Małgorzata Białas
The School of Banking and Management in Krakow

FAIR VALUE versus CRISIS

Introduction

Fair value, which is a comparatively new concept introduced to accounting, has recently been criticized in several articles in which valuation at fair value is accused of causing the latest crisis. Has fair value really contributed to the ignition of the crisis?

The aim of the article is to provide information on the fair value concept applied in accounting and its impact on financial reports. Challenges regarding measurement and valuation that appear when applying this method will be analyzed Finally, on the basis of the information given, the role of fair value in the recent financial crisis will be presented. The analysis will not be a final one as the research on these issues has not been completed yet. Moreover, it should be pointed out that the article focuses mainly on the valuation of financial assets at fair value. Other balance sheet elements have been omitted.

1. Fair value – basic information

In 1494, Luca Pacioli in his *Summa Arithmetica, Geometrica, Proportioni et Proportionalita* described the principles of accounting used by Venetian merchants, which resulted in the formation of the fundamentals of the balance sheet method. The method enabled current accounting of business operations in a company with the application of the double entry method. “While appreciating the significance of the balance sheet method in the development of accounting, it has to be emphasized that it does not constitute – as it is often assumed – the only condition for the quality of information given by means of this method. The power of the double entry principle (…) is not absolute as it remains ‘helpless” regarding the weakest element of the accounting system, i.e. the balance sheet valuation, which has always been and will be the area of unconscious, purposeful or even criminal actions aiming at the manipulation of the information given in financial reports, irrespectively of the efforts on the part of the London IASB, the American FASB, national bodies that are responsible for the shape of the system or the auditors who control the financial reports of companies that are obliged to present them."[1]

Already in the early 1970s, with the aim to improve the informative quality of the balance sheet valuation, the American Accounting Principles Board (APB) considered the introduction of an approach based on market valuation with regard to some of financial instruments. Unfortunately, the idea was not supported by the members of this body. Some time later the Financial Accounting Standards Board (FASB) tried again to deal with the problem. However, due to the intervention of the Securities and Exchange Commission (SEC), the project was not completed on a larger scale. What is more, a bank lobby, mainly The Federal Reserve System (FED) was strictly against the introduction of the *mark-to-market accounting* and only the Statement of Financial Accounting Standards (SFAS) No 12 was issued in 1975, which regarded some issues related to the valuation of short-term securities.

The concept of *market-to-market accounting* was finally to stay in accounting after the speech of R.C.Breeden, the Chairman of SEC on August 10th, 1990. In his speech R.C. Breeden urged the application of market prices when valuating the debt securities kept as assets by financial institutions. In the last part of his speech R.C. Breeden stated that business operations of financial institutions consist in purchasing and selling financial instruments whose values are measured in the conditions of current markets. Their efforts should aim at the existence of financial reports that apply in the process of valuation appropriate measures based on the market, as quickly as possible. Accounting based on historical costs was developed basically in a different economic reality from the one in which they are operating now[2]. According to B.Micherda, the introduction of fair value was the reply to the need for information on the part of investors for whom the information based on historical costs and the prudence principle was not completely useful. [3]

Fair value has been defined both in American accounting and the International Financial Reporting Standards IFRSs. Yet, there are some differences in the definitions. According to American standards fair value is "the amount at which the asset or liability could be bought or sold in a current transaction between willing parties on the day of

---

[1] S.T. Surdykowska, *Ryzyko finansowe w środowisku globalnej gospodarki. Kulisy najbardziej spektakularnych afer finansowych ostatnich lat,* Difin, 2012, p.104

[2] Ibidem, p. 372-373

[3] B. Micherda, *Problemy wiarygodności sprawozdania finansowego,* Difin, Warszawa 2006, p. 53

valuation"[4] , while the IFRSs define fair value "as the amount for which an asset or liability could be exchanged between knowledgeable, willing parties in an arm's length transaction." Only the American standards point out that fair value refers to the value on the day of valuation. The use of the subjunctive form suggests that transaction has not been completed and the asset (liability) has not been exchanged. Thus, fair value reflects the price possible to be obtained on the market on the day of valuation for an asset (liability) equivalent to the one being valued. Considerations regarding the differences between the definitions are included in the book by A.Mazur. .[5]

However, the Polish act on accounting regards fair value as the amount for which a particular asset could be exchanged and a liability covered in a market transaction between knowledgeable, willing parties in an arm's length transaction.[6]

When analyzing the regulations, a certain algorithm determining the fair value of a selected assets can be made. Firstly, the existence of an active market for the asset must be confirmed. If so, the current market value reflects best its fair value. Otherwise, the fair value may be estimated on the basis of current market prices of similar assets or by an independent specialist. The company may also apply other commonly accepted estimating techniques.

Thus, fair value may be defined as a substitute for the market value of financial report positions for which active market does not exist. [7] The lack of market prices results in the situation where valuation is conducted on the basis of various models, e.g. discounted cash flow model. Due to such an approach, the parameters of models are frequently subject to subjective evaluation.

2. Arguments for and against the application of fair value in accounting

The concept of fair value seems to be a right one. The objective of financial reports is to take into consideration the market value of assets and liabilities or any other value close to the market one. As a result, the supporters of this method emphasize the fact that it makes it possible to present actual values of financial assets. In the case of valuation at historical value it was possible to manipulate with , for example, the value of securities. Mangers were able to

---

[4] Par 5 SFAS 157

[5] A. Mazur, *Wartość godziwa – potencjał informacyjny*, Difin, Warszawa 2011, pp. 58 - 68

[6] article 28, item 6, Act of 29th September 1994 on Accounting, Journal of Laws 1994 No 121, item 591 as amended

[7] Cf. W. Hasik, *Wartość godziwa a bezpieczeństwo obrotu gospodarczego* [in:] B. Micherda (ed.) *Sprawozdawczość i rewizja finansowa w procesie poprawy bezpieczeństwa obrotu gospodarczego*, Wyd. Akademii Ekonomicznej w Krakowie, Kraków 2005, pp. 167-168

hide or delay endlessly the information about the decrease of their value, using the argument about its temporary character. Consequently, the model of historical cost allowed them to overestimate the value of securities.

According to W.Wąsowski, the arguments for the application of fair value are as follows:

- it reflects the valuation of company's resources at their current value;
- thanks to the application of fair value, the equity value is estimated properly;
- fair value is useful when forecasting and planning;
- its application prevents from transactions aiming at the improvement of the rate of return through the sales of assets with an increased market value in order to improve profits.[8]

In other words, fair value was created to present goodwill in a better way than it was done by the traditional approach based on historical costs.

On the other hand, the opponents of the *mark-to-market accounting* point out to the fact that market values are frequently inaccessible and it may be expensive to acquire them. Consequently, financial instruments for which there is no effective market, are valued through assumptions that may reflect the expectations of market contributors. As a result, in order to value balance sheet positions at fair value, mathematical models are applied, in which assumptions are taken as regards the situation on the market. This results in the decrease of the role of accountants who prepare financial reports. While the historical valuation was conducted in compliance with defined accounting principles, the valuation at fair value often requires the opinion of such professionals as actuaries, specialists dealing with valuation or financial engineering. In such cases, accountants are less important and their role is limited to the verification of the accepted assumptions or hypotheses. Hence, it should be pointed out that in the case of the lack of active market, there is a growing possibility of manipulation with the value of these assets.

The opponents also fear that the introduction of valuation at fair value to accounting may influence the credibility and verifiability of financial reports as fair value is based on the estimation of future cash flows or the market value. Everybody knows very well that future cannot be predicted and all that can be done is the verification of the legitimacy of the hypotheses and estimates regarding the forecasts. Even market values refer to the future expected cash flows as the price is uncertain until the completion of a transaction. Such

[8] por. W. Wąsowski, *Kreatywna rachunkowość. Fałszowanie sprawozdań finansowych*, Difin, Warszawa 2005, p. 52

unreliable valuation is the opposite of the valuation at historical prices that has been used so far and where the value could always be verified.

Thus, according to W.Wąsowski, the arguments against the application of valuation at fair value are as follows:[9]

- subjective valuation in many cases;
- repeatedly occurring high valuation costs;
- significant volatility in profits and capital, i.e. in the areas where differences in valuation are shown;
- lack of significant sales markets, where the sales at a fair price would be possible at any time.

„ Fair value is always hypothetical, volatile and in many cases it is not completely clear. As a result, the measurement is not fully objective. For many people who do not deal professionally with accounting, the volatility of valuation, its discretion and the lack of clearly defined criteria may be incomprehensible and difficult to accept" [10]

3. Fair value as the object of scientific investigations

Since the introduction of valuation at fair value to accounting, scientists have been trying to check how investors react to such information. Research was carried out that concerned financial results of American companies in the last 20 years. It clearly showed that there is a strong correlation between the share price of companies listed on the stock exchange and the fair value of their assets, while the correlation between the share price and the historical value of a company is significantly smaller. [11]

An interesting research was also carried out by Bernard, R. Merton i K. Palepu[12] who based their work on the fact that for many years Dutch accounting standards and commercial banking regulations applied the *mark-to-market* method in asset valuation. It turned out that the book value of Dutch banks, which applied fair value, provided more reliable information to investors than the book value of American banks that used historical value at the same time. The investigation results are surprising; however, the authors pointed out to the fact that

[9] por. Ibidem, p. 52
[10] Ibidem, p. 52
[11] see M.E. Barth, W.H. Beaver, W.R. Landsman, *The relevance of the value relevance literature for accounting standard setting: another view*, Journal of Accounting and Economics 31, 2001, pp. 77 - 104
[12] see V. Bernard, R. Merton, K. Palepu, *Mark-to-Market Accounting for Banks and Trifts: Lessons from the Danish Experience*, Journal of Accounting Research 33 (Spring) 1995, pp. 1 - 32

Dutch and American stock exchanges differ to such an extent that they should not be compared.

The scandals of the beginning of the 21st century are also worth recalling. The Enron company will serve a good example of what is happening when the hitherto valuation methods at historical prices are replaced by the *mark-to-market* method and at the same time the managers are allowed to choose on their own the prices indispensible to value contracts. [13] This fact has been confirmed by recent investigations, which clearly show that fair value provides managers with wider opportunities in the valuation and recognition of assets and liabilities, which may potentially impair the credibility of financial reports. For example, D. Aboody, M. E. Barth and R. Kasznik discovered that managers independently match parameters to the option valuation model. The question arises, whether in the future the managers will behave in the same way and match the parameters of the models to the valuation at fair price of other financial instruments. [14]

4. Fair value in the face of financial crisis – selected ideas

The introduction of fair value to accounting incited hot debates at universities, among businesspeople, investors and supervising institutions. Recent financial crisis has additionally contributed to further discussions and provided new arguments. D.Dodge, the former governor of the Bank of Canada thinks that the application of fair value in accounting has accelerated the latest financial crisis. The price decrease of several financial instruments that started in 2007 resulted in the situation that many financial institutions indicated a lower value of the assets in their balance sheets, which significantly decreased their capitalization index. In order to meet the requirements of supervising institutions given in equity ratios, the institutions started selling in mass their securities and closed the positions related to financial instruments. The sales caused further price decrease and additionally resulted in devaluation.[15] The former president of the U.S. Federal Deposit Insurance Corporation, W.Isaac went along with this opinion and stated that “mark-to-market accounting has been extremely and needlessly destructive of bank capital in the past year and is a major cause of the current credit crisis and economic downturn.” [16]

[13] see R. Weil, *After Enron, „mark to market” accounting gets scrutiny*, Wall Street Journal (December 4), 2001
[14] D. Aboody, M.E. Barth, R. Kasznik, *Firms’ voluntary recognition of stock-based compensation expense*. Journal of Accounting Research 42 (2), 2004, p. 123-150
[15] see J. McFarland, J. Partridge, *Mark-to-market’ accounting rules fuel debate.* The Globe and Mail – Report on Business, November 20, 2008
[16] see G. Jeffrey, *Mark to market debate down as a draw*. The Bottom line, December 2008, s. 27

Despite these statements, fair value may still be widely supported by professional accountants, the setters of accounting standards and supervising institutions. For example Nick Le Pan, the former superintendent of Financial Institutions for Canada explained that fair value is just a messenger and should not be criticized for bringing bad news that reflect poor economic results.[17] On the other hand, B. Roper of the Consumer Federation of America says that the application of fair value in valuation makes issues related to assets more visible. According to her, fair value provides the investors with information that is more precise, up-to-date and comparable than any other valuation method.

When analyzing the impact of fair value on the latest financial crisis, it must be emphasized that at present it is still too early for a precise diagnosis as not all data are accessible and additional analyses have not been conducted. On the basis of earlier research some statements can be made as regards the impact of valuation at fair price on the financial crisis. However, they do not exhaust the problem and after further research, new theses will be formulated.

Volatility increase of financial results

The investigations indicate that the introduction of fair value to accounting had a significant impact on the volatility increase of financial results.[18] The increase on the financial markets influenced directly the financial results of companies. The decline in profits, due to the application of fair value, appeared to be visible. It was particularly acute when the weak financial results were compared to the record profits of the previous years, which were also the result of the use of fair value. Thus, it is clear that the application of valuation at fair value in economic prosperity overestimates artificially financial results, and in crisis it understates them even more. Fair value, through its influence on the volatility of financial results contributes to even worse perception of company's financial position in face of the crisis, i.e. in the period of record price decreases of many assets

Problems with valuation at fair value in the case of the lack of effective market

[17] see J. McFarland, J. Partridge, *Mark-to-market' accounting rules fuel debate*. The Globe and Mail – Report on Business, November 20, 2008

[18] M.E. Barth, W.R. Landsman, J.M. Wahlen, *Fair value accounting: Effects on banks' earnings volatility, regulatory capital, and value of contractual cash flow*, Journal of Banking & Finance 19 (3-4), pp. 577-605

Some opponents of fair value state that the method undermines the hitherto conservatism that is obligatory when making financial reports and it results in the changes of behavior among managers. The lack of the opportunity to verify the valuation at fair price and the creation of the possibility to influence the input data in the mathematical models applied to estimate future values introduce chaos in financial reporting, which may have a negative impact on investors' decisions.

The example of the Lehman Brothers bank is a perfect illustration. In the financial report of the 30th November, 2007 as many as 75.1% of assets valued at fair price were not valued at market prices but on the basis of hypothetical selling prices and complex mathematical models. As a result, a substantial majority of assets valued at fair price had no relevance to the prices on the market but was calculated on the basis of managers' assumptions. By the 31stMay, 2008 the number reached 81.7%, which meant that only 18% of assets valued at fair value were valued on the basis of market prices[19]. It is clear that the valuation at fair price and based on hypothetical prices and mathematical models makes it possible to hid growing loss and gives the managers the opportunity to distort the reality. The conclusion is, that the valuation at fair value is reasonable only when the market of particular assets is effective. In the case of less liquid assets, the use of fair value to valuate assets becomes incomprehensible and unclear to investors. That is why the valuation at fair price of credit instruments is highly difficult due to the lack of direct information (such instruments are not a frequent object of transactions). The market for this kind of instruments is not effective enough to value them at market value. Consequently, people responsible for financial reports have to rely on the opinion of rating agencies. However, it turns out that such a solution has its drawback as they do not have complete information about companies.

Feedback between accounting and the market

The introduction of market value to financial reports caused some chaos among analysts and investors, who make use of this information to measure the differences between the book and market values of companies when deciding on selling or purchasing particular securities. At present it is difficult to conduct such analysis as already the financial report itself takes into consideration the market prices of financial instruments.

[19] Based on M. Magnan, *Fair Value Accounting and the Financial Crisis: Messenger or Contributor?*, Cirano, Montreal 2009, p. 9

For example, in 2007 the Lehman Brothers' Bank presented its employees and managers with almost 39 thousand shares. According to SFAS 123, which had been obligatory in the US since 2006, the valuation of such remuneration should be done at fair value. In 2007, in the case of Lehman Brothers Bank, the value of such remuneration amounted to 1.8 billion USD, which accounted for almost 25% of company's pre-tax profit before taking into account the remuneration paid in this form. On the one hand, the remuneration had to be accounted for in the financial report as the company's cost with the consideration of current prices of company shares. On the other hand, investors estimate the value of shares on the basis of such reports. Thus, the example illustrates clearly how the market value of shares emerges in financial reports that are the basis for the valuation of the company performed by investors who, in this way, influence the future share price. It is visible that company's financial results and the share prices of the same company influence one another. It should also be added that the whole process is carried out irrespectively of real operations and cash flows. [20]

Relationship between the principles of financial reporting and regulatory capital in financial institutions

Due to the application of fair value, the value of financial assets went down significantly during the latest financial crisis and, consequently, it lead to the decrease of the value of equity ratios in financial institutions. As a result, they started selling the assets, which contributed even more to the decrease of their prices and eventually a downward price spiral started. It should be emphasized, however, that it was not only accounting to be blamed but the way how the information provided by accounting was used by supervising bodies. In other words, the valuation of financial instruments at fair value was only a kind of information and it depended on supervising bodies how it would be interpreted.

Conclusion

It can be concluded that the informative value of accounting has been limited significantly with the introduction of valuation at fair value. That results mainly from the volatility of fair value. The valuation at market prices results in the fact that their value is

[20] Based on M. Magnan, *Fair Value Accounting and the Financial Crisis: Messenger or Contributor?*, Cirano, Montreal 2009, p. 11

different every day, which is reflected in profit and loss accounts in the form of unearned income or costs. As a result, a company may have excellent results one day (due to the price increase of the shares it possesses), and may show a significant loss on the other (because of the decline of share prices). How can financial supervision authorities know when measures against these institutions should be taken? The answer seems to be easy. The information provided on the basis of valuation at fair value is necessary but insufficient. That refers particularly to the measures on the part of supervision authorities as regards capital ratios. Thus, the real informative value depends on additional information. For example, financial reports of the Lehman Brothers Bank presented a very optimistic situation before the crisis and it was difficult to observe potential loss. However, a significant part of the balance sheet positions was valued at fair price. The conclusion is, that fair value without appropriate additional information is not sufficient and cannot reflect properly values that will be exposed to risk in the future.

At the moment it is difficult to draw definite conclusions as regards the impact of fair value on the financial crisis. There is no doubt, that fair value is a messenger bringing bad news, which could have accelerated the crisis, especially in the financial sector.

It can be certainly stated that fair value has opened a new chapter in the history of accounting, which will be characterized by the departure from conservatism, where historical value was considered, towards values that define future expected cash flows. The new trend will require new skills from accountants as regards value estimation and the change of the hitherto way of thinking. Recent crisis was a challenge to fair value; it helped to learn about its weak and strong points. Let us hope, that people responsible for the acceptance of new accounting standards will draw right conclusions from that lesson and will introduce suitable modifications regarding the principles of valuation at fair value.

Bibliography

[1] Aboody D., Barth M.E., Kasznik R., *Firms' voluntary recognition of stock-based compensation expense*. Journal of Accounting Research 42 (2), 2004

[2] Barth M.E., Beaver W.H., Landsman W.R, *The relevance of the value relevance literature for accounting standard setting: another view*, Journal of Accounting and Economics 31, 2001

[3] Barth M.E., Landsman W.R., Wahlen J.M., *Fair value accounting: Effects on banks' earnings volatility, regulatory capital, and value of contractual cash flow*, Journal of Banking & Finance 19 (3-4)

[4] Bernard V., Merton R., Palepu K., *Mark-to-Market Accounting for Banks and Trifts: Lessons from the Danish Experience*, Journal of Accounting Research 33 (Spring) 1995
[5] Jeffrey G., *Mark to market debate down as a draw*. The Bottom line, December 2008
[6] Magnan M., *Fair Value Accounting and the Financial Crisis: Messenger or Contributor?*, Cirano, Montreal 2009
[7] Mazur A., *Wartość godziwa – potencjał informacyjny*, Difin, Warszawa 2011
[8] McFarland J., Partridge J., *Mark-to-market' accounting rules fuel debate.* The Globe and Mail – Report on Business, November 20, 2008
[9] Micherda B. (red. nauk.) *Sprawozdawczość i rewizja finansowa w procesie poprawy bezpieczeństwa obrotu gospodarczego*, Wyd. Akademii Ekonomicznej w Krakowie, Kraków 2005
[10] Micherda B., *Problemy wiarygodności sprawozdania finansowego,* Difin, Warszawa 2006
[11] Surdykowska S.T., *Ryzyko finansowe w środowisku globalnej gospodarki. Kulisy najbardziej spektakularnych afer finansowych ostatnich lat*, Difin, 2012
[12] Ustawa o rachunkowości z dnia 29 września 1994r., Dz.U. 1994 Nr 121, poz. 591 z późn. Zmianami
[13] Wąsowski W., *Kreatywna rachunkowość. Fałszowanie sprawozdań finansowych*, Difin, Warszawa 2005
[14] Weil R., *After Enron, „mark to market" accounting gets scrutiny,* Wall Street Journal (December 4), 2001

Abstract

The article focuses on fair value as the method of valuation which is recently introduced to accounting system. The text provides an overview of the English-language literature on the subject and is an attempt to emphasize the advantages and disadvantages of this method. Eventually, the author tries to find the answer to the question, how fair value contributed to the recent financial crisis.