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Earnings Management in Family Firms and Countries' Legal System: European Evidence

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Master's in Accounting and Management Control

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PhD, Dante Baiardo Cavalcante Viana Júnior, Assistant Professor, Faculty of Economics of the University of Algarve

July, 2025



BUSINESS
SCHOOL

Department of Accounting

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To Maria Caetana,

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Abstract

The objective of this dissertation is to investigate the level of earnings management (EM) in family firms compared to non-family firms and the moderating effect of countries' legal system in this relationship. For this purpose, a sample of 10,940 observations from 27 European countries were used. The level of earnings management was calculated using the modified Jones Model (Collins et al., 2017; Dechow et al., 1995; Kothari et al., 2005). The distinction between family and non-family firms was made based on the criteria used by Borralho et al. (2022) and Ma and Ma (2024). In addition, we sought to distinguish our sample between common-law and code-law countries (La Porta et al., 1998).

This dissertation shows empirically that in the European setting the level of earnings management is lower in family firms compared to non-family firms, and this association is moderated by the countries' legal system status. Additionally, the results show that the level of earnings management is lower in common-law countries than in code-law countries.

While most of the existing literature in developed countries focuses on single-country analysis, often yielding mixed results, this dissertation provides robust conclusions on an international scale by analysing the combined impact of earnings management in family firms compared to non-family firms in 27 European countries. Additionally, it examines the role of moderating effect of countries' legal system factor in the relationship between earnings management and family firms.

JEL Classification: G34, K15, M40, M41

Keywords: Earnings management, Family versus non-family firms, Common-law countries, Code-law countries, Discretionary accruals, Agency theory, Stewardship theory, SEW theory

Resumo

O objetivo deste estudo é investigar o nível de *earnings management* (EM) em empresas familiares em comparação com empresas não familiares e o efeito moderador do sistema legal de cada país nesta relação. Para este efeito, foi utilizada uma amostra de 10,940 observações de 27 países europeus. O nível de *earnings management* foi calculado utilizando o Modelo de Jones modificado (Collins et al., 2017; Dechow et al., 1995; Kothari et al., 2005). A distinção entre empresas familiares e não familiares foi feita com base nos critérios utilizados por Borralho et al. (2022) e Ma and Ma (2024). Além disso, procurámos distinguir a nossa amostra entre países *common law* e *code law* (La Porta et al., 1998).

Este estudo mostra empiricamente que, no contexto europeu, o nível de *earnings management* é mais baixo nas empresas familiares comparativamente com as empresas não familiares, e essa associação é moderada pelo sistema legal vigente em cada país. Além disso, os resultados mostram que o nível de *earnings management* é mais baixo nos países *common-law* do que nos países *code-law*.

Enquanto a maior parte da literatura existente nos países desenvolvidos se concentra na análise de um único país, muitas vezes produzindo resultados mistos, esta dissertação fornece conclusões robustas à escala internacional, analisando o impacto combinado da gestão de resultados em empresas familiares em comparação com empresas não familiares em 27 países europeus. Além disso, examina o papel moderador do sistema legal vigente em cada país na relação entre os *earnings management* e as empresas familiares.

Classificação JEL: G34, K15, M40, M41

Palavras-chave: *Earnings management*, Empresas familiares versus não familiares, Países *common-law*, Países *code-law*, Accruals discricionários, Teoria de agência, Teoria de stewardship, Teoria da riqueza socioemocional

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Glossary of acronyms

ABEM – Accrual-based earnings management

BOD – Board of directors

CFO – Chief financial officer

CSR – Corporate social responsibility

DA – Discretionary accruals

EM – Earnings managements

ESG – Environmental, social, governance

EU – European Union

FF – Family firms

NDA – Non-discretionary accruals

NFF – Non-family firms

OLS – Ordinary least squares

PPE – Property, plant and equipment

REM - Real earnings management

ROA – Return on assets

RPT – Related-party transactions

SEW – Socio-emotional wealth

SIC – Standard Industrial Classification

TA – Total accruals

UK – United Kingdom

WC – Working capital

Introduction

Family firms are a worldwide phenomenon and play a crucial role in the global economy. They are responsible for around 70% of global gross domestic product, create 60% of jobs in the world, and account for 90% of all firms worldwide (Mikušová et al., 2025; Siaba & Rivera, 2024). In the European Union, family firms account for between 60% and 90% of economic activities and around two thirds of the gross domestic product generated, and the labour force employed (Borralho et al., 2020). Family businesses differ from other businesses mainly in that image and reputation are essential aspects for family businesses, since family members are closely connected and identify with the organisations (Sáenz González & García-Meca, 2014).

Earnings management has become a central topic in the field of financial accounting due to its implications for the quality of financial reporting and the reliability of information provided to stakeholders (Bansal, 2024). Much of the current accounting debate has focused on whether family firms manipulate their earnings compared to non-family firms, and it remains an open question. The body of research on earnings management and family firms is extensive. While some studies find that family firms are less likely to engage in earnings management (Borralho et al., 2020; Cascino et al., 2010; Ma & Ma, 2024), others report the opposite, indicating higher levels of manipulation, particularly when family control is unchecked or when financial pressures are intense (Gavana et al., 2017; Gavana et al., 2024; Paiva et al., 2019).

Prior studies investigate how firm's attributes, such as audit quality, CFO characteristics, adoption of integrate reporting and being classified as family firms create incentives to manage earnings (Achleitner et al., 2014; Donkor et al., 2024; Memis et al., 2012; Qiao et al., 2025). Nevertheless, there is also evidence that macroeconomic and market conditions affect earnings management. Since accounting information reflects the consequences of external conditions, Filip and Raffournier (2014), for example, suggest that market forces affect the propensity of earnings management. Furthermore, Isidro et al. (2020) found that there are a set of variables at country level that influence the level of earnings management, including the origin of the legal system. It is reasonable to assume that external factors may also exert a significant influence on the way firms engage in earnings management, particularly in developed economies characterised by robust regulatory frameworks and greater economic stability. Indeed, prior research suggests that external mechanisms, such as the extent of analyst coverage, may help to constrain earnings management practices in family firms (Paiva et al., 2019).

The literature also reports evidence that the information environment plays an important role in the level of earnings management with lower levels of earnings management being practised in environments where the information disclosed is more intense (Viana et al., 2023). In addition, Prencipe et al. (2011) found that the firms in a certain country may differ in earnings management motivations compared to other firms from countries with other legal systems. Hence, the author considered that it is essential to consider the countries' legal systems of the firms as this acts as a moderating factor in the comparative study of the earnings management phenomenon between family firms and non-family. Leuz et al. (2003) pointed out that earnings management levels depend on the corporate ownership structure, one of the characteristics that distinguishes family firms from non-family firms, but that both investor protection and legal enforcement are key factors in moderating this relationship.

The objective of this dissertation is to investigate the level of earnings management in family firms compared to non-family firms and the moderating effect of countries' legal system in this relationship.

The empirical analysis is based on a sample of 10,940 observations from 27 developed markets, from European Union and United Kingdom, covering 10 years (2014 to 2023). Methodologically, panel data techniques were used to facilitate the understanding and analysis of this wide range of data, and a multiple linear regression model was used to construct the empirical model on which this research is based. As a proxy for the level of earnings management, the Jones model was used, with modifications introduced by Dechow et al. (1995), Kothari et al. (2005), and Collins et al. (2017). Family firms were classified according to the criteria defined by the extant literature (Borralho et al., 2022; Ma & Ma, 2024), and the countries in the sample were divided into two large groups - common-law countries and code-law countries - according to La Porta et al. (1998).

The development of this dissertation focuses on the following research question: Can the legal system in force in each country be a moderating factor in the lower level of earnings management in family firms versus non-family firms? This dissertation contributes to the literature on accounting, corporate governance, and law in different ways.

First, it contributes to the expansion of the existing literature in the field of earnings management by addressing recent developments, identifying research gaps, and proposing directions for future studies, thereby strengthening the theoretical and practical relevance of the topic (Bansal, 2024). Second, this dissertation contributes to providing a transnational perspective on the phenomenon of earnings management among family and non-family firms, unlike most existing studies in this field, which focus on only one country or a small group of countries with similar characteristics and operating in the same legal system (Gavana et al., 2017; Ma & Ma, 2024).

Furthermore, this dissertation fills a current research gap in the literature, which is the importance of the legal system in force in each country as a moderating factor in the level of earnings management between family and non-family firms (López-González et al., 2019; Paiva et al., 2019).

The rest of the dissertation is structured as follows. Chapter 1 - Literature Review and Hypothesis Development presents the relevant literature on the topics of this dissertation, the main explanatory theories on the subject, and formulates the research hypotheses. Chapter 2 - Research Methodology presents the methodology used in data processing and in the formulation of the empirical model used in the development of research. Chapter 3 - Empirical Results presents, analyses and discusses the results obtained during the research. Finally, Chapter 4 - Conclusions presents the main conclusions, the contributions of this dissertation, its limitations and the main lines of future research.

CHAPTER 1

Literature Review and Hypothesis Development

1.1. Earnings management and theories

Earnings management has become one of the major research topics in the financial accounting field (Bansal, 2024), but despite the abundant literature on the subject there is no consensual definition of this important phenomenon, and a lot of expressions to indicate the distortions of financial information quality exists, such as earnings management, accounting manipulation, earnings manipulation, and creative accounting (Baralexis, 2004). Earnings management can be defined as any intentional practice conducted by management with the purpose to report a desired result, different from the real one (Osma et al., 2005).

According to Healy and Wahlen (1999) earnings management occurs when managers use their discretion, whether in financial reporting, or in signing contracts and carrying out transactions, to modify financial information to change the perception of some stakeholders about the company's performance or to achieve certain contractual objectives. Jones (2011) considered that creative accounting is an accounts manipulation practice which, by taking advantage of the flexibilities in the accounting standards, prioritises the interests of the preparers of the financial statements to the detriment of the interests of their users.

The main purpose of earnings management is alter reported financial earnings and report a desired amount of the financial position (Borrallho et al., 2020). Managers can achieve this goal through different ways, for instance, through accounting policy choice, accounting application, or issuing fraudulent financial statements (Paiva & Lourenço, 2012). Hence, it is possible to classify the earnings management phenomenon in three different categories (Gunny, 2005; Jones, 2011; Scott, 2015).

- i. Fraudulent management - In these cases, earnings management practices deliberately violate and disregard current accounting principles, and such practices are considered a fraud crime. Accounting fraud and earnings management practices have the same purpose, but fraud violates current accounting standards, while earnings management practices take advantage of the discretionary accounting rules to manipulate results. In many cases, the boundary between earnings management and fraud is slight;
- ii. Real earnings management (REM) - When the aim is to obtain certain results by altering economic operations, in time and scale, but never by altering or violating generally

accepted accounting procedures. The manipulation of real transactions is not considered an accounting manipulation as the company properly accounts for the transaction;

- iii. Accrual-based earnings management (ABEM) – Occurs when managers choose, from a wide range of current accounting policies, those that maximise their utility and the market value of their organisation. The use of subjective methods in financial information takes the form, for example, of determining depreciation rates for fixed assets, setting up provisions, choosing inventory costing methods and managing payments and receivables.

The term accrual represents the non-cash flow elements of accounting that can be more easily manipulated by management (Paiva & Lourenço, 2012). Accruals are based on forecasts and estimates which aim to harmonise the accounting result with the economic result by adopting the accruals basis, in which transactions and other events are recognised when they occur and are recorded and reported in the financial statements for the respective periods, regardless of the date of payment or receipt (Elliott & Elliott, 2022). Discretionary accruals are the part of accruals that result from managers' discretionary choices and are normally used as a proxy for earnings management levels. On the other hand, non-discretionary accruals correspond to the component of accruals explained by the company's actual performance (Paiva & Lourenço, 2012).

Derived from the discretion of managers in selecting accounting policies that best serve their interests, the extant literature presents a wide range of accrual-based earnings management methods that management can use to disclose the desired financial position of their organisation (Healy & Wahlen, 1999; Jones, 2011; Mulford & Comiskey, 2002):

- i. Increase income activities - This takes the form, for instance, of prematurely recognising sales, recording revenue earlier than was supposed to, increasing the net income in the current period and implying understatement of earnings in subsequent periods;
- ii. Decrease expenses activities – This strategy can be achieved through different practices, such as:
 - a. Using the big bath accounting to estimate future expenses in order to maximise losses now to avoid future losses;
 - b. Reducing the tax burden on profits, which is treated as an expense for the period;
 - c. Overvaluation of final stocks, which reduces the cost of sales, and then increases the net profit;
 - d. Capitalisation of expenditure on assets, spreading the cost over many years;

- e. Using of provision accounting, through the understatement of accounting estimates due to changes in depreciation costs and the non-recognition of impairments;
- iii. Increase assets – Some of the practices underlying this strategy correspond to decrease expenses activities. Furthermore, it is important to highlight those related to the overvaluation of intangible assets and the use of the revaluation method when accounting for fixed assets;
- iv. Decrease liabilities – This strategy includes mechanisms such as the undervaluation of provisions, the use of off-balance sheet financing and the reclassification of debt as equity;
- v. Increase operational cash flow – This is considered the most difficult method to practice earnings management, and it is related to the efforts to accelerate the collection of cash and increase the operating cash flow, by trying to classify non-operating inflows as operating cash inflows and simultaneously operating outflows as non-operating cash outflows.

Beneish (2001) presented two different earnings management perspectives: the information thesis and the opportunistic thesis. The information thesis argues that the subjectivity used by managers is beneficial because it sends credible signals to the market that are not yet known by the interested parties, reducing information asymmetry. The signalling theory is based on the informational perspective of earnings management, considering that due to information asymmetry problems, investors have access to less information than managers. In this way, management performs earnings management practices, sacrificing the company's value in the short term in order to signal the company's future performance. In short, this strategy ends up being beneficial for the market, as it gives the market more information and signals about the company's future cash flows than expected (Al-Shattarat et al., 2022).

Regarding to the opportunistic thesis it is argued that the subjectivity used by managers is harmful because it alters the expectations of investors about the future performance of the company, as well as the other users of the financial statements (Beneish, 2001). The opportunistic thesis considers that earnings management is motivated by agency conflicts between managers and shareholders (type I agency problems) and between minority and majority shareholders (type II agency problems) (Umans & Corten, 2023).

Agency theory considers that problems between managers and shareholders arise when the former are more interested in maximising their own utility to the detriment of the latter's interests (Jensen & Meckling, 1976). Al-Shattarat et al. (2022) referred that the managers are orientated

towards short-term financial results, to the detriment of the company's long-term value, while shareholders focus on their investment and expect long-term sustainable results.

Jensen & Meckling (1976) defined the agency relationship as a contract whereby the principal delegates to the agent the execution of a certain action in the management of his own organisation, resulting in the separation of ownership and control. The agency theory arises to solve two extant problems in the relationship between the principal and the agent. The first problem is the conflict of interests between management and shareholders, making it difficult and expensive for the principal to monitor the agent's behaviour. The second is the sharing of risk, given the different risk propensities of both parties (Eisenhardt, 1989).

In line with the above, Jiraporn et al. (2008) reinforced the idea that the phenomenon of earnings management can be opportunistic or beneficial for the companies that practise it, but these two facets of the phenomenon are ambiguously presented in the extant literature. The author presents the agency costs borne by the company when it engages in earnings management practices as a moderating factor between the use of these two perspectives. Thus, the author shows that there is an inverse relationship between agency costs and the level of earnings management, is that managers manipulate earnings more in companies where agency costs are lower (Jiraporn et al., 2008).

1.2. Family firms and theories

Family firms are a worldwide phenomenon and play a crucial role in the global economy. Despite its importance in the global context, the definition of a family firm is a complex topic on which there is no consensus in the academic community (Sciascia et al., 2024). Thus, there are various definitions of family firms scattered throughout the accounting literature.

According to Miller et al. (2007), a family firm is one in which several members of the same family function as majority shareholders and managers at the same time. Sciascia & Mazzola (2008) considered that family firms are those in which the family controls the business through its involvement in the ownership and management of the organisation, which are respectively measured through the percentage of capital held by the family and the percentage of company managers who are also members of the controlling family.

For Astrachan and Shanker (2003), a family firm is a business in which the family controls the ownership and management of the organisation and hopes to pass them on to their descendants in order to keep them in control of the family. Lastly, La Porta et al. (1999) considered that a firm is a family firm if a sole person is the controlling shareholder and ultimate owner, whose voting rights exceed 20%.

European Commission (2009) published a definition of family firms in which was considered that in a family firm:

- a. The majority of voting rights belong to the company's founder or his family members;
- b. At least one family member participates in the management of the organisation;
- c. In the case of listed companies, the minimum percentage of voting rights belonging to the family must be 25 per cent to meet the definition of a family firm.

Family firms are responsible for around 70% of global gross domestic product, create 60% of jobs in the world, and account for 90% of all firms worldwide (Mikušová et al., 2025; Siaba & Rivera, 2024). Considering the European Union as a whole, family firms account for between 60% and 90% of economic activities and around two thirds of the gross domestic product generated, and the labour force employed (Borralho et al., 2020).

Poutziouris and Chittenden (1996) concluded that family firms are normally owner-managed, with ownership control centred on the founder and have successive generations of owner-managers belonging to the family. Sáenz González and García-Meca (2014) noted that image and reputation are essential aspects for family firms because family members are closely related to and identify with the organisations. The shareholders of family firms are different from the rest because of the family's interest in the long-term maintenance of the organisation and their identification with the company's reputation (Anderson et al., 2002).

The main strengths of this type of organisation are: knowledge of the business, family culture, strong identification with the company, independence from the stock market, orientation towards self-financing and flexibility in decision-making. On the other hand, the weaknesses are the fact that less access to the capital market can limit growth opportunities, the resistance to attracting professional management, the possibility of family conflicts spilling over into the organisation and tension arising from intergenerational conflicts and those inherent in succession processes between managers (Paiva, 2020).

Family firms are most often characterised by the accumulation of the roles of owner and manager in the same person or group of people, who are simultaneously members of the controlling family, which substantially mitigates the occurrence of type I agency conflicts, resulting in better financial reporting practices, lower levels of earnings management and higher quality of the financial information disclosed (Ali et al., 2007; Cascino et al., 2010). In turn, family firms are often characterised by type II agency conflicts (Ali et al., 2007; Salvato & Moores, 2010). In this type of organisation, the controlling families are majority shareholders and tend to be encouraged to extract private benefits at the expense of minority shareholders (Paiva et al., 2019).

The link between the agency conflicts and their implications for family firms is justified by two contradictory effects. According to the alignment effect, family firms reduce their agency costs by continuously monitoring the organisation's managers, which benefits all shareholders. This is because businesses are seen as assets that should be inherited by descendants and that preserve the family name and position. Companies are therefore more long-term orientated and tend to report higher quality financial information (Ali et al., 2007). In turn, the entrenchment effect leads organisations to face principal-principal agency conflicts between the majority shareholders belonging to the controlling family and the rest. The former tends to use their dominant and privileged position to make opportunistic decisions at the expense of minority shareholders, expropriating the wealth from employees, managers and other stakeholders (Ali et al., 2007).

Adopting the agency theory alone to explain the implications of earnings management in family and non-family firms can be significantly limited in interpreting this phenomenon (Salvato & Moores, 2010). For this reason, the extant literature has used two other theories: the SEW theory and the stewardship theory (Borralho et al., 2020; Paiva, 2020)

The SEW theory has been used to explain the specific behaviour of family firms (Paiva et al., 2019). According to this perspective, family firms are not only concerned with the financial aspects of their activities, but also with the non-financial aspects related to the well-being of the family and the maintenance of the business for future generations (Gomez-Mejia et al., 2007).

Normally, family members identify with the values of their own company and value its public image, as this is reflected in the family. According to this theory, family members consider their company a valuable long-term investment to be passed on to their descendants. In this way, transgenerational sustainability is a key factor in the SEW of family firms and a powerful motivation to prevent managers from engaging in earnings management activities that damage or harm the reputation of their organisations (Berrone et al., 2012).

In turn, stewardship theory appears as a complement to agency theory in explaining the role played by the controlling family in decision-making regarding earnings management practices (Prencipe et al., 2011). This theory, derived from the fields of psychology and sociology, considers that a steward is a member of the controlling family that, acting in the top management, aims to favour the long-term goals of the company, protecting and maximizing shareholders' wealth (Prencipe et al., 2011).

Thus, stewards are executives and managers who work in organisations at the service of shareholders, with the aim of defending their interests and generating profit (Davis et al., 1997). The stewardship theory assumes people with a strong identification and high-value commitment are more likely to become stewards than other people because they define themselves in terms of

organizational membership by accepting the organization's mission and goals, which occurs largely in the cases of family firms (Donaldson & Davis, 1991).

1.3. Hypothesis development

1.3.1. Earnings management and family firms

According to Borralho et al. (2020) and Paiva (2020) there are three theoretical theses – agency theory, SEW theory and stewardship theory - that support the comparative impact of the earnings management phenomenon on family and non-family firms. The first part of the agency theory indicates that family firms manipulate less than non-family firms and produce higher quality financial information, given the accumulation of power of family members, as directors and owners of the companies (Paiva et al., 2019). However, family firms face more severe type II agency problems than non-family firms, due to the stock ownership and control over the firms' board of directors. These type of agency problems are likely to have a differential effect on earnings management between family and non-family firms and could lead to a greater level of earnings management in family firms (Paiva et al., 2019).

The SEW theory considers that family firms are not only concerned with the financial aspects of the companies, but also with non-financial aspects, such as the reputation and image of the founding family of the business and its maintenance for future generations and end up incurring less in earnings management activities compared to non-family firms (Umans & Corten, 2023). In turn, the stewardship theory reinforces the idea that family firms are run by people who are highly committed to the values of the organisation and whose main objectives are to maximise the value of the organisation and pursue its long-term goals (Paiva et al., 2019).

The theoretical diversity associated with studying the earnings management phenomenon in family and non-family companies over time has led us to find mixed findings on the impact of the family firms' classification on the quality of companies' financial reporting, which can be seen in table 1. Table 1 is divided into two panels: the panel A which includes studies conducted in developed countries such as the United Kingdom and countries belonging to the European Union; and the panel B with studies conducted in emerging economies such as China, Indonesia and Iran.

Borralho et al. (2020), Cascino et al. (2010), Ma and Ma (2024), and Putra et al. (2021) concluded in their papers that family firms are less likely to engage in earnings management practices when compared to non-family firms, considering the equality of circumstances between the two. On the other hand, Gavana et al. (2017, 2024), and Paiva et al. (2019) presented evidence

Table 1 - Comparative studies of earnings management between family firms and non-family firms

Author(s)	Objectives	Geography	Theories	Time	Main results
Panel A – Developed countries					
Achleitner et al. (2014)	To analyse the effects of FF on REM and ABEM and its implications on their transgenerational sustainability	Germany	Agency Theory; SEW Theory	1998-2008	FF engage less in REM and exhibit more earnings-decreasing ABEM policies
Borralho et al. (2020)	To research on the signs of EM in unlisted companies	Spain	Agency Theory; Stewardship Theory; SEW Theory	2011-2015	FF are less prone to the practices of EM and this association is moderated by the firm generation
Borralho et al. (2020)	To explore the quality of financial information of Spanish firms and relating with corporate governance practices	Spain	Agency Theory; SEW Theory	2011-2016	Lower asymmetry of information between owners and managers in the FF and evidence that the participation of women on the board boosts the quality of financial information
Borralho et al. (2022)	To investigate how each component of ESG disclosure individually affects EM	France and Spain	Stakeholder Theory; Agency Theory	2009-2018	Not all ESG dimensions are equally important for reducing EM and the relationship between ESG disclosure and EM is affected by FF and NFF
Cascino et al. (2010)	To explore the quality of accounting information in listed companies	Italy	Agency Theory	1998-2004	FF convey financial information of higher quality: peers and the determinants of accounting quality differ
Gavana et al. (2017)	To study the effect of EM practices on a firm's CSR disclosure behaviour	Italy	Institutional Theory; Signaling Theory; SEW Theory	2006-2015	FF are more likely to manage results downwards through CSR disclosure, although the level of family ownership has a moderating effect

Gavana et al. (2024)	To investigate the effect of family control on the association between RPT and different forms of EM	Italy	Agency Theory; SEW Theory	2014-2019	FF use RPTs in association with downward EM and NFF, use RPTs as a substitute of ABEM
Paiva et al. (2019)	To investigate the relationship between the level of EM and the level of the monitoring effect from analysts	United Kingdom	Agency Theory; SEW Theory; Stewardship Theory	2006-2010	FF have higher levels of EM unless they are followed by a significant number of analysts
Panel B – Emerging countries					
Ma and Ma (2024)	To investigate how FF strategically manage earnings by using DA and real activities	China	SEW Theory	2007-2018	FF are less likely to use REM and more likely to use ABEM
Putra et al. (2021)	To examine the effect of managerial ability on REM	Indonesia	Agency Theory	2008-2016	FF reduce the possibility of higher ability managers to engage in REM, and higher ability managers in FF are more likely to engage in REM to improve future earnings
Salehi et al. (2020)	To examine the effect of EM on the reputation of companies	Iran	Agency Theory	2012-2016	There is a negative and significative relationship between EM and reputation of FF and NFF

Source: elaborated by the author

that family firms have higher levels of earnings management than non-family firms, even using them as a tool to reduce accounting earnings.

Furthermore, the three theoretical frameworks presented above appear to be in favour of family firms, as they consider that family firms manipulate accounting results less than non-family firms:

1. The first part of the agency theory considers that the accumulation of management and ownership powers by family members leads to higher quality financial information, lower agency costs and a reduction in earnings management levels (Paiva et al., 2019).
2. The second part of the agency theory considers that the coexistence of majority and minority shareholders in family firms leads to greater levels of earnings management in family firms since controlling families may have incentives to extract private benefits at the expense of minority shareholders (Paiva et al., 2019). However, the difference in agency costs between family and non-family firms motivated by type I agency problems dominates the difference in agency costs between family and non-family firms motivated by type II agency problems, thus family firms tend to show lower levels of earnings management than non-family firms (Paiva et al., 2019).
3. According to SEW theory, family firms manipulate accounting results less due to their concerns about non-financial aspects such as image, reputation and the sustainability of the business for future family generations (Umans and Corten, 2023);
4. Regarding to stewardship theory, family firms incur less in earnings management activities thanks to the presence of stewards, managers who are highly committed to the values of the organisation and its long-term objectives (Paiva, 2019).

In view of the above, the first hypothesis assessed in this dissertation is the one presented below. The main goal in assessing this hypothesis is to obtain strong and robust statistical evidence that, given equal circumstances, family firms practise less earnings management than non-family firms.

H1: Family firms have lower level of earnings management activities when compared to non-family firms.

1.3.2. Earnings management and countries' legal system

La Porta et al. (1998) divided the universe of legal systems into two major groups: common-law countries and code-law countries. Each of these has differentiating characteristics, which has implications for the management and governance aspects of organisations in these countries and for the characteristics of national institutions themselves. In the common-law legal system laws are developed by judges through court decisions. On the other hand, in the code-law legal system, laws are written in a collection, codified, and not determined by judges (La Porta et al., 1998).

Accounting practices are systematically different in code-law countries and common-law countries. Ball et al. (2000) concluded that companies in code-law countries adopt more conservative positions in their financial reporting. In code-law countries, the high degree of state involvement means that companies quickly recognise bad news from an accounting point of view, namely large losses and impairments, while they are slower to recognise good news, such as profits and large gains (Bushman & Piotroski, 2006).

On the other hand, the institutional practices of common-law countries favour public disclosure, which increases the quality of financial information, while the institutional practices of code-law countries favour communication between managers and stakeholders (Oz & Yelkenci, 2018). In short, the extant literature shows that common-law countries have stronger legal protection for external investors than code-law countries and, at the same time, common-law countries provide stronger protection for both shareholders and creditors than code-law countries.

The legal system adopted affects the earnings management behaviours committed by companies, since the origin of the legal system affects the basic principles of the institutions that define accounting and tax rules (Oz & Yelkenci, 2018). Ellahie and Kaplan (2021) and Memis et al. (2012) found that national institutions restrict the actions of companies, especially increasing investor protection, which reduces the side effects of information asymmetry and agency conflicts. They concluded that countries with weaker national institutions have companies with higher levels of agency problems, as well as lower levels of financial quality and higher external financing costs (Ellahie & Kaplan, 2021; Memis et al., 2012). Furthermore, Isidro et al. (2020) found that there are a set of seventy-two variables at country level that influence the level of quality of companies' financial reporting, including the origin of the legal system, enforcement, and the level of investor and creditor protection.

In turn, Leuz et al. (2003) pointed out that earnings management levels tend to be lower in countries with more developed capital markets, more dispersed corporate ownership structures, strong protection of investor rights and strong legal enforcement. The legal system of the countries in which companies operate can play a moderating role in the quality of financial reporting by managers, since it influences the behaviour of the various stakeholders, such as directors, investors and regulators, through a complex interaction between accounting standards, legal, market, regulatory and political pressures and the discretion of managers and preparers of financial statements (Bushman & Piotroski, 2006).

Countries with stronger institutions restrict companies' actions, increasing investor protection, which has various effects on the market in general, such as reducing information asymmetry and agency conflicts (Ellahie & Kaplan, 2021). Extant literature shows that to the extent that countries'

institutions are stronger, external factors are less important in determining the quality of information. Thus, when the countries' laws are effectively enforced, corruption is mitigated, political instability is controlled and political institutions constrain politicians and political elites (Acemoglu et al., 2003).

In view of the above, the second hypothesis proposed is as follows. The main goal in assessing this hypothesis is to obtain strong and robust statistical evidence that in general the companies in common-law countries have lower levels of earnings management than the companies in code-law countries.

H2: Firms in common-law countries have lower levels of earnings management than firms in code-law countries.

Family firms are contingent on the cultural and legal context in which they operate. It could therefore be a mistake to assume that a generic definition of a family business applies in various contexts (Allouche et al., 2008). The extant literature provides evidence that family firms adopt different financial and accounting practices from non-family firms, although it is considered that not all family firms adopt the same practices, so researchers should treat them as a heterogeneous group (Paiva, 2020).

Extant literature shows that the countries' legal system of companies around family and non-family firms is a moderating factor in the relationship between both with the level of earnings management. Viana et al. (2023) state that the information environment plays an important role in the level of earnings management, with lower levels of earnings management being practised in environments where the information disclosed is more intense, which is the usual characteristic of common-law countries. Prencipe et al. (2011) studied the phenomenon of income smoothing in family and non-family firms in Italy (code-law country), concluding that family firms practise less earnings smoothing compared to non-family firms, but mentioning that the motivations of Italian family and non-family firms may differ compared to other firms from countries with other legal systems. Hence, the author considered that it is essential to consider the legal system of the firms as this acts as a moderating factor in the comparative study of the earnings management phenomenon between family firms and non-family firms (Prencipe et al., 2011).

In turn, Ansari et al. (2021) studied the relationship between the level of earnings management and CEO succession events in three European countries (Germany, France and the UK) and found that the results presented are moderated by the legal system of the countries in question. The United Kingdom, the only common-law country in that paper, has lower levels of earnings management than France and Germany, both code-law countries. In addition, Leuz et al. (2003) pointed out that earnings management levels depend on the corporate ownership structure, one of the characteristics

that distinguishes family firms from non-family firms, but that both investor protection and legal enforcement are key factors in moderating this relationship, with earnings management tending to be lower in countries where these institutional factors are more prevalent, the common-law countries.

In view of the above, the hypothesis proposed is as follows. The main goal in assessing this hypothesis is to obtain strong and robust statistical evidence that the legal system in force in the country modifies the propensity of companies to engage in earnings management practices and that this moderating effect behaves differently in family and non-family firms.

H3: The lower levels of earnings management in family firms versus non-family firms is moderated by countries' legal system.

CHAPTER 2

Research Methodology**2.1. Data and sample**

In conducting this investigation, all publicly listed companies from the 27 European Union countries and the United Kingdom whose information is available in the DataStream Eikon database, between 2014 and 2023 were used. Afterwards, data cleaning procedures were realised, considering some previously defined requirements. Firstly, to be included in the study sample, their accounts must be closed on 31 December of each year, to maintain comparability between the financial data collected. Subsequently, were excluded the companies with a Standard Industrial Classification (SIC) code corresponding to the financial sector, which includes banking and insurance companies. Another important aspect of data cleaning is the absence of missing values in any of the ten years covered by the data and for any variable used. Hence, companies that did not include available information for some variable and some year of study essential to the calculation of the model were excluded.

After data cleaning procedure, a sample of 10,940 observations was obtained, corresponding to 1,094 companies over the 10-year period relevant to this research, between 2014-2023. Once the sample was obtained, the data was processed in a panel, resulting in a balanced database, is that, without any missing value, for any of the companies in any of the years. This method of data processing is especially effective when dealing with large sets of data over a long period of time.

Table 2 shows the distribution of the sample by country. It is easy to see that there is great heterogeneity in the representativeness of the countries in the study. Of the twenty-eight European countries that make up the sample, thirteen individually represent less than 1% of the total sample obtained: Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Ireland, Latvia, Lithuania, Luxembourg, Malta, Romania, Slovakia, and Slovenia. These thirteen countries together represent around 5.67 per cent of the total number of companies in the study. On the other hand, there are three countries that together account for around 47.71 per cent of the total sample: France, Germany, and United Kingdom. It should be noted that during the data cleaning process, all observations concerning Hungary were excluded, so the country has no representation in this dissertation, with only 27 countries.

Table 2 - Distribution of the sample by country

Country	N	%
Austria	19	1.74
Belgium	33	3.02
Bulgaria	8	0.73
Croatia	7	0.64
Cyprus	3	0.27
Czech Republic	2	0.18
Denmark	30	2.74
Estonia	7	0.64
Finland	53	4.84
France	162	14.81
Germany	190	17.37
Greece	27	2.47
Ireland	10	0.91
Italy	64	5.85
Latvia	2	0.18
Lithuania	7	0.64
Luxembourg	6	0.55
Malta	1	0.09
Netherlands	34	3.11
Poland	74	6.76
Portugal	14	1.28
Romania	4	0.37
Slovakia	1	0.09
Slovenia	4	0.37
Spain	59	5.39
Sweden	103	9.41
United Kingdom	170	15.54
Total	1,094	100.00

Source: elaborated by the author

2.2. Dependent variable: Earnings management

The dependent variable in this dissertation is the level of earnings management practiced by companies (EM). Similarly to the extant literature, earnings management is measured in this dissertation using the proxy of discretionary accruals (Borralho et al., 2020, 2022; Paiva et al.,

2019), since this reflects the accounting estimates used and choices made within the scope of the accountant's work (Ali et al., 2007).

Very briefly, accrual is defined as the part of the company's accounting results that does not generate cash flow (Paiva & Lourenço, 2012). The main difference between discretionary and non-discretionary accruals is that the former result from the choices inherent in the work of the manager and accountant, while the latter result from the company's actual performance (Elliott & Elliott, 2022).

Healy (1985) and DeAngelo (1986) formulated two models for estimating the non-discretionary accruals, in which they consider that its value corresponds to an approximation of the total accruals recorded during the estimation period. The model formulated by Healy (1985) calculated the value of the non-discretionary accruals using the following formula (2.1):

$$NDA_{\tau,i} = \frac{\sum_{t,i} TA_{t,i}}{T} \quad (2.1)$$

Where:

NDA = Estimated non-discretionary accruals;

TA = Total accruals of company i in year t;

T = 1,2,3,...,T are the periods included in the estimation;

τ = The year in which a given event occurred.

According to Healy (1985), the generally accepted formula for calculating the value of total accruals is (2.2):

$$Total\ accruals_{t,i} = \frac{EBIT_{t,i} - Operational\ cash\ flow_{t,i}}{Total\ assets_{t,i}} \quad (2.2)$$

Algebraically, it is considered that the amount of total accruals can be written as (2.3):

$$TA_{i,t} = DA_{i,t} + NDA_{i,t} \quad (2.3)$$

Where:

TA = Total accruals of company i in year t;

DA = Discretionary accruals of company i in year t;

NDA = Non-discretionary accruals of company i in year t.

Both models assume that the non-discretionary accruals value is constant over time. In order to overcome this limitation, Jones (1991) created a model – Jones Model – in which the author calculates the value of non-discretionary accruals through the variation in sales and fixed assets, but the main limitation of this model is that it considers that invoicing and, consequently, the value of accounts receivable are not subject to discretion on the part of the manager and,

therefore, they are not considered an earnings management mechanism. The Jones model can be expressed in the following formula (2.4):

$$\frac{TA_{i,t}}{A_{i,t-1}} = \hat{\alpha}_0 + \hat{\alpha}_1 \frac{1}{A_{i,t-1}} + \hat{\alpha}_2 \frac{\Delta REV_{i,t}}{A_{i,t-1}} + \hat{\alpha}_3 \frac{\Delta PPE_{i,t}}{A_{i,t-1}} + \varepsilon_{i,t} \quad (2.4)$$

Where:

$TA_{i,t}$ = Total accruals of company i in year t;

$A_{i,t-1}$ = Total assets of company i in year t-1;

$\Delta REV_{i,t}$ = Variation in company i's turnover in year t compared to year t-1;

$\Delta PPE_{i,t}$ = Variation in tangible fixed assets of company i in year t compared to year t-1;

$\varepsilon_{i,t}$ = Estimation error for company i in year t.

By the way, Dechow et al. (1995) created the Modified Jones Model, which improves on the previous model, considering that sales, and specifically credit sales, have an impact on the company's working capital, and is used as an earnings management tool. This model can be expressed using the following expression (2.5):

$$\frac{TA_{i,t}}{A_{i,t-1}} = \hat{\alpha}_0 + \hat{\alpha}_1 \frac{1}{A_{i,t-1}} + \hat{\alpha}_2 \frac{(\Delta REV_{i,t} - \Delta REC_{i,t})}{A_{i,t-1}} + \hat{\alpha}_3 \frac{\Delta PPE_{i,t}}{A_{i,t-1}} + \varepsilon_{i,t} \quad (2.5)$$

Where:

$\Delta REC_{i,t}$ = Variation in accounts receivables of company i in year t compared to year t-1.

Kothari et al. (2005) increased the model previously presented by including a variable related to the company's performance, return on assets (ROA), in which case the value of accruals is calculated using the following formula (2.6):

$$\frac{TA_{i,t}}{A_{i,t-1}} = \hat{\alpha}_0 + \hat{\alpha}_1 \frac{1}{A_{i,t-1}} + \hat{\alpha}_2 \frac{(\Delta REV_{i,t} - \Delta REC_{i,t})}{A_{i,t-1}} + \hat{\alpha}_3 \frac{\Delta PPE_{i,t}}{A_{i,t-1}} + \hat{\alpha}_4 \frac{\Delta ROA_{i,t}}{A_{i,t-1}} + \varepsilon_{i,t} \quad (2.6)$$

Where:

$ROA_{i,t}$ = Return on assets of company i in year t.

In turn, Dechow et al. (2012) approached the problem of measuring earnings management through the discretionary accruals proxy from another perspective, considering that the presence of discretionary accruals in each period implies its reversal in subsequent periods, according to the following formula (2.7):

$$WC_ACC_{i,t} = a + bPART_{i,t} + cPARTP1_{i,t} + dPARTP2_{i,t} + \sum_k f_k X_{k,i,t} + \varepsilon_{i,t} \quad (2.7)$$

Where:

WC_ACC = Non-cash working capital accruals;

PART = Dummy variable that is 1 in periods during which a hypothesized determinant of earnings management occurred and 0 otherwise;

PARTP1 = Dummy variable equals 1 in the first year following an earnings management year and 0 otherwise;

PARTP2 = Dummy variable equals 1 in the second year following an earnings management year and 0 otherwise;

X_k = Control variables for non-discretionary accruals.

Finally, Collins et al. (2017) improved the Modified Jones Model, previously presented by Dechow et al. (1995) and Kothari et al. (2005) by including two metrics related to company growth, sales growth and the market-book ratio which, according to the author, are innate aspects of the earnings management phenomenon. In this case, the formula for calculating accruals is as follows (2.8):

$$\frac{TA_{i,t}}{A_{i,t-1}} = \hat{\alpha}_0 + \hat{\alpha}_1 \frac{1}{A_{i,t-1}} + \hat{\alpha}_2 \frac{(\Delta REV_{i,t} - \Delta REC_{i,t})}{A_{i,t-1}} + \hat{\alpha}_3 \frac{\Delta PPE_{i,t}}{A_{i,t-1}} + \hat{\alpha}_4 \frac{\Delta ROA_{i,t}}{A_{i,t-1}} + \hat{\alpha}_5 \frac{SG_{i,t-1 \text{ to } t}}{A_{i,t-1}} + \hat{\alpha}_6 \frac{MB_{i,t-1}}{A_{i,t-1}} + \varepsilon_{i,t} \quad (2.8)$$

Where:

SG_{i,t-1 to t} = Sales growth of company i between t-1 and t years;

MB_{i,t-1} = Market-book ratio of company i in year t-1.

2.3. Independent variables

2.3.1. Family

One of the independent variables in this dissertation is related to family firms and its main purpose is to distinguish the companies in our sample between family and non-family firms. Family is a dummy variable that takes on the value 1 if the company is considered family-owned and 0 otherwise. Collecting data on this variable is particularly important in this dissertation, so it was done manually for each of the companies in the sample. For an organisation to be considered a family firm, it must meet two requirements, which has been widely used in extant literature: (i) the controlling family must hold at least 20% of the share capital, (ii) and at least one member of the board of directors (BOD) must belong to the family (Borralho et al., 2022; Ma & Ma, 2024).

Table 3 shows the proportion of family and non-family firms in each of the countries that compose the sample. Its interpretation shows that, in general, around 30% of companies in the European Union and the United Kingdom are family firms. The countries in which more than half of the companies are family firms are: Bulgaria, Italy, Lithuania and Portugal. There are other countries, although not incredibly significant in the sample, where all the companies are classified as non-family firms: Czech Republic, Malta, Romania, Slovakia and Slovenia. In addition to these, there are several countries in which non-family firms are also particularly important, with a proportion of more than 80 per cent of the total: Denmark, Finland, Ireland, Netherlands, Sweden, and United Kingdom.

2.3.2. Legal system

The second relevant dependent variable in the model is related to the origin of the legal system in force in the country where the company is located, and its main objective is to distinguish the sample between common-law and code-law countries. The LegalSyst variable is a dummy variable that assumes the value 1 whenever a given company belongs to a common-law country and assumes the value 0 otherwise, that is, whenever the company is in a code-law country.

Malta is a particular case in this dissertation, since due to its strong British influences the origin of its system of law is based on the common-law systems founded in the United Kingdom. However, its integration into the European Union has forced the country to codify its legal rules (Sammut, 2021). For this reason, and for the purposes of this dissertation, we have included Malta alone in a third group, known as the mixed legal system. Given its irrelevance in the total sample, representing only 0,09% of the total number of companies, the observations relating to this country were not included in the statistical tests carried out at a later stage of the study.

Table 4 shows the relevance of the three groups of legal systems represented in this dissertation: common-law countries, code-law countries, and mixed legal system. The table shows that the group of code-law countries has a much greater preponderance in the total sample, in terms of the number of observations, with 83,13 per cent of the total, compared to 16,73 per cent for the common-law countries in the total sample.

Table 3 – Proportion of family and non-family firms in the sample countries

Country	Family	Non-family	% Family	% Non-family
Austria	5	14	26.32	73.68
Belgium	13	20	39.39	60.61
Bulgaria	5	3	62.50	37.50
Croatia	2	5	28.57	71.43
Cyprus	1	2	33.33	66.67
Czech Republic	0	2	0.00	100.00
Denmark	5	25	16.67	83.33
Estonia	2	5	28.57	71.43
Finland	8	45	15.09	84.91
France	80	82	49.38	50.62
Germany	51	139	26.84	73.16
Greece	12	15	44.44	55.56
Ireland	1	9	10.00	90.00
Italy	35	29	54.69	45.31
Latvia	1	1	50.00	50.00
Lithuania	4	3	57.14	42.86
Luxembourg	4	2	66.67	33.33
Malta	0	1	0.00	100.00
Netherlands	6	28	17.65	82.35
Poland	27	47	36.49	63.51
Portugal	9	5	64.29	35.71
Romania	0	4	0.00	100.00
Slovakia	0	1	0.00	100.00
Slovenia	0	4	0.00	100.00
Spain	18	41	30.51	69.49
Sweden	16	87	15.53	84.47
United Kingdom	23	147	13.53	86.47
Total	328	766	29.98	70.02

Source: elaborated by the author

Table 4 – Distribution of the sample by legal system

Legal system	N	%
Code-law countries	910	83.18
Common-law countries	183	16.73
Mixed legal system	1	0.09
Total	1094	100.00

Source: elaborated by the author

Table 5 shows the importance of family and non-family firms in the two groups of countries relevant to the study – code-law countries and common-law countries. Through its analysis, it is concluded that non-family firms are more relevant than family firms, both in common-law countries and in code-law countries, which is in line with the analysis in table 3, in which non-family firms prevail in all countries in the sample. Despite this, the preponderance of family firms is much higher in code-law countries, compared to common-law countries.

Table 5 - Distribution of family and non-family firms by legal system.

	% Family	% Non-family	Total
Code-law countries	33.30	66.70	100.00
Common-law countries	13.66	83.34	100.00
Mixed legal system	0.00	100.00	100.00

Source: elaborated by the author

2.4. Control variables

The model proposed includes, in addition to the dependent variable and the independent variables, a set of nine control variables, previously used in the extant literature and which are considered relevant for the study of the problem (Borralho et al., 2020, 2022; Cascino et al., 2010; Paiva et al., 2019; Sáenz González & García-Meca, 2014). Table 6 summarizes all variables included in the model.

Table 6 – Variables used in the model

Variable	Acronym	Definition
Earnings management	EM	Is the accruals-based earnings management based on the adjustments of Jones (1991) model proposed by Dechow et al. (1995) and additionally controlling for firm performance (Kothari et al., 2005), and growth (Collins et al., 2017)
Family firm	Family	Is a dummy variable which equals one for family firms, and zero otherwise
Legal system	LegalSyst	Is a dummy variable which equals one for firms from common-law countries, and zero otherwise
Size	Size	Is the natural logarithm of the market capitalization of the period in US dollar
Tangibility	Tangibility	Is the total property, plant and equipment scaled by total equity of the period
Return on assets	ROA	Is the net income scaled by total assets of the period
Leverage	Leverage	Is the total leverage scaled by total assets of the period
Growth	Growth	Is the percentual growth of total revenues from the year t-1 to t
Market-to-book	Marketbook	Is the market to book ratio of the period
Debt issue	Dissue	Is the percentual growth of current liabilities from the year t-1 to t.
Big 4 Audited	Big4	Is a dummy variable, which takes the value 1 if the company is audited by a BIG4, and 0 otherwise
Loss	Loss	Is a dummy variable, which equals one for firm-year observations with negative net income, and zero otherwise

Source: elaborated by the author

2.5. Empirical Model

The first empirical model statistically studied in this dissertation consists of a multiple linear regression, which aims to explain the relationship between the dependent variable – EM, measured through the proxy of discretionary accruals - and the independent variables – Family and LegalSyst. The linear equation representing the model is presented below (2.9):

$$EM_{i,t} = \hat{\beta}_0 + \hat{\beta}_1 Family_{i,t} + \hat{\beta}_2 LegalSyst_{i,t} + \hat{\beta}_3 Size_{i,t} + \hat{\beta}_4 Tangibility_{i,t} + \hat{\beta}_5 ROA_{i,t} + \hat{\beta}_6 Leverage_{i,t} + \hat{\beta}_7 Growth_{i,t} + \hat{\beta}_8 MarketBook_{i,t} + \hat{\beta}_9 Dissue_{i,t} + \hat{\beta}_{10} Big4_{i,t} + \hat{\beta}_{11} Loss_{i,t} + \varepsilon_{i,t} \quad (2.9)$$

In line with Hypothesis 1, in which we suggest that family firms engage in fewer earnings management acts than non-family firms, we expect the coefficient β_1 to have a negative sign. In turn, the Hypothesis 2 lead us to expect that the value of the coefficient β_2 is negative,

suggesting that common-law countries engage in fewer earnings management acts than code-law countries, due to the increasing legal enforcement and power of national institutions.

To test the Hypotheses 3 the linear regression model previously presented was modified and was created a new variable ($Family * LegalSyst$), which consists of an interaction term between the two main independent variables of this dissertation – Family and LegalSyst. The aim of this interaction term is to simultaneously study the extent to which countries' legal system mediate the negative relationship between the level of earnings management and family firms versus non-family firms. The linear equation representing the new model is presented below (2.10):

$$\begin{aligned} EM_{i,t} = & \hat{\beta}_0 + \hat{\beta}_1 Family_{i,t} + \hat{\beta}_2 LegalSyst_{i,t} + \hat{\beta}_3 (Family * LegalSyst)_{i,t} + \\ & \hat{\beta}_4 Size_{i,t} + \hat{\beta}_5 Tangibility_{i,t} + \hat{\beta}_6 ROA_{i,t} + \hat{\beta}_7 Leverage_{i,t} + \hat{\beta}_8 Growth_{i,t} + \\ & \hat{\beta}_9 MarketBook_{i,t} + \hat{\beta}_{10} Dissue_{i,t} + \hat{\beta}_{11} Big4_{i,t} + \hat{\beta}_{11} Loss_{i,t} + \varepsilon_{i,t} \end{aligned} \quad (2.10)$$

In line with Hypotheses 3, in which we suggest that the relationship between earnings management in family firms versus non-family firms is moderated in common-law countries comparing to code-law countries, we expect the coefficient β_1 to have a negative sign.

CHAPTER 3

Empirical Results**3.1. Descriptive statistics**

The empirical model formulated was tested based on the sample constructed for this dissertation, with a total of 10,930 final observations, after excluding observations relating to Malta, as it falls into a third group of legal systems, the mixed legal system, as specified above. Table 7 shows the descriptive statistics for all the variables considered in the empirical model.

Table 7 – Descriptive statistics

Variable	N	mean	p25	p50	p75	sd
EM	10,930	0.0477	0.0129	0.0291	0.0599	0.0551
Family	10,930	0.3001	-	-	-	-
LegalSyst	10,930	0.1674	-	-	-	-
Size	10,930	13.6265	12.0845	13.5195	15.0927	2.0580
Tangibility	10,930	0.5855	0.2129	0.4680	0.8716	0.4638
ROA	10,930	0.0346	0.0123	0.0410	0.0744	0.0993
Leverage	10,930	0.5404	0.4053	0.5414	0.6734	0.2050
Growth	10,930	0.0780	-0.0223	0.0541	0.1435	0.2359
MarketBook	10,930	2.7025	1.0718	1.8182	3.2191	2.9966
Dissue	10,930	0.1054	-0.0496	0.0387	0.1643	0.3430
Big4	10,930	0.6834	0.0000	1.0000	1.0000	0.4652
Loss	10,930	0.1747	0.0000	0.0000	0.0000	0.3798

Source: elaborated by the author

The results show that the average for the EM variable is 0.0477, which is similar to the values obtained in other studies, such as: Borralho et al. (2020, 2022) and Paiva et al. (2019). Regarding to the Family variable, the average obtained is 0.3, which corresponds to the result obtained in table 3 above. This figure means that on average 30 per cent of the companies in our sample are classified as family firm. This proportion of family firms in the total sample coincides with the proportion obtained by other studies, such as: Borralho et al. (2020, 2022) and Mnif and Cherif (2020). As for the LegalSyst variable, the results show that on average around 16.74 per cent of the observations refer to common-law countries, namely the United

Kingdom, Ireland and Cyprus, which means that around 83.26 per cent of the sample is classified as belonging to code-law countries. These results coincide with the analysis conducted in table 4.

As a first step, we tested the difference in earnings management averages between family firms and non-family firms, dividing our sample into two different panels – common-law and code-law. Given that our sample is mismatched in terms of the number of observations of family and non-family companies in both panels, it became imperative to conduct this analysis based on the unbalanced sample and simultaneously using the propensity score matching (PSM) method. This method creates a sub-sample with an equal number of family and non-family firms selected from the main sample, based on the similarity of three specific parameters: Size, Leverage, and Growth.

Table 8 – Mean test of earnings management between family and non-family firms

Panel A – LegalSyst = 1				Panel B - LegalSyst = 0			
Unbalanced sample				Unbalanced sample			
	N	EM			N	EM	
<i>Family</i> = 0 [A]	1,580	0.0452		<i>Family</i> = 0 [A]	6,070	0.0483	
<i>Family</i> = 1 [B]	250	0.0567		<i>Family</i> = 1 [B]	3,030	0.0471	
		Diff. [B-A]	0.0116 ***			Diff. [B-A]	-0.0012
PSM sample				PSM sample			
	N	EM			N	EM	
<i>Family</i> = 0 [A]	250	0.0498		<i>Family</i> = 0 [A]	3,030	0.0513	
<i>Family</i> = 1 [B]	250	0.0567		<i>Family</i> = 1 [B]	3,030	0.0471	
		Diff. [B-A]	0.0069			Diff. [B-A]	-0.0043 ***

Source: elaborated by the author

Table 8 shows the results of the difference of means tests carried out on both the unbalanced sample and the PSM sample. The fact that the results obtained in both samples are different in both panels allows us to conclude that using a sample that is not adjusted in terms of the number of family and non-family companies generates a bias in the results obtained. Therefore, only the results of the difference of means tests obtained with the PSM sample are considered. The results obtained in panel A indicate that there is no statistically significant evidence that there are differences in the levels of earnings management between family firms and non-family firms in common-law countries. In panel B, the results indicate that there is significant statistical evidence that in code-law countries, family firms manipulate earnings less than non-family firms, given that the difference in means is negative.

Table 9 – Correlations matrix

	1	2	3	4	5	6	7	8	9	10	11	12
1 EM	1.0000											
2 Family	0.0015	1.0000										
3 LegalSyst	-0.0077	-0.1600***	1.0000									
4 Size	-0.1696***	-0.1663***	-0.0375***	1.0000								
5 Tangibility	-0.1552***	-0.0575***	-0.0492***	0.0063	1.0000							
6 ROA	-0.0958***	0.0176	-0.0332***	0.2541***	-0.0234*	1.0000						
7 Leverage	-0.0433***	-0.0131	-0.0778***	0.1378***	-0.0017	-0.2236***	1.0000					
8 Growth	0.1105***	-0.0048	0.0315**	0.0221*	-0.0962***	0.1516***	-0.0446***	1.0000				
9 MarketBook	0.0933***	-0.0696***	0.0293**	0.2305***	-0.1936***	0.2049***	0.0109	0.1381***	1.0000			
10 Dissue	0.1991***	-0.0162	0.0201*	0.0127	-0.1163***	-0.0018	0.0213*	0.3167***	0.1378***	1.0000		
11 Big4	-0.0574***	-0.0909***	-0.0004	0.2803***	0.0535***	0.0707***	0.0741***	-0.0021	0.0654***	-0.0050	1.0000	
12 Loss	0.1331***	-0.0322***	0.0860***	-0.2501***	0.0139	-0.6589***	0.1333***	-0.1437***	-0.0769***	-0.0099	-0.0484***	1.0000

Source: elaborated by the author

3.2. Correlations matrix

As the model proposed in this dissertation is a linear regression model, it is essential to ensure that there is no collinearity between the variables in the model, is that there are no strong correlations between them. For this reason, Pearson's correlation coefficients were calculated and summarised in the table 9. The results show that there are no strong statistically significant correlations between the variables in the model, which corroborates the requirement that there is no collinearity when applying the linear regression model.

The results also indicate that there is a negative linear correlation, though a weak one, between the LegalSyst and Family variables (Sig. < 0.01), which means that the variables are inversely proportional, which is in line with the conclusions drawn from table 5, in which family firms are more abundant in code-law countries compared to common-law countries. Regarding to the control variables, all of them have linear correlations with the dependent variable, but all these relations are weak due to the value of Pearson correlation coefficient. In fact, the variables Size, Tangibility, ROA, Leverage, and Big4, are negatively correlated with the dependent variable (Sig. < 0.01), and the variables Growth, MarketBook, Dissue, and Loss are positively correlated with the dependent variable (Sig. < 0.01). As for the Family variable, there are five negatively correlated control variables: Size, Tangibility, MarketBook, Big4, and Loss (Sig. < 0.01).

3.3. Linear regression results

Therefore, the multiple linear regression model was estimated according to the ordinary least square method (OLS). There are four variations: column 1 includes all the variables plus the year dummies in the model under analysis, column 2 includes all the variables, industry and year dummies, column 3 includes all the variables, year, industry and country dummies. The model is statistically significant, and its explanatory power is based on an adjusted R^2 of 15 per cent (column 3).

The results presented in the first three columns of the table 10 indicates that there is a statistically significant negative relationship (Sig < 0.05), between the Family variable and the EM variable. This result confirms Hypothesis 1, since it demonstrates that family firms have lower levels of earnings management than non-family firms, even when fixed effects for years, industries and countries are considered. This assumption is in line with the findings of extant literature, such as Achleitner et al. (2014), and Borralho et al. (2020).

Regarding to the LegalSyst variable the results show a negative and statistically significant relationship with the EM variable in any of the combinations of fixed effects considered (Sig < 0.01), demonstrating that common-law countries generally have lower levels of earnings management than code-law countries, regardless of whether the companies consider themselves to be family firms or non-family firms. This allows us to confirm Hypothesis 2, since the results show that firms in common-law countries have lower levels of earnings management than firms in code-law countries which is in line with the findings of extant literature, such as Ball et al. (2000), Bushman and Piotroski (2006) and Oz and Yelkenci (2018).

Considering only common-law countries (column 4), the linear regression coefficient for the Family variable is not statistically significant. This result demonstrates that in common-law countries, the fact that a company is considered family, or non-family firm is not significant in terms of the company's earnings management. This is because in common-law countries the inherent characteristics of this type of legal system discourage companies from engaging in earnings management, whether they are family firms or non-family firms (Acemoglu et al., 2003).

In addition, if we only consider code-law countries (column 5), the relationship of the Family variable with earnings management is negative and statistically significant (Sig. < 0.01), which demonstrates that in code-law countries, family firms have lower levels of earnings management than non-family firms. These results shows strongly that the level of earnings management and family versus non-family-firms depends on the countries' legal system (Prencipe et al., 2011), since the EM variable behaves differently between the two groups.

The results of the interaction variable (column 1) should be analysed separately, when the LegalSyst variable takes on values equal to 0 (code-law countries) and equal to 1 (common-law countries). When LegalSyst = 0, the interaction term has a negative value (Stat. = $-0.032 + 0 = -0.032$; Sig. < 0.10). This result indicates that in code-law countries family firms achieve lower levels of earnings management than non-family firms. On the other hand, when LegalSyst = 1, the interaction term, although also negative, has a less negative value (Stat. = $-0.032 + 0.0187 = -0.0133$; Sig. < 0,10). It indicates that also in the common-law countries, family firms achieve lower levels of earnings management than non-family firms, however, the interaction coefficient is less negative, is that, more moderate in the common-law countries. These demonstrate that family firms practice less earnings management than non-family firms, whether in common-law and code-law countries, but this relationship is moderate, or less evident in common-law countries compared to code-law countries. The results presented in

column 1 remain unchanged in columns 2 and 3, with changes in the fixed effects for years, countries and industries.

These results confirm Hypothesis 3, is that the negative relation between the level of earnings management and family firms versus non-family firms is less evident in common-law countries, comparing to code-law countries. The main reason for these results is that the level of earnings management is lower in countries with stronger national institutions, more developed capital markets and stronger legal enforcement, which are typical of common-law countries, because national institutions end up restricting companies' actions (Ellahie & Kaplan, 2021; Isidro et al, 2020). The results above are in line with the extant literature such as Ansari et al. (2021), Leuz et al. (2003), and Paiva et al. (2019). All the results presented remain consistent, considering the dummies for years, industries and countries.

As for the control variables, the Size, Tangibility, and Leverage variables show statistically significant inverse relationships with the level of earnings management (Sig. < 0.01), which means that companies with higher asset values, higher proportions of tangible fixed assets and higher levels of debt have lower levels of earnings management. On the other hand, the variables Growth, MarketBook, and Loss show statistically significant and positive relationships with the dependent variable (Sig. < 0.01), which means that companies with higher levels of sales growth, which show losses and with a greater discrepancy between the book value and the market value of the shares show higher levels of earnings management. These relationships corroborate some of results from extant literature, such as Borralho et al. (2020), and Paiva et al. (2019).

3.4. Robustness tests

To confirm and reinforce the results obtained through the main empirical model, various robustness tests were conducted, consisting of adaptations to the original model. Table 11 shows the results of the linear regression model, in which four alternative models for calculating discretionary accruals were used. In the original model, the calculation of discretionary accruals was based on the adjustments of Jones (1991) model proposed by Dechow et al. (1995) and additionally controlling for firm performance (Kothari et al., 2005), and growth (Collins et al., 2017).

Table 10 - The effect of family firms on earnings management: The role of countries' legal system.

	(1)		(2)		(3)		(4)		(5)	
	<i>EM</i>									
<i>Variables</i>	<i>All sample</i>						<i>LegalSyst = 1</i>		<i>LegalSyst = 0</i>	
<i>Family</i>	-0.0320	***	-0.0375	***	-0.0313	**	0.0185		-0.0334	***
	(0.0012)		(0.0013)		(0.0013)		(0.0048)		(0.0013)	
<i>LegalSyst</i>	-0.0519	***	-0.0730	***	-0.0616	***				
	(0.0015)		(0.0033)		(0.0033)					
<i>Family x LegalSyst</i>	0.0187	*	0.0205	*	0.0215	*				
	(0.0041)		(0.0042)		(0.0044)					
<i>Size</i>	-0.1590	***	-0.1580	***	-0.1890	***	-0.1480	***	-0.1770	***
	(0.0003)		(0.0003)		(0.0003)		(0.0009)		(0.0003)	
<i>Tangibility</i>	-0.1170	***	-0.1360	***	-0.1410	***	-0.1230	***	-0.1440	***
	(0.0011)		(0.0011)		(0.0015)		(0.0046)		(0.0016)	
<i>Return on Assets</i>	-0.0305		-0.0311		-0.0151		-0.0453		-0.0097	
	(0.0121)		(0.0122)		(0.0123)		(0.0191)		(0.0156)	
<i>Leverage</i>	-0.0467	***	-0.0465	***	-0.0423	***	-0.0230	***	-0.0500	
	(0.0034)		(0.0034)		(0.0036)		(0.0077)		(0.0044)	
<i>Growth</i>	0.0522	***	0.0514	***	0.0418	***	0.0858	*	0.0295	**
	(0.0038)		(0.0038)		(0.0038)		(0.0079)		(0.0043)	
<i>MarketBook</i>	0.0931	***	0.0989	***	0.1030	***	0.1330	***	0.0962	***
	(0.0023)		(0.0002)		(0.0002)		(0.0005)		(0.0003)	
<i>Dissue</i>	0.1670	***	0.1670	***	0.1690	***	0.1450	***	0.1730	***
	(0.0025)		(0.0025)		(0.0025)		(0.0057)		(0.0028)	
<i>Big4</i>	-0.0025		0.0041		-0.0015		-0.0920		0.0103	***
	(0.0011)		(0.0014)		(0.0014)		(0.0037)		(0.0016)	
<i>Loss</i>	0.0996	***	0.0985	***	0.0855	***	0.0459	***	0.0908	
	(0.0021)		(0.0021)		(0.0021)		(0.0042)		(0.0024)	
<i>Year-FE</i>	Yes		Yes		Yes		Yes		Yes	
<i>Industry-FE</i>	No		Yes		Yes		Yes		Yes	
<i>Country-FE</i>	No		No		Yes		Yes		Yes	
<i>Observations</i>	10,930		10,930		10,930		1,830		9,100	
<i>R-squared</i>	0.1150		0.1250		0.1480		0.2020		0.1520	

Source: elaborated by the author

The three alternative models shown in table 11 are: Modified Jones Model proposed by Dechow et al. (1995) without any additional variables (EM_Alter 1), Modified Jones Model based on Dechow et al. (1995) and additionally including only firm performance, following Kothari et al. (2005) (EM_Alter 2), and Modified Jones Model proposed by Dechow et al. (1995) by considering only the one-year lag of total accruals as an additional regressor, as suggested by Dechow et al. (2012) (EM_Alter 3).

Table 11 - Alternative measures of earnings management.

	(1)		(2)		(3)	
	<i>EM Alter1</i>		<i>EM Alter2</i>		<i>EM Alter3</i>	
<i>Variables</i>	<i>All sample</i>					
<i>Family</i>	-0.0341	***	-0.0322	**	-0.0301	**
	(0.0013)		(0.0013)		(0.0013)	
<i>LegalSyst</i>	-0.0663	***	-0.0635	***	-0.0670	***
	(0.0034)		(0.0033)		(0.0033)	
<i>Family x LegalSyst</i>	0.0224	*	0.0228	*	0.0255	**
	(0.0044)		(0.0044)		(0.0043)	
<i>Size</i>	-0.2000	***	-0.1890	***	-0.1910	***
	(0.0003)		(0.0003)		(0.0003)	
<i>Tangibility</i>	-0.1430	***	-0.1430	***	-0.1480	***
	(0.0015)		(0.0015)		(0.0014)	
<i>Return on Assets</i>	-0.0207		-0.0057		0.0056	
	(0.0124)		(0.0122)		(0.0119)	
<i>Leverage</i>	-0.0509	***	-0.0434	***	-0.0380	***
	(0.0037)		(0.0036)		(0.0036)	
<i>Growth</i>	0.0460	***	0.0407	***	0.0424	***
	(0.0038)		(0.0037)		(0.0036)	
<i>MarketBook</i>	0.1000	***	0.1010	***	0.0983	***
	(0.0002)		(0.0002)		(0.0002)	
<i>Dissue</i>	0.1680	***	0.1660	***	0.1690	***
	(0.0025)		(0.0025)		(0.0024)	
<i>Big4</i>	-0.0009		4.08e-05		0.0019	
	(0.0015)		(0.0014)		(0.0014)	
<i>Loss</i>	0.0932	***	0.0887	***	0.0904	***
	(0.0021)		(0.0020)		(0.0020)	
<i>Year-FE</i>	Yes		Yes		Yes	
<i>Industry-FE</i>	Yes		Yes		Yes	
<i>Country-FE</i>	Yes		Yes		Yes	
Observations	10,930		10,930		10,930	
R-squared	0.1520		0.1510		0.1540	

Source: elaborated by the author

The linear relationship between the Family variable and dependent variable continue to be negative and statistically significant, even with the application of the three alternative discretionary accrual models (Sig. < 0.05), as do the negative relationship of the LegalSyst variable (Sig. < 0.01). The results of the interaction term are similar to those presented above is that the regression coefficients are negative and statistically significant in both the common-law (Stat. = $-0.0341 + 0.0241 = -0.0117$) and code-law countries (Stat. = $-0.0341 + 0 = -0.0341$), but less negative in the case of the common-law countries (Sig. < 0.10). Thus, the results included in table 10 agree with those in table 11, so it can be demonstrated that the results are

robust. we can therefore demonstrate that the level of earnings management is higher in non-family firms than in family firms and is also more evident in code-law countries than in common-law countries, even when three alternative models for calculating discretionary accruals are used. The alternative linear regression models maintain a coefficient of determination of around 15 per cent and remain statistically significant.

In turn, in table 12, the linear regression model was tested again with four further adaptations to the construction of the sample and the regression model used. Firstly, as was done in the difference of means test (table 8), the sample was balanced using the propensity score matching method, creating a sub-sample with an equal number of family and non-family firms selected from the main sample, based on the similarity of three specific parameters: Size, Leverage, and Growth. Then, to purge possible unexpected and controversial effects during and after the Covid-19 pandemic period, the observations for the years 2020, 2021, 2022 and 2023 were eliminated. In addition, the sample was organised into clusters at country level, in which sub-samples were created according to common characteristics in the various countries. Finally, the Tobit regression model was used as an alternative to the OLS method, through which the regression models presented above were estimated.

The results shown in table 12 continue to be statistically significant, despite having lower confidence levels (Sig. < 0,10), and the coefficient of determination remains close to 15%, as in the main linear regression model, except in the case where Tobin's regression model is used, where the coefficient drops to 5%. In all cases, the relationship between the Family variable and the dependent variable continues to be negative, as does the LegalSyst variable (Sig. < 0.05), so it can be demonstrated that in all cases there is statistically significant evidence that family firms have higher levels of earnings management than non-family firms, as do the code-law countries, which also have higher levels of earnings management than the code-law countries.

Table 12 – Robustness analysis

	(1)	(2)	(3)	(4)
	<i>EM</i>			
Variables	PSM Sample	Without Covid19	Cluster Country-level	Tobit regression
Family	-0.0355 *** (0.0016)	-0.0363 * (0.0017)	-0.0313 * (0.0020)	-0.0313 ** (0.0013)
LegalSyst	-0.0475 ** (0.0052)	-0.0745 *** (0.0041)	-0.0616 *** (0.0016)	-0.0616 ** (0.0041)
Family x LegalSyst	0.0376 * (0.0056)	0.0381 ** (0.0059)	0.0215 ** (0.0028)	0.0215 ** (0.0039)
<i>Size</i>	-0.1770 *** (0.0004)	-0.1680 *** (0.0004)	-0.1890 *** (0.0002)	-0.1890 *** (0.0003)
<i>Tangibility</i>	-0.1350 *** (0.0019)	-0.1260 *** (0.0019)	-0.1410 *** (0.0016)	-0.1410 *** (0.0015)
<i>Return on Assets</i>	-0.0068 (0.0163)	-0.0407 (0.0161)	-0.0151 (0.0147)	-0.0151 (0.0071)
<i>Leverage</i>	-0.0418 ** (0.0049)	-0.0527 *** (0.0050)	-0.0423 (0.0070)	-0.0423 *** (0.0028)
<i>Growth</i>	0.0461 ** (0.0047)	0.0404 * (0.0061)	0.0418 *** (0.0034)	0.0418 *** (0.0024)
<i>MarketBook</i>	0.0864 *** (0.0003)	0.1290 *** (0.0003)	0.1030 *** (0.0003)	0.1030 *** (0.0002)
<i>Dissue</i>	0.1650 *** (0.0032)	0.1770 *** (0.0029)	0.1690 *** (0.0031)	0.1690 *** (0.0016)
<i>Big4</i>	0.0087 (0.0018)	-0.0118 (0.0020)	-0.0015 (0.0017)	-0.0015 (0.0013)
<i>Loss</i>	0.0797 *** (0.0026)	0.0710 *** (0.0029)	0.0855 *** (0.0020)	0.0855 *** (0.0018)
<i>Year-FE</i>	Yes	Yes	Yes	Yes
<i>Industry-FE</i>	Yes	Yes	Yes	Yes
<i>Country-FE</i>	Yes	Yes	Yes	Yes
Observations	6,560	6,558	10,930	10,930
R-squared (Pseud R ²)	0.1410	0.1660	0.1480	0,0540

Source: elaborated by the author

As for the interaction term, the results presented show some divergent aspects from the main empirical model. The results presented in columns 3 and 4 are similar to those presented previously in tables 10 and 11 is that the negative effect of family firms on the level of earnings management is more moderate in common-law countries compared to code-law countries (Sig. < 0.05). On the other hand, the results of the interaction term in columns 1 and 2 allow us to note that in the case of code-law countries the interaction term has a negative sign, as shown in tables 10 and 11, which means that in code-law countries family firms have lower levels of

earnings management than non-family firms. With regard to the common-law countries, the results obtained in these two columns are contrary to those presented in tables 10 and 11, since the coefficient associated with the term is positive, which demonstrates that there is significant statistical evidence (Sig. < 0.05) that in the common-law countries and specifically under the conditions presented (balanced sample and not analysing the post Covid-19 period) family firms have higher levels of earnings management than non-family firms.

In summarise, we can note that the results obtained are robust, because in addition to presenting high levels of confidence, they are maintained even after the changes made to the empirical model, with the exceptions of using the PSM sample and excluding the Covid-19 period, where the Family*LegalSyst interaction term presents contradictory results. Thus, the joint analysis of the results of the linear regression model and the robustness tests carried out lead us, on the one hand, to not reject Hypothesis 1, which tested that family firms have lower levels of earnings management than non-family firms, to not reject Hypothesis 2, since, in general, companies in common-law countries have lower levels of earnings management than companies in code-law countries. and lastly, to not reject Hypothesis 3, given that the results presented demonstrate that the negative relationship between the level of earnings management and family firms versus non-family firms depends on the countries' legal system and that this is more moderate in common-law countries compared to code-law countries.

CHAPTER 4

Conclusions

This dissertation was developed with the aim of analysing earnings management in family firms compared to non-family firms and the moderating effect of countries' legal system in this relationship. In the dissertation was used a sample of 10,940 observations from 27 countries of European Union and United Kingdom, covering 10 years, between 2014 and 2023. The results of the study show that the level of earnings management is higher in non-family firms, lower in common law countries, and that the legal system in force in each country acts as a moderating factor in the level of earnings management between family and non-family firms, since in both common-law and code-law countries. The level of earnings management is lower in family firms, but this relationship tends to be less significant in common-law countries, mainly due to the power that national institutions have to restrict the actions of companies in this type of country.

Specifically, the findings show that family firms have lower levels of earnings management than non-family firms in European context. This result is consistent with other studies already conducted, such as Achleitner et al. (2014), and Borralho et al. (2020). This evidence can be explained by the combination of the three main theories explaining earnings management in family firms: agency theory, stewardship theory, and SEW theory. The unique characteristics of family firms mean that these companies have lower levels of earnings management, due, for example, to the control exercised and concern for intergenerational sustainability.

Furthermore, the results obtained show that common-law countries have lower levels of earnings management than code-law countries. This insight coincides with other studies conducted in this field: Ball et al. (2000), Bushman and Piotroski (2006) and Oz and Yelkenci (2018). These findings are mainly due to the power that national institutions have in restricting the actions of companies, acting as a moderator in the quality of financial information.

Finally, the results indicate that the level of earnings management between family firms and non-family firms depends on the legal system in force in each country and that the lower levels of earnings management in family firms versus non-family firms is moderated in common law countries, compared to code law countries. These findings are in line with other studies conducted (Ansari et al., 2021; Leuz et al., 2003; Paiva et al., 2019). The justification for the results found is related to the fact that the level of earnings management is lower in

countries with stronger national institutions, more developed capital markets and strong legal enforcement.

This dissertation makes multiple contributions to the literature in the areas of accounting, corporate governance, and law. First, it contributes to the expansion of the existing literature in the field of earnings management by addressing recent developments, identifying research gaps, and proposing directions for future studies, thereby strengthening the theoretical and practical relevance of the topic (Bansal, 2024). Secondly, this dissertation contributes to providing a cross-country perspective on the phenomenon of earnings management between family firms and non-family firms (Gavana et al., 2017; Ma & Ma, 2024). This is a valuable contribution, since most existing studies in this field focus on only one country or a small group of countries with similar characteristics and operating in the same legal system. In addition, this dissertation adds to the literature the importance of the legal system in force in each country as a moderating factor in the level of earnings management between family firms and non-family firms, which is currently a research gap in the literature (López-González et al., 2019; Paiva et al., 2019). In short, this dissertation is relevant in that it studies a large sample of European listed companies, not only because of the contributions presented above, but also because of the relevance and robustness of the results obtained. This dissertation is therefore useful for the academic community, companies operating in these markets, potential investors, regulators and all other stakeholders involved in these contexts.

Despite the rigour and robustness of the results presented, this dissertation has limitations. One of the limitations of this dissertation is that it focuses on a single geographical reality: the countries of the European Union and the United Kingdom. Although, as mentioned above, these countries have different legal systems, it is likely that the relationships mentioned in this dissertation would be different when countries from different markets are introduced, such as the developed markets of North America and Oceania, emerging markets and developing markets. Another limitation is that the sample in this dissertation consists only of listed companies, so the results could differ if unlisted companies were considered.

At this point, possible lines of research that could be explored in the future are suggested. Firstly, it is suggested that other moderating factors in corporate governance be added, namely ownership structure, and that their effect on the relationship between earnings management in family firms versus non-family firms be studied. In line with what was mentioned earlier, it would also be interesting to expand on the current study by introducing other geographical realities, such as other developed markets, emerging markets and developing market.

References

- Acemoglu, D., Johnson, S., Robinson, J., & Thaicharoen, Y. (2003). Institutional causes, macroeconomic symptoms: Volatility, crises and growth. *Journal of Monetary Economics*, 50(1), 49–123. [https://doi.org/10.1016/S0304-3932\(02\)00208-8](https://doi.org/10.1016/S0304-3932(02)00208-8)
- Achleitner, A., Günther, N., Kaserer, C., & Siciliano, G. (2014). Real earnings management and accrual-based earnings management in family firms. *European Accounting Review*, 23(3), 431–461. <https://doi.org/10.1080/09638180.2014.895620>
- Ali, A., Chen, T., & Radhakrishnan, S. (2007). Corporate disclosures by family firms. *Journal of Accounting and Economics*, 44(1–2), 238–286. <https://doi.org/10.1016/j.jacceco.2007.01.006>
- Allouche, J., Amann, B., Jaussaud, J., & Kurashina, T. (2008). The impact of family control on the performance and financial characteristics of family versus nonfamily businesses in Japan: A matched-pair investigation. *Political Methods: Quantitative Methods eJournal*. <https://api.semanticscholar.org/CorpusID:154466888>
- Al-Shattarat, B., Hussainey, K., & Al-Shattarat, W. (2022). The impact of abnormal real earnings management to meet earnings benchmarks on future operating performance. *International Review of Financial Analysis*, 81. <https://doi.org/10.1016/j.irfa.2018.10.001>
- Anderson, R., Mansi, S. & Reeb, D. (2003). Founding-Family Ownership and the Agency Cost of Debt. *Journal of Financial Economics*. 68. 263-285. <http://dx.doi.org/10.2139/ssrn.303864>
- Ansari, I., Goergen, M., & Mira, S. (2021). Earnings management around founder CEO reappointments and successions in family firms. *European Financial Management*, 27(5), 925–958. <https://doi.org/10.1111/eufm.12307>
- Astrachan, J., & Shanker, M. (2003). Family businesses' contribution to the U.S. economy: A closer look. *Family Business Review*, 16(3), 211–219. <https://doi.org/10.1177/08944865030160030601>
- Ball, R., Kothari, S., & Robin, A. (2000). The effect of international institutional factors on properties of accounting earnings. *Journal of Accounting & Economics*, 29(1), 1–51. [https://doi.org/10.1016/S0165-4101\(00\)00012-4](https://doi.org/10.1016/S0165-4101(00)00012-4)
- Bansal, M. (2024). Earnings management: A three-decade analysis and future prospects. *Journal of Accounting Literature*, 46(4), 630–670. <https://doi.org/10.1108/JAL-10-2022-0107>
- Baralexis, S. (2004). Creative accounting in small advancing countries: The Greek case. *Managerial Auditing Journal*, 19(3), 440–461. <https://doi.org/10.1108/02686900410524427>
- Beneish, M. (2001), "Earnings management: a perspective", *Managerial Finance*, Vol. 27 No. 12, pp. 3-17. <https://doi.org/10.1108/03074350110767411>
- Berrone, P., Cruz, C., & Gomez-Mejia, L. (2012). Socioemotional wealth in family firms: Theoretical dimensions, assessment approaches, and agenda for future research. *Family Business Review*, 25(3), 258–279. <https://doi.org/10.1177/0894486511435355>
- Borralho, J., Gallardo-Vázquez, D., & Hernández-Linares, R. (2020). Earnings management in private family versus non-family firms. The moderating effect of family business generation. *Revista Espanola de Financiacion y Contabilidad*, 49(2), 210–233. <https://doi.org/10.1080/02102412.2019.1616480>

- Borrallho, J., Gallardo-Vázquez, D., Hernández-Linares, R., & Paiva, I. (2020). The effect of corporate governance factors on the quality of financial reporting in family and non-family firms. *Revista de Contabilidad-Spanish Accounting Review*, 23(2), 167–179. <https://doi.org/10.6018/rcsar.358451>
- Borrallho, J., Hernández-Linares, R., Gallardo-Vázquez, D., & Paiva, I. (2022). Environmental, social and governance disclosure's impacts on earnings management: Family versus non-family firms. *Journal of Cleaner Production*, 379. <https://doi.org/10.1016/j.jclepro.2022.134603>
- Bushman, R., & Piotroski, J. (2006). Financial reporting incentives for conservative accounting: The influence of legal and political institutions. *Journal of Accounting and Economics*, 42(1–2), 107–148. <https://doi.org/10.1016/j.jacceco.2005.10.005>
- Cascino, S., Pugliese, A., Mussolino, D., & Sansone, C. (2010). The influence of family ownership on the quality of accounting information. *Family Business Review*, 23(3), 246–265. <https://doi.org/10.1177/0894486510374302>
- Collins, D., Pungaliya, R., & Vijh, A. (2017). The effects of firm growth and model specification choices on tests of earnings management in quarterly settings. *Accounting Review*, 92(2), 69–100. <https://doi.org/10.2308/accr-51551>
- Davis, J., Schoorman, F., & Donaldson, L. (1997). Toward a stewardship theory of management. *Academy of Management Review*, 22(1), 20–47. <https://doi.org/10.2307/259223>
- DeAngelo, L. (1986). Accounting numbers as market valuation substitutes: A study of management buyouts of public stockholders. *The Accounting Review*, 61(3), 400–420. <http://www.jstor.org/stable/247149>
- Dechow, P., Hutton, A., Kim, J., & Sloan, R. (2012). Detecting earnings management: A new approach. *Journal of Accounting Research*, 50(2), 275–334. <https://doi.org/10.1111/j.1475-679X.2012.00449.x>
- Dechow, P., Sloan, R., & Sweeney, A. (1995). Detecting earnings management. *Accounting Review*, 70(2), 193–225
- Donaldson, L., & Davis, J. (1991). Stewardship theory or agency theory: CEO governance and shareholder returns. *Australian Journal of Management*, 16(1), 49–64. <https://doi.org/10.1177/031289629101600103>
- Donkor, A., Trireksani, T., & Djajadikerta, H. G. (2024). The role of firm complexity in the relationship between integrated reporting and earnings management. *International Journal of Accounting & Information Management*, 32(4), 709–729. <https://doi.org/10.1108/IJAIM-11-2023-0285>
- Eisenhardt, K. (1989). Agency theory: An assessment and review. *Academy of Management Review*, 14(1), 57–74. <https://doi.org/10.2307/258191>
- Ellahie, A., & Kaplan, Z. (2021). Show we money! Dividend policy in countries with weak institutions. *Journal of Accounting Research*, 59(2), 613–655. <https://doi.org/10.1111/1475-679X.12363>
- Elliott, J., & Elliott, B. (2022). *Financial accounting and reporting*. Pearson.
- European Commission. (2009). Overview of family business relevant issues: Research, networks, policy measures and existing studies. Retrieved from <http://ec.europa.eu/enterprise/policies/sme/promoting-entrepreneurship/family-business/>
- Filip, A., & Raffournier, B. (2014). Financial crisis and earnings management: The European evidence. *The International Journal of Accounting*, 49(4), 455–478. <https://doi.org/10.1016/j.intacc.2014.10.004>
- Gavana, G., Gottardo, P., & Moisello, A. (2017). Earnings management and CSR disclosure. Family vs. non-family firms. *Sustainability*, 9(12), 2327. <https://doi.org/10.3390/su9122327>

- Gavana, G., Gottardo, P., & Moisello, A. (2024). Related party transactions and earnings management in family firms: The moderating role of board characteristics. *Journal of Family Business Management*, 14(1), 171–198. <https://doi.org/10.1108/JFBM-07>
- Gomez-Mejia, L., Haynes, K., & Moyano-Fuentes, J. (2007). Socioemotional wealth and business risks in family-controlled firms: Evidence from Spanish olive oil mills. <https://www.researchgate.net/publication/279900703>
- Gunny, K. (2005). What Are the Consequences of Real Earnings Management ? Working Paper, University of Colorado at Boulder. Healy, January, 1–47.
- Healy, P. (1985). The effect of bonus schemes on accounting decisions. *Journal of Accounting and Economics*, 7(1), 85–107. [https://doi.org/10.1016/0165-4101\(85\)90029-1](https://doi.org/10.1016/0165-4101(85)90029-1)
- Healy, P., & Wahlen, J. (1999). A review of the earnings management literature and its implications for standard setting. *Accounting Horizons*, 13(4), 365–383. <https://doi.org/10.2308/acch.1999.13.4.365>
- Isidro, H., Nanda, D., & Wysocki, P. (2020). On the relation between financial reporting quality and country attributes: Research challenges and opportunities. *Accounting Review*, 95(3), 279–314. <https://doi.org/10.2308/ACCR-52607>
- Jensen, M., & Meckling, W. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- Jiraporn, P., Miller, G., Yoon, S., & Kim, Y. (2008). Is earnings management opportunistic or beneficial? An agency theory perspective. *International Review of Financial Analysis*, 17(3), 622–634. <https://doi.org/10.1016/j.irfa.2006.10.005>
- Jones, J. (1991). Earnings management during import relief investigations. *Journal of Accounting Research*, 29(2), 193–228. <https://doi.org/10.2307/2491047>
- Jones, M. (2011). Creative accounting, fraud and international accounting scandals. John Wiley.
- Kothari, S., Leone, A., & Wasley, C. (2005). Performance matched discretionary accrual measures. *Journal of Accounting and Economics*, 39(1), 163–197. <https://doi.org/10.1016/J.JACCECO.2004.11.002>
- La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (1999). Corporate ownership around the world. *The Journal of Finance*, 54(2), 471–517. <http://www.jstor.org/stable/2697717>
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (1998). Law and finance. *Journal of Political Economy*, 106(6), 1113–1155. <https://doi.org/10.1086/250042>
- Leuz, C., Nanda, D., & Wysocki, P. (2003). Earnings management and investor protection: An international comparison. *Journal of Financial Economics*, 69(3), 505–527. [https://doi.org/10.1016/S0304-405X\(03\)00121-1](https://doi.org/10.1016/S0304-405X(03)00121-1)
- López-González, E., Martínez-Ferrero, J., & García-Meca, E. (2019). Does corporate social responsibility affect earnings management? Evidence from family firms. In *Revista de Contabilidad-Spanish Accounting Review* (Vol. 22, Issue 2, pp. 233–247). Universidad de Murcia. <https://doi.org/10.6018/rcsar.349601>
- Ma, L., & Ma, S. (2024). Strategic earnings management in family firms. *Accounting and Finance*. <https://doi.org/10.1111/acfi.13224>
- Memis, M., Hüseyin, E., Nevşehir, Ç., Bektaş, H., Memiş, M., & Çetenak, E. (2012). Earnings management, audit quality and legal environment: An international comparison. *International Journal of Economics and Financial Issues*, 2(4), 460–469. www.econjournals.com

- Mikušová, M., Friedrich, V. & Subhani, M. Do economic and cultural differences influence family businesses? Comparative study from Czechia and Pakistan. *Futur Bus J* **11**, 129 (2025). <https://doi.org/10.1186/s43093-025-00545-3>
- Miller, D., Le Breton-Miller, I., Lester, R., & Cannella, A. (2007). Are family firms really superior performers? *Journal of Corporate Finance*, 13(5), 829–858. <https://doi.org/10.1016/j.jcorpfin.2007.03.004>
- Mnif, Y., & Cherif, I. (2020). Female board directorship and earnings management. *Pacific Accounting Review*, 33(1), 114–141. <https://doi.org/10.1108/PAAR-04-2020-0049>
- Mulford, C., & Comiskey, E. (2002). *The financial numbers game: detecting creative accounting practices*. New York : John Wiley Sons.
- Osma, B., Noguer, B., & Clemente, A. (2005). Research on earnings management. *Revista Espanola de Financiacion y Contabilidad*, 34(127), 1001–1033. <https://doi.org/10.1080/02102412.2005.10779570>
- Oz, I., & Yelkenci, T. (2018). Examination of real and accrual earnings management: A cross-country analysis of legal origin under IFRS. *International Review of Financial Analysis*, 58, 24–37. <https://doi.org/10.1016/j.irfa.2018.04.003>
- Paiva, I. (2020). Corporate governance and financial features of Portuguese family firms. *International Journal of Sustainable Entrepreneurship and Corporate Social Responsibility*, 5, 2379–7401. <http://www.igi-global.com/IJSECSR>
- Paiva, I., & Lourenço, I. (2012). Earnings management in family firms. [s.n.]. <http://hdl.handle.net/10071/6568>
- Paiva, I., Lourenço, I., & Curto, J. (2019). Earnings management in family versus non-family firms: The influence of analyst coverage. *Revista Espanola de Financiacion y Contabilidad*, 48(2), 113–133. <https://doi.org/10.1080/02102412.2018.1463764>
- Poutziouris, P., & Chittenden, F. (1996). *Family businesses or business families?* Institute for Small Business Affairs.
- Prencipe, A., Bar-Yosef, S., Mazzola, P., & Pozza, L. (2011). Income smoothing in family-controlled companies: Evidence from Italy. *Corporate Governance: An International Review*, 19(6), 529–546. <https://doi.org/10.1111/j.1467-8683.2011.00856.x>
- Putra, A., Mela, N., & Putra, F. (2021). Managerial ability and real earnings management in family firms. *Corporate Governance (Bingley)*, 21(7), 1475–1494. <https://doi.org/10.1108/CG-02-2021-0083>
- Qiao, L., Adegbite, E., & Nguyen, T. H. (2025). Chief financial officer overconfidence and earnings management. *Accounting Forum*, 49(1), 181–205. <https://doi.org/10.1080/01559982.2023.2196045>
- Sáenz González, J., & García-Meca, E. (2014). Does corporate governance influence earnings management in Latin American markets? *Journal of Business Ethics*, 121(3), 419–440. <https://doi.org/10.1007/s10551-013-1700-8>
- Salehi, M., Hoshmand, M., & Ranjbar, H. (2020). The effect of earnings management on the reputation of family and non-family firms. *Journal of Family Business Management*, 10(2), 128–143. <https://doi.org/10.1108/JFBM-12-2018-0060>
- Salvato, C., & Moores, K. (2010). Research on accounting in family firms: Past accomplishments and future challenges. *Family Business Review*, 23(3), 193–215. <https://doi.org/10.1177/0894486510375069>

- Sammut, I. (2021). Introduction—The Maltese legal system and the EU. In J. Sammut Ivan and Agranovska (Ed.), *The implementation and enforcement of European Union law in small member states: A case study of Malta* (pp. 1–10). Springer International Publishing. https://doi.org/10.1007/978-3-030-66115-1_1
- Sciascia, S., & Mazzola, P. (2008). Family involvement in ownership and management: Exploring nonlinear effects on performance. *Family Business Review*, 21(4), 331–345. <https://doi.org/10.1177/08944865080210040105>
- Sciascia, S., Mazzola, P., De Massis, A., & Chirico, F. (2023). Family firms: Current debates and future research agenda. *Journal of Family Business Strategy*, 14(2), 100582. <https://doi.org/10.1016/j.jfbs.2023.100582>
- Scott, W. (2015). *Financial accounting theory*. Pearson. <https://books.google.pt/books?id=4oZxngEACAAJ>
- Siaba, S., & Rivera, B. (2024). The evolution of the field of family business research over a decade (2012–2022). *Small Business Economics*, 63(3), 1089–1115. <https://doi.org/10.1007/s11187-023-00866-z>
- Umans, I., & Corten, M. (2023). Ownership succession intentions affecting earnings management in private family firms. *Small Business Economics*, 61(2), 827–842. <https://doi.org/10.1007/s11187-022-00696-5>
- Viana, D., Lourenço, I., Black, E., & Martins, O. (2023). Macroeconomic instability, institutions, and earnings management: An analysis in developed and emerging market countries. *Journal of International Accounting, Auditing and Taxation*, 51, 100544. <https://doi.org/10.1016/j.intaccaudtax.2023.100544>