

DID FASB 157 CAUSE THE FINANCIAL CRISIS?

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ABSTRACT

In light of the financial meltdown that followed the bankruptcy of Lehman Brothers in the fall of 2008, there is considerable debate in the financial community on the appropriate accounting methodology used to value financial assets. In fact, many analysts on Wall Street argue that much of the blame for the current financial and economic crisis is due to fair value accounting and the implementation of FASB 157, which regulators put into effect for financial statements released after November 15, 2007. The argument is that with assets trading in illiquid markets, financial institutions reported outsized losses by writing down the value of their security and loan holdings even if they had the intent and ability to hold the assets to maturity. The critics of FASB 157 charge that these sharp write-downs contributed to the failure of banks and forced others firms into a difficult financial situation. This study examines the issues surrounding fair value accounting and looks at the role accounting played in the financial crisis. We conclude that fair value accounting played no significant role and is the preferred accounting framework for financial institutions.

JEL: G01, G10, G21, M41

KEYWORDS: Fair-value accounting, FASB 157, mark to-market, level 1, 2 and 3 assets

INTRODUCTION

The financial crisis that occurred in the US in 2007-2008 had its roots in the collapse of the residential real estate market. The result of this collapse was a sharp decline in housing prices that adversely affected the value of mortgage-related financial products held on the balance sheet of many financial institutions. Financial Accounting Standard 157, which the Securities and Exchange Commission (SEC) put into effect for financial statements released after November 15, 2007, required commercial and investment banks and some insurance companies to mark-to-market their assets, particularly the mortgage backed securities. As a result, financial institutions recognized large losses in 2007 and 2008 due to marking-down the value of the mortgage backed securities (MBS) on their balance sheets. In addition, the markdowns reduced the value of bank regulatory capital, forcing banks to raise additional capital and creating uncertainty among investors about the health of the banks.

The main criticism of this accounting standard is that assets classified as “other than temporarily impaired” are marked-to-market, no matter if the security is available-for-sale or being held-to-maturity. FASB 157 requires financial institutions to look at market inputs from sales of similar assets even if there is no active trading market. Thus, with illiquid markets financial institutions may be forced to take outsized losses by writing down the value of the security even if they both have the intent and ability to hold the assets to maturity. The resulting lower sale value may be below the security’s value based on its future cash flows. The critics of FASB 157 charge that these sharp write-downs contributed to the failure of banks and forced others firms into a difficult financial situation. This study examines the role accounting played in the financial crisis and is organized as follows: section 2 provides a literature review of fair value accounting, section 3 discusses asset categories under FASB 157, section 4 discusses the impact on the investment community, and the paper ends with conclusions and suggestions for future research in section 5.

LITERATURE REVIEW

The financial crisis began in February 2007 as shown by Taylor (2008) and Wingall, Atkinson and Lee (2008) and the problems grew dramatically following the demise of Lehman Brothers in September 2008. What preceded the crisis was an explosive growth in mortgage lending and the securitization of mortgage loans. The unprecedented drop in housing prices that began in 2006 resulted in growing defaults on mortgages and made it difficult for financial institutions to determine the true value of the mortgage-related assets held on their balance sheet. The fact that these assets traded in illiquid markets exacerbated the problem. Thus, accounting rules used to determine asset values took on a central stage in the crisis.

With FASB 157 enacted in November 2007, the critics such as McTague (2008) blame its implementation as the root cause of the crisis. They argue that fair value accounting caused financial institutions to take unnecessary losses that resulted in the elimination of the entire investment banking industry as well as the bankruptcy of banks such as Washington Mutual and Wachovia. However, what is fair value accounting?

Given all the controversy, there is a lot of confusion surrounding the role played by fair value accounting in the crisis and how financial institutions use mark-to-market accounting to value their assets. Contrary to views expressed in the media and by the critics, mark-to-market accounting is not new. Financial institutions have used fair value accounting for decades to value financial assets. Prior to FASB 157, there was no single consistent measure of fair value and the guidance for applying these definitions was limited and inconsistent. What is new is that FASB 157 issued new guidelines and additional disclosures on how to measure fair value, especially in the case of illiquid markets.

The accountancy board issued FASB 157 to define fair value, create a framework for measuring it and to expand disclosure requirements about fair value measurements. Under 157, the definition of fair market value retains the exchange price notion in earlier definitions. “This Statement clarifies that the exchange price is the price in an orderly transaction between market participants to sell the asset or transfer the liability in a 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. The transaction to sell the asset or transfer the liability is a hypothetical transaction at the measurement date, considered from the perspective of a market participant that holds the asset or owes the liability. Therefore, the definition focuses on the price that would be received to sell the asset or paid to transfer the liability (an exit price), not the price that would be paid to acquire the asset or received to assume the liability (entry price)” (FASB 157 Section 5:15).

It is important to note that under FASB 157, financial institutions do not have to report all of their assets at fair value. In applying FASB 157, a mixed attribute model is used where some assets are valued at fair value and others using historic costs. Financial institutions report held-to-maturity or held-for-investment securities and loans at historic cost, but use fair values to determine impairments for these instruments. In contrast, financial institutions report assets and liabilities held for trading purposes and available-for-sale at fair value.

What really reduced the role played by FASB 157 in the crisis is the fact that the largest items on a commercial bank’s balance sheet are loans held for investment. Banks value these loans at historic cost. Huizinga and Lavean (2009) noted that loan loss allowances and not mark-to-market losses accounted for a majority of the write-downs taken by banks during the financial crisis. Finally, banks have discretion in the determination of fair value in an environment of depressed prices.

Other Aspects of FASB 157

In the international literature, International Financial Reporting Standard (IFRS) defines fair value as the amount for which an asset would be exchanged or a liability settled between knowledgeable, willing parties in an arms length transaction. The major difference between their measures of fair value is that 157 specifically uses exit price in its determination, whereas the IFRS is not explicit on this issue.

FASB 157 makes the distinction between recurring and non-recurring fair value measurements, as well as financial versus non-financial assets. Recurring refers to fair market value measurement on a quarterly basis and includes most of the financial assets as well as derivatives. Non-recurring fair value measurements apply mostly to non-financial securities and are tested for impairment on a yearly basis. If it is determined that the fair value in these assets is less than carrying value, then an impairment loss is recognized by this difference.

Research is inconclusive, but it has been shown that much of this write-down occurs when companies have exaggerated losses so adding more losses has no further effect on stock price—a practice known as “Big Bath Behavior”. As such, one can argue that these losses are arbitrary. The latter set of assets would include property, plant and equipment as well as intangibles.

Under FASB 144, impairment losses for property, plant and equipment involve a two-step process. First, the question is whether we have impairment. If the carrying value of the asset is greater than the undiscounted cash flows from its use and disposal, then we have an impairment loss. The next step is to calculate the amount of the loss, which is the excess of carrying value over fair market value. If fair market value cannot be determined, as is often the case, then the discounted cash flows must be used as a proxy to fair value.

Under FASB 142, companies must test goodwill and other non-amortizable intangible assets for possible impairment at least on an annual basis. If the fair market value of an intangible asset exceeds its carrying value, then an impairment loss is created.

Under FASB 157, company specific information should be factored into fair market value measurements when relevant information is not observable in the market. This is especially true with non-financial assets. Clearly, FASB 157 has differentiated the treatment of fair market measurement between financial and non-financial assets. We will now give you our thoughts as to why we believe this is the case.

Reasons for Differences

We believe that there are four reasons for this difference.

- First, financial assets are clearly much more material in financial statement reporting than non-financial assets. This makes a more conservative definition of fair value much more critical.
- Second, non-financial assets such as land and buildings are recorded at historical cost and subsequently recorded net of accumulated depreciation. Collectively, non-financial assets like fixed assets and intangibles, when totaled, have a fair market value much greater than its book or accounting value. This will not be the case for each individual asset but will apply to the total of these asset groups. A major reason for this is inflationary effects. Simply put, these assets are reported on a conservative basis.
- Third, it is easier to put a fair value number on financial assets than non-financial. The cost-benefit of trying to find an exit price for each non-financial asset is not feasible.
- Fourth and last, users of financial statements often back into the fair market value of non-financial assets by an income approach. An internally developed patent has no accounting value but a market value is derived from a cash flow or income approach. Giving a fair value for these assets then would be counterproductive.

Assets Categories

Under FASB 157, the Board created a hierarchy of fair value methodologies starting with observable prices and moving to unobservable inputs and the use of models. Three categories of assets were created. The classification is dependant as to how and where an asset is traded, as well as to its liquidity.

- Level 1 assets are traded in organized exchanges with observable prices. An example of this would be the stock of IBM. IBM is traded on the NYSE, its price is easily and objectively observed and thus a mark-to-market approach can be used.
- Level 2 assets are those which do not have a quoted price but whose price can be observed either directly or indirectly. This would include assets, which have similar assets traded in an active market, as well as assets traded in a market with low liquidity. A fair market value can be attained for these assets using mark-to-model guidelines, with a high degree of confidence, but not an absolute value as we have for level 1 assets.
- Level 3 assets have unobservable inputs due to their illiquid nature and have traditionally been valued by companies by the use of internal sophisticated models, which require the use of many assumptions. Now, under FASB 157, these assets must be reported at a fair market value along with enhanced disclosure about the processes used to arrive at a fair value.

Problem of Level 3 Assets

With level 3 assets, the intent of the Board was to inform investors that the value of these assets should be treated with some degree of skepticism. It is the less liquid, level 3 assets that are the source of the uncertainty especially in the valuation of complex mortgage and derivative products. Market participants like banks and investment companies developed many of these exotic products and there is no effective market to trade them. Instead, trading of these securities occurs in private or in the over the counter market (OTC). Mortgage backed securities originated by private firms such as Countrywide Financial, Lehman Brothers or Wachovia were a main source of the problem. These MBS were backed by pools of subprime or ALT-A loans, which were subject to high default rates.

Accentuating the problem, these privately packaged mortgage backed securities were further securitized creating illiquid products such as collateralized debt obligations (CDOs) and structured investment vehicles (SIV). The CDOs and SIVs are examples of level 3 assets and when subprime mortgages began to experience problems, the hedge funds and banks that owned these assets reported large losses. These products are the instruments invented and engineered by Wall Street; the public does not understand them due to their unique nature and are often seem like high-grade investments when packaged.

Mark-to-Model versus Mark-to-Nothing

Until the advent of 157, a mark-to-model approach was used to value level 3 assets for financial reporting purposes. Mark-to-model entails valuing an asset on some mathematically based model. The present value of cash flows is often used as a proxy for fair value. Since no market exists for this type of asset, a model-based approach, although imperfect, is a way of obtaining a fair value for an asset. As an example, the value of a unique patent can be modeled by estimating future cash flows over the course of its economic life, and then using an appropriate discount rate to obtain the present value of its cash flows. This in turn is the fair market value under the mark-to-model method.

Critical to this result, is the reality of the assumptions inherent in the model. Poor or unrealistic assumptions will yield questionable results. Good assumptions will yield a good output. FASB 157 requires the use of fair market valuation (based on exit price) for level 3 assets. The result is a mark-to-nothing model. Level 3 assets due to their illiquidity and unique nature have no objective value. They are not traded in any organized market, so consequently, a true market value cannot be observed. However, FASB 157 forces companies to assign a fair market value to these assets. Additionally, models cannot be used to value these level 3 assets under FASB 157, so a mark-to-model method, which theoretically is the best approach for asset valuation in this case, is not allowed.

Consequently, a fair market value somehow has to be assigned to these non-liquid assets, which have no similar assets for comparative value. One then has to realize that the valuation derived is suspect and questionable, and economically may not be viable. Clearly, exit price of illiquid assets can result in a decrease in market value in excess of 30 percent when compared to an entry price. FASB 157 requires disclosure as to how the value is derived, which we believe will result in a conservative presentation, thereby causing exaggerated write-downs and losses to these level 3 assets.

IMPACT ON THE INVESTMENT COMMUNITY

Multiple and serious repercussions were created to the holders of these level 3 assets in terms of their financial reporting. First, the market value based on an exit price was found to be significantly lower than the value derived internally by the use of models. The results were large write down of assets and consequently large losses in company income statements.

Second, level 3 assets turned out to be much more material than anybody expected. As an example in 2007, Morgan Stanley had a ratio of level 3 assets to its Stockholders' Equity in the amount of 250 percent, while Goldman Sack's ratio was 185 percent, Lehman Brothers was 160 percent, Citicorp was 105 percent, JP Chase was 45 percent and Merrill Lynch was 38 percent.

Equally important was that these level 3 assets ended up in the portfolio of pension funds and in global sovereign wealth funds like the country of Iceland. One can argue that since these assets now have to be valued at mark-to-nothing, it may be in the best interest of a company to arbitrarily place a high value on these assets and minimize their losses. However, companies must disclose the inputs used to measure fair market value, which will be closely reviewed by the user of financial statements.

Table 1 Ratio of Level 3 Assets to Shareholder Equity (2007)

Company	Percent
Morgan Stanley	250%
Goldman Sachs	185%
Lehman Brothers	160%
Citicorp	105%
JP Morgan Chase	45%
Merrill Lynch	38%

The above table illustrates the high Percentage of Level 3 Assets to Shareholders' Equity, as reported by SEC 10- filings for selected financial institutions , for the 2007 fiscal period.

Advantages of FASB 157

Proponents of FASB 157 as shown in the Financial Stability Forum Report (2008) state that the fair value pricing of assets brings about transparency and allows the investment community to learn more about the nature of tier 3 assets, and the amount of these assets held on the company's balance sheet. Essentially, it informs investors of the extent of bank exposure to MBS and the real estate market.

The goal of FASB 157 is to present financial statements on a conservative basis. Companies will now have to take losses on a yearly basis and will reconsider investing or creating such tier 3 assets with this in mind. Consequently, one can argue that Wall Street's engineering and greed created the economic meltdown and that the FASB 157 potentially discourages destructive Wall Street action in the future by forcing disclosure and close monitoring on such engineered instruments. Eliminating mark-to-market rules would further reduce investors' trust in the financial statements in all companies at a time when ongoing efforts are need to restore investor confidence. In contrast to the views of its critics, the elimination of fair value accounting would have increased market instability and would have made the financial crisis worse.

CONCLUSIONS

The role that FASB 157 played in the financial crisis is the subject of much debate. Our review of the literature suggests that FASB 157 played only a small role in the crisis. Banks failed not because of fair value accounting but due to a loss of investor confidence and their inability to attract funding and liquidity. No accounting standard is perfect, but FASB 157 is a step in the right direction in that it provides a measure that best reflects a financial institution's current financial condition by providing meaningful and transparent financial information and minimizing the possibility of manipulation.

The SEC (October 2008), mandated by the Emergency Economic Stabilization Act of 2008, conducted a

study and found that the economic meltdown and financial crisis was due to poor internal decisions by banks and other financial institutions. Loose credit policies, poor internal controls and bad business judgment were the basis for the meltdown rather than FASB 157. The SEC (December 2008) study noted that investors have a high degree of confidence in fair value accounting because 90% of the assets that are marked-to-market use inputs that are based on observed data obtained in active and highly liquid markets. FASB 157 was the messenger that just delivered the news and the economic reality to the investment community. Relaxing the rules may encourage banks to hold worthless assets to maturity rather than taking the hit that would result from marking impaired assets to their market value. While it may help, the financial institutions in the short-run by helping them hide their toxic assets, in the long-term it may drive away investors due to their lack of confidence in the accuracy of the financial statements. We conclude that fair value accounting is the preferred accounting framework for financial institutions. An alternative based on historic costs is not appropriate in determining the current value of assets and liabilities held by financial firms.

Our overview of the issues surrounding FASB 157 suggests a number of avenues for future research. First, is the question of whether fair value accounting is pro-cyclical? The argument is that under fair value accounting banks and other financial institutions write-up the value of their assets during an economic upturn increasing the overall leverage of the financial system. This, in turn, makes the system more vulnerable during an economic downturn and accentuates the potential severity of any financial crisis. A test of the relationship between accounting methodology and leverage is ultimately an empirical issue.

Second, it is argued that there is a potential contagion effect associated with fair value accounting. In this case, falling prices caused by write-offs at one institution force other healthy institution to take losses on their assets spreading the problem through the financial markets. Again, this is an empirical issue and the question is which accounting method best insulates banks from fire sale drops in market prices.

Finally, what impact did FASB 157 have on the stock price of financial firms? The traditional approach would be to conduct an event study on a sample of financial firms. The methodology used to address this question was to conduct an event study. Under this approach, one can assess the impact of the accounting change under FASB 157 on the stock price of a sample of financial firms. The abnormal return prior to and after the announcement date is estimated and the statistical significance of any change is assessed.

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BIOGRAPHY

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