Earnings quality and earnings management: the role of accounting accruals

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Chapter 1 Introduction

1.1 Introduction

In this dissertation I examine how managers exercise judgment in financial reporting through accounting accruals to report earnings that best measure firm performance. Accruals shift or adjust recognition of cash flows over time to make financial reports more informative about the performance of the firm (Dechow, 1994; Dechow et al., 1998; Liu et al., 2002). However, the professional literature and the financial press have raised questions on whether the effect of accruals is to increase earnings quality and make financial reports more informative or if accruals are used for earnings management, which is defined as a deliberate intervention of management in the financial reporting process to further a private gain of the management itself (Schipper, 1989). Thus, given that implementing Generally Accepted Accounting Principles (GAAP) requires management to make judgments and estimates, the crucial issue seems to be one of how managers use accruals to produce earnings that are of high quality.

There are many ways that managers can exercise judgment in financial reporting. For example, judgment is required to estimate numerous future economic events, such as expected lives and salvage values of long-term assets, obligations for pension benefits and other post-employment benefits, deferred taxes, and losses from bad debts and asset impairments. Managers must also choose among acceptable accounting methods for reporting the same economic transactions, such as the straight-line or accelerated depreciation methods or the LIFO, FIFO, or weighted-average inventory valuation methods. In addition, managers must exercise judgment in working capital management (such as inventory levels, the timing of inventory shipments or purchases, and receivable policies), which affects cost allocations and net revenues. Managers must also choose to make or defer expenditures, such as research and development (R&D), advertising, or maintenance. Finally, they must decide how to structure corporate transactions. For example, lease contracts can be structured so that lease obligations are on- or off-balance sheet, and equity investments can be structured to avoid or require consolidation (Healy and Wahlen, 1999).

Managers can use accounting judgment to make financial reports more informative for users. This can arise if certain accounting choices or estimates are perceived to be credible signals.

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1 The term accrual is used here in a general sense and includes both accrual accounts (for which recognition in the income statement precedes cash receipts or disbursements) and deferral accounts (for which cash receipts or disbursements precede recognition in the income statement). One can also view accrual accounting from a “balance sheet” perspective, in the sense that accrual accounting involves the recognition of an entity's rights and obligations as they occur.
of a firm's financial performance. In this case, management communicates its private information about the firm’s performance through financial reporting (Demsiki, 1998; Fields et al., 2001; Arya et al., 2003; Beaver and Ryan, 2005; Guay, 2006). However, managers can also use their 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 (Schipper, 1989; Healy and Whalen, 1999; Dechow and Skinner, 2000; Nelson et al., 2002). In this case, management uses its private information to distort signals about firm performance through financial reporting. Accruals allow earnings to provide better information about economic performance to investors than cash flows do. However, key questions are how far management should go in helping investors form rational expectations about firm’s performance through their accruals choices and when does this activity become earnings management?

Research in accrual accounting has been a very active field of research, providing insights in the financial reporting process in general and accrual accounting in particular. However, there remain questions about the role of accruals in (1) improving earnings quality to assist the users of financial reports in predicting future performance (e.g. Desai et al., 2004; Barth and Hutton, 2004; Callen and Segal, 2004; Francis et al, 2005, Lev and Nissem, 2006), (2) the effect of growth on financial reporting and earning management (e.g. McNichols, 2000; Beaver, 2002; Fairfield et al. 2003b; Richardson et al., 2006, Dechow and Ge, 2006) and (3) the role of accruals in accounting conservatism and loss firms (e.g. Burgsthaler and Dichev, 1997; Beaver et al., 2003, Joos and Plesko, 2005; Durtschi and Easton, 2005; Ball and Shivakumar, 2006). With this dissertation I provide empirical evidence on the role of accruals in financial accounting to fill these gaps in the extant financial accounting literature, and assist users of financial reports in assessing the performance of a firm using financial statements.

1.2 Research objectives and contributions

In this dissertation I examine the manner in which accruals adjust cash flows to produce earnings that best reflect firm performance. More specifically, in three empirical studies I further examine the relationship between cash flows and accruals in relation to respectively accrual quality, growth and accounting losses. In the first study, accruals are the independent variable in an examination of the effect of accrual quality on future cash flows as the dependent variable. In the second and the third study, accruals are the dependent variable and cash flows are the
independent variable in an examination of the effect of respectively growth and accounting conservatism on accrual adjustments.

This dissertation builds on a large body of evidence on the role of accruals in financial accounting. Almost all studies that are referred to in this dissertation use US data taken from the Compustat Annual Industrial And Research Files database. I extend the literature by providing empirical evidence using the same Compustat US data as previous studies, making my results comparable to previous studies.

In the first study, I examine if the quality of accruals affects the ability of earnings to predict future cash flows, where earnings are decomposed in cash flows and accruals. Earnings are of good quality if they are a good indication of future earnings (Penman, 2003). One of the ways managers can improve financial reporting is to use accruals to improve the prediction of future cash flows. The Financial Accounting Standards Board (FASB) considers cash flow projection as a desirable characteristic of accounting information by stating that “financial reporting should provide information to help investors, creditors, and others assess the amounts, timing and uncertainty of prospective net cash inflows to the related enterprise” (1978).

Dechow et al. (1998) and Barth et al. (2001) show that accruals improve the prediction of future cash flows over current cash flows. However, Sloan (1996) argues that high accrual are associated with lower future performance, Fairfield et al. (2003a) suggest that a high level of accruals on the balance sheet indicates earnings that are not sustainable, Hirshleifer et al. (2004) argue that a high level of accruals on the balance sheet indicates a lack of sustainability of recent earnings performance, while Desai et al. (2004) show that the ability of cash flows to predict future returns subsumes accruals in predicting future returns.

I show that the ability of accruals to be informative in predicting future cash flows incremental to current cash flows is conditional on accrual quality. Accrual quality is the extent that accruals map into cash flows (Dechow and Dichev, 2002; Francis et al., 2004; Francis et al., 2005). When accrual quality is low, future cash flows are less likely to be predicted from current cash flows, and accruals are incremental to current cash flows in predicting future cash flows. When accrual quality is high, current cash flows are more likely to persist, and accruals are less relevant in predicting future cash flows relative to cash flows. This can be explained by the fact that, when accrual quality is low, accruals are not likely to be converted in future cash flows, and therefore cash flows are shown to be less persistent. In this case, accruals are relevant incremental to cash flows in predicting future cash flows. However, when accrual quality is high, the likelihood of the conversion of assets in cash flows is high, and it is shown that cash flows are highly persistent when accrual quality is high. In the case of high accrual quality, accruals are less
relevant for the prediction of future cash flows, incremental to current cash flows. I also show that accrual quality does not affect the ability of abnormal accruals to predict future cash flows, indicating that abnormal accruals may reflect private information about future cash flows rather than earnings management.

In the second empirical examination, I examine the effect of growth on the manner in which accruals adjust cash flows to produce earnings. Firms with greater expected earnings growth are likely to have greater than expected accruals than firms with less expected earnings growth (McNichols, 2000). The higher than expected amount of accruals for growth firms, and the reversal of accruals in consequent periods, could be wrongly interpreted as earnings management (Beaver, 2002; Fairfield et al., 2003b). For instance, the variation in growth rates rather than earnings management is likely to cause the lower persistence of accruals (Richardson et al., 2006).

Accrual adjustments made by firms are fundamentally linked to underlying economics. Firms with large positive accruals relative to their asset base are typically growing firms, while firms with large negative accruals are typically firms that are exiting businesses and are in a state of decline. The accounting rules applicable to growing and declining firms have very different perspectives. Dechow and Ge (2006) point out that the difference in accounting perspective for accruals is likely to be dependent on the life cycle the company is in. They argue that accruals for growing firms have an income statement perspective, focusing on revenue recognition and the matching of costs to revenue. Value (low growth) firms however, use accruals from a balance sheet perspective, where the focus is on changes in the value of assets, as reflected in earnings. The difference in accounting perspective is presumably driven by differences in demand for reporting quality. Growth firms typically have more growth opportunities than value firms. Generally, there is little demand to fair-value these growth opportunities, as stakeholders focus on the realization of the growth opportunities. However, value firms facing a decline in business are likely to have assets in place that have a lower market value than book value. Demand for reporting quality will be based on financial reporting reflecting fair value. This exercise of caution in the recognition and measurement of income and assets is reflected in accruals.

Accruals perform two major functions in financial accounting (Ball and Shivakumar, 2006). Accruals are used to ameliorate the noise in earnings caused by transitory cash flows, and for the timely recognition of unrealized gains and losses. I argue that difference in accounting perspective for firms with high growth and firms with low growth cause a difference in accrual accounting. I show that the noise reduction role of accruals is less prevalent for firms with high growth. I also show that since underlying economics adjust the accrual process, causing a
significant lower association between accruals and underlying cash flows and higher than expected specific accruals. This could be interpreted as earnings management. However, accrual based earnings management measures are affected by the effect of growth on accounting accruals, and may in fact reflect differences in accrual accounting rather than earnings management. This result suggests that growth is an omitted correlated variable in earnings management research.

Third, I examine the role of accruals in accounting conservatism and loss firms. The frequency of loss firms has increased markedly in recent years, from 15% to 35% of all firm-year observations in the Compustat database of U.S. firms in the last 30 years (Joos and Plesko, 2005). Loss firms are expected to be more likely to engage in earnings management (Burghstahler and Dichev, 1997; DeGeorge et al., 1999; Phillips et al., 2003). However, evidence for the earnings management hypothesis has been questioned (Dechow et al., 2003; Durtschi and Easton, 2005). The higher incidence of loss firms seems to be caused by an increase in accounting conservatism (Basu, 1997; Givoly and Hayn, 2000; Ball and Shivakumar, 2006). Conservatism can be considered an accounting bias toward reporting low book values on the balance sheet (Penman, 2003). One consequence of conservatism is the differential verifiability required for the recognition of profits versus losses (Watts, 2003). Two types of accounting conservatism can be distinguished (Beaver and Ryan, 2005). First, unconditional conservatism reflects GAAP principles or policies that reduce earnings independent of current economic news, e.g. immediate expensing of R&D expenses. The second type of conservatism is conditional conservatism, which reflects the reduction of accounting income due to a contemporaneous economic loss, e.g. more timely earnings recognition of bad news than of good news. Timely loss recognition is considered a key attribute of financial reporting quality (Ball and Shivakumar 2005). The timely recognition of unrealized gains and losses is a major role of accruals (Ball and Shivakumar, 2006). I show that the differences in demand for reporting quality is reflected in differences in timely loss recognition between profit firms and loss firms. More specifically, my results indicate that the role of accruals for the recognition of conditional conservatism, or timely loss recognition, is predominantly applicable to loss firms, whereas profit firms do not seem to use accruals to reflect conditional conservatism. I further show that this is reflected in the use of special items, a specific class of accruals. Firms with an accounting profit on average do not have substantial use of special items, whereas for loss firms, special items are substantially negative. Since special items are associated with accounting conservatism (Givoly and Hayn, 2000), this further shows the difference in conditional conservatism between loss firms and profit firms.

This dissertation provides a contribution to research in financial accounting and to the practice of financial statement analysis. First, the role of accruals in the prediction of future cash
flows is further explained. I show that accruals are relevant for the prediction of future cash flows especially when accrual quality is low, i.e. when the extent that accruals map into cash flows is low, and less relevant when accrual quality is high. This is the case for both accruals on the income statement and on the balance sheet. I show that users of financial statements should not only examine the amount of accruals when considering future performance, but also the quality of accruals. Second, I further provide evidence on the relevance of abnormal accruals. In his review on capital market research, Kothari (2001) states that discretionary accruals are synonymous with earnings management. However, Subramanyam (1996) shows that discretionary accruals improve earnings as a signal of performance. The net effect (i.e. good or bad) of this managerial discretion remains an empirical question. I show that abnormal accruals are not necessarily a signal of earnings management, but also a signal of private information about future cash flows. This is consistent with Arya et al. (2003), who argue that in certain instances a managed earnings stream can convey more information than an unmanaged earnings stream. Under the “Conservation of Income” principle, the sum of accounting earnings over the firm’s life is not affected by accounting choices (ignoring the effect of taxes and changes in the firm’s opportunity set). As a result, the assumption of this principle, manipulation catches up with the manager. Thus, when a manager manages earnings (e.g. to smooth the earnings stream), this is a demonstration of his ability to run the firm and predict future earnings. Therefore, researchers and users of financial statements should caution equating abnormal accruals with earnings management. Third, I show that the higher the growth, the more managers use accruals to adjust cash flows over time to reduce the noise in cash flows as a measure of performance. This systematic effect of growth on accruals also affects accruals-based measures of earnings management. McNichols (2000) and Beaver (2002) argue that the effects of growth on accruals should be further examined, at the risk of spuriously concluding to earnings management. My results show the importance of adjusting the evaluation of accounting numbers for growth. I show that growth will cause systematic differences in accrual-based accounting numbers between firms with low growth and firms with high growth. A better understanding of the effect of growth also allows the users to better assess the quality of earnings, making my results also important for the practice of financial statement analysis. A fourth and final contribution of this dissertation is empirical evidence on the difference of conditional conservatism between profit firms and loss firms. Ball and Shivakumar (2006) show that accruals play an important role in the timely recognition of economic losses, i.e. conditional conservatism. My results indicate that the timely loss recognition role of accruals is especially relevant for firms with an accounting loss. In contrast, conditional conservatism via accruals is not applied by profit firms. This is consistent with evidence from capital market
research that investors do not react to losses in the same manner as to profits (Hayn, 1995). The earnings response coefficient (ERC) for loss firms is zero, indicating that the stock price reaction to earnings news is zero. Therefore, there is an incentive for managers to recognize economic losses in income, since this will not affect the stock price of the company. However, the ERC for profit firms is high, so for profit firms, conditional conservatism will affect the stock price, given managers the incentive not to recognize economic losses in a timely manner. This result is important for researchers in financial accounting. It shows that loss firms and profit firms have different properties of accruals, and therefore should not be pooled automatically. The explanatory power of the model is shown to improve dramatically by partitioning the sample on loss firms and profit firms. I also present evidence against the earnings management hypothesis that is presented in prior research. I argue that accrual choices that previously may have been considered earnings management may in fact represent the application of conditional conservatism, or timely loss recognition. For instance, McVay (2006) argues that managers opportunistically shift expenses from core expenses to special items. I show that accrual choices are likely to represent conditional conservatism rather than earnings management. Also, my results are important for investors and other users of financial reports. I show that earnings quality in terms of timely loss recognition through accruals is higher for loss firms than for profit firms. This could for instance affect accounting based valuation. My results help users of financial statements to better interpret the accounting numbers.

1.3 Outline of the dissertation

The remainder of the dissertation is organized in the following manner. Chapter 2 discusses the role of accruals and cash flows in financial reporting. Chapter 3 discusses the role of accruals for accounting conservatism. Chapter 4 examines the quality of earnings and accruals. Chapter 5 reviews prior literature on earnings management. Chapter 6 examines the effect of accrual quality on cash flow persistence and the prediction of future cash flows. Chapter 7 examines the effect of growth on accounting accruals. Chapter 8 examines differences in the role of accruals for conditional conservatism between profit firms and loss firms. Chapter 9 presents the summary and the conclusions. A brief summary of the dissertation in Dutch is presented at the end of this dissertation.