

## **ANATOMY OF A MELTDOWN**

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### **Abstract**

Critics have blamed FAS 157 for exacerbating the global economic crisis of 2008. This paper investigates the links between Enron, the reintroduction of fair value accounting, the implementation of FAS 157, and the subprime mortgage crisis of 2008. The account describes the possible connections between these events and shows that the implementation of the Sarbanes-Oxley Act was pivotal in determining the role that fair value accounting played in the economic crisis. The study highlights the great influence that public policy has on accounting practice, and the drastic consequences that such influence, although unforeseen, can bring about.

## **THE ORIGINS OF FAIR VALUE ACCOUNTING**

Fair value measurement has been slowly introduced into the American accounting system over several decades (SEC, 2008a). Originally used in the early 1900's, the practice was discontinued in 1938 (McTeer, 2009). The 1970's saw the informal return of mark-to-market practices. FASB statements, including

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FAS 12 and FAS 15, issued in 1975 and 1977, respectively, discussed the use of fair value measurement in certain situations.

A drive for the more formal and expanded reintroduction of this valuation method in GAAP occurred in the early 1990's. Richard Breeden, Securities and Exchange Commission [SEC] chairman in 1990, testified before the Senate Subcommittee of Housing, Banking, and Urban Affairs in 1990. Noting that a move to market-based accounting would need careful consideration and implementation, he nevertheless advocated a "fundamental shift" in the goal of setting accounting standards for accounting institutions. He also posited that the goal of these standards should be that of "[d]etermining the current value of an institution's assets," indicating that this can only be accomplished using market-based valuations. The SEC also strongly encouraged the American Institute of Certified Public Accountants [AICPA] and the Financial Accounting Standards Board [FASB] to require banks to mark certain assets to market by 1991 in an attempt to begin the process of moving all of bank's assets and liabilities to a fair value accounting model (Greenspan, 1990).

The FASB began to issue statements that mandated the use of fair value measurement for all financial assets and liabilities beginning in the 1990's. In FAS 107, issued in 1991, the FASB posited that that the standard

extends existing fair value disclosure practices for some instruments by requiring all entities to disclose the fair value of financial instruments, both assets and liabilities recognized and not recognized in the statement of financial position, for which it is practicable to estimate fair value. (FASB, 1991, p.4)

With FAS 107, the FASB acknowledged that it was providing only general guidance regarding fair value accounting, and that specific valuation techniques would undoubtedly differ among entities. One justification of this action was that "financial instruments have such diverse characteristics that the Board believes that it is not practicable at this time to prescribe detailed methods and assumptions to be used in estimating fair value"

(FASB,1991,p.21).

A decade later, however, the FASB began a project that attempted to provide more directed guidance in the computation of fair value. By that time, several statements (e.g. FAS 115, 133, 144, and 146) had included some guidance and information pertaining to the application of fair value measurement. FAS 157 was issued to enable consistency and comparability between fair values measured by different entities, as well as to decrease the complexity of the rules that governed fair value measurement.

A secondary goal of this standard was to mandate increased disclosures when using fair value measuring in financial reporting (FASB, 2006).FAS 157 delineated three basic categories that should be used when attempting to assess fair value. The first category of assets, dubbed Level 1 assets, describes those that have an actual quoted market price.

The second, level 2 assets, do not have a market price, but there are similar assets in the market that can be compared to the assets that the entity holds, and the entity can use those comparable assets to “mark-to-model” and closely calculate the value of the asset. FAS 157 calls these prices ones that have direct or indirect observable inputs.

Level 3 assets are most difficult to accurately compute due to the lack of observable inputs that could determine the market price. These assets are often those that do not trade in a liquid or active market. In this case, the value assigned to these assets “shall reflect the reporting entity’s own assumptions about the assumptions that market participants would use in pricing the asset or liability” (FASB, 2006, p. 12).

Issued in 2006, FAS 157 was effective beginning in 2007. Its advocates hailed it as an important standard provided a clear, comprehensive guide for determining fair value. For example, Schuetze (2001), who had consistently supported the movement toward mark to market accounting, had noted that guidance on the application of fair value accounting was needed if the FASB intended to require fair market valuation for all assets and liabilities. As this was the ultimate goal of the FASB, they took a

step toward providing such guidance and clarifying the existing applications of these rules. As Schuetze had warned, there was also significant debate about the usefulness of fair value accounting, as well as about the applicability of FAS 157. The criticism of fair value accounting and FAS 157 is discussed in the next section.

## **CRITICS OF MARK-TO-MARKET ACCOUNTING**

### **Early Concerns Regarding Fair-Value Accounting**

The critics of fair-value accounting have been many, and many voiced their concerns long before the current economic crisis which has caused massive changes in the global economy (e.g., Cifuentes et al, 2005; Greenspan, 1990; Brady, 1992; Taylor, 1992). These critics, and others like them, pointed to numerous potential problems inherent in using fair value accounting. For example, they explained that fair market valuation is pro-cyclical in nature (Zancanaro & Ramond, 2008), since it increases systemic risk within and contagion among banks (Khan, 2009; Plantin, Shin, & Sapra, 2008).

They argued that institutions that are not characterized by active trading in the financial markets use a business model that is inconsistent with fair value financial reporting, thus increasing the volatility of their financial worth (SEC, 2008a; McTeer, 2009; Greenspan, 1990; Brady, 1992). Representatives of the Federal Reserve Bank have pointed out that many bank assets are illiquid in nature, and thus are difficult to value using mark-to-market rules (Bies, 2004; Greenspan, 1990).

Further, researchers have posited that fair value accounting often does not reflect managerial intent when used by banks, which obscures the true value of financial holdings (Zancanaro & Ramond, 2008). Such a disparity between values assigned during fair valuation and those which reflect true managerial intent is often the case when banks intend to hold securities to maturity rather than actively trade them. The fair value of these securities, then, do not accurately reflect the true value of the asset as it

pertains to the nature of the bank's intentions in the use of that asset.

Finally, critics have noted that "a paradox of mark-to-market accounting is that it is likely to be most 'accurate' in circumstances where it is least useful, i.e., in complete markets" (Gwilliams & Jackson, 2008). Since it is difficult to pin down actual market values when markets are incomplete or inactive, exact values cannot be determined, and, in such cases, mark-to-market accounting becomes inaccurate when such circumstances are encountered.

### **The Case of Inactive Markets and Distressed Sales**

As the mortgage-backed security market became inactive and the value of bank assets plummeted in 2008, many of these critics called for the suspension or revision of mark-to-market, or fair value accounting rules. This call came from both the financial sector as well as from long-time critics of mark-to-market accounting as it applied to the banking industry.

Wesbury and Stein (2008), leading economists for First Trust Advisors, L.P., a privately-owned investment advisor with \$32 billion in assets under management, posited in an economic commentary that, instead of a governmental bailout of mortgage-backed securities, which is anathema to a free market economy, a temporary and targeted suspension of mark-to-market accounting would "help restore market sanity with much less government intervention" (Wesbury & Stein, 2008, p. 2).

Similarly, McTeer (2009) posited that by allowing banks to re-label their securities as held to maturity rather than held for sale, the large capital losses that these banks have been forced to report could be reversed.

Many of the early concerns regarding fair value accounting became the reality during the economic crisis of 2008. The normally active market for mortgage-backed securities and similar assets were became inactive as the sub-prime mortgage crisis decreased investor confidence in the value of such securities. In

addition, the values of these assets were marked down to reflect the prices actualized during fire sales of these securities by distressed banks.

However, these lower values did not reflect the fact that most of the mortgages would be paid in full and that bank management intended to hold these securities to maturity. A full discussion of the possible relation between the implementation of fair value accounting and the credit crunch can be found in Ryan (2008).

The criticism of mark-to-market accounting was directed at FAS 157, the statement of the Financial Standards Accounting Board's [FASB] statement that provided a comprehensive clarification of the application of fair value accounting to different categories of assets and liabilities. For example, William Isaac, former FDIC chairman, in his statement at the SEC roundtable on mark-to-market accounting, said, "I believe one of the biggest culprits [of the economic crisis] is mark-to-market accounting promulgated in recent years by the Financial Accounting Standards Board and accepted by the SEC (the guidance provided under SFAS 157 has been particularly devastating)" (SEC, 2008a).

Similarly, Mendelson, president of Windham Financial Services, wrote in a letter to the SEC during the period of invited comments in their study of mark-to-market accounting, "One of the major trigger points of the current disaster is FASB 157" (Mendelson, 2008). These comments are indicative of the link that was alleged by these critics regarding the implementation of FAS 157 and the subsequent economic crisis.

In the next section, an account of the SEC investigation of FAS 157 and the subsequent actions by legislators and standards setters is provided.

## **A CLOSER LOOK AT FAS 157**

### **SEC Study on FAS 157**

In the fall of 2008, the SEC conducted an in-depth study of mark-to-market accounting under directive from the Emergency Economic Stabilization Act and attempted to determine whether it played a significant role in the global economic crisis that was occurring. It investigated six interrelated issues, including the effect of mark-to-market accounting on balance sheets and on the bank failures of 2008, its impact on the financial information that is made available to investors, and alternatives to the standards set forth in FAS 157.

After a ninety-day investigation, the SEC released a report of its activities and concluded that it would not recommend suspending fair value accounting rules. However, it did recommend, for example, that the FASB provide more comprehensive guidance in the valuation of assets in an inactive or illiquid market and to improve the accounting models used for assessing impairments. Peripherally, the SEC recommended “Educational efforts, including those to reinforce the need for management judgment in the determination of fair value estimates.” (SEC, 2008b).

### **New Guidance on Fair Value Measurement**

Interestingly, the FASB did not hurry to comply with this advice. Congress, under pressure from corporate sponsors, finally threatened the FASB chairman in March that his position would be in jeopardy if the issue was not addressed (Katz & Westbrook, 2009). Following this threat, the FASB responded to the recommendations of the SEC, issued a staff position (FSP 157-4) statement explaining that:

If the reporting entity concludes there has been a significant decrease in the volume and level of activity for the asset or liability in relation to normal

market activity for the asset or liability (or similar assets or liabilities), transactions or quoted prices may not be determinative of fair value (for example, there may be increased instances of transactions that are not orderly). Further analysis of the transactions or quoted prices is needed, and a significant adjustment to the transactions or quoted prices may be necessary to estimate fair value in accordance with Statement 157. (FASB, 2009)

Even though it did provide this and other clarification to the original statement (See FSP 157-3), the FASB continuously asserted that this had been the intent of the original statement, and that this was additional clarification and guidance to assist auditors and preparers in their attempt to apply the fair value measurement guidance.

So what was the problem? Why does it seem that fair-value accounting played a large role, when the SEC decided that it had not, and recommended clarification of FAS 157 rather than is suspension? And what was the hidden factor that resulted in the global financial crisis of 2009?

### **ENRON, SARBANES-OXLEY, FAIR VALUE ACCOUNTING, AND FAS 157**

Fair value accounting is linked on many counts to Enron and the subsequent Sarbanes-Oxley Act. The following sections will summarize these links and will serve as an introduction to the final discussion centering on the role of Enron and Sarbanes-Oxley on the implementation of FAS 157.

#### **Fair Value Accounting and Enron**

The root cause of this drastic misapplication of the rules of fair-value measurement can be traced to the beginning of the decade. Then, fair value accounting - rather, the abuse of fair value accounting - reared its head again in a different context and began

a series of events that played leading roles in the Enron scandal, and ultimately in the implementation of FAS 157 in recent years.

Benston (2006) provided a detailed account of the role of fair-value accounting in the Enron scandal. Enron used Level 3 mark to market accounting in ways that inflated their earnings. For example, projected profits from long-term gas contracts were recorded as soon as they were signed. These profits were calculated using gas prices projected over ten or twenty years.

Although the net value of these contracts was immediately recorded as earnings, the contracting company's inability to pay its obligation was not recorded as a loss (Benston, 2006). The chief accounting officer of Enron consistently revaluated contracts in an effort to increase their fair value so as to meet the CEO's earnings goals. On the other hand, any losses found during these revaluations were not recorded if there was even a small chance that they would be unrealized.

Benston's (2006) account documents the various ways that the fair value method was abused by Enron's decision makers, and warns those in favor of applying fair value measurement across the board of the dangers in such an implementation. Discussions about the implications of fair value accounting in the downfall of Enron is included in Benston & Hartgraves (2002), Thomas (2002), McLean & Elkind (2003), Baker & Hayes (2004), Gwilliams & Jackson (2008). Enron serves as strong case outlining the dangers that fair value accounting methods contain, even in a strong financial market.

Ronen (2008) points out that the use of discounted cash flow valuations is dangerous, since, under FAS 157, the valuations for level 3 use managers' own assumptions about the market price of the asset. Ronen notes that "the valuation is highly subjective and acutely sensitive to changes in assumptions" (p. 186). Further, he explains that it is "extremely difficult, even for a well intentioned auditor, to dispute and reject the projections of a manager wishing to improve the appearance of his financial statements" (p. 186). These pitfalls of fair-value accounting were highlighted during the Enron scandal.

## **Enron and Sarbanes-Oxley**

The passage of the Sarbanes-Oxley act was historical in its clarity and the extent of its legislative impact on the world of financial reporting. Its critics were immediate and many, and Congress was criticized as being overly hasty in its reaction to Enron. One way that the Sarbanes-Oxley act did not address the underlying issues that contributed to the severity of the Enron debacle was the way that it addressed and altered views on fair value accounting.

## **Enron and the Implementation of Fair Value Measurement Rules**

Fair value accounting played an important role in Enron's misuse of financial reporting, and the refinement of fair value accounting application as mandated by the FASB was spurred on in the aftermath of the Enron scandal. This was not backed by research until after the Sarbanes-Oxley Act was signed into law. In fact, Herdman, chief accountant of the SEC, noted that mark-to-market accounting had been used for many years by broker-dealers and that there was no evidence that the Enron scandal resulted from abuse of fair value accounting. He went so far as to say that "the principles of mark-to-market accounting are quite clear in the accounting literature that exists today, and the circumstances under which it should be done" (The Enron Collapse: Impact on Investors and Financial Markets, 2001).

Ironically, there was a push for the more widespread implementation of fair value accounting during the months following the Enron debacle. Proponents of fair value measurement used the case of Enron to promote, rather than discourage, the more widespread implementation of fair value measurements. Walter Schuetze, chief accountant of the SEC, in a prepared statement submitted during a Senate hearing that preceded the passage of the Sarbanes-Oxley Act, stated that

various Members of Congress have said in recent hearings about Enron that a corporation's balance sheet must present the corporation's true economic financial condition. A corporation's true economic financial condition cannot be seen when assets are reported at their historical cost amounts. The only objective way that the true economic financial condition of a corporation can be portrayed is to mark-to-market all of the corporation's assets and liabilities.

Schuetze went further to recommend:

[T]here be a sense of the Congress resolution that corporate balance sheets must present the reporting corporation's true economic financial condition through mark-to-market accounting for the corporation's assets and liabilities. Then I recommend that Congress leave implementation to the SEC, much the way it is done today by the SEC for broker-dealers and mutual funds. (*Accounting and Investor Protection...*, 2002)

Schuetze posited that this would resolve the issue of earnings management by "taking the numbers out of the hands of corporate management," which was a primary issue in the Enron scandal, as well as others of the time. Schuetze's (2004) collected writings and speeches on the topic further these ideas and encourage the complete change of accounting to that of fair value measurement.

Ironically, in spite of the fact that Enron's use of fair value measurement inflated their income and misrepresented their true financial state, Schuetze used Enron as a reason to increase the use of fair value accounting.

### **The Role of Sarbanes-Oxley in the Use of Fair Value Measurement Rules**

At the same time that Schuetze and others promoted a broader use of fair value measurements, many participants in the congressional hearings during the formulation of the Sarbanes-

Oxley Act noted that the story of Enron uncovered the need of more precise guidance from standard-setters in the area of fair value disclosures. Linsmeier's testimony before the House Committee on Financial Services included a list of lessons to be learned from Enron.

One item was the danger of too general accounting rules. Noting that, as yet, there was no evidence that Enron misused mark-to-market accounting, he cautioned that the lack of guidance as to the specifications of determining market value can lead to abuse. Others pointed out that Enron showed the imprecision of fair value estimates in the absence of active, liquid markets, and advised that a low level of confidence in long-term projections should be acknowledged and made public (Are Current ..., 2002; Developments Relating to Enron Corporation, 2002; Accounting and Investor Protection..., 2002).

Thomas Hill of Thomson Financial suggested that one reason that auditors may have been willing to accept the earnings reported by Enron was due to the large portion of Enron's business that was recorded on a mark-to-market basis and was therefore hidden from view, as their nature was not fully disclosed on the balance sheet. Similarly, Sokol of MidAmerican Energy Holdings Corporation stated that "if there was any part of Enron's energy assets that had the potential for abuse, it was that company's domination of the 'mark-to-market' exchange" (Developments Relating to Enron Corporation, 2002).

The versions of the Sarbanes-Oxley Act that were passed by the House Committee on Financial Services as well as by the full House of Representatives in April included a mandate to the SEC to revise its regulations pertaining to financial disclosures. Specifically, the House, in this bill, required the SEC to consider certain alternatives to the then-current methods of disclosure. One of these alternatives was the requirement that issuers of a non-exchange traded contracts should explain their activities when they were required to account for the transactions at fair value but could only estimate that value due to the lack of a market price quotation for that contract (H.R. 3763, 2002).

Such a requirement would make the disclosure of fair value estimation techniques more transparent. Although this item in the bill was not included in the resulting Act that was negotiated between both the House and the Senate and that was signed into law, this clause points to the push for more precise disclosure of fair value measurement methods and the accountability that was desired as a result of the misuse of fair value measurements at Enron.

The SEC did conduct a study mandated by the Sarbanes-Oxley Act to investigate ways to increase transparency in financial reporting. One of the five recommendations offered in the report on the study, released in 2005, was to continue to investigate the “feasibility of reporting all financial instruments at fair value” (SEC Study..., p. 110). They argued that this issue was linked to many of the topics under the study and that its potential benefits outweighed the concerns raised by some.

They acknowledged that one of these concerns, which was the possibility of greater earnings management (on the part of corporate management) and potential for accounting abuse due to management’s role in determining fair market value for inputs that do not rely on quoted prices, was a part of recent scandals (including Enron). However, they still recommended wider application of fair value accounting.

### **The Role of Judgment in FAS 157**

However, standards setters and advocates of fair value measurement argued that FAS 157 did not contain the many evils that were attributed to it. They posited that FAS 157, “of all the accounting standards written in recent decades, brings more judgment into accounting than any other” (SEC, 2008a).

Specifically, the SEC promoted and explained the importance of the use of judgment in determining the value of Level 3 assets. The resulting FASB statement also advocated judgment in determining appropriate selection and application of techniques when valuating Level 3 assets, and that much decision-

making regarding the valuation of these assets was left to the discretion of management.

It explained, for example, that “[d]etermining the appropriateness of valuation techniques in the circumstances requires judgment” (FAS 157, p. 65), and that “the fair value hierarchy focuses on the inputs, not the valuation techniques, thereby requiring judgment in the selection and application of valuation techniques” (FAS 157, p. 68). However, the opening explanation of Level 3 valuations was less explicit. It stated:

[U]nobservable inputs shall reflect the reporting entity’s own assumptions about the assumptions that market participants would use in pricing the asset or liability (including assumptions about risk). Unobservable inputs shall be developed based on the best information available in the circumstances, which might include the reporting entity’s own data. (FAS 157, p. 12)

Raymond Ball argued that the allowance for judgment that was included in FAS 157 was rarely capitalized by management. Rather than taking this course, they explained, bank management more often categorized their holdings as Level 2 assets and used indexes or models to ascertain current market value than dared to venture to Level 3 territory (SEC, 2008a).

Interestingly, the SEC’s report on the effect of fair value accounting on bank’s balance sheets and the bank failures of 2008 lends further credence to this argument. It showed that the majority of assets held by banks were categorized as Level 2 assets (SEC, 2008, p. 76). This may have resulted in the lack of judgment used to value these assets over the course of the fiscal year.

If this was the case, it may be argued that the misapplication of FAS 157, evidenced by the lack of judgment used in the case of inactive markets, rather than the existence and enforcement of this rule, played a pivotal role in the bank failures that ensued.

## **WHAT WAS THE CAUSE OF THE MISAPPLICATION OF FAS 157?**

### **FAS 157 and Sarbanes-Oxley - A Bad Twosome**

With the release of FAS 157 in 2006, the FASB provided a clear demarcation of the three options for determining fair value measurements. Level 3 instruments were to be estimated with the tempering factor of managerial judgment. However, Sarbanes-Oxley, with its strict oversight on the use of managerial judgment in financial reporting, the implementation of strict internal controls to ensure that all issuers were accountable for the methods used to arrive at reported earnings, and the requirement of increased disclosures, put a damper on the use of Level 3 estimates.

As the SEC study found, the majority of assets and liabilities were reported at Level 2, rather than Level 3. In addition, when the market for mortgage-backed securities became inactive, these securities were, under FAS 157, to be reported using Level 3 estimates. However, management did not use judgment in their reporting, due to the fear of the watchdog role of the Public Company Accounting Oversight Board and the consequences of misrepresenting these estimates that were dealt by these watchdog government committees (SEC, 2008a).

Thus, mark-to-market accounting was not to blame. It was the real-life misapplication of an excellent set of guidelines due to the overly strict accountability act that was set into place hastily in the wake of the Enron scandal. With such an act, the accounting standards became ineffective, and the judgment which management needed during the subprime mortgage crisis was not utilized.

### **IMPLICATIONS AND CONCLUSIONS**

The chronology detailed above points to the far-reaching effects of legislative action that relates to financial reporting. The Sarbanes-Oxley Act, considered in conjunction with otherwise

important, carefully considered accounting standards implemented in the wake of one of the most consequential accounting scandals in U.S. history, caused irrevocable damage to the economic stability and makeup of the country.

Although it may be unintentional, the influence that the misapplication of such legislation can be great, and government officials need to carefully consider such consequences prior to its implementation.

Importantly, the effect of the harsh imposition of accounting oversight on the workings of financial reporting in a free market economy has been highlighted in this paper. It may be useful to further research this phenomenon and investigate alternatives to such consequential means of enforcing compliance with GAAP.

## REFERENCES

- Baker, C.R., and Hayes, R., 2004. Reflecting form over substance: the case of Enron Corp., *Critical Perspectives on Accounting* 15 (6-7): 767-785.
- Benston, G. J., and Hartgraves, A.L., 2002 Enron: What happened and what we can learn from it. *Journal of Accounting and Public Policy*, 21 (2): 105–127.
- Benston, G. J., 2006. Fair-value accounting: A cautionary tale from Enron, *Journal of Accounting and Public Policy*, 25 (4): 465-484.
- Bies, S., 2008. Fair value accounting. Speech to the International Association of Credit Portfolio Managers General Meeting, New York, New York. Nov. 18.
- Brady, N.F. Letter to Dennis R. Beresford. 24 March, 1992. Available at: <http://taxesandbudget-blog.ncpa.org/wp-content/plugins/uploads/MTM%20-%20Treasury%20letter%20to%20FASB%20March%2024%201992.pdf> .

- Cifuentes, R., Ferrucci, G., and Shin, H.S., 2005. "Liquidity risk and contagion." *Journal of the European Economic Association*, 3 (2–3): 556–66.
- Greenspan, A. Letter to Richard C. Breeden, 1 November, 1990. Available at: <http://taxesandbudget-blog.ncpa.org/wp-content/plugins/uploads/Greenspan%20letter%20to%20SEC%20November%201990.pdf>.
- Gwilliam, D., and Jackson, R. H. G., 2008. Fair value in financial reporting: Problems and pitfalls in practice: A case study analysis of the use of fair valuation at Enron. *Accounting Forum*, 32 (3): 240-259.
- Financial Accounting Standards Board (FASB), 1991. Disclosures about fair value of financial instruments. Statement of Financial Accounting Standards no. 107. Financial Accounting Standards Board, Stanford, CT.
- Financial Accounting Standards Board (FASB), 1993. Accounting for certain investments in debt and equity securities. Statement of Financial Accounting Standards no. 115. Financial Accounting Standards Board, Stanford, CT.
- Financial Accounting Standards Board (FASB), 1998. Accounting for derivative instruments and hedging activities. Statement of Financial Accounting Standards no. 133. Financial Accounting Standards Board, Stanford, CT.
- Financial Accounting Standards Board (FASB), 2001. Accounting for the impairment or disposal of long-lived assets. Statement of Financial Accounting Standards no. 144. Financial Accounting Standards Board, Stanford, CT.
- Financial Accounting Standards Board (FASB), 2002. Accounting for costs associated with exit or disposal activities. Statement of Financial Accounting Standards no. 146. Financial Accounting Standards Board, Stanford, CT.
- Financial Accounting Standards Board (FASB), 2006. Fair value measurements. Statement of Financial Accounting Standards no. 157. Financial Accounting Standards Board, Stanford, CT.
- Financial Accounting Standards Board (FASB), 2008. Determining the fair value of a financial asset when the market for that

- asset is not active. Staff Position no. 157-3. Financial Accounting Standards Board, Stanford, CT.
- Financial Accounting Standards Board (FASB), 2009. Determining fair value when the volume and level of activity for the asset or liability have significantly decreased and identifying transactions that are not orderly. Staff Position no. 157-4. Financial Accounting Standards Board, Stanford, CT.
- Greenspan, A. Letter to Richard C. Breeden, 1 November, 1990. Available at: <http://taxesandbudget-blog.ncpa.org/wp-content/plugins/uploads/Greenspan%20letter%20to%20SEC%20November%201990.pdf> .
- Gwilliam, D., and Jackson, R. H. G., 2008. Fair value in financial reporting: Problems and pitfalls in practice: A case study analysis of the use of fair valuation at Enron. *Accounting Forum*, 32 (3): 240-259.
- Katz, I. and Westbrook, J., March 30 2009. Mark to market buoys bank profit 20% as FASB may say yes. Retrieved from Bloomberg.com: <http://www.bloomberg.com/apps/news?pid=20601109&sid=awSxPMGzDW38>
- Khan, U. 2009. Does Fair Value Accounting Contribute to Systemic Risk in the Banking Industry? Available at SSRN: <http://ssrn.com/abstract=1327596>
- McLean B., and Elkind, P., 2003. *The amazing rise and scandalous fall of Enron*. New York: Portfolio.
- McTeer, R., 2009. Mark-to-market accounting: Shooting ourselves in the foot. Brief Analysis no. 648 prepared for the National Center for Policy Analysis. Available at: <http://www.ncpa.org/pub/ba648> .
- Mendelson, P.D., 2008. Letter submitted to Securities and Exchange Commission as part of Comments 4-573: Study on Mark-to-Market Accounting. Available at: [www.sec.gov/comments/4-573/4-573.shtml](http://www.sec.gov/comments/4-573/4-573.shtml).
- Plantin, G., Sapra, H., and Shin, H. S., 2004. "Marking-to-market: Panacea or Pandora's box?" Working paper, London School of Economics.

- Ronen, J., 2008. To fair value or not to fair value: A broader perspective. *Abacus*, 44: 181–208.
- Ryan, S. G., 2008. Fair value accounting: Understanding the issues raised by the credit crunch. White paper prepared for the Council of Institutional Investors.
- Sarbanes-Oxley Act, 2002. Pub.L. 107-204, 116 Stat. 745.
- Schuetze, W.P., 2001. What are assets and liabilities? What is true north? (Accounting that my sister would understand), *Abacus*, 37(1), 1-25.
- Schuetze, W.P., 2004. *Mark to Market Accounting: 'Truth North' in Financial Reporting*. P. W. Wolnizer (Ed.), Routledge.
- Securities and Exchange Commission (SEC). 2008a. Roundtable on Mark-to-Market Accounting. (Prepared statement and testimony of William Issac, testimony of Raymond Ball).
- Securities and Exchange Commission (SEC). 2008b. Report and recommendations pursuant to section 133 of the Emergency Economic Stabilization Act of 2008: Study on mark-to-market accounting. Office of the Chief Accountant, Division of Corporate Finance, December 30.
- Taylor, W. Letter to Dennis R. Beresford, 2 March, 1992. Available at: <http://taxesandbudget-blog.ncpa.org/wp-content/plugins/uploads/MTM%20-%20FDIC%20letter%20to%20FASB%20March%202%201992.pdf>.
- Thomas, C.W., 2002. The rise and fall of Enron. *Journal of Accountancy*, 193 (4): 41-48.
- U.S. House of Representatives. 1990. Nomination of Richard C. Breeden. Hearings before the Senate Subcommittee on Housing, Banking, and Urban Affairs, 101<sup>st</sup> Congress, 1990. (Testimony of Richard C. Breeden). Washington, D.C.: Government Printing Office.
- U.S. House of Representatives. 2001. The Enron Collapse: Impact on Investors and Financial Markets: Hearings before the House Committee on Financial Services Subcommittee on Capital Markets, Insurance and Government Sponsored

- Enterprises Subcommittee on Oversight and Investigations, 107<sup>th</sup> Cong. Washington, D.C.: Government Printing Office.
- U.S. House of Representatives. 2002a. Developments Relating to Enron Corporation: Hearings before the House Committee on Energy and Commerce, 107<sup>th</sup> Cong. (Testimony of David L. Sokol, Bala G. Dharan). Washington, DC: Government Printing Office.
- U.S. House of Representatives. 2002b Are Current Financial Accounting Standards Protecting Investors? Hearings before the House Committee on Energy and Commerce Subcommittee on Commerce, Trade, and Consumer Protection, 107<sup>th</sup> Cong. (Testimony of Grace L. Hinchman, Robert K. Herdman, Thomas J. Linsmeier). Washington, DC: Government Printing Office.
- U.S. House of Representatives. 2002c. Corporate and Auditing Accountability, Responsibility, and Transparency Act of 2002, passed by the House Committee on Financial Services on April 16, 2002 [H.R. 3763]. Washington, DC: Government Printing Office.
- U.S. House of Representatives. 2002d. Corporate and Auditing Accountability, Responsibility, and Transparency Act of 2002, passed by the House of Representatives on April 24, 2002 [H.R. 3763]. Washington, DC: Government Printing Office.
- U.S. Senate. 2002. Accounting and Investor Protection Issues Raised by Enron and Other Public Companies: Oversight of the Accounting Profession, Audit Quality and Independence, and Formulation of Accounting Principles: Hearings before the Senate Committee on Banking, Housing, and Urban Affairs, 107<sup>th</sup> Cong. (Testimony of Dennis R. Beresford). Washington, DC: Government Printing Office.
- Wesbury, B.S. and Stein, R., 2008. Mark to market mayhem. Available at:  
[http://www.ftportfolios.com/Commentary/EconomicResearch/2008/9/25/mark-to-market\\_mayhem](http://www.ftportfolios.com/Commentary/EconomicResearch/2008/9/25/mark-to-market_mayhem) .

Zancanaro and Ramond, 2008. Letter submitted to Securities and Exchange Commission as part of Comments 4-573: Study on Mark-to-Market Accounting. Available at: [www.sec.gov/comments/4-573/4-573.shtml](http://www.sec.gov/comments/4-573/4-573.shtml).