Fair Value Accounting Under FAS 157 and IFRS 13: Evidence from Borsa, Istanbul

Assist. Prof. Dr. C. T. Kaya *and* N. Türegün, *PhD Candidate*

Abstract— **Among the traditional models to value financial instruments, mixed model is generally employed. Mixed model uses both fair value and historical cost calculations where the instruments held for trading are valued at market price; and the rest are recorded at their historical cost. In contrast to this model, fair value method suggests that the financial instruments are recorded at their market value. Aim of this paper is to review the widespread application of fair value in accounting under FAS 157 and IFRS 13 with regard to its application to financial instruments; and to compare historical cost accounting with fair value accounting by providing evidence from Borsa Istanbul (formerly known as Istanbul Stock Exchange).**

***Index Terms* - fair value accounting, FAS 157, historical cost accounting, IFRS 13.**

I. INTRODUCTION

Financial instruments have been used to hedge against interest and exchange rate risks. In the 1980s, significant developments have been observed regarding derivatives due to the abandonment of the fixed exchange rate system, where the monetary authorities altered the interest rates by money supply as a device of control. Furthermore, employment of derivatives has become one of the fundamental sources of commerce for credit institutions. There were forces to change the traditional use of practices to prepare financial statements to serve the needs of external users especially for investment purposes. Such change of practices was mainly the large-scale use of instruments by financial and nonfinancial entities and they began to receive acceptance in capital markets. Following the market crash of 1929, the difference between the incomes accrued and costs incurred have been reflected as a year's profit. Revaluations (changes in value) were not accounted for as realized profit. Pillar stone principles of accounting dictate that profits are to be recognized only after the completion of production cycle. Revaluations take place only when there is a sale or disposal, or when there is an increase in liquid assets.

Manuscript received on December 30 ,2013.

Can Tansel Kaya is with the Department of Business Administration, Faculty of Economics and Administration, Yeditepe University, Istanbul, 34755 (phone: +90-216-578-1626; fax: +90-216-578-0797; e-mail: can.kaya@yeditepe.edu.tr).
Nida Türegün is a doctoral student and with the Department of Tourism and Hotel Management in the Faculty of Commerce, Yeditepe University, Istanbul, 34755. (phone: +90-216-578-0953; fax: +90-216-578-0938; e-mail: nida.turegun@yeditepe.edu.tr).

Conservative nature of the prudence principle commands that although unrealized (not yet have been realized), such losses are required to be accounted for and recorded in the period's profit and loss accounts specifically in the comprehensive income statement. With the shifting tendency from conservative valuation towards more *fair* methods, the debate on which method provides more use is still being severely debated.

II. LITERATURE REVIEW

Academia holds diverse views regarding the nature of fair value (FV). According to some, it is the fundamental aim and general purpose of valuation practice, while others insist that fair value is an accounting concept [1]. However, under Financial Accounting Standard (FAS) 157, FV is defined as 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*" [2]. Generally Accepted Accounting Principles (GAAP) are *"accounting rules used to prepare, present and report financial statements"* [3]; and these principles are employed in every aspect of the reporting process for publicly traded and privately held companies as well as for nonprofit organizations and governments. The hierarchy of the standard setting process, especially with regard to GAAP in the United States is constructed as the Securities and Exchange Commission (SEC) acting as the founding body, overseeing the activities of the Financial Accounting Standards Board (FASB). Financial Accounting Standards Board (FASB) is a private nonprofit organization whose main objective is standard setting for the GAAP. Since the Norwalk Agreement of 2002, which intended to bring together two different standard setters of the FASB and the International Accounting Standards Board (IASB) together, much has been achieved. US GAAP and IFRS standards are similar and different at the same time. Within this comparison, *"general principles, conceptual framework and accounting results between them are often the same or similar"* [4]. Problematic areas do not spin around the similarities; but around the different approaches between the US GAAP and IFRS.

A. Fair Value Measurement According to IFRS

European Union has adopted the International Accounting Standards (IAS) and IFRS in 2002 "*to answer the need of a common accounting language resulting from the globalization of commercial and financial exchanges"* [5]. In particular conditions, IFRS

DOI: 10.5176/2010-4804_3.2.303

© 2014 GSTF

necessitate some assets, liabilities and equity instruments to be measured at fair value. Although guidance on measuring fair value is discrete all through IFRS, it is not always steady. IASB deems that creating a specific guidance for every fair value measurements required by IFRS will develop higher quality of fair value information. A short definition of fair value combined with dependable guidance that is used for all fair value measurements should noticeably share the objective of fair value measurement and select the need for constituents to consider guidance discrete all through IFRSs. However, the IASB states that fair value measurement task is not a way to increase the use of fair value in financial reporting [6].

Main characteristics of fair value accounting (FVA) are embedded in many IFRSs. IAS 16 offers a fair value option for property, plant and equipment; IAS 36 requires asset impairments to fair value; IAS 38 directs intangible asset impairment to fair value; IAS 38 offers intangibles to be revalued to market price; IAS 39 outlines the requirements for the recognition and measurement of financial assets, financial liabilities, and some contracts to buy or sell non-financial items; IAS 40 offers a fair value option for investment property; IFRS 2 requires share based payments to be accounted at fair value and IFRS 3 offers minority interest to be recorded at fair value [7].

B. Definition of FV under FAS 157 and IFRS 13

According to Paragraph 5 in FAS 157, fair value is defined as *"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."* Within the scope of IFRS, fair value is generally defined as 'the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction'. There are three major differences between FAS 157 and IFRS. These are;

a. According to FAS 157, the definition is clearly an exit (selling) price. As for IFRS, the definition is neither clearly an exit price nor an entry (buying) price.
b. According to FAS 157, the definition clearly refers to buyers and sellers. As for IFRS the definition refers to knowledgeable, willing parties in an arm's length transaction.
c. According to FAS 157, the definition for liabilities is based on the idea that the liability is transferred. As for IFRS, the definition refers to the amount, which a liability might be settled between knowledgeable, wiling parties in an arm's length transaction [8].

C. Comparison of FV and Historical Cost Accounting

As far as historical cost accounting is concerned, reliability of the reported values is perhaps more significant than any lack of relevance of historical cost figures. In fair value accounting, the relevance of fair value estimates perhaps balances any lack of reliability. Estimates of fair value depending on inactive markets may prove to be unreliable. In historical cost accounting, conservatism results in early recognition of losses. Such act results in an upper limit of confirmation for reporting gains, potentially directing to reliable earnings numbers. On the other hand, the voluntary nature of asset impairment records may result in more aggressive accounting practices. In fair value method, it is anticipated to result in more symmetric recognition of gains and losses. Preferably, the symmetric recognition should uphold the conservatism in recognition of loss, but could lower the confirmation standards for recognition of gain.

In historical cost accounting, earnings are measured at separate points of time when the recognition of revenue criteria are met, using the matching principle to calculate expenses. In fair value accounting, earnings are calculated more constantly depending on changes in the economic values of rights and commitments.

Historical cost system records particular rights and commitments selectively depending on observable historical costs. Preferably, system of fair value accounting inflict discipline on the business and its accountants to identify, measure and disclose every right and commitments that are fixed in complex business transactions.

Historical cost system reports arm's length historical transaction prices. On the other hand, following measurements can be subject to unplanned allocations. Reported values in fair value accounting may vary from market prices in actively traded markets to values depending on which valuation technique is employed.

It is argued that the historical cost accounting concentrates more on the income statement with the statement of financial position being demoted as a holding place. The fair value focuses more on the statement of financial position with limited argument on reporting of income statement [9].

Much debate has been going on which method reveals more truthful results. Much of the research on this matter shows that fair value has been harshly criticized for the increased volatility that it generates in some accounting variables. According to Barth, although fair value estimates of investment securities appear reliable and relevant to investors in valuing bank equity, fair value security gains and losses do not [10, 11]. With respect to the relevance and reliability issues within the scope of fair value and historical cost accounting, there is heavy disagreement. Much of research considers FV to be a more capable method to reflect useful and relevant information [12, 13, 14]. FASB "*considers fair value to be more relevant to financial statement users"* [15]. Fornelli states that market information to value assets and liabilities provides investors relevant information in terms of the economic realities of the companies for investment purposes [16]. According to Fink, FV is a more relevant approach that is able to result in "*reduced complexity and greater transparency"* [17].

On the opposition, counter arguments stand strong to the extent that FV is considered to be a method, which may have significant tendencies to mislead investors and other users of financial statements in general, due to its subjective approaches on valuations [18, 19, 20]. Greatest share of the criticisms against FVA focuses on the three level fair value hierarchy, especially when formerly liquid securities sharply become illiquid with regard to very subjective fashion of the level three inputs.

 © 2014 GSTF

III. METHODOLOGY

Two companies listed at Borsa Istanbul are selected. The two cases presented below; one of which incurs a loss, and the other generates a gain, are accounted for their fair value application. As for accounting for the adjustments, a simple comparison of historical cost versus fair value is applied. In a conventional conservative approach, since no exchange takes place, the incurred loss should be accounted as an unrealized loss, and certainly, no gain will to be accounted for. The conservative valuation rule of lower cost or market (LCM) requires specific types of assets such as marketable securities and inventory, to be valued either at the current replacement cost or at their historical cost; whichever is less. The fair value approach is applied in both of the cases. The differences arising because of the historical cost versus fair value is presented on the face of the income statement; under non-operating financial revenues or losses. Following financial data are collected from the financial statements of İş Gayrimenkul Yatırım Ortaklığı A.Ş. All currencies are presented in Turkish Lira (TRY).

TABLE I.
İŞ GAYRIMENKUL YATIRIM ORTAKLIĞI A.Ş

Financial Investments:		
	t+1	t
Financial Investments:	16.179.941	18.004.592
Financial Incomes/Expenses:		
	t+1	t
(Other than Operating) Financial Incomes:	27.519.660	6.106.723
Reflection of Financial Assets to Profit/Loss due to Fair Value diffrences:		
	Cost	Fair
ValueMarketable Securities in the Tradebook		
Treasury Stocks	15.217.111	16.179.941
Reflection of Financial Assets to Profit/Loss due to Fair Value Diffrence	962.830	939.024
Financial Income/Expenses:		
	t+1	t
Reflection of Financial Assets to Profit/Loss due to Fair Value Diffrence	962.830	939.024

In the above table, historical cost amounts for financial investments are presented. The difference between FV and historical cost amounts for financial investments is 962.830 TRY. This difference goes to the other financial incomes/expenses section in the income statement.

In this case, fair value excesses the cost. Therefore; the following journal entry is recorded.

Marketable Securities	962.830	
Reflection of Financial Assets to Profit/Loss due to Fair Value Difference		962.830

Such transaction would not have been accounted for in the case of LCM application. If LCM was applied rather than mark to market under fair value, then the marketable securities would have been recorded in the amount of 15.223.228 TRY henceforward no adjustment would to be made and the cost amounts would remain the same in the accounting records.

Based on the assumption that the investments are fully sold when the market price is equal to the cost, the company incurs 962.830 TRY of a loss. This loss could have been fully avoided if historical cost was applied. Based on the assumption that investment is fully sold at 16.179.941 TRY and the cost figures are presented on the face of the statement of financial position, the company would generate 962.830 TRY gain due to the sale.

Following financial data are collected from the financial statements of İş Yatırım Menkul Değerler A.Ş. All currencies are presented in Turkish Lira (TRY).

TABLE II
İŞ YATIRIM MENKUL DEĞERLER A.Ş

Financial Investments:		
	t+1	t
Financial Investments:	244.014.821	302.883.704
Financial Incomes/Expenses:		
	t+1	t
(Other than Operating) Financial Expenses (-)	(2.111.760)	(1.694.210)
Reflection of Financial Assets to Profit/Loss due to Fair Value diffrences:		
	Cost	Fair
Stocks	67.857.678	54.077.043
Treasury Bond and Treasury Bills	106.583.129	113.133.024
Foreign Currency Securities	1.020.982	929.302
Private Sector Bonds	55.519.965	56.696.457
Mutual Funds	7.183.428	10.793.542
Assets from Derivatives	-	840.802
	238.165.182	**236.470.170**

In the above table, historical cost amounts for financial investments are presented. The difference between FV and historical cost amount is 1.695.012 TRY. This difference goes to the other financial incomes/expenses section in the income statement. Adjusting the marketable securities by a credit entry, thus reflection of financial assets to profit/loss due to fair value difference presents a loss resulting the investment to be reduced down in the amount of 1.695.012 TRY. Based on the assumption that the investment is fully sold at cost will provide a realized gain for the company in the amount of 1.695.012 TRY. Therefore, the reduction of the investment is a favorable situation. Through this conservative entry, which also serves the idea of fair value accounting at the same time, the company generates a realized gain in the amount of 1.695.012 TRY.

© 2014 GSTF

In this specific case, LCM and FV create the very same outcome, since cost was higher than the market.

The difference between the cost and the fair value will be disclosed under the other financial expenses section of the income statement.

IV. DISCUSSION AND CONCLUSION

Two companies both listed at Borsa Istanbul were selected. Since these companies are listed at the stock exchange, they are subject to IFRS. Therefore, they all employed mark to market.

The two possible outcomes (cost > market value and market value > cost) have been exhibited to illustrate differential accounting applications.

Through the main body of the literature review, fair value and historical cost have been thoroughly discussed. Both methods attract different academic supporters.

Simply, accounting for an income where no realization takes place constitutes danger for the companies' wellbeing since neither the actual time of sale nor the market price at the time of sale are certain. On the contrary, under historical cost, no gain is accounted for unless realization takes place. This acts as a safety cushion since the values at the actual time of sale and the market price at that date may easily be different from each other.

Under conservatism principle, all losses are required to be anticipated, but probable gains are required to be omitted. From this viewpoint; mark to market refuses conservatism. Therefore, the outcome creates an "unreal situation" since no realization has taken place. Through a holistic research on the outcomes of cost versus fair value, the authors conclude that historical cost approach is a safer method, thus deserves more attention.

The use of fair value under both the IFRS and the US GAAP has been widely accepted particularly in the light of the Convergence efforts. Fair value definition and measurement has not always been consistent. The FAS 157; Fair Value Measurement displayed a new definition for fair value. It introduced a framework for measuring fair value, which is the fair value hierarchy. It has also widened disclosures about fair value measurements.

FVA has been developed because traditional measurement of transactions was not adequate for recording and valuing financial instruments. However, there were doubts, questions and arguments about the suitability and adequacy of this valuation method. Debate continues whether FVA is the optimum solution for the financial statements especially with respect to the continuous global crises.

FV is already intensely embedded in IASB and FASB literature. Shifting from theory to practice, there is a question to be answered: What are the advantages and disadvantages of FVA? Such question leads to a different debate on the pros and cons on historical cost accounting.

Featured advantages of FV are clarity and transparency. On the other hand, FV is an information - rich model which provides significant information about financial assets and liabilities when compared to values based only on historical cost. Fair value shows current market conditions and this delivers the ease of comparability between financial instruments that are purchased at different times. Additionally, financial disclosures under FVA supply investors with understandability on widespread market values, which enhances the usefulness of financial reports.

Despite of its advantages, fair value has limitations as well. During periods of economic downturns, fair value accounting aggravates the volatility of the financial statements. FVA is intensely limited when the assets and liabilities are not quoted in an active market or at times when there is no available transaction for such kind of assets or liabilities held by the entity. In such circumstances, since notable dependence on estimation surfaces, fair value may lead to biased valuations.

To illustrate the comparison of historical cost and fair value accounting, two listed companies listed at Borsa Istanbul were selected. Historical cost has a significant role by providing necessary information. It records realized, therefore actual transactions and the figures are reliable.

In conclusion, viable work is needed from the accounting bodies to develop a comprehensive method to minimize misleading interpretations arising due to the nature of FVA. Until such comprehensive method both relevant and reliable is devised by the accounting bodies, historical cost accounting remains to be prime method due its reliable nature in measurement of entities' transactions.

ACKNOWLEDGMENT

The authors would like to thank the anonymous reviewers for their valuable comments and suggestions to improve the quality of the paper. They are also grateful to Ms. Esra Saçıcı and Mr. Mert Menteş for improving the format of the paper.

REFERENCES

[1] N. Jiang and X. M. Jiang, "Discussions on Fair Value" *Journal of Modern Accounting and Auditing*, 2008, Vol.4, No.12, pp. 9-12.

[2] International Accounting Standard Board (IASB), "Statement of Financial Accounting Standards No 157 Fair Value Measurements" *Discussion Paper*, 2007, United Kingdom, paragraphs 5, pp. 12-35.

[3] R. C. Pozen, "Is It Fair to Blame Fair Value Accounting for the Financial Crisis" *Harvard Business Review*, 2009, Boston; USA.

[4] Ernst & Young, "US GAAP vs. IFRS" *The Basics*, 2009.

[5] P. Françoise, "The Anglo–Saxon Conceptual Framework" Working Paper, 2008.

[6] International Accounting Standards Board (IASB), "Providing Consistency in the Measurement of Fair Value" United Kingdom, 2006, paragraph 2.

[7] S. Bhattacharce and M. Z. Islam, "Problems of Adoption and Application of International Financial Reporting Standards (IFRS) in Bangladesh" *International Journal of Business and Management*, Vol.4, No.12, 2009, p.165-175.

[8] International Accounting Standards Board (IASB). "Fair Value Measurements, Part1: Invitation to Comment and Relevant IFRS Guidance" Discussion Paper, United Kingdom, 2007, paragraphs 10-54.

[9] K. Ramesh and C. M. Graziano, "Failr Value Accounting: A Status Report", 2004. Pp. 5-6.

[10] M. E. Barth, "Fair Value Accounting: Evidence from Investment Securities and the Market Valuations of Banks", *The Accounting Review*, Vol. 69, No. 1, 1994, pp. 1-25.

[11] M. E. Barth, J. Gómez-Biscarri, R. Kasznik, and G. López-Espinosa, "Fair Value Accounting, Earnings Management and the use of Available-for-Sale Instruments by Bank Managers", Working Paper, *Facultad de Ciencias Económicas y Empresariales,* 2012, pp. 3-49.

[12] Financial Accounting Standards Board (FASB), "FASB Statement of Financial Accounting Standards No. 107, Disclosures about Fair Value of Financial Instruments", *FASB*, 1991, paragraph 41, p. 17.

[13] A. Clark and A. Mills, "Fair Value Accounting" *CAPITA,* 2009.

[14] Financial Accounting Standards Board (FASB), "Fair Value Measurements", *FASB Exposure Draft*, 2004, p.27.

[15] Financial Accounting Standards Board (FASB), "The Fair Value Option for Financial Assets and Financial Liabilities - Including an Amendment of FASB Statement No. 115", *FASB Exposure Draft*, 2006, p.8.

© 2014 GSTF

[16] C. Fornelli, “The Great Fair Value Debate”, *Directorship Magazine*, August 2009, pp. 66-68.
[17] R. Fink, “Will Fair Value Fly?” *CFO Magazine*, September 2006, pp. 59-62.
[18] L. D. Hodder and P. E. Hopkins, Accounting Slacks and Banks’ Response to Proposed Fair Value Accounting for Loans.” Working Paper, 2012, Indiana University.
[19] I. Khurana and M. Kim, “Relative Value Relevance of Historical Cost vs. Fair Value: Evidence from Bank Holding Companies” *Journal of Accounting and Public Policy,* 2003, Vol. 22, pp. 19-24
[20] S. S. Bies, “The International Association of Credit Portfolio Managers General Meeting”, 2004, New York.
[21] S. G. Ryan, “Fair Value Accounting: Part of the Policy Solution, not the Problem” Stern School of Business. White Paper. February 2009, New York.

Can Tansel Kaya was born in Istanbul in 1978. He has received his Bachelor of Science degree in accounting from The University of North Carolina at Greensboro, North Carolina, USA, 2001, Master of Business Administration and Doctor of Philosophy degrees both in accounting from Yeditepe University, Istanbul, Turkey, in 2003 and 2008 respectively. He has been a faculty member and a lecturer of accounting at the Department of Business Administration at Yeditepe University, Istanbul since 2001, and served as the Vice Chairman from 2006 to 2013. He is a member of Accounting Academicians’ Research and Collaboration Foundation (AARCF) of Turkey.

Nida Türegün was born in Adana in 1985. She has received her Bachelor of Arts degree in Business Administration with the concentration area of accounting and finance from Yeditepe University, Istanbul, 2007, Master of Science degree in Accounting and Finance from Marmara University, Istanbul, 2010. She is a doctoral student at the Ph.D. program at Yeditepe University in accounting. She has been working as a Research Assistant Department of at Tourism and Hotel Management in the Faculty of Commerce at Yeditepe University since 2009.

© 2014 GSTF