

Contributions to Management Science

Bruno Maria Franceschetti

Financial Crises and Earnings Management Behavior

Arguments and Evidence Against Causality



Springer

Contributions to Management Science

More information about this series at <http://www.springer.com/series/1505>

Bruno Maria Franceschetti

Financial Crises and Earnings Management Behavior

Arguments and Evidence Against Causality

Bruno Maria Franceschetti
Department of Economics and Law
University of Macerata
Macerata
Italy

ISSN 1431-1941 ISSN 2197-716X (electronic)
Contributions to Management Science
ISBN 978-3-319-54120-4 ISBN 978-3-319-54121-1 (eBook)
DOI 10.1007/978-3-319-54121-1

Library of Congress Control Number: 2017946663

© Springer International Publishing AG 2018

This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Printed on acid-free paper

This Springer imprint is published by Springer Nature
The registered company is Springer International Publishing AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

To my son Valerio

Acknowledgements

I thank Carsten Felden and Claudia Koschtial, Technische Universität Bergakademie Freiberg (DE), and Francesca Bartolacci, Nicola Castellano, Andrea Fradani, Antonella Paolini and Michela Soverchia, University of Macerata (IT), for the continuous constructive discussions and comments.

Contents

1	Introduction	1
1.1	Introduction	1
1.1.1	The Research Question	1
1.2	A Brief Overview of the Book and its Structure	3
1.3	Theoretical Contributions of the Present Work	6
1.4	Practical Contributions of the Present Work	8
	References	9
2	Earnings Management: Origins	15
2.1	Introduction	15
2.2	Definitions of Earnings Management, Earnings Quality, Fraud, and Earnings Manipulation	16
2.3	Accruals Earnings Management, Real Activities Earnings Management, and Fraudulent Financial Reporting	18
2.3.1	Studies Related to Accruals Earnings Management	21
2.3.2	Studies Related to Real Activities Earnings Management	34
2.3.3	Studies Related to Non-GAAP Earnings Management: Fraudulent Financial Reporting	38
2.4	Main Incentives to Manage Earnings and Offset Causes	44
2.5	Conclusion	49
	Appendix: Earnings Management Detection Models	51
	References	68
3	A Critical Realist Perspective on Earnings Management	75
3.1	Introduction	75
3.2	Critical Realism as an Alternative to Positivism	77

3.3	A Critical Realist Conceptualization of Powers and Tendencies	81
3.4	A Critical Realist Approach to Earnings Management	87
	References.	97
4	Financial Crisis as a Major Cause of Earnings Management:	
	Theoretical Background and Literature Review	103
4.1	Theoretical Background	103
4.2	Literature Review	105
4.2.1	Methodology	105
4.2.2	Results	108
4.2.3	Discussion: Mainstream Approach to the Financial Crisis–Earnings Management Relation	108
	References.	115
5	Does Financial Crisis Cause Earnings Management?	119
5.1	Introduction	119
5.2	Positivist Mainstream Approach to the Research Question	120
5.2.1	Hypotheses Development	120
5.2.2	Measurement of Earnings Management: Beneish’s Model	126
5.2.3	Sample Selection	130
5.2.4	Empirical Results	132
5.3	Critical Realist (CR) Approach to the Research Question	139
5.3.1	Against the Causal Law of a Constant Conjunction Model: An Etymological Perspective	140
5.3.2	A New Critical Realist Conceptualization of Tendencies Applied to Earnings Management	141
5.4	Discussion and Conclusion	144
	Appendix: Extended Tables	145
	References.	158

Chapter 1

Introduction

Abstract This opening chapter presents the research question, gives a brief overview of the book, and pinpoints the main theoretical and practical contributions of the present work. The study examines whether the generative mechanism for managing earnings identified by the previous research (i.e., financial crisis) is adequate. Chapter 2 presents the earnings management phenomenon while Chap. 3 provides a critical realist evaluation of mainstream earnings management literature. Chapter 4 approaches the question of the relationship between financial crisis and earnings management. Finally, Chap. 5 presents both the positivist and the critical realist approach to the research question.

1.1 Introduction

1.1.1 *The Research Question*

According to Lo (2008), “earnings management has a lot in common with earnings quality” and “highly managed [manipulated] earnings have low quality” (p. 351).¹ Since earnings quality is essential to the decisions made by anyone with a vested interest in a company (Dechow et al. 2010), discovering the causal factors or indicators associated with the use of earnings management is crucial to help detect and/or prevent the misreporting of a firm’s business activities. Academics and regulators have strived to uncover the “causal laws of a ‘constant conjunction’ model (whenever A happens, B happens)” (Collier 2005, p. 328) and have identified financial crisis as a major cause of earnings management. Warnings such as “the financial crisis will exacerbate the increase in corporate fraud” (Levy 2009, p. 11), and estimates of “a potential projected global fraud loss of more than \$3.7 trillion” (ACFE 2014), are common.

Indeed, financial crises offer a unique opportunity to study the effects of crisis on financial reporting quality (Kousenidis et al. 2013) since “antecedently available

¹Accordingly, earnings management “includes the whole spectrum, from conservative through fraud, a huge range for accounting choices” (Giroux 2006, p. 6).

cognitive resources are used to construct plausible models of the mechanisms producing identified patterns of phenomena” (Bhaskar 2011, p. 90). However, mistaking the effect for the cause, termed the “real corruption of reason” by Nietzsche (1888), poses a considerable risk. While a constant conjunction model between financial crisis and earnings management may exist, the parts of the model that represent cause and effect remain to be understood.

Based on the foregoing, and since the task of science is “to discover which hypothetical or imagined mechanisms are not imaginary but real; or, to put it the other way round, to discover what the real mechanisms are” (Bhaskar 2008, p. 136), this study examines whether the generative mechanism for managing earnings identified by the previous research (i.e., financial crisis) is adequate.² In particular, the present study aims to verify whether financial crisis affects the earnings behavior of managers and companies. In other words, does financial crisis have the power to improve or worsen earnings quality?

Previous research has investigated the impact of financial crisis on earnings management (Kousenidis et al. 2013; Vladu 2013), the extent to which “economic crisis affects companies’ scope for earnings management” (Iatridis and Dimitras 2013, p. 155), whether crisis leads “to a significant decline in the information value of discretionary earnings” (Choi et al. 2011, p. 184), and whether it has “encouraged” (Ahmad-Zaluki et al. 2011; Choi et al. 2011), “influenced” (Rusmin et al. 2012), or “incentivized” (Chia et al. 2007) managers to engage in earnings management. The conclusions drawn by these studies suggest that financial crisis may have both positive and negative effects on a company’s earnings quality. Earnings quality may improve or diminish, managers may adopt income-increasing or income-decreasing strategies, and reported earnings may appear more or less timely, conditionally conservative, value-relevant, smoothed, managed, persistent, and predictable (Kousenidis et al. 2013). The results are made more confusing by previous authors’ inconsistent use of terminology.

The question of the relation between financial crisis and earnings management is approached from two philosophical perspectives: positivism and critical realism. First, a positivist approach is required to compare the presented results with those of mainstream research. The results of the positivist approach, which should be expressed in terms of tendencies (Collier 2005), indicate that financial crisis tends to have no consistent effect on earnings quality since managers’ earnings behavior does not differ from the pre-crisis to the crisis periods. In this regard, earnings manipulation is sufficiently “pervasive” (Dyck et al. 2013) in both periods.

²Determining their precise cause and effect relationship is outside the scope of the present study and will be the subject of future work. By acknowledging that the question cannot be investigated in a closed system (laboratory) “where other mechanisms that are not being tested will not affect the outcome” (Collier 2005, p. 329), I argue against the causal law of a constant conjunction model (whenever a financial crisis happens, earnings management happens), although I cannot exclude a priori the opposite (that earnings management causes financial crisis), or the presence of other generative mechanisms that may cause financial crisis, or the absence of any causal law of a constant conjunction model type.

Therefore, I set aside the search for predictive models and explore other structures that might be responsible for managing earnings.

Second, from a critical realist perspective, previous “theory-laden” (Sayer 1992, p. 5) research has identified financial crisis as a plausible generative mechanism for earnings management. By applying Fleetwood’s (2011) conceptualization of tendencies, I suggest that financial crisis cannot be considered the cause of earnings management. I further argue that it is necessary to identify both the “*more, most, or the most important*” intrinsic enabling conditions” (Fleetwood 2011, p. 11) that must be satisfied to make a possessor of power manage earnings in this way and the intrinsic offsetting causes that “may or may not directly interfere with the operation of the mechanism responsible for the satisfaction of these intrinsic enabling conditions” (Bhaskar 2008, p. 225). Specifically, I posit that managers possess the power to manage earnings, while so-called “earnings managers” have a tendency to do so.

1.2 A Brief Overview of the Book and its Structure

Chapter 2 seeks to describe the field of inquiry by defining the concepts of earnings quality, earnings management, fraud, and earnings manipulation. In line with prior studies, it focuses on two types of earnings management: accruals earnings management and real activities earnings management. While accruals earnings management refers to the manipulation of earnings through the exploitation of an opportunity set of generally accepted procedures defined by accounting standards (Healy 1985), real activities earnings management is “accomplished by timing investment or financing decisions to alter reported earnings or some subset of it” (Schipper 1989, p. 92). The former earnings management category has no direct cash flow consequences as opposed to the latter which affects cash flows and, in some cases, accruals (Roychowdhury 2006).

Mainstream studies related to aggregate (e.g., Dechow et al. 1995; Healy 1985; Jones 1991; etc.) and specific (e.g., Marquardt and Wiedman 2004; McNichols and Wilson 1988; Teoh et al. 1998b; etc.) accruals earnings management, and real activities earnings management (e.g., Bartov 1993; Herrmann et al. 2003; Roychowdhury 2006; etc.), will be discussed. However, since both accruals earnings management and real activities earnings management can cross the line from legitimate to fraudulent in specific situations, studies related to fraudulent financial reporting (or non-generally accepted accounting principles, i.e. non-GAAP earnings management) (e.g., Beasley 1996; Beneish 1997, 1999a, b; Dechow et al. 1996; etc.) will be presented and discussed as well.

Furthermore, this chapter presents studies on managerial incentives for earnings management since a common approach in the earnings management literature is to first identify conditions in which managers’ incentives to manage earnings are likely to be strong, and then test whether patterns of earnings management are observable and consistent with these incentives (Healy and Wahlen 1999). For

instance, previous literature identified plausible causes for managing earnings around the time of certain types of corporate events (DuCharme et al. 2004) such as management buyouts (e.g., DeAngelo 1986; Marquardt and Wiedman 2004; Perry and Williams 1994; etc.), seasoned equity offerings (e.g., Kothari et al. 2016; Shivakumar 2000; Teoh et al. 1998a; etc.), or initial public offerings (e.g., Ball and Shivakumar 2008; Teoh et al. 1998b; Wongsunwai 2013; etc.). Earnings forecasts may also create an incentive to manage earnings. In other words, to meet the expectations of financial analysts (e.g., Bartov et al. 2002; Bhojraj et al. 2009; Kinney et al. 2002; etc.) and other stakeholders (e.g., Chung et al. 2002; Hsu and Koh 2005; Kasznik 1999; etc.), managers manage earnings. However, among other causes, earnings management activity seems particularly plausible when firms are close to debt covenant violation (e.g., Bartov 1993; DeAngelo et al. 1994; Dechow et al. 1996; DeFond and Jambalvo 1994; etc.), when firms are seeking import relief (Jones 1991), are subject to (potential) regulatory scrutiny (Byard et al. 2007; Cahan 1992; Hall 1993), or when managers act to maximize the value of their bonuses, i.e., compensation contracts and bonus schemes can trigger the manager to manage earnings (e.g., Guidry et al. 1999; Healy 1985; Holthausen et al. 1995; etc.). However, I will present the most often discussed incentives (or causes) for managing earnings and highlight the contradictory results provided by some of them since it is not clear whether these factors have the power to affect managers' earnings behavior.

Chapter 3 shifts away from the contradictory conclusions drawn on the causes of earnings management presented by prior positivist research (discussed in Chap. 2) and introduces critical realism as an alternative philosophical perspective to investigate the earnings management phenomenon. Evidence provided by prior research "is often conflicted on what motivates firms to manage earnings" (Dichev et al. 2013, p. 26). Indeed, studies providing evidence of earnings management in specific contexts are often followed by research showing antithetical results in the same contexts. Similarly, studies providing evidence of income-increasing (decreasing) strategies under a specific earnings management incentive are followed by research showing antithetical results under the same incentive. Positivism is the philosophy underpinning prior studies examining earnings management. According to Ackroyd and Fleetwood (2005), positivism claims that "the social world can be known by applying the same techniques as the natural world, a position referred to as 'scientism' ... [K]nowledge is obtained via sense experience and is made from discrete, atomistic, observed events...[T]here must be patterns in these events. More specifically, these patterns to be of use must take the form of regularities or constant conjunctions which can be characterised as follows: 'whenever event type x occurs, then event type y will also occur.' Ideally, such event regularities should have no exceptions and apply invariably; in short, they should be laws". (p. 6). From a methodological standpoint, "positivist requirements for universal principles and generalisability imply the use of quantitative methodology... In its purest form, positivism suggests that human behaviours can be reduced to the state of generalised laws in which the individual is not of significance (nomothetic). Such research is scientific, structured, has a prior theoretical base, seeks to establish the

nature of relationships and causes and effects, and employs empirical validation and statistical analyses to test and confirm theories” (Bisman 2010, p. 5).

By contrast, from a critical realist perspective, “the natural and social worlds alike do not consist of discrete atomistic events whose regular co-occurrences is the task of scientists to record, but of complex structures existing independently of scientists’ knowledge of them” (Tsoukas 1994, p. 290).

Critical realism is presented as a different philosophical perspective to explain earnings management. Critical realism “provides a comprehensive alternative to the positivism” (Bhaskar 2008, p. 1). For instance, critical realism rejects the existence of causal laws of a “constant conjunction” type in the social world (Ackroyd and Fleetwood 2005); substitutes the concept of “laws as regularity laws” with the concept of “laws as the powers or tendencies of causal mechanisms” (Fleetwood 2017, p. 42); seeks “to discover which hypothetical or imagined mechanisms are not imaginary but real; or, to put it the other way round, to discover what the real mechanisms are” (Bhaskar 2008, p. 136); and “proposes a ‘stratified ontology’ in contrast to other ontologies which have ‘flat’ ontologies populated by either the actual or the empirical, or a conflation of the two” (Sayer 2000, p. 12).

Finally, this chapter provides a critical realist evaluation of mainstream earnings management literature and of related incentives (or identified causes) for managing earnings. In short, it argues that the inconclusive results presented by prior research could be due to the openness of the system in which the earnings management phenomenon occurs since in open systems, constant conjunctions of events do not occur (Bhaskar 2008; Collier 2005). Outside the experimentally closed conditions, quantitative methodologies lose their capacity to explain or predict phenomena, and the assumption that the external world can be accurately described and causally explained does not hold (Bisman 2010). Therefore, efforts to discover the causal laws of a constant conjunction model (whenever A happens, B [‘earnings management’] happens) might be in vain.

Chapter 4 approaches the question of the relationship between financial crisis and earnings management. This chapter presents a review³ of studies that identified financial crisis as a major cause of earnings management. A review with selective citations has been performed (Cooper 1988). In summary, previous research on the impact of financial crisis on managers’ earnings management behavior has yielded

³Fink (2013) defines a research literature review as “a systematic, explicit, and reproducible method for identifying, evaluating, and synthesizing the existing body of completed and recorded work produced by researchers, scholars, and practitioners” (p. 3). Literature reviews are often considered to be “the Cinderella of research, being less valued than primary research, or dull preludes to research reports” (Steward 2004, p. 495). However, literature reviews represent “the backbone of almost every academic piece of writing” (Seuring and Gold 2012, p. 544) and provide “a framework for relating new findings to previous findings” (Randolph 2009, p. 2). Specifically, “condensed overviews of relevant literature allow for grounding the authors’ research on the state of the art of existing research, thus highlighting the particular scholarly contribution to the research field” (Seuring and Gold 2012, p. 544). Furthermore, researchers can “extract new ideas from others’ work by synthesizing and summarizing previous sources” (Bolderston 2008, p. 86). In addition, performing a literature review is a fundamental step in hypothesis building.

ambiguous results, depicting different scenarios depending on the choice of firm context/type, and on the start date of the financial crisis. It shows that there is a lack of consensus on the direction and magnitude of earnings management in times of recession. Thus, more evidence is needed. The results of the literature review performed will be operationalized into a hypothesis presented in Chap. 5, Sect. 5.2.1. Finally, the hypothesis will be tested in Sect. 5.2.4. Hence, Chap. 4 is essentially propaedeutic to Chap. 5, Sect. 5.2.

Chapter 5 answers the following research question: Does financial crisis cause earnings management? The answer, controversially perhaps, is ‘No’. Financial crisis does not cause earnings management. In other words, financial crisis does not have the power to affect the earnings behavior of managers and companies. However, this chapter presents both the positivist and the critical realist approach to the research question. To enable comparability with prior mainstream studies in the field, a positivist approach to the research question is required. Therefore, Sect. 5.2 presents the research design, data collection, hypothesis testing, and results from a positivist perspective. More specifically, based on the literature review performed in Chap. 4, a plausible hypothesis is developed and tested on a sample of firms. However, in contrast to some prior research that looked for evidence of earnings management during financial crisis periods using firms with specific characteristics (e.g., Ahmed et al. 2008; Saleh and Ahmed 2005 used debt renegotiating firms; Jaggi and Tsui (2007) used firms associated with insider trading; Ahmad-Zaluki et al. 2011 used initial public offering companies; and Habib et al. (2013) used financially distressed firms; etc.), only high earnings quality firms in which earnings management—the property of interest—should be absent have been selected. That is, I tried to isolate the mechanism (financial crisis) from the other earnings management incentives and causes.

Section 5.3 abandons the search for a predictive model and instead adopts a critical realist perspective to search for the underlying mechanisms of earnings management. It argues against financial crisis serving as a generative mechanism for managing earnings from an etymological point of view and applies retroductive reasoning to explore other potential generative mechanisms for earnings management. Lastly, it concludes by presenting some final considerations, including possibilities for future research.

1.3 Theoretical Contributions of the Present Work

From a theoretical standpoint, the present work makes several contributions. Specifically, it contributes:

- To the earnings management literature by adopting a non-mainstream philosophical perspective alongside a mainstream positivist perspective to investigate the causes of earnings management. Accounting research “has been, and continues to be, dominated by objectivist ontology” (Bisman 2010, p. 6); i.e.,

mainstream accounting research is conducted within the positivist paradigm “which since the time of Hume has fashioned our image of science” (Bhaskar 2008, p. 1). The present work is designed to be the first to consider a non-mainstream philosophical paradigm in earnings management literature. To the best of my knowledge, this is one of the first studies in the earnings management literature to take a critical realist philosophical position.

- By shedding some light on managers’ earnings behavior in times of economic downturn. Since previous research, assuming the existence of causal laws of a ‘constant conjunction’ type, has investigated the impact of financial crisis on managers’ earnings management behavior and resulted in different scenarios with inconclusive results, I have tried to find further evidence by using a mainstream approach. The findings allow me to conclude that financial crisis tends to have no consistent effect on earnings quality since managers’ earnings management behavior tends not to differ from pre-crisis to crisis periods. Overall, earnings manipulation tends to be “pervasive” (Dyck et al. 2013) in both pre-crisis and crisis periods. Moreover, the critical realist perspective reveals managers’ reasons for acting like earnings managers, and along with the more traditional positivist approach, helps overturn the idea of financial crisis as a generative mechanism for managing earnings, thus contributing to the literature.
- By revealing managers’ incentives to manage earnings (or causes for managing earnings). Prior research has identified several causes for managing earnings (e.g., compensation contracts, lending contracts, earnings forecasts, management buyouts, seasoned equity offerings, seasoned bond offerings, etc.). Academics have engaged in numerous efforts to discover the causal laws of a constant conjunction model (whenever A happens, B ‘earnings management’ happens), such as whenever a management buyout/a seasoned equity offering/a seasoned bond offering, etc., happens, earnings management happens. Roughly speaking, the critical realist approach helps to reject the notion that ‘something other than an earnings manager’ causes earnings management to occur. It suggests abandoning the idea of “discovering [the] causal laws of a ‘constant conjunction’ model” (Collier 2005, p. 328) since the research question cannot be investigated in the context of a closed system. As an alternative, future researchers might aim to explore other structures or generative mechanisms responsible for the given phenomenon (Lawson 1997) and analyze them “as the tendencies and powers of enduring and transfactually acting things” (Bhaskar 2008, p. 221).
- To the critical accounting research debate. Modell (2017) points out that critical accounting research “continues to evolve and accommodate novel strands of research drawing on hitherto unexplored or under-utilised intellectual resources”; in this regard, an emerging research genre able to generate “a growing body of conceptual, methodological and empirical work is that informed by critical realism” (p. 21). Moreover, several authors “have recently singled out critical realism as a promising way forward for critical accounting research”

(Modell 2017, p. 21).⁴ Thus, the present work contributes to this emerging avenue of research.

- By providing further stimuli for testing theories in a rigorous manner since accounting researchers should endeavor, whenever possible and practicable, to avoid examining “instances in which a theory is expected to hold” (Miller and Tsang 2011, p. 143). Results of earnings management studies, whatever direction earnings management takes, are consistent with relevant theories. In this regard, prior studies have robust theories supporting the results. For instance, transaction cost theory and prospect theory (Burgstahler and Dichev 1997), as well as agency theory (DeAngelo 1986) can plausibly be used to explain why earnings are managed. Furthermore, the “big bath” argument (Walsh et al. 1991) and the income-smoothing hypothesis (Monsen and Downs 1965; Gordon 1964; Trueman and Titman 1988; Bartov 1993, etc.) are often invoked. I chose a positive test strategy (Klayman and Ha 1987) as well by investigating whether the financial crisis affects managers’ earnings behavior, but my “inappropriate bolstering of [my] hypothesis” (Nickerson 1998, p. 175) was mainly driven by prior knowledge (Klauer et al. 2000; Stanovich and West 2007). Researchers should try to mitigate the so-called confirmatory bias (Nickerson 1998) by avoiding the adoption of positive test strategies in their research designs.

1.4 Practical Contributions of the Present Work

From a practical standpoint, the present work provides useful evidence for bankruptcy courts, certified public accountants, auditors, and other parties who use accounting numbers as well, such as banks, financial analysts, institutional investors, and creditors, by enabling a judgment that takes into account two different research approaches based on ‘how’ and ‘why’ managers exercise their discretion in the financial reporting process. Firms can benefit from the present study as well. Both the positivist and the critical realist philosophical perspectives support firms’ ownership and management in the decision making process.

Finally, from a practical research standpoint, the present work acts as an invitation to positivist accounting researchers to seek out conditions of *quasi*-closure in designing research in an open system, so that certain activities of interest are

⁴However, according to Modell (2017), the influence of critical realism “on the accounting literature was long rather cursory (e.g. Armstrong 2004, 2006; Manicas 1993; Whitley 1988). It is only over the past decade that accounting scholars have made more explicit and extensive use of it to debate paradigmatic and methodological issues (Ashraf and Uddin 2015a; Brown and Brignall 2007; Llewellyn 2007; Modell 2009, 2013, 2015a, b), examine processes of accounting change (Ashraf and Uddin 2013, 2015b, 2016; Mutiganda 2013; Stergiou et al. 2013) and advance critical commentaries on emerging accounting policies and practices (Burrowes et al. 2004; Smyth 2012)” (p. 21).