

2004 Student Case Competition

Maynard Manufacturing:

An Analysis of GAAP-Based and



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Operational Earnings Management Techniques

John Robbins, CFO of Maynard Manufacturing Company, sat back in his chair and reflected on the negative publicity that accountants have received over the past year. It appeared that an increased number of companies had been engaging in questionable earnings-management activities recently. As the CFO of a publicly held corporation, John understood the pressures to increase shareholder value and knew the importance of meeting analysts' quarterly earnings expectations. Indeed, three years earlier Maynard missed its third-quarter earnings expectation by one cent, and the market punished the stock—the price fell 15% the day earnings were announced. John vowed never to let that happen again.

He believed that the flexibility inherent in generally accepted accounting principles (GAAP) allowed him the discretion to close a one- or two-cent deficit needed in order to meet analysts' earnings expectations. He was certain that stockholders would approve of such actions and that they would view them as the right thing to do.

John never believed that he was doing anything unethical, but he was bothered by what he saw happening at Enron, WorldCom, and other companies. Clearly, management at these companies had crossed the line and had committed fraud. John wondered whether they started out making the same types of GAAP-based decisions that had become a regular part of his job. Although he still felt pressure to achieve earnings targets, he wanted to make sure that he fully understood what types of earnings-management activities were appropriate and what types were inappropriate. He wanted to make sure he was not on a slippery slope that would lead to fraudulent financial reporting.

In order to understand the issues surrounding earnings management and fraudulent financial reporting more fully, John read as much as he could on the subjects. Essentially, he was looking for answers to three questions:

1. What is earnings management?
2. What are the incentives for firms to engage in earnings management?

3. What specific techniques do firms use to manage earnings?

WHAT IS EARNINGS MANAGEMENT?

GAAP offers some flexibility because financial transactions and the economic conditions surrounding them are not identical. Preparing financial statements involves selecting among GAAP alternatives and using estimates and judgments in the application of these principles (Mulford and Comiskey, 2002, p. 50). Earnings management uses the flexibility in financial reporting to alter the financial results of a firm. The following definitions illustrate this.

Earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers (Healy and Whalen, 1999, p. 368).

Earnings management is the active manipulation of earnings toward a predetermined target. That target may be one set by management, a forecast made by analysts, or an amount that is consistent with a smoother, more sustainable earnings stream. Often, earnings management entails taking steps to reduce and "store" profits during good years for use during slower years. This more limited

form of earnings management is known as *income smoothing* (Mulford and Comiskey, 2002, p. 51).

Firms that attempt to alter their financial results take actions that range from decisions within GAAP to outright fraud. Decisions made within GAAP are often viewed as aggressive if the tactics push the envelope and stretch the flexibility of GAAP beyond its intended limits (Mulford and Comiskey, 2002, p. 26). If pushed too far, these actions may become *financial fraud*, which the National Association of Certified Fraud Examiners has defined as:

The intentional misstatement or omission of material facts, or accounting data, which is misleading and, when considered with all the information made available, would cause the reader to change or alter his or her judgment or decision (www.cfenet.com).

Thus, for financial reporting to be considered fraudulent, there must be a *preconceived intent to deceive* financial statement users in a material way. Technically, accounting practices are not said to be fraudulent until the intent to deceive has been alleged in an administrative, civil, or criminal proceeding (Mulford and Comiskey, 2002, p. 49). Clearly, fraudulent financial reporting is outside the bounds of GAAP. In contrast, the intent of choices made within the discretion afforded by GAAP is harder to distinguish. Without objective evidence, it's difficult to distinguish between legitimate choices made within GAAP and earnings management (Dechow and Skinner, 2000, p. 239).

EARNINGS MANAGEMENT INCENTIVES

Earnings management is undertaken in order to increase or decrease current-period earnings relative to their "unmanaged" level. Increasing earnings involves *overstating* revenues and gains and/or *understating* expenses and losses. The reverse is true if the goal is to reduce current-period earnings. That is, revenues and gains are *understated* and/or expenses and losses are *overstated* (Schilit, 2002, p. 26). Following are five situations that provide executives incentives to manage earnings. They are adapted from Mulford and Comiskey, pp. 60-81.

1. To Avoid a Significant Decrease in Stock Price Due to Missing an Earnings Expectation.

Because of the significant adverse market reaction resulting from missed earnings expectations, managers have the incentive to make sure expectations are met. Thus, managers have an incentive to take earnings-increasing measures if it appears that the market's expectation will

be missed, especially if it will be missed by a small amount.

Although this benefits all stockholders, some would argue that it benefits top management even more as most executives are receiving a growing proportion of their compensation from stock options. Arthur Levitt, the former Chairman of the Securities & Exchange Commission (SEC), defined the problem when he said, "Companies try to meet or beat Wall Street earnings projections in order to grow market capitalization and increase the value of stock options" (Levitt, 1998, p. 5).

Ironically, it's often the companies themselves that create this pressure to meet the market's earnings expectations. It's common practice for companies to provide earnings estimates to analysts and investors. Management is then faced with the task of ensuring their targeted estimates are met. Several companies, including Coca-Cola Co., Intel Corp., and Gillette Co., have taken a contrary stance and no longer provide quarterly and annual earnings estimates to analysts. In doing so, these companies claim they have shifted their focus from meeting short-term earnings estimates to achieving their long-term strategies (McKay, 2002).

Recent academic studies indicate that earnings management in order to meet the market's earnings expectations may be widespread. Several studies (Degeorge, 1999) find an unusually high proportion of consensus quarterly earnings forecasts are exactly met or barely exceeded. Conversely, a very low number of earnings expectations are missed by a small amount. The theory behind these studies is that if earnings were not being managed, we would expect to see more symmetry in the earnings numbers around the market's expectation. That is, the percentage of firms just barely making their earnings expectation should be roughly the same as the percentage just barely missing their expectation. The fact that the results are very lopsided is generally interpreted as evidence of earnings management. Other studies have documented the same asymmetry with respect to *avoiding losses* (a high proportion of small profits and a small proportion of small losses) and *avoiding decreases in profits* (a high proportion of small increases in profits and a small proportion of small decreases in profits). This is additional evidence that firms manage earnings to avoid these undesirable outcomes.

2. To Smooth Earnings Toward a Long-Term Sustainable Trend.

For many years it has been believed that a firm should

attempt to reduce the volatility in its earnings stream in order to maximize share price. Because a highly volatile earnings pattern indicates risk, the stock will lose value compared to others with more stable earnings patterns. Consequently, firms have incentives to manage earnings to help achieve a smooth and growing earnings stream.

This form of earnings management (income smoothing) is also related to meeting analysts' earnings expectations in future periods. Management may be concerned that beating the current-period expectation by a wide margin will cause analysts to increase next-period's earnings expectation to this higher earnings number. If management does not believe that the current level of earnings can be sustained, then they have an incentive to manage earnings downward in the current period. Thus, income smoothing is sometimes viewed as a way for management to convey inside information to analysts regarding future earnings (Scott, 1997, p. 206). In turn, this can help guide analysts' future earnings forecasts.

3. To Maximize Proceeds from Initial and Seasoned Public Offerings (IPOs and SPOs).

When issuing shares, management has an incentive to manage earnings upward in order to increase the selling price of shares. Empirical evidence shows that firms do engage in earnings management activities to present themselves in the best possible light. But evidence of whether this results in higher share prices is mixed. Some studies have shown that the market does not see through the earnings management, resulting in overpriced shares (Rangan, 1998), while other studies have shown that the market is not misled by the earnings management (Shivakumar, 2000).

4. To Maximize Earnings-Based Incentive Compensation Agreements.

Several studies (Healy, 1985) have provided evidence that earnings are managed in the direction that is consistent with maximizing executives' earnings-based incentive compensation (bonuses). When earnings will be below the minimum level needed to earn a bonus, then earnings are managed *upward* so that the minimum is achieved and a bonus is paid. Conversely, when earnings will be above the maximum level at which no additional bonus is paid, then earnings are managed *downward*. In essence, the "extra" earnings that generated no additional compensation in the current period are stored and used to earn a bonus next period. When earnings are between the minimum and maximum levels, then earnings are man-

aged *upward* because this will increase the current-period bonus.

5. To Avoid Debt-Covenant Violations and Minimize Political Costs.

Rather than focus on the adverse effects of not meeting earnings expectations, early academic research often assumed that the market would be efficient and would not be fooled by such earnings management techniques. Academic researchers used *positive accounting theory*, developed by Watts and Zimmerman (1986), to examine situations where the market would not see through the earnings management techniques. Positive accounting theory hypothesizes that contractual arrangements a firm enters into present incentives for managers to manipulate earnings (Dechow and Skinner, 2000, p. 236). For example, firms have the incentive to avoid violating earnings-based debt covenants. If violated, the lender may be able to raise the interest rate on the debt or demand immediate repayment. Consequently, some firms may use earnings-management techniques to increase earnings to avoid such covenant violations.

Positive accounting theory also hypothesizes that some firms have incentives to lower earnings in order to minimize political costs associated with being seen as too profitable. For example, if gasoline prices have been increasing significantly and oil companies are achieving record profit levels, then there may be incentives for the government to intervene and enact an excess-profits tax or attempt to introduce price controls (Mulford and Comiskey, 2002, p. 80).

Overall, the results of the research using positive accounting theory to develop hypotheses for earnings management have been generally supportive. But only a small percentage of firms are exposed to the situations hypothesized by positive accounting theory. In contrast, the incentives provided by the stock market to manage earnings affect all companies with stock that is publicly traded. Managers of all these firms have a strong incentive to avoid the significant decline in stock price associated with missing market expectations.

EARNINGS-MANAGEMENT TECHNIQUES

As mentioned previously, the techniques used to manage earnings range from decisions that fall completely within the flexibility of GAAP to practices that are well beyond GAAP. These latter activities may be referred to as *abusive earnings management* and may become the basis for fraud charges by the SEC (Mulford and Comiskey, 2002, p. 86).

In between these extremes are judgments that push the limits of GAAP and often result in misleading financial results. Such judgments may be referred to as *aggressive accounting*. Mulford and Comiskey (2002, p. 15) define aggressive accounting as “a forceful and intentional choice and application of accounting principles done in an effort to achieve desired results, typically higher current earnings, whether the practices followed are in accordance with generally accepted accounting principles or not.” The aggressive application of GAAP has been the focus of significant attention since a 1998 speech titled “The Numbers Game” was given by Arthur Levitt. In the speech, Levitt accused companies of “exploiting the pliancy” of GAAP in order to create illusions in their financial reporting (Levitt, 1998, p. 3). Because managerial intent is not observable, however, it’s difficult to determine the difference between legitimate choices allowed within the discretion of GAAP and aggressive accounting (Dechow and Skinner, 2000, p. 239).

Most earnings-management techniques used by firms can be grouped into four categories.

1. Revenue recognition—The focus of these activities is usually to recognize revenues prematurely in order to boost current-period earnings. In order to clarify current GAAP in this area, the SEC issued Staff Accounting Bulletin No. 101 (SEC, 1999). For example, the SEC determined that annual membership fees paid to discount clubs should be recorded as revenue on an accrued basis as earned, not when membership dues are paid.

2. Operating expense timing—These techniques generally shift expenses from one period to another to help manage earnings. For example, some discretionary expenses may be postponed to the next year if the firm is experiencing lower-than-expected earnings.

3. Unrealistic assumptions to estimate liabilities—Companies may use aggressive assumptions when accruing liabilities in order to manage earnings. For example, if earnings are low, managers may use an unrealistically low estimate for bad debt expense in order to boost earnings. Conversely, an unrealistically high estimate may be used if earnings are above the market’s expectation in order to reduce current-period earnings. In the latter case, the over-accrued liability may be reversed in a future period to increase earnings. This technique has been called establishing a *cookie jar reserve* (Levitt, 1998, p. 4). The cookies (excess earnings) are stashed in a cookie jar (a reserve account) during good years and then are reversed when they are needed to boost earnings in a bad year.

4. Real (operating) actions—The main focus of GAAP-based earnings-management activities is the timing and recognition of revenues and expenses. In contrast, *operational or real activities* deal with voluntary business decisions that are made in the ordinary course of running a business. For example, if sales are lagging, a company may slash prices in order to stimulate sales and help achieve earnings goals.

Parfet (2000, p. 485) makes a strong distinction between GAAP-based and operational earnings management. With respect to GAAP-based earnings management, he says:

“Bad’ earnings management, that is, *improper earnings management*, is intervening to hide real operating performance by creating artificial entries or stretching estimates beyond the point of reasonableness... This is the realm of the hidden reserves, improper revenue recognition, and overly aggressive or overly conservative accounting judgments. At a minimum, such actions are unproductive and create no real value. At their worst, they constitute fraud.”

In contrast, Parfet views operational earnings management in a completely different light:

“However, there is also a ‘good’ kind of earnings management—reasonable and proper practices that are part of operating a well-managed business and delivering value to shareholders... Sometimes this ‘good’ earnings management is called ‘operational’ earnings management, where management takes actions to try to create stable financial performance by acceptable, voluntary business decisions.”

SPECIFIC EXAMPLES OF EARNINGS MANAGEMENT

There are many techniques that can be used to manage earnings. Some techniques fit neatly within one of the four categories of earnings management, but others do not. For instance, postponing factory maintenance in order to reduce current-period expenses involves the timing of operating expenses (category 2) and is also an operating activity (category 4). Some examples of possible earnings-management techniques are (developed from Mulford and Comiskey, 2002, and Schilit, 2002):

1. Revenue from a multi-year service contract is totally recognized in the year of sale.
2. Operating expenses that have been previously expensed are now being capitalized.
3. Maintenance expenditures are postponed until next year in order to reduce expenses.
4. Revenue is recognized when goods are shipped to a consignee.
5. The write-off of obsolete inventory is deferred until a

more appropriate time.

6. The books are kept open for the first week of the next quarter in order to record additional revenue in the current quarter.
7. More lenient credit terms are extended in order to increase sales. No adjustment is made to increase the allowance for bad debts.
8. Optimistic estimate of useful life is used to depreciate plant and equipment.
9. Costs associated with restructuring are significantly overestimated.
10. The allowance for warranty expenses (expressed as a percent of sales) is increased from the previous year.
11. Next year's price increases are leaked to customers in order to increase current-year sales.
12. Production of goods is increased so that more fixed manufacturing overhead is deferred in ending finished goods inventory.

FUTURE EARNINGS-MANAGEMENT ACTIVITIES AT MAYNARD MANUFACTURING COMPANY

After reviewing the material on earnings management, John Robbins felt uncomfortable with some of the GAAP-based earnings-management decisions he had made in the past. He now believed that the line between realistic judgments made within GAAP and aggressive accounting was too fuzzy. More troubling was the recent trend to label some forms of aggressive accounting as fraud. Consequently, John thought the best thing to do was avoid any form of aggressive GAAP-based earnings management.

John knew that he would still be under pressure to meet earnings expectations. Fortunately, he agreed with the characterization of operational earnings management as good and proper. Therefore, he believed that the best way to manage earnings at Maynard was to engage in such activities. Of particular interest to John was the ability to overproduce inventory in order to defer fixed manufacturing overhead costs in ending finished goods inventory. John wondered about the ability to increase earnings by overproducing. He looked at some recent operating information to help shed some light on his possibilities.

COMPANY INFORMATION

Maynard Manufacturing Company produces machine parts for manufacturing equipment used by various industries. Approximately 3,000 different parts are produced in Maynard's single manufacturing facility. Two

TABLE 1

SECTION A: INCOME STATEMENT FOR THE YEAR ENDING 12/31/2002

| | DOLLARS | PERCENT OF SALES |
|--|----------------------|------------------|
| Sales | \$ 851,217,896 | 100.00 |
| Cost of Goods Sold | <u>− 713,405,719</u> | <u>− 83.81</u> |
| Gross Margin | 137,812,177 | 16.19 |
| Selling, General and Administrative Expenses | <u>− 80,865,700</u> | <u>− 9.50</u> |
| Operating Income | 56,946,477 | 6.69 |
| Other Income (principally interest) | + 4,681,698 | + 0.55 |
| Interest and Debt Expenses | − 9,533,640 | − 1.12 |
| Income Taxes | <u>− 10,810,467</u> | <u>− 1.27</u> |
| Net Income | <u>\$41,284,068</u> | <u>4.85</u> |
| Number of Outstanding Shares | \$11,932,000 | |
| Earnings Per Share | \$3.46 | |

SECTION B: BREAKDOWN OF COST OF GOODS SOLD (COGS) BY COST ELEMENT

| | DOLLARS | PERCENT OF COGS |
|--------------------------|----------------------|-----------------|
| Direct materials | \$324,162,284 | 45.44 |
| Direct labor | 141,702,684 | 19.86 |
| Variable overhead | 53,738,698 | 7.53 |
| Fixed overhead | <u>193,802,052</u> | <u>27.17</u> |
| Total Cost of Goods Sold | <u>\$713,405,718</u> | <u>100.00</u> |

SECTION C: SIMPLIFIED DATA TO ILLUSTRATE THE EFFECT OF OVERPRODUCTION ON EARNINGS

- ◆ One product is produced. Each unit uses 5 machine hours and sells for \$425.
- ◆ Normal capacity utilization is 2 million units (10 million machine hours).
- ◆ Budgeted fixed manufacturing overhead is \$200 million.
- ◆ Actual fixed manufacturing overhead is \$200 million.

years ago, Maynard replaced much of its machinery with state-of-the-art equipment. This equipment allowed Maynard to reduce its direct labor cost by over 25%. This changed Maynard's cost structure by shifting costs that were previously variable (direct labor) to fixed overhead (depreciation on the new equipment). The new equipment also decreased the setup times associated with producing many of its products. Consequently, Maynard now produces many products only after an order is received. Because 60% of Maynard's sales are generated from the sale of 200 parts, they are produced in large batches and are carried in inventory. The other 2,800 parts are pro-

duced only upon the receipt of an order. In contrast, with the old equipment all 3,000 parts were produced for inventory. Because of unpredictable demand for many parts, Maynard used to carry high levels of inventory.

Table 1 provides financial information about Maynard Manufacturing. Section A of Table 1 shows an income statement and earnings per share (EPS) for 2002. Section B shows the breakdown of production costs by cost element. Section C provides a simplified example developed by John Robbins to help him evaluate the effect of overproduction on earnings.

REQUIRED QUESTIONS

1. The case presents 12 examples of possible earnings management techniques. Assume that each technique will have a material effect on the financial statements of a company. Identify which techniques are GAAP-based and which involve operational or real actions. For the GAAP-based techniques, determine whether you believe the action is within the latitude afforded by GAAP (in the white area), pushing the limits of GAAP (in the gray area), or beyond the limits of GAAP (in the black area).

2. Do the techniques you identified as beyond the limits of GAAP (i.e., in the black area) constitute financial fraud?

3. The case characterizes GAAP-based earnings-management techniques as bad and operational techniques as good. Do you agree with this characterization? Do you think operational techniques are always good business decisions? Do you think operational techniques are more ethical than GAAP-based techniques?

4. Use the information presented in Section C of Table 1 and the following four scenarios to illustrate the effect of overproducing inventory on earnings. Specifically, identify how much fixed manufacturing overhead will be expensed (via Cost of Goods Sold) and how much will be held back on the balance sheet (in Finished Goods Inventory). Use the *normal capacity utilization* to determine the fixed manufacturing overhead rate. Ignore income taxes.

- A. Produce and sell 2 million units.
- B. Produce 2.2 million units and sell 2 million units.
- C. Produce 2.3 million units and sell 2 million units.
- D. Produce 2.4 million units and sell 2 million units.

How many units would have to be overproduced in order for John Robbins to increase EPS by \$.01? What about \$.05? Do you believe it's feasible for John Robbins to close a small gap in earnings in order to meet the market's expectation by overproducing? ■

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