
# Fair Value Accounting and the Financial Crisis

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## 1.1. Introduction

Fair value accounting (FVA) is the practice of accounting that prices certain assets and liabilities at their present market value. In theory, FVA intends to capture and report the present value of future cash flows related to an asset or a liability (Campmell, Jackson and Robinson, 2008). FVA means that assets and liabilities are reported on the balance sheet at fair value and any changes in the fair value are recognized as gains or losses in the income statement. When fair value is determined based on market prices, FVA is also called mark-to-market accounting (Laux and Leuz, 2010), thus it can be said that the FVA is a market-based measure of value (Campmell, Jackson and Robinson, 2008).

The impact of the fair value accounting during the crisis period has received considerable critical attention. Because of the inactivity of the markets, the main allegation according to Masoud and Daas (2014) are that FVA contributes to excessive leverage in boom periods and leads to excessive market valuation. According to Laux and Leuz (2010) the write-downs due to falling market prices reduce bank capital and begin a downward spiral as banks are forced to sell assets at "fire sale" prices, which intern can lead to contagion as prices from assets fire sales of one bank become relevant for other banks.

This paper will discuss the previous literature, compare arguments and opinions in order to come with relevant conclusions. Thus we will attempt to find relevant answer to several questions, mainly has FVA played essential role in deepening the financial crisis? Whether reporting losses, due to assets declining values, under fair value accounting created additional problems? Should financial institutions report financial assets and liabilities on balance sheet at fair value or, as they had traditionally report them, at a historical cost?

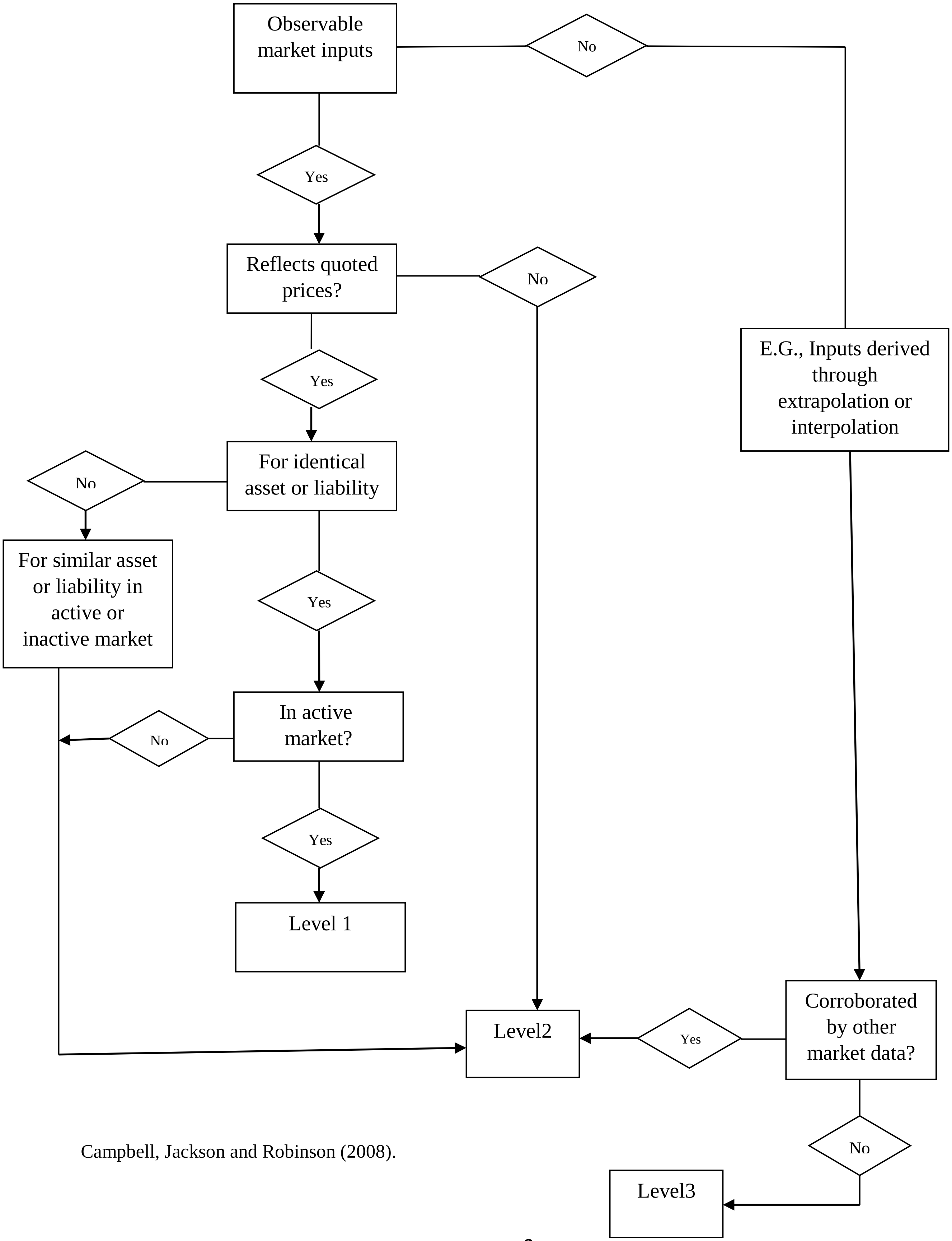
## 1.2. Fair value accounting:

In the US, Statement 157 is issued and offered a definition and a framework for measuring fair value in generally accepted accounting principles (GAAP) that result in increasing consistency and comparability in fair value measurements; in addition, Statement 157 requires increased disclosures, thereby improving the quality of information provided. Statement 157 defines fair value as "the exchange price … in an orderly transaction between market participants to sell the asset or transfer the liability in the market in which the reporting entity would transact for the asset or liability, that is, the principal or most advantageous market for the asset or liability". In other words, "it 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" (FASB, 2006).

Statement 157 provides three valuation techniques: the market approach, the income approach, and the cost approach. Valuation according to the market approach uses prices and other information from market transactions. With the income approach, future income or cash flows are discounted to one single present value. Valuation according to the cost approach is based on the cost to acquire or construct an identical asset to the one being valued, taken into account obsolescence. These three techniques are used by valuation specialists. For mortgages backed securities, relevant valuation techniques are the market approach and the income approach (Krumwiede, 2008).

Statement 157 provides a three level hierarchy for fair-value measurements, thus inputs into the valuation process are classified based on this hierarchy. For Level 1, inputs are unadjusted quoted prices in active markets (Krumwiede, 2008). Level 1 inputs are preferred, as it provides little room for management for manipulation and generally provide reliable information (Laux and Leuz, 2010), and fair value should be measured using these inputs when available. Level 2 inputs are other observable inputs, which include observed transactions for similar assets, information obtained from pricing services, quotes from brokers or dealers, the sale of a piece of an instrument to establish a price, and the use of related indexes. These observable inputs are preferred where Level l inputs are not available (Krumwiede, 2008), and when Level 2 inputs are used fair value accounting offers some discretion to management (Laux and Leuz, 2010). In order to maintain reliability and relevance of information used, FASB emphasizes the use of observable inputs (Krumwiede, 2008). Level 3 inputs are unobservable inputs, with which management has considerable discretion (Laux and Leuz, 2010). To the extent that fair value cannot be measured using only observable inputs, unobservable inputs are used.

Figure 1 Fair Value Hierarchy




Campbell, Jackson and Robinson (2008).

As shown in the Figure 1, observable market input that reflects quoted prices for identical asset/liability in an active market is classified as Level1, while observable market input that reflects quoted prices for identical asset/liability in an inactive market; observable market input that reflects quoted prices for similar asset /liability in an active or inactive market ; observable market input other than quoted prices; unobservable market input derived principally from or corroborated by other observable market data are good examples of Level2, and lastly unobservable market input not derived principally from or corroborated by other observable market data is classified as Level3.

In an effort to increase transparency Statement 157 increased fair value disclosure requirements, these requirements include expanding disclosure for Level 3 assets and liabilities. Entities should provide a reconciliation of the beginning and ending asset and liability balances, including realized and unrealized gains and losses for the period; purchases, sales, issuances, and settlements; and transfers in and out of Level 3 for the period (Krumwiede, 2008).

Although Level 2 inputs generally are preferred to Level 3 inputs, FAS 157 does not essentially require firms to use Level 2 inputs over Level 3 inputs. Firms should use the assumptions that market participants would use in pricing the asset or liability. In the case of illiquid market, firms can argue that available Level 2 inputs are of such low quality that market participants would use Level 3 inputs instead (Altamuro and Zhang, 2013). However, Altamuro and Zhang's (2013) results found no association between lower accounting quality and the Level 2 versus Level 3classification choice.

However, some suggest that the timing of SFASs 157 and 159, whose effective date coincided with the recent crisis, may cause the accounting profession to be under increased scrutiny (Trussel and Rose, 2009).

### 1.3. The role of fair value in the financial crisis:

As mentioned earlier, the main allegation, according to Laux and Leuz (2010) that the write-downs due to falling market prices decrease bank capital and begin a downward spiral as banks are forced to sell assets at "fire sale" prices, which intern can lead to contagion as prices from assts fire sales of one bank become relevant for other banks. But has fair value accounting contributed to the crisis?

During the financial crisis, unemployment rates have risen, prices for mortgage related securities fell significantly and markets for them became illiquid. The result was banks marking down their assets by significant amounts and money has been lost from what were thought to be good investments. FVA allows for certain assets to be valued at the amount for which they could be exchanged in an open market transaction. The problem with this arises when the market for an asset that a company values at fair value becomes illiquid (Masoud and Daas, (2014).

SEC issued its congressionally mandated study on the impact fair value accounting has had on the financial crisis and has recommended against scraped or suspending the practice, instead, it recommended several ways to improve fair value accounting. The study concluded that fair value accounting had no significant role in U.S. banks failures during 2008 (Marcy, 2009).

Altamuro and Zhang (2013) think that although managers may be advanced in terms of having information over an inactive market and incorporate private information through managerial input models, they may also have incentives to impose biased model assumptions through the valuation process.

Seay and Ford (2010) state that transparency provided by fair value accounting would enable banks, regulators, and government to identify specific sources of the crisis and take steps toward recovery and future prevention. They persist, blaming fair value accounting is not a solution. Possibly confusion exists about the conflict between transparency and financial stability, but restoring investor confidence in financial markets is essential to achieve long term stability.

From an ethical perspective, Seay and Ford (2010) state that accounting has a responsibility to see that financial statements are fairly presented and reflect economic reality. Accountants and auditors are ethical detectives holding businesses to ethical standards of integrity, completeness, objectivity, and representative faithfulness. Accountants and auditors are bound by their professional code of conduct to protect the public interest. Suspension of fair value on the side of alternative cost-based measures would disguise losses in value, mislead investors, and weaken investor confidence (Seay and Ford, 2010).

Laux and Leuz (2010) suggest that unreliable evidence suggests that the asset values reported on the investment banks' balance sheets were excessively high relative to what the banks could sell the assets for, which intern did not help retain confidence and may have worsened matters. Generally, the financial difficulties of banks during the crisis seem to be the result of poor investment, short-term debt financing, high leverage, and investors' concern about the value of the underlying assets, rather than aggressive written-downs forced by fair-value accounting.

Laux and Leuz (2010) think that it is unlikely that fair-value accounting fuelled the high leverage period to the crisis, conversely, less transparency about losses and other things related to subprime mortgage exposure could have made matters worse. As we can't expect the market to have reacted differently if banks had not reported their losses or used a different set of accounting rules, such as, historical cost accounting; it is difficult to argue that fair-value accounting *per se* contributed to the crisis. Although deriving fair value is very complex in illiquid markets and in times of crisis, it is conceptually difficult to argue that the disclosure of fair-value information *per se* contributed to uncertainty and exacerbated the financial crisis.

Moreover, there were tradeoffs, on one hand marking assets to market prices can in principal exacerbate downward spiral and contagion during a financial crisis; but on the other hand, a faster recognition of losses provides pressures for prompt corrective action by banks and regulators and likely limits imprudent lending in the first place. Laux and Leuz (2010) find little evidence that banks’ reported fair value suffered from excessive write-downs or undervaluation in 2008, which in turn could have contributed to downward spirals and contagion.

### 1.4. Blames of FVA

A number of criticisms have been made to the U.S. Congress about the Financial Accounting Standards (FASB’s) FVA rules and their possible contribution to the financial losses incurred in the credit crisis (Casabona and Shoaf, 2010). The U.S congress as well as many other commentators believe that FVA has aggravated the recent financial crisis (Trussel and Rose, 2009). According to Masoud and Daas (2014) FVA plays only a limited role for banks’ income statements and regulatory capital ratios, except for a few banks with large trading positions, but the failure of some banks could have spread out to other banks via FVA.

Much of criticism has been targeting the FASB’s FVA rules and their probable role in the financial losses incurred in the credit crisis and this criticism has been provided to the U.S. Congress and various politicians during 2009 by the U.S. Chamber of Commerce, American Bankers Association, American Council of Life Insurers, Financial Services Roundtable, real estate and home builders groups, and the Council of Federal Home Loan Banks, among other organizations. They think that the failure of businesses, investors, and government to properly value assets — particularly in increasingly inactive and disorderly markets — has created uncertainty, caused the fair values of certain assets being underestimated, and resulted in a loss of confidence by many market participants. They have expressed their concerns for the need to correct the unintended consequences of mark-to-market accounting, especially those related to determining fair value for illiquid assets in unstable markets, and the need for enhanced transparency in the form of more meaningful disclosures (Casabona, and Shoaf, 2010).

In their report, Financial Crisis Advisory Group, (2009) suggest that information regarding the fair value of assets and liabilities is, in many cases, reliant on well-functioning markets with infrastructure that offers timely, reliable and relevant data. The quality of the underlying data also depends on the appropriateness of processes for verification of price and other valuation information used by financial institutions and other business entities. In many of the over-the-counter markets, particularly those for structured products and imitative, those mechanisms have been missing.

The regression analyses model examined by Masoud and Daas (2014) show that the FVA did not cause the financial crisis; it may have worsened the negative effects. However, they think that FVA is a necessary part of the economic recovery, and through revision of current standards, mark-to-market will prove to be a valuable tool in the prevention of similar crises. Furthermore, lack of full disclosure by management in their financial reporting is more to blame for the crisis.

Trussel and Rose (2009) suggest that FVA, like historical cost accounting may not be efficient at providing information value; they believe that the exclusive use of one accounting method may not be efficient for financial institutions. They recommend that FASB should consider an alternative accounting approach that would incorporate both systems and mitigate the inefficiencies of using just one accounting method.

However, several critics blame the lending decisions. According to Krumwiede (2008), the main causes of the crisis can be the significant increase of subprime and other risky loans and mortgage-backed securities during the period ahead of the crisis. This growth and negligent lending standards seeded the housing bubble that once it collapsed led to the credit market crisis. In accordance to the previously mentioned research, Wallace (2009) suggests that the original cause of the recent economic crisis is the relaxation of underwriting standards and higher loan to value ratios that characterize loans issued by the mortgage market in a couple of years just before the crisis began. Seay and Ford (2010) blame banks for causing the existing crisis, ultimately through bad lending decisions and inadequate risk management.

### 1.5. Responses to the issue:

As a response to their concern about the role of FVA in the crisis, several professional and oversight bodies have reacted somehow to improve the practice of FVA or to find an alternative. For instance, the FASB continued to work to improve fair value accounting. In 2008, the IASB and FASB established a Financial Crisis Advisory Group (FCAG), made up of current and former regulators, and financial services executives. The 18-member board has been given the mission of staving off undue interferences in accounting rulemaking. Their initial objective is to address both how financial reporting helped uncover the current problems and how it helped hide them as the crisis unfolded in the U.S. and abroad. The group was required to explore the ties that mark-to-market accounting and off-balance-sheet accounting had to the collapses on Wall Street. FCAG on its July 28$^{th}$ 2009 report states that "Information about the fair value of assets and liabilities is, in many instances, dependent on well-functioning markets with infrastructure (including clearing mechanisms) that provide timely, reliable and relevant data" and these processes were missing (Financial Crisis Advisory Group, 2009).

In 2008, FASB formed a group of valuation practitioners and accountants, representing a cross section of industry representatives including financial statement preparers, auditors, and valuation experts, to provide input to the FASB staff on valuation guidance. The Valuation Resource Group (VRG) does not make any authoritative decisions; rather the VRG provides the FASB staff with information on the existing implementation issues surrounding fair value measurements used for financial statement reporting purposes and the alternative viewpoints associated with those implementation issues (Casabona and Shoaf, 2010) .

An extremely large and increasing number of Financial Accounting Standards (FAS) and other pronouncements take account of some requirement for the determination of fair value in reporting or disclosure. The SEC's continued support of FVA, and the FASB's recent pronouncements and IASB converging standards guiding preparers to properly value assets during the credit crisis in inactive and disorderly markets, may have restored some confidence in financial reporting (Casabona, and Shoaf, 2010).

The European Union approved an amendment to its accounting legislation that will allow companies to adopt changes to FVA rules that ease the impact of the financial crisis on their balance sheets. The IASB agreed to relax the requirements of its financial instrument standard to permit, in certain circumstances, reclassification of financial instruments allowing these companies to reclassify assets held-for-trading into the held-to-maturity category, thus in certain circumstances financial institutions in the EU would no longer have to reflect market fluctuation in their financial statements for these kinds of assets.

EU business groups representing the largest EU companies as well as the European Banking Federation have called for a move away from fair value accounting. However, trade associations representing some insurance groups throughout the EU insist that fair value accounting is the only way to get an accurate understanding of the financial health of a company, especially when it concerns banks (Kirwin, 2008).

### 1.6. Comparison between fair value and historical-cost accounting

Debate around the theme of the relevance of historical-cost-based financial statements has brought attention of discussions about replacing historical cost with fair value. In addition, the move forward to fair value is promoted by the movement of international accounting regulation toward the harmonization of standards (Campmell, Jackson and Robinson, 2008). During the last decade, increasingly countries have modified/ adopted their accounting standards to align with the IAS for raising global financial marketability and increasing the information comparability, and one of the main essences of the IFRS is to use fair value as the key basis for measurements of assets and liabilities to reflect accurate value of a company (Liao, Liu, Suvankulov and Branson, 2014). The International Accounting Standards Board (IASB) updated their fair value standard several times since 2004 and it is working with the FASB on cooperative projects investigative the feasibility of using fair value measurement for certain categories of assets and liabilities. This focus on FVA continues to downgrade the historical cost concept and has resulted in the FASB producing financial accounting standards that necessitate the use of fair values rather than historical cost values. These applications of FVA highlight the FASB's continual intention to establish a methodology for FVA that is consistent with the present Conceptual Framework, U.S. GAAP, and International Accounting Standards (IAS) (Campmell, Jackson and Robinson, 2008).

The advocates of fair value argue that fair value is a superior economic measure to historical cost. Theoretically, fair value accounting reports a book value that is sufficient to value a firm but earnings that are of no use for the purpose. On the other hand, historical cost accounting produces a balance sheet that does not report value, but earnings that are sufficient to value a firm (Penman, 2007). According to Campmell, Jackson and Robinson (2008) the fair value have several strengths including being more objective basis, it impounds current information, and it must be forward looking.

Penman (2007) thinks that FVA is superior, implementation concerns aside. However, historical cost accounting has attributes that present an alternative if ideal FVA cannot be attained. The implementation of ideal FVA may be feasible with subjective estimates of fair values of assets and liabilities, but that goes against the required objectivity and reliability of evidence which supports accounting information (Penman, 2007).

Evidence from the recently released SEC study on mark-to-market accounting supports fair value as the most relevant measurement attribute for financial instruments (Seay and Ford, 2010). The SEC issued Report and Recommendations Pursuant to Section 133 of the Emergency Economic Stabilization Act of 2008: Study on mark-to-market accounting on September 2008. The report concluded that FVA did not seem to have a significant role in bank failure occurring during 2008 (Trussel and Rose, 2009). Suspension of fair value in favor of alternative cost-based measures would mask losses in value, mislead investors, and diminish investor confidence. Transparent accounting standards and sound auditing provide support for that confidence (Seay and Ford, 2010).

According to Masood and Bellalah (2014), the best way to stem the credit crunch and damage caused is to accelerate the price amendment process by providing market participants with the most precise and complete information about subprime situations. While deficient, fair value accounting presents better information about these situations and is a better stage for mandatory and voluntary disclosure than alternative measurement attributes, including any form of cost-based accounting.

Krumwiede (2008) studied the application of fair-value accounting to securities backed by subprime loans; and whether or not fair-value accounting for difficult to- value securities improves transparency, relevance, reliability, and comparability of financial reports. He thinks that the markets for securities backed by mortgage loans, especially subprime, was not a highly liquid market even before the crisis, and during the crisis the markets for these securities became even less liquid. As the credit ratings for many of these securities were downgraded, the difficulty of determining accurate fair values became apparent.

For securities, it is plausible to say that fair value measures, if they are based on observations from active markets, are more relevant than historical cost measures. The measurements are reliable and verifiable when fair values are derived from active markets. In addition, comparability would not be compromised. The possible criticism is that even the best fair-value measurements are snapshots.

On the other hand, if fair values are not based on observations from active markets, the information is subjective and can reduce the relevance and comparability of financial reporting. This subjectivity can give rise to a wide range of values, and different entities could use different valuation techniques resulting in measures that are not comparable.

The relevance of using estimated fair values for securities backed by subprime mortgages to predict future cash flows is limited, because this information is proved to be inaccurate in many cases.

Additionally, if users of information are not confident in reported values, the usefulness of the reported information is doubtful (Krumwiede, 2008).

Regarding value relevance, Liao, Liu, Suvankulov and Branson's (2014) research aimed to explore value relevance of fair value measurement in the financial services industry; and to understand any impacts changes made by IASB on IAS may have on value relevance of fair value measurement of financial statements. Their empirical results suggest that the overall fair value information of financial products in the financial services industry is value relevant, but this relevance has not increased compared to that of historical costs measurement. In addition, they think that the changes made by the IASB to respond to the financial crisis in 2008 and the changes in international situation has resulted in the failure of corporate earnings to truly reflect real fluctuations in fair value, which diminish value relevance for fair value information of financial products in the period of 2009-2010.

Penman (2007) surveyed standard setters, regulators, analysts, and preparers' standpoint regarding public statements made for and against FVA. The stated drawbacks typically point to the dangers of fair value estimations from marking to model instead of marking to market, worries about introducing excess unpredictability into earnings, and feedback effects that could damage a business and, indeed, intensify systematic risk. A few question whether fair values really capture the economics of a business.

Some pluses and minuses of fair values, Penman (2007) specifies, are related to the implementation of market prices values. He thinks that fair (market) values are a plus when value to the shareholders is determined solely by exposure to market price; that is, shareholder value is one-to-one with market prices. However**,** fair 'market' values are a minus when the firm arbitrages market prices, *i.e.*, fair value is not suitable when the firm adds value 'for shareholders' by buying at 'input' market prices and selling at 'output' market prices.

In addition to bringing price bubbles into financial statements, fair market prices, according to Penman (2007), are a minus also if they substitute for historical cost information and 'efficient' prices depend on historical cost information.

### 1.7. Conclusion

Many scholars and experts support the use of FVA, and think that FVA had no significant role in the 2008 financial crisis. In addition, transparency provided by fair value accounting would enable banks, regulators, and governments to identify specific sources of the crisis and take steps toward recovery and future prevention. However, some think that if fair values are not based on observations from active markets, the information is becoming more subjective and can reduce the relevance and comparability of financial reporting. This irrelevance and incomparability may reduce the usefulness of financial reports and may reduce user's confidence.

We insist on the appropriate authorities to ensure that all markets have robust infrastructure that fosters the transparency of market prices. Effective and independent price verification processes should be employed by businesses especially financial institutions and they should improve their valuation of assets and liabilities. We can conclude that the criticism was not regarding FV, but the application of it. Thus, FVA can be seen as the best available measurement compared to cost accounting measurements, however more work is needed to improve the practices of FVA.

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