

# Earnings Management and Corporate Finance

The Importance of Transparent Financial Reporting

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## Dissecting earnings management strategies

Why, how, and when?

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# 1 Dissecting earnings management strategies

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## Introduction

Financial statements play an essential role in the assessment of corporate financial performance and future company prospects. Financial reports are closely monitored by stakeholders, like owners, lenders, business partners, or government and professional bodies. The reliability and high quality of these reports are imperative for external users of accounting information to make informed decisions. Among many items reported in financial statements, income is one that attracts particular attention. Consequently, companies sometimes have incentives to influence earnings to window-dress the company's financial situation by engaging in the practice of earnings management, especially during periods of performance decline or significant business events. The demarcation between legitimate earnings management techniques and deceptive financial reporting, colloquially termed "cooking the books" or involving fraudulent practices, is often unclear (Gottschalk, 2022; Svabova et al., 2020).

Companies can manage earnings through accrual tools and real activities. The first activities encompass changes in discretionary accounting numbers within the scope of possibilities allowed by accounting standards. Real earnings management implies changes in timing or structuring real business transactions. Thus, they distort not only earnings but also cash flows (Dechow & Skinner, 2000; Healy & Wahlen, 1999). Moreover, real earnings management is considered to be more costly and harder to detect in comparison to accrual activities (Kothari et al., 2016; Zang, 2012). Earnings management may sometimes be perceived as changing earnings to be more informative and, especially real tools, as enabling better financial performance in the future (Gunny, 2010). However, the most common research view is that earnings management does not enhance truthful reporting. On the contrary, it reduces the quality of financial information in accounting reports for external users, leading to more severe information asymmetry and garbled transparency of financial reports for stakeholders in financial markets (Abad et al., 2018).

Worldwide interest in earnings management and the informativeness of financial reports is increasing significantly. First, the demand for reliable accounting information is growing. Profound changes in business risk in recent years and an extremely turbulent business environment require strategic adjustments, including

earnings management decisions. Additionally, more and more stakeholders are strongly interested in a company's commitment to sustainable finance and sustainable accounting. The nature of earnings management is that it is very often short-term, which strongly challenges the long-term logic of corporate finance management, with due consideration for safeguarding the rights of all stakeholders. Next, the interest in earnings management is growing because the accounting system is constantly evolving. This creates new possibilities and renders older tools redundant. Another argument for the growing popularity of earnings management is that such activities carry important, long-term implications for the areas of operating, investment, and financing in business life. Last but not least, this issue is complex and challenging, as similar methods may be used both to artificially boost company performance in order to mislead investors and, conversely, to make financial statements more informative. Earnings management is as ambiguous as it is ubiquitous.

The changes that have taken place in accounting have undeniably influenced the quality of reported information, particularly concerning corporate earnings. The shift from a rules-based to a principles-based accounting approach necessitates decision-makers to exercise discretion in areas such as valuation methods, estimation processes, and the presentation of reporting information. This subjective approach, while adhering to legal boundaries, allows for a creative portrayal of a company's financial standing, encompassing the practice of earnings management. Earnings management not only impacts the transparency of financial statements but also introduces significant changes to a company's risk profile. This dynamic has led to extensive discussions in corporate finance and accounting, especially regarding the quality of financial statements. The implications of earnings management underscore the ongoing importance of this topic within scholarly discourse, reflecting its broader significance in the domain of corporate finance and accounting.

This book is different from existing books because it focuses on an international perspective, discussing the latest advances in earnings management by combining the 'two worlds' of accounting and corporate finance towards a comprehensive, multidimensional, and informative approach to financial reporting transparency. The research addresses the logic, details, and trade-offs between accrual-based and real-based earnings management, giving a helpful reference for academics and practitioners. It presents the most popular accounting policy tools used in earnings management. It integrates the main elements of the corporate finance puzzles that relate to the transparency of financial reports, like the macroeconomic environment, profit thresholds, cash holdings management, audit quality, financing decisions, and financial health. The geographical scope of the study is a group of non-financial companies listed on stock exchanges in European countries. Such a perspective is particularly relevant in a period of growing international connections in the business world. This book provides new, empirical evidence on European capital markets for the last 20 years. The conclusions formulated based on broad European evidence may also be useful for readers from other regions. The empirical research was supported by funds granted by the Minister of Science of the

Republic of Poland under the “Regional Initiative for Excellence” Programme for the implementation of the project “The Poznań University of Economics and Business for Economy 5.0: Regional Initiative – Global Effects (RIGE)”.

The chapters are thematically varied and explore the broad scope of earnings management issues. They include different perspectives on the earnings management process, starting from accounting tools and concluding with results in corporate finance. Each chapter is stand alone, but all are logically structured and integrated around earnings management and the transparency of financial reports. To sum up, the book seeks to provide a beneficial take on earnings management by discussing a new two-sided perspective. It informatively details the methods of earnings manipulation in the international accounting system. Next, it shows the consequences of the informativeness of financial reports for stakeholders in the European setting. Such a perspective is useful for corporate financiers and other users of financial reports and helps easily understand the multifaceted, far-reaching financial consequences of earnings management mechanisms.

### **Why: the many faces of motivations for earnings management**

Comprehending the determinants of active earnings management is pivotal for the nuanced interpretation, effective control, and potential mitigation of this intricate phenomenon. This issue necessitates a thorough examination of managers’ motivations, their proclivity towards earnings management, and the multifaceted constraints and opportunities.

Earnings management, as a strategic manoeuvre within financial reporting, entails the adroit utilisation of accounting policy tools. This practice aims to wield influence over financial outcomes or present a more sanguine portrayal of a company’s financial standing than the underlying economic performance. The intricate web of reasons prompting companies to delve into earnings management is intricately woven with the interplay of diverse internal and external factors.

Subramanyam (1996) posits that earnings management serves various purposes for company managers, with a common thread being the pursuit of additional benefits. Two primary motives for earnings management were identified: first, the aspiration to augment and refine the value of information presented to users of financial statements; and second, the pursuit of benefits outlined in management contracts. The prevalent rationale for earnings management often centres around the remuneration of board members. This is particularly evident when management contracts stipulate that remuneration, including potential bonuses, hinges on achieving specified profit thresholds. In such instances, board members engage in earnings management, occasionally opportunistically, to showcase the desired level and structure of profit in financial statements, meeting contractual terms for personal benefits. The incentive for earnings management to influence company management and enhance remuneration has been explored empirically by scholars such as Healy (1985), Holthausen et al. (1995), and Jiraporn et al. (2008). This behaviour is mirrored when a company faces financial distress and contends with less favourable market conditions than more profitable counterparts. In such scenarios,

managers strive to portray a profit at any cost, thereby creating a distorted depiction of the company's financial health.

There is a prevailing perspective in the literature suggesting that a primary driver for earnings management is the aspiration to align with capital market expectations, striving to report earnings on a par with, or exceeding forecasts made by financial analysts (Ronen & Yaari, 2008). Notably, participants in the capital market express interest in both the profitability presented in financial statements and the projections articulated by independent analysts. Consequently, the successful realisation of expectations, where profit aligns with forecasted values, holds considerable significance for investors and other stakeholders. Studies conducted in the US market, including research by Matsumoto (2002), Skinner and Sloan (2002), and Rees and Sivaramakrishnan (2007), underscore that the desire to meet capital market expectations serves as a motivating factor for earnings management. The widespread occurrence of aligning with analysts' forecasts is recognised as a notable phenomenon in this context.

Entry to the stock market is also a strong motivation for earnings management. Companies entering the stock market tend to overstate their financial performance. Consequently, in the period immediately following their listing, they underperform comparable companies in their industry (Cotten, 2008). A parallel inclination is evident in the context of mergers and acquisitions, especially those funded through the issuance of additional shares. The correlation between reported earnings and share price prompts corporate management to take measures to strategically bolster the share price (Vladu, 2014). Conversely, when managers are orchestrating a management buyout, their strategy involves suppressing the company's profit to diminish both the share price and the unit buyout price.

Another reason for earnings management is to avoid the negative effects of debt covenant hypothesis. Typically, credit agreements contain clauses that sanctions will be imposed on the company in the event of a deterioration in its credit rating. Hence, management, aiming to avoid additional costs or the complete loss of a source of financing, resorts to earnings management, especially to underscore its positive value (Dichev & Skinner, 2002). Research, by Healy and Palepu (1990), Dichev and Skinner (2002), and Beatty and Weber (2003), reveals that board members manage earnings to portray profitability and thereby steer clear of the negative consequences associated with violating the provisions of loan agreements. In essence, a company's indebtedness serves as a motivator for its management to employ earnings management strategies.

The regulatory environment significantly influences earnings management. Companies resort to earnings management to avert adverse actions by capital market regulators and public accusations from regulatory bodies, while also seeking public support. In jurisdictions where balance sheet law is distinct from tax law, situations arise where entities display high financial performance values alongside low taxable income. Given the implications of elevated shareholder benefits and reduced tax revenues, such scenarios lead to public dissatisfaction and exert pressure for enhanced regulatory control. Consequently, highly profitable entities often strategically downplay their financial performance to mitigate the escalated costs associated with increased regulatory requirements. In regions with a close nexus

between accounting law and tax law, companies strategically manage earnings to minimise their tax burden (Vladu, 2014).

The identified earnings management motives are based on mutually interpenetrating and complementary theories, in particular: agency theory (Jensen & Meckling, 1976; Ross, 1973), contract theory (Hart, 1988), signal theory (Ross, 1977), threshold management theory (Burgstahler & Dichev, 1997), and organisational management and leadership theories (Finkelstein & Hambrick, 1996; Hambrick & Mason, 1984). A fundamental role in earnings management is played by the separation of ownership and management functions and the relationship between owners and managers of a company (Palliam & Shalhoub, 2003). Management, through information asymmetry and information advantage over the investor (owner), can manipulate the reported figures for their own benefit. In the case of managers' participation in the ownership of the company, such practices are curtailed (Ebrahim, 2007; Warfield et al., 1995). Research findings indicate that when the amount of managers' bonuses depends on the reported financial results, then they engage in earnings management more to maximise the bonus amount (Balsam, 1998; Healy, 1985; Holthausen et al., 1995; Shuto, 2007). The same is true for remuneration equity-based compensation (Bergstresser & Philippon, 2006; Cheng & Warfield, 2005). When managers plan a managerial buyout, they generally try to understate financial results so as to lower the price of the buyout of the unit (Xie et al., 2003).

Contract theory applies to management contracts as well as loan and lease agreements. They contain clauses incurring higher costs if the company's financial situation deteriorates. Contracts may also provide for the need for immediate maturity of the entire amount of the obligation. Thus, earnings management aims to improve the financial condition of the company in order to avoid additional costs (Dichev & Skinner, 2002). Managers, through earnings management, can reduce the cost of contracts with stakeholders, including potential ones, when raising further sources of capital.

Reported profit can provide an important signal to the market regarding a company's growth prospects. This interesting background was formulated on the basis of the signalling theory, wherein investors view profit as information from management not only about the current state of the company but also about its future performance forecasts. According to Ahmed et al. (1999), companies with high growth prospects use earnings management to signal their investment opportunities. While these signals are informative, they may also carry opportunistic motives aimed at realising immediate benefits for management. Managers strategically signal a specific profit level to benchmark the company against others in the industry or sector. Companies may disclose higher earnings to portray themselves as more profitable entities compared to their counterparts in the industry, thereby attracting investors (Dakhlallah et al., 2020). Companies raising capital on the stock market may have a tendency to inflate profits, especially when potential investors are interested in the company's financial health. This tendency is particularly pronounced in the year of initial public offering, when a company is not well-known to the market (Teoh et al., 1998a). Moreover, subsequent share issues may also incentivise managers to engage in earnings management (Teoh et al., 1998b).

Analyst forecasts represent one of the thresholds that management considers in the earnings management process (Burgstahler & Dichev, 1997). The objective of aligning earnings with analysts' expectations is to foster confidence in the company. Another threshold in this process may be the profit of the previous year. Managers may adjust profits to ensure they are not lower than the previous year's earnings, while avoiding making them significantly higher. This precaution is taken to prevent the creation of unrealistic expectations for the following year. Additionally, the zero financial result serves as a threshold, with management manipulating earnings to avoid reporting a loss. Even a minimal loss can inflict significant damage to the company's reputation and, consequently, to its managers.

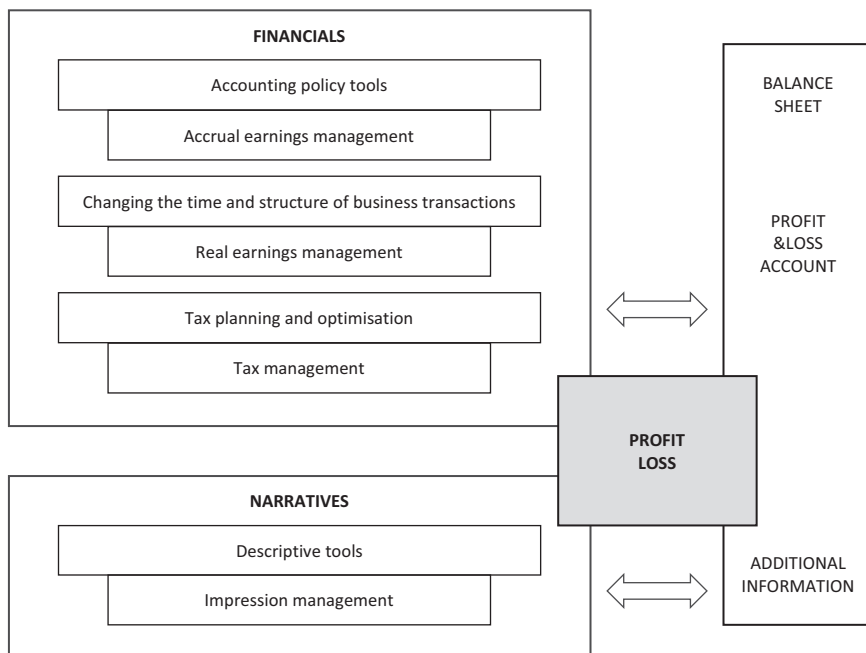
The organisational culture is an important factor in corporate decision-making, encompassing earnings management, as highlighted by the organisational theory (Duncan, 2001). The time orientation of the company is also a significant consideration. Companies with a short-term orientation typically prioritise immediate profits and rapid, impressive success. This approach may lead to aggressive earnings management, ultimately diminishing the company's long-term resources and weakening its market position. Furthermore, the tone established by top leadership plays a crucial role in shaping perceptions and evaluations of events, thereby influencing managers' decisions regarding earnings management (Hamilton et al., 2018).

In conclusion, various determinants play a role in shaping earnings management within companies, arising from both the distinct features of the company itself and its broader business environment. It is essential to highlight that these determinants may have various impacts on earnings management, depending on the region and the timeframe in which they are implemented. Recognising these factors is pivotal for foreseeing and addressing undesirable managerial behaviours, contributing to increased transparency of financial reports, and mitigating the negative effects of information asymmetry. Attaining this objective requires adapting legal regulations and institutional frameworks to align with the dynamic landscape of corporate practices.

### **How: managerial choices that change earnings**

Part 1 of this book offers an informative discussion on practical methods of earnings management in the accounting and taxation system, with plenty of examples to illustrate its financial consequences. It explores accrual-based and real-based earnings management tools for European companies, exploring areas connected with fixed assets, current assets, provisions, tax optimisation, impression management in narrative financial reports, or the timing and structuring of business transactions. The detailed descriptive analysis of accounting possibilities and informative case studies included in this part offers additional insights into earnings management tools. Figure 1.1 succinctly summarises the content of Part 1, providing a visual overview of the diverse methods of earnings management discussed in specific chapters.

In the exploration of long-term earnings management based on fixed assets, valuation and depreciation methods wield significant influence on a company's



*Figure 1.1* Accounting financials and narrative descriptions in the service of earnings management

financial outcomes. Chapter 2 scrutinises the consequences of earnings management tools related to the depreciation of fixed and intangible assets, as well as the methods of valuation for long-term investments. The choices made in the acquisition, valuation, and depreciation of fixed assets echo into the future, impacting earnings for an extended period. This extends to 40 years in the case of real estate, highlighting the enduring ramifications of decisions made in this domain. The subjective choices of depreciation and valuation methods for fixed assets are revealed as pivotal factors shaping long-term earnings.

Shifting the focus to creative accounting or earnings management via current assets, Chapter 3 delves into the intricate system of accounting as a measurement of economic reality. Profits, a cornerstone for stakeholders, are explored through the concept of accruals, with a specific emphasis on the valuation of current assets. We investigate the relationship between current assets valuations and company earnings, unravelling the complexities of decisions related to write-offs, valuation methods, and the estimation of write-off values. Through a comprehensive examination of accounting practices, legal regulations, and case studies, the chapter sheds light on the multifaceted effects of current assets valuation as tools in earnings management strategies.

Chapter 4 explores provisions as a subtle form of accounting manipulation in earnings management. While accounting principles strive for a true and fair view of



a company, provisions can become a source of abuses affecting earnings. The chapter presents the impact of provisions on a company's financial results, delving into research literature, current regulations, and advanced case studies. It underscores the multidimensional financial consequences arising from the subjective assessments of accountants, highlighting how provisions, intended to uphold accounting principles, can be subtly manipulated to meet profit targets.

Turning attention to the tax landscape, Chapter 5 unravels taxation as a crucial tool of earnings management, with multidimensional consequences. Companies, compelled by compulsory taxes, actively seek mechanisms to mitigate their tax burdens. The study discusses instruments enabling the reduction of the tax burden, emphasising tax optimisation for increased net profit. It navigates the complexities of balancing sheet law versus tax law, providing insights into how tax strategies impact revenues, costs, and profits. The chapter acknowledges the intricate nature of each country's tax system, creating opportunities for companies to optimise tax burdens. However, it cautions that earnings management via taxes may introduce negative implications for financial statement transparency, affecting the decision-making process of external users of financial statements, such as investors.

Chapter 6 introduces real earnings management as a strategic shift from accrual-based methods, focusing on managers altering the timing or structuring of business transactions. The study explores the tools of real earnings management and their consequences on subsequent operating performance. Through a discussion of current legal regulations and by providing a detailed case study, the chapter uncovers the short-term effects of these tools on a company's profits. It also delves into the ambiguous impact on long-term company value, acknowledging the potential for both financial difficulties and strategic business lifelines.

Investors derive their knowledge about the company's prospects not only from financial data but also from the descriptions of these results provided concurrently by the companies. Therefore, Chapter 7 dedicated to impression management in narrative accounting descriptions of financial results complements the comprehensive considerations of the transparency of earnings. Beyond numerical data, narrative reports play a crucial role in communicating financial outcomes. This chapter analyses strategies of impression management, encompassing tone management, explanation management, comparison management, rhetorical impression management, and information visibility management. It underscores how narrative reporting can influence the perception of financial results by stakeholders, emphasising that words, like numbers, can significantly impact the readability, legibility, and informativeness of financial reports, thus enabling firms to manage transparency effectively.

In Part 1 of this book, each chapter contributes to a nuanced understanding of the various tools and strategies employed in earnings management. From the intricacies of fixed assets and current assets valuation to provisions, taxation, real earnings management, and impression management, the exploration unveils a multifaceted landscape where financial decisions reverberate across time, influencing long-term earnings and shaping the narrative communicated to stakeholders.

### **When: factors facilitating and limiting earnings manipulation**

Part 2 of this book delivers empirical international evidence on the multidimensional connections between financial reporting transparency and company financial decisions for a broad group of public non-financial companies in European countries over the last two decades. Empirical studies are dominant here, based on recognised worldwide databases. Cross-sectional models are run annually for non-financial industries in Europe to estimate normal accruals, cash flow from operations, production costs, and discretionary expenses. Proxies of earnings management are tested with parametric and non-parametric statistical approaches. Both aggressive and conservative earnings management strategies are analysed with a set of measures, including raw/standardised, single/aggregated, and signed/unsigned proxies. We discuss challenges to the transparency of the reported financials. It is empirically explored in connection with macroeconomic turbulence, the managerial focus on achieving profit thresholds, complexity of cash holdings management, monitoring role of auditing expertise, the mix of equity and debt financing, and corporate financial distress. Understanding the complexity of these phenomena, the results of which are presented in Part 2, is facilitated by Figure 1.2.

Exploring the intricate relationship between earnings informativeness and macroeconomic environment, Chapter 8 unravels how companies navigate the challenges posed by financial crises. From the aftermath of the 2008 global financial crisis to the COVID-19 pandemic, nuanced behaviours of firms facing extreme uncertainty emerge. Some companies shift away from aggressive earnings manipulation, while others strategically increase losses to navigate the crisis, thereby revealing the complex interplay between information asymmetry and macroeconomic earthquakes.



*Figure 1.2* Earnings management surroundings

Moving forwards, the exploration continues in Chapter 9 into the analysis of focusing on profit thresholds, emphasising the dichotomy between accounting earnings and long-term corporate performance. Despite the unanimous call for companies to enhance market value, the persistent attention placed on accounting earnings plays an important role. Firms, when confronted with unsatisfactory profitability, are often tempted to engage in earnings management. This research probes the crucial profit thresholds, namely, the zero earnings, revealing distinct patterns of earnings management that underscore the tension between reported profits and losses. The empirical findings shed light on the opportunistic manipulation of earnings by European firms, suggesting a strategic approach to avoiding reported losses.

Chapter 10 explores the intriguing phenomenon of cash holdings and their relationship with the transparency of financial reports. While holding significant cash reserves provides financial flexibility, it comes at the cost of reduced reporting transparency. This chapter demonstrates that the financial statements of cash holders exhibit lower transparency, contributing to increased information asymmetry. The exploration of possible explanations enriches the understanding of the complex dynamics between cash holdings and financial reporting transparency.

In Chapter 11, the attention turns to the role of auditing expertise in enhancing financial reporting quality. Auditors, as key external monitors of accounting processes, are expected to limit opportunistic inducements for earnings manipulation. This research empirically discusses the relationship between audit quality and earnings management strategy. While high-quality auditors are presumed to curb opportunistic behaviours to some extent, the study demonstrates that even more qualified monitoring bodies may not create enough pressure to completely eliminate all forms of earnings manipulation. The findings expose the limitations of auditing procedures, especially as curbing accrual earnings management may prompt companies to resort to altering the timing or structure of real transactions.

In Chapter 12, exploring the intricate relationship between financing decisions and earnings quality, the research uncovers the dual nature of financing-induced changes. On the one hand, new financing demands reliable reporting, especially under high information asymmetry. On the other hand, capital needs may exert pressure to boost earnings. The research provides valuable insights into the complex interplay between external capital demands, and the propensity for accrual and real earnings management.

Finally, delving into the realm of company financial performance and its effects on the strategy of earnings manipulation, the research presented in Chapter 13 uncovers distinct opportunities and motivations for earnings management in distressed and healthy companies. It reveals how these different groups trade off accrual and real earnings management, providing a comprehensive understanding of how companies strategically adapt their financial reporting in the face of

financial difficulties and offering insights that can benefit a wide array of corporate stakeholders.

In this multifaceted examination of earnings management, the chapters in Part 2 of this book enhance the comprehension of the intricate strategies adopted by companies in addressing various challenges within the financial environment. The challenges associated with macroeconomic turbulence, profit thresholds, cash holdings, auditing expertise, financing decisions, and financial distress reveal the complexity of information transparency in corporate finance management.

### **Empirical approach**

Firms change their profits in the desired direction to achieve their goals. For obvious reasons, companies do not publicly disclose the fact of manipulating their earnings. Researchers have put forwards various methodologies to detect earnings management. The main approaches are summarised in Figure 1.3. First, they encompass traditional methods. The existing literature proposes several accrual models such as the Jones model (Jones, 1991), the modified Jones model (Dechow et al., 1995), the Kasznik (1999) model, the model proposed by Dechow and Dichev (2002), McNichols (2002), Kothari et al. (2005), and Ball and Shivakumar (2005, 2006), the Dechow et al. (2012) model, and Roychowdhury (2006) approach for detection of real earnings management. The additional approaches, far less commonly used in empirical studies, were proposed by McVay (2006) or Malikov et al. (2018). Advanced methodologies have been proposed to tackle the challenges of nonlinearity, multicollinearity, and heteroscedasticity prevalent in real-world scenarios (Bansal, 2023; Du et al., 2020; Hammami & Hendijani Zadeh, 2022; Hejazi et al., 2012; Omar et al., 2017).

This empirical study uses the traditional approach. Regression models are still most prevalent, owing to their well-established foundations, inherent simplicity, and cost-effective implementation. The first group of proxies for earnings management allows us to detect mechanisms in the reporting process based on accrual activities. Accruals are decomposed into non-discretionary (normal) and discretionary (abnormal), abbreviated as NDACC and DACC, respectively. The first are estimated with annual cross-sectional regressions. Our empirical research estimates non-discretionary accruals using the Jones model, and the robustness of results is checked with the modified Jones model as they are most commonly applied in the existing literature.

The expected accruals according to the cross-sectional Jones (1991) model are estimated as:

$$NDACC_{i,t}^J = \alpha_{i,1} \left( \frac{1}{A_{i,t-1}} \right) + \alpha_{i,2} (\Delta REV_{i,t}) + \alpha_{i,3} PPE_{i,t} + \varepsilon_{i,t}$$

where  $A_{i,t-1}$  – lagged total assets,  $\Delta REV_{i,t}$  – the change in revenues, and  $PPE_{i,t}$  – property, plant, and equipment.

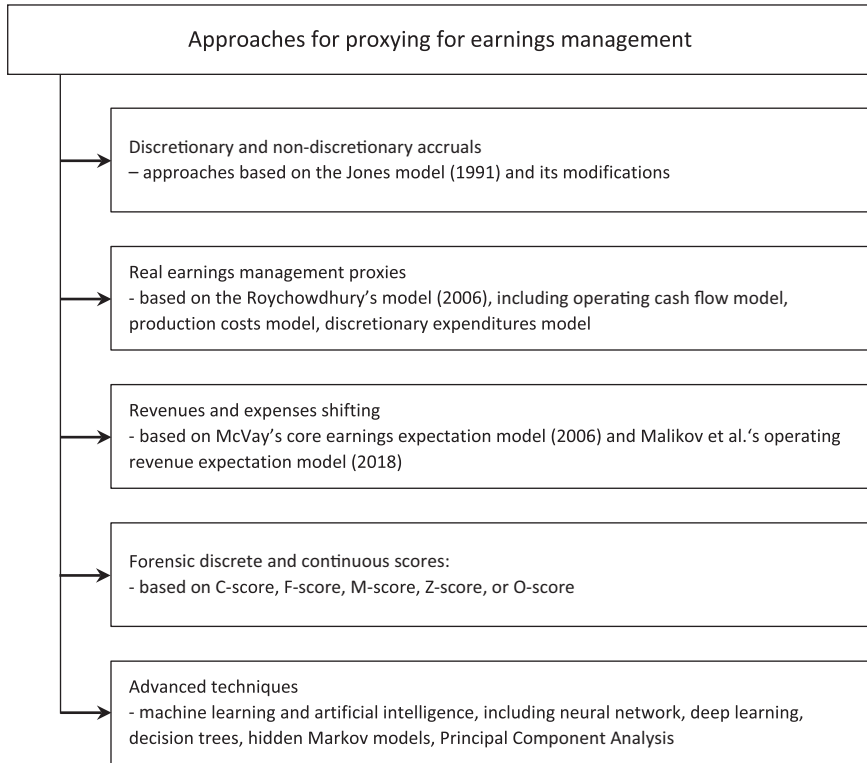


Figure 1.3 Methods of detection of earnings management

The procedure of estimated non-discretionary accrual with the modified Jones model (Dechow et al. 1995) proceeds as follows:

$$NDACC_{i,t}^{mJ} = \alpha_{i,1} \left( \frac{1}{A_{i,t-1}} \right) + \alpha_{i,2} (\Delta REV_{i,t} - \Delta REC_{i,t}) + \alpha_{i,3} PPE_{i,t} + \varepsilon_{i,t}$$

where  $\Delta REC_{i,t}$  – change in receivables.

Estimated non-discretionary accruals are compared to accruals revealed in financial statements. It allows us to derive unusual accruals that finally proxy for accrual earnings management.

The second group of proxies relates to real earnings management. These proxies help to reveal managerial decisions aimed at changing the timing or structuring of real business transactions (Gunny, 2010; Roychowdhury, 2006; Zang, 2012). Real earnings management is observed with proxies based on cash flow from operations (CFO), production costs (PROD), and discretionary expenses (DISX) (Cohen et al., 2008; Dechow et al., 1998; Roychowdhury, 2006; Zang, 2012). Annual

cross-sectional models are applied to estimate normal CFO, expected PROD, and expected DISX. Next, they are compared with their actual levels giving abnormal cash flow from operations (ACFO), abnormal production costs (AROD), and abnormal discretionary expenses (ADISX).

Normal cash flow from operations is modelled according to:

$$\frac{CFO_{i,t}}{A_{i,t-1}} = \alpha_{i1} \left( \frac{1}{A_{i,t-1}} \right) + \alpha_{i2} \frac{REV_{i,t}}{A_{i,t-1}} + \alpha_{i3} \frac{\Delta REV_{i,t}}{A_{i,t-1}} + \varepsilon_{i,t}$$

Normal production costs are estimated as:

$$\frac{PROD_{i,t}}{A_{i,t-1}} = \alpha_{i1} \left( \frac{1}{A_{i,t-1}} \right) + \alpha_{i2} \frac{REV_{i,t}}{A_{i,t-1}} + \frac{\Delta REV_{i,t}}{A_{i,t-1}} + \frac{\Delta REV_{i,t-1}}{A_{i,t-1}} + \varepsilon_{i,t}$$

We model normal discretionary expenses as:

$$\frac{DISX_{i,t}}{A_{i,t-1}} = \alpha_{i1} \left( \frac{1}{A_{i,t-1}} \right) + \alpha_{i2} \frac{REV_{i,t-1}}{A_{i,t-1}} + \varepsilon_{i,t}$$

The research sample covers companies listed on stock exchanges in Europe. We focus on non-financial public firms. The data are derived from the Capital IQ database and Equity RT database. The research period is 2005–2021. Industries were defined according to the Global Industry Classification Standard (GICS).

At the beginning of the empirical procedure, outliers were eliminated. Models for normal accruals, CFO, PROD, and DISX include intercepts (Kothari et al., 2005; Yoon et al., 2022; Zang, 2012). Components of cross-sectional models and estimates of normal DACC, CFO, PROD, and DISX are scaled by lagged assets to mitigate heteroscedasticity.

We apply a broad scope of earnings management measures. First, raw DACC are used to observe if earnings are inflated or decreased by accrual activities. The greater the level of DACC, the more companies artificially inflate their earnings, leading to a decrease in the overall quality of financial reports during the reporting period. The practice of inflating earnings through elevated discretionary accruals also has an impact on the informativeness of financial statements in subsequent periods. When companies misuse discretionary accruals to artificially enhance earnings to meet specific targets, this is often followed by a subsequent reduction in discretionary accruals in the following periods. Conversely, companies may proactively reduce discretionary accruals in anticipation of the need for higher future earnings. These abrupt and excessive shifts in discretionary accruals across periods disrupt the overall informativeness of financial reports. Therefore, this study also considers the absolute value of discretionary accruals (absDACC), enabling the examination of activities related to earnings management and the observation of their repercussions in surrounding periods. A higher level of absolute discretionary

*Table 1.1* How to detect accrual earnings management?

<i>Abbreviation</i>	<i>Description</i>
DACC(J)	Discretionary accruals estimated according to cross-sectional regressions according to the Jones model (1991)
DACC(mJ)	Discretionary accruals estimated according to cross-sectional regressions according to the modified Jones model (Dechow et al., 1995)
absDACC(J)	Absolute (unsigned) discretionary accruals estimated according to cross-sectional regressions according to the Jones model (1991)
absDACC(mJ)	Absolute (unsigned) discretionary accruals estimated according to cross-sectional regressions according to the modified Jones model (Dechow et al., 1995)
posDACC(J)	Positive discretionary accruals estimated according to cross-sectional regressions according to the Jones model (1991)
posDACC(mJ)	Positive discretionary accruals estimated according to cross-sectional regressions according to the modified Jones model (Dechow et al., 1995)
negDACC(J)	Negative discretionary accruals estimated according to cross-sectional regressions according to the Jones model (1991)
negDACC(mJ)	Negative discretionary accruals estimated according to cross-sectional regressions according to the modified Jones model (Dechow et al., 1995)

accruals corresponds to a lower level of informativeness in financial statements. Next, we divide accrual-based strategies into negative discretionary accruals that enable changing earnings downwards (negDACC) and positive discretionary accruals that boost earnings upwards (posDACC) (Table 1.1).

Three individual metrics of real earnings management (ACFO, AROD, and ADISX) serve as proxies for departures from normal business operations. The original ACFO and ADISX are multiplied by  $-1$  (Kim & An, 2018).

Consequently, elevated levels of ACFO, APROD, or ADISX are indicative of lower earnings quality. Subsequently, absolute values for each actual earnings management metric are computed to capture the overall impact earnings manipulation (absCFO, absPROD, and absADISX).

In the subsequent stage, the three individual measures of real earnings management are standardised and aggregated. It results in comprehensive metrics for total real earnings management (Haga et al., 2018). First, stREM1 combines standardised ADISX and standardised APROD. Second, stREM2 reflects the impact of standardised ACFO and standardised ADISX. Additionally, stTREM summarises the impact of standardised ACFO, standardised APROD, and standardised ADISX. Higher levels of measures of real earnings management signify a diminished transparency of reported earnings (Table 1.2).

Parametric and non-parametric tests are diligently employed to assess statistical significance in this research investigation. The normality of the distribution underwent meticulous scrutiny using the Anderson-Darling test. For the statistical significance of average earnings management measures, both parametric and

Table 1.2 How to detect real earnings management?

<i>Abbreviation</i>	<i>Description</i>
ACFO	Abnormal cash flow from operations (according to the Roychowdhury (2006) approach and multiplied by negative one)
APROD	Abnormal production costs (according to the Roychowdhury (2006) approach)
ADISX	Abnormal discretionary expenses (according to the Roychowdhury (2006) approach and multiplied by negative one)
absACFO	Absolute (unsigned) abnormal cash flow from operations (according to the Roychowdhury (2006) approach)
absAPROD	Absolute (unsigned) abnormal production costs (according to the Roychowdhury (2006) approach)
absADISX	Absolute (unsigned) abnormal discretionary expenses (according to the Roychowdhury (2006) approach)
stREM1	Aggregate of standardised ADISX and standardised APROD (according to the Roychowdhury (2006) approach)
stREM2	Aggregate of standardised ADISX and standardised ACFO (according to the Roychowdhury (2006) approach)
stTREM	Aggregate of standardised ACFO, standardised ADISX, and standardised APROD (according to the Roychowdhury (2006) approach)

non-parametric examinations are conducted. The parametric Student’s t-test for the mean is employed alongside the non-parametric Wilcoxon test to scrutinise the significance of the medians. Furthermore, the study delves into the examination of the significance of distribution disparities between distinct groups. To achieve this, tests for independent samples are applied, encompassing both the parametric t-Student test, where equality of variance in the research groups is presumed, and the non-parametric Mann-Whitney test. These comprehensive statistical analyses are crucial in drawing meaningful conclusions from the broad empirical dataset.

**Concluding remarks and challenges for the future**

Financial statements serve as a crucial tool in evaluating corporate financial performance and future prospects, with income garnering particular attention. The reliability of financial reports is vital for company stakeholders, being the primary source of information on corporate financial stability and its future prospects. Therefore, companies sometimes engage in earnings management to present a more favourable financial health, a practice that significantly impacts the transparency of financial reports for external users and associated risk levels. The global interest in earnings management is rising due to growing demand for reliable accounting information, changes in business risk, and increased stakeholder interest in sustainable finance. The evolving accounting system, coupled with the complex nature of earnings management, further contributes to its popularity.

This research contributes to academic knowledge as well as business practice by presenting and discussing earnings management methods connected with fixed and



current assets, provisions and taxes, and the timing or structuring of real transactions, and providing empirical evidence on the consequences of informativeness of earnings for corporate finance decisions. This book stands out by offering an international perspective, focusing on a group of European countries, aligning with the increasing internationalisation of the business landscape. It explores the latest advances in earnings management, bridging the realms of accounting and corporate finance. The two-part structure of the book delves into practical methods of earnings management, providing insightful case studies, and then delivers international evidence on the connections between financial reporting transparency and company financial decisions. It covers diverse aspects of earnings management, offering insights for academics and practitioners alike.

Future investigations into earnings management have the potential to advance our current findings. In particular, an avenue for future research could involve exploring the interplay between earnings management and corporate social responsibility (CSR). This realm assumes significance as earnings management not only diminishes the transparency of financial statements but may also yield detrimental, enduring repercussions for corporate value. The scholarly discourse on the ethical underpinnings of corporate decision-making, particularly within the domain of CSR, has received growing attention in recent years on a global scale (refer, for instance, to Maglio et al., 2020; Velte, 2020). This existing discourse extends also to the European context, as evidenced to some extent by studies such as Gras-Gil et al. (2016), Chouaibi and Zouari (2022), or Palacios-Manzano et al. (2021). Future investigations in this direction could contribute to the ongoing discussion by exploring whether socially responsible companies exhibit a heightened inclination to report more conservatively to their stakeholders, thereby fostering greater transparency in corporate disclosures.

Another intriguing area for future exploration involves a thorough investigation into the impact of gender diversity, specifically the presence of women, on corporate boards and its effects on corporate financial performance, including the quality of earnings. This aspect remains relatively underexplored, holding considerable promise for delving into the nuanced dynamics of internal monitoring facilitated by female board members as in Srinidhi et al. (2011) and Zalata et al. (2022) for the USA or Mnif and Cherif (2021) for France. Further inquiry would shed light on the multifaceted interactions between gender diversity at the board level and the financial performance of corporations, contributing valuable insights to the existing body of literature on corporate governance and performance. Moreover, another promising area of research into earnings management deals with behavioural patterns. This could enrich the literature by exploring the intricate interplay of personal-psychological factors influencing the intentions of individuals to partake in earnings management activities in continuation of Sayal and Singh (2020).

Furthermore, the relationship between cultural determinants and earnings management stands out as an important direction for further research. Gray (1988), Gudykunst and Kim (2005), House (2004), and Hofstede et al. (2010) have proposed cultural factors that exert an influence on accounting systems, particularly impacting the quality of reported information. An interesting thread

for further research could extend the insights derived from the works of Douppnik (2008), Viana Jr et al. (2022), or Mokrzycka-Kogut (2022) delving into the ramifications of cultural factors on the precision and reliability of financial information. This line of inquiry offers the prospect of comparing ethical business behaviour across diverse cultural spheres. Cultures that prioritise honesty and integrity tend to discourage or condemn earnings management practices, diverging from cultures that are more lenient or accepting of such conduct.

The considerable research potential inherent in the area of earnings management also encompasses the domains of corporate governance and ownership structure, continuing the conclusions of, for example, Saona et al. (2020) or Ramalingegowda et al. (2021). Additionally, the latest new streams covering the detection of earnings management with modern technologies such as a machine learning approach open new research possibilities as suggested by Dbouk and Zaarour (2017). These potential avenues for future research hold promise in advancing our comprehension of earnings management.

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