Earnings quality and earnings management: the role of accounting accruals

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Chapter 9 Summary and Discussion

9.1 Introduction

The purpose of financial reporting is to provide information that is useful for business decisions. Financial reports are of interest to users for a multiple of purposes, ranging from investment decisions to contracting purposes. At the heart of the financial reporting system is accrual accounting. Accruals shift or adjust the recognition of cash flows over time, so that the adjusted number, i.e. earnings, better measures firm performance. Managers of the firm are responsible for generating financial statements, and through the exercise of their discretion over accounting accruals, managers can improve or impair the usefulness and the quality of financial statements. Knowing more about the role of accruals in financial accounting in general, and more specifically about the role of accruals for the quality of earnings and earnings management is therefore essential to increase the usefulness of financial statements.

In this dissertation, the use of accruals in financial reporting is described and explained. In particular, this dissertation addresses the following three research questions that examine the role of accounting accruals for earnings quality and earnings management.

RQ1: What is the effect of accrual quality on the prediction of future cash flows?
RQ2: How does growth affect the role of accounting accruals in financial reporting?
RQ3: Is there a difference in the manner in which accruals are used for conditional conservatism, i.e. the timely recognition of unrealized economic losses, between firms with an accounting profit and firms with an accounting loss?

9.2 The theoretical foundation of the dissertation

The dissertation starts with the presentation of the main theoretical arguments and empirical evidence on the role of accounting accruals in financial reporting. A model is discussed which shows how generally accepted accounting principles employ accruals to alter the timing of cash flows recognition in earnings. Two important accounting principles that guide the production of earnings are the revenue recognition principle and the matching principle. Accrual accounting consists of all the techniques developed by accountants to apply the matching rule. Accrual accounting is the basis under which the effects of transactions and other events are recognized when they occur (and not as cash or its equivalent is received or
paid) and they are recorded in the accounting records and reported in the financial statements of the periods to which they relate.

Then, the role of accruals for reducing the noise of transitory cash flows is discussed. Generally speaking, accruals perform two functions in financial accounting. The primary function of accruals is to reduce the noise in transitory cash flows to produce earnings. The other major function of accruals is the timely recognition of unrealized gains and losses. Empirical evidence is presented of the noise reduction role of accruals. It is shown that the noise reduction role of accruals induces a negative relation between cash flow and accruals.

The information content of accruals is examined by establishing that accrual based earnings are a better measure of performance than reported realized cash flows. This is because realized cash flows have timing and matching problems that cause them to be a ‘noisy’ measure of firm performance. To evaluate the effectiveness of the accounting summary of events, empirical research requires a benchmark against which the financial report can be evaluated. Since the events that have affected the firm are reflected in firm value, the market value of the firm, as reflected in the stock price, is used as the benchmark. The stock price reflects all the future pay-outs to the holder of the stock, i.e. all future cash flows generated by the firm that will be distributed to shareholders. Therefore, changes in the stock price reflect changes in the expectations of future cash flows, or future pay-outs to the holders of the stock. Information is considered to be relevant if it is associated with (changes in) the value of the firm. Empirical evidence is discussed that shows that the association between security returns and earnings is higher than the association between security returns and operating cash flows, suggesting that accruals have information content. However, it is also shown that transitory components of earnings do not have an association with stock returns. This suggests that not all accruals are related to future cash flows generated by the firm.

Chapter 3 provides a discussion of the other major role of accruals, the timely recognition of unrealized gains and losses. The focus in this dissertation is on the timely recognition of unrealized losses. Timeliness of loss recognition is a summary indicator of the speed with which adverse economic events are reflected in both income statements and balance sheets. It is considered to be an important attribute of financial reporting quality.

Accounting recognizes (economic) income under two broad models: deferred and timely recognition. Deferred recognition largely ignores revisions in expectations and awaits the realization of the revised cash flows themselves. Timely recognition incorporates unrealized gains or losses in income (and hence the balance sheet) on an accrued basis. The economic gain or loss during a period can be thought of as the current-period cash flow plus or minus any upward or downward revision in the present value of expected future cash flows. By definition, timely gains and loss recognition must occur around the time of revisions in
expectations of future cash flows. The revision in cash flow expectations normally will be made prior to the actual realization of those losses in cash, so timely recognition of an economic loss in accounting income generally requires accounting accruals. In contrast to noise-reducing operating accruals, gain and loss accruals are a source of positive correlation between accruals and current-period operating cash flow.

There is a difference in accounting practice in the timely recognition of losses and the timely recognition of gains. Financial reporting normally modifies the revenue recognition rules by adopting a lower verification standard for information about decreases in expected future cash flows (i.e. economic losses) than for increases (i.e. economic gains). Thus, the accounting treatment of gains and losses is asymmetric when concerning the verification requirement. This difference is induced by the conservatism principle of accounting. Using accruals for timely loss recognition is also called ex post conservatism, news-dependent conservatism or conditional conservatism. Empirical evidence is discussed that shows that accruals play a major role in the timely recognition of unrealized losses.

Chapter 4 discusses earnings quality. Given the focus on decision usefulness of financial reporting, the quality of financial reporting is of interest to those who use financial reports for contracting purposes and for investment decision making. A major interest in financial reporting is the earnings quality, which is part of the overall financial reporting quality.

It is shown that the time series properties of earnings are typically used in financial accounting research to examine earnings quality. Persistent earnings are often referred to as sustainable or core earnings, where sustainable earnings are considered high quality earnings. Empirical evidence is discussed that shows that the accrual portion of earnings is less persistent than the cash portion of earnings. Furthermore, it is shown that the differential persistence of accruals is possibly caused by earnings management. Finally, the difference between cash flow persistence and accrual persistence is highly variable across firms. Empirical evidence is discussed that confirms that firm-specific information is an important determinant for the persistence of earnings.

The earnings management literature is discussed in depth in chapter 5. Earnings management deals with accrual accounting. It is defined as a purposeful intervention in the external financial reporting process, with the extent of obtaining some private gain, as opposed to merely facilitating the neutral operation of the process.

Earnings management concerns managers using their discretion over accounting accruals and accounting choices, presumably for a private purpose. While earnings management receives a lot of attention both in the popular press and in the academic press, academic research has yet to present as convincing results showing earnings management as the financial press has. Regulators and practitioners seem to believe that earnings
management is both pervasive and problematic, however, academic research has not demonstrated that earnings management has a large effect on average on reported earnings. One of the reasons for this is the research design used to examine earnings management.

Academics usually wish to make general statements about earnings management by examining large samples of firms, and tend to use statistical definitions of earnings management that may not be very powerful in identifying earnings management. Three dominant research designs are used to test for earnings management: aggregate accruals tests, specific accruals tests and distribution of earnings tests. The most popular test for earnings management is based on aggregate Jones-abnormal accruals. However, as discussed in chapter 5, there are many reasons to suspect that the estimated discretionary accruals from the Jones model reflect nondiscretionary forces rather than pure discretion. While aggregate accruals tests receive the most criticism, they remain the most used test for earnings management. Specific accrual tests mitigate some of the problems associated with aggregate accrual test. Together, chapters 2 through 5 provide the motivation and foundation for the empirical research of this dissertation.

9.3 Empirical Research

The first empirical examination in chapter 6 examines the effect of accrual quality on the prediction of future cash flows. One of the primary objectives of financial reporting is to provide information to help investors, creditors, and others assess the amount and timing of prospective cash flows. For instance, stock prices reflect the current value of future cash flows. Therefore, the ability to predict future cash flows is essential for the valuation of securities.

Earnings are the best predictor of future cash flows. However, decomposing earnings in cash flow from operations and accruals enhances the ability of earnings to predict future cash flows. Chapter 6 examines how accruals assist cash flows in predicting future cash flows. Since the persistence of earnings is firm specific, a measure of accrual quality is used that reflects the firm-specific effect accrual accounting has on financial reporting, based on the firm’s real business activity. This measure can be interpreted as a reflection of the accounting state of the firm. This accrual quality measure is employed to examine the effect of accrual quality on the predictive ability of accruals on future cash flows. Thus, this empirical examination answers the first research question of this dissertation: What is the effect of accrual quality on the prediction of future cash flows?

Three different types of accruals are examined. First, the effect on the prediction of future cash flows of total accruals is examined. Total accruals represent the change in the net
operating assets of a firm. The results indicate that when accrual quality is low, that is, the firm is in a volatile (accounting) state, accruals assist current cash flow in the prediction of future cash flows. This result can be explained by the fact that when a firm is in a volatile state, cash flow persistence is low, and accruals are used to mitigate the shocks in transitory cash flow. When accrual quality is high, that is, the firm is in a stable state, accruals are less relevant in predicting cash flows. The persistence of cash flows is high when accrual quality is high, and as a result, the noise reducing role of accruals is less relevant. The relation between accrual quality, which is a measure of earnings quality, and the persistence of cash flows, which is also a measure of earnings quality, is the major contribution of the first hypothesis of chapter 6.

The second type of accruals examined in chapter 6 is the Jones model abnormal accruals. Abnormal accruals are the most used proxy for earnings management in the literature. The effect of accrual quality is examined. It is hypothesized that if abnormal accruals represent earnings management, they can be considered a transitory shock, and therefore will not have any relevance in the prediction of future cash flows. The results however indicate that the abnormal part of accruals has the highest relevance in predicting future cash flows, casting doubt on the use of abnormal accruals for earnings management research. This result suggests that abnormal accruals are used by managers to convey private information about future cash flow rather than to manage earnings. Also, accrual quality does not seem to affect the relevance of abnormal accruals for the prediction of future cash flows. The stable coefficient of abnormal accruals for conveying private information about future cash flows shows the relevance of abnormal accruals for the prediction of future cash flows. This result suggests that the change in business activity is reflected in abnormal accruals, and not in the normal part of total accruals, which decreases with the increase in accrual quality and cash flow persistence. Therefore, abnormal accruals are used exclusively to convey private information about future cash flows. However, this test allows not for the conclusion that abnormal accruals are never used for earnings management.

Finally, the third measure of accruals examined is the level of accruals on the balance sheet. It is shown that the level of accruals on the balance sheet can be relevant for the prediction of future cash flows, dependent on the accrual quality.

The second empirical examination in chapter 7 examines the effect of growth on the role of accruals in financial accounting. Accounting is fundamentally linked to underlying economics. Growth seems to affect the accrual accounting process. 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. Accruals for growing firms have an income statement perspective, focusing on revenue recognition and the matching of costs with revenues. As a result, there is a lower demand for
the reporting of growth opportunities via accrual accounting for high growth firms, as stakeholders focus on the realization of the growth opportunities. Value firms however, use accruals from a balance sheet perspective, where the focus is on changes in the value of assets, as reflected in earnings. As such, there is a larger demand for the reporting of changes in asset values in earnings. In chapter 7, I answer the second research question in this dissertation: How does growth affect the role of accounting accruals in financial reporting?

I show empirically that there are systematic differences in accrual accounting between growth firms and value firms. I show that the noise reducing role of accruals is less prevalent for growth firms, and more prevalent for value firms on average. As a result of this accrual effect, earnings for growth firms are more volatile, and earnings for value firms are less volatile. This is consistent with business activity effecting accruals. It is also consistent with lower demand for the reporting of growth opportunities via accrual accounting for high growth firms, as stakeholders focus on the realization of the growth opportunities.

I then show that the difference in the use of accruals for growth firms and value firms potentially affect accrual-based measures of earnings management. My results indicate that that measures that examine the relation between earnings, cash flow and aggregate accruals are also related to growth. The contemporaneous correlation between changes in accounting accruals and changes in operating cash flows is significantly lower for firms with high growth compared to firms with low growth, as is the magnitude of accruals relative to cash flows. Growth also affects measures of unexpected specific accruals. Based on these results, I show that growth can be an omitted correlated variable in earnings management research.

The final empirical examination in chapter 8 more closely examines the state of the firm and accounting accruals. I examine the use of accounting accruals for firms with an accounting profit and firms with an accounting loss, and investigate if there is a difference in conditional conservatism using accruals between these two types of firms.

Firms reporting accounting losses experience higher levels of information asymmetry among investors relative to firms reporting accounting profits. This information asymmetry is typically dealt with by instituting accounting conservatism. Accounting conservatism implies the exercise of caution in the recognition and measurement of income and assets. Two forms of accounting conservatism have emerged in the literature. One is an accounting bias toward reporting low book values of stockholder equity. This kind of conservatism is called unconditional conservatism. The second form of conservatism is the asymmetric timeliness of loss recognition. Timeliness of loss recognition is a summary indicator of the speed with which adverse economic events are reflected in both income statements and balance sheets. This second kind of earnings conservatism is also called conditional conservatism. In chapter 8, I examine if the role of accruals in conditional conservatism is different for profit firms and for loss firms. In this chapter I answer research question 3: Is there a difference in the manner
in which accruals are used for conditional conservatism, i.e. the timely recognition of unrealized economic losses, between firms with an accounting profit and firms with an accounting loss?

The results in chapter 8 indicate that accruals are used for conditional conservatism for firms that incur an accounting loss. Information asymmetry causes management to use accruals to signal the transitory nature of losses. In contrast, firms that earn an accounting profit do not use accruals for conditional conservatism. For profit firms, revisions in future cash flows are expected to persist, and therefore managers do not use accruals to reflect a change in expectations of future cash flows in earnings. Partitioning on profit firms and loss firms also dramatically improves the explanatory power of the model, illustrating that there are major differences in accounting between profit firms and loss firms. My results indicate that pooling profit firms and loss firms may result in misspecification of accrual-based models.

The results in this chapter indicate that the difference in conditional conservatism between profit and loss firms is caused largely by special items. Loss firms use special items in a different manner than loss firms. Special items are more negative for loss firms than for profit firms. Special items are also shown to have a positive relation with cash flow. Loss firms use special items for conditional conservatism, resulting in an even more positive relation between cash flow and special items. Profit firms in contrast use special items to reduce the noise of transitory cash flows caused by an economic loss resulting in a more negative relation between cash flows and accruals.

9.4 Limitations, suggestions for future research and implications

The results in this dissertation imply that the state of the firm, as represented in the accrual quality of the firm, the level of growth of the firms, and the sign of accounting earnings, affect earnings quality. However, there are some limitations to the study that should be considered when drawing conclusions based on the evidence provided. A general limitation concerns the data used in this study. The data used in this study is data from the US, which potentially limits the generalizability of the results to countries using other GAAP. For instance, the examination of conservatism and accruals could be affected by the fact that in some instances IFRS allows for fair value accounting where US GAAP does not. Even though this is a general concern for all research in financial accounting, an extra heed of caution seems in place. Other limitations are directly related to the methods of empirical research.

First off, the prediction of future cash flows is related to accrual quality. The measurement of accrual quality is not easily done, and is subject to interpretation what accrual quality is. Accrual quality is defined as the extent to which accruals are converted into cash
flows. However, the model of the prediction of future cash flows is confined to the prediction of next period’s cash flows. The model fails to pick up the extent that accruals are converted into cash at a later period. Thus, the results on the relation between accrual quality and the prediction of future cash flows can be considered incomplete to the extent that the model fails to incorporate all future cash flows. Future research should develop a measure of the long term accrual quality, and examine the effect of accrual quality on all future cash flows.

Second, the influence of growth on the role of accruals in financial accounting is examined. Growth is determined by the book-to-market ratio, and therefore reflects the stock market’s expectations of growth. However, future research should also examine the effect of other proxies for growth on the role of accruals in financial accounting. Suggestions of other proxies for growth are sales growth, earnings growth and analysts’ expectations of long term growth. Also, the results seem to be affected by industry specification. The results also do not seem to be stable for different industry specifications. Although this is expected, since industries can differ widely in growth conditions, the reader should take these limitations into account when drawing conclusion on the results presented in chapter 7. Growth also seems to affect measures of earnings management. However, in this study, only two types of earnings management measures are examined. Future research should further examine the effect of growth on proxies for earnings management, using other definitions of growth and other earnings management measures.

Finally, the difference in conditional conservatism between firms with an accounting loss and an accounting profit is examined. The proxy for conditional conservatism is based on accounting measures, i.e. the change in cash flows, or stock-market based measures, i.e. abnormal returns. My results are contingent on these proxies actually measuring conditional conservatism. Also, the results seem to be affected by industry specification, which could be explained by differences in conservatism between industries, or by the fact that my results are not generalizable over all industries.

This study extends research in financial accounting by showing how accrual adjustments are affected by the state of the firm. The evidence in this study suggests that the level of accrual accounting quality affects the persistence of cash flows, and as a result, accrual quality affect the prediction of future cash flows. Also, abnormal accruals appear not to be affected by the accrual quality, suggesting that abnormal accruals are used by managers to reflect private information about future cash flows. Second, growth affects the earnings of a firm by adjusting the accrual process. Finally, there is a difference in the manner in which accrual accounting is used to generate earnings for profit firms and loss firms. For users of financial statements who use financial statements to make economic decisions like the investment of shares in a firm, this information can improve the usefulness of financial statements. Since share prices reflect the expectations of future cash flows, a measure of
accrual quality can be used to predict share prices. A firm with a high level of accruals and high accrual quality should have higher returns than a firm with a high level of accruals and a low level of accrual quality. Also, earnings as a measure of firm performance have a higher association with returns than cash flows. However, for high growth firms, the earnings number may be less useful to predict returns, as the accrual adjustment of cash flows that produces earnings is less prevalent for high growth firms. Investors could therefore use other information in financial statements like cash flow information to predict returns. Finally, investors should also differ between earnings for loss firms and earnings for profit firms as a measure of firm performance. The association between earnings and stock returns should be higher for profit firms than for loss firms, as the accrual adjustment to cash flows to produce earnings are more prevalent for profit firms than the accrual adjustments for loss firms.