Earnings Management, Conservatism, and Earnings Quality

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Earnings Management, Conservatism, and Earnings Quality

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Abstract

This monograph reviews economic models that study earnings management and conservatism in an information economics framework. Both introduce a deliberate or a mandatory bias in financial reports. The fundamental issue this monograph addresses is what economic effects these biases have on earnings quality. We focus on models of managers in firms interacting with rational capital market participants, and briefly consider some contracting models. The models allow us to analyze earnings management and rational inferences by market participants in equilibrium in a variety of settings and to pinpoint costs and benefits of earnings management. We discuss how investors can elicit the maximum information from the biased reports and what potential remedies actually achieve in equilibrium. For example, accounting standards that reduce discretion for earnings management may be detrimental from a welfare point of view. In rational expectations models earnings quality can be defined as the information content in reported earnings. We discuss the earnings response coefficient, value relevance, and accounting-based earnings quality measures and how they reflect changes in earnings quality. Further, we review analytical work on conservatism of accounting standards and why conservatism can be welfare-enhancing even though it introduces a bias in the earnings reports. It is exactly through this bias that the benefit arises. Therefore, a differentiated view of earnings management and conservatism is warranted; neither is principally desirable or undesirable, but this depends on the circumstances. The benefit of equilibrium models is that they offer a rigorous explanation for the phenomena and show that sometimes conventional wisdom does not apply. There exist subtle interactions between accounting standards, the institutional environment, and earnings management that lead to several insights that challenge conventional wisdom. The models describe the economics behind these results and the particular circumstances.

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1

Introduction

This monograph reviews and illustrates earnings management, conservatism, and their effects on earnings quality in an economic modeling framework. Both earnings management and conservative accounting introduce biases to financial reports. The fundamental issue this monograph addresses is what economic effects these biases have on earnings quality or, more generally, financial reporting quality.

Earnings management is commonly understood as intentionally misrepresenting or concealing financial information about the firm's economic position by a manager.[1] It carries a connotation of wrongdoing, mischief, fraud, and even mystery, similar to other criminal activities.[2] Highly publicized accounting scandals and the immediate call for stricter regulation of the accounting environment add to this perception. Consistent with this view, most empirical literature that studies earnings management commonly views it as detrimental to the quality of financial reporting.[3]

[1] See, e.g., Schipper (1989) and Healy and Wahlen (1999).
[2] See Lo (2008).
[3] It should be noted that practitioners and regulators often see earnings management as problematic, whereas academics hold more balanced views. See Dechow and Skinner (2000).

Accounting standards offer broad discretion for earnings management. They provide several options of accounting treatment and they contain many principles that require judgment. If earnings management is indeed detrimental, why would accounting standards give preparers so much discretion? Consider rules-based standards that prohibit firms to recognize R&D costs as assets, to impair assets or set up provisions. Of course, such standards preclude earnings management. However, at the same time they would not provide financial information about R&D, impairment and expected obligations. While there are other means of communicating such economic events, they usually lack many of the useful characteristics of financial accounting (such as trustworthiness and standardization). This simple example points to the fact that accounting standards that provide room for earnings management can be a desirable outcome. Even if earnings management were undesirable per se, the joint effect of undesirable bias and useful information can be still preferable to eliminating earnings management — besides the perhaps high cost of doing so.

Earnings management can take two basic forms:

- Accounting (accruals, accruals-based) earnings management: it starts with given transactions and aims at influencing the recognition, measurement, and disclosure of these transactions and other events in the financial statements after the fact. Recognition and measurement choices affect net assets and earnings in a period and they usually reverse in future periods (except for certain effects that are recognized directly in equity and presented in other comprehensive income without recycling), so clean surplus prevails. In contrast, classification and presentation choices do not affect bottom-line numbers; their effect arises if users look at subtotals only. Finally, disclosure choices affect the amount of information provided in financial statements, but do not change the numbers reported in the balance sheet and income statement.
- Real (economic) earnings management: this form of earnings management consists of performing or structuring transactions that are then reported in the financial

statements to influence the reported numbers. The transactions usually affect total cash flows negatively, so they do not fully reverse. This is directly costly to the firm and is a kind of signal jamming activity. The accounting consequences for these transactions are given, and they may not even provide discretion. Thus, accounting standards often cannot prevent managers from this form of earnings management as they cannot distinguish between "normal" transactions and those that are only induced by earnings management incentives.

The effects of conservatism are similar to those of earnings management because both introduce bias in the financial report. The difference is that conservatism stems from following accounting standards, whereas earnings management is an individual choice. If standards introduce conservatism, then the question arises why should the conservative bias be any different from an, say, earnings minimizing earnings management strategy (e.g., because of taking a big bath, prior to the issuance of management stock options, or political costs)? Why is it that conservatism is deemed "good" and earnings management "bad"? Or is conservatism "bad" as well, as the recent FASB/IASB Conceptual Framework (FASB, 2010) suggests?

In this monograph, we review analytical models of earnings management and conservatism and show that both can have beneficial or detrimental economic effects, so a differentiated view is appropriate. Earnings management can provide additional information via the financial reporting communication channel, but it can also be used to misrepresent the firm's position. Guay et al. (1996) refer to these effects as performance measure hypothesis and opportunistic accrual management hypothesis. Ronen and Yaari (2008, pp. 25–31) label earnings management as "white" if it is beneficial, "black" if it is detrimental, and "gray" if either one can occur. What we find in this monograph is consistent with the "gray" view. Similar to earnings management, conservatism can reduce the information content of financial reports if it suppresses relevant information, but it can be a desirable feature that improves economic efficiency.

Our approach to study earnings management, conservatism, and earnings quality is based on the information economics literature. We discuss a variety of analytical models that capture the effects and subtle interactions of managers' incentives and rational expectations of users. The benefit of analytical models is to make precise these, often highly complex, strategic effects. They offer a rigorous explanation for the phenomena and show that sometimes conventional wisdom does not apply.[4]

The "work horse" model is a rational expectations equilibrium model that captures the interaction between management (and the firm, assuming no conflicts of interest between managers and owners) and rational investors in an efficient capital market. The key ingredient is that financial reports are used to manage expectations and these expectations are endogenous (Demski, 2004). That is, managers take their decisions based on conjectures about the reaction of market participants and other users of financial information; and users make conjectures about the managers' incentives and opportunities to manage earnings to make their decisions. In equilibrium, the conjectures are fulfilled, and we study the characteristics of equilibrium earnings management and its effect on earnings quality.

Besides affecting expectations, financial accounting numbers are used in contracts to determine claims and duties of the contracting parties. Similar to equilibrium models, ex ante the contracting parties anticipate the consequences of contract covenants; differently, though, they are bound to the predetermined consequences after the contract has been agreed upon. Thus, the consequences are not necessarily best responses ex post. In this monograph, we deliberately focus on the equilibrium models and discuss contracting models briefly to highlight potential commonalities and differences in the results.

Although we review a variety of analytical work, we do not attempt to provide an exhaustive survey on equilibrium models, and even less so on other analytical models, that have been used to study issues in earnings management, conservatism, and earnings quality. We organize the monograph around a few basic model settings, which we present in

[4] See, e.g., Wagenhofer (2004).

simple versions first and then in extensions to elicit the main insights most clearly. We draw from the literature selectively and subjectively to illustrate main insights. The discussion should show avenues the literature has taken and directions for possible future research.

There are several surveys that discuss earnings management, conservatism, and earnings quality. Ronen and Yaari (2008) provide a detailed analysis of earnings management from both an analytical and empirical perspective. Beyer et al. (2010) survey voluntary and mandatory disclosure extensively. Kanodia (2006) focuses on another class of analytical papers that examine real effects of accounting reports and his paper is complementary to ours. Francis et al. (2006) and Dechow et al. (2010), among others, survey earnings quality mainly from an empirical perspective.

The organization of the rest of this monograph is as follows. In Section 2, we present the basic rational expectations equilibrium model with earnings management and rational inferences by the capital market. We use this model to discuss a variety of questions, including the characteristics of equilibrium earnings management strategies, the determinants of the earnings response coefficient, the effect of additional uncertainty in the market, uncertainty of the precision of accounting information, the interaction between accounting and real earnings management, and potential benefits of earnings management.

Section 3 is devoted to earnings quality and earnings quality metrics used in many studies. This analysis is based on a multiperiod rational expectations model with more accounting structure that enables us to distinguish cash flows, accruals and earnings management in a nontrivial way. We define earnings quality based on the notion of "decision usefulness" and study how it is related to characteristics of accounting standards, to the cost of earnings management and to the information endowment of managers. Then we examine various earnings quality metrics, formally defined, and analyze how they trace the actual earnings quality in the equilibrium model. Finally, we review some work that approaches earnings quality in a contracting context.

In Section 4, we study conservatism in accounting. We begin with formal definitions of conservatism to provide a framework for the variety of appearances of conservatism. Since we are interested in potential benefits of conservatism, we present models that show that conservative accounting is useful. First, we consider models that examine non-contracting settings, similar to our focus in the previous sections. The model structures differ from those in the previous sections because conservatism introduces non-linearity into the model that violates the common assumption of linear strategies and normal distributions of random variables in the previous models. Since most analytical work on conservatism uses contracting models we also discuss some of them in more detail. Finally, we examine the interaction between conservatism and earnings management.

Each section ends with a section containing a summary of the main findings and conclusions.

References

Arya, A., J. Glover, and S. Sunder (1998), 'Earnings management and the revelation principle'. *Review of Accounting Studies* **3**, 7–34.

Badertscher, B. A., D. W. Collins, and T. Z. Lys (2012), 'Discretionary accounting choices and the predictive ability of accruals with respect to future cash flows'. *Journal of Accounting and Economics* **53**, 330–352.

Bagnoli, M. and S. G. Watts (2010), 'Oligopoly, disclosure, and earnings management'. *The Accounting Review* **85**, 1191–1214.

Ball, R. and L. Shivakumar (2005), 'Earnings quality in UK private firms: comparative loss recognition timeliness'. *Journal of Accounting and Economics* **39**, 83–128.

Basu, S. (1997), 'The conservatism principle and the asymmetric timeliness of earnings'. *Journal of Accounting and Economics* **24**, 3–37.

Beyer, A. (2009), 'Capital market prices, management forecasts, and earnings management'. *The Accounting Review* **84**, 1713–1747.

Beyer, A., D. A. Cohen, T. Z. Lys, and B. R. Walther (2010), 'The financial reporting environment: review of the recent literature'. *Journal of Accounting and Economics* **50**, 296–343.

Caskey, J. and J. Hughes (2012), 'Assessing the impact of alternative fair value measures on the efficiency of project selection and continuation'. *The Accounting Review*. forthcoming.

Caskey, J., V. Nagar, and P. Petacchi (2010), 'Reporting bias with an audit committee'. *The Accounting Review* **85**, 447–481.

Chen, Q., T. Hemmer, and Y. Zhang (2007), 'On the relation between conservatism in accounting standards and incentives for earnings management'. *Journal of Accounting Research* **45**, 541–565.

Chen, Q., B. Mittendorf, and Y. Zhang (2010), 'Endogenous accounting bias when decision making and control interact'. *Contemporary Accounting Research* **27**, 1063–1091.

Chi, W., L. L. Lisic, and M. Pevzner (2011), 'Is enhanced audit quality associated with greater earnings management?'. *Accounting Horizons* **25**, 315–335.

Cho, K. and D. M. Kreps (1987), 'Signaling games and stable equilibria'. *Quarterly Journal of Economics* **102**, 179–221.

Christensen, J. (2010), 'Conceptual frameworks of accounting from an information perspective'. *Accounting and Business Research* **30**(International Accounting Policy Forum), 287–299.

Christensen, P. O., G. A. Feltham, and F. Şabac (2005), 'A contracting perspective on earnings quality'. *Journal of Accounting and Economics* **39**, 265–294.

Christensen, P. O., H. Frimor, and F. Şabac (2012), 'The stewardship role of analyst forecasts, and discretionary versus non-discretionary accruals'. *European Accounting Review*. forthcoming.

Cohen, D. A. and P. Zarowin (2010), 'Accrual-based and real earnings management activities around seasoned equity offerings'. *Journal of Accounting and Economics* **50**, 2–19.

Dechow, P. M., W. Ge, and C. Schrand (2010), 'Understanding earnings quality: a review of the proxies, their determinants and their consequences'. *Journal of Accounting and Economics* **50**, 344–401.

Dechow, P. M. and C. M. Schrand (2004), *Earnings Quality*. Charlotteville, VA.

Dechow, P. M. and D. J. Skinner (2000), 'Earnings management: reconciling the views of accounting academics, practitioners, and regulators'. *Accounting Horizons* **14**, 235–250.

Demski, J. S. (1998), 'Performance measure manipulation'. *Contemporary Accounting Research* **15**, 261–285.

Demski, J. S. (2004), 'Endogenous expectations'. *The Accounting Review* **79**, 519–539.

Demski, J. S., H. Frimor, and D. E. M. Sappington (2004), 'Efficient manipulation in a repeated setting'. *Journal of Accounting Research* **42**, 31–49.

Demski, J. S., H. Lin, and D. E. M. Sappington (2009), 'Asset revaluation regulations'. *Contemporary accounting research* **26**, 843–865.

Drymiotes, G. and T. Hemmer (2011), 'On the stewardship and valuation implications of accrual accounting systems, working paper'. University of Houston.

Drymiotes, G. C. (2011), 'Information precision and manipulation incentives'. *Journal of Management Accounting Research* **23**, 231–258.

Dutta, S. (2007), 'Dynamic performance measurement'. *Foundations and Trends in Accounting* **2**, 175–240.

Dutta, S. and F. Gigler (2002), 'The effect of earnings forecasts on earnings management'. *Journal of Accounting Research* **40**, 631–655.

Dutta, S. and S. Reichelstein (2005a), 'Accrual accounting for performance evaluation'. *Review of Accounting Studies* **10**, 527–552.

Dutta, S. and S. Reichelstein (2005b), 'Stock price, earnings, and book value in managerial performance measures'. *The Accounting Review* **80**, 1069–1100.

Dye, R. A. (1988), 'Earnings management in an overlapping generations model'. *Journal of Accounting Research* **26**, 195–235.

Dye, R. A. (2002), 'Classifications manipulation and nash accounting standards'. *Journal of Accounting Research* **40**, 1125–1162.

Dye, R. A. and S. S. Sridhar (2004), 'Reliability-relevance trade-offs and the efficiency of aggregation'. *Journal of Accounting Research* **42**, 51–88.

Dye, R. A. and R. E. Verrecchia (1995), 'Discretion vs. uniformity: choices among GAAP'. *The Accounting Review* **70**, 389–415.

Einhorn, E. and A. Ziv (2012), 'Biased voluntary disclosure'. *Review of Accounting Studies* **17**, 420–442.

Ewert, R. and A. Wagenhofer (2005), 'Economic effects of tightening accounting standards to restrict earnings management'. *The Accounting Review* **80**, 1101–1124.

Ewert, R. and A. Wagenhofer (2011), 'Earnings quality metrics and what they measure'. Working Paper, University of Graz.

Ewert, R. and A. Wagenhofer (2012), 'Accounting standards, earnings management, and earnings quality'. Working paper, University of Graz.

Fan, Q. and X.-J. Zhang (2012), 'Accounting conservatism, aggregation, and information quality'. *Contemporary Accounting Research*. forthcoming.

FASB (2010), *Statement of Financial Accounting Concepts No. 8*. Norwalk, CT.

Fischer, P. E. and P. C. Stocken (2004), 'Effect of investor speculation on earnings management'. *Journal of Accounting Research* **42**, 843–870.

Fischer, P. E. and R. E. Verrecchia (1999), 'Public information and heuristic trade'. *Journal of Accounting and Economics* **27**, 89–124.

Fischer, P. E. and R. E. Verrecchia (2000), 'Reporting bias'. *The Accounting Review* **75**, 229–245.

Francis, J., P. Olsson, and K. Schipper (2006), 'Earnings quality'. *Foundations and Trends in Accounting* **1**(4), 259–340 (1–85).

Gao, P. (2012), 'A contracting approach to conservatism and earnings management'. Working paper, University of Chicago.

Gigler, F. and T. Hemmer (2001), 'Conservatism, optimal disclosure policy, and the timeliness of financial reports'. *The Accounting Review* **76**, 471–493.

Gigler, F., C. Kanodia, H. Sapra, and R. Venugopalan (2009), 'Accounting conservatism and the efficiency of debt contracts'. *Journal of Accounting Research* **47**, 767–797.

Givoly, D. and C. Hayn (2000), 'The changing time-series properties of earnings, cash flows, and accruals: has financial reporting become more conservative?'. *Journal of Accounting and Economics* **29**, 287–320.

Göx, R. F. and A. Wagenhofer (2009), 'Optimal impairment rules'. *Journal of Accounting and Economics* **48**, 2–16.

Göx, R. F. and A. Wagenhofer (2010), 'Optimal precision of accounting information in debt financing'. *European Accounting Review* **19**, 579–602.

Graham, J. R., C. R. Harvey, and S. Rajgopal (2005), 'The economic implications of corporate financial reporting'. *Journal of Accounting and Economics* **40**, 3–73.

Guay, W. and R. Verrecchia (2006), 'Discussion of an economic framework for conservative accounting and bushman and piotroski (2006)'. *Journal of Accounting and Economics* **42**, 149–165.

Guay, W. R., S. P. Kothari, and R. L. Watts (1996), 'A market-based evaluation of discretionary accrual models'. *Journal of Accounting Research* **34**(Supplement), 83–105.

Guttman, I., O. Kadan, and E. Kandel (2006), 'A rational expectations theory of kinks in financial reporting'. *The Accounting Review* **81**, 811–848.

Healy, P. M. and J. M. Wahlen (1999), 'A review of the earnings management literature and its implications for standard setting'. *Accounting Horizons* **13**, 365–383.

Hirshleifer, D. and S. H. Teoh (2003), 'Limited attention, information disclosure, and financial reporting'. *Journal of Accounting and Economics* **36**, 337–386.

IASB (2010), The Conceptual Framework for Financial Reporting 2010. London.

IFRS Foundation (2010), Constitution. London.

Johnstone, D. J. (2012), 'Information risk in decision theory and asset pricing'. Working paper, University of Sydney.

Jones, J. (1991), 'Earnings management during import relief investigations'. *Journal of Accounting Research* **29**, 193–228.

Kanodia, C. (2006), 'Accounting disclosure and real effects'. *Foundations and Trends in Accounting* **1**(3), 1–95.

Kirschenheiter, M. and N. D. Melumad (2002), 'Can "big bath" and earnings smoothing co-exist as equilibrium financial reporting strategies?'. *Journal of Accounting Research* **40**, 761–796.

Kwon, Y. K., D. P. Newman, and Y. S. Suh (2001), 'The demand for accounting conservatism for management control'. *Review of Accounting Studies* **6**, 29–51.

Lambert, R. A. (2003), 'Discussion of 'limited attention, information disclosure, and financial reporting''. *Journal of Accounting and Economics* **36**, 387–400.

Laux, V. and P. C. Stocken (2012), 'Managerial reporting, overoptimism, and litigation risk'. *Journal of Accounting and Economics*. forthcoming.

Leuz, C., D. Nanda, and P. D. Wysocki (2003), 'Earnings management and investor protection'. *Journal of Financial Economics* **69**, 505–527.

Li, J. (2010), 'Accounting conservatism and debt contracts: Efficient liquidation and covenant renegotiation'. Working paper, Carnegie Mellon University.

Li, W. (2012), 'A theory on the discontinuity in earnings distributions'. Working Paper, University of Illinois at Urbana-Champaign.

Lo, K. (2008), 'Earnings management and earnings quality'. *Journal of Accounting and Economics* **45**, 350–357.

Marinovic, I. (2011), 'Internal control system, earnings quality and the dynamics of financial reporting'. Unpublished working paper, Northwestern University.

Myerson, R. B. (1982), 'Optimal coordination mechanisms in generalized principal–agent problems'. *Journal of Mathematical Economics* **10**, 67–81.

Nan, L. and X. Wen (2011), 'Conservatism's effects on capital structure efficiency and information quality'. Working paper, Carnegie Mellon University.

Patatoukas, P. N. and J. K. Thomas (2011), 'More evidence of bias in the differential timeliness measure of conditional conservatism'. *The Accounting Review* **86**, 1765–1793.

Penno, M. (1996), 'Unobservable precision choices in financial reporting'. *Journal of Accounting Research* **34**, 141–149.

Ronen, J. (2001), 'On R&D-capitalization and value relevance: a commentary'. *Journal of Accounting and Public Policy* **20**, 241–254.

Ronen, J. and V. Yaari (2008), *Earnings Management*. New York, NY.

Sankar, M. R. and K. R. Subramanyam (2001), 'Reporting discretion and private information communication through earnings'. *Journal of Accounting Research* **39**, 365–386.

Schipper, K. (1989), 'Commentary on earnings management'. *Accounting Horizons* **3**, 91–102.

Schipper, K. and L. Vincent (2003), 'Earnings quality'. *Accounting Horizons* **17**(Supplement), 97–110.

Stein, J. (1989), 'Efficient capital markets, inefficient firms: a model of myopic corporate behavior'. *Quarterly Journal of Economics* **104**, 655–669.

Stocken, P. C. and R. E. Verrecchia (2004), 'Financial reporting system choice and disclosure management'. *The Accounting Review* **79**, 1181–1203.

Subramanyam, K. R. (1996), 'Uncertain precision and price reactions to information'. *The Accounting Review* **71**, 207–220.

Suijs, J. (2008), 'On the value relevance of asymmetric financial reporting policies'. *Journal of Accounting Research* **46**, 1297–1321.

Tucker, J. W. and P. A. Zarowin (2006), 'Does income smoothing improve earnings informativeness?'. *The Accounting Review* **81**, 251–270.

Wagenhofer, A. (2004), 'Accounting and economics: what we learn from analytical models in financial accounting and reporting'. In: C. Leuz, D. Pfaff, and A. Hopwood (eds.): *The Economics and Politics of Accounting*. Oxford: Oxford University Press, pp. 5–31.

Wagenhofer, A. (2012), 'Vorsichtige Rechnungslegung und Informationsgehalt'. *Zeitschrift für Betriebswirtschaft*. forthcoming.

Watts, R. L. (2003), 'Conservatism in accounting part I: explanations and implications'. *Accounting Horizons* **17**, 207–221.

Zang, A. (2012), 'Evidence on the trade-off between real activities manipulation and accrual-based earnings management'. *The Accounting Review* **87**, 675–703.