PacificCPE

COURSE
11652A

Fraud Investigation, Detection Procedures, and Auditor Liability

Knowing a number looks wrong is only half the battle — determining whether it reflects fraud or an honest mistake is where the real skill comes in. This course dives into advanced detection procedures, practical frameworks for distinguishing intentional fraud from error, and strategies for assessing and minimizing auditor liability. You'll also learn to recognize key financial statement fraud indicators before they escalate. Ideal for auditors, forensic accountants, and any professional who needs to evaluate the integrity of financial reporting.

CREDIT HOURS 2 | FIELD OF STUDY AUDITING | EXAM QUESTIONS 8

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LEARNING ASSIGNMENTS AND OBJECTIVES

Assignment

- Study the full course materials included here.
- Complete the review questions after each chapter.
- Answer 8 final exam questions.
- Final exam is scored immediately, 70% or better passes.
- Certificate of completion is available in your account.
- Failed exams can be retaken free of charge.

Course Objectives

- Identify various detection procedures for financial statement fraud.
- Recognize characteristics of fraud and an honest mistake.
- Identify audit techniques for identifying financial statement fraud.
- Recognize various asset-based, revenue-based, and expense/liability-based fraudulent schemes.

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Chapter 1: OTHER DETECTION PROCEDURES

Chapter Objective

After completing this chapter, you should be able to:

- Identify various detection procedures for financial statement fraud.

ANALYSIS UTILIZING MULTIPLE RATIOS

Using single ratios as an indicator of fraud can be valuable. There is some evidence, however, that using a blend of several ratios can be an even more reliable method of detecting fraud than any single ratio alone.

The M-Score

In his 1999 article, "The Detection of Earnings Manipulation," Messod Beneish describes a blended formula, called the M-Score, that may be useful in detecting financial statement fraud. The formula was based on an evaluation of the financial statements of a sample of companies that had engaged in earnings manipulation. In particular, the financial statements of the first period in which earnings manipulation occurred were compared to the preceding year's financial statements.

The M-Score described by Beneish is a weighted blend of eight different indexes, each measuring the change in a ratio from one year to the next. The eight indexes utilized in the M-Score are as follows:

1. **DSRI = Days' Sales in Receivables Index.** This is the ratio of the current year's days' sales in receivables to that of the prior year, expressed as the following formula, where CY stands for current year and PY stands for prior year:
2. **GMI = Gross Margin Index.** This is the ratio of the prior year's gross margin to that of the current year, where an index of less than 1 means that margins have declined.
3. **AQI = Asset Quality Index.** This is the ratio of the current year's non-current assets other than property and equipment to total assets to that of the prior year.
4. **SGI = Sales Growth Index.** This is the ratio of the current year's sales to that of the prior year.
5. **DEPI = Depreciation Index.** This is the ratio of the rate of depreciation expense for the prior year to that of the current year.

6. **SGAI = Sales, General, and Administrative Expenses Index.** This is the ratio of current year's sales, general, and administrative expenses to that of the prior year.
7. **LVGI = Leverage Index.** This is the ratio of total debt to total assets for the current year to the same ratio of the prior year.
8. **TATA = Total Accruals to Total Assets.** This is the ratio of total accruals (defined as the change in working capital accounts other than cash, less depreciation) to total assets.

The eight-factor M-Score is calculated as follows:

An M-Score of greater than –2.22 (i.e., a less negative score, such as –1.50) indicates a strong likelihood of financial statement fraud.

There is also a five-factor version of the M-Score. This version, developed after further research, excludes SGAI, DEPI, and LVGI based on the conclusion that these three indexes were less significant than the other five. The five-factor M-Score is calculated as follows:

In the paper, "Financial Statement Fraud Detection Using Ratio and Digital Analysis," Maria L. Roxas put the five-factor and eight-factor versions of the Beneish model to the test using more current data, focusing solely on revenue recognition frauds disclosed in SEC AAERs issued between December 1999 and June 2008. 116 such AAERs were identified for this study, which concluded that the five- factor version of the M-Score (with a benchmark of greater than –2.76) was a more reliable predictor of revenue recognition earnings manipulation than the eight-factor version (with a benchmark of greater than –2.22).

The F-Score

In their article, "Predicting Material Accounting Misstatements," Dechow, Ge, Larson, and Sloan present another model that utilizes multiple financial statement variables as a basis for predicting misstatements (not necessarily those caused by fraud, but misstatements in general). The authors studied 2,190 SEC AAERs issued from 1982 to 2005. The variables used were classified as follows:

1. Accruals quality related variables (nine variables, including change in receivables, percentage soft assets, etc.)
2. Performance variables (five variables, such as change in return on assets and others)
3. Nonfinancial variables (two variables: abnormal change in employees and abnormal change in order backlog)

4. Off-balance-sheet variables (four variables, including existence of operating leases, expected return on pension plan assets, etc.)
5. Market-related incentives (eight variables, including leverage, earnings-to-price, and others)

The 28 variables were studied for misstating firms and the authors made several conclusions:

1. Companies with misstatements appear to engage in off-balance sheet financing through leases with greater frequency than firms without misstatements.
2. Agreater percentage of firms with misstatements have high percentages of their assets in the form of soft assets, which are subject to a greater risk of manipulation.
3. Stock performance of misstating companies tends to be high and these companies are often issuing equity and raising financing around the time of their misstatements.
4. Companies with misstatements tend to have high accruals followed by significant declines in the return on assets ratio during years of misstatements.

Altman Z-Score

The Altman Z-Score, first published in 1968 by Edward I. Altman, has been reliably used as a predictor of bankruptcy. It has also been used as a broader measure of deteriorating financial health by auditors and others involved with financial statements.

The original Altman Z-Score, which focused solely on publicly held manufacturing companies, is calculated by summing the following five elements:

Notice that two of the ratios that comprise the Altman Z-Score (the first and fifth ones) are also strongly correlated to fraud as stand-alone ratios. Altman found that the average score for bankrupt companies was –0.25, while the score for the non-bankrupt group averaged +4.48.

Alternate factors for each of the five ratios were developed for other sectors of the economy. For instance, for private companies, the five ratios would be multiplied by 0.717, 0.847, 3.107, 0.420, and 0.998, respectively.

The Altman Z-Score was found by Kirkos et al. (see Chapter 4 of course 11651A) to have a correlation with financial statement fraud. This should be expected, as many companies involved in financial reporting fraud are doing so to stave off financial deterioration. Kirkos et al. found the mean Z-Score for Greek manufacturers not

involved in fraudulent financial reporting to be 1.990. The mean Z-Score for companies found to have engaged in fraudulent financial reporting was 0.778.

RATIOS INVOLVING NONFINANCIAL DATA

The ratios described so far all involve amounts from the financial statements.Another extremely valuable method of detecting fraud is through the use of ratios that involve nonfinancial data. Pairing financial amounts with relevant nonfinancial data often reveals clear signs of fraud. For example, analysis may involve dividing annual sales or revenue by any or all of the following factors:

- Number of employees
- Square footage of a store or warehouse
- Quantities of items sold
- Number of customers
- Number of sales transactions

Likewise, analyzing cost of goods sold or other categories of expense using these nonfinancial statistics can be quite revealing.

Part of the value of analyzing ratios involving nonfinancial data is that perpetrators of fraud normally either do not have the ability to falsify the nonfinancial data or they do not think to do so. The difficulty in using this type of analysis is that access to relevant nonfinancial data may be limited.

The key to successful use of this technique is to identify appropriate nonfinancial measures that should be expected to have a predictable relationship with a financial amount. What makes these ratios so valuable is that rarely does the perpetrator of a financial reporting fraud have the ability (or the awareness) to manipulate both the financial statements and the nonfinancial statistics in equal proportions.

For example, let’s say we are evaluating whether a fair value accounting fraud has been perpetrated in connection with a particular intangible asset. The potential fraud involves a failure to record an impairment loss on the intangible asset. Depending on the type of intangible asset, potentially useful ratios to consider include the following:

- Book value of the asset/Revenue derived from the asset
- Book value of the asset/Units of production derived from the asset
- Amortization expense/Units of production derived from the asset

Much like any of the ratios described in this chapter, customized ratios do not prove that a fair value accounting fraud has occurred. These ratios, when properly designed

and compared over time, merely indicate that something unexpected has occurred. But that something just might be your first clue that you are on the trail of a major fraud involving the misapplication of fair value accounting. If you miss that clue, the opportunity to detect the fraud may be missed.

OTHER INFORMATION AND DISCLOSURES IN FINANCIAL STATEMENTS

In the preceding sections, select ratios, as well as some of the related note disclosures, were examined. There are, however, certain additional disclosures in the financial statements, those that are not associated with any of the specific ratios covered thus far, which can also provide valuable insight into whether a financial statement fraud exists.

Who Performed the Audit?

The first disclosure found in an audit report is not the footnote disclosures to the financial statements. It is the name of the auditor, an important piece of information. Turnover in the independent firm that audits a company's financial statements has been associated with financial reporting fraud. Chen and Elder found a mean number of changes in external auditor of 0.1900 in the 97 companies with financial statement fraud, compared to a mean of 0.0150 in the 467 companies without fraud. This indicates that the risk of financial reporting fraud appears to be much higher in the year of auditor changes, perhaps due to one of the following reasons:

1. The new firm was not as familiar with all of the systems, internal controls, and accounting treatments in its first year of working with a new client.
2. Disagreements over accounting treatment with a predecessor firm led to the switch to a new firm that was more likely to agree with management (i.e., opinion shopping).

Indications of disagreements with auditors or shopping around for an auditor who appears more likely to agree with accounting positions taken by a company should be viewed as suspicious.

Cash Flows from Operating Activities

Another disclosure that can help to identify financial statement fraud can be found on the statement of cash flows, which classifies a company's cash flows into three categories: operations, investing, and financing. When cash flows from operations are significantly lower than income from operations reported on the income statement, readers should immediately analyze the statements carefully, as this has been an indicator of fraud in many cases.