Professional Education Services, LP

Detecting Fraud in Financial Statements

#7170C

COURSE MATERIAL

Professional Education Services, LP
The Professional's Choice for Quality CPE.
4208 Douglas Blvd. • Suite 50
Granite Bay, CA 95746 • www.mypescpe.com
1-800-998-5024 • Customer Service: 1-800-990-2731
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CHAPTER 1: DISCLOSURE FRAUD

Chapter Objective

After completing this chapter, you should be able to:

- Recall various types of disclosure fraud.

Prior to reading any financial statements, readers should always consider the valuable information provided in the notes to the financial statements. The same can be said for fraud investigators – study the notes. The notes may be a source of a financial statement fraud, but they may also provide useful clues about other fraud that affects amounts reported in the financial statements.

A thorough description of the disclosure requirements, and the associated red flags of fraud, would require a voluminous text of its own. So, the approach taken in this course is to provide a framework for evaluating note disclosures and to explore only a handful of the most likely suspects in the category of disclosure fraud.

There are four general types of notes that can be found in the financial statements:

1. **Policies.** Many of the notes, usually some of the first ones following the core financial statements, provide information about the accounting policies and methods used in preparing the financial statements. These notes provide answers to some of the most important questions associated with evaluating statements for the risk of fraud. For instance, what inventory flow model does the company utilize? For which assets has an election been made to carry at fair value? What are the ranges of useful lives used in depreciating and amortizing property and equipment and intangible assets? What methods are utilized in the recognition of revenue?

2. **Composition of accounts.** The notes often provide details of amounts that appear as a single line item in the core financial statements. For example, a line item "Investments" appearing on the balance sheet may be associated with a note disclosure listing the categories and amounts of investments held, such as equities, fixed income securities, and so on. Some accounting standards are rather specific regarding the level of detail that must be disclosed, while others provide more general guidance, such as by stating that an "appropriate" level of useful disaggregation should be disclosed in the notes. Another example of this type of disclosure is the schedule of future maturities of long-term debt.

3. **Additional information about items in the statements.** In addition to further quantitative data about items in the financial statements, the notes are also used to provide descriptive information about certain amounts. For example, a long-term debt note should also provide a description of any collateral associated with loans. An important disclosure in this category pertains to related party transactions. Another important category of

disclosures in this area is for changes in accounting methods and changes in accounting estimates.

4. **Information about items not in the financial statements.** Certain disclosures are required for information that does not relate to a specific amount reported in the financial statements. This is particularly true in the case of commitments that an entity has at the end of the year. In addition, important events that occur after the balance sheet date (the last day of the entity's reporting period) but before the date of the auditor's report (which coincides with either the date the financial statements were issued or the date the statements were available to be issued) must be disclosed.

As each line item or section of the financial statements is reviewed, the corresponding sections of the notes should be read carefully. Keep in mind that the notes themselves may be fraudulent or they may provide clues as to a fraud that directly affects certain line items of the financial statements.

CATEGORIES OF DISCLOSURE FRAUD

Disclosure frauds can be classified in the following manner:

- **Omissions.** Failing to disclose information required by an accounting standard represents a departure from U.S. GAAP or IFRS. Most commonly, omissions involve some negative piece of information, such as failure to disclose pending litigation against a company, the subsequent financial troubles of a major customer, or other information that would cast an adverse light on the entity.

- **Incomplete disclosures.** Certain issues are too public or too important to avoid altogether. So, an unscrupulous company may try to soften any negative publicity by leaving out a few important details, or by leaving out a negative aspect of an otherwise positive event.

- **Misrepresentations of information presented in the notes.** Some notes to financial statements contain outright inaccurate information.

- **Confusing disclosures.** While confusing descriptions provided in the notes may not be a fraud itself, it is often a sign of some underlying fraud or of an omission of information.

A useful technique in evaluating the risk of financial statement fraud is to compare the notes in the current year financial statements with the notes of the prior year. Look for changes from one year to the next. Each of the following disclosures can provide clues regarding financial reporting fraud risks:

- Changes in accounting estimates (useful lives of depreciable assets, estimates of uncollectible accounts receivable, fair value estimates, etc.)

- Changes in accounting methods (methods of depreciation, revenue recognition, methods used in measuring fair values of assets, etc.)

- Changes in descriptions of the nature of a company's operations (e.g., disclosures of new or discontinued products, opening of new locations, etc.)
- Notes indicating acquisitions or dispositions of affiliates or lines of business

COMMON DISCLOSURE RISKS

The remainder of this chapter will be devoted to explaining some examples of disclosures that tend to be the most vulnerable to fraud. There are many disclosures required under U.S. GAAP and IFRS. A complete discussion of fraud risks associated with each required disclosure would fill a large text of its own. So, the approach in this course is to focus on some specific risks that illustrate a few of the most common disclosure frauds, starting with an example of the most common type – the omission of required disclosure data.

Loss Contingencies

The primary reason for omitting a required disclosure is that the disclosure would provide negative information to the readers of the financial statements. For example, the requirement to accrue liabilities for certain loss contingencies was explained. However, as noted, not all loss contingencies are required to be recorded as liabilities. Some contingencies that are not recorded are instead disclosed in the notes to the financial statements. There are two situations in which loss contingencies that are not required to be accrued must be disclosed in the notes:

1. Loss contingencies that have at least a reasonable possibility of occurring
2. Cases in which an exposure to loss in excess of the amount accrued exists and there is at least a reasonable possibility of this additional loss being incurred

In either of these cases, a company should disclose the nature of the loss contingency and an estimate of the possible amount of the loss, or a range of losses if that cannot be determined.

Commitments

Unlike a contingency, a commitment represents a known obligation normally associated with a future outflow required under an existing contract or lease. For example, minimum future lease obligations must be disclosed in the notes, even though this liability is not reported on the balance sheet (unless certain criteria are met, and the overall treatment of leases is currently in the process of undergoing change).

An example of a failure to disclose a commitment is included in the case involving Vivendi Universal, S.A., a French company whose financial statements were prepared in accordance with French GAAP, but also included U.S. GAAP-based disclosures. Vivendi had stock traded on the EuroNext Paris, S.A. as well as on the New York Stock Exchange during the time covered by this case, from 2000 to 2002.

Among a series of charges against Vivendi was the allegation that the company failed to disclose a major commitment. The commitment originated in February 2001, when Vivendi and the Moroccan government allegedly entered into an agreement that required Vivendi to purchase shares of Maroc

Telecom, a Moroccan telecommunications operator, in February 2002 for approximately €1.1 billion. In 2000, Vivendi had acquired a 35 percent interest in Maroc Telecom. This additional commitment to acquire an another 16 percent interest was not disclosed in Vivendi's financial reports filed in 2001 and early 2002.

Related Party Transactions

As noted in other sections of this course, transactions with related parties are often susceptible to misstatement. In fact, the concern over the reporting of related party transactions has risen to the point that in February 2012, the PCAOB proposed a new auditing standard focused solely on the evaluation, accounting, and disclosure of related party transactions.

These transactions require separate disclosure in the notes to the financial statements. An exception from disclosure applies under U.S. GAAP for compensation paid to related parties. This exception does not apply under IFRS, and IAS 24 specifically requires disclosure of compensation and benefits provided to related parties.

ASC 850 requires disclosure of material related party transactions, including all of the following:

1. Nature of the relationship
2. Description of the transactions, including transactions to which no amounts or nominal amounts were ascribed, for each period for which income statements are presented
3. Such other information deemed necessary to an understanding of the effects of the transactions on the financial statements
4. Amount of the transactions for each of the periods for which income statements are presented and the effects of any change in the method of establishing the terms from that used in the preceding period
5. Amounts due from or to related parties as of the date of each balance sheet presented and, if not otherwise apparent, the terms and manner of settlement

IAS 24 requires disclosure of the nature of related party transactions, as well as amounts of the transactions and amounts of outstanding balances at year-end.

A significant majority of public companies (75 percent in a 2003 Wall Street Journal study) disclose the existence of related party transactions. Most of these disclosures are fully compliant with the accounting standards. So, the challenge, then, is to weed out the inaccurate disclosures. Even more challenging is the detection of omitted disclosures.

The most common disclosure fraud risk associated with related parties is the failure to disclose transactions with these parties. Secondarily, misrepresentations regarding the nature of the related party or incomplete disclosures pertaining to the nature of related party transactions are additional risks.

Two cases provide illustrations of how fraud in the form of non-disclosure is carried out.

A fascinating case involving allegations of failing to disclose related party transactions is that of the Anglo Irish Bank and loans made by the bank to the chair and another member of its board of directors. As expected, Anglo Irish Bank disclosed its "Loans to Directors" in its year-end financial statements. However, loans estimated at €87 million at the end of fiscal year ended September 30, 2008 were not disclosed. The reason – shortly before year-end, the loans were paid off, usually by transferring them to another entity. Then, immediately after year-end, the loans were transferred back onto the books of Anglo Irish Bank. This temporary removal of related party balances, which purportedly took place from 2000 to 2008, might arguably meet an exception from disclosure of the balance at year-end. But, most experts would agree that disclosure of this practice and the existence of the transactions themselves should have been made in the notes to Anglo Irish Bank's financial statements.

The scandal over Anglo Irish Bank's circular transactions and failures to disclose began with the CEO's admission in December 2008, but then progressed to nationalization of the bank in 2009 and additional investigations, including assertions that the auditors were negligent.

In May 2012, China Natural Gas, Inc. (CHNG) was charged with concealing the related party nature of two short-term loans totaling $14.3 million. CHNG is based in the People's Republic of China and is a distributor of natural gas through fueling stations owned by affiliates. In January 2010, CHNG made two loans totaling $14.3 million and reported the loans as being made to unrelated third parties. In fact, the beneficiary of both loans was a real estate company that was 90 percent owned by the son of CHNG's chairman and former CEO and 10 percent by a nephew. In one of the loans, an individual served as a sham borrower in order to conceal the true nature of the loan to the real estate company. In light of CHNG's total reported assets of just over $200 million, this failure to disclose the related party loans was considered to be a material misstatement of the financial statements. As part of the scheme, CHNG provided a fraudulent legal opinion from its legal counsel to CHNG's auditors as additional support for the assertion that the loans were to unrelated third parties when the auditors questioned the loans.

Changes in Accounting Principles

ASC 250 requires disclosure of the following in the financial statements of the period in which a change of accounting principles is made:

1. The nature of and reason for the change, including an explanation of why the newly adopted accounting principle is preferable.
2. The method of applying the change, including all of the following:
   a) A description of the prior-period information that has been retrospectively adjusted, if any.
   b) The effect of the change on income from continuing operations, net income (or other appropriate captions of changes in the applicable net assets or performance indicator), any other affected financial statement line item, and any affected per-share amounts for the current period and any prior periods retrospectively adjusted. Presentation of the effect on financial statement subtotals and totals other than income from continuing operations and net

income (or other appropriate captions of changes in the applicable net assets or performance indicator) is not required.

c) The cumulative effect of the change on retained earnings or other components of equity or net assets in the statement of financial position as of the beginning of the earliest period presented.

d) If retrospective application to all prior periods is impracticable, disclosure of the reasons therefore, and a description of the alternative method used to report the change.

3. If indirect effects of a change in accounting principle are recognized, then both of the following shall be disclosed:

   a) A description of the indirect effects of a change in accounting principle, including the amounts that have been recognized in the current period, and the related per-share amounts, if applicable.

   b) Unless impracticable, the amount of the total recognized indirect effects of the accounting change and the related per-share amounts, if applicable, that are attributable to each prior period presented.

IFRS disclosures for changes in accounting principle are found in IAS 8 and are substantially similar to U.S. GAAP, requiring disclosure of the nature of the change, the reasons that application of the new policy provides reliable and more relevant information, and the adjustment for each financial statement line item affected for the current reporting period and each prior reporting period presented, as well as the adjustment relating to periods before those presented.

One excellent example that illustrates the difference between an omitted disclosure and a misleading one involves Raytheon. In a 2006 complaint, the SEC claimed that from 1997 through 1999, Raytheon prematurely recognized revenue on a subsidiary’s sale of unfinished aircraft through improper bill and hold transactions. As a result, the company materially overstated its net sales by approximately $80 million at year-end 1997 and $110 million at year-end 1998, which led to 13 percent overstatements in the annual operating income of the subsidiary in both of these periods. The SEC noted that although “Raytheon did restate for these material errors at year-end 1999, the company misleadingly attributed the restatement to additional ‘clarification’ supposedly provided by ‘new guidance’ on revenue recognition recently issued by the Commission in Staff Accounting Bulletin No. 101 (“SAB 101”) instead of the improper accounting practices that had occurred at RAC, an aircraft manufacturing subsidiary, prior to that time.”

The proper disclosure by Raytheon would have been to describe the change as a correction of an error made in the previous financial statements, rather than by suggesting that it was caused by a change from one acceptable method of accounting to a new one prescribed by the SEC.

Changes in Accounting Estimates

A change in accounting estimate is defined as a change that has the effect of adjusting the carrying amount of an existing asset or liability or altering the subsequent accounting for existing or future assets or liabilities. A change in accounting estimate is a necessary consequence of the assessment of the present status and expected future benefits and obligations associated with assets and liabilities. Changes in accounting estimates result from new information. Examples of items for which estimates are necessary are uncollectible receivables, inventory obsolescence, useful lives and residual values of depreciable and amortizable assets, and warranty obligations.

ASC 250 notes that a change in a valuation technique or its application does not represent a change in accounting estimate. ASC 250 requires disclosure of changes in accounting estimates that will impact future periods.

IAS 8 requires disclosure of the following for a change in accounting estimate that has an effect on the current financial statements or that is expected to have an effect on future financial statements:

1. The nature of the change.
2. The amount of the change (or, if applicable, the fact that the amount of the effect on future periods is not disclosed because estimating it would require undue cost or effort).

Subsequent Events

Subsequent events are events that occur after the end of the reporting period but before the date that the financial statements are available to be issued (for SEC filers, subsequent events are events occurring up through the date that the financial statements are issued).

U.S. GAAP for subsequent events is found in ASC 855, while IFRS is found in IAS 10. Certain subsequent events require retroactive recognition in the financial statements (called adjusting events under IFRS). Others do not require recognition (known as nonadjusting events), but must be considered for possible disclosure in the notes to the financial statements.

Under both U.S. GAAP and IFRS, subsequent events that require retroactive recognition are those events that provide additional evidence about conditions that existed at the date of the balance sheet.

ASC 855 provides an example of an event requiring retroactive recognition in the form of a loss on an uncollectible trade account receivable resulting from a customer's deteriorating financial condition leading to bankruptcy subsequent to the balance sheet date. This event would be indicative of conditions existing at the balance sheet date, requiring adjustment of the financial statements before their issuance. On the other hand, a similar loss resulting from a customer's major casualty such as a fire or flood subsequent to the balance sheet date would not be indicative of conditions existing at the balance sheet date and adjustment of the financial statements would not be appropriate.

IAS 10 provides additional examples of adjusting events occurring after the reporting period:

- The settlement after the reporting period of a court case that confirms that the entity had an obligation at the end of the reporting period.
- The receipt of information after the reporting period indicating that an asset was impaired at the end of the reporting period, or that a previously recognized impairment loss should be adjusted.

- The determination after the reporting period of the cost of assets purchased, or the proceeds of assets sold, before the end of the reporting period.
- The discovery of fraud or errors that show the financial statements are incorrect.

Subsequent events that are not to be recognized are those events that provide evidence about conditions that did not exist as of the balance sheet date. For subsequent events that are not to be retroactively recognized, the determination of whether or not to disclose the event is based on whether the event is considered to be material. Disclosure should be made if the financial statements would be misleading if the event was not disclosed.

ASC 855 provides the following examples of nonrecognized subsequent events that require disclosure to the financial statements:

- Sale of a bond or capital stock issue
- Purchase of a business
- Settlement of litigation when the event giving rise to the claim took place subsequent to the balance sheet date
- Loss of plant or inventories as a result of fire or flood

Two important disclosures must be made in notes with respect to material subsequent events that have not been retroactively recognized in the financial statements:

1. The nature of the event
2. An estimate of the event's financial effect, or a statement that such an estimate cannot be made

CHAPTER 1: TEST YOUR KNOWLEDGE

The following questions are designed to ensure that you have a complete understanding of the information presented in the chapter (assignment). They are included as an additional tool to enhance your learning experience and do not need to be submitted in order to receive CPE credit.

We recommend that you answer each question and then compare your response to the suggested solutions on the following page(s) before answering the final exam questions related to this chapter (assignment).

1.	**There are four general types of notes that can be found in the financial statements. Which of the types often provides details of amounts that appear as a single line item in the core financial statements:** **A.** policies **B.** composition of accounts **C.** additional information about items in the statements **D.** information about items not in the financial statements
2.	**Softening negative publicity by leaving out the important details can be classified as which category of disclosure fraud:** **A.** confusing disclosures **B.** incomplete disclosures **C.** misrepresentations of information presented in the notes **D.** omissions
3.	**In a 2003 Wall Street Journal study, what percentage of public companies disclose the existence of related party transactions:** **A.** 40 **B.** 50 **C.** 65 **D.** 75

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CHAPTER 1: SOLUTIONS AND SUGGESTED RESPONSES

Below are the solutions and suggested responses for the questions on the previous page(s). If you choose an incorrect answer, you should review the pages as indicated for each question to ensure comprehension of the material.

1.	**A.** Incorrect. Policy notes, usually some of the first ones following the core financial statements, provide information about the accounting policies and methods used in preparing the financial statements. **B.** **CORRECT**. The composition of accounts type of note often provides details of amounts that appear as a single line item in the core financial statements. An example of this type of disclosure is the schedule of future maturities of long-term debt. **C.** Incorrect. In addition to further quantitative data about items in the financial statements, the notes are also used to provide descriptive information about certain amounts. **D.** Incorrect. These disclosures are required for information that does not relate to a specific amount reported on the financial statements. *(See pages 1 to 2 of the course material.)*
2.	**A.** Incorrect. Confusing disclosures may not be a fraud itself, but it is often a sign of some underlying fraud or of an omission of information. **B.** **CORRECT**. Certain issues are too public or too important to avoid altogether; so, an unscrupulous company may try to soften any negative publicity by leaving out a few important details, or by leaving out a negative aspect of an otherwise positive event. **C.** Incorrect. Some notes to financial statements contain outright inaccurate information. **D.** Incorrect. Failing to disclose information required by an accounting standard represents a departure from U.S. GAAP or IFRS. *(See page 2 of the course material.)*
3.	**A.** Incorrect. 75%, not 40%, of public companies disclose the existence of related party transactions. **B.** Incorrect. 75%, not 50%, of public companies disclose the existence of related party transactions. **C.** Incorrect. 75%, not 65%, of public companies disclose the existence of related party transactions. **D.** **CORRECT**. 75% of public companies disclose the existence of related party transactions. Most of these disclosures are fully compliant with accounting standards. So, the challenge, then, is to weed out the inaccurate disclosures or detect the omitted ones. *(See page 4 of the course material.)*

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CHAPTER 2: DETECTING FINANCIAL STATEMENT FRAUD

Chapter Objective

After completing this chapter, you should be able to:

- Identify methods for detecting financial statement fraud.

The detection and investigation of financial statement fraud involves the following 10 steps:

1. Understanding whether the behavioral conditions are ripe for fraud, primarily by determining whether there is a strong incentive present for individuals to engage in fraudulent financial reporting
2. Identifying the presence of fraud risk indicators (red flags); these are the symptoms that exist when certain financial reporting frauds are occurring
3. Considering whether there are weaknesses in internal controls that could make it easier for financial reporting fraud to be carried out without detection in the normal course of business
4. Performing analytical procedures geared toward the identification of financial statement fraud, such as ratio and trend analysis
5. Engaging in targeted analysis of journal entries, since most financial reporting fraud is either carried out or covered up through the use of nonstandard journal entries
6. Following up on and assessing the information gathered to determine whether there are clear signs of fraudulent financial reporting
7. Assessing whether the financial statements are materially misstated as a result of noncompliance with U.S. GAAP or IFRS (or another acceptable basis of accounting)
8. Digging deeper into additional evidence to determine whether there is evidence of intentional circumvention of internal controls and intentional misstatement of financial reports
9. Determining who is involved and how long the scheme has been going on
10. Assessing whether any external parties may have willingly participated in the scheme (e.g., vendors or customers) or may otherwise have liability (e.g., the possibility that auditors failed to detect the fraud as a result of performing a substandard audit)

Whereas the first four parts of this course have explored how financial statement frauds are perpetrated and whether a scheme violates the accounting principles, this final part is devoted to the other aspects of detection and investigation.

MOTIVES FOR FINANCIAL STATEMENT FRAUD

An essential element of detection is a thorough understanding of the environment in which a perpetrator operates. Noted criminologist Donald R. Cressey (1919–1987) studied white collar criminals and concluded that three factors are normally present when fraud is perpetrated:

1. A pressure (i.e., motive, incentive) to commit the act.
2. An opportunity (real or perceived), which normally manifests itself as a weakness in the design or the operation of one or more internal controls.
3. A rationalization for the act.

These three factors became known as the fraud triangle. Initially, the fraud triangle was first applied in connection with asset misappropriations, where the motive behind the act is often an unbearable financial pressure. However, the fraud triangle also applies to financial statement fraud, where the motive behind the fraud may be one involving direct financial gain, but may also involve other factors.

Therefore, the first step in evaluating an environment is to gain an understanding of the reasons behind the perpetration of financial statement fraud. Because when these motives are present, the risk of fraud increases.

- **To meet earnings expectations.** Many of the cases studied in this course began with actual earnings or revenues lagging behind the expectations of internal management (i.e., budgets and forecasts) and external parties, such as stock analysts. Failing to meet these expectations often results in the stock price dropping, as analysts express disappointment in the financial stability of a company. But, even when a company is not publicly traded, falling short of expectations can be a strong motivator for financial statement fraud. Earnings expectations may be set by individual owners, parent companies, joint venture partners, or other parties.
- **To satisfy borrowing requirements.** Financial institutions place reliance on a company's financial statements for purposes of lending, as well as monitoring ongoing compliance with debt covenants. Financial statement fraud may be perpetrated for several loan-related reasons:
  - To qualify for a new loan or an increase in a loan limit (especially in connection with asset-based loans)
  - To qualify for a preferred (lower) rate of interest
  - To qualify for more lenient terms, such as having to pledge less collateral
  - To avoid default triggered by violating a loan covenant

Each of these incentives is accompanied by more than just a risk of overstating the profits of a company. A variety of factors are considered by a financial institution when lending money to a company. As a result, the risk of fraudulent financial reporting can involve misstating a current or quick ratio, cash flows from operations, earnings as adjusted for certain items (such as interest, depreciation, taxes, etc.), or a variety of other financial measures.

- **To qualify for bonuses or other compensation incentives.** Senior management may be eligible for a variety of lucrative incentives by achieving certain financial targets, such as total revenue levels or profitability. Some companies have introduced various measures of cash flows into the list of factors that determine whether someone earns an incentive, thereby lowering certain financial statement fraud risks and raising others. Understanding these incentives is critical to evaluating where the risk of fraud exists.

- **To maximize a price in an acquisition.** When management considers selling the company, the risk of financial reporting fraud increases. Often the sales price is based on some element of reported profits or gross revenue. Therefore, the more financially healthy the company appears, the bigger the payoff for the current owners. This can be the case with privately held businesses as well as publicly traded companies.

- **To maximize a stock price in an initial public offering.** When a company issues stock, a primary driver in establishing its price is its recent pattern of growth and profitability. Therefore, the years leading up to such offerings are prime candidates for financial reporting fraud.

- **To appear stable.** Wild fluctuations in profits are never viewed as kindly as steady growth, whether the readers of the financial statements are investors, bankers, potential buyers, or even private owners. Showing steady growth makes a company appear well-managed. And this can lead to fraudulent financial reporting in an effort to maintain that appearance. Interestingly, this incentive also introduces the risk of understating profits. In several cases described in this course, companies were found to have hidden revenues that should have been recognized in one year by establishing reserves so that the revenue could be recognized in a future period. This risk is heightened when a company is enjoying a particularly strong year, creating an incentive to "save" some of the current year's revenue as a hedge against less than stellar performance in the future.

- **To reduce the value of a business in divorce cases.** Speaking of the risk of understating financial performance, this risk is also present in connection with divorce and certain other division of property cases, in which there may be an incentive to make a company appear less valuable than it really is.

FRAUD RISK INDICATORS

Fraud risk indicators associated with each of the major categories of financial statement fraud are provided in the Appendix. The indicators in the Appendix are scheme-specific (or category-specific).

However, other fraud risk indicators are broader or entity-wide in nature. Examples include internal control risk indicators, described in the next section.

INTERNAL CONTROL INDICATORS

The most commonly applied model for designing and auditing internal controls was developed by the Committee of Sponsoring Organizations (COSO). The COSO model involves five interrelated components of internal control:

1. Control environment
2. Risk assessment
3. Control activities
4. Information and communication
5. Monitoring

These components can be considered broadly, such as on an entity-wide basis. But they can also be considered in relation to specific aspects of an entity's operations:

1. By function (e.g., human resources, information technology, etc.)
2. By location
3. By division or department
4. By subsidiary
5. By accounting cycle (e.g., payroll, purchasing, cash receipts, inventory, etc.)

There are three goals of a system of internal controls:

1. Reliability of financial reporting
2. Compliance with laws and regulations
3. Operational efficiency and effectiveness

The important goal in this course is the first one – reliability of financial reporting. Think back to Cressey's fraud triangle, which states that three conditions are normally present when fraud occurs. One of those factors is an opportunity (real or perceived) to commit a fraud and not be detected.

The focus in this section is on internal controls over financial reporting. When those internal controls are strong, the opportunity to commit and conceal financial statement fraud is lowered. Therefore, a careful consideration of the five interrelated components of internal control can refine an assessment of the risk of financial reporting fraud.

A thorough consideration of all five components of internal control is beyond the scope of this book. Instead, the focus of this section will be on highlighting some of the characteristics of internal controls that are most often found to be weak in connection with financial statement fraud cases, using the COSO model as our guide.

Control Environment

The control environment represents the overall control consciousness of an entity. The expression "tone at the top" is sometimes used in reference to certain important elements of the control environment. The control environment establishes a structure and theme for other elements of internal control. Specific control environment factors that are most relevant to financial statement fraud include the following:

- The philosophy and operating style of management and the board of directors, especially as it relates to risk-taking and aggressiveness of financial reporting positions (i.e., does management focus so heavily on profitability or revenue growth that their discussion expands from looking at ways of improving operations to looking into which accounting treatment could help to achieve objectives?).
- The operation of a trusted whistleblower system, whereby employees would feel comfortable in reporting violations of the code of conduct without fear of retaliation (it should be noted that tips reported by employees are considered the most effective tool in detecting fraud in general).
- A board of directors, audit committee, and finance committee that are independent from management, empowered with the tools necessary to discharge their duties, and properly engaged in and committed to fulfilling their oversight roles (note: as required under the Sarbanes-Oxley Act, but also advisable for companies not subject to the Act, committees should include individuals with sound knowledge of financial reporting).
- Management's respect for the functions of internal and external auditors and those charged with the responsibilities of setting accounting policies and preparing financial statements.
- Clear assignment of job duties and establishment of organizational structure (note: vague organizational structure is consistent with environments in which it is acceptable for nonfinancial personnel to have unreasonable levels of involvement in accounting and financial reporting duties).
- Human resources policies and practices that include proper background screening of employees involved in all key accounting and financial functions (note: several of the individuals involved in the cases described in this course had previous criminal convictions or other warning signs that would have been discovered in a proper background check).
- A commitment to ongoing training for all employees involved in the accounting and financial reporting functions to ensure a high level of technical competence (note: in some of the cases described in this course, an environment was present in which one or two individuals dominated an unskilled team of accountants).

Risk Assessment

Risk assessment is the process of identifying and assessing relevant risks to the achievement of an entity's objectives. As it relates to financial reporting, factors involved in risk assessment include the following:

- Proper assignment of responsibilities for the identification and assessment of risks involving financial reporting
- Identification and assessment of the applications of estimation (e.g., fair value measurements, establishment of useful lives, etc.) in the financial statements
- Identification and assessment of external factors that could impact financial reporting, such as declines in quoted stock prices, introduction of new competitors or new products of competitors, new technology, and so on
- Identification and assessment of changes in laws, regulations, or accounting standards that could impact financial reporting
- Identification and assessment of risks associated with the introduction of new personnel, including outside contractors, or information systems that affect accounting and financial reporting systems

Control Activities

Control activities are the policies and procedures applied to carry out the specific functions of an organization. This is the element of internal control that most people think of when they are asked about internal controls. Specific factors involving control activities pertaining to financial reporting include the following:

- Segregation of duties, such as the separation of functions involving the determination of fair value, the estimation of percentage of completion, inventory, and the review of financial statements
- Controls designed to make sure that management cannot override established controls (note: the circumvention of internal controls by management personnel is a common theme in many of the fraud cases profiled in this course)
- Procedures in place to implement new accounting standards issued by FASB and IASB
- Procedures in place to review significant new transactions (such as business acquisitions and mergers, joint ventures, and so on) for proper application of relevant accounting standards
- Requiring proper supporting documentation for all accounting entries, especially all nonstandard (nonrecurring) journal entries
- Periodic review of nonfinancial assets for signs of impairment

- Review and approval of the selections of methods used in the determination of fair value, as well as the application of those methods
- Information technology hardware and software controls designed to prevent unauthorized access to all systems and leave an appropriate audit trail
- Due diligence in the selection and monitoring of outside consultants and vendors used in any accounting or financial reporting capacity (e.g., third-party specialists such as appraisers)
- Verifying the independence of third-party valuation specialists used by the entity

Information and Communication

Information and communication consist of the processes utilized to record and report transactions and to maintain accountability over assets and liabilities of an entity. Important elements of information and communication include the following:

- Retention of proper supporting documentation for all transactions and journal entries
- Accurate and timely information is available to those who need it in making determinations regarding accounting estimates, such as fair value measurements, asset impairments, collectibility of receivables, percentage of completion, and so on
- Critical accounting issues (e.g., fair value accounting issues and other estimates) and their treatment are properly disclosed and explained to the finance committee, audit committee, and/or board of directors
- Adequate resources are provided for the thorough research of external data useful in accounting and financial reporting (e.g., industry benchmarks, fair value comparisons, etc.)
- Adequate channels of communication (e.g., hotlines, etc.) are provided for the reporting of allegations of accounting improprieties, such as financial reporting fraud, by whistleblowers
- Employees are properly informed regarding the information they are requested to provide to those in charge of accounting and financial reporting
- Accounting system provides for the proper collection and reporting of information needed to comply with accounting standards, including all information necessary for disclosure in the notes to the financial statements
- Proper record retention and destruction policies and practices

Monitoring

Monitoring represents the process of assessing the quality of internal controls over time. Monitoring assesses both the design and the operation of internal controls over financial reporting. Important elements of monitoring may include the following:

- Ongoing account reconciliations and reviews of reconciliations
- Comparisons of financial results with budget
- Benchmarking of financial performance against entities with similar operations
- Ongoing ratio and trend analysis
- A robust internal audit function that assesses the performance of internal controls over financial reporting
- Proper ongoing communication with the entity's external auditors
- Periodic special studies of internal controls, especially in connection with specialized aspects of accounting, such as fair value measurements, assessment of inventory obsolescence, and so on
- Periodic special audits of procurement involving the selection of vendors used in any accounting or financial reporting function (e.g., valuation specialists)
- Periodic special audits of IT security relevant to accounting and financial reporting
- Monitoring the performance of third parties that are relied upon for accounting or financial reporting functions
- Monitoring the performance of joint ventures partners that are not consolidated or part of the entity's own internal control system

CHAPTER 2: TEST YOUR KNOWLEDGE

The following questions are designed to ensure that you have a complete understanding of the information presented in the chapter (assignment). They are included as an additional tool to enhance your learning experience and do not need to be submitted in order to receive CPE credit.

We recommend that you answer each question and then compare your response to the suggested solutions on the following page(s) before answering the final exam questions related to this chapter (assignment).

1.	**Which of the following is <u>not</u> one of the three factors of the fraud triangle:** **A.** a pressure to commit the act **B.** an opportunity **C.** a rationalization for the act **D.** a desire to commit the act
2.	**Which of the following is an example of a control activity:** **A.** proper assignment of responsibilities for the identification and assessment of risks involving financial reporting **B.** segregation of duties **C.** retention of proper supporting documentation for all transactions and journal entries **D.** comparisons of financial results with budget

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CHAPTER 2: SOLUTIONS AND SUGGESTED RESPONSES

Below are the solutions and suggested responses for the questions on the previous page(s). If you choose an incorrect answer, you should review the pages as indicated for each question to ensure comprehension of the material.

1.	**A.** Incorrect. A pressure to commit the act is one of the three factors of the fraud triangle. **B.** Incorrect. Having an opportunity is one of the three factors of the fraud triangle. **C.** Incorrect. A rationalization for the act is one of the three factors of the fraud triangle. **D.** CORRECT. A desire to commit the act is not one of the three factors of the fraud triangle. *(See page 14 of the course material.)*
2.	**A.** Incorrect. Proper assignment of responsibilities for the identification and assessment of risks involving financial reporting is part of risk assessment, which is the process of identifying and assessing relevant risks to the achievement of an entity's objectives. **B.** CORRECT. Segregation of duties is a control activity. Another example would be to require proper supporting documentation for all accounting entries, especially all nonstandard journal entries. **C.** Incorrect. Retention of proper supporting documentation for all transactions and journal entries is part of information and communication, which consist of the processes utilized to record and report transactions and to maintain accountability over assets and liabilities of an entity. **D.** Incorrect. Comparisons of financial results with budget is part of monitoring, which represents the process of assessing the quality of internal controls over time. *(See pages 18 to 19 of the course material.)*

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CHAPTER 3: FINANCIAL STATEMENT ANALYSIS

Chapter Objective

After completing this chapter, you should be able to:

- Recall analytical techniques to detect fraud.

USE OF ANALYTICAL TECHNIQUES TO DETECT FRAUD

Financial statement fraud normally leaves a trail that an alert reader can use to detect the fraud. Unfortunately, that trail is often very muddled with immense amounts of information, most of which simply represents legitimate changes in a company's operations. As noted in Chapter 2, for every fraud risk indicator, there is a possible non-fraud explanation.

The challenge for us, then, is to create a reliable set of procedures for detecting fraud in its earliest stages, starting with the use of fraud risk factors but also incorporating other techniques.

One of the most useful techniques for detecting fraudulent financial reporting is financial statement analysis, the subject of this chapter as well as Chapters 4 and 5. While financial statement analysis is also useful in detecting asset misappropriations, the focus here is on its application to detecting financial statement fraud.

HORIZONTAL ANALYSIS

Horizontal analysis involves the comparison of data across multiple time periods. In its most basic application, current results and account balances are compared to those of the prior reporting period. Comparing actual results with budgeted amounts for the same period is another form of horizontal analysis. This analysis should be performed not only for revenues and expenses, but also for asset and liability accounts.

Generally, material variances in current year balances from either prior year amounts or budgeted amounts should be investigated. More often than not, there are legitimate reasons behind such variances, such as changes in prices, the economy, or strategy. But, these variances may also be an indicator of manipulation in the accounting records. Sudden, unexplained changes in account balances from period to period are a common indicator of fraud (either an asset misappropriation or a financial reporting fraud). For example:

- Unexplained increases in property and equipment could be a sign of improper expense capitalization (especially when the increase is not associated with known growth or expansion activities)
- Large increases in sales coupled with a similarly large increase in accounts receivable could be a sign that fictitious revenue has been recorded

- An unchanged balance in intangible assets could raise the question of whether impairment losses have been ignored, especially if reported revenue associated with such assets is flat or declining (this illustrates the importance of identifying unchanging balances, not just unusual changes, as red flags of fraud)

A useful extension of horizontal analysis is to compare results over several periods, which may identify long-term trends. While some indicators become apparent by simply comparing one period to the preceding period, others are more gradual and take time to reveal themselves.

Explanations of variances between actual and budgeted amounts should be a standard element of internal control present in all entities. If this is not being performed, a material weakness in internal controls is likely present.

Another consideration in performing horizontal analysis is to determine what, if any, level of account grouping is most likely to be useful. Horizontal analysis can be done on many different grouping levels:

- On an account-by-account basis (i.e., without grouping any accounts together)

- Rolling up similar objective categories of accounts together (e.g., instead of comparing rent expense, utilities expense, facilities maintenance, and other similar costs separately, group all occupancy-related costs together)

- Grouping revenues and expenses together by division or by functional area

- Grouping revenues and expenses together by geographic location

- Grouping revenues and expenses together by manager – this can be particularly useful when individual managers have input into the development of accounting estimates

Performing horizontal analysis on a few different levels of account groupings is more likely to detect fraud than limiting the analysis to company-wide data.

VERTICAL ANALYSIS

Vertical analysis involves measuring a single account, or a group of accounts, as a percentage of some larger total. It can be used to measure the composition of a total or subtotal. Examples of vertical analysis include the following:

- Measuring office supplies expense (or any other category of expense) as a percentage of total operating expenses

- Measuring the total expenses of one division as a percentage of total expenses of an entire company

- Measuring revenue from one type of product as a percentage of total revenue

Similar to horizontal analysis, vertical analysis should be performed from different angles. It can be performed using different types of groupings:

- On a line item by line item basis, comparing each element of revenue to total revenue, each item of expense to total expenses
- Grouping accounts that have similar characteristics
- Grouping accounts by region, by division, by manager, or some other useful shared characteristic

Vertical analysis is useful for detecting changes in the composition of a group of accounts over time. This, in turn, can be useful in detecting fraud. For example:

- Changes in the composition of a company's revenue (the percentage of revenue associated with each product or service) may indicate nothing more than the increasing or decreasing popularity of certain of the company's offerings. However, if the changes involve products or services that are bundled together for sale to customers, these changes could be a sign that the company is changing its method of allocating revenue among the multiple deliverables associated with a bundled offering.
- Changes in the composition of operating expenses in a manner in which depreciation and amortization expense represents a decreasing percentage of total expenses could mean that some of a company's assets in service have reached the end of their useful lives but are still providing value, or that other types of costs have increased. But it could also mean that the company is assigning unrealistically long useful lives to its depreciable assets or that it is improperly classifying some of its intangible assets as indefinite life assets.
- Unexplained increases in gross profit (sales minus cost of goods sold) could be a sign of several of the fraud schemes described in this course, in particular those that overstate sales (e.g., fictitious sales) or that understate cost of goods sold (e.g., inventory inflation schemes).

There is always a story behind changes in the composition of accounts as revealed through vertical analysis. Internal auditors, external auditors, and investigators must dig to find the true reasons behind these variances. As with most red flags, these variances are often explained by reasons that have nothing to do with fraud. There are many other factors that can cause a variance, such as the economy, success or failure of marketing efforts, internal efficiencies (or inefficiencies), etc. But when financial statement fraud occurs, one or more of these indicators are also normally present.

BUDGET VARIANCE ANALYSIS

A budget should serve as a reliable expectation of a company's performance. If a budget is prepared under a strong system of internal controls, it can provide a solid tool for the detection of fraud.

If a company's actual operating results differ materially from budgeted amounts, this variance should be explored. But, the exploration must be done carefully. Explanations for budget variances are most reliable when the source of the explanation is not in a position to perpetrate and conceal a fraud. An independent source is always best. For instance, if a company has budgeted a certain amount for writing inventory off the books due to obsolescence each year, based on historical patterns, and in the current year none has been written off, who is in the best position to provide the most accurate answer to this question? The person responsible for recording the journal entries or the chief financial officer could be the very individuals who are attempting to inflate the value of the company's inventory. If an inventory valuation scheme is in the works, these individuals could be involved and will, therefore, lie about the reason for the budget variance. However, a warehouse employee in charge of taking inventory and who observes inventory on a daily basis, is more apt to provide a thorough and accurate answer to an inquiry about this variance. In fact, the fraud risk associated with warehouse employees is more likely to be some form of inventory misappropriation scheme, in which case these individuals would be more prone to saying that inventory should be written off due to obsolescence. So, verification by these individuals that inventory is not obsolete may be more reliable than a representation from someone else.

One of the inherent flaws in budget analysis is that the budgets may be prepared by people in a position to perpetrate financial reporting frauds. In such cases, it is possible that the budget itself is an unreliable benchmark to which actual results should be compared. Additionally, as seen in several cases in this course, financial statement fraud often involves creating fraudulent entries in order for a company to achieve its budgeted results. In these cases, budget variances will not appear.

Finally, one additional caution in using budget variance analysis as a detection tool is that once a fraud has begun, if operating results from one year are used as a basis for establishing future budgets, a company can actually begin budgeting for fraud without this fact being apparent to individuals not involved in the fraud.

CHAPTER 3: TEST YOUR KNOWLEDGE

The following question is designed to ensure that you have a complete understanding of the information presented in the chapter (assignment). It is included as an additional tool to enhance your learning experience and does not need to be submitted in order to receive CPE credit.

We recommend that you answer the question and then compare your response to the suggested solution on the following page before answering the final exam question(s) related to this chapter (assignment).

1.	**Which analytical technique to detect fraud involves the comparison of data across multiple time periods:** **A.** horizontal analysis **B.** vertical analysis **C.** variance analysis **D.** budget variance analysis

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CHAPTER 3: SOLUTIONS AND SUGGESTED RESPONSES

Below is the solution and suggested responses for the question on the previous page. If you choose an incorrect answer, you should review the page(s) as indicated for the question to ensure comprehension of the material.

1.	**A.** CORRECT. Horizontal analysis involves the comparison of data across multiple time periods. In its most basic application, current results and account balances are compared to those of the prior reporting period. **B.** Incorrect. Vertical analysis involves measuring a single account, or group of accounts, as a percentage of some larger total. **C.** Incorrect. This is not an actual analytical technique. **D.** Incorrect. A budget should serve as a reliable expectation of a company's performance. If a budget is prepared under a strong system of internal controls, it can provide a solid tool for the detection of fraud. *(See page 25 of the course material.)*

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CHAPTER 4: RATIO ANALYSIS

Chapter Objective

After completing this chapter, you should be able to:

- Recognize various ratio analysis tools.

In Chapter 3, basic financial statement analysis was introduced in the form of vertical and horizontal analysis. In this chapter, more advanced forms of ratio and data analysis will be explained.

Use of operating ratio analysis is one of the most reliable methods of detecting financial statement fraud. These ratios are most likely to detect fraud when the fraud impacts the numerator and denominator in a proportion that differs from the normal (properly stated) ratio. For example, if the carrying amount of current investments has been overstated as a result of recording fraudulent gains in connection with nonexistent increases in fair value, the entity's current ratio (current assets divided by current liabilities) would be artificially inflated (or an expected deterioration would not occur). Of course, there are numerous other explanations for an improved current ratio, most of which do not involve fraud. But, unexplained changes in key ratios, especially when this occurs with respect to multiple important ratios, should always be investigated, as this may be the first warning sign of a financial reporting fraud.

RESEARCH ON RATIO ANALYSIS

Many books and articles have been written on the subject of ratio analysis as a tool in detecting financial reporting fraud. Most focus on basic horizontal and vertical analysis, or on some of the commonly used financial ratios. Many ratios have the potential for detecting fraud. But which ones actually have been proven to have a direct link to fraudulent financial reporting? That is the challenge.

Numerous academic studies on financial statement fraud have been conducted and were reviewed for this course. However, two of these studies have particular relevance to this chapter and have been chosen for citation in this course:

1. "Fraud Risk Factors and the Likelihood of Fraudulent Financial Reporting: Evidence from Statement on Auditing Standards No. 43 in Taiwan," by Ken Y. Chen and Randel J. Elder, December 2007, hereinafter cited as "Chen and Elder."

2. "Data Mining Techniques for the Detection of Fraudulent Financial Statements," by Efstathios Kirkos, Charalambos Spathis, and Yannis Manolopoulos, from *Expert Systems with Applications* 32 (2007), hereinafter cited as "Kirkos et al."

These studies were chosen for two reasons. First, they provide extremely relevant analysis that correlates certain ratios with financial statement fraud. In addition, each study utilizes non-U.S. data, helping to balance the U.S. data and reports of fraud used elsewhere in this course. Other studies and papers will be introduced in Chapter 5.

Chen and Elder studied the correlation of certain financial ratios to the three elements of Donald Cressey's fraud triangle:

1. Pressures or incentives
2. Opportunities
3. Rationalizations

The population used for Chen and Elder's study consisted of 97 Taiwanese companies that were subject to financial restatements mandated by the Securities and Futures Bureau between 1996 and 2006 (similar to Accounting and Auditing Enforcement Releases issued in the United States by the SEC). These 97 companies were contrasted with 467 companies in which no financial reporting fraud was reported.

Kirkos et al. studied 38 Greek manufacturing firms where there was published proof of involvement in issuing fraudulent financial statements. These 38 companies were matched with 38 firms that did not possess any characteristics of fraudulent financial reporting (i.e., there were no published reports of fraud) in order to determine the degree of correlation of certain ratios to the existence of financial statement fraud.

As with any red flag of fraud, the existence of an anomaly in connection with any ratio can often be explained with many reasons that have nothing to do with fraud, such as changes in operations, cost structures, and so on. However, when anomalies are detected, auditors and investigators should consider the risk of fraud and then proceed to consider the non-fraud reasons for each anomaly. As each non-fraud reason is considered and eliminated, the risk of fraud grows.

USE OF OPERATING RATIO ANALYSIS TO DETECT FINANCIAL STATEMENT FRAUD

The use of vertical and horizontal analysis, explained in Chapter 3, is well established as a technique for detecting financial reporting fraud. However, simple horizontal and vertical analysis is limited in their ability to detect fraud. More sophisticated ratio analysis is often much more reliable in detecting the red flags associated with financial statement fraud. Some of the most useful operating ratios for detecting are covered in this section.

Operating ratios that could be of use in detecting financial statement fraud can be classified as follows:

1. Liquidity ratios
2. Activity ratios
3. Leverage ratios
4. Profitability ratios

Liquidity Ratios

Liquidity ratios measure an entity's ability to meet its short-term obligations with its short-term assets.

There are two commonly used liquidity measures – the current ratio and the quick (or acid-test) ratio.

$$\text{Current ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

The current ratio is the most commonly used liquidity measure. It assesses an entity's ability to satisfy current liabilities, which include all short-term claims of creditors, with any of the current assets held at the reporting date.

$$\text{Quick (acid-test) ratio} =$$

$$\frac{\text{Cash} + \text{Cash Equivalents} + \text{Short} - \text{Term Investments} + \text{Accounts Receivable}}{\text{Current Liabilities}}$$

The quick ratio takes a slightly different view of liquidity than does the current ratio. Instead of measuring an entity's ability to pay its creditors using any of its current assets, the quick ratio assesses this ability using only the most liquid of current assets. For example, since prepaid expenses cannot be used to pay a creditor, these current assets are excluded from the numerator of the quick ratio.

Either of the liquidity measures can be useful when assessing the risk of fraud. Short-term investments, in particular, can be subject to fluctuations in fair value and are therefore a target for fraudulent reporting. Other potential current assets and current liabilities with fraudulent accounting implications are receivables, certain derivatives, inventory, current portions of debt obligations, accounts payable, and several others described in this course.

Activity Ratios

Activity ratios, sometimes called efficiency ratios, indicate how effectively an entity utilizes its assets. Some of the more commonly used activity ratios are as follows:

$$\text{Accounts receivable turnover} = \frac{\text{Annual Net Sales}}{\text{Average Accounts Receivable}}$$

$$\text{Days outstanding in accounts receivable} = \frac{365}{\text{Average Receivable Turnover}}$$

$$\text{Inventory turnover} = \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$$

$$\text{Average age of inventory} = \frac{365}{\text{Inventory Turnover}}$$

$$\text{Days payables outstanding} = \frac{365}{\text{Cost of Sales/ Average Accounts Payable}}$$

$$\text{Total asset turnover} = \frac{\text{Net Sales}}{\text{Average Total Assets}}$$

$$\text{Fixed asset turnover} = \frac{\text{Net Sales}}{\text{Average Fixed Assets}}$$

$$\text{Intangible asset turnover} = \frac{\text{Net Sales}}{\text{Average Intangible Assets}}$$

$$\text{Related party sales ratio} = \frac{\text{Sales to Related Parties}}{\text{Total Sales}}$$

As with horizontal and vertical analysis, many of these activity ratios become even more valuable if they can be calculated not only on an entity-wide basis, but also by region, location, product line, division, manager, and so on. While all of the preceding ratios are helpful, the following have been proven to show particular correlation to financial statement fraud.

Days Receivables Outstanding

The days receivables ratio, one of the activity ratios introduced in the preceding section, measures the number of days it would take to collect the ending balance in accounts receivable at the average sales per day. This ratio is particularly useful in detecting certain types of frauds. The ratio is calculated as follows:

$$\text{Days receivables outstanding} = \frac{365}{\text{Net Sales/Average Accounts Receivable}}$$

The denominator in this ratio, referred to as accounts receivable turnover, is also a useful ratio in detecting fraud. Overall, this ratio normally remains steady even as sales volume increases or decreases, absent other changes that could affect the ratio. If a company is overstating receivables by carrying uncollectible receivables on the books, the number of days outstanding increases.

If a company is recording fictitious sales, the effect on this ratio varies depending on what part of the balance sheet is affected. If the overstatement in sales is accompanied by a corresponding inflation of accounts receivable, both the numerator and denominator of the receivables turnover ratio are increased by equal amounts. But since the numerator (sales) is a much larger figure than the denominator, the effect on the turnover ratio is to decrease it as fictitious sales are recorded. And since the turnover ratio is the denominator in the days receivables outstanding calculation, the effect of this fraud is to inflate the number of days of receivables outstanding.

If the fictitious sales are recorded elsewhere in the balance sheet (such as by increasing property and equipment), the effect is to lower the number of days of receivables outstanding.

Days Payables Outstanding

This ratio represents the liability side of the number of days in accounts receivable. The ratio is calculated as follows:

$$\frac{365}{\text{Cost of Sales/Average Accounts Payable}}$$

The denominator in this ratio is also referred to as accounts payable turnover. The ratio represents the number of days it would take to pay the ending balance in accounts payable at the average cost of goods sold per day.

It would be expected that this ratio would remain relatively steady as sales and cost of sales increase or decrease, absent some other logical explanation. Unexplained improvements (decreases) in the days payables outstanding ratio could be a sign of understating accounts payable.

Sales to Total Assets

The sales to total assets ratio (also known as asset turnover) is one of the more reliable indicators of fraud. A sudden or continuing decrease in this ratio is often associated with improper capitalization of expenses, which increase the denominator without a corresponding increase in the numerator (keep in mind that overstating sales is most often done by inflating assets, so increases in this ratio have less of a correlation with overstatement of sales than do decreases with false capitalization of costs). Kirkos et al. found that the mean asset turnover ratio in firms with fraudulent financial reporting was 0.699, while the mean for firms without fraud was 1.055, indicating a strong correlation.

WorldCom was not the only expense capitalization scheme to be evidenced by declining sales to total assets ratios. The Livent case of the late 1990s is another excellent example. In Livent's case, changes in this ratio sent a strong signal that costs that should have been reported as expenses were instead improperly capitalized as fixed assets, and that costs were also improperly shifted from asset accounts subject to upcoming expensing to asset accounts that would be carried for longer periods (i.e., deferring of costs to future periods).

The asset turnover ratio is also useful for detecting failures to write off assets (such as uncollectible accounts receivable or obsolete inventory) or failing to record impairment losses on property or intangible assets (covered further in the next subsection).

As with most high-level ratios (ratios based on significant totals and subtotals in a set of financial statements), the asset turnover ratio can be an indicator of more than one type of fraud. Drilling down a bit more into specific accounts or classes is necessary in order to determine the specifics of the fraud.

Sales to Intangible Assets

Intangible assets are assets with no physical presence, but that have value to a company. They can be internally developed (subject to rules regarding whether the costs can be capitalized), purchased separately from third parties, or acquired in connection with a merger with or acquisition of another entity. Most intangible assets are associated with the production of income, such as goodwill, trademarks, copyrights, trade secrets, customer lists, certain contracts, and many others. Some intangible assets may not be associated directly with a specific income stream, but should nonetheless only be carried as an asset if there is some basis for identifying and measuring their value.

As explained earlier, all intangible assets are carried in the financial statements in one of two manners:

1. They are amortized over an estimated useful life.
2. They are not amortized, but are tested for impairment in value every year.

In either case (and it works differently for each of the two categories), if the fair value of the asset declines below the net book value, an impairment loss should generally be recorded. Fair value of an income-producing intangible asset is normally measured using one of several versions of the income approach to valuation, in which fair value is based on the present value of a future income stream.

Thus, intangible assets should be analyzed in the following manner:

1. Increases from one year to the next should be studied:
    a) What types of intangible assets were acquired and how?
    b) Are these assets being amortized over an estimated useful life?
2. No change or a very small reduction in intangible assets from one year to the next should be scrutinized for the possibility of using overly long useful lives or for failing to record impairment losses.
3. Perform ratio analysis on intangible assets as a group and, if possible, on specific assets or categories of assets.

The ratio of sales or revenue to intangible assets provides a measure of how productive intangible assets are. Decreases in this ratio may be a strong sign that intangible assets are declining in usefulness without the required recording of an impairment loss.

Disclosures associated with intangible assets can provide much insight into whether this type of fraud is occurring. Readers of financial statements should expect to see disclosures for all of the following:

- Amounts of intangible assets subject to amortization and amounts not subject to amortization.
- Methods and periods used for amortization.
- Descriptions of major classes of intangibles.
- Estimated amortization expense to be recognized in each of the five years after year-end.
- If an impairment loss has been recognized, the amount of the loss, a description of the impaired asset and the facts and circumstances leading to its impairment, and a description of the method used to determine fair value of the asset.

These disclosure requirements are based on U.S. GAAP, but IFRS rules are very similar in this area.

Of course, missing from these disclosure requirements, and for obvious reasons, is an explanation of why an impairment loss has not been recorded. Management and the external auditor are required to analyze this issue. But a careful analysis of the financial statements may identify a failure to record an impairment loss.

Related Party Sales to Total Assets

While the asset turnover ratio may be an indicator of fraud when it decreases inexplicably, one specific category of sales should be monitored for unexplained increases. The ratio of sales to related parties (affiliates, parent companies, subsidiaries, etc.) was found by Chen and Elder to have a strong correlation to fraudulent financial reporting. In their study, the mean ratio of related party sales to total assets was 0.1285 for companies without fraudulent financial reporting, but jumped to 0.1816 (a 50% increase) with firms that were found to have fraudulent financial statements. Sudden or ongoing increases in this ratio could mean that a company is generating revenue from transactions with affiliated entities, and this revenue could be intentionally overstated due to the close relationship the reporting entity has with these companies.

A useful variation on this ratio is calculated simply by dividing sales to related parties by total sales. This ratio, while not the specific one used by Chen and Elder, measures the proportion of a company's sales that are to related parties. Significant increases in this ratio should be scrutinized carefully as this could be a sign of fraud.

Disclosures pertaining to related party transactions should be closely scrutinized. Requirements for these disclosures were explained in Chapter 1. Incomplete, vague, or confusing note disclosures about related party transactions can be a sign that these transactions are being used to somehow hide a problem or create an image of financial strength when such strength does not exist.

Revenue Composition Analysis

Determining whether revenue has been inflated can be difficult if a company generates revenue from many different types of products and services. Rarely is each category of revenue inflated by the same percentage. Therefore, breaking revenue into various categories and comparing the composition of revenue from period to period is an essential step. Sudden shifts in the composition of revenue can be a sign of fraud.

This is particularly true when a company "bundles" some of its products and services together in transactions in which certain portions of a transaction represent current period income while others must be deferred for recognition in future periods. These multiple-deliverable arrangements have been abused for fraudulent financial reporting purposes on several occasions. For example, the SEC determined that Xerox recognized more than $3 billion in revenue too early between 1997 and 2000 in connection with certain multiple-deliverable arrangements. In the Xerox case, a single lease transaction with a customer would result in three types of revenue: revenue from the equipment itself, revenue from servicing the equipment over the lease term, and financing revenue. Manipulating the allocation of revenue among the three elements resulted in early recognition.

The red flags associated with premature revenue recognition in connection with these multiple-deliverable arrangements include the following:

- Decreases in revenue associated with elements of revenue that are to be recognized in future periods, coupled with increases in revenue associated with revenue elements that are to be deferred and recognized in later periods

- Changes in the description of the revenue recognition methods applied to multiple-deliverable arrangements as explained in the notes to the financial statements

Careful review of the notes is one of the keys to detecting certain methods of fraudulently inflating revenue. In connection with multiple-deliverables, a description of the arrangement and the methods of recognizing each component should be included in the notes.

Leverage Ratios

Leverage ratios provide a measure of solvency of an entity. Strong leverage ratios indicate that an entity is well-prepared for surviving an economic downturn.

$$\text{Debt to equity ratio} = \frac{\text{Total Debt(long-term and short-term)}}{\text{Total Equity}}$$

$$\text{Long-term debt to equity} = \frac{\text{Long-Term Debt}}{\text{Total Equity}}$$

$$\text{Debt to assets} = \frac{\text{Total Debt}}{\text{Total Assets}}$$

$$\text{Equity to assets ratio} = \frac{\text{Total Equity}}{\text{Average Assets}}$$

$$\text{Times interest earned} = \frac{\text{Net Income before Interest and Taxes}}{\text{Interest Expense}}$$

Leverage ratios, while they are very useful tools for analysts, are probably the least valuable of the four categories of operating ratios as a financial statement fraud detection tool. Their use is limited primarily to the detection of fraudulent valuations of debt obligations.

However, two of these ratios have been shown to have a correlation to financial statement fraud:

1. The debt to equity ratio
2. The debt to total assets ratio

Unlike some of the other ratios explained here, neither of these ratios directly predicts a specific type of fraud. However, excessive reliance on debt clearly suggests a company with potentially extreme financial pressures, creating a high expectation of solid earnings and financial health, leading to financial reporting fraud.

Kirkos et al. determined that the median debt to equity ratio of companies with financial statement fraud was 2.706, while non-fraud companies had a median ratio of only 1.075. Likewise, companies with financial statement fraud had a median debt to total assets ratio of 0.629, while this ratio was just 0.437 for companies without fraud.

Profitability Ratios

Profitability ratios measure an entity's record of producing profits for shareholders. Some of the most useful profitability ratios include:

$$\text{Gross profit margin} = \frac{\text{Net Sales} - \text{Cost of Goods Sold}}{\text{Net Sales}}$$

$$\text{Operating profit margin} = \frac{\text{Net Income before Interest and Taxes}}{\text{Net Sales}}$$

$$\text{Net income ratio} = \frac{\text{Net Income}}{\text{Net Sales}}$$

$$\text{Return on equity} = \frac{\text{Net Income}}{\text{Average Stockholders' Equity}}$$

$$\text{Return on assets} = \frac{\text{Net Income} + \text{Interest Expense}(1 - \text{Tax Rate})}{\text{Average Total Assets}}$$

$$\text{Return on investment} = \frac{\text{Net Income} + \text{Interest Expense } (1 - \text{Tax Rate})}{\text{Average}(\text{Stockholders' Equity} + \text{Long-Term Debt})}$$

As with many of the other ratios explained in this chapter, profitability ratios can be even more valuable as a fraud detection technique if they are calculated on the basis of product line, division, region, or other useful subcategory in addition to a company-wide basis.

ANOTHER USEFUL MEASURE: WORKING CAPITAL TO TOTAL ASSETS

The ratio of working capital to total assets has been found to have a correlation to financial statement fraud. Since actual liquid assets are rarely produced as financial statement fraud progresses, the fraud often sits on the balance sheet in the form of other assets. As such, the ratio of working capital to total assets declines.

Kirkos et al. found that the mean working capital to total assets ratio in companies without any financial statement fraud was 0.253. However, in companies reported to have engaged in fraudulent financial reporting, the mean was only 0.054. Sudden or continuing decreases in this ratio should be investigated.

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CHAPTER 4: TEST YOUR KNOWLEDGE

The following questions are designed to ensure that you have a complete understanding of the information presented in the chapter (assignment). They are included as an additional tool to enhance your learning experience and do not need to be submitted in order to receive CPE credit.

We recommend that you answer each question and then compare your response to the suggested solutions on the following page(s) before answering the final exam questions related to this chapter (assignment).

1. **What is the days outstanding in accounts receivable ratio:**

A. 365/average receivable turnover

B. annual net sales/average accounts receivable

C. net sales/average total assets

D. 365/(cost of sales/average accounts payable)

2. **What is an example of a leverage ratio:**

A. inventory turnover

B. times interest earned

C. return on equity

D. days payables outstanding

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CHAPTER 4: SOLUTIONS AND SUGGESTED RESPONSES

Below are the solutions and suggested responses for the questions on the previous page(s). If you choose an incorrect answer, you should review the pages as indicated for each question to ensure comprehension of the material.

1.	**A.** CORRECT. This is an activity ratio and is used to calculate the days outstanding in accounts receivable. **B.** Incorrect. This is the equation for accounts receivable turnover ratio. **C.** Incorrect. This is the equation for the total asset turnover ratio. **D.** Incorrect. This is the equation for the days payables outstanding ratio. *(See page 35 of the course material.)*
2.	**A.** Incorrect. Inventory turnover is an activity ratio. **B.** CORRECT. Times interest earned is a leverage ratio. Leverage ratios provide a measure of solvency of an entity. **C.** Incorrect. Return on equity is a profitability ratio. **D.** Incorrect. Days payables outstanding is an activity ratio. *(See page 40 of the course material.)*

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CHAPTER 5: 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:

$$\text{DSRI} = \frac{\text{CY Receivables/CY Sales}}{\text{PY Receivables/PY Sales}}$$

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.

$$\text{GMI} = \frac{(\text{PY Sales} - \text{PY Cost of Goods Sold})/\text{PY Sales}}{(\text{CY Sales} - \text{CY Cost of Goods Sold})/\text{CY Sales}}$$

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.

$$AQI = \frac{(\text{CY Total Assets} - \text{CY Current Assets} - \text{CY PP\&E})/\text{CY Total Assets}}{(\text{PY Total Assets} - \text{PY Current Assets} - \text{PY PP\&E})/\text{PY Total Assets}}$$

4. **SGI = Sales Growth Index.** This is the ratio of the current year's sales to that of the prior year.

$$SGI = \frac{\text{CY Sales}}{\text{PY Sales}}$$

5. **DEPI = Depreciation Index.** This is the ratio of the rate of depreciation expense for the prior year to that of the current year.

$$DEPI = \frac{\text{PY Depreciation}/(\text{PY Depreciation} + \text{PY PP \& E})}{\text{CY Depreciation}/(\text{CY Depreciation} + \text{CY PP \& E})}$$

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.

$$SGAI = \frac{\text{CY SG\& A Expense}/\text{CY Sales}}{\text{PY SG\& A Expense}/\text{PY Sales}}$$

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.

$$LVGI = \frac{(\text{CY LTD} + \text{CY Current Liabilities})/\text{CY Total Assets}}{(\text{PY LTD} + \text{PY Current Liabilities})/\text{PY Total Assets}}$$

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.

$$TATA = \frac{\begin{array}{c}\Delta\text{Working Capital} - \Delta\text{Cash} - \Delta\text{Income Taxes} \\ \text{Payable} - \text{CY Depreciation and Amortization}\end{array}}{\text{CY Total Assets}}$$

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

$$M = -4.84 + 0.920*DSRI + 0.528*GMI + 0.404*AQI + 0.892*SGI + 0.115*DEPI - 0.172*SGAI + 4.679*TATA - 0.327*LVGI$$

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:

$$M = -6.065 + 0.823*DSRI + 0.906*GMI + 0.593*AQI + 0.717*SGI + 0.107*DEP$$

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. A greater 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:

0.012 × (Working Capital/Total Assets)
0.014 × (Retained Earnings/Total Assets)
0.033 × (Earnings before Interest and Taxes/Total Assets)
0.006 × (Market Value of Equity/Book Value of Total Liabilities)
0.999 × (Sales/Total Assets)

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) 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.

Of course, as with almost all red flags of fraud, there can be many non-fraud reasons for this indicator. A company may have borrowed money to fund an expanding operation, it may have prepaid certain future expenses, it may have loosened its policies for granting credit to customers, or any of dozens of other reasons. But a significant difference in operating cash flows from operating income, or a string of several periods in a row with cash flow lagging behind operating income, can be a sign of either overstatement of revenue or understatement of expenses.

In their study, Chen and Elder found a strong correlation between negative cash flows from operations and financial statement fraud. In financial statements without fraud, negative cash flows from operations was reported 11 percent of the time. In the financial statements containing fraud, that figure jumped to 25 percent.

Fair Value Disclosures

The increased use of fair value accounting concepts has been filled with controversy. As a result of this controversy, the standard-setters have increased the level of note disclosures required when fair value accounting is applied. Generally, disclosures that should be expected when assets or liabilities have been measured at fair value include the following:

- Description of the valuation methods used in measuring assets or liabilities at fair value
- Identification of the nature of the inputs used in performing fair value measurement calculations
- A ranking of these inputs using a standard hierarchy (this hierarchy is designed to inform readers about the reliability of inputs used by applying a classification system described in the accounting standards)
- Total gains or losses recognized during the period based on the application of fair value accounting measurements

Additional disclosure requirements, too voluminous to list here, may also apply. These disclosures should be read carefully, as fair value measurements can require extensive judgment. And wherever significant judgment is exercised, the risk of financial reporting fraud increases. If these disclosures are vague or confusing, fair value accounting fraud may be present.

UNDERSTANDABILITY OF FINANCIAL STATEMENT DISCLOSURES

One of the underlying assumptions made when an auditor issues an unqualified opinion on the financial statements is that the financial statements are understandable. But anyone who has read a set of financial statements knows that clarity is not always the first word that comes to mind.

Several studies have focused on use of the Gunning Fog Index to measure the readability of the notes to the financial statements, or the management discussion and analysis (MD&A) section in the financial reports of publicly traded companies. The index can be applied to any sample of writing in English. The formula for the Gunning Fog Index is as follows:

$$0.4 \times ((\text{total words}/\text{number of sentences}) + 100(\text{complex words}/\text{total words}))$$

Complex words are defined as those with three or more syllables, not counting proper nouns, compound words, or common suffixes such as –es.

While this formula appears to be quite simple, it has been well-respected as a reliable measure of readability since its development in 1952. The index generally corresponds to the grade level required to understand it. For example, a Fog index of 12 means it has the reading level equivalent of a high school senior in the United States. Many general audience newspapers and publications have a Fog Index of about 8, while others that aim at a more educated audience, such as the Wall Street Journal, have an index of around 12.

In remarks made in March 2007, U.S. SEC Chairman Christopher Cox noted that when the Gunning Fog Index was applied to the then-new Compensation Disclosure and Analysis sections of the reports submitted to the SEC, the average Index was 16.45!

A 2006 study of SEC filings by Feng Li of the Stephen M. Ross School of Business at the University of Michigan (published in the working paper, "Annual Report Readability, Current Earnings, and Earnings Persistence"), found that the median Fog Index of the notes to audited financial statements ranged from 18.65 to 18.95 during the 11 years from 1994 to 2004. This means that the notes would not likely be understood fully by someone possessing even a college degree or perhaps a graduate degree.

There are a number of websites that will calculate the Fog Index by simply cutting and pasting blocks of text. Whether a formal calculation of a Fog Index is performed or not, when notes to the financial statements are confusing or vague, this could be a sign of deceptive financial reporting.

TESTING OF JOURNAL ENTRIES

As noted in many of the cases described in this course, financial statement fraud is often perpetrated by recording journal entries, rather than through improper recording of cash transactions and other activities in the normal course of business.

The challenge, however, is to develop a reliable technique for identifying the fraudulent journal entries out of a population that can number into the tens or hundreds of thousands of journal entries made by companies. One theory that may help in this cause is Benford's Law.

According to Benford's Law, the following list reflects the frequency with which each digit appears as the first digit of a number:

1 = 30.1%
2 = 17.6%
3 = 12.5%
4 = 9.7%
5 = 7.9%
6 = 6.7%
7 = 5.8%
8 = 5.1%
9 = 4.6%

Thus, the digit "1" can be expected to be the first digit of a number 30.1 percent of the time.

Benford's Law can be useful in the detection of financial statement fraud (it can also be quite useful in detecting certain types of asset misappropriation schemes, but that type of fraud is not the focus here). In their 2009 paper, "Data Mining Journal Entries for Fraud Detection: A Pilot Study," Roger Debreceny and Glen Gray studied the journal entries of 29 entities and found a high correlation between Benford's Law and the first digits of the amounts in journal entries. Only a handful of anomalies were found, suggesting further investigation would be necessary to determine whether fraud was involved. (Note: Debreceny and Gray do not indicate what types of entities were included in their data, and the anomalies identified, such as one company having a higher than normal percentage of journal entry amounts starting with a 5, were not subject to further investigation.) Therefore, Benford's Law may have useful applications in detecting financial statement fraud.

However, Benford's Law by itself may not narrow the list of possible fraudulent journal entries down to a manageable size. For instance, if there is an unusually large quantity of journal entries starting with a particular digit, there may be thousands of entries identified for analysis. Some possible next steps might be to examine the following characteristics of the pool of entries that have been identified using Benford's Law:

1. The general ledger account numbers involved
2. The person preparing the journal entries
3. The department affected by the entries
4. The location affected by the entries
5. The date within the month or month within the year of the entries
6. The level at which the journal entries were made (i.e., were they top-side entries made at the corporate level or were they made at the operating level)

Finding a correlation between the suspect pool of journal entries and one or more of these characteristics can help to narrow the list of entries requiring further investigation down to a reasonable quantity.

The recording of journal entries to perpetrate a financial statement fraud almost always involves some form of circumvention of internal controls. These entries are often made at the highest level (i.e., top-side level entries or at the consolidation level). And they are normally associated with limited or a complete lack of proper supporting documentation, and may lack the reviews and approvals required by a company's policies.

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CHAPTER 5: TEST YOUR KNOWLEDGE

The following questions are designed to ensure that you have a complete understanding of the information presented in the chapter (assignment). They are included as an additional tool to enhance your learning experience and do not need to be submitted in order to receive CPE credit.

We recommend that you answer each question and then compare your response to the suggested solutions on the following page(s) before answering the final exam questions related to this chapter (assignment).

1.	**How many indexes make up the blended formula, called the M-Score, developed by Messod Beneish:** **A.** five **B.** six **C.** seven **D.** eight
2.	**Which type of calculation can be used as a predictor of bankruptcy:** **A.** Gunning Fog Index **B.** F-Score **C.** Altman Z-Score **D.** Benford's Law

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CHAPTER 5: SOLUTIONS AND SUGGESTED RESPONSES

Below are the solutions and suggested responses for the questions on the previous page(s). If you choose an incorrect answer, you should review the pages as indicated for each question to ensure comprehension of the material.

1.	**A.** Incorrect. There are more than five indexes that make up the blended formula called the M-Score. **B.** Incorrect. There are more than six indexes that make up the blended formula called the M-Score. **C.** Incorrect. There are more than seven indexes that make up the blended formula called the M-Score. **D.** CORRECT. There are eight indexes that make up the blended formula called the M-Score. They are: days' sales in receivables index, gross margin index, asset quality index, sales growth index, depreciation index, SG&A index, leverage index, and total accruals to total assets. *(See page 47 of the course material.)*
2.	**A.** Incorrect. The Gunning Fog index measures the readability of the notes to the financial statements. **B.** Incorrect. The F-score utilizes multiple financial statement variables as a basis for predicting misstatements. **C.** CORRECT. The Altman Z-Score, first published in 1968 by Edward I. Altman, has been reliably used as a predictor of bankruptcy. **D.** Incorrect. Benford's law can be useful in the detection of financial statement fraud. *(See page 50 of the course material.)*

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CHAPTER 6: FRAUD OR HONEST MISTAKE?

Chapter Objective

After completing this chapter, you should be able to:

- Recognize characteristics of fraud and an honest mistake.

When a restatement of a company's financial statements is necessary, it is understood that the previously issued statements were not prepared in accordance with the accounting principles that the company claimed it used. But what is it that distinguishes a restatement from a fraud case?

When confronted with an accusation of financial statement fraud, a common response on the part of the perpetrator is that he or she was merely being aggressive in the interpretation of the applicable accounting principles in an effort to present the company's financial statements in the best light possible. There's nothing wrong with that, right?

One of the challenges presented to the fraud investigator is to prove that the material misstatement in the financial statements was caused not by an honest but overaggressive interpretation of the accounting standards, but by a deliberate misstatement designed to deceive readers.

THE "SMOKING GUN"

If the investigator is lucky, the white-collar crime equivalent of a smoking gun is found. There are two key elements of a smoking gun:

- The perpetrator is aware that the accounting treatment does not conform to applicable accounting principles.
- The perpetrator initiates the activity that violates the accounting principle (e.g., the individual makes or requests a journal entry that executes the fraud).

The smoking gun must be in the form of some record that can be traced to the individual. An e-mail message, for instance, wherein the perpetrator acknowledges these facts, is an excellent piece of information that can be used to show that the individual intended to commit financial reporting fraud (e.g., "I don't care what that silly accounting standard says, just record it this way!"). Other written memos can also be used for this purpose.

WITNESSES

For obvious reasons, simply having a witness testify that they heard the perpetrator make these statements is not quite as strong as documentation from the perpetrator. However, witnesses who have heard the perpetrator make statements that involve the two elements introduced in the preceding section can be powerful evidence, especially when multiple witnesses have heard the same or similar things.

The best example of this might come from an individual who was somehow involved in the scheme. An accounting clerk who was ordered to make an entry that was acknowledged to be in conflict with accounting principles can provide strong support for an assertion that the perpetrator knew that their actions were fraudulent. Sometimes, the individuals who are in the best position to make these statements may have some liability themselves. They may have willingly participated or may have been coerced by an influential or domineering supervisor or co-worker. But, they can have tremendous value as witnesses if managed properly.

Other individuals who can serve as useful witnesses may have simply been in the room when the perpetrator made statements that demonstrate an intent to commit financial reporting fraud. Investigators can find useful witnesses by determining which individuals sat on certain internal committees or would otherwise have reason to be in attendance at meetings in which the perpetrator may have discussed the fraudulent financial reporting.

ALTERED DOCUMENTS

Another strong piece of evidence that can be used to demonstrate a willful act of deceit is an altered document, especially if it can be traced back to the suspect. A correction to erroneous documentation is one thing, but when the "correction" turns an accurate document into one that supports improper accounting treatment, the investigator has discovered valuable evidence. Examples of altered documents that have proven useful in fraud cases include the following:

- Shipping documents (e.g., making it appear that a shipment took place earlier than it really did)
- Inventory records (e.g., altering count sheets to inflate the quantity on hand during a physical inventory)
- Contracts (e.g., altering dates or other key terms of a contract to support a fraudulent accounting treatment)
- Appraisals and valuation reports (e.g., altering the fair value assigned to certain assets that are carried on the balance sheet, or to avoid recognition of an impairment loss)

Of course, proving that a document has been altered is not always easy. Physical evidence may be present in the form of correction fluid, correction tape, and so on. In some cases, documentation that appears to be a photocopy when an original was at one time present, or would be expected to be present, should be a sign that further investigation is necessary. The original document may have been altered and then scanned or copied in order to conceal evidence of the alteration. Sometimes, this can be proven through careful analysis of the document.

Alterations of electronic records are also possible to detect. Some software leaves a distinct trail that can tell an investigator who altered a document and when the alteration took place. In other cases, outside experts can be called upon to analyze electronic files for signs of alteration.

Harder still is proving who altered a document, especially physical documents (electronic documents often provide an indication of who has accessed the document). Once again, an eyewitness who observed or participated in the alteration is best. But, sometimes using the process of elimination can be helpful. Proving that no one other than the suspect had access to, or any reason to access the document can provide some degree of useful support for an assertion that the individual altered the document.

MULTIPLE RECORDS

The number of reasons for maintaining two or more sets of accounting records is very limited. In some cases, a tax-basis set of records may be a legitimate second record that differs from those prepared in accordance with applicable accounting principles. But these cases are few and far between.

Normally, when a fraud scheme involves the creation and maintenance of a second set of records, this represents strong evidence that the misstatement in the financial statements was no honest mistake. Why would a company maintain two accounts receivable subsidiary ledgers (as was done in the case of Del Global Technologies Corp. – see Chapter 7) other than to keep track of the real receivables separately from the inflated receivables? Likewise with a second set of inventory records.

Proving that there is no legitimate need for a second set of accounting records is strong evidence of someone's intent to present false information, especially when the false information is used to prepare the financial statements.

DESTRUCTION OF EVIDENCE

Many readers of this course will recall one instance in which an overzealous shredder cost a company dearly. Destruction of evidence can be an important indicator of intent on the part of a suspect.

Companies destroy documents and records all the time. Every company should have a policy regarding record retention and destruction. Many companies also have strictly enforced policies governing retention of e-mail messages and other electronic files.

Accordingly, an important part of an investigation is to determine what a company's record retention and destruction policies and procedures were at the time of the misstatement in the company's financial statements. Signs that are consistent with deliberate, willful misstatements include the following:

- The suspect violates the company's policies in destroying records that could be used to prove a financial reporting fraud.
- Selective compliance with the company's policies (i.e., technically, the records that were destroyed were eligible for destruction under the company's policies, but the policy was only practiced in connection with the records most valuable to the investigation, while all other records eligible for destruction remain intact).
- The destruction of records technically complies with company policy, but the timing of the destruction is suspicious (e.g., immediately after a whistleblower complaint surfaces, or notification of an audit is received).

Once a suspect has been notified of an investigation, or is otherwise aware of a pending investigation, destruction of pertinent records, even those records otherwise eligible for destruction, may violate company policy and definitely violates certain provisions of the Sarbanes-Oxley Act if the investigation pertains to a violation of U.S. law.

ACTIONS THAT CONTRADICT RECOMMENDATIONS

Another sign that an individual may have deliberately misstated a company's financial statements exists when the individual acts in a manner that contradicts recommendations received from others, such as from internal or external auditors. Examples of such contradictory actions include the following:

- Failing to take action in response to reported weaknesses in internal controls, especially controls that, left unaddressed, could allow for the perpetration and/or concealment of a financial reporting fraud (e.g., poor controls for the recording of journal entries).
- Not following an auditor's recommended accounting treatment for a certain transaction or category of transactions.

Contradicting an auditor's recommended accounting treatment should always be considered suspicious. If it becomes apparent that management has sought out the opinions of other accountants and auditors, this is yet another indication that fraud may be occurring. Opinion shopping, as it is known, takes place when management looks around for auditors who they can convince to go along with their preferred accounting treatment. This should always be viewed as suspicious behavior.

PATTERNS OF BEHAVIOR

Speaking of behavior, repeatedly engaging in an activity that the suspect knows, or should have known, was wrong also is a strong indicator of an intent to engage in that behavior. In other words, doing something once or twice is easier to justify as an honest mistake. Engaging in the same act over and over again is more consistent with the behavior of someone who knew exactly what they were doing and intended to continue doing it.

PERSONAL GAIN

While not directly associated with proving whether someone perpetrated a fraud scheme, showing that the individual personally benefited can help in proving intent. Examples of personal gain that best support attempts to prove intent are increases in stock price that correspond with the suspect's sale of stock at the higher price, bonuses (especially if directly tied to financial performance of the company), salary increases, and any other benefit that is provided in response to the reported financial results of the company.

Personal gain may also be established less directly. For example, someone may have received a promotion or elevation in title (with or without any adjustments in compensation), an excellent performance evaluation, or some nonfinancial benefit. In some cases, simply keeping one's job is the benefit that an individual receives, when loss of employment would have been the alternative.

THERE'S NO OTHER EXPLANATION FOR IT

Finally, another way to prove that an individual intended to commit a dishonest act is to show, through process of elimination, that there was no honest reason for their actions. This process is sometimes referred to as reverse proof. It involves seeking out and disproving every legitimate explanation for the evidence at hand, leading to the only remaining conclusion – that fraud has occurred.

As it pertains to financial statement fraud, this can be a difficult task. One of the common assertions made by individuals who have committed financial statement fraud is that they thought that their accounting estimates, methods, and positions taken all complied with GAAP or IFRS, even if their actions represent aggressive interpretations of the rules.

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CHAPTER 6: TEST YOUR KNOWLEDGE

The following question is designed to ensure that you have a complete understanding of the information presented in the chapter (assignment). It is included as an additional tool to enhance your learning experience and does not need to be submitted in order to receive CPE credit.

We recommend that you answer the question and then compare your response to the suggested solution on the following page before answering the final exam question(s) related to this chapter (assignment).

1.	**When a company maintains a second set of accounting records, it is often a sign that there may be potential fraudulent accounting occurring in the records.** **A.** true **B.** false

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CHAPTER 6: SOLUTIONS AND SUGGESTED RESPONSES

Below is the solution and suggested responses for the question on the previous page. If you choose an incorrect answer, you should review the page(s) as indicated for the question to ensure comprehension of the material.

1.	**A.** CORRECT. The number of reasons for maintaining more than one set of accounting records is limited. Proving that there is no legitimate need for a second set of accounting records is strong evidence of intent to present false information. **B.** Incorrect. There are some legitimate reasons why a company may maintain more than one set of accounting records, such as a tax-basis set of records. In many instances, however, when a fraud scheme involves the creation and maintenance of a second set of records, it represents strong evidence that the misstatement was not an honest mistake. *(See page 63 of the course material.)*

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CHAPTER 7: ASSESSING (OR MINIMIZING) AUDITOR LIABILITY

Chapter Objective

After completing this chapter, you should be able to:

- Identify audit techniques for identifying financial statement fraud.

Once it has been determined that the financial statements contain a material misstatement, two important questions must be asked:

1. Was the misstatement an intentional act of one or more individuals in management (as discussed in Chapter 6), thereby making a case for fraud?
2. Do the auditors of the financial statements have liability for failing to detect the misstatement in connection with their audit?

In this chapter, the issue of assessing auditor liability in financial statement fraud cases is addressed. The goals of this chapter are as follows:

- Provide guidance to auditors to help them minimize the risk of successful auditor liability claims by performing better audits
- Provide guidance to investigators in assessing whether auditors have failed to perform an audit that fulfills professional responsibilities

Auditors are required to exercise professional skepticism in performing an audit. This is described as having a questioning mind and a critical assessment of audit evidence. As it relates to the potential for fraud, auditors are instructed to neither assume that management is dishonest nor to assume unquestioned honesty.

LITIGATION AGAINST AUDITORS

Potential plaintiffs in litigation involving cases in which auditors failed to detect a material misstatement in the audited financial statements include the following:

- Initial and subsequent purchasers and sellers of stock (either in cases involving publicly traded companies or closely held private companies)
- The company that was audited (the client of the auditor)
- Third-party primary beneficiaries (parties specifically identified to the auditor, beneficiaries of the auditor's services)

- Other third parties (parties not specifically identified, but that are known, such as creditors, as well as others who may have a reasonable need for relying on the audited financial statements)

The potential liabilities that an auditor might face include breach of contract and tort. Under breach of contract, the most likely assertion is that the auditor violated the auditing standards that were contractually agreed to under the terms of the audit engagement letter. As a tort, the likely charges are for ordinary or gross negligence. In each of these cases, a failure to follow auditing standards is also asserted. Under ordinary negligence, it is asserted that there was a lack of reasonable care in performing the audit. Under gross negligence, the claim is that the auditor engaged in reckless departure from the auditing standards, demonstrating a lack of even minimum care in performing the audit.

In each case, the outcome hinges upon the answers to the following questions:

1. Were the financial statements materially misstated (i.e., did the financial statements contain a material departure from the accounting principles in conformity with which they purport to be prepared, such as U.S. GAAP or IFRS)?

2. Did the auditor fail to comply with the auditing standards that are required to be followed, and to which the auditor claims compliance in the auditor's report?

The burden of proof in most cases is generally on the plaintiff, who must demonstrate that the auditors failed to comply with auditing standards or were otherwise negligent. However, this course is not designed to explain the burden of proof in detail, which can vary somewhat from one jurisdiction to another. Instead, the focus here is on the auditing standards and how auditors may or may not fulfill the requirements of those standards. In particular, the focus will be on those areas of an audit that appear to be most prone to negligence assertions or under-auditing.

There is the additional possibility that an auditor may be directly involved in a fraud through intentional concealment. But this chapter focuses solely on the issue of auditor liability associated with failing to follow auditing standards and the resultant failure to detect a material misstatement in the financial statements.

CONCEALMENT FROM THE AUDITORS

The biggest challenge to auditors is the intentional nature of a financial statement fraud. Unlike unintentional errors and deliberately aggressive accounting treatment of transactions, financial statement fraud involves attempts to conceal schemes from the auditors – be they internal or external auditors. In some cases, the efforts to trick the auditors were quite elaborate. Consider the following examples from prior fraud cases:

- **Del Global Technologies Corp., Inc.** This case involved a variety of schemes, as well as multiple subsidiary companies. At least four of these subsidiaries maintained two sets of accounting records – one for the auditors and one correct set. The records maintained for the auditors even included bogus sales invoices, product testing documents, and shipping records in support of a premature revenue recognition scheme in which quarters were held open after the end of the quarter, premature shipments were made to third-party warehouses, and sales were recorded for products that hadn't even been manufactured yet. In connection with improperly capitalized costs, phony vendor invoices were created that supported capitalization.

- **Sterling Financial Corp.** This case involved the overstatement of a loan portfolio, including the hiding of delinquent loans at one of Sterling's subsidiaries, Equipment Finance, LLC. Senior management hid the delinquent and bogus loans from the internal and external auditors using a variety of techniques:
    - The removal of fraudulent loan information from the loan system in advance of audits, preventing internal and external auditors from discovering the scheme, followed by reentering the fraudulent information back into the system once the audits were completed.
    - Insertion of fake work references, summary approvals, and credit reports into loan files, in some cases simply using correction fluid on photocopied credit reports to alter dates and alter or conceal other information.
    - After the auditors selected loan customers for confirmation, customer addresses were changed to ensure that the confirmations went undelivered or were delivered to others involved in the scheme.
- **Koninklijke Ahold N.V. (Royal Ahold).** This case involved the improper consolidation of certain joint ventures associated with a subsidiary of this company based in the Netherlands. To support the consolidation of joint ventures, Ahold provided its auditors with letters signed by both Ahold and the joint venture partners stating that Ahold controlled the joint ventures. These letters were critical to consolidation, since the joint venture agreements did not demonstrate control on the part of Ahold, which held 50 percent or less ownership interests in each of the joint ventures. However, undisclosed to the auditors, shortly after these letters were prepared, Ahold and the joint venture partners executed "rescinding letters," effectively secret side agreements that rescinded Ahold's control over the joint ventures. This practice was carried out at least four times, until the head of Ahold's internal audit department became aware of the existence of the rescinding letters. Shortly thereafter, an internal investigation commenced.

This element of concealment makes detection by auditors much more complicated. As an auditor assesses the risk of fraud, the risk of concealment must be factored equally into the planned audit procedures.

AUDITING STANDARDS

In the United States, auditing standards for audits of publicly traded companies are promulgated by the Public Company Accounting Oversight Board (PCAOB), while the auditing standards for audits of all other entities (referred to as "non-issuers") have as their source the American Institute of Certified Public Accountants (AICPA). The PCAOB follows all standards issued by the AICPA through April 16, 2003, and has subsequently issued standards of its own. These additional standards mostly mirror those issued by the AICPA, but with certain differences and provisions that are unique to audits of public companies. The AICPA auditing standards are issued as individual standards (e.g., Statement on Auditing Standards No. 115), but are then codified using a standardized referencing system, referred to in this course using their AU Section number (e.g., AU Section 316).

Internationally, auditing standards are issued as International Standards on Auditing (e.g., ISA 540). These standards are issued by the International Federation of Accountants through the International Auditing and Assurance Standards Board.

The auditor's opinion on the financial statements provides reasonable assurance that the financial statements are free of material misstatement. The concept of "reasonable" is explained as being a high level of assurance, but is not meant to be absolute assurance. This correlates to an expectation that an auditor obtain sufficient evidence such that audit risk (the risk that the auditor issues an unqualified opinion on financial statements that contain a material misstatement) is kept to a low level.

The concept of "material" refers mostly to a quantitative measure. However, auditors are instructed to consider qualitative elements of materiality as well. For instance, certain misstatements, while small in amount, may have a profound effect on a reader of the financial statements. A small misstatement that allows an entity to barely meet a current ratio loan covenant could be considered material due to the effect that the misstatement has.

Audits are not expected to uncover all misstatements. But auditors are expected to detect material ones. And a material misstatement can be caused by either an unintentional act (an error) or an intentional one (fraud).

CONSIDERATION OF THE RISKS OF MATERIAL MISSTATEMENT

The first area in which the potential for auditor liability emerges is in the planning stages of the audit. Under AU Section 314 and ISA 315, auditors must identify and assess the risk that the financial statements they are about to audit contain a material misstatement. Part of that identification requires that the auditor gain an understanding of all of the following factors that can have an impact on the risk of material misstatement:

1. The client's industry in which it operates, including regulatory and other external factors
2. The nature of the audit client (i.e., its operations, ownership, organizational structure, etc.)
3. The client's objectives and strategies and the related business risks
4. The measurement and review of the entity's financial performance
5. The client's internal controls, including how the entity selects and applies accounting policies

All of these considerations should be documented in the auditor's work papers.

From this list, the first and last are areas in which auditors are most prone to falling short of expectations. The first factor is misinterpreted by some auditors to mean simply understanding what industry a client is in. But auditors should have a knowledge of the industry sufficient to understand the risks and industry developments relevant to their client, in order to plan appropriate audit procedures.

One sure sign that an auditor may not possess a sufficient understanding of an industry is that the auditor claims expertise in too many industries, as evidenced by a client list that spans multiple and diverse industries. Not only do accounting standards vary from one industry to another, but the regulatory environment, competitive forces, and numerous other factors vary, leading to very different audit risks. Good auditors tend to specialize in very few industries and are well-immersed in those industries, evidenced by subscribing to industry journals, attending industry-specific continuing professional education, and working with numerous clients in an industry.

This deficiency has been observed more commonly in smaller firms, where the same audit partner and audit team serve clients in several dissimilar industries, making it difficult to demonstrate expertise across all industries. Larger firms have generally been able to avoid assertions of this deficiency for the simple reason that with so many people, their personnel tend to be able to specialize in one industry or in fewer areas.

The fifth item from the list, the requirement that an auditor obtain an understanding of an entity's internal controls sufficient to enable the auditor to plan appropriate auditing procedures, is not new at all. This requirement has been a cornerstone of auditing for many years. However, it nonetheless represents a common area of auditor exposure if the auditor takes shortcuts in gaining and documenting internal controls. How does this happen? Usually, a failure to gain a proper understanding of internal controls occurs under one of two circumstances:

1. The auditor has already determined the specific auditing procedures that are planned for the audit (regardless of the results of gaining an understanding of internal controls), so the process of looking into internal controls is done very quickly, with an eye toward simply getting this part done so that the auditor can move on to the predetermined audit steps.

2. The task of gaining and documenting the understanding of internal controls is delegated to a very inexperienced auditor without adequate supervision and guidance from someone who understands how to make proper inquiries and observations that are more likely to turn up deficiencies in the design of internal controls.

In PCAOB Release No. 105-2010-006, the PCAOB revoked the registration of one small audit practice based on conducting substandard audits of a public company from 2006 to 2008. Among the many deficiencies cited by PCAOB was the auditor's failure to test internal controls during any of the three years, without including any documentation for "how that determination was reached or how the assessment of internal controls impacted the planning of the audit to determine the nature, timing, and extent of the tests to be performed."

The deficiencies in this case reached almost comic proportions. The auditor admitted to relying heavily on the previous audits and only inquiring of management about balance sheet accounts that changed by 10 percent or more from year to year. When asked about this approach, coupled with a few very basic procedures, the auditor replied, ". . . other than that, I did nothing."

Material misstatements can be put into two basic categories: those that result from unintentional errors (including honest misinterpretations of accounting standards) and those that result from fraud, which is an intentional act. Due to the unique characteristics of fraud, the auditing literature contains special provisions associated with detecting misstatements caused by fraud.

Consideration of fraud in an audit is covered in AU Section 316 and ISA 240. Under these sections of the auditing standards, auditors are directed to perform certain procedures, the most important of which are listed as follows:

1. Identify specific risks of fraud (asset misappropriations or financial statement fraud) that could result in a material misstatement

2. Assess each identified risk (i.e., evaluate an entity's programs and internal controls in terms of its ability to address fraud risks)

3. Respond to the fraud risks by designing appropriate audit procedures, some of which may be overall responses and others that might be a response to a very specific risk

Audit failures can occur in any of these three critical steps. And, of course, the audit work papers must document what the auditor did with respect to each.

Perhaps even worse than failing to identify a fraud risk is an auditor's failure to do anything about a risk once one has been identified. This appears to be what happened in PCAOB Release No. 105-2010-007, which addressed the 2006 audit of a company in which 92 percent of its reported assets consisted of capitalized internal-use software (accounting for internal-use software). The auditor properly identified capitalized software as not only a significant audit area, but one that was classified as a risk of financial reporting fraud. Specifically, the auditor's work papers identified "overstating the valuation of capitalized software" as a fraud risk. However, the PCAOB concluded that the auditor "failed to perform sufficient procedures to determine (a) whether software costs were appropriately capitalized, and (b) whether capitalized software was fairly valued."

In essence, the PCAOB identified two separate deficiencies associated with auditing the application of two separate accounting rules. Not only did the auditor fail to test whether the initial software costs met the criteria for capitalization, but the auditor also failed to assess whether the capitalized software (even assuming its costs were initially eligible for capitalization) incurred an impairment loss as a result of its value being lower than its book value. With the impairment loss issue, the auditor once again left itself open to liability by identifying the risk, in the form of communicating to management the possibility of impairment, but then doing nothing about it.

Much guidance is available for auditors in assessing the risk of material misstatement due to fraud. Included in this guidance is coverage of Cressey's Fraud Triangle, which notes that three conditions are normally present when fraud occurs:

1. Incentive or pressure
2. Opportunity for the fraud to be perpetrated
3. Rationalization by the perpetrator

Auditors are instructed to consider each of these three elements in assessing the risk of fraud in an audit.

Another example of an audit firm being accused of failing to perform adequate procedures in response to its risk assessment is the Adelphia Communications case. In this case, Adelphia underreported its debt obligations by shifting them to affiliated entities, all under the control of a few individuals. In AAER 2237, the SEC noted that in their work papers, the auditors identified all of the following fraud risk factors:

1. Management is concentrated in a small group or dominated by one strong personality without compensating controls.
2. Management appears willing to accept unusually high levels of risk.
3. Management tends to interpret accounting standards aggressively.
4. The organizational and/or reporting structures are unduly complex.
5. There is substantial debt from unusual sources (e.g., related parties) or on unusual terms.
6. There are significant affiliated entities or other related parties that the audit firm will not audit and with whom significant transactions might have occurred.
7. The company engages in unique, highly complex, and material transactions that pose difficult “substance over form” questions.
8. The company is under significant pressure to obtain additional capital necessary to stay competitive, and is growing near the limit of its financial resources.
9. There have been frequent disputes with the auditor on accounting, auditing, or reporting matters.

These issues would serve as a good list of fraud risk factors for any auditor in assessing a client’s environment and motives for engaging in fraudulent financial reporting.

One final aspect of audit planning should be considered. Based on the extent and nature of the fraud risks identified, an audit firm should consider how to best staff an audit. The assignment of professional staff to an audit should be done according to which staff possesses the knowledge, skills, and experience necessary to properly execute the audit plan. Audit firms should document how they assigned staff to an audit engagement, and how this staffing varied according to the extent and types of fraud risks identified.

IMPROPER OR INADEQUATE USE OF ANALYTICAL PROCEDURES

Analytical procedures are described in AU Section 329 and ISA 520. Analytical procedures may be used by auditors in three stages of the audit:

1. In the planning stages of the audit, to assist in determining the nature, timing, and extent of auditing procedures to be applied.
2. During audit fieldwork, as a substantive procedure to obtain audit evidence about particular account balances or classes of transactions.
3. In the final review stages of an audit, as part of an overall review of the financial information and audit evidence gathered during the audit.

Use of analytical procedures in the planning and final review stages is required. Their use as a substantive procedure, though not required, is a common practice.

Auditor liability associated with planning-stage analytical procedures arises from either of the following failures:

1. Failure to identify a risk of material misstatement even though planning-stage analytical procedures indicated an unexplained variance from expectations.
2. Identification of a risk based on analytical procedures, but a failure to properly follow up by designing appropriate additional audit procedures to address the risk.

Using analytical procedures as a substantive tool for auditing a particular account or category of accounts is rather common. For example, an auditor may use an analytical procedure as a method of auditing a particular revenue account by multiplying a reliable statistic associated with the revenue-producing activity by an average price charged for the item or service (e.g., number of items delivered times the price per unit). This particular example may be useful for assessing either the completeness of revenue (i.e., whether someone has been skimming revenue intended for the organization) or for determining whether revenue is inflated by management.

When an analytical procedure produces an expected result that materially differs from the actual recorded amount, the auditor must evaluate the difference. One approach to investigating these differences, and a very common first step, is to make an inquiry of management. Management is often in a position to quickly assess why the variance might exist and can point the auditor in the right direction for verification. For instance, there may be a flaw in the assumptions used by the auditor in calculating an expected result, or there are changes in operations that management is aware of that explain the variance. However, regardless of how believable a management response might be, auditors must perform follow-up work. As it is stated in AU Section 329, “management responses . . . should ordinarily be corroborated with other audit evidence.” Blind acceptance of management explanations of variances, or failure to gather appropriate additional audit evidence, has been the cause of numerous auditor failures.

Another cause of audit failures in using analytical procedures as a substantive procedure is the use of unreliable data on which an expectation is based. Using unreliable data to develop an expectation, in particular data that has been provided by a perpetrator of fraud, can lead to a false conclusion that an account balance or class of transactions is fairly stated when in fact, it is materially misstated. Auditors should consider the source of information that is relied upon for analytical procedures, keeping in mind that if fraud exists, it may be more than the account balances that are misstated. The data that could lead to detecting the fraud may be misstated as well.

A simple example of this scenario involves the comparison of a recorded balance with the same account's balance in a prior period. If the prior period balance is misstated, and the current year's balance is comparable to the prior balance, a false conclusion that the current year balance is fairly stated could result. Another example involves developing an expectation of recorded revenue by multiplying the number of items sold or units of service provided by an average price. Flaws in any of these data elements could lead to an erroneous calculation of expected revenue.

An example of a specific audit deficiency of this type is found in the following excerpt from a 2011 PCAOB inspection report of a large international audit firm:

> The Firm failed to perform sufficient procedures to test the existence of the issuer's inventory. The Firm performed physical inventory observations at approximately one half of one percent of the issuer's locations during the first half of the year, and used a substantive analytical procedure to test the year-end inventory balance. To develop its expectation of the year-end inventory balance, the Firm used the inventory balances from the small number of locations at which it had performed inventory observations during the first half of the year to predict the inventory balances for all the locations at the end of the year. The Firm, however, did not obtain evidence that the inventory balances at the issuer's retail locations were similar. In fact, there was considerable variation, approximately 15 percent, in the inventory balances at the three retail stores where physical inventories were observed. In addition, the Firm did not have evidence that the inventory balances in the first half of the year could be expected to be predictive of the balances at year end.

Reliance on analytical procedures as a substantive audit procedure is quite common in the audit revenue. Some examples of deficiencies in the application of analytical procedures to revenue are provided later, in the section on revenue recognition risks. However, one example is noteworthy here, in that it illustrates one additional issue that auditors may fail to recognize. The following is from a November 2011 PCAOB inspection report on one of the world's largest audit firms:

> The Firm failed to test the completeness and accuracy of the data it used to establish its expectations. In addition, when establishing thresholds for investigation of significant differences, the Firm failed to consider the possibility that a combination of misstatements could aggregate to an unacceptable amount. As a result, the Firm failed to investigate differences that, in combination, exceeded the Firm's established materiality level by a significant amount. Further, the Firm failed to obtain corroboration for certain of management's explanations of significant unexpected differences between expected and actual revenues.

Of particular importance in this finding is the possibility that multiple variances, each of which is not considered to be material, may accumulate to a large variance when considered together.

This finding also illustrates the importance of corroborating explanations for variances provided by management.

The final phase of the audit in which analytical procedures are used is in the final review stage. At this point, all adjustments resulting from the audit (if there are any) have been identified and recorded, and a draft set of financial statements has been prepared reflecting those adjustments. The final review should consider whether the final amounts and disclosures make sense and whether all unexpected balances or relationships have been identified and explained. Once again, conclusions about unexpected variances must be supported with proper audit evidence.

AUDITING ACCOUNTING ESTIMATES AND FAIR VALUES

Auditing accounting estimates is addressed in AU Section 342 and ISA 540. Additional guidance on auditing fair value measurements and disclosures is provided in AU Section 328 (this topic is included within ISA 540 for international auditing purposes).

Examples of accounting estimates include all of the following:

1. Assessment of the collectibility of receivables
2. Determination of whether inventory is obsolete
3. Determination of useful lives of depreciable and amortizable assets
4. Estimation of the percentage of completion associated with contracts (which impacts revenue recognition)
5. Establishment of revenue recognition criteria and timelines
6. Actuarial assumptions used in determining pension liabilities
7. Assessing the probability and amount of losses associated with litigation

All estimates that are material to the financial statements must be identified and audited. Auditing standards describe three approaches to auditing the accounting estimates developed by management:

1. Review and test the process used by management to develop the estimate.
2. Develop an independent expectation of the estimate and compare it to the estimate developed by management.
3. Review subsequent events (events occurring after the end of the year, but prior to the conclusion of the audit).

Auditors are required to utilize one or more of these procedures when auditing estimates that are material to the financial statements.

The first approach is essentially the equivalent of gaining a detailed understanding of internal controls and testing those internal controls. However, in addition to specific processes used by management, this understanding may also involve the assessment of assumptions used by management in developing an estimate. In this respect, the process is different than processes utilized in other accounting cycles, such as payroll, disbursements, and receipts.

As a result, audit failures when using the first approach tend to result from one or more of the following:

1. Failing to gain a complete understanding of the process used by management.
2. Gaining an understanding of the process, but not properly testing the application of the process.
3. Relying on the false assumption that an outside specialist hired by a client is independent, and failing to understand and test the specialist's processes.

This last oversight is particularly common with certain fair value measurements, which are explained more fully later in this section.

The second approach, developing an independent expectation, requires that the auditor re-perform the development of the estimate, using either the same methodology as that used by management or, perhaps, a different approach. The goal is to independently arrive at an estimate similar to the one developed by management. Analytical procedures may be used to develop this independent expectation. But, as pointed out in the preceding section, there are two common mistakes when taking an analytical approach:

1. Using unreliable data to develop the expectation.
2. Identifying a deviation from expectations, but not properly following up on the explanation for the deviation (e.g., taking management's explanation for the deviation at face value, without corroborating the explanation with other evidence).

The third approach, using subsequent events as evidence that an estimate is fairly stated, is useful only in certain situations. For example, subsequent events may provide evidence about the reliability of the estimate regarding collectibility of accounts receivable, by observing subsequent collections. It may also provide useful information about the fair value measurements of certain assets held at year-end, if those assets were sold shortly after the end of the year.

Intentionally omitted from the list of accounting estimates is the development of fair value measurements. The omission is due to the fact that these are a very special brand of estimate, one that is so specialized and ripe for misstatement that specialized audit guidance has been developed to address this risky area.

Many assets and liabilities are recorded at fair value under accounting principles generally accepted in the U.S., as well as under IFRS. For instance, most investments are carried at fair value. The determination of fair value can range from fairly simple, such as with certain actively traded securities, to very complex, as with many alternative investments.

AU Section 328 and ISA 540 provide guidance on auditing fair value measurements. However, the requirements are quite similar to those already described in this chapter. The auditor must gain an understanding of an entity's process for determining fair value measurements and then determine an appropriate method for auditing those measurements. The methods used mirror those used in auditing other accounting estimates, as explained earlier.

An entity's process for determining fair value measurements can be quite complex. Some of the characteristics of these processes that are particularly prone to fraud (and therefore susceptible to auditor oversight) include the following:

- Significant assumptions made by management in the development of fair values (e.g., estimated future cash flows associated with an asset, determination of discount rates used in present value calculations, etc.).
- The selection of methods used to calculate fair values (e.g., present value calculations, etc.).
- The documentation maintained in connection with management's fair value measurements.
- The extent to which information technology is utilized in the process.
- Segregation of duties and other key internal controls over the measurement process.
- Controls over the consistency and reliability of data used in the measurements.
- The extent to which reliance is placed on an outside service organization for the determination of fair value measurements (e.g., fair values provided by an investment management firm).
- The extent to which an entity utilizes outside experts to perform or assist in performing fair value measurements (e.g., appraisers and valuation specialists hired by the company).

In some cases, an audit firm may employ specialists who possess the technical skills necessary to audit complicated fair value measurements. However, many firms, smaller ones in particular, should consider temporarily employing the services of outside specialists to aid in the performance of specific audit procedures aimed at fair value measurements. And under no circumstances should an auditor rely on the outside expert used by a client as the sole evidence that fair value measurements were audited, regardless of how well-regarded the expert may be. The use of outside experts by an audit client constitutes an element of the client's internal controls. Regardless of how strong those internal controls might be, the auditor must nonetheless perform sufficient audit work on the measurements themselves if they are material to the financial statements.

One of the acceptable approaches to auditing estimates and fair values described earlier is to examine and test management's process for developing the estimate. PCAOB Release No. 105-2009-001 describes how this approach, when improperly applied, can lead to audit failures. This case dealt with the 2003, 2004, and 2005 audits of a U.S. registered company based in Beijing, China. During the period covered by the audits, the company had acquired one or more other entities. The cost of such acquisitions must be allocated to the acquired assets and assumed liabilities based on the underlying fair values of such assets and liabilities. The company recorded acquired assets and liabilities at the book values at which they were carried in the accounting records of the acquired entities. Management asserted to the auditor that this was done because the acquirees' book values reasonably approximated estimated fair value. However, the auditor performed no audit procedures to verify this assertion.

This is a good example of how explanations that may make complete sense in many ways must nonetheless be audited. Simply accepting management's assertion is not an audit procedure by itself.

A review of audit firm inspection reports prepared by the PCAOB provides excellent examples of some of the fair value accounting issues that are susceptible to under-auditing. The issue of evaluating fair value measurements prepared by a third-party specialist for an auditee was explained. In one 2010 inspection report for a large U.S. auditing firm, the PCAOB noted the following deficiencies:

> The issuer used a service organization to account for its investments and mortgage-backed securities and engaged a pricing specialist to validate values received from the service organization. The Firm failed to perform sufficient procedures concerning the valuation of the issuer's investments and mortgage-backed securities. Specifically:
>
> - The Firm failed to obtain an understanding of the methods and to evaluate the reasonableness of the assumptions used by either the service organization or the pricing specialist to value the issuer's investments and mortgage-backed securities.
> - For the valuation assertion, the Firm relied on controls in place at the service organization to support its control risk assessment of low even though the service auditor's report covered only one month of the issuer's fiscal year. Other than obtaining a representation from the service organization that there were no changes to controls during the remaining eleven-month period, the Firm failed to obtain evidence regarding whether the controls were operating effectively during the eleven-month period not covered by the service auditor's report.

In another report, the PCAOB identified deficiencies in the audit of fair values prepared by an auditee of certain equity and debt investments it held:

> The issuer valued the equity investments using an enterprise valuation method computed as a multiple of the corresponding investee's earnings before interest, taxes, depreciation, and amortization ("EBITDA") based on the unaudited financial statements of the investee. The issuer valued the debt investments using a yield approach in which the fair value of the debt was determined based on the present value of the principal and interest payments. The discount rate used in the present value calculation took into consideration the stated interest rate on the debt and the financial position and credit risk of each investee. The Firm failed to perform sufficient procedures to test the underlying

data and assumptions used in the issuer's valuation models to calculate the fair value of the debt and equity investments. Specifically:

- The Firm failed to apply (or to request that the issuer arrange with the investees to have other auditors apply) appropriate auditing procedures to the investees' financial statements from which the EBITDAs used to determine fair value were derived.
- The Firm failed to sufficiently evaluate the reasonableness of the multiples that the issuer applied to the investees' EBITDA to calculate the value of the equity investments, including whether the multiples reflected, or were not inconsistent with, market information. The Firm first compared the multiples to ranges of multiples that the issuer had obtained from an outside source, but the Firm did not test these ranges. Then, for those multiples that fell outside of the issuer-provided range, the Firm compared the multiple to a multiple that the Firm obtained from an outside source. For those multiples for which the multiple it obtained from this outside source did not provide corroboration, the Firm's procedures were limited to inquiries of management.
- The Firm failed to sufficiently evaluate the reasonableness of the discount rates applied by the issuer to calculate the value of the debt investments, including whether they reflected, or were not inconsistent with, market information. Specifically, for investments for which the discount rate fell outside a range determined by the Firm's valuation group for similar companies, the Firm's procedures were limited to inquiry of management.

Similar deficiencies were found in the evaluations of audit procedures applied to impairment testing associated with goodwill. In a PCAOB inspection report released in December 2011 on one of the world's largest audit firms, the following deficiency was noted:

> The Firm failed to sufficiently evaluate the assumptions the issuer used in its revenue and expense projections, as the Firm limited its procedures to comparing current-year interim data to unaudited financial statements and verifying the mathematical accuracy of the projections. In addition, there was no evidence in the audit documentation, and no persuasive other evidence, that the Firm had evaluated the reasonableness of the risk premium that the issuer used to calculate the weighted average cost of capital, which was a significant assumption in the issuer's goodwill impairment analysis.

And, just like with the measurement of fair values of investments, companies frequently utilize outside specialists to evaluate impairment of goodwill and other intangible assets. In the PCAOB inspection report of the same audit firm (though with respect to a different audit than the one cited above), the following deficiency was included:

> As part of its impairment analysis for goodwill, the issuer obtained from its external valuation specialist two estimates of the fair value of one of its reporting units; one estimate was based on a market approach, which was weighted 60 percent, and the other

on an income approach, which was the higher amount and was weighted 40 percent. The Firm did not determine the reasons for the significant difference between the two estimates in order to evaluate whether one of the individual approaches or the weighted average was the best indicator of fair value. Further, the Firm failed to sufficiently evaluate the reasonableness of the revenue growth assumptions that were used in the income approach and that were significantly higher than the issuer's historical revenue growth rates. Specifically, the Firm's evaluation was limited to inquiry of management, review of certain long-term industry outlook reports that did not address the short-term growth rates used in the analyses, review of a few recent requests for proposals and long-term supply contracts that covered an insignificant portion of the projected revenue, and a comparison of the assumptions to those management used for other purposes.

REVENUE RECOGNITION RISKS

Auditing standards associated with the detection of fraud make an assumption that revenue recognition will always be a fraud risk factor that should be addressed. If an auditor is to claim that revenue recognition is not a fraud risk, the reasoning behind such a conclusion must be documented in the audit work papers. And acknowledging that revenue recognition is a fraud risk requires the auditor to document a response to that risk.

The fraud risk in this area is ordinarily the risk that revenue has been inflated by management in order to make the entity appear to be more successful than it really is (though there can be instances in which management is motivated to understate revenue). In some cases, management goes to great lengths to falsify revenue in order to meet outsiders' expectations of profitability. However, in one part of AU Section 316, auditors are reminded that "fraudulent financial reporting need not be the result of a grand plan or conspiracy. It may be that management representatives rationalize the appropriateness of a material misstatement, for example, as an aggressive rather than indefensible interpretation of complex accounting rules, or as a temporary misstatement of financial statements, including interim statements, expected to be corrected later when operational results improve."

The preceding statement illustrates some of the difficulty in fraud cases – proving intent. However, in pursuing the auditors, proof of management intent is not the central issue. Rather, showing that the financial statements were misstated and that the auditor failed to follow the auditing standards in failing to detect the misstatement is the central issue.

Revenue recognition can be one of the most complicated areas of an audit. Not only can the determination of an appropriate revenue recognition method be complex, but there can be numerous estimates involved in applying a revenue recognition methodology. As the business world has gotten more sophisticated, the many different practices for selling goods and services has led to numerous complex methods for recognizing revenue. Nowhere is the need for auditors to understand the details of accounting principles more pronounced than in the area of revenue recognition. Likewise, solid understanding of industry practices is essential in this area, as certain industries have developed practices based on the industry's interpretation of how a particular accounting principle should be applied, absent specific wording in the accounting principle.

A review of PCAOB inspection reports released in 2010 and 2011 provides the following examples of deficiencies found in the audits of revenue recognition by some of the largest audit firms in the world:

1. The Firm failed to perform sufficient procedures to test the issuer's recognition of revenue from contracts accounted for under the percentage-of-completion method. Specifically, the Firm failed to test costs incurred to date, including indirect cost allocations, beyond comparing certain costs to reports that were not tested. The Firm also failed to sufficiently test the estimated costs to complete, because the Firm's procedures were limited to inquiries of management.

2. The Firm failed to perform sufficient procedures to test the appropriateness of the issuer's recognition of revenue:

    a) Most of the issuer's sales to its dealers were financed by lending institutions that had repurchase agreements with the issuer in the event of the dealer's default. The Firm failed to evaluate whether the ultimate collectibility of these sales to dealers was reasonably assured.

    b) The Firm failed to consider whether a portion of the sales proceeds representing the fair value of the repurchase agreements should have been allocated to deferred revenue.

    c) The Firm failed to adequately evaluate the issuer's conclusion that sales to the issuer's largest dealer met the criteria for revenue recognition. Specifically, the Firm failed to include in its evaluation certain key facts, such as an exclusivity agreement between the dealer and the issuer that required the dealer to purchase a significant portion of its overall product requirements from the issuer; loans made by the issuer to the owner of the dealer during the year with a requirement that the proceeds be contributed as additional capital to the dealer, with half of the proceeds being used to purchase product from the issuer; and guarantees that the issuer provided to the dealer's lenders.

Many of the deficiencies found by the PCAOB in connection with audits of revenue relate to improper analytical procedures (explained earlier), as it is common for auditors to place moderate to significant reliance on analytical procedures in the audit of revenue. For example, the following deficiencies associated with analytical procedures applied to revenue were found in PCAOB inspection reports from 2010 and 2011:

1. The Firm's planned approach for auditing revenue included the performance of substantive analytical procedures. For purposes of these procedures, the Firm established its expectation for current-year revenue based on the results of certain of the issuer's competitors. The Firm, however, failed to determine that the use of the average of the historical results of certain of the issuer's competitors for its expectation was predictive of the issuer's revenue. In addition, other than by reading certain reports that management had provided to the issuer's Board of Directors, the Firm failed to obtain corroboration of management's explanations for approximately half of the significant unexpected

difference between the Firm's expectation and the issuer's recorded revenue. Further, the Firm failed to investigate the remaining half of the significant unexpected difference.

2. The Firm established an expectation that the sales by each customer and product as a percentage of overall sales would be consistent with the corresponding percentage for the prior year, but failed to evaluate whether such an expectation was predictive of revenue for the current year. In addition, the Firm did not test certain of the current year and prior year data used in establishing its expectations. Further, the Firm failed to obtain corroboration of management's explanations of significant unexpected differences between expected and actual revenue for one of the reporting units. As a result of these failures, the analytical procedures provided little to no substantive assurance.

3. When performing analytical procedures to test revenue for all three segments, the Firm developed certain of its expectations based on the issuer's budget. There was no evidence in the audit documentation, and no persuasive other evidence, that the Firm had tested management's process for developing and updating the budget. In addition, the Firm failed to develop sufficiently precise expectations for certain of its analytical procedures, as it used ranges (for example, a decrease in revenue of 5 to 10 percent) for these expectations that were in excess of the Firm's established materiality levels. Further, the Firm failed to obtain corroboration of management's explanations of significant unexpected differences between expected and actual revenues.

INSUFFICIENT CONSIDERATION OF RELATED PARTY TRANSACTIONS

As explained throughout this course, transactions with related parties are particularly prone to fraudulent reporting. As such, the AICPA has placed emphasis on this area and has provided auditors with additional guidance designed to aid with identifying and analyzing related party transactions.

In their 2006 paper, "The Role of Related Party Transactions in Fraudulent Financial Reporting," Henry, Gordon, Reed, and Louwers studied 48 SEC enforcement actions in which both fraud and related party transactions were involved. In 31 of those cases, actions against the auditor were identified by the authors. In just 6 of the 31 cases did the auditor fail to identify related party transactions. Rather, the majority of cases against auditors involve some sort of failure associated with auditing the transactions.

Of the 31 cases, 16 involved deficiencies in the audit work performed regarding identified related party transactions. Nine of these cases pertained to valuing assets obtained in related party transactions and receivables from related parties. One of those nine cases involved Great American Financial, Inc., which acquired a fictitious patent and a purported racehorse, each at inflated amounts. The SEC criticized the auditor in this case for overreliance on the management representation letter about the values of these assets. The remaining seven cases involved other deficiencies in audit procedures involving identified transactions.

Six of the 31 cases against auditors pertained to a failure to properly disclose related party transactions that had been identified during the audit. As explained in Chapter 1, identified transactions are subject to certain disclosure requirements.

AUDITING DISCLOSURES IN THE FINANCIAL STATEMENTS

Misstatements can occur in the basic financial statements as well as in the notes to the financial statements. Indeed, the disclosures made in the notes to the financial statements are prime candidates for fraud through the omission of required disclosures or the misstatement of information included in a disclosure. As with the basic financial statements themselves, however, auditor liability is based primarily on whether the disclosures contain a material misstatement and whether the auditor failed to follow the auditing standards in failing to detect the misstatement.

Disclosure requirements are found in the accounting standards addressing each specific area of the financial statements. As a result, auditors must be familiar not only with the required accounting treatment of relevant assets, liabilities, revenues, and expenses, but also with the disclosure requirements associated with each.

There is very little in the way of published guidance on how to audit disclosures. Instead, the auditing standards simply remind auditors of the importance of making sure that disclosures are complete and accurate. Unfortunately, some auditors have taken an approach that places little effort on these disclosures.

OVERRELIANCE ON THE MANAGEMENT REPRESENTATION LETTER

At the conclusion of an audit, the auditor must obtain a management representation letter. This letter represents management's understanding that the financial statements and disclosures are primarily the responsibility of management. The letter addresses all matters that are potentially material to the financial statements. As a result, the letter does represent a form of audit evidence. However, as noted in ISA 580, "Although written representations provide necessary audit evidence, they do not provide sufficient appropriate evidence on their own about any of the matters with which they deal." In other words, the management representation is similar to management responses to unexpected variances found in connection with analytical procedures – they must be corroborated with other audit evidence and cannot stand on their own.

There have been numerous cases in which auditors were found to be liable for failing to detect material misstatements where the auditor erroneously placed reliance on a management representation letter as the only form of audit evidence. Audit work papers should provide a clear trail of additional audit evidence that supports representations about material matters that are included in such letters.

CHAPTER 7: TEST YOUR KNOWLEDGE

The following questions are designed to ensure that you have a complete understanding of the information presented in the chapter (assignment). They are included as an additional tool to enhance your learning experience and do not need to be submitted in order to receive CPE credit.

We recommend that you answer each question and then compare your response to the suggested solutions on the following page(s) before answering the final exam questions related to this chapter (assignment).

1.	**In regard to concealment from the auditors, which of the following most accurately reflects how Del Global Technologies Corporation concealed fraud from their auditors:** **A.** insertion of fake work references **B.** maintaining two sets of accounting records **C.** improper consolidation of certain joint ventures **D.** removal of fraudulent loan information from the loan system in advance of audits
2.	**Why would analytical procedures be used by auditors in the planning stage of the audit:** **A.** as a substantive procedure to obtain audit evidence about particular account balances or classes of transactions **B.** as part of an overall review of the financial information **C.** as part of an overall review of audit evidence gathered during the audit **D.** to assist in determining the nature, timing, and extent of auditing procedures to be applied

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CHAPTER 7: SOLUTIONS AND SUGGESTED RESPONSES

Below are the solutions and suggested responses for the questions on the previous page(s). If you choose an incorrect answer, you should review the pages as indicated for each question to ensure comprehension of the material.

1.	**A.** Incorrect. Insertion of fake work references was a concealment technique employed by Sterling Financial Corporation. **B.** CORRECT. The Del Global Technologies Corporation case involved a variety of schemes, as well as multiple subsidiary companies. At least four of these subsidiaries maintained two sets of accounting records. **C.** Incorrect. Improper consolidation of certain joint ventures was a concealment technique used by Koninklijke Ahold N.V. **D.** Incorrect. Removal of fraudulent loan information from the loan system in advance of audits was a technique that Sterling Financial Corporation used. *(See pages 72 to 73 of the course material.)*
2.	**A.** Incorrect. This is a reason to use analytical procedures during audit fieldwork. **B.** Incorrect. This is a reason to use analytical procedures during the final review stages of an audit. **C.** Incorrect. This is a reason to use analytical procedures during the final review stages of an audit. **D.** CORRECT. Analytical procedures may be used by auditors in the planning stages of the audit, to assist in determining the nature, timing, and extent of auditing procedures to be applied. *(See page 78 of the course material.)*

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CHAPTER 8: FINANCIAL STATEMENT FRAUD INDICATORS

Chapter Objective

After completing this chapter, you should be able to:

- Recognize various asset-based, revenue-based, and expense/liability-based fraudulent schemes.

When financial statement fraud takes place, it virtually always leaves a trail. The fraud indicators listed in this appendix represent characteristics that are often present when financial statement fraud occurs. Just like other red flags, their presence is not a guarantee that fraud is occurring. There are many reasons for their occurrence that have nothing to do with fraud. However, when fraud is occurring, these may be some of the signs that are observed. When these indicators are present, an explanation should be obtained in an attempt to rule out financial statement fraud. If fraud cannot be ruled out, keep investigating!

The indicators are organized by broad category of financial statement fraud – revenue-based schemes, asset-based schemes, and expense/liability based schemes. Since many of the indicators could be consistent with a variety of schemes in each category, further investigation will be necessary to narrow the list of possible frauds down to a more manageable quantity.

Revenue-Based Schemes

- Cash flows from operations are negative or lag significantly behind reported net income.
- Rapid growth in sales in comparison with competitors or in light of current economic conditions.
- Growth in revenue from one location or division is unusually high in comparison with other locations or divisions.
- Unexplained increases in sales to specific customers.
- Changes in revenue recognition policies allowing for earlier recognition.
- Unexplained increases or decreases in reserve (liability) accounts.
- Changes in key assumptions used in revenue recognition, especially those impacting the timing of when revenue is recognized.
- Unexplained increases in accounts receivable (billed or unbilled), such as when receivables are growing at a faster rate than sales (i.e., fluctuations in the number of days' sales in receivables).

- Sales recognized are supported by documentation that indicates delivery to or acceptance by customers may have occurred after the end of the period.
- Sales supported by documentation that shows signs of having been altered, particularly with respect to dates of delivery, customer acceptance, or other information that triggers recognition of revenue.
- Supporting documentation, such as contracts, shipping documents, and sales orders, appear to be copies, rather than original documents (another sign that the originals have been altered, then copied).
- Sales invoice dates that are significantly later than the documented shipping date (which coincides with revenue recognition), perhaps indicating that the customer did not request the shipment until the later date.
- Changes in credit terms offered to customers, especially terms that are excessively lenient.
- The introduction of new incentives offered to customers.
- The introduction of highly complex sales arrangements with customers.
- An absence of a valid business purpose behind certain transactions.
- Unusually large sales to certain customers with no history of such large sales.
- Unusually large sales to certain customers at the end of the accounting period.
- A significant portion of a company's sales are recognized at the end of a quarter or year (especially if the portion of a quarter's sales that are recognized at the end of the quarter shows an increasing trend over recent quarters or if the significant recognition of sales enables the company to achieve its stated goals for the period).
- Sales arrangements that are not supported with a written agreement when such an agreement would ordinarily be expected.
- Discovery of side letters, verbal agreements, or e-mails that alter the standard terms of a sale.
- Contracts or other agreements that indicate that a customer is not required to pay for products delivered to the customer until the customer has sold the products to an end user.
- Sales at the end of one accounting period followed by returns from the same customer(s) early in the subsequent accounting period.
- Inconsistencies between information on a customer order and the shipping documentation (e.g., product numbers ordered appear to be different than those shipped), especially for orders processed right before the end of an accounting period.

- Customers listed in the sales/accounts receivable master file have incomplete information (e.g., purported customers that have no telephone numbers, street addresses, etc.).
- Multiple customers listed in the sales/accounts receivable master file with the same street address.
- Unexplained increases in sales to related parties, joint venture partners, or affiliates.
- Evidence exists of products provided to customers on a “trial basis” or under “loaner” programs under which the customer may not have an obligation to pay for the products.
- Material journal entries at the end of an accounting period (or after the end of the period), especially those resulting in the entity’s meeting revenue goals for the period.
- Top-side journal entries to revenue or sales accounts that are not supported with entries to subsidiary ledgers or other records that should match.
- Changes in how revenue is allocated among the units of a multiple-element revenue arrangement.
- Changing from the cost approach to a more subjective approach to estimate the progress on contracts accounted for under the percentage of completion method of accounting.
- Unexplained fluctuations in ratios associated with revenue recognition (see Chapters 4 and 5).
- Discovery of new reserve accounts that lack apparent business justification.
- Pending acquisition or initial public offering.

Asset-Based Schemes

- Cash flow from operations is negative or lags significantly behind reported net income.
- New products have recently been introduced or have been announced, indicating the potential for research and development costs, which should be expensed as incurred.
- Asset capitalization costs appear to have been paid to related parties.
- Unexplained changes in valuation methods used in measuring the fair values of assets or liabilities.
- Unexplained changes in the assumptions used in applying valuation methods used in measuring the fair values of assets or liabilities.
- Expenditures recorded as expenses of the subsequent period are supported by documentation that indicates that the goods or services may have been received by the company in the prior period.

- Unusual increases in the number of days' purchases in inventory from one year to the next.
- The write-down rate associated with obsolete inventory declines inexplicably from one year to the next.
- Unsupported increase in the useful lives assigned to depreciable or amortizable assets.
- Changes in inventory flow or pricing assumptions.
- Inadequate internal controls associated with physical counts of inventory.
- Indications of subsequent alteration of inventory count documents.
- Unsupported changes in indirect cost (overhead) allocation policies and procedures.
- Unexplained increases or decreases in contra-asset reserve accounts.
- Significant assets resulting from transactions with related parties, affiliates, or joint venture partners.
- Changes in capitalization policies.
- Lack of documentation for management's assessment of the impairment of intangible assets or other indications that required impairment testing was not performed.
- Intangible assets being carried on the books that do not appear to be associated with the generation of revenue or other value.
- Material journal entries at the end of an accounting period (or after the end of the period), especially those that change carrying amounts of asset accounts or that reclassify costs from expense accounts to asset accounts.
- Top-side journal entries to asset accounts that are not supported with entries to subsidiary ledgers or other records that should match (e.g., inventory, accounts receivable, etc.).
- Unexplained fluctuations in ratios associated with expense capitalization or asset carrying values (see Chapters 4 and 5).
- Pending acquisition or initial public offering.

Expense/Liability-Based Schemes

- Cash flow from operations is negative or lags significantly behind reported net income.
- Unexplained increases in property and equipment accounts.
- Unexplained decreases in accounts payable, accrued expenses, and other liabilities.
- Lower than expected expenses.

- Significant use of estimates in measuring reserves and certain liability accounts.
- Significant expenditures shortly after the end of the period that were not accrued as liabilities.
- Discovery of liabilities that were transferred to unconsolidated affiliates prior to the end of the period.
- Discovery of correspondence indicating side deals with vendors or special arrangements with unconsolidated affiliates.
- Discovery of correspondence, or internal memoranda, indicating that the company is involved in litigation or may have other contingent liabilities.
- Significant purchases from related parties.
- Material journal entries at the end of an accounting period (or after the end of the period), especially those that change carrying amounts of liability accounts or that reclassify costs from expense accounts to asset accounts.
- Top-side journal entries to asset accounts that are not supported with entries to subsidiary ledgers or other records that should match (e.g., accounts payable).
- Unexplained fluctuations in ratios associated with expense capitalization or liability accounts (see Chapters 4 and 5).
- Pending acquisition or initial public offering.

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CHAPTER 8: TEST YOUR KNOWLEDGE

The following question is designed to ensure that you have a complete understanding of the information presented in the chapter (assignment). It is included as an additional tool to enhance your learning experience and does not need to be submitted in order to receive CPE credit.

We recommend that you answer the question and then compare your response to the suggested solution on the following page before answering the final exam question(s) related to this chapter (assignment).

1.	**If cash flows from operations are negative or lag significantly behind reported net income, it means that the company is manipulating its financial statements.** **A.** true **B.** false

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CHAPTER 8: SOLUTIONS AND SUGGESTED RESPONSES

Below is the solution and suggested responses for the question on the previous page. If you choose an incorrect answer, you should review the page(s) as indicated for the question to ensure comprehension of the material.

1.	**A.** Incorrect. Although cash flows from operations that are negative or lag significantly behind reported net income is a fraud indicator of revenue-based schemes, asset-based schemes, and expense/liability-based schemes, its presence is not a guarantee that fraud is occurring. **B.** CORRECT. When fraud is occurring, cash flows from operations that are negative or lag significantly behind reported net income may be a sign observed, but there may be other reasons for the occurrence. When these indicators are present, an explanation should be obtained in order to rule out or narrow the list of possible frauds. *(See page 93 of the course material.)*

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GLOSSARY

Call provisions – permit the issuer of the debt to repay the obligation prior to the stated maturity date, usually at some premium.

Contingencies – represent gains or losses that may occur, but for which there is some degree of uncertainty.

Discount rate – the rate of return that an investor would require.

Horizontal analysis – involves the comparison of data across multiple time periods.

Intangible assets – assets lacking a physical substance, but which provides future economic benefits, generally in the form of the ability to produce income.

Put provisions – enable the lender to require the borrower to repay the debt obligation prior to scheduled maturity date, usually on specified dates and also often at par.

Subsequent events – events that occur after the end of the reporting period but before the date that the financial statements are available to be issued.

Trading securities – debt and equity securities that are bought and held primarily for the purpose of selling them in the near term.

Vertical analysis – involves measuring a single account, or group of accounts, as a percentage of some larger total.

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About the Author

Gerard M. Zack, CFE, CPA, CIA, CCEP, has provided forensic accounting, fraud investigation, expert witness testimony, fraud prevention, external and internal audit, internal control advisory, and training services for more than 30 years. He is the president of Zack, P.C., located in Rockville, Maryland. Mr. Zack has provided antifraud services for entities throughout North America and Europe.

Mr. Zack is the author of two previous books published by John Wiley &Sons:

- Fair Value Accounting Fraud: New Global Risks and Detection Techniques
- Fraud and Abuse in Nonprofit Organizations: A Guide to Prevention and Detection

In addition to his extensive antifraud and audit experience, Mr. Zack is also the author of numerous articles, papers, and self-published training manuals and guides. Mr. Zack is a frequent speaker at conferences, including those sponsored by the Association of Certified Fraud Examiners (ACFE) and the American Institute of Certified Public Accountants (AICPA), and has provided customized internal training for more than 50 CPA firms.

Mr. Zack serves on the faculty of the ACFE, providing training on a wide variety of fraud-related topics, and is the 2009 winner of the ACFE's James Baker Speaker of the Year Award.

For additional information about Gerry Zack and Zack, P.C., visit the Zack, P.C. website at www.zackpc.com, where there is a link to Mr. Zack's blog. He can be reached atGerry@zackpc.com.

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