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EDITION



Forensic Accounting

Rufus • Miller • Hahn



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FORENSIC ACCOUNTING

Global Edition

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timely reconciled, contain intercompany transactions, or are otherwise associated with an identified fraud risk.

Dig Deeper

You are encouraged to consider AICPA Practice Alert 2003-02, which provides guidance on procedures for journal entry testing and the use of computer-assisted audit tools.

Given the scope of the relevant data, it is often impractical for the forensic accountant to manually review a company's general ledger. In fact, research indicates that financial statement fraud occurs in less than 1% of digital transactions.³⁰ Furthermore, journal entries often exist only in electronic form, requiring extraction of the data before any analysis can be performed. Computer-assisted audit tools (CAATs) provide an alternative to manual review for identifying journal entries to be tested and detecting unusual ledger activity.

There are several benefits of automated journal entry testing. First and foremost, it addresses a primary method of financial statement fraud—the top-side journal entry (an adjusting entry made at the management level). Moreover, it provides a better chance of fraud detection, because 100% of the data (rather than a sample) can be analyzed. Finally, it supports conclusions with substantial quantitative data.³¹ Despite these benefits, CAATs, like any tool, have their limitations. They do not replace skilled forensic accountants, but rather allow them to focus their efforts on the highest-risk journal entries.

Special Note

CAATs can cost anywhere from hundreds to thousands of dollars. Examples of specific software packages are discussed in Chapter 9.

CONTENT ANALYSIS

Financial statements represent *historical data*. Thus, in many cases the damage (such as fraud) has already been done. As such, researchers are constantly evaluating strategies to detect accounting failures earlier and thus reduce the related damage. One such strategy is content analysis.

Content analysis is a systematic technique for categorizing words into content categories using special coding rules. Simply stated, it's a *qualitative* method of determining characteristics of interest based on grammatical structure, word content, and other fundamental characteristics of communication. The method tests for multiple indicators and statistically analyzes them to determine characteristic patterns reflecting deception.

Research conducted by Churyk and Clinton (2008) identified certain “tells” or communication characteristics in the context of the MD&A section of annual reports, related to financial statement deception.³² Such characteristics include:

- Significantly fewer colons
- Fewer words per sentence
- Fewer optimistic words
- More words related to downward direction
- Fewer words describing certainty
- Fewer instances of the words *note* and *see*
- Fewer self-references
- More past-tense words
- Fewer present-tense words

In this study, the researchers used a software program called *Linguistic Inquiry and Word Count* (LIWC), which parses and identifies parts of speech and syntax and then tallies the frequencies of the word occurrences (for example, “we” or “I”). LIWC also analyzes individual text files and computes the percentage of words in each text file that fall into each of

more than 70 linguistic categories of detail. These groupings of word occurrences reflect themes that are categorized and statistically analyzed by the software.

PERSONAL FINANCIAL STATEMENTS

In addition to business financial statements, forensic accounting engagements commonly require the consideration and analysis of *personal* financial statements. What are personal financial statements? Why are they issued? How do they differ from business financial statements? **Personal financial statements**, like business financial statements, serve to provide information about an individual's financial condition, income profile, and cash flow. They are commonly required by banks and other creditors to support loan applications or other requests for financing.

Generally, a personal financial statement consists of a single form that reports an individual's personal assets and liabilities, as well as personal sources of income and expenses. The nature and extent of the form is determined by the organization (bank or vendor) supplying the credit. However, personal financial statements compiled or reviewed by an accountant should be accompanied by a written report. This written report serves to qualify or limit the accountant's level of assurance and responsibility for the financial statement.

Personal Balance Sheet

Similar to a company's balance sheet, a personal balance sheet provides a snapshot of an individual's financial condition at a *specific point in time*. Recall that a balance sheet is a summary of assets (resources), liabilities (obligations), and net worth (assets minus liabilities).

Contrary to rules employed in the preparation of business financial statements (specifically, the GAAP cost principle), personal financial statements should present assets at their estimated current values[§] and liabilities at their estimated current amounts.^{**} In determining the estimated current values of assets and liabilities, the following items should be considered:

- Has cash on hand been disclosed? Does it include funds in a safe deposit box?
- Have bank account balances been reconciled?
- Is there evidence of recent transactions involving similar assets and liabilities in similar circumstances?
- Have the valuation methods employed been followed consistently from period to period?
- Are marketable securities valued at quoted market prices?
- Are investments in life insurance shown at the cash value of the policy less the amount of any loans against it? Is the face amount also disclosed?
- Are investments in closely held businesses presented at current value (rather than book value)?
 - Is there evidence that the reported value is the amount at which the investment could be exchanged between an informed buyer and seller, neither of whom is compelled to buy or sell?
 - Has goodwill been considered?
- Have investments in collectibles (for example, stamps, coins, guns, and art) been considered?
- Is there evidence supporting real estate values (such as appraisals)?
- Are all nonforfeitable rights to receive future sums presented as assets at their discounted amounts? How was the discount rate determined?
- Are accounts payable, including credit cards, and other liabilities presented at the discounted amounts of cash to be paid?

[§] Defined as the amount at which the item could be exchanged between a buyer and seller, each of whom is well informed and willing to buy and sell. See FASB Accounting Standards Codification (ASC) glossary term *estimated current value*.

^{**} The methods used to determine the estimated current values of assets and estimated current amount of liabilities are detailed in Paragraphs 4–15 of FASB ASC 274-10-35.

- Are noncancellable commitments presented as liabilities at their discounted amounts?
- Are there any contingent liabilities? For example, is the individual a guarantor of another's debt obligation (e.g., credit cards, business loan, or car loan)?
- Is there pending litigation?
- Is a liability for income taxes presented?
 - Is a provision made for estimated income taxes on the differences between the estimated current values of assets and the estimated current amounts of liabilities and their tax bases?
 - Was a marginal or effective tax rate used? How was it determined?

Personal Income (Cash Flow) Statement

Similar to a company's income statement, a personal income statement prepared on the cash basis serves to provide information regarding an individual's cash inflows and outflows over a period of time. Cash inflows include salaries, dividends, interest, capital gains, rental income, and so forth. Cash outflows include all living expenses, such as rent or mortgage payments, car payments, utility bills, food, clothing, and entertainment.

A personal income statement discloses an individual's net cash flow (cash inflows minus cash outflows). Banks and other third parties use this information to measure capacity to manage current and/or proposed debt.

Special Note

Examples of a personal balance sheet and income statement are provided in Appendix 5-B.

Personal Financial Statement Disclosures

Like business financial statements, personal financial statements prepared in accordance with GAAP require sufficient disclosures to make them adequately informative.^{††} The following items are commonly disclosed:³³

- Clear identification of the effective (as of) date of the financial statements
- Proper identification of the individuals covered by the financial statements
- Statement that the assets are presented at their estimated current values and liabilities are presented at their estimated current amounts
- Identification of the methods used in determining the estimated current values of major assets and the estimated current amounts of major liabilities
- Statement that the valuation methods used in determining the major categories of assets and liabilities have been employed consistently from one period to the next
- Statement (qualification) regarding any assets held jointly with another person and the nature of the joint ownership

Personal Financial Statements and Forensic Accounting Engagements

Personal financial statements represent affirmative statements made by the submitting party and, as such, provide evidence for consideration (analysis) by the forensic accountant.

Three common forensic accounting engagements that commonly require the analysis of personal financial statements include:

1. *Domestic Relations.* In domestic relations (divorce) cases, the analysis of personal financial statements provides significant context for the forensic accountant. These statements measure an individual's net worth, or wealth, as of a specific date. Moreover, a comparative analysis (for example, the last three years) allows the measurement of changes in specific assets and liabilities. Such an analysis might identify missing assets

^{††} Examples of personal financial statements are provided in FASB ASC 274.

(cash), unexplained changes in reported values, or increased debt. The personal financial statement might also establish one's ability to pay child support or alimony.

2. *Embezzlement/Fraud.* In an embezzlement or fraud allegation, the analysis of one's personal financial statement may provide support (or lack thereof) for alternative theories explaining the acquisition or expenditures of cash. For example, a beginning cash balance on hand of \$100,000 might explain a bank deposit of \$10,000 or the cash purchase of an automobile for \$7,500.
3. *Arson.* Motive is a critical element in an arson (insurance fraud) case. A common motive alleged by insurance companies in denials of claims is financial distress on the part of the claimant. To support or refute this allegation, forensic accounting experts for both sides will analyze personal financial statements to identify indicators of financial distress.

Other forensic accounting engagements requiring the analysis of personal financial statements include mortgage fraud, tax fraud, risk management audits, and employment/background checks.

SUMMARY

This chapter discusses concepts and techniques useful for analyzing financial information as part of a forensic examination. With a foundational understanding of accounting principles, especially the relationships among the financial statements, a forensic accountant is equipped to use the various tools of financial statements analysis. Such analysis provides a basis for identifying significant patterns, trends, or inconsistencies that may warrant further investigation. Using these findings, preliminary hypotheses can be developed and additional tests, such as journal entry testing and content analysis, can be employed to test these hypotheses.

APPENDIX 5-A

Illustration of Financial Statements Analysis

Table 5A-1 | Summary Income Statement

Green Mountain Coffee Roasters, Inc. Income Statement (\$ Thousands) Fiscal Year Ending Sept. 30					
	2007	2008	2009	2010	2011
Net Sales	341,651	492,517	786,135	1,356,775	2,650,899
Cost of Sales	210,530	318,477	540,744	931,017	1,746,274
Gross Profit	131,121	174,040	245,391	425,758	904,625
Selling & Operating Expenses	72,641	90,882	121,350	186,418	348,696
General & Admin. Expenses	30,781	41,759	30,655	100,568	187,016
Operating Income	27,699	41,399	93,386	138,772	368,913
Other Income	54	(235)	(662)	(269)	(8,509)
Interest Expense	(6,176)	(5,705)	(4,693)	(5,294)	(57,657)
Income Before Taxes	21,577	35,459	88,031	133,209	302,747
Income Tax Expense	(8,734)	(13,790)	(33,592)	(53,703)	(101,699)
Net Income	12,843	21,669	54,439	79,506	201,048

Table 5A-2 | Income Trend Analysis

Green Mountain Coffee Roasters, Inc. Income Statement Trend Analysis Fiscal Year Ending Sept. 30				
	2007–2008	2008–2009	2009–2010	2010–2011
Net Sales	44.16%	59.62%	72.59%	95.38%
Cost of Sales	51.27%	69.79%	72.17%	87.57%
Gross Profit	32.73%	41.00%	73.50%	112.47%
Selling & Operating Expenses	25.11%	33.52%	53.62%	87.05%
General & Admin. Expenses	35.66%	–26.59%	228.06%	85.96%
Operating Income	49.46%	125.58%	48.60%	165.84%
Other Income	–535.19%	181.70%	–59.37%	3063.20%
Interest Expense	–7.63%	–17.74%	12.81%	989.10%
Income Before Taxes	64.34%	148.26%	51.32%	127.27%
Income Tax Expense	57.89%	143.60%	59.87%	89.37%
Net Income	68.72%	151.23%	46.05%	152.87%

Table 5A-3 | Common-Size Income Statement

Green Mountain Coffee Roasters, Inc. Common-Size Income Statement Fiscal Year Ending Sept. 30					
	2007	2008	2009	2010	2011
Net Sales	100.00%	100.00%	100.00%	100.00%	100.00%
Cost of Sales	61.62%	64.66%	68.79%	68.62%	65.87%
Gross Profit	38.38%	35.34%	31.21%	31.38%	34.13%
Selling & Operating Expenses	21.26%	18.45%	15.44%	13.74%	13.15%
General & Admin. Expenses	9.01%	8.48%	3.90%	7.41%	7.05%
Operating Income	8.11%	8.41%	11.88%	10.23%	13.92%
Other Income	0.02%	–0.05%	–0.08%	–0.02%	–0.32%
Interest Expense	–1.81%	–1.16%	–0.60%	–0.39%	–2.17%
Income Before Taxes	6.32%	7.20%	11.20%	9.82%	11.42%
Income Tax Expense	–2.56%	–2.80%	–4.27%	–3.96%	–3.84%
Net Income	3.76%	4.40%	6.92%	5.86%	7.58%

Table 5A-4 | Balance Sheet

Green Mountain Coffee Roasters, Inc. Balance Sheet (\$ Thousands) Fiscal Year Ending Sept. 30					
	2007	2008	2009	2010	2011
Assets					
<u>Current Assets</u>					
Cash & Cash Equivalents	3,172	965	242,091	4,756	40,512
Short-Term Investments			50,000		
Receivables	39,373	54,782	91,559	172,200	310,321
Inventories	38,909	85,311	132,182	262,478	672,248
Other Current Assets	6,369	11,032	21,535	55,835	108,446
Total Current Assets	87,823	152,090	537,367	495,269	1,131,527
Fixed Assets (Net)	65,692	97,678	135,981	258,923	579,219
Intangibles (Net)	34,208	29,396	36,478	220,005	529,494
Goodwill	73,840	73,953	99,600	386,416	789,305
Other Long-Term Assets	2,964	4,531	3,979	9,961	168,342
Total Assets	264,527	357,648	813,405	1,370,574	3,197,887
Liabilities & Shareholders' Equity					
<u>Current Liabilities</u>					
Current Portion of Long-Term Debt	63	33	5,030	19,009	6,669
Accounts Payable	37,778	43,821	79,772	139,220	265,511
Accrued Expenses	16,893	26,314	37,159	73,515	135,380
Income Taxes Payable	1,443	2,079	1,225	1,934	9,617
Other Short-Term Liabilities	871	673	3,257	4,377	54,197
Total Current Liabilities	57,048	72,920	126,443	238,055	471,374
Long-Term Debt	90050	123517	73,013	335,504	575,969
Deferred Income Taxes	18,330	21,691	26,599	92,579	189,637
Other Long-Term Liabilities				5,191	48,692
Total Liabilities	165,428	218,128	226,055	671,329	1,285,672
<u>Shareholders' Equity</u>					
Common Stock	2,470	2,549	13,081	13,282	15,447
Additional Paid-In Capital	45,704	63,607	441,875	473,749	1,499,616
Retained Earnings	58,981	81,280	134,338	213,844	411,727
Other Comprehensive Income (Loss)	(512)	(419)	(1,870)	(1,630)	(14,575)
ESOP Unallocated Shares	(208)	(161)	(74)		
Treasury Stock	(7,336)	(7,336)			
Total Shareholders' Equity	99,099	139,520	587,350	699,245	1,912,215
Total Liabilities & Shareholders' Equity	264,527	357,648	813,405	1,370,574	3,197,887