## Chapter 7: Management of earning based

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7.1 Introduction and Management of Earning

The accrual method of accounting has been widely criticized as allowing managers too many opportunities to use discretionary accounting choices to manage earnings. The practice of altering earnings to mislead stakeholders or achieve contractual outcomes is ‘earnings management’ (Schipper, 1989). Earnings management has enabled firms to be profitable, achieve positive earnings surprises and smooth earnings growth (Carslaw, 1988; Burtstahler and Dichev, 1997; Degeorge et al., 1999; Barth et al., 1999; Matsumoto, 2002). Prior research suggests that the market relies on working capital accruals to mitigate timing and matching problems inherent in cash flows (Dechow, 1994). This implies either that working capital accruals are not generally managed, or that the market does not recognize (or ignores) earnings management. If the market is unable to detect earnings management, questions can be raised about the effectiveness of auditors/accounting regulations in identifying earnings management, and/or the market’s efficiency in recognizing managerial motivations behind accounting choices. The literature provides mixed evidence about the market’s ability to see through earnings management. Sloan (1996) finds evidence that the market misjudges the time series properties of accruals. He suggests that the market overestimates the persistence of low quality (high accrual) earnings and underestimates the persistence of high quality (low accrual) earnings. Dechow and Skinner (2000) (DS) suggest that the market is inefficient in detecting earnings management to reach simple earnings targets. DS argue that extreme reactions to small deviations from simple benchmarks such as analysts’ earnings predictions indicate that the market uses overly “simple heuristics” to measure economic performance forecasts. On the other hand, focusing on non-linear relations between returns and large absolute discretionary working capital accruals, Ali (1994) finds that the market distinguishes between the persistence of unexpected accruals that are large compared to those that are small in absolute value2. He suggests that the market expects either large positive or large negative discretionary working capital accruals to be more transitory than smaller amounts. Ali, however, does not consider the overall relation between large discretionary working capital accruals (LWCAs), earnings management and earnings response coefficients (ERCs). We examine the market’s reaction to positive and negative earnings changes influenced by LWCAs and predict circumstances where
LWCAs lead to varying market expectations of earnings quality, which has neither been suggested nor tested in earlier work. We argue that annual earnings changes associated with either positive or negative LWCAs are more likely to be viewed by the market as being managed and, therefore, being of lower quality when they are associated with small earnings changes. On the other hand, we anticipate that the existence of LWCAs does not, in and of itself, necessarily connote earnings management to the market. For example, large positive earnings surprises having positive LWCAs are inconsistent with the ‘bonus hypothesis’ (Healy, 1985). Managers are normally expected to reserve accruals for use in future earnings management rather than greatly overshoot bonus earnings targets. The existence of positive LWCAs along with small earnings declines is also inconsistent with likely managerial incentives, which, according to the literature, encourage managers to increase accruals a bit more to achieve positive earnings growth. Possible alternative explanations for LWCAs include value-increasing actions (i.e., positive signals), attempts to mitigate timing problems, or errors in the measure (Kothari, Leone and Wasley, 2004). We expect conflicting differences in the reasons why LWCAs exist to lead to diverse investor opinions, resulting in a less predictable market reaction.

In general, we expect the market to characterize discretionary working capital accruals as follows:

1. Positive or negative LWCAs associated with small earnings increases are likely to be perceived as earnings management;
2. Small positive or negative discretionary working capital accruals are more likely to represent non-discretionary accruals or measurement error and less likely to be Viewed as earnings management;
3. Positive or negative LWCAs lead to more disagreements about managerial motivations among market participants except when they result in small earnings increases.

We focus on annual earnings changes (similar to Ali, 1994) because there is widespread interest by investors, analysts and compensation committees in annual earnings trends, which is likely to affect managerial incentives to manage earnings. In addition, there is more detailed information available in annual filings from which the
market can assess earnings management. In designing our tests, we focus on working capital accruals rather than total accruals because working capital accruals have been found to be especially important in helping the market resolve problems inherent in cash flows from operations (Dechow, 1994). In addition, we avoid potential noise in our measure given the mixed evidence surrounding the use of large negative non-working capital accruals to take ‘big baths’ (White, Sondhi and Fried, 2003, p. 60). We concentrate on earnings before extraordinary and special items as our primary measure of earnings. We exclude loss firms from our analysis since earnings management has been found to be less important when earnings are negative (Degeorge et al., 1999). Similar to Ali (1994), we allow for separate valuation of small and large absolute earnings changes. In addition, we control for factors that have been found in previous work to affect the ERC including growth, persistence, and risk (Collins and Kothari, 1989), so that ERC differences attributable to LWCAs are more likely to be related to lower earnings quality than be surrogates for those other factors. Also, consistent with extant research, we expect large positive or negative unexpected working capital accruals to involve a greater degree of discretionary accounting choices than small negative or positive unexpected working capital accruals.

Our sample is divided into four mutually exclusive groups: (a) positive small earnings changes, (b) negative small earnings changes, (c) positive large earnings changes, and (d) negative large earnings changes. We separately analyze the effects of positive or negative LWCAs on the ERCs within each group (the cases identified by the market as being of lower quality earnings are expected to be found in category ‘a’). We divide our earnings surprises and discretionary working capital accruals into large (small) categories based on whether the magnitudes exceed (are less than or equal to) the annual median of the firm’s industry. Our working capital accruals expectation model relies on the historic relationship between sales and working capital (Defond and Park, 2001). Our main finding suggests that the market discount earnings surprises with LWCAs in the small earnings increase group but not in the other groups.

We assume a random walk model for annual earnings and use annual earnings changes as a proxy for unexpected earnings or earnings surprises. We examine ERCs for the following four mutually exclusive groups that correspond to our four regression tables: (a) positive earnings surprises of small magnitude, (b) negative earnings surprises...
of small magnitude, (c) positive earnings surprises of large magnitude, and (d) negative earnings surprises of large magnitude. To test our hypotheses, we use dummy variables within each group representing the existence of either positive or negative LWCAs. In addition, we control for variables that prior research has identified to be determinants of cross-sectional differences in ERCs. Thus, ERC differences attributable to LWCAs are more likely to be related to lower earnings quality than be viewed as surrogates for those other factors. Consistent with prior work (e.g., Ali, 1994), we use a long-window association study.

**Annual return (RET)**

We use raw returns computed as the compounded monthly returns from nine months prior to the fiscal year-end to three months after the fiscal year-end as the dependent variable.

Unexpected working capital accruals (WCt) and absolute unexpected working capital accruals (WCt|):

Working capital from operations for period t is defined as current assets (net of cash and short-term investments) minus current liabilities (net of short-term debts) 1:

\[ WCt = (Data_{4t} - Data_{1t}) - (Data_{5t} - Data_{104t}) \]

There have been different measures of unexpected working capital accruals in the literature. Ali (1994) and Dechow (1994) use a random-walk expectation model to capture annual surprises in working capital accruals. They both examine cases involving different rankings of absolute values of working capital surprises. Defond and Park (2001) (DP) base their working capital accrual expectations model on how much working capital is normally needed to support current sales. Our approach is similar to DP (although we test the other model in our sensitivity analysis)

Where we define expected working capital as:

\[ E(WCt) = WCt-1 \times Sales_{t} / Sales_{t-1} = WCt-1 \times (Data_{12t}/Data_{12t-1}) \]

We define unexpected working capital (WCt) as the difference between the actual working capital WCt, and the expected working capital, E(WCt), scaled by the beginning period market value.

\[ WCt = \frac{WCt - WCt-1 \times (Data_{12t}/Data_{12t-1})}{(Data_{199t-1} \times Data_{25t-1})} \]
Our measure of ‘large’ working capital accruals (LWCA) is consistent with the ones used in earlier studies. We first rank all observations of (WCt) in one of fifteen industrial sectors. Industrial sectors are defined according to the definition used in Barth, Beaver and Landsman (1998). Variable LWCA\(_t\) for a firm \(j\) equals 1 if (WC\(_t\)) is above the median for the industry of firm \(j\) in year \(t\) (zero, otherwise).

After creating the variable LWCA to classify whether unexpected working capital accruals are large or small, we then define dummy variables RWP\(_t\) and RWN\(_t\) based on whether unexpected working capital accruals are positive or negative as follows:

\[
\text{RWP}_t = \begin{cases} 
1 & \text{if } \text{LWCA}_t = 1 \text{ and } \text{WC}_t \text{ is positive, } \\
0 & \text{otherwise.}
\end{cases}
\]

\[
\text{RWN}_t = \begin{cases} 
1 & \text{if } \text{LWCA}_t = 1 \text{ and } \text{WC}_t \text{ is negative, } \\
0 & \text{otherwise.}
\end{cases}
\]

Earnings changes (N\(_{It}\)) and absolute changes in earnings (N\(_{It}^a\))

We use earnings before extraordinary items and special items. By excluding extraordinary items and special items, we reduce the likelihood that our results are driven by the market’s response to one-time events. We use changes in annual earnings (scaled by beginning of the period market value) as a proxy for unexpected earnings under the assumption that annual earnings follow a random walk process.

\[
\text{N}_{It} = \text{unexpected earnings} = \frac{\text{Change in Earnings before extraordinary items and special items}}{\text{market value at the beginning of the period}}.
\]

\[
= [\text{(Data } 18t - \text{Data } 17t) - (\text{Data } 18t-1 - \text{Data } 17t-1)] / (\text{Data199t-1 x Data } 25t-1).
\]

We define dummy variable RE\(_t\) to identify firm-years with large magnitude of unexpected earnings. Analogous to LWCA, RE\(_t\) is defined by ranking firms according to (N\(_{It}\)) within each industry group.

Control Variables (X\(_{j,t}\) \(j = 1\) to 11)

Prior research has identified control variables that are related to the cross-sectional differences in ERCs. We include a total of eleven control variables in our market returns regressions.

They include size, book-to-market, and debt to equity as risk proxies (Fama and French, 1992); separate proxies for growth, persistence, and change in book value (Barth et al., 1999); and interactions between all of these variables (except the change in book value) and earnings surprises. Control variables are described in Appendix A.

[6]
We estimate equation (1) below separately for each of our four regression tables (i.e., one each for small positive earnings changes, small negative earnings changes, large positive earnings changes, and large negative earnings changes). To test hypothesis 1, we examine regression coefficients in an estimation using only those observations that have small and positive earnings surprises, i.e., the dummy variable for large absolute unexpected earnings (REt) = 0 and NI t > 0. To test hypothesis 2, we use observations with small and negative earnings surprises, i.e., REt = 0 and NI t < 0. To test hypothesis 3, we use observations with large and positive earnings surprises, i.e., REt = 1 and NI t > 0. We also test it separately for observations with large and negative earnings surprises, i.e., REt = 1 and NI t < 0.

The marginal price response to unexpected earnings is a_1,t for firms with small accruals. It is (a_1,t+a_2,t) for firms with positive LWCAs. It is (a_1,t+ a_3,t) for firms with negative LWCAs. A negative value of a_2,t (a_3,t) indicates that the marginal price response to earnings is lower for firms with positive (negative) LWCAs. Tests of the three hypotheses of the study are conducted by examining whether coefficient a_2,t < 0 and a_3,t < 0. We estimate each of these equations separately for each year t and use Fama and Macbeth (1973) tests on our coefficients. To control for extreme observations affecting cross-sectional results, we use the DFFITS criteria (Belsley et al., 1980, pp. 28-29), which enables us to identify and then delete observations that have a large influence on parameter estimates. In addition to estimating the equations for each year separately, we also estimate each equation using pooled regressions after adding year dummy variables to allow for year-wise variation in the intercept. Similar to individual year regressions, we use the DFFITS procedure to ensure that our results are not unduly influenced by extreme observations. To control for heteroscedasticity in the pooled sample, we examine consistent estimates of the covariance matrix using the White (1980) procedure. Finally, we conduct sensitivity analysis to check the robustness of our results.

We examine market reactions to unexpected earnings influenced by large unexpected working capital accruals (LWCAs). Focusing on nonlinear relations between returns and LWCA, prior work has found that market reactions are generally weaker for LWCA than for small discretionary working capital accruals. We extend the extant literature by examining the market’s reaction to positive and negative earnings changes influenced by LWCAs and predict circumstances where LWCAs lead to varying market
expectations of earnings quality. Prior work generally assumes that LWCAs have a uniform impact on market expectations. We examine eight situations that combine positive or negative LWCAs with earnings changes that are either positive or negative and are of either small or large absolute magnitudes. We argue that the market is more likely to suspect earnings management and, therefore, view earnings as being of lower quality when firms report small increases in earnings with the help of positive or negative LWCAs. According to the literature, managers are strongly motivated to produce small earnings increases instead of earnings declines (i.e., by using positive LWCAs), or produce small earnings increases instead of positive earnings shocks (i.e., by using negative LWCAs). The remaining six situations are not consistent with traditional managerial incentives suggested by the literature and, therefore, do not necessarily imply earnings management. For example, when there are large increases in earnings using positive LWCAs, managerial accounting choices are inconsistent with the motivation predicted by the bonus hypothesis and with expectations that managers retain future flexibility to manage earnings. Similarly, when managers report small decreases in earnings using positive or negative LWCAs, their actions are inconsistent with the expected desire to report increases in earnings. These apparent inconsistencies may be a result of error in the LWCA measure or unobservable motivations by management. Consistent with our predictions, we find that the market discounts unexpected earnings when there are small increases in earnings using negative LWCA (i.e., masking earnings variance or smoothing) or positive LWCA (i.e., masking lower earnings levels). We find little or no evidence that positive or negative LWCAs lead to lower ERCs in the remaining six situations. The failure of positive or negative LWCAs to reduce ERCs in these other cases may be due to an absence of earnings management, error in the measure, diversity in opinions among investors about LWCAs being a manifestation of earnings management, or failure of the market to detect earnings management.

7.2 Profit Method

Earnings manipulation is usually not the result of an intentional fraud, but the culmination of a series of aggressive interpretations of the accounting rules and aggressive operating activities. The end result is misstatement of the financial results
perpetrated by people that had previously been considered honest and may not have realized the severity of their actions until it was too late.

The typical case of earnings manipulation begins with a track record of success. The company or division has posted significant sales and earnings growth over recent years. Their stock price trades at a high price earnings multiple as the market rewards its stellar growth. Unfortunately, it is becoming more difficult for the company to maintain the sales and earnings growth that analysts have grown to expect. Sales are behind target this quarter, so management runs special incentives for its sales force to accelerate sales and uses overtime to ship out its products. It works and the firm meets expectations.

The next quarter, the analyst expectations are higher. However, sales still have not picked up to the level required, so the firm provides additional incentives to its sales force, uses overtime to boost shipments but now has additional expenses to contend with (incentives and overtime), so it does not fully accrue all its consulting expenses. The following quarter rolls around and sales still haven't recovered, but the analysts keep raising the bar. This time the operating tactics are not enough, so management pressures the CFO to make the numbers. The CFO is aggressive in the interpretation of installment sales and expense accruals, and the company again meets expectations. The expectations keep rising, as does the firm's stock price. As the fourth quarter comes around, sales still are not at expectations. The CFO creates sales and under-accrues expenses all to meet expectations. The company has gone from aggressive operating practices to financial fraud.

Earnings management is the acceleration or deferral of expenses or revenue through operating or accounting practices with the objective to produce consistent growth in earnings. These earnings may not reflect the underlying economics of the enterprise for the time-period. Some of the principle means of managing earnings are "cookie jar" reserves, capitalization practices, "big bath losses", altering the timing of operations to speed recognition of revenues, aggressive merger and acquisition practices and revenue recognition practices.

In general, the practice of earnings management leads to pulling operating profits from subsequent periods creating even greater pressure on financial managers to create earnings in those following periods. The management of earnings can then lead to
manipulation and misstatement taking management down the path from questionable ethical practices to blatant fraud.

Some of the techniques used to manage and manipulate earnings are discussed below:

a. "Cookie-jar" Reserves

The accrual of expenses is to reflect the period in which the expense was incurred. For example, if a firm hires a consultant to perform a particular activity, it should reflect the expense related to that activity in the period in which it is incurred, not when the bill is paid or invoice received. In many cases, the accrual of expenses, or reserves in particular industries such as insurance and banking, are based on estimates. As such, the estimates have varying degrees of accuracy.

During times of strong earnings, the firm establishes additional expense accruals and subsequently reduces the liability to generate earnings when needed in the future - pulling a "cookie from the jar".

b. Capitalization practices - intangible assets, software capitalization, research and development

In 1997, companies were allowed to capitalize the costs of internally developed software and amortize it over the useful life, generally three to five years. Capitalization is to represent the development costs. The capitalization process of companies has the potential for manipulation because these assets are often intangible and based on judgment. A firm may allocate more expenses to a project that can be capitalized to reduce current operating expenses.

c. "Big bath" one-time charges

Unusual or non-recurring charges have become one-technique used by firms to escape the maze of over aggressive accounting practices. Many believe and anecdotal evidence has shown that analysts overlook non-recurring charges because they are not part of the firms’ ongoing operations or operating income. Typical non-recurring charges
include writing down assets, discontinuance of an operating division or product line and establishing restructuring reserves.

As discussed previously, firms practicing earnings management deplete the economic earnings from future periods. As their ability to sustain earnings growth diminishes, they may seek an event that can be characterized as one-time event and "overload" the expenses attributable to that event. The one-time charge may be discounted by analysts as not being part of operating earnings while the stock price does not suffer the consequences normally associated with missing earnings targets. To provide itself with more "cookie jar" reserves or mask its past sins, the firm may take other write-offs or create other accruals not directly tied to the event and attribute those expenses to the one-time event.

A study by Elliot and Hanna (1996) reported that reports of large, one-time items increased dramatically between 1975 and 1994. In 1975, less than 5% of companies reported a large negative write-off compared to 21% in 1994. The authors also showed that companies that had previously reported similar write-offs were more likely to do so.

d. Operating activities

Managers often have the ability to modify the timing of events such that the accounting system will record those activities in the period that is most advantageous to management. The activity does not alter the long-term economic value of the transaction, just the timing and thus, comparability of financial statements. For example, a company could accelerate its sales and delivery process such that it records sales in December that normally would have been reported in January. Thus, the company reports higher fourth quarter sales, revenue and profits. In the long-term, the company would ultimately report the same sales and profits; however, it has inflated its growth in the near term, and reduced profits in the future period.

e. Merger and acquisition activities

One type of significant event that may be used to mask other charge-off is mergers and acquisitions. In most cases, there is some form of restructuring involved creating the need for a large one-time charge along with other merger-related expenses. The event provides the acquirer with the opportunity to establish accruals for
restructuring the transaction, possibly attribute more expense than necessary for the transaction. The company may also identify certain expenses that are revalued on the seller's balance sheet, increasing goodwill. If the conservative valuations prove to be excessive, the company is able to reduce its operating expenses in the near term by reducing its estimate for the liability. The additional goodwill created would be amortized over a long period of time and not have a significant impact on near term results.

There are two methods of accounting for mergers and acquisitions. Pooling of interests ("pooling") accounting and purchase accounting. Pooling recognizes the transaction as a merger of equals, thus the transaction is recorded as company A plus company B. Purchase accounting treats the transaction as a purchase. The fair value of the purchased company is assessed and compared to the purchase price. Any excess or premium paid above the fair value of the assets is recognized as goodwill. Goodwill is amortized over a period of time not to exceed forty years.

1. Pooling of interests

Abraham Brill off, professor emeritus at Baruch College, in an article in the October 23, 2000 issue of Barron's entitled "Pooling and Fooling" brought attention to the use of pooling accounting by Cisco Systems to inflate its operating earnings. Cisco has been an active acquirer paying $16 billion for twelve companies in fiscal 2000 alone, but through the use of pooling accounting, Cisco only recognized only $133 million in cost in its capital accounts for these transactions. In addition, five of the acquisitions were deemed "too immaterial" to restate prior period financial statements. Brilloff contends that Cisco's earnings for 2000 should have been reduced by $2.5 billion reducing the $2.1 billion gain into a $.4 billion loss.

If a company pays a premium to acquire another firm, the premium, or goodwill, is amortized and reduces earnings going forward. Thus, companies seek transactions that will allow them to use pooling of interests. It has been contended that additional premiums have been paid in instances where pooling of interests will be allowed.

Criticism of pooling accounting has been significant and the FASB has reacted by announcing the elimination of the method. However, the effective date has been delayed as the FASB has received strong opposition from industry.
2. Purchase accounting and goodwill

Under the purchase method of accounting for acquisitions if the price paid by the acquiring firm exceeds the fair value of the company acquired, the difference is recorded as an intangible asset, goodwill. Goodwill is amortized over future periods, thus, the creation of goodwill causes future expenses, therefore reducing reported earnings. If the acquirer conservatively values assets (such as private placement or illiquid securities and real estate) or liabilities (reserves, accrued liabilities), the company may be able to recognize additional earnings in the near future as it estimates become less conservative.

Professor Brilloff has also been a critic of the accounting practices of Conseco, a financial services company. Mr. Brilloff contended that Conseco had manipulated its earnings through its acquisition practices. In summary, he argued that Conseco had inflated the loss or claim reserves of the insurance entities it acquired and recognized a corresponding asset of goodwill at the time of acquisition. It could then reduce the reserves over the near term to inflate earnings while amortizing the goodwill over a significantly longer period of time.

f. Revenue Recognition

The timing of the recognition of revenue is the most likely area to target for management and manipulation. From an operational standpoint, firms can take aggressive actions to boost revenues and sales in one period through providing incentives to their sales force, utilize overtime to push shipments out the door. They may also take aggressive accounting actions such as selling securities classified held for sales recognize gains in income versus stockholders equity, aggressive in the timing of the recognition of sales or aggressive in the application of broad or unclear accounting guidance.

g. Immaterial misapplication of accounting principles

Materiality is a concept that has been under fire from the SEC due to its misuse. As previously discussed. Errors, misstatements and misapplication of accounting principles have been overlooked if they fell below the materiality threshold. A company may knowingly misstate earnings by amounts that fall below the materiality threshold by
not correcting known errors or other misstatements. If the practice continues for a number of periods, the balance sheet (retained earnings) may become significantly misstated.

h. Reserve one-time charges

The use of one-time charges, established in the form of a reserve, can be used to manage earnings. The company conservatively recognizes a one-time charge in the form of a contingency reserve for a possible future loss or future expense. They anticipate that analysts will discount the charge since it is not deemed to be part of operating income. Over time, the company changes its estimate (reduces) to recognize additional earnings.

References


