Many became aware that their reported balance sheet value could be improved by selling those assets with a market value greater than book value, where the book values were based on historical or amortized cost. Assets with market values less than book values were retained, because selling them would only decrease the reported book equity. As a result, many banks were left with asset portfolios dominated by weak and underperforming assets, and many of these banks eventually went insolvent. The concern was raised that any time financial assets are not held at their economic value (i.e., market or fair value), financial reports can be manipulated through the selective buying and selling of assets. Since then, the Financial Accounting Standards Board (FASB), the independent institution responsible for establishing standards of financial accounting in United States, has been embarked on a long-term project to incorporate fair value concepts in the accounting for financial assets and liabilities (Casualty Actuarial Society, 2000).

In 1994, the FASB issued the Statement of Financial Accounting Standards (FAS) 115, which applied to all financial firms. It split financial assets into three categories: those "held to maturity," those "held for sale" and those "held for trading." FAS 115 allowed firms to value assets "held to maturity" based on discounted cash flow, and it required them to value assets in the latter two categories using fair value. This was augmented in 1998, when FAS 133 was adopted. FAS 133 stated that derivatives must be carried on the balance sheet at fair value and that changes in their fair value, with the exception of those related to certain hedging activities, must be
recognized in the income statement when occur. Although fair value principles were reinstated, the process of applying it on practice became very complex and controversial matter. To address this problem, in 2006, FASB issued a new standard, FAS 157, *Fair Value Measurements*, which provided a single, consistent definition of fair value, established a common framework for developing fair value estimates, and required expanded disclosures about those estimates. Stated differently, FAS 157 itself does not prescribe any particular accounting treatment or require fair value accounting but does specify how fair value is to be determined when fair value is required by another standard.

Concurrent with the FASB developments discussed above, the International Accounting Standards Committee (IASC) has been working to develop standards for financial instruments and for insurance accounting. The IASC was renamed the International Accounting Standards Board (IASB) in 1999. It is an independent private-sector body working to achieve uniformity in the accounting principles that are used by businesses and other organizations for financial reporting around the world. Efforts in the area of financial instruments resulted in IAS 39, which was issued in 1998. Since then, IAS 39 has been modified many times and Table1 summarizes these changes. Whereas much of the IASC efforts have been in line with those of the FASB and centered on financial instruments, the Committee assumed two additional innovative steps through IAS 40 *Investment Property* (2000) that applies fair value accounting to non-financial assets and IAS 41 *Agriculture* (2000) requiring the fair value model to be implemented by all enterprises that undertake agricultural activity (Georgiou & Jack, 2008).

Today the use of fair value is allowed or prescribed in numerous standards. For example, IAS 16 *Property, Plant, and Equipment*, IAS 38 *Intangibles*, and IAS 40 *Investment Property* allow reporting entities to opt either for the revaluation or the cost model. Most financial instruments (regulated in IAS 32 and 39), however, have to be recognized at fair value.

In March 2002, the European Parliament passed a resolution requiring all firms listed on stock exchanges in European member states to apply International Financial Reporting Standards (IFRS; standards issued by IASB) when preparing their financial statements for fiscal years beginning on or after January 1, 2005. More than 100 countries now require or allow the use of IFRS, and many other countries are replacing their national standards with IFRS. Iceland requires for all listed companies
to report their consolidated financial statements using IFRS beginning with the 2007 financial year.

Table 1.  **History of IAS 39** (Deloitte, 2009)

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 1984</td>
<td>Exposure Draft E26 <em>Accounting for Investments</em></td>
</tr>
<tr>
<td>March 1986</td>
<td>IAS 25 <em>Accounting for Investments</em></td>
</tr>
<tr>
<td>1 January 1987</td>
<td>Effective date of IAS 25</td>
</tr>
<tr>
<td>September 1991</td>
<td>Exposure Draft E40 <em>Financial Instruments</em></td>
</tr>
<tr>
<td>January 1994</td>
<td>E40 was modified and re-exposed as Exposure Draft E48 <em>Financial Instruments</em></td>
</tr>
<tr>
<td>June 1995</td>
<td>The disclosure and presentation portion of E48 was adopted as IAS 32</td>
</tr>
<tr>
<td>December 1998</td>
<td>IAS 39 <em>Financial Instruments: Recognition and Measurement</em></td>
</tr>
<tr>
<td>April 2000</td>
<td>Withdrawal of IAS 25 following the approval of IAS 40 <em>Investment Property</em></td>
</tr>
<tr>
<td>October 2000</td>
<td>Limited revisions to IAS 39 effective 1 January 2001</td>
</tr>
<tr>
<td>21 August 2003</td>
<td>Exposure Draft <em>Fair Value Hedge Accounting for a Portfolio Hedge of Interest Rate Risk</em> (Macro Hedging) issued for public comment</td>
</tr>
<tr>
<td>17 December 2003</td>
<td>Revised version of IAS 39 issued by the IASB</td>
</tr>
<tr>
<td>31 March 2004</td>
<td>IAS 39 revised to reflect Macro Hedging</td>
</tr>
<tr>
<td>17 December 2004</td>
<td>Amendment issued to IAS 39 for transition and initial recognition of profit or loss</td>
</tr>
<tr>
<td>1 January 2005</td>
<td>Effective date of IAS 39 (Revised 2004)</td>
</tr>
<tr>
<td>14 April 2005</td>
<td>Amendment issued to IAS 39 for cash flow hedges of forecast intragroup transactions</td>
</tr>
<tr>
<td>15 June 2005</td>
<td>Amendment to IAS 39 for fair value option</td>
</tr>
<tr>
<td>18 August 2005</td>
<td>Amendment to IAS 39 for financial guarantee contracts</td>
</tr>
<tr>
<td>1 January 2006</td>
<td>Effective date of the April, June and August 2005 amendments</td>
</tr>
<tr>
<td>6 September 2007</td>
<td>Proposed amendment to IAS 39 for exposures qualifying for hedge accounting</td>
</tr>
<tr>
<td>22 May 2008</td>
<td>IAS 39 amended for <em>Annual Improvements to IFRSs 2007</em></td>
</tr>
<tr>
<td>1 January 2009</td>
<td>Effective date of the May 2008 amendments to IAS 39</td>
</tr>
<tr>
<td>30 July 2008</td>
<td>Amendment to IAS 39 for eligible hedged items</td>
</tr>
<tr>
<td>13 October 2008</td>
<td>Amendment to IAS 39 for reclassifications of financial assets</td>
</tr>
<tr>
<td>1 July 2008</td>
<td>Effective date of the October 2008 reclassifications amendment</td>
</tr>
<tr>
<td>22 December 2008</td>
<td>Proposed amendment to IAS 39 for Embedded Derivatives Assessment</td>
</tr>
<tr>
<td>12 March 2009</td>
<td>Amendment to IAS 39 for embedded derivatives on reclassifications of financial assets</td>
</tr>
<tr>
<td>16 April 2009</td>
<td>IAS 39 amended for <em>Annual Improvements to IFRSs 2009</em></td>
</tr>
</tbody>
</table>
2 Overview of fair value accounting

2.1 Definition of fair value

According to FAS 157, fair value is:

“the 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.”

Until recently, IAS 39’s definition of fair value was:

“Fair value is the amount for which an asset could be exchanged, or a liability settled between knowledgeable, willing parties, in an arm’s length transaction.”

FAS 157’s definition is focused on the price that would be received to sell the asset or paid to transfer the liability (an exit price), while IAS 39’s definition was based neither on exit price, nor entry price (the price that would be paid to acquire the asset or received to assume the liability). In the Exposure Draft published in May 2009 ISAB proposed to define fair value as it is defined in FAS 157. Let’s take a closer look at this definition.

“At the measurement date” means that fair value should reflect the market conditions that exist at the balance sheet date.

“Market participants” are buyers and sellers in the most advantageous market for the asset or liability that are:

(a) independent of each other;
(b) knowledgeable, i.e. they are sufficiently informed to make an investment decision and are presumed to be as knowledgeable as the reporting entity about the asset or liability;
(c) able to enter into a transaction for the asset or liability;
(d) willing to enter into a transaction for the asset or liability, i.e. they are motivated but not forced or otherwise compelled to do so

“Most advantageous market” is the market that maximizes the amount that would be received to sell the asset or minimizes the amount that would be paid to transfer the liability, after considering transaction costs and transport costs.

“Orderly transaction” is a transaction that assumes exposure to the market for a period before the measurement date to allow for marketing activities that are usual and customary for transactions involving such assets or liabilities; it is not a forced
2.2 Measurement and disclosure

The objective of a fair value measurement is to determine the price that would be received to sell an asset or paid to transfer a liability at the measurement date. A fair value measurement requires an entity to determine:

(a) the particular asset or liability that is the subject of the measurement (consistently with its unit of account)
(b) for an asset, the valuation premise that is appropriate for the measurement (consistently with its highest and best use)
(c) the most advantageous market for the asset or liability
(d) the valuation technique(s) appropriate for the measurement, considering the availability of data with which to develop inputs that represent the assumptions that market participants would use in pricing the asset or liability and the level of the fair value hierarchy within which the inputs are categorized (International Accounting Standards Board, 2009)

While fair value accounting could be applied to any asset or liability, it is most commonly an issue for financial assets and liabilities. To increase consistency and comparability in fair value measures, IASB established a fair value hierarchy that provides insight into the priority of valuation techniques to use to determine fair value. As shown in the Table 2, the fair value hierarchy is divided into three broad levels.

Table 2. Fair value Hierarchy

<table>
<thead>
<tr>
<th>Level 1:</th>
<th>Quoted prices (unadjusted) in active markets for identical assets or liabilities.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 2:</td>
<td>Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices).</td>
</tr>
<tr>
<td>Level 3:</td>
<td>Inputs for the assets or liabilities that are not based on observable market data (unobservable inputs).</td>
</tr>
</tbody>
</table>

Quoted market prices in an active market are the best evidence of fair value and should be used, to the extent possible, to measure the financial instrument. If a
market for the financial instrument is inactive or illiquid, an entity establishes fair value by using valuation techniques consistent with the market approach, income approach or cost approach. The main aspects of those approaches are summarized below:

(a) *The market approach* uses prices and other relevant information generated by market transactions involving identical or comparable assets or liabilities. Valuation techniques consistent with the market approach include matrix pricing. Matrix pricing is a mathematical technique used principally to value debt securities without relying exclusively on quoted prices for the specific securities, but relying on the securities’ relationship to other benchmark quoted securities.

(b) *The income approach* uses valuation techniques to convert future amounts (e.g. cash flows or income and expenses) to a single present (discounted) amount. The fair value measurement is determined on the basis of the value indicated by current market expectations about those future amounts. Those valuation techniques include present value techniques, option pricing models, such as the Black-Scholes-Merton formula and a binomial model, which incorporate present value techniques and reflect both the time value and intrinsic value of an option; and the multi-period excess earnings method, which is used to measure the fair value of some intangible assets.

(c) *The cost approach* reflects the amount that would currently be required to replace the service capacity of an asset (often referred to as current replacement cost). From the perspective of a market participant (seller), the price that would be received for the asset is based on the cost to a market participant (buyer) to acquire or construct a substitute asset of comparable utility, adjusted for obsolescence. The current replacement cost approach is generally appropriate for measuring the fair value of tangible assets using an in-use valuation premise because a market participant would not pay more for an asset than the amount for which it could replace the service capacity of that asset.

An entity shall use valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximizing the use of relevant observable inputs (inputs that are developed on the
basis of available market data) and minimizing the use of unobservable inputs (inputs for which market data are not available). Valuation techniques used to measure fair value shall be consistently applied. However, a change in a valuation technique or its application is appropriate if the change results in a measurement that is equally or more representative of fair value in the circumstances. That might be the case if, for example, new markets develop, new information becomes available, information previously used is no longer available or valuation techniques improve (International Accounting Standards Board, 2009).

In addition, companies must provide significant additional disclosure. Because fair value measurements and assessments of impairments may require strong judgments, clear and transparent disclosures are critical to providing investors with an understanding of the judgments made by management. For assets and liabilities measured at fair value, an entity shall disclose information that enables users of its financial statements to assess the methods and inputs used to develop those measurements and, for fair value measurements using significant unobservable inputs (Level 3), the effect of the measurements on profit or loss or other comprehensive income for the period (International Accounting Standards Board, 2009). Moreover, most fair value accounting standards require fair values to be re-estimated each quarter, and so past valuation errors can and should be corrected on an ongoing and timely basis.

2.3 Effect of fair value accounting on the financial statements

Measuring companies’ assets and liabilities at fair value affects their financial statements. Specially, the balance sheet and income statement can be affected.

Balance sheet

When an asset or a liability is reported at its fair value, any difference between the asset’s original cost or prior period’s fair value must be recorded. One method for doing this is to use a valuation allowance. In addition, the unrealized gain or loss on change in fair values must be recorded. The unrealized gains and losses may be reported as part of stockholders’ equity.

Income statement

Instead of recording the unrealized gains and losses on changes in fair values as part of stockholders’ equity, the unrealized gains and losses may be reported on the
income statement. Because fair values are continually changing, some argue that recognizing these gains and losses in net income is misleading. In attempt to solve this issue, the concept of comprehensive income was introduced. Comprehensive income includes all revenues and gains, expenses and losses reported in net income, and all gains and losses that bypass net income but affect stockholders’ equity.

Under fair value accounting, the income statement is the residual of balance sheet measurement. The income statement reports changes in fair value calculated in the balance sheet, and no separate income concept drives the income statement.

The information supplied by fair value balance sheets and income statements has the following features:

- The balance sheet is a complete accounting for value; the valuation objective is satisfied in the balance sheet.
- The income statement reports ‘economic income’ because it is simply the change in value over a period.
- Income reports the stewardship of management in adding value for shareholders.
- Earnings are uninformative about future earnings and about value; earnings are changes in value and as such do not predict future value changes, nor do they inform about value (value “follows a random walk,” as it is said).
- While the income statement does not inform about value, it measures periodic changes in value and thus informs about risk. While a given report (for one period) yields only one realization on the volatility, the time-series volatility of income indicates the risk of the business.

In short, the balance sheet satisfies the valuation objective and the income statement provides information about risk exposure and management performance (Penman, 2007).

2.4 Different points of view on fair value accounting

Despite its almost universal adoption by accounting standards setters, the merits of fair value accounting generate intense and passionate debates among academics, regulators, business people and investors.

In order to understand better arguments given for and against fair value, it is useful to take a look at basic objectives of financial reporting, which through the years
have been consistent. The objective of general purpose financial statements is to provide information that is:

(a) useful in investment and credit decisions,
(b) useful in assessing cash flows prospects, and
(c) about company resources, claims to those resources, and changes in them

To be useful, accounting information has to satisfy following requirements:

- **Relevance**
  Information is relevant when it is capable of making a difference in a decision. It must have *predictive value* – help users to predict the ultimate outcome of the past, present and future events. It must have *feedback value* – help users to confirm or correct prior expectations. And finally it must have *timeliness* – be available to decision makers before it loses its capacity to influence their decisions.

- **Reliability**
  Information is reliable, when it is verifiable, is a faithful representation, and is reasonably free of error and bias. *Verifiability* occurs when independent measurers, using same methods, obtain similar results. *Representational faithfulness* means that the numbers and descriptions match what really existed or happened. *Neutrality* means that a company cannot select information to favor one set of interested parties over another.

- **Comparability**
  Information that is measured and reported in a similar manner for different companies is considered comparable. Comparability enables users to identify the real similarities in differences in economic events between companies.

- **Consistency**
  Consistency means applying the same accounting treatment to similar events from period to period.

Now let’s turn back to fair value and see what advantages and disadvantages it has.

### 2.4.1 A comparison of fair value accounting and historical cost accounting

In discussing advantages and disadvantages of fair value, it is necessary to consider an alternative. The ongoing debates concentrate on a question whether fair value
accounting is an improvement over historical cost accounting. Table 3 provides comparison of fair value and historical cost accounting.

Supporters of fair value accounting have argued that it is more relevant than historical cost because it provides up-to-date information consistent with market, thereby increasing transparency and encouraging prompt corrective actions. In today rapidly changing business environment, the financial statements should reflect the underlying economic reality of the companies rather than the summary of past transactions. Another argument in favor of fair value is that any time financial assets are not held at their economic value, financial reports can be manipulated through the selective buying and selling of assets.

Critics have pointed out the following flaws of fair value accounting: fair values based on models are not reliable and can be subject to managerial manipulation given the subjective assessments involved in their estimation; prices can be distorted by market inefficiencies, investor irrationality or liquidity problems; fair values create undue volatility in the financial statements; fair value concept contradicts the going concern assumption which essentially states that a company is expected to continue its operations for the medium to long term, while fair value is exit price so balance sheet is actually liquidation balance sheet. Fair value accounting has also been criticized for its high implementation costs.

Standard setters face the classic and well-known trade-off between relevance and reliability: model-based fair values may be more relevant in certain situations but market prices are easier to verify and harder to manipulate. Another trade-off is: while fair value accounting recognizes losses early, thereby forcing firms to take appropriate measures early and making it more difficult to hide potential problems, it introduces volatility in the financial statement (Laux & Leuz, 2009).

Table 3. A comparison of fair value accounting and historical cost accounting

<table>
<thead>
<tr>
<th>Concept / Issue</th>
<th>Fair value accounting</th>
<th>Historical cost accounting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relevance</td>
<td>Fair value measurement is more relevant to investors and creditors because it reflects the current market price of an asset or liability. Provides feedback value. Timely.</td>
<td>Historical cost financial statements do not provide information that is relevant to investors. Information is out of date.</td>
</tr>
<tr>
<td>Reliability</td>
<td>Fair value estimates based on inactive markets may prove to be unreliable.</td>
<td>Is based on actual transactions, the recorded amounts are reliable and verifiable and free from management bias.</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Comparability</td>
<td>Fair values when they can be reliably measured, enhance comparability. However, there is need to improve the comparability of fair value measurements.</td>
<td>Historical cost measures can hinder comparability by failing to identify similarities between similar items and differences between different items.</td>
</tr>
<tr>
<td>Consistency</td>
<td>The use of fair value consistently applies one valuation approach over time.</td>
<td>Historical cost is a mixture of valuation methods. It reports past transactions at historical amounts while current transactions are reported at fair value.</td>
</tr>
<tr>
<td>Revenue Recognition</td>
<td>Earnings could be measured more continually, based on changes in the economic values of rights and obligations.</td>
<td>Earnings are measured at discrete points when the revenue recognition criteria are met, using the matching principle to measure expenses.</td>
</tr>
<tr>
<td>Financial Reporting</td>
<td>The balance sheet is the primary vehicle for conveying information to shareholders. The income statement does not inform about value but it measures periodic changes in value and thus informs about risk.</td>
<td>The income statement is the primary vehicle for conveying information about value to shareholders, not the balance sheet.</td>
</tr>
<tr>
<td>Earnings Management</td>
<td>Earnings are uninformative about future earnings and about value; earnings are changes in value and as such do not predict future value changes, nor do they inform about value.</td>
<td>Historical cost accounting creates opportunities for earnings management.</td>
</tr>
</tbody>
</table>

2.4.2 Alternative measurement bases

Fair value is not the only alternative to historical cost. Different methods can be used to measure asset base of the firms. Possible bases of measurement include replacement cost, net realizable value, value in use and deprival value. The remainder of this chapter describes the essential features of each method along with its advantages and disadvantages.
• **Replacement cost** is defined as the most economic current cost of replacing an existing asset with an asset with equivalent productive capacity or service potential.

Advantages of the replacement cost are the following:
- an asset would normally be replaced, if lost, as it is the profit generating means of a business;
- the derived value is justified by future returns;
- it is a current valuation without taking into account intended future use

Problems in application of replacement cost are:
- finding the exact replacement cost of an asset in the market as technology improves;
- it is very subjective

• **Net realizable value** is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale. For a liability net realizable value defined as the estimated settlement amount in the ordinary course of business plus estimated costs of settlement on the measurement date.

Advantages of net realizable value are:
- it is easy to understand;
- it indicates the amount of cash resources;
- selling prices are relevant for management decision making;
- selling prices are relevant in determining the ability of a firm to borrow on the security of its assets

Problems in implementation of net realizable value are the following:
- selling price is not relevant for asset what is held for the use in the business;
- the inability to sell some assets;
- asymmetrical markets (new versus second hand, wholesale versus retail) or the absence of markets

• **Value in use** is the present value of estimated future cash flows expected to arise from the continuing use of an asset and from its disposal at the end of its useful life.

Some argue that, based on the theory of capital budgeting, value in use is the most relevant value of an asset.
Disadvantages include the following:
- because future returns are based on forecasts, there is a question whether the forecasts should be those of the management or those of the market;
- another problem arises when an asset used in the business does not produce discrete cash flows but rather contributes, in combination with other assets, to the total cash flows produced by the firm

- **Deprival value** (often termed as *value to the business*) is the loss that an entity would suffer if it were deprived of an asset. It is the lower of the replacement cost and recoverable amount on the measurement date, with recoverable amount being the higher of value in use and net realizable value.

Advantages of deprival value include the following:
- because it is a ‘mixed value’, it is more realistic and relevant than either replacement cost or net realizable value

Disadvantages are:
- it is subjective;
- firms are not in practice being continually deprived their assets

### 3 Fair value accounting and financial crisis

The ongoing financial crisis has been called by leading economists the worst financial crisis since the Great Depression of the 1930s. During the crisis, the markets for financial assets and some other asset and liability positions have been severely illiquid and disorderly. Many financial institutions recognized billions of dollars in losses as the fair value of certain securities fell off sharply. All of these have added fuel to the debate about fair value accounting. There are two major problems with fair value during the current crisis:

- difficulties in estimating fair values in illiquid and disorderly markets
- fair value accounting is procyclical, i.e., it exacerbates swings in the financial system, and that it may even cause a downward spiral in financial markets

*Markets illiquidity*

Fair value measures require applying market prices regardless of how disorderly the market may be (referred to as Level 1 values), or referring to prices of
similar securities (referred to as Level 2 values). When neither of those alternatives exists, companies employ models to determine fair value (referred to as Level 3 values). Turmoil in the credit markets has spotlighted the latter scenario. But there is no clear answer to the question at what point companies should turn from market prices to models, and judgment is required to make that decision. However, it is not the end of the story. Once the decision to use models has been made, management, and investors interested in understanding management’s perspective, must cope with the complexities and range of judgments inherent in using models. Valuation models require preparers to make significant assumptions and judgments which are intended to reflect how the markets are expected to behave. In a stable market environment the assumptions and judgments may be more straight-forward and fall within a relatively narrow band, which may produce a greater sense of confidence in the result. In times of market turbulence, the range of judgments is wider typically leading to a wider range of outputs (PricewaterhouseCoopers, 2008).

**Procyclicality**

Some observers suggest that fair value promotes a downward spiral in prices and investor confidence. As financial institutions take write-downs when prices drop, they may be forced to sell off assets to maintain compliance with regulatory capital requirements. The result is continuing downward pressure on pricing (PricewaterhouseCoopers, 2008). However, two things must be noted. First, this sequence of cause and effect clearly exists in economics, and faithfully reflecting these changes in fair value is fundamental to transparent financial reporting. Second, fair value accounting provides early warning signals for an impending crisis and hence may force companies to take appropriate measures earlier. Thereby, fair value accounting may actually reduce the severity of a crisis (Laux & Leuz, 2009).

A recent survey by Valuation Research Corporation of financial professionals’ views on fair value accounting showed little confidence in fair value. A majority believe that market turmoil and the collapse of active markets for many assets caused implementation issues in fair value accounting.

Respondents came down hard on fair value, with many even supporting a return to historical cost accounting. On the question of whether fair value is beneficial, the answer was:

- fair value accounting has caused more problems than benefits 47.5%
- fair value accounting has merit and is about right 52.4%
And when asked if the collapse of active markets for many assets has caused fair value to essentially become unsupportable, the response was:

- Yes, market turmoil negates fair value accounting validity 58%
- No, market turmoil does not negate fair value accounting validity 42%

Of those 58% who said that fair value accounting was flawed, many indicated that they would prefer a return to historical cost accounting; i.e. a two-year moratorium on fair value:

- Yes – Revert to Historical Cost Accounting 33.8%
- No Reversion 37.9%
- No Response 28.2%

The survey was completed by professionals from public accounting, investment banking, private equity, hedge fund, insurance, law, real estate, consulting, valuation, and fund administration firms (Valuation Research Corporation, 2009).

It has to be noted that the biggest critics of fair value accounting are bankers and representatives of other financial corporations. Historical cost accounting allows banks to choose when to realize the gains. Moreover, impairment testing under historical cost accounting is less strict and offers more flexibility than fair value accounting. This greater flexibility under historical cost certainly has a value for bank managers as it allows them to accumulate hidden reserves, and lets them realize gains and losses strategically. Therefore, their arguments could be self-serving, essentially passing the blame for the crisis to the accounting standards and fair value accounting.

In contrast to the banks’ views, investor interest groups and accountants are considerably less concerned about fair value accounting, even in the current crisis, and warn against a suspension of fair value (Laux & Leuz, 2009).

In October 2008, the Emergency Economic Stabilization Act of 2008 was signed into law in the United States. Section 133 of the Act mandated that the U.S. Securities and Exchange Commission (SEC) conduct a study on fair value accounting. The SEC report to Congress on its study of fair value accounting states: “As a result of the analysis in the preceding sections of this study, the Staff believes the suspension of fair value accounting (to implement historical cost-based or other alternative valuation measures) is not advisable. The suspension or elimination of current accounting fair value requirements would likely increase investor uncertainty and adversely impact investor confidence by removing access to information at a time when that information is likely most useful to investors”. The report also observes that fair value
accounting did not appear to play a meaningful role in the bank failures that occurred in 2008. Rather, the report indicated that bank failures in the U.S. appeared to be the result of growing probable credit losses, concerns about asset quality, and in certain cases, eroding lender and investor confidence (U.S. Securities and Exchange Commission, 2008).

4 Recent developments under US GAAP and IFRS

The Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) are the two most influential standard-setters bodies. IASB and FASB have a long-standing commitment to work together in an internationally coordinated manner on improving financial reporting standards.

Fair value accounting and other aspects of US GAAP and IFRS have not been working perfectly during the crisis. The crisis has made clear that financial statement preparers need additional guidance regarding how to measure fair values in illiquid markets. Users of financial reports need better disclosures about the critical estimates underlying Level 3 fair values and how sensitive fair values are to those estimates.

In response to the widely held view that existing reporting requirements for financial instruments are difficult to understand, interpret, and apply, the IASB recently released for public comment several discussion papers.

In May 2009 the IASB published an exposure draft of an IFRS on fair value measurement guidance. The Board’s objectives in the Fair Value Measurement project are to:

(a) establish a single source of guidance for all fair value measurements;
(b) clarify the definition of fair value and related guidance;
(c) enhance disclosures about fair value measurements; and
(d) increase convergence between IFRS and US GAAP

(International Accounting Standards Board, 2009)

Another project IASB is working on is Financial Instruments: Replacement of IAS 39. The objective of this project is to improve the decision-usefulness of financial statements for users by simplifying the classification and measurement requirements for financial instruments. The project will ultimately replace IAS 39 Financial Instruments: Recognition and Measurement.
Much of the FASB efforts are in line with those of the IASB. In response to the recommendations contained in the SEC report on study of fair value accounting, FASB added the projects to improve measurement and disclosure of fair value estimates. The fair value projects address both application and disclosure guidance:

(a) The projects on application guidance will address determining when a market for an asset or a liability is active or inactive; determining when a transaction is distressed; and applying fair value to interests in alternative investments, such as hedge funds and private equity funds.

(b) The project on improving disclosures about fair value measurements will consider requiring additional disclosures on such matters as sensitivities of measurements to key inputs and transfers of items between the fair value measurement levels (Financial Accounting Standards Board, 2009).

IASB and FASB are also working on Joint Project of the IASB and FASB. The objective of this project is to develop an improved common conceptual framework that provides a sound foundation for developing future accounting standards. The Financial Crisis Advisory Group was created to assist them in evaluating the problems and identifying the improvements necessary in financial reporting.
Conclusion
The introduction of the concept of fair value has meant a change from the classic principles of the accounting system based on prudence and reliability. This implies both advantages and disadvantages.

Fair value accounting is more relevant than historical cost because it provides up-to-date information consistent with market, thereby increasing transparency and encouraging prompt corrective actions.

On the other hand, fair value based on models can be unreliable and can be subject to managerial manipulation, given the subjective assessments involved in their estimation; prices can be distorted by market inefficiencies, investor irrationality or liquidity problems. Also fair value creates undue volatility in the financial statements.

Summarizing advantages and disadvantages of fair value, it is possible to say that fair value measurement continues to be the best available method for financial reporting. In good times it helps companies to show the immediate impact of earnings growth and value creation. In hard times, it is the best means available to keep investors informed. However, reporting fair value can and should be improved. The preparer and user communities need to become more comfortable with valuation models, and preparers need to effectively implement and employ valuation techniques and modeling.
Sources


