

Analysis of Asset Valuation Measurement Methods in the Perspective of Forensic Accounting—A Case Study of Financial Fraud in Enron Corporation, USA

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Abstract: Judicial forensic accounting, as one of the types of forensic accounting, aims to identify specific financial accounting facts related to litigation cases. In the issue of asset valuation, the measurement method of asset valuation is an essential aspect that cannot be ignored. The choice of measurement methods played a significant role in the shocking Enron financial fraud case, a former energy giant in the United States. Taking the Enron financial fraud case as an example, this paper analyzes the issue of asset valuation measurement methods under the perspective of judicial forensic accounting to provide references for asset valuation identification.

Keywords: Judicial Accounting; Identification; Asset Valuation; Measurement

1. Introduction

Judicial forensic accounting, as an important category in the field of judicial appraisal, plays a broad role in economic crime and economic dispute litigation^[1]. The accuracy of identification opinions has a decisive impact on the fairness and impartiality of case trial results and judgments. Asset value refers to the amount of assets expressed in value form, reflecting the net worth of an enterprise. However, under different asset valuation measurement methods, the reflection of asset value varies^[2].

This paper takes the Enron financial fraud case as an example, using relevant principles and methods of judicial forensic accounting^[3], focusing on the issue of asset valuation measurement methods. It studies the different impacts of various measurement methods on asset valuation identification, providing references for asset value identification.

2. Asset Valuation Methodology Overview

Assets are the primary means of measuring value. Understanding a company's financial position is essential in determining its value. However, the valuation of assets can vary depending on the assumptions used during the assessment. Due to various reasons, entities in financial accounting predominantly use historical cost, revalued amount, realizable value, and present value to express the original value of assets, thus affecting the identification of asset valuation issues.

Currently, historical cost and fair value are two core measurement methods. Fair value is mainly used in the measurement of financial assets and liabilities, while other asset items generally adopt historical cost measurement. When using fair value measurement, asset book values are essentially consistent with or close to market value. In the context of historical cost measurement, following the prudence principle, asset values remain unchanged when they rise, and impairment provisions are made when asset values decrease, resulting in asset book values usually being lower than market value^[4].

3. Analysis of Financial Fraud Case of Enron Corporation in the United States

3.1 Case Overview

As one of the world's largest energy, commodities, and services companies, in October 2001, the financial fraud case of the American energy giant Enron Corporation was exposed. Its stock price plummeted from a high of \$90 per share to less than \$1, leading to delisting of stocks and declaration of bankruptcy.

After the scandal broke, the auditing firm Arthur Andersen, one of the world's five largest accounting firms that provided auditing services to Enron, was investigated by the U.S. Securities and Exchange Commission (SEC) and was eventually forced to dissolve.

The main accounting issues at Enron involved overestimating profits and underestimating liabilities through the use of Special Purpose Entities (SPE) and inflating profits by using the Mark-to-Model Accounting method and other fair value accounting methods. As this article primarily focuses on exploring the application of asset valuation methods in forensic accounting, the following sections will mainly introduce the Mark-to-Model Accounting method.

At that time, Enron's balance sheet contained many illiquid assets with difficult-to-determine fair market values. Due to valuation challenges, the company employed an internally discretionary valuation method, overstating income and profits, misleading investors and regulatory bodies, ultimately leading to the company's bankruptcy and significant investor losses.

3.2 The impact of asset valuation methods on the Enron fraud case.

In the case of Enron's financial fraud, the application of asset valuation methods was one of the key factors leading to the fraud. The selection and application of these valuation methods directly impacted the company's asset value and profit levels. Enron employed the "mark-to-market accounting method" during its operations, valuing assets based on market values^[5].

In general, most companies base their profit calculations on the business volume completed in the current year multiplied by the corresponding remuneration, minus the costs incurred in the current year, to determine the profits for that year. However, the mark-to-market valuation method differs in approach.

For instance, if a company signs a 10-year contract with a customer that is already deemed to have a market value equivalent to the total expected profits over the next 10 years, adopting the mark-to-market valuation method allows the profits of the next 10 years to be advanced and recognized in the current year, ultimately boosting the current year's profit. This practice seems theoretically sound as long as the contracts signed in the current year are dutifully fulfilled, enabling the recognition of this income in the current year while continuing the subsequent work progressively. However, this calculation approach should be based on the recognition of the contractual value by all parties, complying with the concept of fair value.

Many financial companies commonly utilize this method due to specific calculation models for assessing contractual values, which receive general acceptance as fair values. However, such practices may not be entirely suitable for industrial companies like Enron, where the valuation of natural gas contracts primarily depends on the company's subjective judgment rather than objective calculation models.

Simultaneously, due to the impact of fair value on the recognition of asset book value, upon approval of this measurement method by the Securities Regulatory Commission, Enron obtained a tool to modify the books, creating an illusion of continuously increasing book value^[6].

The significance of asset value measurement methods on asset valuation and related recommendations.

4. The significance of asset value measurement method to asset value appraisal and related suggestions

4.1 Importance of focusing on asset value measurement methods

In forensic accounting appraisal, different valuation methods applied to asset valuation and recognition issues can lead to vastly different asset valuation results. Fair value affects the historical cost value of assets as well as the recognition of asset book value. For example, Enron in the United States inflated profits and raised its stock price by using a market value measurement method during financial fraud, which not only damaged investors' interests but also severely affected market order.

In addition, in recent years, China has continuously strengthened the supervision of corporate financial statements, and higher requirements have been proposed for the application of fair value, using relevant regulations to constrain companies to enhance the authenticity and reliability of financial statements and protect investors' legitimate rights and interests.

4.2 Recommendations for asset value identification

In cases where fair value affects the historical cost value of assets and the recognition of asset book value, different treatments should be applied in forensic accounting appraisal.

In the process of asset original value identification, if there is specific evidence sufficient to confirm the specific composition of the

acquisition cost, the original value of the asset should be recognized based on the cost components. If corresponding evidence cannot be provided, it is recommended that the inspecting party use an assessment approach to determine the fair value of the asset.

During the asset book value assessment process, for financial accounting entities that have already established book values using fair value, a professional judgment needs to be made regarding the basis and process of fair value determination. If there are no obvious unreasonable circumstances, the book value shall be recognized based on fair value. In the presence of evident unreasonable situations, different scenarios can be addressed as follows:

4.2.1 Lack of calculation basis or presence of significant errors in the calculation basis

In situations where there is evidence to support a reasonable calculation basis, accounting errors can be confirmed while the assessment continues^[7].

4.2.2 Absence of calculation basis without sufficient evidence for a reasonable calculation basis

During the assessment of the book value of a specific asset, if it is found that the original fair value lacks adequate calculation basis and there is no evidence to support a reasonable calculation basis, a qualified conclusion can be drawn, treating the missing calculation basis of that asset value as an additional determining condition. When assessing the book value of a specific asset, if the original fair value calculation lacks basis and there is no evidence for a reasonable calculation, the book value assessment should be terminated. The “Termination of Assessment Notice” should clearly indicate this accounting error. However, if there is evidence of the specific cost of acquiring the asset, the book value can be confirmed based on the cost calculation method under accounting standards.

4.2.3 Presence of certain errors in the calculation process

If errors are found in the original fair value calculation process, the assessment can continue while confirming the accounting errors.

In conclusion, in forensic accounting appraisal, accurate assessment of fair value is crucial. Appraisers need to pay more attention to the valuation methods of assets used by the appraised company in its daily operations and look for issues in its daily records. By carefully examining the company’s daily records, appraisers can uncover potential anomalies, thereby revealing possible financial fraud issues, upholding market integrity, and safeguarding investor rights.

5. References

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