„Zeszyty Teoretyczne Rachunkowości", tom 79 (135), SKwP, Warszawa 2014, s. 135–177

Ze współpracy z zagranicą / International cooperation

The development of earnings management research
A review of literature from three different perspectives

Susana Callao [*], *José I. Jarne* [**], *David Wróblewski* [***]

Introduction

Earnings management is a very complex and multifaceted phenomenon. It is defined in a variety of forms which reflect the fact that researchers often have very different perceptions of earnings management. For example, as Dechow and Skinner (2000) point out, practitioners and regulators often see earnings management as pervasive and problematic and in need of immediate remedial action. Schipper (1989) defines it in the context of purposeful intervention in external financial reporting, with the intent of obtaining some private gain.

Therefore, the literature points to different debates on the topic of earnings management. Some studies simply focus on the theoretical aspect of earnings management. These include Healy and Wahlen (1999), Dechow and Skinner (2000), García Osma *et al*. (2003), Yaping (2005), and Rath and Sun (2008), who focus on the main advances in earnings management research. Other researchers provide an empirical view. For example, some authors just aim to supply evidence of earnings management; others assume that earnings management has been found in connection with many aspects of the company, such as its role in companies' problems, financial markets, information asymmetry and agency theory.

Others address the question of whether managers of firms in different countries engage in earnings management and, if so, how can its effects be measured and why do they do so, among other questions. As a consequence, an ongoing debate on the concept of earnings management is still present in the accounting and finance literature, indicating its continued importance.

We contribute to the literature in two ways. The methodology used in this paper is based on a detailed review of the literature from early 1985 to 2013, and the devel-

[*] Susana Callao, Lecturer in Accounting, University of Zaragoza, Faculty of Economy and Business, scallao@unizar.es

[**] José I. Jarne, Lecturer in Accounting, University of Zaragoza, Faculty of Economy and Business, jijarne@unizar.es

[***] David Wróblewski, PhD student, University of Zaragoza, Faculty of Economy and Business, david.wroblewski@my.wales.ac.uk

opment of a constructive classification of the results obtained by the authors. Taking into consideration the existing literature on earnings management, we created our database of the papers on earnings management. We have included in this database most cited articles published on earnings management in the journals of the accounting and finance literature. We have also incorporated PhD Theses, Master's Theses and working papers on this topic. In total, we identified 207 articles, which included: journals, conferences, congresses and other publications, such as: PhD Theses, Master's theses and working papers. Such a broad analysis of papers from three perspectives has never been done to my knowledge.

The country analysis is a new perspective presented in our paper. The country of origin influences the perceptions and the results of earnings management investigations. So far, several studies have pointed out that the country of origin of the sample determines the results. See, for example, Leuz *et al*. (2003), Burgstahler *et al*. (2004), Geiger *et al*. (2006), Geiger *et al*. (2007); nevertheless, detailed analysis on country sample selection has not been available.

The remainder of this article is structured as follows. First, we describe the most common perception of earnings management by presenting prior definitions. We explain differences between authors and their implications on the perception of earnings management.

Second, taking into consideration the complex nature of earnings management and the abundance of literature, we look at the research on earnings management from three different perspectives. We begin by analysing the chronological perspective, making a roadmap of the evolution of earnings management. We point out and determine significant moments in the phenomenon of earnings management.

Then, the methodological perspective is investigated. Research studies are still concerned with the problem of measuring earnings management. In this section, we present the developments in this matter and new ways of detecting and measuring earnings management.

Finally, we focus on the cross-country perspective. Looking at a wide range of countries of origin of the sample, we centre the attention on country selection by the authors. Finally, we present our conclusions.

1. Definition of earnings management

There has been no clear consensus on what earnings management is in the literature (Dechow *et al*., 1996; Messod, 2001). Practitioners and regulators defined earnings management in a variety of forms using a wide range of expressions to describe it. The definition of earnings management is also inconsistent in academic literature. Authors on earnings management contrast different aspects and characteristics of earnings management. Major problems with the definition include ambiguity and immeasurability. Some elements coincide and we may find them in the majority of

definitions; nevertheless, some of them are different. Therefore, to be able to support the systematic review of earnings management literature, we present our own definition of the concept:

Earnings management is a purposeful intervention in financial reporting, designed to reach earnings targets by varying accounting practices. However, it is an action which takes place without necessarily violating accounting regulations, and which takes advantage of the possibilities of choice in accounting policy. The action may mislead stakeholders, causing them to make decisions on the basis of financial reports that they would not have made otherwise.

Our definition underlines the common elements found in many of the definitions. Elements such as:

- the purposeful action of managers, indicating the deliberate and conscious activity of managers (following the definition of Schipper, 1989);
- dealing with the external aspects of data, always regarding reporting data of firms (Healy and Wahlen, 1999);
- manipulation of the financial data of the company (GAAP definition);
- reaching targets to obtain objectives and particular goals of managers (Park and Shin, 2004);
- using the flexibility of choosing accounting treatments, the subjectivity of managers by selecting the norms which are helpful to achieve the planned results, and opting within the possibilities of standards (Fields *et al*., 2001);
- the misleading nature of the information, as the presented information can pretend to hide or even fake some of information (Roychowdhury, 2006).

Nevertheless, other authors give different perceptions for some of the aspects of earnings management. A large number of studies, including our definition and our earnings management review, found that managers can exercise discretion through the choice of accounting methods or polices. However, other authors, for example Beneish (2001), Higson (2003), Rosner (2003), Abdul Rahman and Ali (2006), Jiraporn *et al*. (2007), Chia *et al*. (2007), Hasnan *et al*. (2008), Kamel and Elbanna (2010), Perols and Lougee (2010), and Jones (2011), believe earnings management is not just a manipulation within the boundaries of accounting, but a form of financial reporting fraud.

Other discussion points come from the different ways of managing earnings. It can be a manipulation of accruals with no direct cash flow consequences, hereafter referred to as accrual manipulation. Other authors talk about real earnings management where managers try to influence reported earnings through actions that substantially change the underlying cash flows thereby influencing reported earnings, for example Baber *et al*. (1991), Dechow and Sloan (1991), Bartov (1993), Bens *et al*. (2002), Graham et *al*. (2005), Zang (2005), Gunny (2005), and Roychowdhury (2006) among others. In light of the above issues, it is not too surprising that systematically identifying earnings management is difficult. Our study aims to clarify these issues.

2. Methodology

The researchers identified 207 articles from journals, conferences, congresses and other publications, such as PhD theses, Master's theses and working papers. The review period is from 1985 to March of 2013. Table 1 describes the details on the selection of the articles.

Table 1. Database of journals and other reviewed literature

Article	**Number of articles**	**% of the total**
„Academy of Management Journal"	1	0.48%
„Accounting and Business Research"	3	1.45%
„Accounting Horizons"	2	0.48%
„Accounting in Europe"	1	0.48%
„Advanced in Accounting"	1	0.48%
„Advances in International Accounting"	5	2.42%
„Advanced in Scientific and Applied Accounting"	1	0.48%
„American International Journal of Contemporary Research"	1	0.48%
„Annales Universitatis Apulensis Series Oeconomica"	1	0.48%
Annual Conference on Financial Economics and Accounting	1	0.48%
Annual EAA Congress	1	0.48%
Blackwell Publishing	1	0.48%
„Canadian Social Science"	1	0.48%
„Contaduría y Administración"	1	0.48%
„Contemporary Accounting Research"	1	0.48%
„Critical Perspectives on Accounting"	1	0.48%
„Economics and Society"	1	0.48%
„Energy Economics"	1	0.48%
Erasmus School of Economics	1	0.48%
„European Accounting Review"	1	0.48%
„European Scientific Journal"	1	0.48%
„Expert Systems with Applications"	1	0.48%
„Finance Research Letters	1	0.48%
FUCAPE Científica	1	0.48%
„Global Finance Journal"	2	0.97%
„Global Review of Accounting and Finance"	1	0.48%
Instituto Valenciano de Investigaciones Económicas	1	0.48%
International Business Forum	1	0.48%
„International Business Research"	1	0.48%
„International Journal of Economics and Management"	1	0.48%
„International Journal of Human and Social Sciences"	1	0.48%
„International Review of Business Research Papers"	1	0.48%
„International Review of Economics and Finance"	1	0.48%

Article	Number of articles	% of the total
„International Review of Financial Analysis	3	1.45%
„Investigaciones Económicas"	2	0.97%
John Wiley & Sons	1	0.48%
„Journal of Accounting and Economics"	31	14.97%
„Journal of Accounting and Public Policy"	10	4.83%
„Journal of Accounting Research"	7	3.38%
„Journal of Accounting, Auditing & Finance"	1	0.48%
„Journal of Banking & Finance"	4	1.93%
„Journal of Business & Economics Research"	1	0.48%
„Journal of Business Research"	2	0.97%
„Journal of Corporate Finance"	5	2.42%
„Journal of Economics and Management"	1	0.48%
„Journal of Financial Economics"	9	4.35%
„Journal of International Accounting, Auditing and Taxation"	4	1.93%
„Journal of Multinational Financial Management"	1	0.48%
„Jurnal Pengurusan"	1	0.48%
LTA Academy	1	0.48%
„Managerial Finance"	1	0.48%
Master thesis	2	0.97%
„Middle Eastern Finance and Economics"	1	0.48%
Onderzoeksrapport	1	0.48%
PhD Thesis	1	0.48%
Prentice Hall	1	0.48%
„Research in Accounting Regulation"	3	1.45%
„Review of Accounting Studies"	2	0.97%
„Revista de Contabilidad"	1	0.48%
„Scandinavian Journal of Management"	1	0.48%
„The Accounting Review"	6	2.90%
„The British Accounting Review"	2	0.97%
„The Cost and Management"	1	0.48%
„The International Journal of Accounting"	14	6.76%
„Tijdschrift voor Economie en Management"	1	0.48%
Working papers*	43	20.77%
Total	**207**	100,00%

* We include some of the working papers for the reason of the importance (in our opinion) of these articles in the investigation of the earnings management; see Bibliography.

Source: the author.

The breadth of the notion of earnings management leads us to consider different perspectives of the research on earnings management:

1. Chronological perspective – this presents the most important studies in chronological order, thus making clear the evolution of earnings management and determining

the most key milestones in understanding the phenomenon of earnings management.
2. Methodological perspective – this concentrates on the procedural and technical aspect of earnings management over many years of investigation. It focuses on the problem of measuring earnings management, and the development of new ways to detect and measure earnings management.
3. Cross-country perspective – the evolution of interests on issue of earnings management from the point of view of the origin of the sample (the country of origin of the sample).

3. Chronological perspective

In this section we make a roadmap through many years of investigations on earnings management, showing the most important developments over the years. Table 2 shows the chronological schedule of all 207 papers included in our study. However, describing all the papers is beyond the scope of our work. Within the over two hundred papers we select those which in our estimation mark the key points in the understanding of earnings management. In Table 3 we present a summary of these papers.

Healy (1985) was the first to introduce discretionary accruals to detect earnings management, incorporating the definition and parameters used in bonus agreements. His study examined managerial accounting decisions which postulate that executives rewarded by earnings-based bonuses select accounting procedures that increase their compensation. Healy's test results suggest that accrual policies of managers are related to the income-reporting incentives of their bonus contracts and changes in accounting procedures by managers are associated with the adoption or modification of their bonus plan. It is this study that established earnings management as a line of investigation for researchers.

During the following years authors increasingly view the issue of earnings management through a focus on motivations for such activity. Watts and Zimmerman (1986) argue that managers in firms with earnings-based compensation agreements have the incentive to manipulate earnings to maximize their award by (always) selecting income increasing accounting policies. In the same year, DeAngelo (1986) hypothesizes that managers of firms going private would have incentives to understate reported income in attempts to reduce the buyout compensation, but he failed to find support for this hypothesis.

In 1988 DeAngelo discovers that managers by accounting discretion paint a more favourable picture of their own performance. The managers typically blame prior management for the previous poor operating performance. In the same year McNichols and Wilson (1988) examine whether bad debts may be an incentives for earnings management. Their approach differs from previous earnings management studies in

that they consider a single accrual, the provision for bad debts, rather than a collection of accruals. McNichols and Wilson view manipulation of this provision as but one of several ways to manage earnings.

Schipper (1989) is another study mostly cited by the authors. He shows the information asymmetry between firm management and firm shareholders and its effect on manipulation. The environment surrounding earnings management represents a slippage between analytical models and empirical tests of earnings management.

Perhaps one of the key studies on earnings management is the study of Jones (1991). She uses discretionary accruals as a measure for the scope of earnings management. It is a different, much more precise methodology, as the previous studies used total accruals as a proxy. She separates the total accruals on the discretionary part (manageable) and non-discretionary (non-manageable) part of accruals. Her study tests whether firms that would benefit from import relief (for example, tariff increases and quota reductions) attempt to decrease earnings through earnings management during import relief. It is also a new insight into the development of earnings management literature, as prior studies typically examine situations in which all contracting parties have incentives to „perfectly" monitor (adjust) accounting numbers for such manipulation. Import relief investigations provide a specific motive for earnings management that is not provided in other earlier earnings management studies (Jones, 1991). Her results of empirical tests reports support the initial hypothesis suggesting that managers make income-decreasing accruals during import relief investigations.

Subsequent studies base their methodology on that proposed by Jones (1991) with the authors following the investigation of incentives for earnings management. DeAngelo and Skinner (1992) find that highly leveraged troubled companies have large negative accruals related to the renegotiating of their debt contracts. Managers of troubled companies during a recession can improve their bargaining position with unions through income-decreasing accounting choices only when there is confirmatory evidence of financial trouble and sacrifices by other stakeholders. Defond and Jiambalvo (1994) examine the abnormal accruals of a sample of 94 firms that reported debt covenant violations in annual reports. This is in contrast with most studies, which support debt covenants relying on leverage as a proxy for the existence and tightness of accounting-based covenants. They demonstrate that in the year prior to violation, models indicate that violating firms have abnormal total and working capital accruals that are significantly positive.

Table 2. Evolution of investigation of earnings management

PANEL A: PAPERS BETWEEN 1985–1990	
Healy P. (1985)	**DeAngelo L. (1988)**
DeAngelo L. (1986)	**McNichols M. and Wilson P. (1988)**
Watts R. and Zimmerman J. (1986)	**Schipper K. (1989)**

Table 2. Evolution of investigation of earnings management *(cont.)*

PANEL B: PAPERS BETWEEN 1991–1995	
Jones J. (1991)	Perry S. and Williams T. (1994)
Sundgren S. (1991)	Kang S. and Sivaramakrishnan K. (1995)
DeAngelo H., DeAngelo L. and Skinner D. (1992)	Paul K., Chaney C. and Lewis M. (1995)
Bartov E. (1993)	**Dechow P., Sloan R. and Sweeney A. (1995)**
DeFond M. and Jiambalvo J. (1994)	**Holthausen R., Larcker D. and Sloan R. (1995)**
PANEL C: PAPERS BETWEEN 1996–2000	
Jiambalvo J. (1996)	Burgstahler D. and Eames M. (1998)
KasanenE., Kinnunen J. and Niskanen J. (1996)	DeFond M. and Subramanyam K. (1998)
Dechow P., Sloan R. and Sweeney A., (1996)	Healy P. (1999)
Guay W., Kothari S. and Watts R. (1996)	Ball R., Kothari S. and Robin A., (1999)
Shivakumar L. (1996)	Kallunki J. and Martikainen M. (1999)
Subramanyam K. (1996)	Erickson M. and Wang S. (1999)
Bernard V.L. and Skinner D.J. (1996)	Myers L. and Skinner D. (1999)
Burgstahler D. and Dichev I. (1997)	Degeorge F., Patel J. and Zeckhauser R. (1999)
Key K. (1997)	Leone A., Guidry F. and Rock S., (1999)
Hunt A., Moyer S. and Shevlin T. (1997)	Guidry F., Leone A. and Rock S. (1999)
Darrough M., Pourjalali H. and Saudagaran S. (1998)	Shivakumar L. and Jeter D. (1999)
Rangan S. (1998)	**Kasznik R. (1999)**
Teoh S., Wong I. and Wong T. (1998)	Jeter D. and Shivakumar L. (1999)
Becker C., Defond M., Jiambalvo J. and Subramanyam J. (1998)	**Peasnell K., Pope P. and Young S. (2000)**
Healy P.M. and Wahlen J.M. (1998)	**McNichols M. (2000)**
Konings J., Labro E. and Roodhooft F. (1998)	Kinnunen J. *et al.* . (2000)
Richardson V. (1998)	Dechow P. and Skinner D. (2000)
	Ronen J. and Yaari V., (2000)
	Thomas J. and Zhang X. (2000)
	Petroni K., Ryan S. and Wahlen J. (2000)
	Jeanjean T. (2000)
	Bartov E. and Gul F. (2000)
PANEL D: PAPERS BETWEEN 2001–2005	
D'Souza J., Jacob J. and Ramesh K. (2001)	García Osma B., Gill de-Albornoz B. and Gisbert A. (2003)
Xie H. (2001)	Wysocki P. (2003)
Bartov E., Gul F. and Tsui J. (2001)	Laux J. (2003)
Ebrahim A. (2001)	Xue Y. (2003)
Beneish D. (2001)	Henock L. (2004)
Klein A. (2002)	ParkY., Shin and Hyun-Han (2004)
Bartov E., Givoly D. and Hayn C. (2002)	**Larcker D. and Richardson S. (2004)**
Chung, R., Firth, M., and Kim, J. (2002)	Park M. and Ro B. (2004)
Yoon S. and Miller G. (2002a)	Lau H. (2004)
Yoon S. and Miller G. (2002b)	Lee C. and Xue S. (2004)
Zhang H. (2002)	

Richardson S., Tuna I. and Wu M. (2002)	Guan L., Wright C. and Leikam S. (2005)
Maijoor S. and Vanstraelen A. (2002)	Coppensa L. and Peek E. (2005)
Otogawa K. (2002)	Gill-de-Albornoz B. and Illueca M. (2005)
Sun W. and Sun J. (2002)	Van Tendeloo B. and Vanstraelen A. (2005)
Xie B., Davidson W. and DaDalt P. (2003)	Lybaert N. *et al*. (2005)
Koh P. (2003)	Zang A. (2005)
Das S. and Zhang H. (2003)	Feres de Almeida J. *et al*. (2005)
Anandarajan A., Hasan I. and Lozano-Vivas A. (2003)	García Osma B. and Gill-de-Albornoz B. (2005)
Roosenbooma P., Van der Gootb T. and Mertens G. (2003)	Kim J. and Yi C. (2005)
Leuz C., Nanda D. and Wysocki P. (2003)	Rahman U., Dowds J. and Cahan S. (2005)
Vander Bauwhede H. and Willekens M. (2003)	Martinez A. (2005)
Dechow P., Richardson S. and Tuna I. (2003)	Markarian G. (2005)
Johl S., Jubb C. and Houghton K. (2003)	Yaping N. (2005)
	Jaggi B., Chin C. and Lin W. (2005)
	Saleh N., Iskandar T. and RahmatM. (2005)
	Kothari S., Leone A. and Wasley C. (2005)
PANEL E: PAPERS BETWEEN 2006–2010	
Roychowdhury S. (2006)	Zhou J. (2008)
Bergstressera D. and Philiippon T. (2006)	Ahmed A. *et al*. (2008)
Petrovits C. (2006)	Habib A. and Hossain M. (2008)
Cormier D. and Martinez I. (2006)	Mora A. and Sabater A. (2008)
Geiger M. (2006)	Aussenegg W., Inwinkl P. and Schneider P. (2008)
Burgstahler D., Hail L. and Leuz C. (2006)	McNichols M. and Stubben S. (2008)
Lin K. (2006)	Sivaramakrishnan K. and Yu S. (2008)
Langa M., Smith Raedya J. and Wilson W. (2006)	Cohen D. and Zarowin P. (2008)
Ronen J., Tzur J. and Yaari V. (2006)	Yu F. (2008)
Othman H. and Zeghal D. (2006)	Sun J. and Liu G. (2009)
Razzaque R., Rahman M. and Salat A. (2006)	Kao J., Wu D. and Yang Z. (2009)
Burghof H. and Johannsen M. (2006)	Duh R., Lee W. and Lin C. (2009)
Katz S. (2006)	Chang J. and Sun H. (2009)
Maijoor S. and Vanstraelen A. (2006)	Zhao Y. and Chen K. (2009)
DeDalt P., Jiraporn P. and Yaari V. (2006)	Jaggi B., Leung S., and Gul F. (2009)
Stubben S. (2006)	Cornett M., McNutt J. and Tehranian H. (2009)
Lei K. (2006)	Chi J. and Gupta M. (2009)
Hansen J. (2006)	Tsai C. and Chiou Y. (2009)
Jacob J. and Jorgensen B. (2007)	Yagüe J., Gómez-Sala J. and Poveda-Fuentes F. (2009)
Jo H. and Kim Y. (2007)	Iatridis G. and Kadorinis G. (2009)
Jaggi B. and Leung S. (2007)	Ittonen K., Peni E. and Vähämaa S. (2009)
Koh P. (2007)	Callao S. and Jarne J.I. (2009)
Shuto A. (2007)	Adams B., Carow K. and Perry T. (2009)

Table 2. Evolution of investigation of earnings management *(cont.)*

PANEL E: PAPERS BETWEEN 2006–2010	
Agarwal,S. *et al*. (2007)	Bukit R. and Iskandar T. (2009)
Byard D., Hossain M. and Mitra S. (2007)	Brau J. and Johnson P. (2009)
Arnedo L., Lizarraga F. and Sánchez S. (2007)	Chung H., Sheu H. and Wang J. (2009)
Gill-de-Albornoz B. and Illueca M. (2007)	Charoenwong C. and Jiraporn P. (2009)
Ye J. (2007)	García Osma B. and Guillamón-Saorín E. (2009)
García Osma B. and Gill-de-Albornoz Noguer B. (2007)	Shah S., Zafar N. and Durrani T. (2009)
Geiger M., Quirvan C. and Hazera A. (2007)	Sun L. and Rath S. (2009)
Cohen D., Dey A. and Lys T. (2007)	Tylsch R. (2009)
Drautz A. (2007)	Liu Y., Ning Y. and Davidson W. (2009)
Lee K., Lev B. and Yeo G. (2007)	**Chen A.*et al*. (2010)**
Hasnan S., Rahman R. and Mahenthiran S. (2007)	Callao S. and Jarne J. (2010)
Caramanis C. and Lennox C. (2008)	Lo A., Wong R. and Firth M. (2010)
Markarian G., Pozza L. and Prencipe A. (2008)	Aharony J., Wang J. and Yuan H. (2010)
Lo K. (2008)	Dechow P., Myers L. and Shakespeare C. (2010)
Cornett M., Marcus A. and Tehranian H. (2008)	Jiang J., Petroni K. and Wang I. (2010)
Jeanjean T. and Stolowy H. (2008)	ChenC. (2010)
Siregar S. and Utama S. (2008)	Dechow P. *et al*. (2010)
Aono J. and Guan L. (2008)	Kempen R. (2010)
Jiraporn P. *et al*. (2008)	Taylor G. and Xu R. (2010)
Chen X., Lee C. and Li J. (2008)	Sun L. and Rath S. (2010)
Ahmad-Zaluki N. (2008)	Matis D. *et al*. (2010)
Jiraporn P., Sang Kim Y. and Mathur I. (2008)	
Rath S. and Sun L. (2008)	
PANEL F: PAPERS BETWEEN 2011–2013	
Böching H. *et al*. (2011)	Cohen D., and Zarowin P. (2012)
Hadani M., Goranova A. and Khan R. (2011)	Ardison K., Martinez A. and Galdi F. (2012)
Okamoto N. (2011)	**Alhadab M., Clacher I. and Keasey K. (2013)**
Nwaeze E. (2011)	Badolato P., Donelson D. and Ege M. (2013)
Callao S. and Jarne J. (2011)	Llukani T. (2013)
Zhang Y. (2012)	
Yero J. and Usman S. (2012)	

* Papers in bold are in our opinion important papers which influence the development of earnings management research and are explained in Table 3 and / or in the text. These papers were selected as they are commonly cited by other authors over the years.

Source: the author.

Dechow *et al*. (1995) propose their own model and they evaluate the effectiveness of measuring earnings management on two alternative models, the model proposed by Jones (1991) and the model proposed by them, also called the modified Jones model. Since then, the authors focus not only on the motivations of manipulating earnings, but also on the correct application and measure the scope of manipulating earnings. It is an important change in the investigation of earnings management.

The next studies improve the topic of earnings management within the methodology as well as the way of measuring the non-discretionary part of accruals. Among the studies we mention are some of the most cited by authors. Holthausen *et al*. (1995) perform a study which extends the earnings management literature in several ways. First, by utilizing proprietary databases from two human resource consulting firms, they perform a study that uses actual bonus plan thresholds and actual bonus plan payments. They are also able to update the sample period, utilize more sophisticated methods for measuring the discretionary component of accounting accruals, and look at „real" earnings management techniques such as expenditures for research and development initiatives. Holthausen *et al*. (1995) are also able to replicate most of Healy's findings with their new data set. However, the authors do not find evidence supporting managers' propensity to make income-decreasing discretionary accruals when they are below the bonus threshold. In discussing the results of their analysis, the authors note that the choice of discretionary accrual measures influences the results found.

Table 3. Most important papers on earnings management

Author and year	Research topic and obtained results
Healy (1985)	Healy examines that executives rewarded by earnings-based bonuses select accounting procedures that increase their compensation. This paper analyses the format of typical bonus contracts, providing a more complete characterization of their accounting incentive effects than earlier studies. The test results suggest that accrual policies of managers are related to income-reporting incentives of their bonus contracts, and changes in accounting procedures by managers are associated with the adoption or modification of their bonus plan.
Watts and Zimmerman (1986)	They analyse earnings-based compensation agreements. They confirm that accounting plays a significant role in the contractual relations that form the modern corporation, presumably to mitigate agency costs.
DeAngelo (1986)	She investigates the accounting decisions made by the managers of American Stock Exchange firms who proposed purchasing all publicly-held common stock and go private. These management buyouts engender potentially severe conflicts of interest for insider-managers. She finds that developed accrual methodology reveals no indication that managers of sample firms systematically understand earnings in periods before a management buyout of public stockholders.

Table 3. Most important papers on earnings management *(cont.)*

Author and year	Research topic and obtained results
McNichols and Wilson (1988)	They examine the discretionary and non-discretionary elements of bad debts provision. They explore the association between the abnormal expense and earnings given the incentives of managers who receive earnings-based bonuses to manage earnings through the bad-debt expense.
Schipper (1989)	Schipper proposes widely used definition of earnings management. He defines earnings management as a „purposeful intervention in the external financial reporting process, with the intent of obtaining some private gain". In his study he investigates the asymmetry between a firm's management and the firm's shareholders.
Jones (1991)	She tests whether firms that would benefit from import relief (e.g., tariff increases and quota reductions) attempt to decrease earnings through earnings management during import relief investigations by the United States International Trade Commission (ITC). The study documents the use of accounting numbers in a federal government program as a basis for wealth transfers (i.e. import relief). For the first time, a new proxy for measuring earnings management is used. Her model is able to decompose accruals on discretionary and non-discretionary accruals.
Defond and Jiambalvo (1994)	DeFond and Jiambalvo (1994) investigate a sample of 94 firms that violated covenants and document that those firms exhibit an abnormally high level of total and working capital accruals during the year before and the year of violations.
Dechow *et al.* (1995)	They evaluate alternative models for detecting earnings management. They introduce some modification to the model developed by Jones (1991), and in effect exhibit the most power in detecting earnings management. Their result additionally highlights the importance of controlling for financial performance when investigating earnings management.
Holthausen *et al.* (1995)	Using data of executive-specific short-term bonus plans, they investigate the extent to which executives manipulate earnings to maximize the present value of bonus plan payments. They find evidence consistent with the hypothesis that managers manipulate earnings downwards when their bonuses are at their maximum.
Key (1997)	He tests political costs theory by examining the cable television industry during periods of Congressional scrutiny. Firms for which proposed regulations are expected to be more harmful have greater income-decreasing accruals, and for some tests, firms for which cable television operations are more important have greater income-decreasing accruals.
Burgstahler and Dichev (1997)	They provide evidence that firms manage reported earnings to avoid earnings decreases and losses. Specifically, in cross-sectional distributions of earnings changes and earnings, they find unusually low fre-

Author and year	Research topic and obtained results
	quencies of small decreases in earnings and small losses, and unusually high frequencies of small increases in earnings and small positive incomes. They find evidence that two components of earnings, cash flow from operations and changes in working capital, are used to achieve increases in earnings.
Teoh *et al*. (1998)	They report that seasoned equity issuers can raise reported earnings by altering discretionary accounting accruals. They find that issuers who adjust discretionary current accruals to report higher net income prior to the offering have lower post-issue long-run abnormal stock returns and net income. Interestingly, the relation between discretionary current accruals and future returns is stronger and more persistent for seasoned equity issuers than for non-issuers.
Healy and Wahlen (1998)	They propose a widely used definition of earnings management. Moreover, they also conclude that to date the earnings management literature provided only modest insights for standard setters. Prior research focused almost exclusively on understanding whether earnings management exists and why. Their findings indicate that earnings management occurs for a variety of reasons, including influencing stock market perceptions, increasing management's compensation, reducing the likelihood of violating lending agreements, and avoiding regulatory intervention.
Kasznik (1999)	He investigates the association between corporate voluntary disclosure and management's discretion over accounting choices. In particular, he examines the role of earnings management in mitigating costs associated with management earnings forecast errors. The empirical results are consistent with the prediction that managers, fearing costly legal actions by shareholders and loss of reputation for credibility, used discretionary accruals to reduce their forecasting errors. Specifically, the paper documents that managers who overestimate the earnings number manage reported earnings upward, and that the extent of discretionary accruals is associated with various securities litigation cost factors and the amount of management's accounting flexibility.
McNichols (2000)	The author presents a new research design on earnings management: based on aggregate accruals, on specific accruals, and on the distribution of earnings management. A key theme of the paper is that empirical procedures for aggregate accruals studies lag behind both our theories of incentives to manage accruals and our institutional knowledge of how accruals behave. Empirical findings suggest that aggregate accruals models that do not consider long-term earnings growth are potentially misspecified and it could result in misleading inferences about earnings management behaviour.
Peasnell *et al*. (2000)	They examine specification and power issues in relation to cross-sectional models used to estimate abnormal accruals. In addition to testing the standard-Jones (Jones, 1991) and modified-Jones (Dechow

Table 3. Most important papers on earnings management *(cont.)*

Author and year	Research topic and obtained results
	et al., 1995) models, they develop and test additionally a new specification, labelled the „margin model". Empirical tests suggest that all three models are well specified when applied to a random sample of firm-years. However, they conclude that different models may be required in different circumstances.
Klein (2002)	The study of Klein examines whether audit committee and board characteristics are related to earnings management by the firm. A negative relation is found between audit committee independence and abnormal accruals. A negative relation is also found between board independence and abnormal accruals. Reductions in board or audit committee independence are accompanied by large increases in abnormal accruals. In conclusion, these results suggest that boards structured to be more independent of CEO are more effective in monitoring the corporate financial accounting process.
Xie *et al*. (2003)	They examine the role of board of directors, the audit committee, and the executive committee in preventing earnings management. They show that the composition of a board in general and of an audit committee more specifically, is related to the likelihood that a firm will engage in earnings management. Board and audit committee members with corporate or financial backgrounds are associated with firms that have smaller discretionary current accruals. Board and audit committee meeting frequency is also associated with reduced levels of discretionary current accruals.
Leuz *et al*. (2003)	They examine systematic differences in earnings management across 31 countries. They propose an explanation for these differences based on the notion that insiders, in an attempt to protect their private control benefits, use earnings management to conceal firm performance from outsiders. Thus, earnings management is expected to decrease in investor protection because strong protection limits insiders' ability to acquire private control benefits, which reduces their incentives to mask firm performance. Their findings are consistent with this prediction and suggest an endogenous link between corporate governance and the quality of reported earnings.
Larcker and Richardson (2004)	They examine the relation between the fees paid to auditors for audit and non-audit services and the choice of accrual measures for a large sample of firms. They find that the ratio of non-audit fees to total fees had a positive relation with the absolute value of accruals. They find additionally consistent evidence of a negative relation between the level of fees paid to auditors and accruals (i.e., higher fees are associated with smaller accruals).
Burgstahler *et al*. (2006)	They examine how capital market pressures and institutional structures shape firms' incentives to report earnings that properly reflect their economic performance. They focus on level of earnings management

Author and year	Research topic and obtained results
	as one dimension of accounting quality that it is particularly responsive to firms' reporting incentives. Their results document that raising capital in public markets and the quality of legal system are associated with the level of earnings management across European countries. They find that earnings management is more pervasive in private firms and that both public and private firms exhibit more earnings management in countries with weak legal enforcement. They document additionally that private and public firms respond differentially to differences in the tax and accounting rules in the EU.
Roychowdhury (2006)	She finds evidence consistent with managers manipulating real activities to avoid reporting annual losses. Specifically, she finds evidence suggesting price discounts to temporarily increase sales, overproduction to report lower cost of goods sold, and reduction of discretionary expenditures to improve reported margins. Cross-sectional analysis reveals that these activities are less prevalent in the presence of sophisticated investors. Other factors that influenced real activities manipulation include industry membership, the stock of inventories and receivables, and incentives to meet zero earnings.
Ye (2007)	Ye compares cross-sectional and time-series models. He shows that unexpected accruals based on the Jones and performance-adjusted Jones models by incorporating three measures from financial statements: abnormal beginning non-cash working capital, working capital intensity, and historical depreciation rates evinced less bias and higher power in testing earnings management compared to those based on existing models. The proposed accruals model displays the advantages of both the cross-sectional and the time-series Jones models, but overcomes their shortcomings.
Jeanjean and Stolowy (2008)	They analyse the effect of mandatory introduction of IFRS standards on earnings quality, and more precisely on earnings management. They find that the pervasiveness of earnings management does not decline after the introduction of IFRS, and in fact increases in France. Their findings confirm that sharing rules is not a sufficient condition to create a common business language, and that management incentive and national institutional factors play an important role in framing financial reporting characteristics.
Callao and Jarne (2010)	They focus on the effect of IFRS on earnings management. Their main purpose is to examine whether the adoption of IFRS in the European Union has increased or decreased the scope for discretionary accounting practices by comparing discretionary accruals in the periods preceding and immediately after the regulatory change. They determine additionally which firms' features and country factors may explain the accounting discretion observed before and after IFRS. The results obtained show that earnings management has intensified since the adoption of IFRS in Europe, as discretionary accruals have increased in the period following implementation. The variables explaining

Table 3. Most important papers on earnings management *(cont.)*

Author and year	Research topic and obtained results
	accounting discretion are the same before and after IFRS (business size, leverage, investor protection and legal enforcement). These results suggest that variations in earnings management might be due to some room for manipulation under international standards when compared with local standards.
Chen *et al*. (2010)	The study shows private equity issuing firms overstate their earnings in the quarter preceding private equity placement announcements and that sophisticated investors do not ask for a fair discount when purchasing the shares of private issuing firms. They additionally find evidence showing that the reversal of effects of pre-issue earnings management is a significant determinant of long-term performance of private issues. Results further show that post-issue stock performance and operating performance of firms using „aggressive" earnings management significantly underperform those using more „conservative" earnings management.

Source: the author.

McNichols (2000) discusses trade-offs associated with three research designs commonly used in the earnings management literature: those based on aggregate accruals, those based on specific accruals and those based on distribution of earnings after management. A key theme of the paper is that empirical procedures for aggregate accruals studies lag behind both our theories of incentives to manage accruals and our institutional knowledge of how accruals behave. Empirical findings suggest that aggregate accruals models that do not consider long-term earnings growth are potentially misspecified and can result in misleading inferences about earnings management behaviour.

Yoon and Miller (2002) follow the line of investigation started by Dechow *et al*. in 1995, where different models were used to find out the most powerful methodology to detect the earnings management issue. Yoon and Miller investigate the relationship between the operating performances of Korean industrial firms and the behaviour of discretionary accruals. They use four test methods (a mean accrual test, a correlation test, a regression analysis, and a sign-change test) to investigate if operating performances affect discretionary accruals differently. Additionally, they compare three accrual estimation approaches (two discretionary accruals and total accruals) in testing the earnings management hypotheses. They conclude that Korean industrial firms manage earnings.

In the last 10–15 years we may observe studies which have been conditioned by significant corporate scandals (Enron, WorldCom, and Tico among others). Increasingly, the discussion now focuses on how to prevent the manipulation of firms' result. Klein (2002), for example, indicates the core importance of the audit committee. He

shows that an audit committee plays an important role in monitoring the company's financial reporting process. Klein finds that audit committee independence is negatively related to earnings management. Xie *et al*. (2003) examine the role of the board of directors, the audit committee, and the executive committee in preventing earnings management. They show that board and audit committee members with corporate or financial backgrounds are associated with firms that have smaller discretionary current accruals.

Leuz *et al*. in 2003 investigate investor protection through international comparison across 31 countries. It is the first study which examined systematic differences in earnings management using such a wide ranging sample of countries. The analysis suggests that outsider economies with relatively dispersed ownership, strong investor protection and large stock markets exhibit lower levels of earnings management than insider countries with relatively concentrated ownership, weak investor protection and less developed stock markets (Leuz *et al*., 2003).

In the following years, we may observe an effort to draw attention to the effect and impact of the introduction of the IFRS. Burgstahler *et al*. (2006) isolate the effects of reporting incentives (capital market pressure) and the effect of accounting standards, showing that the quality of the legal system is associated with the level of earnings management across European countries. Jeanjean and Stolowy (2008) also offer an investigation in the light of accounting norms, and their importance on the real image of the company. They analyse the effect of the mandatory introduction of IFRS standards on earnings management. They find that the pervasiveness of earnings management does not decline after the introduction of IFRS, and in fact increases in France. Their findings confirm that sharing rules is not a sufficient condition to create a common business language, and those management incentives and national institutional factors play an important role in framing financial reporting characteristics.

Callao and Jarne (2010) also examine whether the adoption of IFRS in the European Union has increased or decreased the scope for the discretionary accounting practices by the comparing accruals in the periods preceding and immediately after the regulatory change. In contrast to previous authors, they point out that earnings management increased after the adoption of IAS / IFRS standards. As to current discretionary accruals, they find a significant increase for France, Spain and the UK, and no significant changes (either for increase or for decrease) in other countries. With reference to long-term discretionary accruals, they find that all the changes are significant, but the number of firms in which they increase exceeds the number of firms in which they decreased.

Finally, in the last three years, between 2011 and 2013, we may observe that investigations again focus on different incentives and factors which may influence earnings management. Hadani *et al*. (2011) focus on information asymmetry between owners and managers, and the effect of shareholder activism and earnings management. The results indicate that the number of shareholder proposals received by firms is positively related to subsequent earnings management. Okamoto (2011) points out

the problems which arise in disputes concerning corporate aggressive earnings management. He attempts to shed new light on the present debate over principles-based versus rules-based accounting standards and aggressive earnings management. His paper concludes by supporting principles-based accounting standards accompanied by true and fair override provisions.

Alhadab *et al*. (2013) analyse the relationship between real and accrual earnings management activities and IPO failure risk. They present evidence that IPO firms manipulate earnings upward utilizing real and accrual earnings management around the IPO. They find additionally that IPO firms with higher levels of real and accrual earnings management during the IPO year have a higher probability of IPO failure and lower survival rates in subsequent periods.

After the review of over two hundred papers we can observe important developments over the years on the topic of earnings management. Earnings management is an issue which has been influenced by many factors and circumstances. Different topics on earnings management have been shown which are related to the present situation of the markets, such as why managers manage earnings, which factors may influence the managers' decision to opt for earnings management, how effectively they measure the manipulation, or how the concept is defined. Finally, recent research shows there is still an interest in the topic. Earnings management is a question that still interests.

4. Methodological perspective

The success of any earnings management study critically depends on the precise methodology used to measure it. For example, McNichols (2000) distinguishes three main research designs commonly used in the literature: aggregate accruals models, a specific accruals, and statistical properties of earnings. Those based **on aggregate accruals** attempt to identify discretionary accruals based on the relation between total accruals and hypothesized explanatory factors. See, for example, the papers of Healy (1985) and DeAngelo (1986). They use total accruals and change in total accruals. Jones (1991) introduces a regression approach to control for nondiscretionary factors influencing accruals. These approaches are typically called aggregate accruals studies.

A second approach in the literature is to **model a specific accrual**, as in McNichols and Wilson (1988). These studies often focus on industry settings in which a single accrual is sizable and requires substantial judgment, for example the papers of McNichols and Wilson (1988), Petroni (1992), and Beaver and Engel (1996). The third approach is **to examine the statistical properties of earnings** to identify behaviour that influences earnings, as developed, for example, by Burgstahler and Dichev (1997) and DeGeorge *et al*. (1999). These studies focus on the behaviour of earnings around a specified benchmark, such as zero or a prior quarter's earnings, to test whether the incidence of amounts above and below the benchmark are distributed smoothly, or reflect discontinuities due to the exercise of discretion, for example studies

such as: Burgstahler and Dichev (1997) and DeGeorge *et al*. (1999). Our study investigates the first approach based on accruals[1], it is important to make a precise isolation of managed accruals from the normal/unmanaged portion. In Table 4 the main models of measuring earnings management are presented.

The literature starts with the simplest models, proposed by Healy (1985), who measured earnings management through simple comparison of mean total accruals (scaled by lagged total assets) between sample groups. Later, DeAngelo (1986) estimates the firm's nondiscretionary accruals from the previous period and he assumes that first order differences in accruals have an expected value of zero. In fact, the DeAngelo model is a variation of the Healy model where total accruals is only dependent on last year's total accruals instead of an average of years in the estimation period.

Possibly the main advance in measuring earnings management is provided by Jones (1991). Her model is still one of the most popular accrual estimation models in earnings management research. She relaxes the assumption that non-discretionary accruals are constant. She estimates nondiscretionary accruals as a regression which includes change in sales and the level of property, plant and equipment as explanatory variables. Later studies demonstrated and explained some limitations of the Jones model. For example, as Defond and Jiambalvo (1994) point out, an important limitation of the Jones model's time series formulation is the need for a long time-series of data to allow for an effective estimation of regression parameters, which excludes firms without a sufficient number of observations from the sample (survivorship bias). Dechow *et al*. (1995) and Kothari *et al*. (2005) point out additionally that the Jones model is misspecified for firms which experience extreme performance. In practice, different models are appearing (which proceed in our study) to cope with these and other limitations of this model.

Table 4. Models of measuring earnings management

Model	1. The Healy Model (1985)
Formula	$NDA_i = 1/n \sum_t \frac{TA_{it}}{A_{it-1}}$
Variables	TA_{it} – Total Accruals in year t A_{it-1} – Total Assets in year t – 1 n – number of years in the estimation period
Model	2. The DeAngelo Model (1986)
Formula	$NDA_{it} = \frac{TA_{it-1}}{A_{it-2}}$
Variables	TA_{it-1} – Total Accruals in year t – 1 A_{it-2} – Total Assets in year t – 2

[1] The methodology based on the accruals is widely and mainly used by the authors. The literature points out a wide range of advantages in terms of the ability in precise detection of earnings management.

Table 4. Models of measuring earnings management *(cont.)*

Model	3. The Jones Model (1991)
Formula	$\frac{TA_{it}}{A_{it-1}} = \alpha_0 \frac{1}{A_{it-1}} + \alpha_1 \frac{\Delta REV_{it}}{A_{it-1}} + \alpha_2 \frac{PPE_{it}}{A_{it-1}} + \varepsilon_{it}$
Variables	TA_{it} – Total Accruals in year t A_{it-1} – Total Assets in year t – 1 ΔREV_{it} – Annual change in revenues in year t PPE_{it} – Gross property, plant and equipment in year t ε_{it} – The error term
Model	4. The Dechow, Sloan and Sweeney (called modified Jones Model, 1995)
Formula	$TA_{it} = \alpha_0 \frac{1}{A_{it-1}} + \alpha_1 \frac{\Delta REV_{it} - \Delta REC_{it}}{A_{it-1}} + \alpha_2 \frac{PPE_{it}}{A_{it-1}} + \varepsilon_{it}$
Variables	TA_{it} – Total Accruals in year t A_{it-1} – Total Assets in year t – 1 ΔREV_{it} – Annual change in revenues in year t ΔREC_{it} – Annual change in receivables accounts in year t PPE_{it} – Gross property, plant and equipment in year t ε_{it} – The error term
Model	5. The Kang and Sivaramakrishnan Model (1995)
Formula	$\frac{AB_{it}}{A_{it-1}} = \alpha_0 \frac{1}{A_{it-1}} + \alpha_1 \frac{\Delta REV_{it}}{A_{it-1}} + \alpha_2 \frac{EXP_{it}}{A_{it-1}} + \alpha_3 \frac{PPE_{it}}{A_{it-1}} + \varepsilon_{it}$
Variables	AB_{it} – Accrual balance in year t, which is: $AB_{it} = AR_{it} + INV_{it} + CAO_{it} - CL_{it} - DEP_{it}$ AR_{it} – Receivables INV_{it} – Inventory CAO_{it} – Current assets other than cash, receivables, and inventory CL_{it} – Current liabilities excluding taxes and current maturities of long-term debt DEP_{it} – Depreciation and amortization A_{it-1} – Total Assets in year t – 1 ΔREV_{it} – Annual change in revenues in year t EXP_{it} – Operating expenses in year t PPE_{it} – Gross property, plant and equipment in year t ε_{it} – The error term
Model	6. The Shivakumar Model (1996)
Formula	$\frac{TA_{it}}{A_{it-1}} = \alpha_0 \frac{1}{A_{it-1}} + \alpha_1 \frac{\Delta REV_{it}}{A_{it-1}} + \alpha_2 \frac{PPE_{it}}{A_{it-1}} + \alpha_3 \frac{CFO_{it}}{A_{it-1}} + \varepsilon_{it}$

Variables	TA_{it} – Total Accruals in year t A_{it-1} – Total Assets in year t – 1 ΔREV_{it} – Annual change in revenues in year t PPE_{it} – Gross property, plant and equipment in year t CFO_{it} – Cash flow from operations in year t ε_{it} – The error term
Model	7. Key Model (1997)
Formula	$\frac{TA_{it}}{A_{it-1}} = \alpha_0 \frac{1}{A_{it-1}} + \alpha_1 \frac{\Delta REV_{it}}{A_{it-1}} + \alpha_2 \frac{PPE_{it}}{A_{it-1}} + \alpha_3 \frac{IA_{it}}{A_{it-1}} + \varepsilon_{it}$
Variables	TA_{it} – Total Accruals in year t A_{it-1} – Total Assets in year t – 1 ΔREV_{it} – Annual change in revenues in year t PPE_{it} – Gross property, plant and equipment in year t IA_{it} – Gross intangible assets in year t ε_{it} – The error term
Model	8. The Teoh *et al*. Model (1998)
Formula	$TA_{it} = \alpha_0 \frac{1}{A_{it-1}} + \alpha_1 \frac{\Delta SALE_{it} - \Delta REC_{it}}{A_{it-1}} + \varepsilon_{it}$
Variables	TA_{it} – Total Accruals in year t A_{it-1} – Total Assets in year t – 1 $\Delta SALE_{it}$ – Change in sales in year t ΔREC_{it} – Annual change in receivables in year t ε_{it} – The error term
Model	9. The Kasznik Model (1999)
Formula	$\frac{TA_{it}}{A_{it-1}} = \alpha_0 \frac{1}{A_{it-1}} + \alpha_1 \frac{\Delta REV_{it}}{A_{it-1}} + \alpha_2 \frac{PPE_{it}}{A_{it-1}} + \alpha_3 \frac{\Delta CFO_{it}}{A_{it-1}} + \varepsilon_{it}$
Variables	TA_{it} – Total Accruals in year t A_{it-1} – Total Assets in year t – 1 ΔREV_{it} – Annual change in revenues in year t PPE_{it} – Gross property, plant and equipment in year t ΔCFO_{it} – Change in cash flow from operations in year t ε_{it} – The error term
Model	10. The Yoon and Miller Model (2002)
Formula	$\frac{TA_{it}}{A_{it-1}} = \alpha_0 \frac{1}{A_{it-1}} + \alpha_1 \frac{\Delta REV_{it} - \Delta REC_{it}}{A_{it-1}} + \alpha_2 \frac{\Delta EXP_{it} - \Delta PAY_{it}}{A_{it-1}}$ $+ \alpha_3 \frac{NCASH_{it-1} \times GPPEGRW_{it}}{A_{it-1}} + \varepsilon_{it}$

Table 4. Models of measuring earnings management *(cont.)*

Variables	TA_{it} – Total Accruals in year t A_{it-1} – Total Assets in year t – 1 ΔREV_{it} – Annual change in revenues in year t ΔREC_{it} – Annual change in receivables accounts in year t ΔEXP_{it} – Change in operating expenses excluding non-cash expenses in year t ΔPAY_{it} – Change in payables accounts in year t $NCASH_{it-1}$ – Non-cash expenses such as depreciation in year t – 1 $GPPEGRW_{it}$ – A rate of growth in gross property, plant and equipment in year t ε_{it} – The error term
Model	11. The Dechow, Richardson, and Tuna Model (2003)
Formula	$\frac{TA_{it}}{A_{it-1}} = \alpha_0 \frac{1}{A_{it-1}} + \alpha_1 \frac{(1+k)\Delta REV_{it} - \Delta REC_{it}}{A_{it-1}} + \alpha_2 \frac{PPE_{it}}{A_{it-1}}$ $+ \alpha_3 \frac{TA_{it-1}}{A_{it-2}} + \alpha_4 \frac{\Delta SALE_{it+1}}{A_{it}} \varepsilon_{it}$
Variables	TA_{it} – Total Accruals in year t A_{it-1} – Total Assets in year t – 1 k – is a slope coefficient from regression ΔREC_{it} on ΔREV_{it} ΔREV_{it} – Annual change in revenues in year t ΔREC_{it} – Annual change in receivables accounts in year t PPE_{it} – Gross property, plant and equipment in year t TA_{it-1} – Total Accruals in year t – 1 $\Delta SALE_{it+1}$ – Annual change in sales from current year (t) to next year (t+1) $(SALE_{t+1} - SALE_t)/SALE_t$ ε_{it} – The error term
Model	12. The Larcker and Richardson Model (2004)
Formula	$\frac{TA_{it}}{A_{it-1}} = \alpha_0 \frac{1}{A_{it-1}} + \alpha_1 \frac{\Delta SALE_{it} - \Delta REC_{it}}{A_{it-1}} + \alpha_2 \frac{PPE_{it}}{A_{it-1}}$ $+ \alpha_3 \frac{BM_{it}}{A_{it-1}} + \alpha_4 \frac{CFO_{it}}{A_{it-1}} + \varepsilon_{it}$
Variables	TA_{it} – Total Accruals in year t A_{it-1} – Total Assets in year t – 1 $\Delta SALE_{it}$ – Change in sales in year t ΔREC_{it} – Annual change in receivables accounts in year t PPE_{it} – Gross property, plant and equipment in year t BM_{it} – Book-to-market ratio in year t CFO_{it} – Cash flow from operations in year t ε_{it} – The error term

Model	13. The Kothari *et al*. Model (2005)
Formula	$\frac{TA_{it}}{A_{it-1}} = \alpha_0 \frac{1}{A_{it-1}} + \alpha_1 \frac{\Delta SALE_{it} - \Delta REC_{it}}{A_{it-1}} + \alpha_2 \frac{PPE_{it}}{A_{it-1}} + \alpha_3 \frac{ROA_{it-1}}{A_{it-1}} + \varepsilon_{it}$
Variables	TA_{it} – Total Accruals in year t A_{it-1} – Total Assets in year t – 1 $\Delta SALE_{it}$ – Change in sales in year t ΔREC_{it} – Annual change in receivables accounts in year t PPE_{it} – Gross property, plant and equipment in year t ROA_{it-1} – Return on assets in year t ε_{it} – The error term

Source: the author.

The study of Dechow *et al*. (1995) is an important contribution to the methodology of measuring earnings management. They modify the original Jones model (1991) to eliminate a conjectured tendency of the Jones model. They evaluate alternative accrual-based models for detecting earnings management. They additionally estimate the effect of a cross-sectional or time-series data base. This study initiates the process of generating more and more powerful models in detecting earnings management.

In the following years, the authors base their methodology on the modified Jones model (1995). They make certain modifications trying to improve the reliability of measuring earnings management, as the Dechow et *al*. (1995) model has been criticized, mainly because of the omission of relevant explanatory variables. It was additionally criticized because it shows a significant negative correlation between accruals and cash flows, suggesting that such a relationship should be included in the abnormal accruals models.

Kang and Sivaramakrishnan (1995), for example, propose that an accrual balance concept and an instrumental variable approach would avoid some of the problems, such as simultaneity, errors in variables or omitted variable problems. Jeter and Shivakumar (1999) show that the time-series Jones model is more powerful than the cross-sectional Jones model in detecting earnings management. By introducing the CFO (Cash flow from Operating activities) variable, Jeter and Shivakumar (1999) acknowledge the existence of a non-linear relationship between accruals and CFO in cross-sectional data. They want to control it for the non-linear relationship between accruals and CFO.

The primary contribution of the study of Bartov *et al*. (2001) is to demonstrate that the cross-sectional Jones model and cross-sectional Modified Jones model perform better than their time-series counterparts in detecting earnings management. These two cross sectional models have not been formally evaluated by prior research, and their use may offer certain advantages to investors and researchers over their time-series counterparts.

On the other hand, Zhang (2002) evaluates a comprehensive list of metrics proposed for detecting earnings management. He points out that the difficulty in evaluating the power of metrics for detecting earnings management lies in the fact that earnings management is not directly observable. His results cast doubt on the abilities of accrual-based models to catch „minor offences", which, according to the empirical frequency documented in previous earnings management research, is likely to be the norm, rather than the exception of various forms of earnings management (Zhang, 2002).

Kothari *et al*. (2005) examine the specification and power of tests based on performance-matched discretionary accruals, and they make comparisons with tests using traditional discretionary accrual measures (e.g., the Jones and modified-Jones models). They want to improve the Jones model (1991) arguing that performance measures are important because of the potential momentum in the economic activities and earnings of firms. Kothari *et al*. (2005) suggest that researchers who do not use performance-adjusted discretionary accruals „are likely to draw inferences that are unreliable at best and incorrect at worst". Their results suggest that performance-matched discretionary accrual measures enhance the reliability of inferences from earnings management research. It occurs because the hypothesis being tested does not imply that earnings management will vary with performance and the control firms are not expected to have engaged in earnings management (Kothari *et al*., 2005).

Finally, we conclude with the study of Ye (2007) that expands the wide use of the Jones model and performance-adjusted Jones models by incorporating three measures from financial statements: abnormal beginning non-cash working capital, working capital intensity, and historical depreciation rates. He shows that unexpected accruals based on the proposed model demonstrate less bias and higher power in testing earnings management compared to those based on existing models. Thus, to clarify, he focuses on how some basic characteristics of firms, measured in financial statements, affect accruals (Ye, 2007).

Within the period of 2007–2013 the methodology is based on existing models. The authors in the majority of studies use the Dechow et al. model (1995), for example Cohen and Zarowin (2008), Yu (2008), Liu *et al*. (2009), Hadani *et al*. (2011), Nwaeze (2011), Yero and Usman (2012) among others. Other authors use the Jones model (1991), for example Naz *et al*. (2011), Zhang (2012) or Llukani (2013).

Nevertheless, for example, Matis *et al*. (2010) use three models to measure discretionary accruals: the Jones (1991), Dechow *et al*. (1995) and Kasznik (1999) models. Ardison *et al*. (2012) also use three models of discretionary accruals as proxy for earnings management: the Jones model (1991), the modified Jones model (1995) and Kang and Sivaramakrishnan (1995). Therefore, nothing innovative was contributed to the methodology in this period.

5. Cross-country perspective

Researchers deal with the need of the earnings management phenomenon to opt for the country of the sample selection. Sample selection is one of the key elements in any research. Mattessich (2008) points out that research on countries / geographical areas is a very useful research tool, especially for those engaged in comparative international research. It is additionally useful for those who wish to extend their knowledge about developments in countries. Mattessich (2008) adds that this type of work helps to illustrate the links between the ideas expounded in one country to those in another.

For those reasons, the cross-country perspective on earnings management may be of special interest to investigators, as no study has been done to date. Other studies point out that the country of origin of the sample influences the perceptions and the results of earnings management investigations. Leuz *et al*. (2003), for example, state that earnings management is more pervasive in countries where the legal protection of outside investors is weak, because in these countries insiders enjoy greater private control benefits and hence have stronger incentives to obfuscate firm performance. Geiger *et al*. (2006) provide evidence that national origin affects perceptions of earnings management in countries in the English-speaking world and Europe.

Other investigations present how firms exhibit more earnings management in countries with weak legal enforcement (Burgstahler *et al*., 2006). In this case, investigators would expect that individuals from different countries would vary in their perceptions of earnings management on these different situational factors. Following the study of Geiger *et al*. (2007) we would expect that companies from different countries would differ across their perceptions of earnings management. Therefore, Geiger *et al*. (2007) set different suppositions: earnings manipulations will differ across the countries; accounting rules-based earnings manipulations differ across the countries; operating decisions to manipulate earnings will differ across the countries; and finally, the differences between accounting and operating manipulations will differ across the countries. It suggests that the choice of country for the study of earnings management will determine the results and the perception of earnings management.

We may observe in the above systematic research that authors are interested in investigating earnings management in different countries. However, there is surprisingly little space devoted to the country of origin. It is barely touched on in earnings management. This section comprises a very useful set of country of origin bibliographical references for earnings management investigators, which may provide a starting point for any reader who wishes to follow up any of the issues related to this topic, and select a sample.

Furthermore, this work helps to illustrate the links between the results on the manipulation of earnings in one country to those in another. This work also provides insights for those interested in comparative studies between different countries. A country perspective may additionally provide source evidence for those who look for new and non-investigated markets in terms of the issue of earnings management.

Among the existing studies on earnings management we can observe:

1. Studies based on a sample from one country. These investigations present the phenomenon of earnings management in one particular country. The authors determine if earnings are manipulated or not in one particular country sample.
2. Studies based on samples from two or three countries. These papers focus on the comparison of two or three origin samples. The authors detect the differences and similarities between countries. They try to establish connections, divergences, and / or variations within two / three markets.
3. Studies based on a set of countries (more than three). The authors indicate the general tendencies in the investigation of earnings management among a different set of countries[2].

5.1. Investigations based on a sample from a single country

Within the earnings management literature we can observe that a common practice of researchers is the use of a one-country selection sample. The authors in their study focus on one particular market. Normally it occurs in response to a special situation; for example the study of Byard *et al*. (2007). They examine earnings management using US-based oil companies in the period immediately after the impact of hurricanes Katrina and Rita. They show that large petroleum refining firms record significant abnormal income-decreasing accruals in the fiscal quarter immediately after the impact of hurricanes Katrina and Rita.

Aono and Guan (2008) examine the effect of the Sarbanes-Oxley Act on earnings management using publicly listed US companies between 2-year periods before and after 2002 when the Sarbanes-Oxley Act went into effect. The empirical results suggest that indeed in the 2-year period prior to the Act, there is evidence of earnings management. The study of Chen *et al*. (2008) investigates the consequence of the introduction of a set of government regulations related to the quality of Chinese listed firms. It additionally shows the response of local governments to help listed firms in earnings management to circumvent the central government's regulation. The conclusion suggests that the collusion between government and listed firms in earnings management exists mainly in firms controlled by local governments.

We may perceive that these studies are very detailed studies. They are centred on a special topic, with a high level of analysis, and they provide systematic results. One-country sample studies are the most appropriately viewed to investigate exhaustively one aspect of earnings management within one market because they can be done accurately.

[2] We do not match this group with the previous one for a substantial reason: the level of detail between the studies based on two or three sample countries and based on four or more countries are completely different. The latter studies only point out some of the convergences between the group of countries. In contrast, the studies of two or three countries evaluate in detail the differences and similarities between the countries. These research studies are much more detailed studies.

Within these studies we may find a wide range of papers from the **US**. The origin sample from the US is the most frequent selection in the literature on earnings management. We may observe that literature from North America starts in 1985 with the study of Healy, who first explored the topic of earnings management. Later, two studies must be highlighted in relation to the methodology applied by the authors: the study of Jones (1991) and the study of Dechow *et al*. (1995). Jones proposes a new model to measure the manipulation while the other study evaluates the different alternative accrual-based models.

In the following years, the diversity and wide selection of topics should be noted, such as managing earnings to avoid report earnings (Burgstahler and Dichev, 1997), testing the influence of political costs on earnings management (Key, 1997), the relationship between fees paid to auditors and the choices of accruals methods (Larcker and Richardson, 2004), the market's efficiency in processing manipulated accounting reports (Louis, 2004), and agency costs of overvalued equity (Chi and Gupta, 2009) among others.

Moreover, the sample selection differs substantially. There are studies based on small samples, for example the study of Byard *et al*. (2007) using 29 listed companies, the study of Jones (1991) based on 31 companies, or the study of Key (1997) employing 47 companies of the cable television industry. On the other hand, other authors use wide samples; see, for example Ye (2007) with 75,348 companies, or Burgstahles and Dichev (1997) who provide evidence from 64,466 companies.

Europe is also a common source of samples for measuring earnings management. We can find studies which based their research on small samples rather than wide samples, for example Kasanen *et al*. (1996) using a sample of 37 companies from Finland; Markarian *et al*. (2008) with 130 Italian firms; or Yagüe *et al*. (2009) who based their study on only 45 Spanish companies.

The topic of studies in Europe varies. Kallunki and Martikainen (1999) investigate the earnings management of Finnish industry firms, where accounting and tax legislation provide extensive possibilities for earnings management. Roosenbooma *et al*. (2003) provide evidence on the impact of earnings management on the long-run stock price performance of initial price offerings. Burghof and Johannsen (2006) examine whether market participants differently assess the information uncertainty associated with earnings management depending on the degree of income smoothing. Caramanis and Lennox (2008) test the effect of audit effort on earnings management.

There is also extensive investigation studies based on samples from the **Asian market**, such as: China, Taiwan, Japan, etc. Studies from Asia vary in sample selection and in topics. We may observe studies which are based on an important scope sample, such as Kim and Yi (2005) using 63,386 firm-year observations; Yu *et al*. (2006) based their study on 5,921 Chinese companies; while Liu and Lu (2007) sample from 5,977 companies. On the other hand, for example, Rahman *et al*. (2005) used only 99 companies from Malaysia; Razzaque *et al*. (2006) sampled only 14 companies from Bangladesh; or Agarwal (2007) who studied 78 Japanese companies.

The topic of investigations also changes. Saleh *et al*. (2005) and Ali Shah *et al*. (2009) assess the effectiveness of the board of directors in monitoring earnings management. Johl *et al*. (2003) provide the evidence regarding audit quality and the level of earnings management. Lo *et al*. (2010) investigate if good governance help constrain management's opportunistic behaviours. Lin (2006) investigates whether foreign investment enterprises in China alter their corporate reporting behaviour. Yu *et al*. (2006) examine whether Chinese firms manipulate their earnings to meet the regulatory requirements. Jaggi *et al*. (2009) investigate family control and its influence on earnings management (among other topics).

The studies from **Canada** and **Latin America** are focused on the effect of board composition on the practice of earnings management in Canada (Park and Shin, 2004); the evidence of Brazilian public companies as a response to capital market incentives of earnings management practice (Martinez, 2005); the investigation of the quality of financial accounting reports and earnings management (Feres de Almeida *et al*., 2005); or the study of the impact of US GAAP on the earnings management practices of Brazilian firms (Lopes *et al*., 2006).

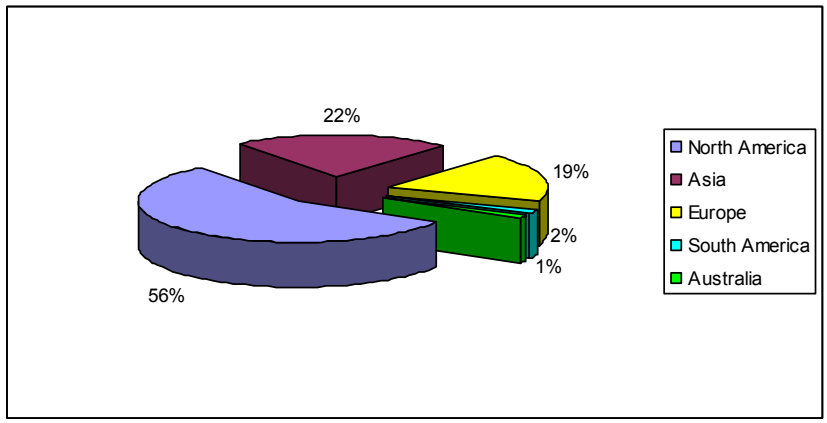
Moreover, there are only two studies from **Australia**[3]**.** These papers focus on the association between institutional ownership and Australian firms' aggressive earnings management strategies (Koh, 2003). The second study examines whether managers manage earnings to „just meet or beat" analysts' forecasts in Australia (Habib and Hossain, 2008). Both studies base their samples on a small number of companies, 836 and 738, respectively.

In conclusion, within the studies of earnings management based on single-country sample, we may notice the intensification of investigation of earnings management from North America almost 60% of all studies (99 studies from the US and one study from Canada) on earnings management[4]. We also observe a significant number of studies from Asia – 39 studies, which is 22% of the total studies. We see a relatively small number of studies from Europe, only 33. Taking into consideration that Europe is almost always a leading continent in investigation, this number of studies is rather poor (see Figure 1). We also observe two studies from Australia and four from South America (Brazil).

[3] We analyze studies till September of 2013.

[4] We do not include multi-country studies. In our statistics we took into consideration those studies with a sample from one country. We have investigated 207 studies; however, of these there are 14 theoretical studies without a sample, and 17 studies with a multi-country sample. In this way we have 176 studies.

Figure 1. Distribution of studies of earnings management related to continents



Source: the author.

5.2. Investigations based on a sample from two or three countries: comparative studies

We separate these studies based on two / three country samples from the studies based on multi-country samples (sample from more than three countries). Ragin (1994) explains that comparative researchers examine patterns of similarities and differences across a moderate number of cases. Therefore, a typical comparative study has a handful of cases / samples. The number of cases is limited because one of the concerns of comparative research is to establish familiarity with the particular case included in the study (Ragin, 1994). It is typically used when researchers have substantial knowledge of a particular case included in an investigation and there are a relatively small number of such cases, as mentioned. The best way to grasp the essential features of the comparative method is to examine it in the light of contrasts.

On the other hand, the studies based on multi-country samples try to find a common pattern between all the samples (which we present in the next section). These studies are less detailed and they are focused on the exploration of general characteristics within all the samples rather than the evaluation of the details of a particular sample market. Multi-country studies are additionally oriented to explore a narrow number of characteristics within all the samples and to contrast the situation for all the countries. These studies are helpful in terms of evaluating the wide range of countries and perceiving general tendencies. However, within the inconvenience, we mention that it is impossible to explore all the samples in the same detail as in the comparative studies. In these circumstances, we separate these two types of studies.

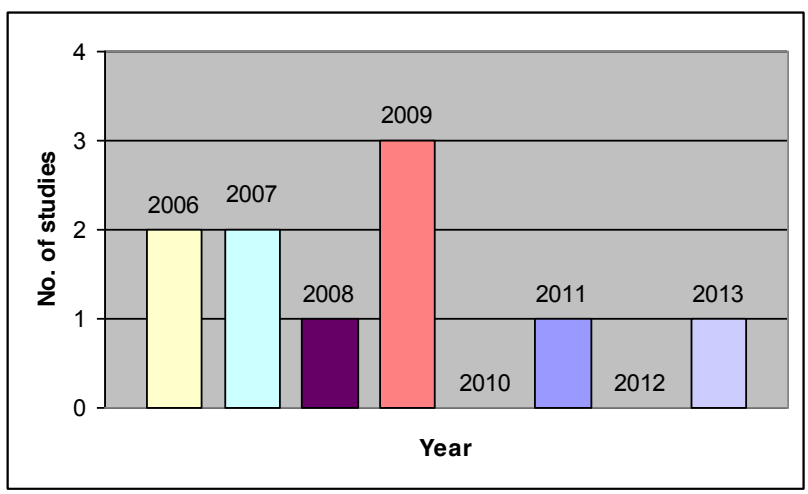
In the literature of earnings management we do not find many comparison studies. In other words, there are few papers based on a sample from two or three sample countries. Maijoor and Vanstraelen (2006) examine earnings management using very

large samples of 17,394 companies from: France, Germany and the UK (3,904; 4,067; 9,423, respectively). They focus on audit quality in international capital markets. Othman and Zeghal (2006) use only samples from France and Canada (1,674 French and 1,470 Canadian companies). They investigate factors that potentially influence earnings-management policy with reference to the Anglo-American and Euro-Continental accounting models.

Drautz (2007) uses the sample from Germany and the UK (63 companies from Germany and 112 from UK) to clarify the question of earnings management as a function of the national audit environment. Tylsch (2008) presents a study on three countries: Germany, Japan and the USA (Germany 735 companies, Japan 720 and USA 675). He provides empirical evidence on the differences in the extent of earnings management across those countries. He confirms a possible link between the real economic performance of a country and the extent of earnings management.

Another study, of Jeanjean and Stolowy (2008), uses a sample of Australian, French and UK companies (422, 321 and 403 companies, respectively) to analyse the effect of the mandatory introduction of IFRS standards on earnings management. Ittonen *et al*. (2009) analyse companies from Finland and Sweden to demonstrate the association between earnings management and the gender of audit engagement partner.

Figure 2. Number of studies on two / three country samples



Source: the author.

Figure 2 shows comparative studies over time. The first study is from 2006. It suggests that investigators in the last five years are focusing on the comparative studies of two or three countries to demonstrate some aspects of earnings management, such as influence of audit control on earnings management, the effect of national origin on earnings management, or analysis of the effect of the mandatory introduction of IFRS standards on earnings management.

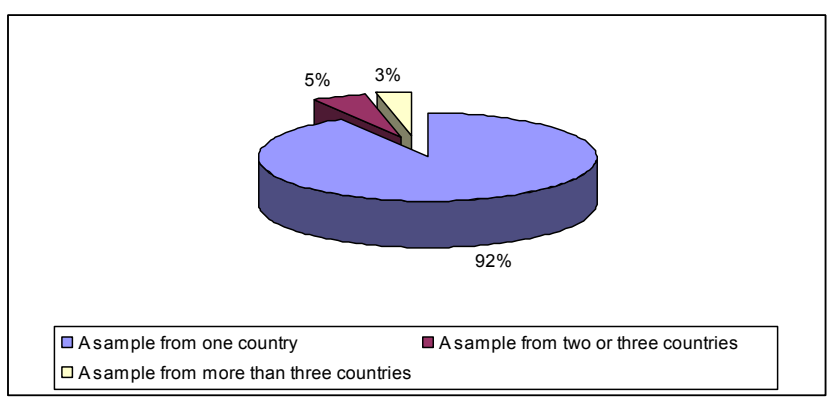
5.3. Investigations based on a sample from more than three countries: panel studies

Studies across countries (panel samples) have important implications for earnings management investigations. These country cluster analyses contribute to the literature by signalising and determining the differences among a wide number of countries related to the earnings management phenomenon. To mention some of the studies, Leuz *et al*. (2003) examine the systematic differences in earnings management across 31 countries while Burgstahler *et al*. (2004) present how capital market pressures and institutional structures shape firms' incentives to report earnings that properly reflect their economic performance 13 countries.

Coppens and Peek (2005) address the questions of whether private firms in eight European countries engage in earnings management and, if so, whether tax incentives affect such practices. Geiger *et al*. (2006) demonstrate that national culture influences perceptions of acceptability of earnings management. They do the research based on a sample from 8 countries. And finally, Callao and Jarne (2010) focused on the effect of IFRS on earnings management from 11 countries.

We may observe again that there are only a few studies, mentioned above, related to the exploration of earnings management using multiple country samples (see Figure 3). Only 6% of all investigations are based on multi-country sample. Also, a very low percentage of studies (10%) is from the two / three country samples. In addition, we may observe that studies based on a sample from one country represent the majority of studies on earnings management. 169 studies from the total of 185 papers of earnings management construct a data using a unique country sample, which is 92% of all studies from earnings management within our period of investigation (1985 to 2013).

Figure 3. Number of studies divided into breadth of study sample

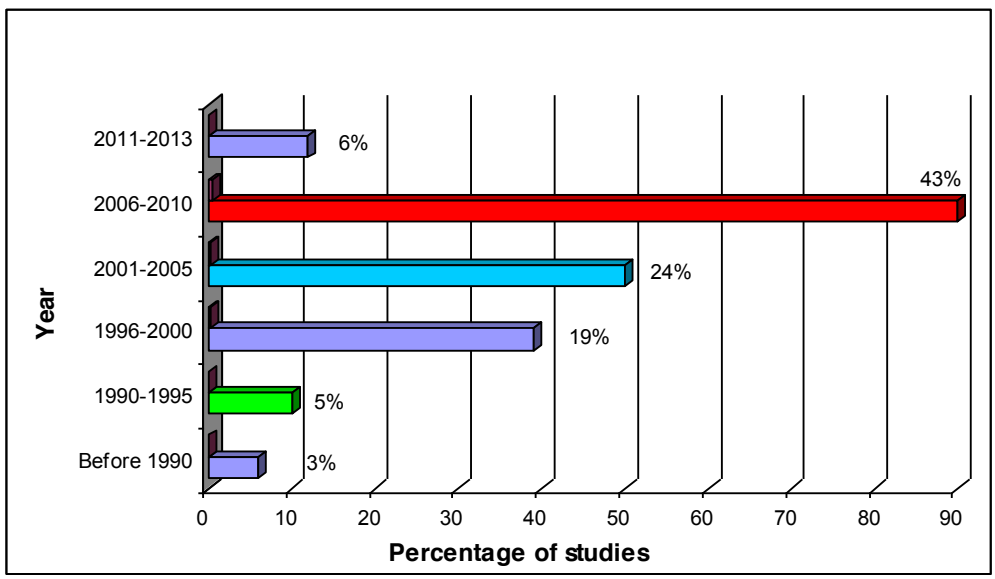


* We have investigated a total of 207 papers. There are 14 theoretical studies without sample study, so because of this our statistics include 193 papers.

Source: the author.

Finally, Figure 4 presents the investigations made over the time of all investigations on earnings management (all three groups). We may observe that in the first 10 years of investigation of earnings management there are a few papers, only 9% of all the studies. In the next five years, there is a pretty large increase in the investigations on earnings management: a total of 39 studies, which is 19% of all papers. In the period of 2001–2005 the investigation continues to increase significantly, with a total of 50 studies.

Figure 4. Percentage of studies over the time



Source: the author.

And finally, we observe the intensification of research on earnings management in the last 5–6 years. In the period of 2006–2010 there are 90 studies. In the period of 2011 to 2013 we have investigated 12 more studies[5].

Conclusions

In this paper we discussed and reviewed the developments on the issue on earnings management from three main perspectives: chronological, methodological and a cross-country perspective. We did a systematic analysis of a total of 207 papers. In the chronological perspective, we can observe that the major intensification of studies is

[5] Our study is based on data until September 2013.

between 2006 and 2010. Moreover, in the previous five years (2001–2005) the tendency on improvement on research on earnings management was also observed.

Furthermore, earnings management is an issue which has been influenced by many factors and circumstances. Different topics on earnings management have been shown related to the present situation of the markets. In the first years of research, the authors focused their investigations on the motivations for earnings management. The main question considered was: why do managers manage earnings. During other periods, authors focused attention on how earnings management is detected. They developed different models on measuring earnings management. Finally, in the last period, they opted for finding a response to the special difficulties which appeared, such as corporate financial scandals. All these investigations lead to underlining the importance of reporting information and the strong demand for quality information.

We additionally discussed and analysed the methodological perspective: This perspective is related to the use of different models to detect earnings management. Within the existent models we highlight the importance of the Jones model (1991) and the modified Jones model (Dechow *et al*., 1995). These two models are still widely used by authors. However, a wide range of modifications to the Dechow *et al*. (1995) model have been done over time. Authors increasingly tried to use other metrics for measuring the discretionary part of accruals. We pointed out the important limitations of the different models to help future researchers opt for the most appropriate model for their particular research environment, as the „perfect" model for measuring earnings management does not exist.

Finally, we developed a country perspective on the sample selection. The country analysis is a new perspective presented in our paper. This section comprises a very useful set of country of origin bibliographical references for earnings management investigators. It helps to illustrate the link between the results on the manipulation of earnings in one country to those in another. It shows additionally insights for future studies such as: where earnings management has still not been explored.

We observed that earnings management was investigated in the majority of studies. We would like to stress the wide range of the US samples. Within the total of 207 papers analysed, 99 studies are from the US. Europe is also a common source of samples to measure earnings management. European samples were used in 33 studies, which puts it in third place (related to continents) in the investigation of earnings management (Asia occupies second place with 39 studies on this topic). Comparative studies (samples based on two or three countries) come much later, the first study appearing in 2006. It suggests that investigators in the last five years are focusing on the comparative studies of two or three countries to demonstrate some aspects of earnings management.

Finally, panel studies (multi-country studies) make up a very small number of the total studies. Although they have important implications for the earnings management investigation, as they signalise and determine the differences related to the earnings

management phenomenon from among a large number of countries, they represented only 6% of all the investigations on earnings management.

Taking all these debates and fields of research into consideration we may still observe possible lines of investigations. For example, it could be interesting to investigate and deepen the question related to the models in detecting earnings management. There are a number of methodological problems associated with how accruals and, more precisely, the discretionary part of accruals are measured. As a result, there is a substantial amount of research that discusses those problems in detail, or proposes new approaches to making better accrual estimations (for example, see studies of McNichols and Wilson 1988; Dechow *et al*., 1995; McNichols 2000, Fields *et al*., 2001; Kothari *et al*., 2005). Some attempts at measuring the reliability of earnings models were done in the earnings management literature. However, there is no consensus regarding which model is more reliable.

A potentially fruitful alternative may be to analyse financial statements in more detail, much as analysts do, in the hope of uncovering more convincing evidence about how and why managers exercise their accounting discretion.

Another interesting topic on earnings management can be the motivations and factors which influence the scope of manipulating earnings. Such investigations have been done in detail in Western European countries or the US, however, some new emerging countries are still unexplored (for example research on Eastern European countries).

References

Adams B., Carow K. and Perry T. (2009), *Earnings management and initial public offerings: the case of the depository industry*, „Journal of Banking & Finance", vol. 33, pp. 2363–2372.

Agarwal S., Chomsisengphet S., Liu C. and Rhee G. (2007), *Earnings management behaviours under different economic environments: evidence from Japanese banks*, „International Review of Economics and Finance", vol. 16, pp. 429–443.

Aharony J., Wang J. and Yuan H. (2010), *Tunnelling as an incentive for earnings management during the IPO process in China*, „Journal of Account. Public Policy", vol. 29, pp. 1–26.

Ahmad-Zaluki N. (2008), *Post-IPO operating performance and earnings management*, „International Business Research", vol. 1, no. 2, pp. 39–48.

Ahmed S. (2009), *Essays on corporate governance and the quality of disclosed earnings across transitional Europe*, „Economics and Society", no. 206, pp. 1–146.

Alhadab M., Clacher I. and Keasey K. (2013), *Real and Accrual Earnings Management and IPO Failure Risk*, working paper.

Anandarajan A., Hasan I. and Lozano-Vivas A. (2003), *The role of loan loss provisions in earnings management, capital management, and signaling: the Spanish experience*, „Advances in International Accounting", vol. 16, pp. 45–65.

Aono J. and Guan L. (2008), *The impact of Sarbanes-Oxley Act on cosmetic earnings management*, „Research in Accounting Regulation", vol. 20, pp. 205–215.

Ardison K., Lopo A. and Caio F. (2012), *The effect of leverage on earnings management in Brazil*, „Advances in Scientific and Applied Accounting" (São Paulo), vol. 5, no. 3, pp. 305–324.

Arnedo L., Lizarraga F. and Sánchez S. (2007), *Does public / private status affect the level of earnings management in code-law contexts outside the United States? A study based on the Spanish case*, „International Journal of Accounting", vol. 42, pp. 305–328.

Aussenegg W., Inwinkl P. and Schneider P. (2008), *Earnings Management and Local vs International Accounting Standards of European Public Firms*, working paper.
Badolato P., Donelson D. and Ege M. (2013), *Audit Committee Financial Expertise and Earnings Management: the Role of Status*, working paper.
Ball R., Kothari S. and Robin A. (1999), *The Effect of International Institutional Factors On Properties of Accounting Earnings*, working paper.
Barth M. and Taylor D. (2010), *In defence of fair value: weighing the evidence on earnings management and asset securitizations*, „Journal of Accounting and Economics", vol. 49, pp. 26–33.
Bartov E. (1993), *The timing of asset sales and earnings manipulation*, „Accounting Review", October, pp. 840–855.
Bartov E. and Gul F. (2000), *Discretionary-Accruals Models and Audit Qualifications*, University of Rochester, the Ninth Annual Conference on Financial Economics and Accounting.
Bartov E., Givoly D. and Hayn C. (2002), *The rewards to meeting or beating earnings expectations*, „Journal of Accounting and Economics", vol. 33, pp. 173–204.
Bartov E., Gul F. and Tsui J. (2001), *Discretionary-accruals models and audit qualifications*, „Journal of Accounting and Economics", vol. 30, pp. 421–452.
Beaver W. and Engel E. (1996), *Discretionary behaviour with respect to allowances for loan losses and the behaviour of security prices*, „Journal of Accounting and Economics", vol. 22, no. 1–3, pp. 177–206.
Becker C., Defond M., Jiambalvo J. and Subramanyam J. (1998), *The effect of audit quality on earnings management*, „Contemporary Accounting Research", vol. 15, no. 1, pp. 1−24.
Beneish D. (2001), *Earnings management: a Perspective*, „Managerial Finance", vol. 27, no. 12, pp. 3–17.
Bergstresser D. and Philiippon T. (2006), *CEO incentives and earnings management*, „Journal of Financial Economics", vol. 80, pp. 511–529.
Bernard V.L. and D.J. Skinner (1996), *What motivates managers' choice of discretionary accruals?*, „Journal of Accounting and Economics", vol. 22, pp. 313–325.
Böching H., Gros M., Wallek C. and Worret D. (2011), *Earnings Management and Enforcement of Accounting Standards – Evidence from Germany*, working paper, Goethe-University, Frankfurt.
Brau J. and Johnson P. (2009), *Earnings management in IPOs: Post-engagement third-party mitigation or issuer signaling?*, „Advances in Accounting, incorporating Advances in International Accounting", vol. 25, pp. 125–135.
Bukit R. and Iskandar T. (2009), *Surplus free cash flow, earnings management and audit committee*, „International Journal of Economics and Management", vol. 3, no. 1, pp. 204–223.
Burghof H. and Johannsen M. (2006), *Good versus bad earnings management: is income smoothing a deliverance?*, International Business Forum *Financial Challenges and Opportunities in the Asia Pacific Region*.
Burgstahler D. and Eames M. (1998), *Management of Earnings and Analyst Forecasts*, working paper, University of Washington and Santa Clara University.
Burgstahler D. and Dichev I. (1997), *Earnings management to avoid earnings decreases and losses*, „Journal of Accounting and Economics", vol. 24, pp. 99–126.
Burgstahler D., Hail L. and Leuz C. (2006), *The importance of reporting incentives: earnings management in European private and public firms*, „Accounting Review", vol. 81, pp. 983–1016.
Byard D., Hossain M. and Mitra S. (2007), *US oil companies' earnings management in response to hurricanes Katrina and Rita*, „Journal of Accounting and Public Policy", vol. 26, pp. 733–748.
Callao S. and Jarne J. (2011), *The impact of the crisis on earnings management*, „Revista de Contabilidad", vol. 14, no. 2, pp. 59–85.
Callao S. and Jarne J.I. (2010), *Have IFRS affected earnings management in the European Union*, „Accounting in Europe", vol. 7, no. 2, pp. 159–189.
Caramanis C. and Lennox C. (2008), *Audit effort and earnings management*, „Journal of Accounting and Economics", vol. 45, pp. 116–138.
Chang J. and Sun H. (2009), *Crossed-listed foreign firms' earnings informativeness, earnings management and disclosures of corporate governance information under SOX*, „International Journal of Accounting", vol. 44, pp. 1–32.

Charoenwong C. and Jiraporn P. (2009), *Earnings management to exceed thresholds: evidence from Singapore and Thailand*, „Journal of Multinational Financial Management", vol. 19, pp. 221–236.
Chen C. (2010), *Earnings Management, Earnings Manipulation: Evidence from Taiwanese Corporations*, working paper, Providence University.
Chen A., Cheng L., Cheng K. and Chih S. (2010), *Earnings management, market discounts and the performance of private equity placements*, „Journal of Banking & Finance", vol. 34, pp. 1922–1932.
Chen X., Lee C. and Li J. (2008), *Government assisted earnings management in China*, „Journal of Accounting and Public Policy", vol. 27, pp. 262–274.
Chi J. and Gupta M. (2009), *Overvaluation and earnings management*, „Journal of Banking & Finance", vol. 33, pp. 1652–1663.
Chung H., Sheu H. and Wang J. (2009), *Do firms' earnings management practices affect their equity liquidity?*, „Finance Research Letters", vol. 6, pp. 152–158.
Chung R., Firth M. and Kim J. (2002), *Institutional monitoring and opportunistic earnings management*, „Journal of Corporate Finance", vol. 8, pp. 29–48.
Cohen D., Dey A. and Lys T. (2007), *Real and Accrual-based Earnings Management in the Pre- and Post-Sarbanes Oxley Periods*, working paper, Kellogg School of Management, Northwestern University Evanston.
Cohen D. and Zarowin P. (2008), *Economic Consequences of Real and Accrual-Based Earnings Management Activities*, working paper, New York University.
Coppens L. and Peek E. (2005), *An analysis of earnings management by European private firms*, „Journal of International Accounting. Auditing and Taxation", vol. 14, pp. 1–17.
Cormier D. and Martinez I. (2006), *The association between management earnings forecasts, earnings management, and stock market valuation: evidence from French IPOs*, „International Journal of Accounting", vol. 41, pp. 209–236.
Cornett M., McNutt J. and Tehranian H. (2009*), Corporate governance and earnings management at large U.S. bank holding companies*, „Journal of Corporate Finance", vol. 15, pp. 412–430.
Cornett M., Marcus A. and Tehranian H. (2008), *Corporate governance and pay-for-performance: the impact of earnings management*, „Journal of Financial Economics", vol. 87, pp. 357–373.
Darrough M., Pourjalali H. and Saudagaran S. (1998), *Earnings management in Japanese companies*, „International Journal of Accounting", vol. 33, no. 3, pp. 313–334.
Das S. and Zhang H. (2003), *Rounding-up in reported EPS, behavioral thresholds, and earnings management*, „Journal of Accounting and Economics", vol. 35, pp. 31–50.
DeAngelo L. (1988), *Discussion of evidence of earnings management from provision for bad debts*, „Journal of Accounting Research", vol. 26, pp. 32–40.
DeAngelo L. (1986), *Accounting numbers as market valuation substitutes: a study of management buyouts of public stockholders*, „Accounting Review", vol. 3, pp. 400–420.
DeAngelo H., DeAngelo L. and Skinner D. (1992), *Accounting choice in troubled companies*, „Journal of Accounting and Economics", vol. 17, pp. 113–143.
Dechow P. *et al*. (2010), *Detecting Earnings Management: A New Approach*, working paper.
Dechow P. and Skinner D. (2000), *Earnings Management: Reconciling the Views of Accounting Academics, Practitioners, and Regulators*, working paper, University of Michigan Business School.
Dechow P., Myers L. and Shakespeare C. (2010), *Fair value accounting and gains from asset securitizations: a convenient earnings management tool with compensation side-benefits*, „Journal of Accounting and Economics", vol. 49, pp. 2–25.
Dechow P., Richardson S. and Tuna I. (2003), *Why are earnings kinky? An examination of the earnings management explanation*, „Review of Accounting Studies", vol. 8, pp. 355–384.
Dechow P., Kothari S. and Watts R. (1998), *The relation between earnings and cash flow*, „Journal of Accounting and Economics", vol. 25, pp. 133–168.
Dechow P., Sloan R. and Sweeney A. (1996), *Causes and consequences of earnings manipulation: an analysis of firms subject to enforcement actions by the SEC*, „Contemporary Accounting Research", vol.13, no. 1, pp. 1–36.

Dechow P., Sloan R. and Sweeney A. (1995), *Detecting earnings management*, „Accounting Review", vol. 70, no. 2, pp. 193–225.
DeDalt P., Jiraporn P. and Yaari V. (2006), *Does Founding Family Control Affect Earnings Management?*, working paper.
DeFond M. and Subramanyam K. (1998), *Auditor changes and discretionary accruals*, „Journal of Accounting and Economics", vol. 25, pp. 35−67.
DeFond M. and Jiambalvo J. (1994), *Debt covenant violation and manipulation of accruals: Accounting choice in troubled companies*, „Journal of Accounting and Economics", vol. 17, pp. 145–176.
Degeorge F., Patel J. and Zeckhauser R. (1999), *Earnings management to exceed thresholds*, „Journal of Business", vol. 72, no. 1, pp. 1–33.
Drautz A. (2007), *The Effects of National Audit Environment on Earnings Management of IPO Firms: A Comparison of Germany and UK*, Master Thesis International Business – Accounting, Universiteit Maastricht.
D'Souza J., Jacob J. and Ramesh K. (2001), *The use of accounting fexibility to reduce labor renegotiation costs and manage earnings*, „Journal of Accounting and Economics", vol. 30, pp. 187–208.
Duh R., Lee W. and Lin C. (2009), *Reversing an impairment loss and earnings management: The role of corporate governance*, „International Journal of Accounting", vol. 44, pp. 113–137.
Ebrahim A. (2001), *Auditing Quality, Auditor Tenure, Client Importance, and Earnings Management: An Additional Evidence*, working paper, Rutgers University.
Erickson M. and Wang S. (1999), *Earnings management by acquiring firms in stock for stock mergers*, „Journal of Accounting and Economics", vol. 27, pp. 149–176.
Feres de Almeida J., Lopes A., Moraes da Costa F. and Batista J. (2005), *Earnings Management and Industry Classificationin Brazil: An Exploratory Investigation*, 3º Simpósio de Producao, FUCAPE Científica.
García Osma B. and Guillamón-Saorín E. (2009), *Corporate governance and impression management in annual results press releases*, working paper, Universidad Carlos III de Madrid.
García Osma B. and Gill-de-Albornoz Noguer B. (2007), *The effect of the board composition and its monitoring committees on earnings management: evidence from Spain*, „Corporate Governance: An International Review", vol. 15, no. 6, pp. 1413–1428.
García Osma B. and Gill-de-Albornoz B. (2005), *El gobierno corporativo y las prácticas de Earnings Management: evidencia empírica en España*, „Instituto Valenciano de Investigaciones Económicas", vol. 11, pp. 1–46.
García Osma B., Gill de Albornoz B. and Gisbert A., (2003), *La manipulación del beneficio contable: un a revisión bibliográfica*, working paper.
Geiger M. (2006), *Perceptions of earnings management: the effects of national culture*, „Advances in International Accounting", vol. 19, pp. 175–199.
Geiger M., Quirvan C. and Hazera A. (2007), *An international comparison of student perceptions of earnings management. Evidence of effects of national origin between Mexico and the United States*, „Contaduría y Administración", septiembre–diciembre, pp. 1–17.
Gill-de-Albornoz B. and Illueca M. (2007), *La calidad de los ajustes por devengo no afecta al coste de la deuda de las pymes españolas*, „Investigaciones Económicas", vol. 31, no. 1, pp. 79–117.
Gill-de-Albornoz B. and Illueca M. (2005), *Earnings management under price regulation: Empirical evidence from the Spanish electricity industry*, „Energy Economics", vol. 27, pp. 279–304.
Guan L., Wright C. and Leikam S. (2005), *Earnings management and forced CEO dismissal*, „Advances in Accounting", vol. 21, pp. 61–81.
Guay W., Kothari S. and Watts R. (1996), *A market based evaluation of discretionary accruals models*, „Journal of Accounting Research", vol. 34, pp. 83–105.
Guidry F., Leone A. and Rock S. (1999), *Earnings-based bonus plans and earnings management by business-unit managers*, „Journal of Accounting and Economics", vol. 26, pp. 113–142.
Habib A. and Hossain M. (2008), *Do managers manage earnings to 'just meet or beat' analyst forecasts? Evidence from Australia*, „Journal of International Accounting, Auditing and Taxation", vol. 17, pp. 79–91.

Hadani M., Goranova M. and Khan R. (2011), *Institutional investors, shareholder activism, and earnings management*, „Journal of Business Research", vol. 64, pp. 1352–1360.
Hansen J. (2006), *Why Firms Just Below Thresholds? Earnings Management Constraints and Market Sensitivity to Earnings*, working paper.
Hasnan S., Rahman R. and Mahenthiran S. (2007), *Management Predisposition, Motive, Opportunity, and Earnings Management for Fraudulent Financial Reporting in Malaysia*, working paper, MARA University of Technology – Malaysia.
Hay C. and Rosamond B. (2000), *Globalisation, European Integration and the Discursive Construction of Economic Imperatives*, working paper.
Healy P. (1999), *Discussion of earnings-based bonus plans and earnings management by business unit managers*, „Journal of Accounting and Economics", vol. 26, pp. 143–147.
Healy P. (1985), *The effect of bonus schemes on accounting decisions*, „Journal of Accounting and Economics", vol. 7, pp. 85–107.
Healy P.M. and Wahlen J.M. (1999), *A review of the earnings management literature and its implications for standard setting*, „Accounting Horizons", vol. 13, no. 4, pp. 365–383.
Holthausen R., Larcker D. and Sloan R. (1995), *Annual bonus schemes and the manipulation of earnings*, „Journal of Accounting and Economics", vol. 19, pp. 29–74.
Hunt A., Moyer S. and Shevlin T. (1997), *Earnings Volatility, Earnings Management, and Equity Value*, working paper.
Iatridis G. and Kadorinis G. (2009), *Earnings management and firm financial motives: a financial investigation of UK listed firms*, „International Review of Financial Analysis", vol. 18, pp. 164–173.
Ittonen K., Peni E. and Vähämaa S. (2009), *Do Female Auditors Constrain Earnings Management?*, working paper, University of Vaasa.
Jacob J. and Jorgensen B. (2007), *Earnings management and accounting income aggregation*, „Journal of Accounting and Economics", vol. 43, pp. 369–390.
Jaggi B. and Leung S. (2007), *Impact of family dominance on monitoring of earnings management by audit committees: evidence from Hong Kong*, „Journal of International Accounting, Auditing and Taxation", vol. 16, pp. 27–50.
Jaggi B., Leung S. and Gul F. (2009), *Family control, board independence and earnings management: evidence based on Hong Kong firms*, „Journal of Accounting and Public Policy", vol. 28, pp. 281–300.
Jaggi B., Chin C. and Lin W. (2005), *Earnings Forecast Disclosure Regulation and Earnings Management: Evidence from Taiwan IPO Firms*, working paper.
Jeanjean T. (2000), *Corporate Governance and Earnings Management*, CEREG, University of Paris-Dauphine, working paper.
Jeanjean T. and Stolowy H. (2008), *Do accounting standards matter? An exploratory analysis of earnings management before and after IFRS adoption*, „Journal of Accounting and Public Policy", vol. 27, no. 6, pp. 480–494.
Jeter D. and Shivakumar L. (1999), *Cross-sectional estimation of abnormal accruals using qquarterly and annual data: effectiveness in detecting event-specific earnings management*, „Accounting and Business Research", vol. 29, no. 4, pp. 1–47.
Jiambalvo J. (1996), Discussion of causes and consequences of earnings manipulation: an analysis of firms subject to enforcement actions by the SEC, „Contemporary Accounting Research", vol. 13, no. 1, pp. 37–47.
Jiang J., Petroni K. and Wang I. (2010), *CFOs and CEOs: who have the most influence on earnings management?*, „Journal of Financial Economics", vol. 96, pp. 513–526.
Jiraporn P., Miller G., Yoon S. and Kim Y. (2008), *Is earnings management opportunistic or beneficial? An agency theory perspective*, „International Review of Financial Analysis", vol. 17, pp. 622–634.
Jiraporn P., Sang Kim Y. and Mathur I. (2008), *Does corporate diversification exacerbate or mitigate earnings management? An empirical analysis*, „International Review of Financial Analysis", vol. 17, pp. 1087–1109.

Jo H. and Kim Y. (2007), *Disclosure frequency and earnings management*, „Journal of Financial Economics", vol. 84, pp. 561–590.
Johl S., Jubb C. and Houghton K. (2003), *Audit Quality: Earnings Management in the Context of the 1997 Asian Crisis*, working paper, Monash University, Berwick.
Jones J. (1991), *Earnings management during import relief investigations*, „Journal of Accounting Research", vol. 29, no. 2, pp. 193–228.
Kallunki J. and Martikainen M. (1999), *Do firms use industry-wide targets when managing earnings? Finnish evidence*, „International Journal of Accounting", vol. 34, no. 2, pp. 249–259.
Kang S. and Sivaramakrishnan K. (1995), *Issues in testing earnings management and an instrumental variable approach*, „Journal of Accounting Research", vol. 33, pp. 353–367.
Kao J., Wu D. and Yang Z. (2009), *Regulations, earnings management, and post-IPO performance: the Chinese evidence*, „Journal of Banking & Finance", vol. 33, pp. 63–76.
Kasanen E., Kinnunen J. and Niskanen J. (1996), *Dividend-based earnings management: empirical evidence from Finland*, „Journal of Accounting and Economics", vol. 22, pp. 283–312.
Kasznik R. (1999), *On the association between voluntary disclosure and earnings management*, „Journal of Accounting Research", vol. 37, pp. 57–81.
Katz S. (2006), *Earnings Management and Conservatism in the Transition between Private and Public Ownership: the Role of Private Equity Sponsors*, working paper, Columbia University.
Kempen R. (2010), Earnings Management in Public and Private Companies in the Netherlands, Master thesis Accounting & Finance, Erasmus University Rotterdam.
Key K. (1997), *Political cost incentives for earnings management in the cable television industry*, „Journal of Accounting and Economics", vol. 23, pp. 309–337.
Kim J. and Yi C. (2005), *Ownership Structure, Business Group Affiliation, Listing Status, and Earnings Management: Evidence from Korea*, working paper, Hong Kong Polytechnic University.
Kinnunen J., Keloharju M., Kasanen E. and Niskanen J. (2000), *Earnings management and expected dividend increases around seasoned share issues: evidence from Finland*, „Scandinavian Journal of Management", vol. 16, pp. 209–228.
Klein A. (2002), *Audit committee, board of director characteristics, and earnings management*, „Journal of Accounting and Economics", vol. 33, pp. 375–400.
Koh P. (2007), *Institutional investor type, earnings management and benchmark beaters*, „Journal of Accounting and Public Policy", vol. 26, pp. 267–299.
Koh Ping-Sheng (2003), *On the association between institutional ownership and aggressive corporate earnings management in Australia*, „British Accounting Review", vol. 35, pp. 105–128.
Konings J., Labro E. and Roodhooft F. (1998), *Earnings Management and Trade Union Activity: Results for Belgium*, Onderzoeksrapport, no. 9828.
Kothari S., Leone A. and Wasley C. (2005), *Performance matched discretionary accrual measures*, „Journal of Accounting and Economics", vol. 39, pp. 163–197.
Lainez J. and Callao S. (2009), *The effect of accounting diversity on international financial analysis: empirical evidence*, „International Journal of Accounting", vol. 35, no. 1, pp. 65–83.
Langa M., Smith Raedya J. and Wilson W. (2006), *Earnings management and cross listing: are reconciled earnings comparable to US earnings?*, „Journal of Accounting and Economics", vol. 42, pp. 255–283.
Larcker D. and Richardson S. (2004), *Fees paid to audit firms, accrual choices, and corporate governance*, „Journal of Accounting Research", vol. 42, pp. 625–658.
Lau H. (2004), *Regulations on IPO pricing, earnings management and earnings forecasts during the reform of state enterprises in China*, „Advances in International Accounting", vol. 17, pp. 175–198.
Laux J. (2003), *Earnings management: friend or foe?*, „Journal of Business & Economics Research", vol. 1, no. 11, pp. 73–76.
Lee C. and Xue S. (2004), *Earnings Management of Loss-Firms in China*, working paper, Tulane University and Tsinghua University.
Lee K., Lev B. and Yeo G. (2007), *Organizational structure and earnings management*, „Journal of Accounting, Auditing & Finance", vol. 22, no. 2, pp. 293–338.

Lei K. (2006), *Earnings management and corporate governance in UK: the role of board of directors and audit committee*, working paper, Shangai Jiaotong University.
Leone A., Guidry F. and Rock S. (1999), *Earnings-based bonus plans and earnings management by business-unit managers*, „Journal of Accounting and Economics", vol. 26, pp. 113–141.
Leuz C., Nanda D. and Wysocki P. (2003), *Earnings management and investor protection: an international comparison*, „Journal of Financial Economics", vol. 69, pp. 505–527.
Lin K. (2006), *The impact of tax holidays on earnings management: an empirical study of corporate reporting behavior in a developing-economy framework*, „International Journal of Accounting", vol. 41, pp. 163–175.
Liu Y., Ning Y. and Davidson W. (2009), Earnings Management Surrounding New Debt Issues, working paper.
Llukani T. (2013), *Earnings management and firm size: an empirical analyse in Albanian market*, „European Scientific Journal", vol. 9, no. 16, pp. 135–143.
Lo A., Wong R. and Firth M. (2010), *Can corporate governance deter management from manipulating earnings? Evidence from related-party sales transactions in China*, „Journal of Corporate Finance", vol. 16, pp. 225–235.
Lo K. (2008), *Earnings management and earnings quality*, „Journal of Accounting and Economics", vol. 45, pp. 350–357.
Lopes A., Tukamoto Y. and Galdi F. (2006), *Earnings Management and Cross Listing in Brazil*, working paper.
Louis H. (2004), *Earnings management and the market performance of acquiring firms*, „Journal of Financial Economics", vol. 74, no. 1, pp. 121–148.
Lybaert N., Jans M. and Orens R. (2005), *Provisions: a tool for earnings management?*, 28th Annual EAA Congress, Göteborg. .
Maijoor S. and Vanstraelen A. (2006), *Earnings management within Europe: the effects of member state audit environment, audit firm quality and international capital markets*, „Accounting and Business Research", vol. 36, no. 1, pp. 33–52.
Maijoor S. and Vanstraelen A. (2002), *Earnings Management: the Effects of National Audit Environment, Audit Quality and International Capital Markets*, paperwork.
Markarian G. (2005), *Analyst Forecasts, Earnings Management, and Insider Trading Patterns*, Department of Accountancy, Case Western Reserve University, Submitted in partial fulfillment of the requirements for the Doctor of Philosophy.
Markarian G., Pozza L. and Prencipe A. (2008), *Capitalization of R & D costs and earnings management: evidence from Italian listed companies*, „International Journal of Accounting", vol. 43, pp. 246–267.
Martinez A. (2005), *Earnings Management in Brazil: Motivation and Consequences*, working paper, FUCAPE Business School.
Matis D., Vladu A., Negrea L. and Sucala L. (2010), *Jones, Dechow and Kasznik models significance in the Romanian economic environment*, „Annales Universitatis Apulensis Series Oeconomica", vol. 12, no. 1, pp. 1–14.
Mattessich R. (2008), Two Hundred Years of Accounting Research: An International Survey of Personalities, Ideas and Publications, Routledge, Abingdon.
McNichols M. (2000), *Research design issues in earnings management studies*, „Journal of Accounting and Public Policy", vol. 19, pp. 313–345.
McNichols M. and Stubben S. (2008), *Does earnings management affect firms' investment decisions?*, „Accounting Review", vol. 83, no. 6, pp. 1571–1603.
McNichols M. and Wilson P. (1988), *Evidence of earnings management from the provision for bad debts*, „Journal of Accounting Research", vol. 26, pp. 1–32.
Mora A. and Sabater A. (2008), *Evidence of income-decreasing earnings management before labour negotiations within firms*, „Investigaciones Económicas", vol. 32, no. 2, pp. 201–230.
Mulford C. and Comiskey E. (2002), *The FinancialNnumbers Game: Detecting Creative Accounting Practices*, Wiley, New York.

Myers J., Myers L. and Skinner D. (2006), *Earnings Momentum and Earnings Management*, working paper, University of Chicago, Graduate School of Business.
Nwaeze E. (2011), *Are incentives for earnings management reflected in the ERC: large sample evidence*, „Advances in Accounting, incorporating Advances in International Accounting", vol. 27, no. 1, pp. 26–38.
Okamoto N. (2011), *Collective intentionality and aggressive earnings management: Developing Norman Macintosh's arguments in the debate over principles- versus rules-based accounting standards*, „Critical Perspectives on Accounting", vol. 22, pp. 236–242.
Othman H. and Zeghal D. (2006), *A study of earnings-management motives in the Anglo-American and Euro-Continental accounting models: the Canadian and French cases*, „International Journal of Accounting", vol. 41, pp. 406–435.
Otogawa K. (2002), *Earnings forecast and Earnings Management of Japanese Initial Public Offerings Firms*, working paper, Kobe University.
Park M. and Ro B. (2004), *The effect of firm-industry earnings correlation and announcement timing on firms' accrual decisions*, „British Accounting Review", vol. 36, pp. 269–289.
Park Y. and Shin Hyun-Han (2004), *Board composition and earnings management in Canada*, „Journal of Corporate Finance", vol. 10, pp. 431–457.
Peasnell K., Pope P. and Young S. (1999), *Detecting Earnings Management Using Cross-Sectional Abnormal Accruals Models*, working paper, Lancaster University.
Perry S. and Williams T. (1994), *Earnings management preceding management buyout offers*, „Journal of Accounting and Economics", vol. 18, pp. 157–179.
Petroni K., Ryan S. and Wahlen J. (2000), *Discretionary and non-discretionary revisions of loss reserves by property-casualty insurers: diferential implications for future profitability, risk and market value*, „Review of Accounting Studies", vol. 5, no. 2, pp. 95–111.
Petrovits C. (2006), *Corporate-sponsored foundations and earnings management*, „Journal of Accounting and Economics", vol. 41, pp. 335–362.
Rahman U., Dowds J. and Cahan S. (2005), *Earnings management practices among muslim and non-muslim managers in Malaysia*, „Journal of Economics and Management", vol. 13, no. 2, pp. 189–208.
Rangan S. (1998), *Earnings management and the performance of seasoned equity offerings*, „Journal of Financial Economics", vol. 50, pp. 101–122.
Rath S. and Sun L. (2008), *The development of earnings management research*, „International Review of Business Research Papers", vol. 4, no. 2, pp. 265–277.
Razzaque R., Rahman M. and Salat A. (2006), *Earnings management: an analysis on textile sector of Bangladesh*, „Cost and Management", vol. 34, no. 5, pp. 5–13.
Richardson S., Tuna I. and Wu M. (2002), Predicting Earnings Management: the Case of Earnings Restatements, working paper, University of Pennsylvania, Wharton School, Philadelphia.
Richardson V. (1998), *Information asymmetry and earnings management: some evidence*, working paper, University of Kansas.
Ronen J., Tzur J. and Yaari V. (2006), *The effect of directors' equity incentives on earnings management*, „Journal of Accounting and Public Policy", vol. 25, pp. 359–389.
Roosenbooma P., Van der Gootb T. and Mertens G. (2003), *Earnings management and initial public offerings: evidence from the Netherlands*, „International Journal of Accounting", vol. 38, pp. 243–266.
Roychowdhury S. (2006), *Earnings management through real activities manipulation*, „Journal of Accounting and Economics", vol. 42, pp. 335–370.
Saleh N., Iskandar T. and Rahmat M. (2005), *Earnings management and board characteristics: evidence from Malaysia*, „Jurnal Pengurusan", vol. 24, pp. 77–103.
Schipper K. (1989), *Commentary on earnings management*„Accounting Horizons", vol. 3, no. 4, pp. 91–102.
Shah S., Zafar N. and Durrani T. (2009), *Board composition and earnings management: an empirical evidence from Pakistani listed companies*, „Middle Eastern Finance and Economics", vol. 3, pp. 28–38.
Shivakumar L. (1996), ,*Estimating Abnormal Accruals for Detection of Earnings Management*, working paper, Vanderbilt University, March.

Shivakumar L. and Jeter D. (1999), *Cross-sectional estimation of abnormal accruals using quarterly and annual data: effectiveness in detecting event-specific earnings management*, „Accounting and Business Research", vol. 29, no. 4, pp. 1–47.
Shuto A. (2007), *Executive compensation and earnings management: empirical evidence from Japan*, „Journal of International Accounting, Auditing and Taxation", vol. 16, pp. 1–26.
Siregar S. and Utama S. (2008), *Type of earnings management and the effect of ownership structure, firm size, and corporate-governance practices: evidence from Indonesia*, „The International Journal of Accounting", vol. 43, pp. 1–27.
Sivaramakrishnan K. and Yu S. (2008), *On the Association between Corporate Governance and Earnings Quality*, working paper, University of Houston.
Stubben S. (2006), *Do Firms Use Discretionary Revenues to Meet Earnings and Revenue Targets?*, working paper, Stanford University.
Subramanyam K. (1996), *The pricing of discretionary accruals*, „Journal of Accounting and Economics", vol. 22, pp. 249–281.
Sun J. and Liu G. (2009), *The impact of the CSRC Regulation No. 12-1996 on the credibility of Chinese IPO earnings forecasts*, „Global Finance Journal", pp. 1–15.
Sun L. and Rath S. (2010), *Earnings management research: a review of contemporary research methods*, „Global Review of Accounting and Finance", vol. 1, no. 1, pp. 121–135.
Sun L. and Rath S. (2009), *An empirical analysis of earnings management in Australia*, „International Journal of Human and Social Sciences", vol. 4, no. 14, pp. 1069–1085.
Sun W. and Sun J. (2002), *Analysis on Factors Influencing Managers' Earnings Management Intentions*, working paper.
Sundgren S. (2007), Earnings management in public and private companies – evidence from Finland, „LTA", vol. 1, pp. 1–29.
Taylor G. and Xu R. (2010), *Consequences of real earnings management on subsequent operating performance*, „Research in Accounting Regulation", vol. 22, pp. 128–132.
Teoh S., Wong I. and Wong T. (1998), *Earnings management and the underperformance of seasoned equity offerings*, „Journal of Financial Economics", vol. 50, pp. 63–99.
Thoma, J. and Zhang X. (2000), *Identifying unexpected accruals: a comparison of current approaches*, „Journal of Accounting and Public Policy", vol. 19, pp. 347–376.
Tsai C. and Chiou Y. (2009), *Earnings management prediction: a pilot study of combining neural networks and decision trees*, „Expert Systems with Applications", vol. 36, pp. 7183–7191.
Tylsch R. (2009), *Real economic activity and earnings management from a cross-country perspective*, Erasmus School of Economics.
Van Tendeloo B. and Vanstraelen A. (2005), *Earnings Management under German GAAP versus IFRS*, „European Accounting Review", vol. 14, pp. 155–180.
Vander Bauwhede H. and Willekens M., (2003), *Earnings management in Belgium: a review of the empirical evidence*, „Tijdschrift voor Economie en Management", vol. 48, no. 2, pp. 199–217.
Watts R. and Zimmerman J. (1986), *Positive Accounting Theory*, Prentice-Hall, Englewood Cliffs, NJ.
Wysocki P. (2003), *Earnings Management, Tax Compliance, and Institutional Factors: A Discussion of Haw et al*., working paper, Sloan School of Management, Massachusetts Institute of Technology.
Xie H. (2001), *The mispricing of abnormal accruals*, „Accounting Review", vol. 76, pp. 357–373.
Xie B., Davidson W. and DaDalt P. (2003), *Earnings management and corporate governance: the role of the board and the audit committee*, „Journal of Corporate Finance", vol. 9, pp. 295– 316.
Xue Y. (2003), *Information Content of Earnings Management: Evidence from Managing Earnings to Exceed Thresholds*, working paper, Sloan School of Management, Massachusetts Institute of Technology.
Yagüe J., Gómez-Sala J. and Poveda-Fuentes F. (2009), *Stock split size, signaling and earnings management: evidence from the Spanish market*", „Global Finance Journal", vol. 20, pp. 31–47.
Yaping N. (2005), *The theoretical framework of earnings management. La structure Théorique du Management des Revenus*, „Canadian Social Science", vol. 1, no. 3, pp. 32–38.
Ye J. (2007), *Accounting Accruals and Tests of Earnings Management*, Baruch College.

Yero J. and Usman S. (2012), *Ownership concentration and earnings management practice of Nigerian listed conglomerates*, „American International Journal of Contemporary Research", vol. 2, no. 7, pp. 157–171.
Yoon S. and Miller G. (2002a), *Cash from operations and earnings management in Korea*, „International Journal of Accounting", vol. 37, pp. 395–412.
Yoon S. and Miller G. (2002b), *Earnings management of seasoned equity offering firms in Korea*, „International Journal of Accounting", vol. 37, pp. 57–78.
Yu F. (2008), *Analyst coverage and earnings management*, „Journal of Financial Economics", vol. 88, pp. 245–271.
Zang A. (2005), *Evidence on the Tradeoff between Real Manipulation and Accrual Manipulation*, working paper, Fuqua School of Business, Duke University.
Zhang H. (2002), *Detecting Earnings Management – Evidence from Rounding-up in Reported EPS*, University of Illinois at Chicago.
Zhang Y. and Gimeno J. (2010), *Earnings pressure and competitive behaviour: evidence from the U.S. Electricity Industry*, „Academy of Management Journal", vol. 53, no. 4, pp. 743–768.
Zhao Y. and Chen K. (2009), *Earnings quality effect of state antitakeover statutes*, „Journal of Accounting and Public Policy", vol. 28, pp. 92–117.
Zhou J. (2008), *Financial reporting after the Sarbanes-Oxley Act: conservative or less earnings management?*, „Research in Accounting Regulation", vol. 20, pp. 187–192.

Summary
The objective of this paper is to review academic evidence on earnings management over the last twenty five years in order to help academic researchers, regulators and investors understand better the issues surrounding earnings management. The paper will be of special interest to investigators just starting to research this topic as we conduct an extensive literature review on earnings management from three different perspectives: a chronological perspective, in which we present the roadmap of the evolution of the earnings management literature in chronological order showing the main developments through the years; a methodological perspective, focusing on the different ways of detecting and measuring earnings management and respective improvements in the models; and a cross-country perspective, presenting the country of origin of the sample used by the authors. The last perspective might be of special interest to authors, as previous studies do not explore this perspective in detail.

Keywords: earnings management, discretionary accruals, manipulation, accounting.

Streszczenie
Rozwój literatury na temat zarządzania zyskiem. Przegląd tematyki z trzech różnych perspektyw
Celem niniejszego artykułu jest przegląd literatury naukowej na temat zarządzania zyskiem (earnings management). Staramy się zaprezentować postępy w świetle prawie dwudziestu pięciu lat badania, i w efekcie pomóc autorom lepiej zrozumieć pojęcie i zagadnienia związane z zarządzaniem zyskiem. Artykuł będzie przedmiotem szczególnego zainteresowania autorów, którzy właśnie rozpoczynają prace i badania na ten temat, jako, że prezentujemy wszechstronną analizę tematu z trzech różnych perspektyw: chronologicznej, w której prezentujemy ewolucję koncepcji zarządzania zyskiem w czasie i pokazujemy najważniejsze postępy w temacie; metodologicznej, która ukazuje problematykę pomiaru zarządzaniem zyskiem; i geograficznej, która analizuje zjawisko kształtowania zysków w praktyce gospodarczej różnych krajów. Ostatnia perspektywa może być szczególnie istotna, jako że wcześniejsze badania nie traktowały szczegółowo tę perspektywę.

Słowa kluczowe: zarządzanie zyskiem, rachunkowość, manipulacja, przegląd literatury, perspektywa geograficzna.

View publication stats