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**ECONOMIC CONSEQUENCES OF INTERNATIONAL ACCOUNTING
STANDARD 38 AND IMPACT ON ORGANISATION'S MANAGEMENT
DECISION-MAKING BEHAVIOUR WHEN INVESTING IN R&D.**

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DECISION-MAKING BEHAVIOUR WHEN INVESTING IN R&D.**

by
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TO MY WIFE, MY MOTHER AND MY BROTHER.

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Abstract

The purpose of this thesis is to explore the economic consequences of IAS 38 and how they influence management's decision-making behaviour regarding R&D investments. IAS 38 allows management to choose whether to capitalise or expense a development cost about investment in R&D. Hence, by following these options, managers can adopt real earnings management practices that may modify the actual financial disclosure when results are off track. The study aims to identify a positive relationship between the non-anticipated economic consequences (translatable into financial performance) and the management's decision to adopt real earnings management when investing in R&D under IAS 38. Following the discussion, the research purpose is broken down into the following objectives: 1) identify the positive effect of the non-anticipated economic consequences (translatable into financial performance) on management's decision-making behaviour with regard especially to real earnings management when investing in R&D under IAS 38, 2) explore in detail the process whereby the non-anticipated economic consequences positively influence management's decision-making behaviour (translatable into financial performance) when investing in R&D under IAS 38, 3) explore the factors that influence how the non-anticipated economic consequences positively impact on management's decision-making behaviour (translatable into financial performance) when investing in R&D under IAS 38.

A mixed methods approach was adopted, involving a survey and semi-structured interview, followed by convergent triangulation of the methods' findings. The survey draws subjective results and data to investigate any positive interrelationship between the financial performance's effect on adopting real earnings management policy when management makes crucial decisions, like investing in R&D under IAS 38. At the same time, the interview allows the researcher to explore in-depth and understand management's decision-making behaviour, such as the adoption of real earnings management in investing in R&D under IAS 38 and how financial performance influences it. The interview's findings provide support and complementary data to the survey's, ensuring the study's credibility and trustworthiness while enhancing the understanding of the studied phenomenon (triangulation of results). The population sample in both studies included CFOs from publicly listed UK companies that have adopted IAS/IFRS and met the professional experience and accounting knowledge criteria. The collected evidence covered a variety of sources, including a) 165 surveys and b) 10 interviews.

As far as research objective (1) is concerned, the findings indicate a positive relationship between the non-anticipated economic consequences (translatable into financial performance) and management's decision-making behaviour through real earnings

management when investing in R&D under IAS 38. Management decides to follow manipulative policies when financial performance is not on target, especially regarding investment in R&D under IAS 38. An out-of-target financial performance affects management to adopt more real earnings management policies to manipulate the actual result.

Concerning research objective (2), the findings suggest that management adopts a continuous performance monitoring policy, constituting a process whereby non-anticipated economic consequences influence an organisation's decision-making behaviour. The researcher identifies the management's choice for continuous monitoring policy of the financial data as a way to avoid unexpected negative results or even to minimise the failure of a strategy. Also, such a policy reflects the perceived importance of the financial statements and supports or effectively encourages real earnings management activities. The findings show that the more important the financial data for the managers, the more they insist on a continuous monitoring policy to control risks and unexpected results. This specific decision is more likely to be made when the financial performance is vital to them and supports more real earnings management activities.

Regarding research objective (3), the research findings indicate that the CFO's accounting knowledge, role and professional experience; the managers' cognisance or knowledge of their company; and "grant funding" are important factors in impacting or shaping the management's decision-making behaviour, enhancing the relationship between R&D expenditure decisions and reported performance. All the factors mentioned above reflect the personal and professional characteristics that influence the decision-making behaviour of managers. However, one exogenous factor appears to be highly influential when investing in R&D under IAS 38, namely grant funding. All respondents admit the use of questionable methods to meet the basic requirements of the funding, which might result in changes in the actual financial picture.

This thesis contributes to real earnings management and international accounting literature by offering insights into the influence of the economic consequences on the management's decision-making process and the dysfunctionality of the IAS/IFRS when providing the option of choice through a specific accounting standard. Such cases develop information asymmetry with all interested parties promoting real earnings management policies, which work against the fundamental objective of the IAS/IFRS to inform public interest about an organisation's financial disclosure and meet the common needs of all the organisation's stakeholders.

Contents

	<u>Page</u>
Acknowledgements.....	I
Abstract.....	II
Contents	IV
List of Tables	XI
List of Figures.....	XIII
List of Appendices	XIV
List of Abbreviations	XV
Declaration,.....	XVII
1. Introduction to the Research Problem	1
1.1. Introduction	1
1.2. Research Justification.....	3
1.2.1. Importance of the topic	3
1.2.1.1. Conceptual Importance of the Topic.....	3
1.2.1.2. Functionality of the IAS 38 and Earnings Management.....	7
1.2.2. Shortcomings of Existing Research	10
1.2.2.1. Conceptual Shortcomings	10
1.2.2.2. Empirical Shortcomings.....	13
1.3. Research Purpose, Research Objectives and Hypotheses.....	14
1.4. Research Methodology.....	17
1.4.1. The Scientific Paradigm	17
1.4.2. The Research Method and Analysis of Empirical Findings.....	18
1.5. Discussion of Research's Findings	21
1.6. Research Contribution	24
1.6.1. Conceptual Contribution	24
1.6.2. Methodological Contribution	26
1.6.3. Empirical Contribution.....	27

1.6.4. Management’s Perspective Contribution	29
1.7. <i>Defining Important Terms of the Research</i>	30
1.8. <i>Limitations of the Research</i>	31
1.9. <i>The Structure of the Thesis</i>	32
2. Theoretical Framework.....	33
2.1. <i>Introduction</i>	33
2.2. <i>IAS 38 and Impact on Management’s Decision-Making Behaviour</i>	36
2.3. <i>Positive Accounting Theory (PAT)</i>	40
2.3.1. <i>Introduction</i>	40
2.3.2. <i>Positive Accounting Theory’s Objectives and Key Assumptions</i>	42
2.3.3. <i>Positive Accounting Theory’s Hypotheses and Simplification’s Characteristic in Context</i>	45
2.3.4. <i>Positive Accounting Theory and the Influence of Accounting on Management’s Behaviour</i>	47
2.4. <i>Real Earnings Management (REM)</i>	49
2.4.1. <i>Introduction</i>	49
2.4.2. <i>Real Earnings Management Characteristics and Management’s Behaviour</i>	51
2.4.3. <i>Real Earnings Management and Management’s Decisions about R&D Investments</i>	54
2.5. <i>Economic Consequences of Accounting Policies and Choices</i>	56
2.5.1. <i>Introduction</i>	56
2.5.2. <i>Economic Consequences and Impacts of the Accounting Principles on the Organisation’s Behaviour</i>	57
2.5.3. <i>Economic Consequences Categorisation and Management’s Decision-Making Behaviour</i>	59
2.5.4. <i>Economic Consequences Influence on the Policymakers and Practical Implications</i>	63

2.6. <i>Empirical Literature on Economic Consequences of Accounting Rules and Principles</i>	66
2.6.1. IAS/IFRS's Development and Contents of IAS 38.	66
2.6.2. The Empirical Literature on Economic Consequences of Accounting Policies and Choices in R&D Projects.	69
2.6.3. Earnings Management and Management's Decision-Making Influenced by the Accounting Choice.	74
2.6.4. Importance of Financial Statements in the Organisation's Decisions.	79
2.6.5. Information Asymmetry as an Influential Factor for the Organisation's Decisions.	83
2.7. <i>Survey's Hypothesis Development</i>	87
2.7.1. Development of Hypothesis 1	87
2.7.2. Development of Hypothesis 2	91
2.7.3. Development of Hypothesis 3	94
3. Methodology	99
3.1. <i>Introduction</i>	99
3.2. <i>Ontology</i>	101
3.3. <i>Epistemology</i>	104
3.4. <i>Research Methodology and Methods</i>	107
3.4.1. Methodology's Theoretical Perspective	107
3.4.2. Research Approach and Strategy	110
3.4.3. Data Collection Processes	112
3.5. <i>Survey</i>	115
3.5.1. Introduction	115
3.5.2. Sample and Web Survey	116
3.5.3. Measurements	120
3.5.4. Questionnaire and Questions	123
3.5.4.1. Introduction	123

3.5.4.2. Introductory and Screening Questions – First Part of the Survey Questionnaire	126
3.5.4.3. Impact of Economic Consequences on Managerial Practices – Second Part of the Survey Questionnaire	128
3.5.4.4. How the Economic Consequences impact Managerial Practices – Third and Fourth Part of the Survey Questionnaire	130
3.5.5. Piloting the Questionnaire	133
3.6. <i>Interview</i>	134
3.6.1. Introduction	134
3.6.2. Interview Research Strategy	136
3.6.3. Researcher’s Profile and Role in the Interview Process	138
3.6.4. Study Participants / Sample	139
3.6.5. Data Collection Process	141
3.6.6. Semi-structured Interview Guide.	142
3.6.6.1. Introduction and Introductory Questions	142
3.6.6.2. Economic Consequences Influence on Management’s Decisions in Investing in R&D	144
3.6.6.3. Management’s Evaluation of IAS 38 and Recommendations for the Accounting Standard	146
3.6.7. Procedures Followed	148
3.7. <i>Data Analysis Strategy</i>	150
3.7.1. Introduction	150
3.7.2. Quantitative Data Analysis Strategy	150
3.7.3. Qualitative Data Analysis Strategy	153
3.7.4. Generating Codes and Familiarising the Data for the Thematic Analysis	155
4. Presentation of Results	158
4.1. <i>Introduction</i>	158
4.2. <i>Presentation of Quantitative Method’s Results</i>	159

4.2.1. Introduction	159
4.2.2. Data Preparation	160
4.2.3. Descriptive Statistics of the Quantitative Study	162
4.2.4. Cronbach’s Alpha – Reliability of Measurements	180
4.2.5. Parametric Test Assumptions	181
4.2.6. Independent One-tailed t-test and Simple Linear Regression	182
4.2.7. Correlation and “Gender” as a Control Variable.....	184
4.2.8. Multiple Regression Analysis.....	187
4.3. Conclusion.....	194
5. Presentation of the Qualitative Method’s Results.....	196
5.1. Introduction.....	196
5.2. Descriptive Statistics of the Qualitative Study	197
5.3. Thematic Analysis	201
5.3.1. Introduction	201
5.3.2. Acceptance of using Real Earnings Management Strategies	203
5.3.2.1. Acceptance of Manipulation of Financial Statements through Organisational Practices to Meet Targets	203
5.3.2.2. Company’s Performance Enhances the Management’s Acceptance of Manipulation of Financial Statements	207
5.3.3. Ways and Factors of Manipulation while Using Real Earnings Management Strategies.....	208
5.3.3.1. Ways of Manipulation of Financial Statements through Organisational Practices	208
5.3.3.2. Company’s Performance as a Factor of Manipulation of Financial Statements through Organisational Practices	212
5.3.3.3. Financial Statements’ Continuous Monitoring as a Manipulative Decision- Making Factor.....	214

5.3.3.4. IAS 38's Information Asymmetry as Manipulative Factor on Management's Decision-Making Behaviour	216
5.3.3.5. Other Manipulative Factors Influence Management's Decision-Making Behaviour	218
5.3.3.6. CFO's Role and Working Experience as Influencing Factors in the Company's Strategies	222
5.3.3.7. Company's Description and R&D Department as Influential Factors on Decisions	224
5.4. Conclusion	225
6. Discussion of Findings	228
6.1. Introduction	228
6.2. Discussion of Findings from the Quantitative Method	229
6.2.1. The Relationship Between the Economic Consequences and Management's Decisions	229
6.2.2. Importance of Financial Statements in Management's Manipulative Decisions	234
6.2.3. Reduced Information Asymmetry on Management's Manipulative Decisions ...	236
6.2.4. Conclusion of the Discussion on Quantitative Findings	240
6.3. Discussion of Findings from the Qualitative Method	242
6.3.1. Influence of Economic Consequences on Decision-making Behaviour under Real Earnings Management	242
6.3.2. How the Economic Consequences Influence Decision-making Behaviour through Real Earnings Management	246
6.3.3. Factors Influencing the Economic Consequences' Impact on Management's Decision-making Behaviour through Real Earnings Management	250
6.3.4. Conclusion of the Discussion on the Qualitative Findings	252
6.4. Triangulation of Results	256
7. Conclusions, Implications, Limitations and Directions for Future Research	269
7.1. Introduction	269
7.2. Conclusions of the Empirical Findings	269

<i>7.3. Implications of the Research</i>	279
<i>7.4. Limitations of the Research</i>	283
<i>7.5. Directions for Future Research</i>	285
References.....	288
Appendices.....	308

List of Tables

	<u>Page</u>
Table 1: Economic Consequences Classification Systems	61
Table 2: Survey's Targeted Population and Response Rate	120
Table 3: Themes and Codes for the Thematic Analysis	156
Table 4: Quantitative Analysis - Descriptive Statistics	163
Table 5: Acceptance of Manipulation Measurement Scale (4 Statements)	168
Table 6: Importance of Financial Statements for Managers Measurement Scale (4 Statements)	173
Table 7: Information Asymmetry Measurement Scale (4 Statements).....	177
Table 8: Reliability of Survey's Measurement Scales	181
Table 9: Company's Performance with Management's Acceptance of Manipulation (Hypothesis 1).....	183
Table 10: Primary Model's Coefficient	184
Table 11: Primary Model's Variables Analysis Symbols.....	184
Table 12: Correlation Between the Company's Performance and Acceptance of Manipulation	185
Table 13: Primary Model's Coefficient Influenced by the Gender Control Variable	186
Table 14: Primary Model's Variables under the Effect of Control Variable - Analysis Symbols.....	186
Table 15: Variance and Standard Deviation – Multiple Regression Analysis.....	187
Table 16: Influential Cases - Residuals Statistics ^a	189
Table 17: Multivariate Analysis – Moderators' Impact	190
Table 18: Hierarchical Multivariate Analysis - Variables Entered/Removed ^a	191
Table 19: Hierarchical Multivariate Analysis - Model Summary ^d	192
Table 20: Hierarchical Multivariate Analysis – Finalised Model - ANOVA ^a	192
Table 21: Hierarchical Multivariate Analysis – Finalised Models' Coefficients ^a	193
Table 22: Finalised Model's Variables Analysis Symbols	194

Table 23: Qualitative Analysis - Descriptive Statistics 198

List of Figures

	<u>Page</u>
Figure 1: Theoretical Model	38
Figure 2: Hypothesis 1	90
Figure 3: Hypothesis 2	93
Figure 4: Hypothesis 3	97
Figure 5: Survey's Theoretical Model	98
Figure 6: Theoretical Model & Empirical Stages	114
Figure 7: Scatterplot – Hierarchical Multiple Regression Analysis	188
Figure 8: Histogram – Hierarchical Multiple Regression Analysis.....	188

List of Appendices

	<u>Page</u>
Appendix 1: Survey’s Cover Letter	308
Appendix 2: Survey’s Consent Form.....	309
Appendix 3: Survey’s Participant Information Sheet	310
Appendix 4: Survey’s Questionnaire (Company’s Positive Performance Scenario).....	313
Appendix 5: Survey’s Questionnaire (Company’s Negative Performance Scenario).....	316
Appendix 6: Interview’s Cover Letter	319
Appendix 7: Interview’s Consent Form.....	320
Appendix 8: Interview’s Participant Information Sheet	321
Appendix 9: Interview’s Guide and Questionnaire	325

List of Abbreviations

CEO	Chief Executive Officer
CFO	Chief Financial Officer
CICA	Canadian Institute of Charter Accountants
EPS	Earnings Per Share
ESG	Environmental, Social and Governance
FAME	Financial Analysis Made Easy (database)
FASB	Financial Accounting Standards
FEBs	Future Economic Benefits
GAAP	Generally Accepted Accounting Principles (US GAAP)
GPM	Gross Profit Margin
IAS	International Accounting Standards
IASB	International Accounting Standards Board
IASC	International Accounting Standards Committee
ICA	International Congress of Accountants
IFRS	International Financial Reporting Standards
MBA	Master of Business Administration
NPM	Net Profit Margin
OLS	Ordinary Least Squares
P&L	Profit & Loss
PAT	Positive Accounting Theory
R&D	Research and Development
REM	Real Earnings Management
ROI	Return on Investment
UK	United Kingdom
US or USA	United States of America

SASB	Swedish Accounting Standards Board
SEC	Security and Exchange Commission
SFAS	Statement of Financial Accounting Standard
SME	Small and Medium-sized Enterprises
SOX	Sarbanes-Oxley Act

I, Angelos Angelakis, confirm that the Thesis is my own work. I am aware of the University's Guidance on the Use of Unfair Means (www.sheffield.ac.uk/ssid/unfair-means). This work has not been previously presented for an award at this, or any other, university.

1. Introduction to the Research Problem

1.1. Introduction

Prior research finds that managers choose to exacerbate earnings management about investment in R&D under the US GAAP, although they follow a mandate for R&D capitalisation and are responsible for the external reporting consequences of their R&D projects (Cooper and Selto, 1991; Oswald and Zarowin, 2007; Seybert, 2010). Managers possibly engage in such activities in investment in R&D to meet performance benchmarks even though the US GAAP does not provide the option of choice (Cooper and Selto, 1991; Oswald and Zarowin, 2007; Seybert, 2010). The International Accounting Standard (IAS) 38 demarcates the accounting criteria for recognising, measuring, and disclosing intangible assets (IFRS, 2022), such as “Investment in R&D”. IAS 38 provides management in effect with the option to choose whether to capitalise (to treat as “development expenditure”) or expense an R&D cost in relation to investment in R&D (IAS Plus, 2022). The choice arises because the decision is subject to criteria that are, to a degree, subjective. Management must follow the applicable accounting standard’s instructions and disclose financial information, like those set out in the IAS 38 for R&D investment. Hence, by extension, by following the above-mentioned options of IAS 38, managers can adopt real earnings management (REM) practices that may modify the actual financial disclosure when results are off track. That is, there are in practice following this logic possibilities of real earnings management.

The current thesis explores “if” and “how” the non-anticipated economic consequences generated by the adoption of the IAS 38 positively influence the organisation’s management decision-making behaviour to adopt real earnings management policies regarding R&D investments. The economic consequences could be simultaneously anticipated and non-anticipated (Brüggemann et al., 2013); and perceived, and stem from the accounting policies an organisation follows (Blake, 1992). Thus, by following the options provided by IAS 38,

managers have the opportunity to adopt questionable operational practices that may modify the actual financial disclosure when results are off track. Some examples of such practices rely on postponing an investment, delaying recording expenses in the books, or transferring any costs from one project to another.

It seems likely that the organisation's management views the anticipated economic consequences as a decision-making factor. Thus, a non-anticipated and out-of-track performance might motivate managers to opt to follow real earnings management policies, modify operational activities relating to R&D investment, and thus impact the financial disclosure. Such situations present an unreal or unreasonable financial picture of the organisation while exacerbating information asymmetry with the stakeholders. These cases may well tend to occur as a managerial effect on an entity's decision-making behaviour, especially in R&D investment decisions.

This study focuses on the economic consequences generated by IAS 38 and links the consequences to their influence on management's decision-making behaviour regarding R&D investments after the management's interpretation of them. The concern is to explore whether management choices rely on the organisation's non-anticipated economic consequences and how managers utilise real earnings management to affect the entity's operational activities. Some evidence of this is found in this present study. Such situations appear to affect an entity's decision-making behaviour, especially in R&D investment decisions under IAS 38. In summary, the present research investigates and concentrates on the feedback provided regarding the economic consequences and their impact on the management's decisions. The management decides to include any insights into its decision-making process and change its R&D investment behaviour.

From the above discussion, Chapter 1 introduces the reader to the research problem. Next, in subsection 1.2., justifications for the study are presented. Subsection 1.3. outlines the

research problem, objectives and hypotheses. The subsection 1.4. describes the research methodology, and the following, subsection 1.5, addresses the research's findings. In subsection 1.6., the researcher comments on the major intended scientific and managerial contributions, and in subsection 1.7., the most important terms used throughout the thesis are defined. In subsection 1.8., the author briefly refers to the discussion of the findings, and, finally, in subsection 1.9. the study's limitations are discussed.

1.2. Research Justification

1.2.1. Importance of the topic

1.2.1.1. Conceptual Importance of the Topic

This research reflects a pragmatistic approach to issues stemming from an organisation's real practices connected with financial accounting. In international accounting literature, there exists a general agreement about a continuous need for research on issues relating to financial accounting and reporting, standard-setting, economic consequences, and real earnings management (Kenny and Larson, 2018; Gordon et al., 2019). In the last two decades, the number of such studies has at least doubled (Kenny and Larson, 2018). Most of these studies have been to reflect on real problems and dysfunctionalities of the accounting field (Kenny and Larson, 2018). Such a case is described by Seybert (2010), who claims that a pattern in R&D expenditures which promotes real earnings management operates as a factor impacting accounting processes and disclosure. Such a case is pragmatic in the US and could be helpful to investigate under other reporting methods and accounting principles outside the US GAAP (Seybert, 2010). The above discussion further supports the case for this study while justifying the research methods, namely the survey and semi-structured interview. Such choices reflect a more in-depth investigation of reality and simultaneously allow us to answer the

research question empirically and originally (Wilner, 1982; Cooper and Selto, 1991; Seybert, 2010).

Furthermore, the international accounting literature examines multiple crucial phenomena based on the accounting standards and procedures adopted by organisations and related to the management's interpretation and behaviour. Specifically, many academics criticise the functionality and substance of IAS 38, which entails accounting practices that remain controversial, and suggest more research that reflects the reality (Garanina et al., 2021). Dinh et al. (2015) say that the IAS 38 capitalisation of R&D development costs creates instability and challenges analysts when forecasting R&D investment earnings. Forecasting errors and dispersion are higher due to the uncertainty of the benefits from the investment and following the directions of the accounting policy suggested by IAS 38 (Dinh et al., 2015). Investors also rely on the usefulness of R&D accounting information under IAS 38, especially the capitalisation of R&D costs (Mazzi et al., 2022). They claim that the IAS 38 impacts the R&D's financial disclosure, which relies on the standard's vagueness and perceived subjectivity (Mazzi et al., 2022). Hence, a controversial accounting standard, like IAS 38, distorts an organisation's financial reality, making it important to deeply investigate its dysfunctionality and connection to reality.

Following the above, accounting reports rely on the functionality of an accounting standard, and accounting standards can engender economic consequences that impact all organisations while leading to enhanced interest in research about it. In practice, the chosen accounting policies directly affect the accounting reports, which may induce feedback for interested parties and influence decisions (Zeff, 1978), like IAS 38's economic consequences. Since the 1990s, the policy setters' near-exclusive interest has focused on the disclosure of financial statements and the exchange of financial information between organisations and investors, both actual and potential (Deegan and Unerman, 2011). Such interest led to several

studies regarding awareness of the economic consequences and the quality of financial disclosure (Deegan and Unerman, 2011). The constantly changeable economic environment ostensibly enhances the policy setters' concern about issuing accounting standards that provide their actual financial status to all stakeholders. The anticipated economic consequences play a critical role in the managerial choices of accounting principles and policies; the two are inseparable and serve each other (Taylor and Turley, 1986) – and they can impact on real expenditure decisions, as highlighted in the literature of real earnings management (Seybert, 2010).

Each time an organisation follows an accounting policy, it may well first consider its legitimacy through pragmatic financial disclosure, interest, and including in long-term survival. While it is also important for an organisation's legitimacy to be seen to follow accounting regulations and principles (Boland and Gordon, 1992), the organisation's management must also serve its interest through its decisions, including regarding disclosure, in a competitive economy (Hillman and Hitt, 1999). The management of an organisation attempts to maximise or increase its wealth in making decisions, while the accountant's obligation is ostensible to merely report the entity's status and financial results (Gordon, 1964). Hence, such a relationship appears to be much more complex based on real cases and conditions (Watts and Zimmerman, 1986). The above leads the researchers to investigate it through empirical evidence and a deep and clear understanding of reality (Watts and Zimmerman, 1986). This study importantly focuses on empirically identifying, investigating and exploring managerial practices following questionable patterns that influence an entity's actual status and implicate accounting and the status of its legitimacy.

Managerial decisions reflect the organisation's practices and present reality. In practice, such a decision also relies on accounting policies and demonstrates the application of an accounting standard with generated economic consequences (Milne, 2002). Specifically, a

manager's accounting decision is a multidimensional choice, and it has been deemed crucial to make it in view of the implications for the organisation, the behavioural changes and ensuing outcomes (Fields et al., 2001). It is important to combine economic consequences with various managerial and behavioural approaches focused on an appreciation of the reality (Fields et al., 2001). Such research provides new paths to investigate the implications of accounting policies from different perspectives (Fields et al., 2001). The present study is inspired by phenomenon-driven research, like any research focusing on providing accurate and insightful information to the real-world (Doh, 2015), and professional accountants who argue about the importance of accounting policies and the impact of the economic consequences of these policies on the organisation's decision-making behaviour. In reality, the effects of accounting policies and choices must be identified and interpreted (Watts and Zimmerman, 1990). It is important to investigate any economic consequences that influence the management's decision and even give rise to the manipulation of operational activities to meet targets (Seybert, 2010). Such a phenomenon has a realistic influence on all kinds of management decisions.

The current study focuses on R&D investment and IAS 38. Managers, in effect, have the option to decide on treating the investment in R&D via capitalising or expensing the R&D development expenses (Dinh et al., 2016). Therefore, even under IAS 38, this decision is again at the management's discretion (Dinh et al., 2016). Managers seize the opportunity to act rationally and opportunistically when they have the option to choose and follow a specific accounting policy (Holthausen and Leftwich, 1983). A common managerial practice is to engage in and manipulate actual organisational transactions to achieve specific earnings targets, namely real earnings management (Roychowdhury, 2006). Furthermore, real earnings management strategies are implemented through ordinary standard transactions and impact the organisation's financial statements (Gunny, 2010).

1.2.1.2. Functionality of the IAS 38 and Earnings Management

The functionality of IAS 38, especially regarding investment in R&D, has been a controversial topic since its first development. Cairns (1999) addresses that the International Accounting Standard Committee (IASC), from the beginning, has identified the need to develop an accounting standard that provides the option regarding R&D investments to the entity to follow the “benchmark treatment” of expensing R&D costs. However, in cases where some criteria are met, the entity can capitalise specific costs, the so-called “allowed alternative treatment” (Cairns, 1999). In reality, the IAS 38 has remained the same since the revision of IAS 9 (R&D) (Mazzi et al., 2022), giving managers the discretionary decision-making power to determine whether a project meets the development costs capitalisation criteria (Smith et al., 2001).

According to IAS 38-Intangible Assets, particularly the part about investment in R&D, all costs must be expensed (IFRS, 2022). However, in relation to R&D, IAS 38 also provides management in effect with the option to choose whether to capitalise or expense an R&D cost in relation to investment in R&D (IAS Plus, 2022). It is proposed that the capitalisation of development costs treatment demands the entity to demonstrate that the specific intangible asset arises from development (or the development phase of an internal project) while simultaneously following specific criteria (Mazzi et al., 2022). These prerequisites (criteria) focus on the organisation’s:

- 1) technical feasibility of completing the intangible asset so that it will be available for use or sale;
- 2) intention to complete the intangible asset until the end;
- 3) ability to sell (or use) the intangible asset;
- 4) availability of adequate resources, technical, financial or other, to complete the asset;
- 5) ability to reliably measure the expenditure;
- 6) ability to justify that the asset will generate future economic benefits (Mazzi et al., 2022).

All those mentioned above are necessary so the organisation can officially clarify that the specific costs can be capitalised, appearing as assets on the balance sheet, and not treated as expenses influencing the income statement's result.

Furthermore, Mazzi et al. (2019) signalises that the "returns on investment", namely criterion 6, is challenging to track in some cases from the entities, which increases the risk of over- or under-investment in an R&D asset. Thus, the non-recognition of an important R&D investment in the financial statements distorts the entity's performance, obstructing the accurate ROI assessment of the specific asset (Mazzi et al., 2019). Also, the inability to reliably measure the inherent assessment of the future benefits of the R&D investment raises issues when the organisation needs to clearly separate the identifiable development costs, which is on management's free interpretation and judgement, which cost to capitalise or expense (Barker et al., 2020). Additionally, the minimal mandatory disclosure requirements of the R&D's investment projects raise concerns regarding their recognition of being internally generated (Dinh et al., 2016). In the majority of the criteria, the management, auditors and analysts can easily exercise judgement, being subjective and undermining the quality and comparability of the financial statements (Dinh et al., 2016). As a result, the management is prone to follow questionable practices, while subjectivity, judgement, and interpretation are characteristics that determine the IAS 38's form from the beginning.

Following the discussion, any liberty for the management to freely interpret and judge an accounting standard clearly motivates it to choose unethical or questionable practices and finally manipulate the actual disclosure. Such strategies fell in the spectrum of real earnings management by engaging in and manipulating actual organisational operations to achieve specific earnings targets and impact the annual financial reporting (Roychowdhury, 2006). REM involves tangible, operational actions stemming from the management that affect the company's actual performance and cash flows (Järvinen and Myllymäki, 2016). Graham et al.

(2005) indicate the management's willingness to manipulate earnings and meet targets through actual operational activities rather than accrual earnings management. This activity can be achieved by influencing investors, creditors, or other stakeholders' perceptions of the company's financial health (Järvinen and Myllymäki, 2016). REM involves manipulating a company's operational activities to influence reported earnings; while it can be used for various reasons, such as meeting short-term financial targets or improving the perception of the company.

Alike managerial policies must be cautiously approached to ensure they remain ethical and legal and do not harm the company's long-term prospects. Based on REM strategies, CFOs and CEOs intend to “burn” the economic value of an investment, like in R&D, to meet financial reporting goals by using accounting discretion when reporting the costs of the particular project and changing the flow of the cash (Graham et al., 2005). Likewise, the decision-makers can reduce or even cease their investment in R&D projects and, eventually, provoke suboptimal long-term performance due to investment budget constraints, which are ways of REM (Cooper and Selto, 1991). Any changes in the operational activities of R&D directly influence the transactions and cause shifts in a company's performance, and all the above results in a behavioural variation in those investment decisions (Cooper and Selto, 1991). Simultaneously, managers can overinvest in R&D to protect their reputations from potential damage caused by an abandoned capitalised project (Seybert, 2010). Such a pattern presents management as responsible for the accounting reporting of R&D projects, and its effects thereof could intensify real earnings management strategies for an organisation (Seybert, 2010). Managers are more likely to engage in such behaviour, alter their decisions to prevent reputational damage, and avoid any negative economic consequences from R&D capitalisation (Seybert, 2010). All of the above are real examples of REM strategies followed by organisations with a primary focus on presenting a manipulated result reflecting an alternative financial disclosure.

Real earnings management can raise ethical and legal concerns. At the same time, not all REM policies are illegal; certain actions regarding changes in operational activities, if taken to an extreme or with the intention to deceive investors or regulators, may cross legal boundaries. The particular policies are different from income smoothing or accrual-based earnings management. By income smoothing, the management acts following accounting processes of manipulating the time profile of earnings or earnings reports to level out fluctuations in the reported income while not increasing reported earnings over the long run (Fundenberg and Tirole, 1995). Additionally, accrual-based earnings management appears when managers follow alternative accounting policies rather than the appropriate ones to achieve earnings targets from a set of GAAP (Cohen and Zarowin, 2010). Even though the above cases address manipulative strategies from the organisation's management, they reflect a part of what the managers can opportunistically do whenever necessary.

1.2.2. Shortcomings of Existing Research

1.2.2.1. Conceptual Shortcomings

Given the emergence of more studies related to the actual effect of IAS/IFRS, a limited tradition of theory development and empirical research is to be expected. Indeed, scrutiny of the international accounting standards has been based largely on empirical studies showing overall benefits associated with the mandatory adoption of IAS/IFRS and avoiding discussing any detriments (Gordon et al., 2019). Supporting the importance of IAS/IFRS since their development and adoption, the specific accounting regulation has arguably been one of the most significant accounting developments (Kenny and Larson, 2018; Gordon et al., 2019). The idea of the IAS/IFRS is to reflect the optimistic part of implementing a common accounting regulation worldwide. However, some critical dysfunctionalities, the controversial influence on specific groups, and the debatable effect on managerial behaviour make them open to

criticism and influence their immediate adoption worldwide (Kenny and Larson, 2018; Gordon et al., 2019). Therefore, any additional research would provide more evidence about the advantages of IAS/IFRS implementation and enhance its global adoption.

The extant literature supports that IAS/IFRS implementation benefits stakeholders and organisations. Such benefits stand provided the accounting standards increase the transparency of the financial statements and the coherent financial comparability with other organisations from different countries (Daske, 2006). Despite such promising results, several dysfunctionalities and unethical or illegal applications have thwarted the general acceptance and adoption of IAS/IFRS in all markets worldwide (Leuz and Verrecchia, 2000). Specifically, IAS 38 (Investment in R&D) appears as a controversial accounting standard that provides specific guidance for organisations through different options; still, its interpretation allows organisations' management to use real earnings management policies and alter the actual financial disclosure (Oswald et al., 2021). R&D drives the entity's long-term innovation and productivity growth, which makes it very important for long-term survivability (Brown et al., 2017). As a result, such a critical accounting standard for every organisation needs to be specific, progressive, and supportive of transparency while considering the reality, such as the presence of economic consequences.

To date, international accounting literature does not specifically deal with how economic consequences might influence management's decision-making behaviour. Studies examine the voluntary and mandatory adoption of IAS/IFRS and their consequences, for example, Leuz and Verrecchia (2000) and Daske et al. (2008). However, only a few studies, such as Callimaci and Landry (2004), Cazavan-Jeny and Jeanjean (2006), and Oswald and Zarowin (2007), concentrate on IAS 38 and explore the results of capitalising R&D expenditures, how different markets react, and the consequences of that particular action. Other studies discuss the reflection of the economic consequences of the US GAAP regarding

investment in R&D following earnings management policies (Wilner, 1982; Cooper and Selto, 1991; Seybert, 2010). The last mentioned studies refer explicitly to the US GAAP and provide evidence of the organisational pattern that the management follows regarding R&D expenditures (Wilner, 1982; Cooper and Selto, 1991; Seybert, 2010). All the studies mentioned above engage with perspectives distinct to that of the influence of the economic consequences on managerial decisions, especially regarding R&D investment.

Following the discussion, Gordon et al. (2019) claim that there is a continuous need for investigation into the real effects of IAS/IFRS adoption in an era where they have already been adopted to redress and develop functional accounting standards. Also, Seybert (2010) claims the importance of examining accounting practices by drawing insights from “real” problems and publicly available data following accounting standards other than the US GAAP regulation. Diachronically, Cooper and Selto (1991) and Wilner (1982) also emphasise that there appears to be a prompt for continual research on how organisations interact with different GAAP and how manipulative the economic consequences may become upon the management’s decision-making behaviour, resulting in insufficient opportunistic strategies. Such research needs to use more empirical results and set the research to pragmatic conditions, facts and situations (Cooper and Selto, 1991; Wilner, 1982). The studies mentioned above led the researcher to:

- identify the positive effect of the non-anticipated economic consequences, translatable into an organisation’s financial performance, on management’s decision-making behaviour with regard especially to real earnings management about R&D investment under the IAS 38. So, the management, influenced by the out-of-track performance, chooses to follow real earnings management strategies about investment in R&D and change the actual financial disclosure. This can happen because the IAS 38 provides the management with the option to do it.

- provide a holistic conceptual framework of the ways the economic consequences impact management's investment decisions in R&D under the IAS 38.
- identify the IAS 38's dysfunctionality that exacerbates real earnings management policies and demands for upgrade and adapt to the current circumstances regarding investment in R&D.

1.2.2.2. Empirical Shortcomings

Firstly, in the last two decades, there has been an increasing interest in connecting earnings management with the IAS/IFRS implementation (Kenny and Larson, 2018). Much of the literature on earnings management relies on the interpretation of accounting legislation and implementation of accounting policies in organisations, namely the US GAAP (Wilner, 1982; Graham et al., 2005; Seybert, 2010). This extensive literature has primarily originated from the need to investigate the efficiency of an accounting standard under specific circumstances (Wilner, 1982; Graham et al., 2005; Seybert, 2010). All the scholars mentioned above argue that further investigation of different GAAPs, such as the IAS/IFRS, should provide empirical evidence by comparing their efficiency in practice and choosing the most appropriate as a representative case. A specific example is the accounting standard regarding the investment in R&D, namely IAS 38, and how policymakers can improve it.

Secondly, real earnings management appears as a common strategy in all organisations, and the case of connecting it with any influence stemming from the economic consequences is essential. Many scholars discuss the existence of real earnings management policies, which entail the generation of altered financial results at the end of a fiscal year (Cooper and Selto, 1991; Fischer and Rosenzweig, 1995; Seybert, 2010; O'Connell et al., 2018). Various organisational determinants may influence such management choices (Shakespeare, 2020).

However, one of the most important is the accounting policies and choices, as well as any alterations that ensue from them and how these may contribute to changing the organisation's long-term strategy (Shakespeare, 2020). Some factors must lead the organisation's management to follow such questionable and unethical policies (Fischer and Rosenzweig, 1995; Seybert, 2010). Hence, it is critical to ascertain with empirical evidence that the economic consequences operate as an influential factor upon real earnings management policies when organisations make R&D investment decisions.

1.3. Research Purpose, Research Objectives and Hypotheses

Based on the previous section, it is clear that several areas that may contribute to or improve international accounting standards and real earnings management are yet to be recognised. The research problem investigated in this study is especially focused on the areas mentioned above, considering the economic consequences as an influential factor. More specifically, the research question focuses on the following aspects:

“if” and “how” do the non-anticipated economic consequences of adopting the IAS 38 positively influence the organisation's management decision-making behaviour to adopt real earnings management policies regarding investments in R&D.

To achieve the purpose of this study, the research problem is analysed according to the following research objectives:

- 1) identify the positive effect of the non-anticipated economic consequences (translatable into financial performance) on management's decision-making behaviour with regard especially to real earnings management when investing in R&D under IAS 38.

- 2) explore in detail the process whereby the non-anticipated economic consequences (translatable into financial performance) positively influence management's decision-making behaviour when investing in R&D under IAS 38.
- 3) explore the factors that influence how the non-anticipated economic consequences (translatable into financial performance) positively impact management's decision-making behaviour when investing in R&D under IAS 38.

Discussing the first objective, relevant research has lacked efforts to systematically explore the economic consequences through the company's financial performance that influence management's decision-making regarding investment in R&D through real earnings management under IAS 38. For Zeff (1978), in practice, the organisation's management makes use of all accounting reports and any financial disclosure in making decisions. Indeed, managers engage in business activities and choose to manipulate them when focusing on achieving specific financial targets (Roychowdury, 2006). In particular cases, such manipulation is questionable and affects the informativeness of financial reports (Järvinen and Myllymäki, 2016). Such dubious practices relate to managing earnings, influencing the company's financial disclosure, and generating information asymmetry with the stakeholders (Graham et al., 2005). Any tolerance of questionable practices from the management results in altered earnings and an intentionally manipulated financial outcome of the organisation (Bruns and Merchant, 1990). Wilner (1982) proposes that it is beneficial to investigate the effects of various accounting standards on managerial behaviour, reflecting the influence in all interested parties. Following the above discussion, this research aims to extend the logic and identify the relationship between the company's financial performance and the management's acceptance of adopting manipulative operational practices under IAS 38 when investing in R&D. The above operational practices rely on the management's decision-making behaviour utilising real earnings management strategies.

As regards the second objective, some studies discuss management's dependence on accurate and timely information to make efficient investment choices and, indeed, establish the organisation's reality with the stakeholders, especially in terms of financial information (Francis and Schipper, 1999; Van Auken, 2005). In practice, financial information is highly valuable, containing disclosable data and providing evidence to all interested parties, including internal parties, over a long window (Francis and Schipper, 1999). Organisations operate monitoring policies regarding the financial results, the consequences, and the conflicts of interest between different parties (Holthausen, 1990). Reliable monitoring of financial information both directly and indirectly impacts operational activities and improves the company's performance (Mia and Clarke, 1999). Therefore, it is important to investigate the procedure or the process whereby the anticipated economic consequences influence the management's decisions and policies (Li et al., 2021). This research aims to examine the management's choice to follow policies to avoid unexpected off-track results or even to minimise the failure of a strategy through systematic control of the financial data.

Finally, for the third research objective, some studies suggest that a number of factors affect the organisation's performance, which is translatable from the economic consequences and, as a result, the management's decisions (Jaworsky and Young, 1992; Mia and Clarke, 1999; Ghio and Verona, 2018). An advantage for an organisation's management is clearly identifying all key factors affecting the entity's performance (Mia and Clarke, 1999). Thus, to achieve the specific research objective, empirical evidence is sought regarding the factors engaged in the impact of the economic consequences on management's decision-making behaviours in R&D investment. The investigation draws on semi-structured interviews with CFOs in publicly listed UK companies.

Following the discussion above, three (3) hypotheses were developed to investigate the research questions through the quantitative method. Each of the hypotheses is linked to each

of the research objectives. The first hypothesis is related to the first research objective by investigating the positive relationship between the effect of the non-anticipated economic consequences, translatable into financial performance, on management's decision-making behaviour with regard, especially to real earnings management. Any managerial decision using questionable operational practices relies on real earnings management strategy. In addition, the second and third hypotheses explore the factors and processes whereby the economic consequences influence management's decision-making behaviour. Thus, these two hypotheses are related to the second and third research objectives. So, the three (3) hypotheses which were developed for the quantitative study are:

- 1) A company's non-anticipated financial performance positively impacts the management's manipulation of operational activities regarding R&D investment (IAS 38) to alter the financial reporting.
- 2) The importance of the financial statements to the manager strengthens the positive impact of a company's non-anticipated financial performance on the management's manipulation.
- 3) Additional disclosure of R&D investments (IAS 38) weakens the positive impact of a company's non-anticipated financial performance on the management's manipulation.

1.4. Research Methodology

1.4.1. The Scientific Paradigm

For the current thesis, the research focuses on conceptualising a professionally observed phenomenon of the economic consequences of an accounting policy's influence on the management's decisions through the adoption of real earnings management. In reality, it investigates how accounting professionals and experts debate the above matter. As such, the

study focuses on dealing with a practical approach to a situation; while judging the outcomes rather than principles, which is the core idea of pragmatism (Lorino, 2018). Thus, the current study's philosophical position stems from a pragmatistic approach with key assumptions from practical rather than theoretical considerations while representing reality. Goles and Hirschheim (2000) consider pragmatism a pluralistic position that promotes a methodological fit between the research question and methodology, allowing for qualitative and quantitative tools. Accounting researchers need to rely on philosophical positions that help the discipline deal with real problems in accounting practice, as "pragmatism offers an alternative framework for analysis of power/knowledge relationships." (Merino 1993, p. 163).

1.4.2. The Research Method and Analysis of Empirical Findings

The current study uses a mixed methods approach, in other words, quantitative and qualitative research, that is, a survey and personal in-depth semi-structured interviews, respectively, followed by convergent triangulation of results. Howe (1988) and Modell (2010) claim that mixed-methods research can be supported by a pragmatistic philosophical position. The research uses a survey to provide evidence about any managerial changes in the long-term R&D investment strategy, which are influenced by the economic consequences, namely the company's financial performance. The quantitative part serves to identify the importance of these financial outcomes on management's decision-making behaviour. Furthermore, it indicates how these outcomes influence and impact any strategic changes that shape the actual results. Moreover, in-depth analytical information is extracted through the fundamental qualitative research method of conversation and face-to-face discussion with an informant (Berger, 2020).

As a result, the data collection activities culminated in the completion of a formal retrievable database containing the results from the two different research methods. The

quantitative, namely the survey, and the qualitative approach, namely the semi-structured interview, were implemented simultaneously. Firstly, for the quantitative method, 165 “positively” answered consent forms, 165 surveys (81 following the “positive” and 84 the “negative” performance scenario), and 660 pages of questionnaires were collected over a four-month period. The survey population sample included managers, specifically CFOs, from publicly listed UK companies that have adopted IAS/IFRS and met the professional experience and accounting knowledge criteria. Subsequently, all the questionnaire answers were entered manually into the statistical software suite, IBM SPSS 26, exclusively by the researcher in a wider format (Field, 2018). The descriptive statistics of the variables were entered first, followed by with Chronbach’s Alpha for the three (3) survey measurements regarding their reliability, and then the one-tailed independent t-test (Diamantopoulos and Schlegelmilch, 2000). Finally, multiple regression analysis was used to evaluate the linear relationship between the organisation’s performance and the management’s acceptance of manipulation influenced by two other moderators (Diamantopoulos and Schlegelmilch, 2000).

Concurrently, the semi-structured interviews were conducted primarily with CFOs from publicly listed UK companies that have adopted IAS/IFRS. Hence, the participants had professional managerial experience and met the IAS/IFRS knowledge criteria. Additionally, the companies they represented must have an R&D department; thus, the organisations are obliged to follow the IAS 38 accounting policy, especially regarding investment in R&D. Ten (10) CFOs fully participated in the interview during the five months. As a result, ten (10) “positively” answered consent forms were collected, plus sixty-seven (67) pages of single-spaced interview transcripts, seven (7) video-recorded electronic files, and twenty (20) pages of organised field notes, which were taken by the interviewee. Seven (7) participants agreed to the interview being recorded in full, and the other three (3) refused, both written and verbal, to be recorded. All interviews lasted, on average, approximately forty-five (45) minutes.

Furthermore, four (4) of the recorded interviews took place on the “Google Meet” telecommunication platform, and the other three (3) via “Zoom”. All three (3) non-recorded interviews were also conducted on “Google Meet”. At the end of the interview data collection period, all the interview transcripts were uploaded to NVivo 12 qualitative data analysis software.

A thematic analysis strategy was followed for the qualitative study. Since the primary focus is thematic coding, there was an identifiable need to investigate the significant thematising meanings (Holloway and Todres, 2003). The data analysis began with an initial familiarisation with the interview transcripts (Stoian et al., 2018). Essentially, this involved the researcher reading each transcript several times to identify the manager’s interpretation (Stoian et al., 2018) of the economic consequences and the influence on management’s decision-making behaviour regarding investment in R&D. Some initial understanding of the interviewees’ interpretations were drafted in short summaries which appeared as the first step of disclosing the data following an a posteriori coding strategy (Gioia et al., 2013). The process, as mentioned earlier, follows the identification of first-order codes generated directly from the participants’ knowledge and discussions with them (Corley and Gioia, 2004). All the data was managed on NVivo 12, strategically assisting in the shift between the different transcripts and codes.

The results were subsequently merged from the first-order codes into the second-order codes (Gioia et al., 2013). After rereading the transcripts, all the emerging first-order codes generated from the empirical dataset provide fewer new concepts corresponding to the theoretical themes (Gioia et al., 2013). Finally, in the third step, after rereading the transcripts again, the researcher focused on understanding how the interviewees organise and dissociate their knowledge and experience, resulting in a third order (Gioia et al., 2013). As a result, a thematic analysis strategy was adopted based on the categorised coding scheme, designed to

capture the dominant schemes in a text based on the researcher's knowledge (Lewis-Beck et al., 2003).

Finally, a triangulation of the results was performed. Triangulation ensures the study's credibility and trustworthiness (Modell, 2005). As a method, triangulation consists of the combination of different methods to accurately identify complementary data about a phenomenon by approaching it from other points and techniques while ensuring its validity (Modell, 2009; Modell, 2015). Given that the convergent triangulation emphasises the idea of obtaining convergence in substantive findings across a diverse set of methodologies and develops knowledge from a less flawed individualistic research strategy (Turner et al., 2017), it improves the researcher's choice of a mixed-methods approach in the current study following the prevailing method of convergent triangulation. Hence, the quality of the mixed-methods research findings within the pragmatism paradigm was evaluated based on ontological appropriateness, contingent validity, triangulation of methods, methodological trustworthiness, analytic generalisation, and construct validity (Guba and Lincoln, 1994; Healy and Perry, 2000).

1.5. Discussion of Research's Findings

In summary, four (4) primary findings were extracted from the results found in this study. The results from the survey and the semi-structured interview methods were analysed. Subsequently, the findings were finalised through convergent triangulation of the results. Firstly, there appears to be a positive relationship between the non-anticipated economic consequences (translatable into financial performance) and the management's decision-making behaviour with regard especially to real earnings management when investing in R&D under IAS 38. If the financial performance is out of track, managers are more likely to accept to follow real earnings management policies about investment in R&D when the accounting

standard provides them with the option to do it, namely the IAS 38. Prior research finds that managers choose to exacerbate earnings management about investment in R&D under the US GAAP, although they are obliged only to capitalise R&D investment expenses and are responsible for the external reporting consequences of their R&D projects (Cooper and Selto, 1991; Oswald and Zarowin, 2007; Seybert, 2010). Managers possibly engage in such activities in investment in R&D to meet earnings benchmarks even though the US GAAP does not provide the option of choice (Cooper and Selto, 1991; Oswald and Zarowin, 2007; Seybert, 2010). Hence, the management follows manipulative policies when the performance is not on target, especially regarding investment in R&D under the IAS 38. The managers rely on opportunistic behaviour to change the actual financial result and protect themselves when the accounting regulation provides them with the option to follow real earnings management policies.

Secondly, the findings show that a continuous monitoring policy is a process whereby the economic consequences influence management's decision-making behaviour about R&D investment under IAS 38. Adopting the continuous monitoring policy of the financial performance serves as a process that influences a company's decision-making behaviour, supports the importance of the financial statements, and exacerbates real earnings management activities when investing in R&D. The researcher identifies the management's choice for continuous monitoring policy of the financial data as a "tool" to avoid unexpected off-track results or even to minimise the failure of a strategy. Reliable monitoring of financial information unquestionably impacts more operational and transactional activities while improving the company's performance (Mia and Clarke, 1999). Hence, a continuous monitoring policy of financial statements operates as a process to control the financial disclosure of R&D investments, especially when the company's performance is important to the managers. The managers follow such a policy of the financial data to control risks and

unexpected results; and enhance the specific choice when the organisation's financial performance is vital for them.

Thirdly, the findings show that information asymmetry operates as a process whereby the economic consequences influence management's decision-making behaviour about R&D investment under IAS 38. Information asymmetry exacerbates ways of manipulating the actual financial disclosure of the organisation when the company's performance is off track. The management preserves information asymmetry status as a way to enhance the option of following real earnings management policies because of the out-of-track performance of the organisation. Organisations follow an imbalanced knowledge policy with their stakeholders to opportunistically enjoy a competitive advantage over the other party (Dunk, 1993). Graham et al. (2005) maintain that management officially supports voluntarily disclosing an organisation's relevant and valuable information. Even so, in some instances, management must face the fear that disclosing specific information today may turn sour with unexpected results in the future (Graham et al., 2005). Hence, the findings support the influence of information asymmetry and contribute to the real earnings management literature as a way to manipulate the actual financial disclosure. So, the more information asymmetry between the management and the stakeholders, the more the organisation adopts real earnings management policies, which is the opposite of the expected following the indicated literature. However, the fact that there is a diverse reaction is an unexpected finding and indicates possible avenues for future research focused on the specific situation. Moreover, the findings generated from the qualitative study reveal a demand for changes on the part of practitioners in relation to IAS 38. The responses focused on developing an individual accounting standard regarding investment in R&D.

Fourthly, the qualitative research findings indicate the influence of specific factors on how the economic consequences influence management decision-making behaviour regarding

R&D investment under IAS 38. The findings suggest that these important factors include the CFO's accounting knowledge, role and professional experience; the managers' cognisance or knowledge of their company; and "grant funding" for R&D investment. One advantage for an organisation's management is to clearly identify all key factors that affect the organisation's performance, such as the company's characteristics (Mia and Clarke, 1999). All the factors mentioned above reflect the personal and professional attributes that influence the decision-making behaviour of the management team and impact the entity's performance. However, there appears to be a highly influential exogenous factor in relation to organisations that invest in R&D, namely the "grant funding". This appears to exert influence on the managerial decision and might demand independent administration to follow the grant's requirements. "Grant funding" seems to require further investigation in the near future since some scholars debate its importance and usefulness for management (Hogan et al., 2022), especially regarding investment in R&D.

1.6. Research Contribution

1.6.1. Conceptual Contribution

This section discusses the intended conceptual contributions of the study. This research contributes to real earnings management and international accounting literature. Firstly, it critically examines existing research on real earnings management in light of its potential contribution to understanding the core of this managerial policy and how it operates under specific circumstances. Secondly, a review of relevant literature about IAS 38 serves to identify any dysfunctionalities of the accounting standards with the purpose of enriching the readers' understanding of the phenomenon under exploration.

The study contributes to real earnings management by providing an extensive review of the factors and methods employed to exacerbate the use of such questionable managerial

policies. In order to identify the effect, and explore the processes and factors, two (2) different methodological approaches were conducted, followed by triangulation of the results. Seybert (2010) and Cooper and Selto (1991) discuss the influence of the economic consequences on management's decisions when investing in R&D under the US GAAP. Seybert (2010) suggests the benefits of examining such relationships under other GAAP, which follow alternative accounting treatment of the R&D investment. The present study's findings revealed the positive influence of the economic consequences under the IAS 38 and provided evidence of their being considered in a positive light by management. Such perception favours management with the option to follow any manipulative strategies when the economic consequences are off target and the accounting regulation permits it. The study also contributed to the conceptualisation of real earnings management with the influence of the economic consequences under the IAS/IFRS when investing in R&D. Future studies could add more possible ways and factors or be associated with the existing ones.

Moreover, the study contributes to the international accounting literature by providing an extensive review of the efficiency of particular accounting standards while predicting possible ways to modify them, relying upon a pragmatic approach to avoid present and future dysfunctionalities. Dinh et al. (2015) say that IAS 38's guidance about the accounting treatment of the R&D investment creates high forecasting errors and dispersion from an analyst's perspective. From the investors' perspective, the IAS 38 adversely affect the R&D's financial disclosure quality, which, in reality, relies on the standard's vagueness and perceived subjectivity (Mazzi et al., 2022). The results showed a critical dysfunctionality of the IAS 38 when providing the option of choice from a manager's perspective. In effect, such cases promote real earnings management policies, which work against the fundamental objective of the IAS/IFRS: to inform public interest about an organisation's financial disclosure and meet the common needs of all the organisation's stakeholders (IFRS, 2022). Hence, managers

believe that a controversial accounting standard, like IAS 38, distorts an organisation's financial reality, making it important to deeply investigate its dysfunctionality and connection to reality. Future studies into the international accounting literature could identify more accounting standards that cause serious dysfunctions and need to be updated or redeveloped. Finally, the review of studies provides a similar view stemming from other researchers, who suggest the investigation of accounting standards from a more pragmatic and realistic approach (Cooper and Selto, 1991; Graham et al., 2005; Seybert, 2010).

1.6.2. Methodological Contribution

The methodological contribution of the current study concerns the incorporation of reality as a dimension in the design of the research process. Diachronically accounting research requests the presence of reality in investigating multiple contexts (Wilner, 1982; Cooper and Selto, 1991; Seybert, 2010). Social reality acts on a phenomenological level through social interaction and focuses on understanding, identifying and explaining how a mechanism works (Ryan et al., 2002). A pragmatic approach to a situation deals with reality while judging the outcomes rather than principles through unpacking the mechanisms of reality (Lorino, 2018). Pragmatism carries a dynamic "to closely engage and empower marginalised and oppressed communities and provides hard evidence for micro- to macro-level discourse." (Kaushik and Walsh, 2019, p. 12). IAS/IFRS-based financial accounting research asks for reality and matches research questions with particular methods (Bisman, 2010). At the same time, such research appreciates exactitude combined with the contextual nature of human behaviour and the role accounting information plays in society (Bisman, 2010). Barth (2018) suggests reality in accounting research as an objective to excavate financial information that is useful to all interested parties, and doing this well helps support a prosperous society, reflecting the IASB's purpose of financial reporting. The decision for the present study was made to follow a

pragmatic approach focused on reality and practitioners' points of view with the perspective to enrich the picture of organisations with more evidence while reflecting on factual cases. Hence, the choice of a mixed-methods study, followed by convergent triangulation of results, seeks the influence of reality in methods, enhancing understanding of everyday phenomena in the area of international accounting regulation and real earnings management in organisations. Accounting research requests more studies reflecting the existence of reality to bring social contexts to life and benefit society (Ahrens, 2022). The current research contributes to bringing reality to social research, specifically international accounting research, and ensures that reality determines the instrument's validity and the sample's quality.

1.6.3. Empirical Contribution

The present study makes a threefold empirical contribution to theory building in the field of real earnings management and international accounting literature. Firstly, it focuses on organisational participants' perceptions of real earnings management under the influence of economic consequences. Cooper and Selto (1991) and Seybert (2010) say that the managers' opportunistic behaviour to secure their reputation operates as a factor in using earnings management in their operational activities when investing in ongoing R&D projects under the US GAAP. Such cases appear when they recognise any issues regarding the R&D's investment performance (Cooper and Selto, 1991; Seybert, 2010). Investigating the influence of economic consequences in real earnings management under alternative GAAP is beneficial which will provide more evidence about management's behaviour (Seybert, 2010). In this way, it contributes to identifying that the economic consequences are an influential factor on REM and, thus, to real earnings management literature. Accordingly, management follows manipulative policies when performance is not on target, especially regarding investment in R&D.

Secondly, the thesis provides an empirical contribution to the effect of continuous monitoring of financial information as a process that exacerbates real earnings management when investing in R&D. Managers operate as the key keepers of the organisation's operations, control them and undertake decisions that change them (Gunny, 2010). Mia and Clarke (1999) identify that, in general, the continuous monitoring policy of financial information operates as a way to improve performance. The researcher identifies the management's choice for continuous monitoring policy of the financial data as a specific "tool" to avoid unexpected out-of-target results or even to minimise the failure of a strategy. In fact, the study's contribution justifies that managers implement real earnings management with the perception of constantly controlling any non-anticipated and unforeseen economic consequences. Management focuses on developing more secure and stable circumstances for itself.

Thirdly, this study contributes to the identification of the dysfunctionality of IAS 38 – "Investment in R&D", which develops information asymmetry and exacerbates real earnings management. In previous studies, Dinh et al. (2015) and Mazzi et al. (2022) claimed that the IAS 38 creates instability and uncertainty to both analysts and investors about the quality of the financial disclosure while favouring forecasting errors and unjustified dispersion of the R&D expenses. Also, Garanina et al. (2021) support that many academics criticise the functionality and substance of the IAS 38 because of the controversial accounting practices. The findings may contribute to identifying the dysfunctionality of IAS 38 from a manager-practitioner's perspective, specifically regarding investment in R&D, in the international accounting literature and present the need for an updated accounting standard. In effect, the managers debate the controversial accounting practices which rely on vagueness and subjectivity; however, they entail a standard that would also harmonise with the ESG and help them to invest more in R&D. Any dysfunctionality develops information asymmetry with all interested parties, resulting in earnings management policies stemming from the entity's

management (Chia, 1995). Hence, a controversial accounting standard, like IAS 38, distorts an organisation's financial reality, making it important to deeply investigate its dysfunctionality and connection to reality.

1.6.4. Management's Perspective Contribution

Finally, from a managerial perspective, the contribution of this study is twofold. Firstly, the importance of financial statements for managers operates as a factor that intensifies real earnings management. Therefore, the effect of the financial statements contributes to identifying the management's dependence on them, which enhances real earnings management policies. The managers consider the financial statements significant; hence, they choose more questionable or unethical practices, which alter the actual financial disclosure. Indeed, financial information is highly valuable, containing disclosable data and providing evidence to all interested parties over a long window (Francis and Schipper, 1999). Thus, the organisation's management relies on carefully considering the quality of the financial information before deciding on important cases, especially in relation to investment in R&D.

Secondly, the thesis provides insights regarding "grant funding" as an influential factor in the management's decisions. "Grant funding" appears as a valuable organisational tool for the long-term survival of organisations, and it is crucial for the management always to consider its presence in the organisational decisions. An advantage for an organisation's management is clearly identifying all essential factors affecting the entity's performance (Mia and Clarke, 1999). Grant funding is vital, especially for organisations that rely on its operations and investments, such as investment in R&D (Hogan et al., 2022). Nowadays, even more organisations promote investment policies based exclusively on grant funding (Hogan et al., 2022). Hence, "grant funding" operates as an influential factor in the managerial decision, which might demand independent administration to follow the grant's requirements.

1.7. Defining Important Terms of the Research

IAS 38: IAS 38 demarcates the accounting criteria for recognising, measuring and disclosing “Intangible Assets” (IFRS, 2022). Primarily, the study focuses on the intangible asset of investment in R&D, which is characterised as a non-monetary asset without physical substance (IAS Plus, 2022). IAS 38 demarcates the criteria in which an expense regarding the development of R&D has the option of being capitalised or expensed when the investment meets specific criteria (Dinh et al., 2015). Tsoligkas and Tsalavoutas (2011) argue that R&D is a strategic resource that can lead to enhanced financial performance, growth, profitability and long-term competitive advantage in an organisation’s strategy.

Economic Consequences: The term “Economic Consequences” was popularised by Stephen Zeff (1978), who defines it as “the impact of accounting reports on the decision-making behaviour of business, government, unions, investors and creditors.” (Zeff, 1978, p. 56). Gunny (2010) relates the economic consequences to the company’s performance influenced by the financial statements. The economic consequences literature frequently directs accounting researchers to challenge unsolved issues in finance, management, political science and organisational theory; and also indicates empirical investigations to contribute to other research areas (Holthausen and Leftwich, 1983).

Positive Accounting Theory: Hagerman and Zmijewski (1979) maintain that the use of a Positive Theory in accounting assists in translating and understanding how an organisation’s management will behave to changes in accounting standards. Also how these changes can influence managerial decisions and other financial incentives (Hagerman and Zmijewski, 1979). Precisely, positive accounting theory contributes to managerial decisions and seeks to justify the manager’s perspective when facing the dilemma of choosing and adopting particular accounting policies (Deegan and Unerman, 2011). In addition, the specific theory deals with

justifying and clarifying accounting practices but is unable to match the organisation with only one convenient accounting policy (Watts and Zimmerman, 1990).

Real Earnings Management: Managers engage and manipulate an organisation's transactions to achieve specific earnings targets and impact financial reporting (Fields et al., 2001). This phenomenon is called real earnings management and "is defined as management actions that deviate from normal business practices, undertaken with the primary objective of meeting certain earnings thresholds." (Roychowdury, 2006, p. 336). Real earnings management refers to all these standard operational activities that managers choose to manipulate, opportunistically improving financially reported earnings (Roychowdury, 2006; Ali and Kamardin, 2018).

1.8. Limitations of the Research

In keeping with the foregoing, the study's limitations are examined in this section. There are six areas in which this research is limited. Firstly, one limitation of this research is associated with the exploratory nature of both studies. In the current research, two (2) different exploratory methodological approaches are followed, namely quantitative and qualitative. Even though the study has tried to be among the influential research endeavours, no definite conclusions can be drawn regarding the causality of relationships outlined in Figure 5.

Secondly, a potential limitation of this research is the use of experimental survey research to explore the issue under investigation. Specifically, the exclusion of the influence of grant funding as an extraneous variable presents a limitation for the research. Grant funding has been accrued from the qualitative research, not the literature. Another limitation of the study, third, is that the lack of collection of demographics on the companies represented by the participants is another extraneous variable. The specific data can act as control variables influencing the relationship and helping to investigate in-depth the particular research question.

Furthermore, using one scenario for each participant appears as a fourth limitation. Simultaneously, using both scenarios for each participant can provide a complete understanding of respondents' behaviours and attitudes. Following the survey's limitations, a fifth focuses on the lack of Likert-scale descriptors given to the respondents. The specific case may increase a bias in the responses. Finally, the sixth limitation of this study is related to the use of UK-listed companies as the focused stock exchange market context for the research. The selection of this market is also considered a potential strength of this research since it is one of the most highly reputed markets that includes high-ranked companies.

1.9. The Structure of the Thesis

In the following part of the thesis, chapter 2, entitled "Theoretical Framework", the theoretical underpinnings of the research are discussed. A detailed literature review and an analysis of theoretical and empirical studies relating to the research question are also presented. Chapter 3 analytically describes the research methodology and the process of the analysis of the study. Chapter 4 presents the data analysis from the quantitative method, while Chapter 5 presents the data analysis from the qualitative approach. Chapter 6 discusses the empirical findings of both methods and, at the end of the chapter, addresses the triangulation of the findings. Chapter 7 contains the conclusion, discusses the theoretical and managerial implications of the research, and points out the study's limitations and future research directions.

2. Theoretical Framework

2.1. Introduction

The research question of this study is inspired by the interface between accounting regulation, specifically the International Accounting Standards (IAS), the manipulation of real organisational activities, and the generated economic consequences from the financial statements. These statements tend to have an effect on management's decision-making behaviour in an organisation. To elaborate, the research question focuses on the aspects of "if" and "how" do the non-anticipated economic consequences of adopting the International Accounting Standards (IAS) 38 influence the organisation's management decision-making behaviour about investments in R&D. Positive Accounting Theory (PAT), Real Earnings Management (REM), and Economic Consequences literature are the main theoretical pillars that support the present research. Accordingly, the theoretical pillars mentioned above connect with the Generally Accepted Accounting Principles (GAAP), namely IAS 38 and R&D; the latter drives the organisation's long-term innovation and productivity growth (Brown et al., 2017).

The accounting literature examines multiple crucial phenomena based on organisations' ordinary accounting practices and procedures. The present study is influenced by standard accounting practices, such as bookkeeping, and the organisation's common accounting operations, while these can be manipulated to favour management's opportunistic behaviours. Kramer (1969) presents common accounting practice as the practical accounting application or auditing policies any entity uses to gather and record an organisation's day-to-day financial activities and information. All accounting practices result in various consequences for an organisation, and PAT is a theory that "can provide those who must make decisions on accounting policy (corporate managers, public accountants, loan officers investors, financial analysts, regulators) with predictions of, and explanations for, the consequences of their

decisions.” (Watts and Zimmerman, 1986, p.14). The specific theory constitutes a helpful implement for predicting management’s decisions and policies, responding to and clarifying them while observing phenomena generated from the organisation’s accounting procedures.

Any organisational decision, like accounting policies and various managerial choices, is taken by certain corporate responsible actors, depending on their roles, knowledge, interests, and the organisation chart. For the present research, were invited actors with the appropriate IAS/IFRS accounting knowledge and managerial experience in listed firms. According to Voulgaris et al. (2015), CEOs with an accounting-related vesting target in their rewards and contracts need precise and prompt accounting information for their decisions. The CEOs rely their decisions on the CFO’s knowledge of accounting law and professionalism, which is vital to securing the company’s integrity and financial stability (Tulimieri and Banai, 2010). Therefore, the CFO’s role tends to be more operationalised and CEO-like while considering the accounting and financial expertise to impact the quality of financial reporting positively (Caglio et al., 2018). Thus, CEOs are responsible for any decision an organisation takes, including its accounting policy (Zorn, 2004), even though the CFO’s accounting and financial knowledge influence a real earnings management strategy and impact the financial reporting quality (Alkebsee et al., 2022). However, the CEO’s decision is primarily based on the CFO’s upgraded role and expertise to secure the company’s integrity and interpret the accounting law to the organisation’s interest. Consequently, the researcher focuses on the CFO’s role and presence in an organisation since it suits the current research as a responsible and knowledgeable agent.

Effective accounting decisions demand of responsible actors, such as the CFOs, with a comprehensive knowledge of specific accounting standards and principles. The present study concentrates mainly on the impact of the IAS 38 accounting policy and the generated economic consequences on the decision-making behaviour of the organisation’s management. An Economic Consequence is defined as “the impact of accounting reports on the decision-making

behaviour of business, government, unions, investors and creditors.” (Zeff, 1978, p. 56). Any result stemming from senior management’s accounting choice forms a manager’s decision-making behaviour (Watts and Zimmerman, 1990). Accounting policies may influence an organisation’s behaviour and the transactions derived from them while generating economic consequences, which may induce valuable feedback for interested parties (Zeff, 1978). The economic consequence hypothesis, as the most suitable for this study, helps to investigate and understand the conditions under which the outcomes of accounting policies mirror management’s decision-making behaviour in standard practices (Li et al., 2021). PAT also recognises and clarifies reality while interpreting the effects of accounting policies and choices, and the influence thereof on the organisation’s operational procedures (Watts and Zimmerman, 1990). Besides, REM strategies occur in ordinary transactions of organisations and impact their financial statements (Gunny, 2010). This particular combination of theoretical framework constitutes an advantage for the present study and allows an understanding of how international accounting principles interfere with and reflect the consequences on management’s decisions and behaviour.

In summary, this section discusses the main theoretical pillars of the study, namely, positive accounting theory, real earnings management and economic consequences. Senior management’s decisions and actions could be derived from and influenced by the economic effects of accounting policies that an organisation follows (Healy and Wahlen, 1999). Managers choose to manipulate real business activities by considering and respecting the accounting law; and influencing the disclosure of financial statements following REM strategies (Healy and Wahlen, 1999). Thus, REM is based on management’s opportunistic behaviour, which is the basic assumption of PAT and results in influencing the financial statements. Furthermore, Watts and Zimmerman (1990) support that the economic consequences theory literature emanates from PAT literature. The two are mutually corroborative on the subject of accounting standards

(Watts and Zimmerman, 1990). Therefore, any result generated from senior management accounting decisions could be considered an economic consequence, and this is reflected in or affects a senior manager's decision-making behaviour (Watts and Zimmerman, 1990).

2.2. IAS 38 and Impact on Management's Decision-Making Behaviour.

In everyday operational practices, an organisation depends on the management's strategy and accounting strategy, recognising the importance of its legitimacy according to accounting law and principles; and serving the entity's interests. Managers act as rational economic agents and choose the appropriate accounting regulation with related economic consequences (Holthausen and Leftwich, 1983). Implementing IAS 38 and interpreting it requires management to follow the particular accounting policy and endeavour to adopt various organisational strategies under specific contexts, namely R&D investment decisions in a company. IAS 38 provides the management with the option to choose whether to capitalise or expense a development cost regarding investment in R&D. Generally, IAS 38 demarcates the accounting criteria for recognising, measuring, and disclosing intangible assets (IFRS, 2022) like investment in R&D. Adopting the specific accounting standard leads managers to interpret it and follow its guidance, which results in unpublished possible economic consequences, thus the company's performance (Figure 1). According to Zeff (1978), the economic consequences rely on the accounting reports, while Gunny (2010) relates them to the company's performance influenced by the unpublished financial statements before officially disclose all financial information. In this particular case, the researcher uses the unpublished financial statements, so there appears to be a threat of what is going to be officially disclosed from the entity.

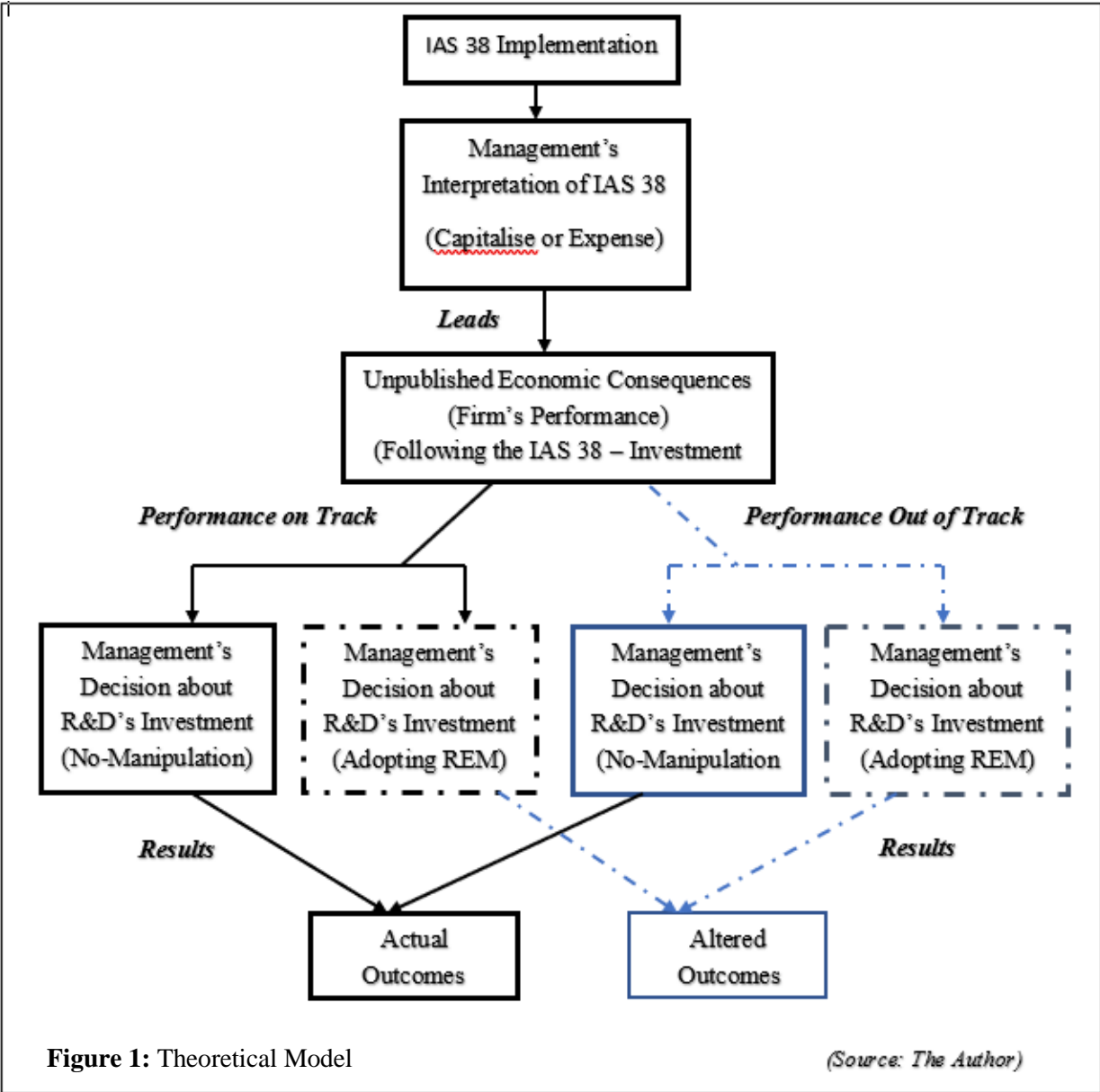
The unpublished economic consequences are generated from a monitoring policy of the accounting and financial data during the fiscal year, like a regular report of a balance sheet, a Profit & Loss statement (P&L), and a spreadsheet with the management accounts. All the

aforementioned financial statements follow IAS 1, which IAS 1.10 describes their complete set and how they must be presented (IFRS, 2022). Such behaviour mentioned above results in actual economic consequences and outcomes, some intended and some unintended in terms of a particular policy (Figure 1). All of them arise from the perceived causes of the account users' judgement pursuant to the accounting regulation (Blake, 1992). Hence, based on the results, the managers decide on the progress of the R&D investment.

The management has the choice to disclose the actual outcomes without interfering or manipulating the outcomes through real earnings management (Figure 1). When everything is on track, the organisation usually follows the natural flow to disclose the actual results, which does not discourage them in rare cases, even adopting a REM strategy and, finally, interfering with the actual financial disclosure (Figure 1). On the other hand, since the standard allows the management to choose, an out-of-track performance may provide the managers with the opportunity to follow REM policies (Figure 1). Such a strategic activity alters the financial disclosure and presents an unreal or unclear picture of the organisation, enhancing information asymmetry with the stakeholders (Figure 1). Also, the choice of avoiding manipulating the numbers exists even when the performance is out-of-track (Figure 1). All the cases mentioned above rely on the management's discretion and ethicality, especially when an accounting standard provides the option of choice, like the IAS 38.

Accounting principles close to the IAS 38, such as the Italian GAAP, are implemented, especially in relation to R&D investment, to reduce the organisation's discretion to capitalise R&D expenses when meeting restrictive criteria (Markarian et al., 2008). Still, it fails to eliminate the management's discretion in choosing an accounting policy (Markarian et al., 2008). However, following IAS 38 criteria, it is at the management's discretion to make a judgement about R&D capitalisation and the possible use of questionable strategies on R&D investment (Dinh et al., 2016). Furthermore, management's discretion is apparent in its choice

to follow the appropriate accounting policy to smooth earnings, which results in adjusted and not actual consequences and outcomes (Markarian et al., 2008). To synopsis, the present research investigates and concentrates on the provided feedback from the economic consequences and their impact on the management’s decisions in the short and long term under the IAS 38 (Figure 1). The management decides to include any insights into its decision-making process and differentiate its behaviour regarding the investment based on the entity’s performance.



Furthermore, the choice to investigate the accounting for intangibles, especially investment in R&D, appears and remains a crucial and controversial case, which the IASB and the FASB view differently. Garanina et al. (2021) discuss the importance of accounting for intangible assets and how less attention has been given to management issues by academics in the last years, especially between 2000 and 2020, in the top twenty (20) accounting journals. IAS 38 leads an organisation's key accounting policies, which promotes the disaggregation of specific accounts on the financial statements to substantially impact their preparation and secure the entity's quality of disclosure (Li et al., 2021). The accounting treatment of IAS 38, specifically in relation to investment in R&D, is an interesting subject that plenty of researchers have been studying for years while trying to clarify and investigate any related phenomenon from different perspectives (Garanina et al., 2021; Hogan et al., 2022). O'Connell et al. (2018) discuss that the company's management, especially the R&D professionals, is essential to develop R&D measures of success. Such a managerial activity is crucial while communicating detailed R&D data to other responsible senior executives for their engagement (O'Connell et al., 2018). Furthermore, many studies continue to engage with the IAS 38 – Investment in R&D, investigating the standard's effectiveness and impact on major strategies regarding investments in R&D (Becker, 2015; Mazzi et al., 2019; Oswald et al., 2021). The above studies reflect the importance of IAS 38, particularly in investment in R&D, for further research. Following the earlier analysis, the study's research question is *““If” and “how” do the non-anticipated economic consequences of adopting the IAS 38 positively influence the organisation's management decision-making behaviour to adopt real earnings management policies regarding investments in R&D?”*.

The perspective of whether and how the economic consequences influence management's decisions and behaviour is an interesting and crucial phenomenon to investigate after adopting an accounting policy. This research explores how management's decisions are

practised under the impact of economic consequences. In fact, it is the first study to perceive them as a determinant of the management's decision-making behaviour. This study differentiates from others about "IAS 38 – *Investment in R&D*", recognising that its economic consequences feed back into the management's short- and long-term decisions and specify them as a decision-making incentive. Based on the above, it contributes to the International Accounting and Real Earnings Management literature by investigating particular cases. Moreover, using innovative methods (mixed methods research) provides a multidimensional approach in terms of investigating the subject from various perspectives. The combination of methods is innovative and differentiates it from other studies since it reflects reality.

2.3. Positive Accounting Theory (PAT)

2.3.1. Introduction

In general, positive accounting theory seeks to familiarise and explain the use of suitable accounting policies when dealing with certain managerial activities (Boland and Gordon, 1992). The theory's main objective focuses on past data and existing knowledge to explain why accountants employ specific accounting practices in different circumstances and companies (Boland and Gordon, 1992). Initially, Ball and Brown (1968) popularised positive research in accounting, which spread even faster with the influential attempts of Watts and Zimmerman (1978; 1986 and 1990). Kabir (2010) notes that the scholars mentioned above influenced the rapid spread of the term "positive" to empirical research in accounting and its differentiation from prescriptive theory. Also, the development of positive accounting theory favours the idea of falsifiability, presenting that some theories are testable and realistic (Kabir, 2010), supporting PAT's choice for the present research. At the same time, interpretation always works better under the existence of multiple theoretical foundations in a discipline (Kabir, 2010), which reflects the choices of the rest related to the PAT theories. All of the above demonstrates the

demand for investing in various theoretical perspectives and promotes the idea of interpreting a phenomenon from different positions that originates from reality.

In the early 40s, accounting theorists provided specific policy proposals for applying accounting principles and laws (Watts and Zimmerman, 1986). The scholars' interest concentrated more on the advisory role of accounting, such as the normative perspective, and its importance for accounting policymakers and organisations (Watts and Zimmerman, 1986). Positive accounting theory seems normative by nature since it relies on accounting procedures of how things "should be done" while emphasising empirical research to provide a plausible framework for understanding accounting (Watts and Zimmerman, 1986). Early researchers of PAT presented a more normative emphasis. These particular researchers did not focus on the empirical validity of their hypothesis but more on the official perspective that must be adopted for accounting practice.

Earlier, crucial dealings with the accounting scholar were concerned mainly with policy recommendations based on past research instead of empirical validation. Scholars, including "Joel Dean (1951) and others, for example, Modigliani and Miller (1958), made significant advances in finance by applying economic analysis to financial problems." (Watts and Zimmerman, 1986, p.5). In addition, Whitley (1988) cites that all these researchers were trying to apply new methodologies to investigate the logic and empirical support for conventional financial and accounting practices. Friedman (1953) introduces the term "Positive Research" in economics, signalling the need to engage in research that explores and predicts. A positive science aims to create a theory or a hypothesis which brings in predictions about phenomena that have not been previously researched, and its assumptions are "objective" (Friedman, 1953). Watts and Zimmerman (1986) claim that PAT is an accounting theory that introduces empirical evidence based on practical situations and conditions, works above ordinary and large-scale

official data, and presents a frame of hypotheses working together to justify the complex elements of reality.

Furthermore, by the mid-'70s, organisations started to systematically change their accounting practices on a large scale; for example, in the US in 1968, the steel industry changed the depreciation method, and concurrently, governments argued about the necessity for laws focused on financial disclosure (Watts and Zimmerman, 1986). Watts and Zimmerman (1990) also support that focusing on legislation for financial disclosure and the value of the management's decision contributes to explaining and developing new accounting practices and advancing a basis for positive accounting theory. Gordon (1964) argues that the management of an organisation attempts to maximise its wealth by using appropriate decisions, and the accountant's obligation is merely to report the particular condition and its financial results. Following the above, Gordon (1964) also claims that the selection of accounting policies contributes to maximising the organisation's wealth, and the choice of accounting rules and principles is manipulated in favour of the positiveness of the accounting numbers. Hence, Watts and Zimmerman (1986) introduce PAT as focused on the assumption that individuals act with self-interest and in an opportunistic manner for their own wealth. Based on the above, accounting research educates a positive theory in the accounting literature which considers explaining and predicting standard accounting practices, their generated economic consequences, and the relationships between individuals with practical involvement in an organisation. All the above appear as the core of the present research concerning the organisation's managerial behaviour under an accounting policy.

2.3.2. Positive Accounting Theory's Objectives and Key Assumptions.

Accounting policies rely on accounting principles and regulations in standard accounting practices, affecting organisational life. Applying an accounting standard might

generate economic consequences (Milne, 2002). Thus, the adoption of IAS 38 by an organisation may bring economic consequences to the management's accounting policy. Positive accounting theory offers the ability to connect the disclosures generated from actual accounting practices with the accounting standards and focuses on the economic consequences of these actions (Milne, 2002). Watts and Zimmerman (1986) argue that, generally, the primary objectives of a positive accounting theory are to explain and predict accounting practices. Moreover, they defend the importance of a theory to observe accounting practices and its usefulness in predicting unobserved accounting phenomena through organisations (Watts and Zimmerman, 1986).

All types of accounting phenomena need to be examined based on appropriate accounting theories that explain organisations' accounting choices. Specifically, PAT refers at the same time to future phenomena and to the objective of past choices without the collection of empirical evidence (Watts and Zimmerman, 1986). Hagerman and Zmijewski (1979) suggest that a positive theory in accounting assists in translating and understanding how an organisation's management would behave in relation to changes in accounting standards and how these changes could influence the management's decisions and other financial incentives. The scholars also posit that various determinants (reasons) affect the choice of accounting principles, including size, risk, capital intensity, competition, and incentive plans (Hagerman and Zmijewski, 1979). The present research utilises PAT to explain how common accounting practices and their economic consequences on the IAS/IFRS influence management's organisational behaviour.

One of the key assumptions of positive accounting theory is that choosing accounting policies will redound to generate economic consequences and result in a strong reaction from managers (Demski, 1988). PAT mainly focuses on agency conflicts generated from the differentiation of the wealth effects in an organisation (Watts and Zimmerman, 1986). A case

in point is the accounting choice, which causes different influences on important stakeholders (Watts and Zimmerman, 1986). In the current study, PAT is conducive toward an analysis of how a management's accounting choice about the "IAS 38 – Investment in R&D" derives economic consequences so significant as to arouse senior management's reactions and impact the final results. Specifically, Deegan and Unerman (2011) suggest that PAT contributes to understanding senior management's decisions and trying to explain the manager's perspective when tackling the dilemma of choosing and adopting particular accounting policies. Such managerial activities rely on the consequences derived from the selected accounting policies and their importance to the long-term survival of the organisation (Deegan and Unerman, 2011). Holthausen and Leftwich (1983) suggest that the PAT considers management's decision to be motivated by the economic consequences of accounting choices.

Any accounting choice depends on the produced information for the decision-makers and the distribution of the generated data to all interested parties. Watts and Zimmerman (1990) define an accounting choice as part of a contract between two different actors – sides, namely the agent and the principal. Both of these actors voluntarily agree on a set of accounting choices, with the premise that the above status is monitored by external auditors concerning the consequences (Watts and Zimmerman, 1990). Furthermore, Collin et al. (2009) point out that one of the actors will opt for suitable accounting choices to maximise the wealth of the involved parties. In addition, PAT posits that increased compensation levels must influence the preferable accounting choices (Collin et al., 2009). Such a strategy is followed by increased discretion in safeguarding lending agreements and eschewing political pressures owing to suspicious profits (Collin et al., 2009). The existence of such contracts relies on profit measures as proxies for the long-term cash-flow potential earning, according to PAT (Whittington, 1987). The described mechanisms depict the agent's opportunistic behaviour concerning the unprotected principals' interests while creating incentives for the agents to enter into contractual

agreements. All kinds of self-interest behaviours relate to the heart of this study in terms of investigating the management's interaction with the organisation's economic consequences.

2.3.3. Positive Accounting Theory's Hypotheses and Simplification's Characteristic in Context

In the present research, the positive accounting theory provides the fundamental underpinning of the study's theoretical framework via the assumptions and the simplified idea of self-interest. The fundamentals of PAT rely on the development of hypotheses that explain and predict accounting practices, consisting of three (3), namely the bonus plan, debt covenant, and political cost hypothesis (Watts and Zimmerman, 1986). All of them follow the assumption that each entity is primarily motivated by self-interest while oversimplifying human behaviour and ignoring other potential motivations (Whitley, 1998). In fact, such motivations identify that social responsibility, ethical considerations, and long-term sustainability are crucial managerial considerations influencing an organisation's strategies and behaviour (Scott, 2009). Ignoring them intensifies the possibility of lacking quality interpretation of a phenomenon while reducing the last's intensity in society (Whitley, 1998). The above-mentioned critique reflects the context-related view of PAT by recognising that each phenomenon is not unique to accounting but under the specific context services the efforts of the researcher to explore the research question (Richardson, 1995). According to Scott (2009), PAT is related to predicting managerial accounting choice and performance while interpreting managers' reactions to accounting policies and newly proposed accounting standards in different circumstances. Under PAT, all entities organise themselves by using the most efficient way to maximise their prospects for survival while trying to follow the law through various interpretations. In the present research, the management relies on questionable accounting policies that interfere with the entity's reality.

In the present research, the choice of the debt covenant hypothesis appears appropriate to present the relationship between management's motivation to manipulate accounting data through operating activities and the entity's performance influencing R&D investments. The management team focuses on ensuring that the organisation performs as anticipated by finding ways to manipulate the accounting numbers and present a more optimistic performance of the entity to all interested parties (Watts and Zimmerman, 1986). Such a statement is simplified, and any effort to generalise complex situations to gain legitimation via simplification can be doomed to failure (Lowe et al., 1983). This critique of PAT signals that accounting is a multifaceted field relying on many approaches depending on the context (Richardson, 1995). Whenever accounting researchers do not consider serving the wealth-maximising condition, any research effort is essential to continue even by simplifying a specific situation in related contexts (Lowe et al., 1983). The tendency to focus on simplified occasions to capture and predict some more complex phenomena in accounting is the core of the present research. In this particular concept, the researcher follows this tendency, identifying any assumptions and limitations that will impact the whole study.

Following the discussion, the idea of PAT under the debt covenant hypothesis relies on contracting and its influence on the accounting reports and the organisation's stakeholders' decision-making behaviour. The PAT uses contracting research to explore the factors that relate to the management influencing one accounting policy's behaviour over others (Tinker and Puxty, 1995). In the process of identifying the influential factors, the researcher is obliged to investigate past events, classify these factors by their importance, and examine part of all variables (Watts and Zimmerman, 1979). Such critique signals that the leded conclusion is important as an opinion rather than a determined final generalised answer (Watts and Zimmerman, 1979). As long as PAT does not prescribe or provide a means to improve accounting practices, the descriptiveness of the theory about cause and effects and the

conclusions about them relies on the simplicity characteristic and the context-related approach (Deegan and Unerman, 2011). In the present research, the simple idea of accounting disclosure manipulation stemming from management is being identified in investments in R&D and how the last is influenced by the economic consequences.

The present study focuses on the influence of the economic consequences on management's decision-making behaviour in investments in R&D under the IAS 38. As a concept, the study identifies a contract between a factor that impacts management's decisions to adopt questionable strategies affecting the accounting disclosure under a specific accounting standard. PAT addresses the manager's rationality to alter the accounting strategy when recognising costs in case there appears to be an opportunistic prospect motivated by self-interest (Williams, 1989). Such opportunistic behaviour is rational from the management even when a simplified logic of self-interest is the prevailing focus of an organisation's correspondent strategy (Holthausen, 1990). The PAT follows an explanatory status of accounting practices focusing on explaining and predicting such behaviour (Williams, 1989), while its self-interest characteristic appears as an obstacle to prescribing any accounting standard changes of how the standard must be (Watts and Zimmerman, 1979).

2.3.4. Positive Accounting Theory and the Influence of Accounting on Management's Behaviour.

Any contracting mechanism connects principals with agents in decision-making processes and develops appropriate conditions for all interested parties (Milne, 2002). Accounting researchers are driven by the above relationship, which aspires to translate the generated phenomena by applying positive accounting theory (Milne, 2002). Deegan and Unerman (2011) maintain that accounting scholars adopt either the efficiency or the opportunistic perspective of PAT to explain the manager's choice. The former, namely the

efficiency, also known as the ex-ante perspective, examines the need for using specific mechanisms to minimise future agency and contracting costs, and explains the actual financial performance of an organisation (Deegan and Unerman, 2011).

On the other hand, Deegan and Unerman (2011) claim that any opportunistic behaviour, relying on the lack of loyalty and morality and the need to increase an individual's wealth, is the main concept of an individual's self-interest basic assumption. Senior management's accounting decisions lean on different kinds of information and incline to influence the organisation's accounting system while being affected by any kind of opportunistic behaviour (Holthausen, 1990). Watts and Zimmerman (1978) argue that the opportunistic behaviour perspective, also known as the ex-post perspective, concerns, as stated, any contractual arrangement used by an organisation. Also, such behaviour attempts to explain and predict particular opportunistic reactions of the individual parts to illustrate the agents' will (Holthausen and Leftwich, 1983). Usually, the agents opportunistically adopt specific accounting choices that redound to an increase in their personal wealth (Holthausen and Leftwich, 1983). As a result, any discrepancy from the accounting principles sets their behaviour as opportunistic within positive accounting theory (Holthausen and Leftwich, 1983). Viewed in this light, PAT assists accounting researchers in focusing on phenomena that conduce to wealth effects for all relatable sides within an organisation. Any influence of the economic consequences may be characterised as obvious and crucial for the decision-making behaviour of the management.

The extant literature on positive accounting theory concludes by studying phenomena which ensue from standard accounting practices and relies on the idea of controlling and allocating an organisation's wealth. The international accounting principles and regulations are part of an essential framework (IFRS, 2022). Such an accounting framework contributes to the appropriate standard bookkeeping practices of organisations, assists companies in developing accounting policies, and monitors and reports the company's wealth to protect interested parties

(IFRS, 2022). Kothari et al. (2010) maintain that the positive theory of GAAP could control and set verifiability and conservatism as the basic elements of accounting practices. Moreover, other accounting regulations, such as those provided by the Swedish Accounting Standards Board (SASB), influence organisations to unreservedly choose the appropriate accounting policy under the economic consequences effect and being enforced by the transaction costs of any accounting change (Collin et al., 2009). PAT can lead accounting standard-setters by providing accounting principles and rules that apportion wealth and capital resources in an effective economy (Kothari et al., 2010).

Furthermore, the PAT's aim is to clarify and forecast accounting procedures, which rely on accounting principles and rules (Watts and Zimmerman, 1986). As a result, the tendency in accounting research to conduct empirical testing of hypotheses guides accounting researchers to adopt a more objective approach to explain managerial practices (Kaplan and Ruland, 1991). PAT relies on the individual's rational choice concerning the organisation's principal agent, such as the management, while being under pressure to signal bad news regarding various costs (Collin et al., 2009). IAS 38 appears as an accounting framework to work with, analyse and predict management's accounting policies. Any application of the specific accounting policy results in economic consequences and seems crucial to investigate how the above may influence management's decision-making behaviour. PAT expounds and clarifies the results in a more objective view and connects them to real-world economic events.

2.4. Real Earnings Management (REM)

2.4.1. Introduction

One of the organisation's primary objectives is to report its financial performance using specific financial statements periodically and annually. Earnings are one of the most critical elements to measure, evaluate and clarify an organisation's performance (IAS Plus, 2022).

Therefore, earnings disclosure through the financial statements is crucial for the majority of an organisation's stakeholders, while the latter choose earnings to evaluate management and its stewardship obligations, commitments and loyalty (Xu et al., 2007). In addition, management acknowledges the previously mentioned relationship with the stakeholders and chooses to utilise any accounting discretion of the accounting principles (Fields et al., 2001). Thus, the management's accounting choices influence the accrued accounting of the transactions (Fields et al., 2001). This signals the importance of earnings in an organisation's performance and its reciprocal relationship with the stakeholders through the preferred accounting principles while presenting that accounting discretion operates in favour or against the stakeholders.

Over the last two decades, many researchers have investigated REM and its reflection on an organisation's operations and performance (Kenny and Larson, 2018). In practice, executive managers become involved in real operational activities during the fiscal year to improve the organisation's financial position. According to Roychowdhury (2006), managers engage in and manipulate actual organisational transactions to achieve specific earnings targets and impact the annual financial reporting. The phenomenon mentioned above is called real activities manipulation and "is defined as management actions that deviate from normal business practices, undertaken with the primary objective of meeting certain earnings thresholds." (Roychowdhury, 2006, p. 336). Prior to this assertion by Roychowdhury, Fundenberg and Tirole (1995), Healy and Wahlen (1999), and Dechow and Skinner (2000) pointed to operational activities that managers accelerate to meet targets and are extensively available to them, signalling them in the earnings management's spectrum based on operative manipulation. As a result, executive managers look for various methods to influence any organisation's financial appearance and position. In the present research, the relationship between the executives' manipulation of real operational activities and the quality of financial reporting seems critical and impactful.

In recent decades, real earnings management has emerged as an essential alternative to earnings management practice. REM refers to all these normal operational activities that managers choose to manipulate in their preferred direction and improve financially reported earnings (Roychowdury, 2006; Järvinen and Myllymäki, 2016; Ali and Kamardin, 2018). This manipulation might be achieved by using techniques such as sales, overproducing inventory to lower the cost of goods sold, cutting discretionary expenditures (like R&D expenses and advertising expenditures), and gains from fixed asset sales (Roychowdury, 2006; Zang, 2012; Huang and Sun, 2017). The senior management team can use accounting judgement and structure corporate transactions to impact the informativeness of financial reports (Jones, 2011; Alkebeese et al., 2022). Bruns and Merchant (1990) and Graham et al. (2005) indicate the management's willingness to manipulate earnings and meet targets through actual operational activities rather than accrual earnings management. As a result, by choosing the REM strategy, the managers concentrate on the organisation's financial performance reported to the stakeholders. Hence, the choice of REM as a theoretical perspective for the present research favours the investigation of management's opportunistic behaviour through its decisions while utilising an accounting standard's discretion opportunity.

2.4.2. Real Earnings Management Characteristics and Management's Behaviour.

Earnings management is a common method for companies to smooth earnings fluctuations and present the appearance of steady results. To be precise, earnings management consists of various accounting policies based on selected accounting principles, namely the GAAP, and "occurs when managers use judgement in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the firm or to influence contractual outcomes that depend on reported accounting numbers." (Healy and Wahlen, 1999, p. 368). Brooks Jr. (2010) defines earnings

management as an organisation's unwarranted and managerial strategy to impact and deliberately manipulate accounting changes upon the recording of transactions. Such a strategy intends to affect the economic-financial performance, particularly the earnings, and the results to fit the prearranged targets (Brooks Jr, 2010). Any organisation's operational manipulation may influence the actual financial performance, while the management intends to follow unwarranted actions with a hypothetically short-term earnings focus.

One important characteristic of REM is that it can be implemented without violating any accounting regulation and by merely taking advantage of any choices in particular accounting policies. Based on specific strategies, management may use operational activities to manage earnings through accounting principles and standards (Khalil et al., 2022). According to Gunny (2010), managers control the real activities of organisations and undertake particular actions that change their structural operations. Based on the accounting conventions, management chooses operational discretion to manipulate any accounting system output, above all, the results in the financial statements (Gunny, 2010). Thus, executive management relies on accounting policies that can easily be adapted for operational activities (like investment in R&D), impact accounting recordings of these transactions, and, as a consequence, influence the financial statements—all the above present the ideal choice of REM for the present research to investigate the research question.

Discretion accounting policy, in effect, is common in an organisation's formal strategic decision. Furthermore, executive managers feel more secure by reducing discretionary expenditures and capital investments (as operational activities) than by choosing other manipulative methods that are against or inconsistent with specific accounting laws. Graham et al. (2005) argue that managers, via earnings management, decide to adopt real economic actions in their operations to achieve earnings benchmarks. Despite being aware that the followed strategy results in accounting manipulations and provides altered financial numbers (Graham

et al., 2005). Especially in the post-Sarbanes-Oxley Act (SOX) period, although the management acknowledges the importance of following the instructions of the accounting standards, it prefers more real earnings strategies than accrual earnings management to manage results effectively (Cohen et al., 2008). Furthermore, even under SOX Section 404 (Material Weaknesses), management tends to engage in REM strategies due to existing material weaknesses in their internal controls (Järvinen and Myllymäki, 2016). Such cases provide the opportunity for material misstatement in an organisation's annual financial statements to the management (Järvinen and Myllymäki, 2016). In practice, the senior management team identifies the significant relationship between the chosen managerial practices, how these result in the manipulated financial numbers and the riskiness of these strategies for any organisation.

The company's management relies on its power and different incentives to discover various strategies and influence the quality of the financial reporting. Based on REM strategies, CFOs and CEOs intend to "burn" the economic value of an investment, such as in R&D, to meet financial reporting goals while using it within accounting discretion under US GAAP (Graham et al., 2005). Also, the senior management's choice to overstate earnings by accelerating sales and sales' time leads to lower cash flow levels from operations; thus, the final selection of REM alters the earnings (Roychowdhury, 2006). Any active use of real earnings management is costly to society and increases the probability of financial fraud to the detriment of informativeness regarding earnings (Pan et al., 2022). Therefore, executives believe that substituting any real economic actions, even investments in important R&D projects, and manipulating operational activities under GAAP discretion may not result in substantial negative consequences for the organisations. All of the above reflects the core idea of the present study to use any accounting discretion through the manipulation of operational activities opportunistically.

2.4.3. Real Earnings Management and Management's Decisions about R&D

Investments.

Following the implementation of IAS 38, all organisations attempted to determine how they must exercise R&D investments and reduce any discretionary accounting policies in this situation. Dinh et al. (2016) claim that earnings management might be a concern when the entity's management is obliged to signal any particular information about investments in R&D and their expected success to the stakeholders. The scholars mentioned above indicate that the decision to invest in R&D and how to apply the particular accounting policy is subject to the management's judgement and discretion (Dinh et al., 2016). These kinds of investments are significant for many companies, and even after the implementation of IAS 38, the managers try to exercise their discretionary decisions in R&D investment (Dinh et al., 2016). The management focuses on signalling any earnings benchmarks or pushing their earnings above a specific threshold (Dinh et al., 2016). It is assumed that executives may adopt earnings management on real operational activities as an opportunistic earnings strategy to meet short-term financial reporting targets (Srivastava, 2019), even after implementing IAS 38. Any management's opportunistic behaviour is based on REM, and surpassing earnings benchmarks drives them to the discretionary choice of manipulating either R&D investments or their expenses.

A primary concern of IAS 38 is to prescribe the accounting application to investments in R&D for all organisations that follow the IAS/IFRS. Implementing an accounting standard intends to serve a clear reporting path for the companies and direct their accounting policies (IFRS, 2022). However, REM serves management as a formal excuse to manipulate and influence any financial reporting through questionable techniques (Amiram et al., 2018), such as reporting on R&D investments, which is not totally against the IAS 38. Moreover, the companies choose to deviate substantially from GAAP through internal decisions on earnings

management, whereby the generated consequences are relevant to all stakeholders' decisions (McNichols and Stubben, 2008). The management usually selects accounting misstatements to cause distortion in an internal investment decision and impact future growth expectations of the company, namely suboptimal investments (McNichols and Stubben, 2008). Any use of managerial discretion to distort a company's actual financial performance constitutes a significant threat to mislead the stakeholders and promote specific opportunistic goals (Healy and Wahlen, 1999). Managers' opportunistic behaviour is derived from their judgement to meet earnings benchmarks, applying it with accounting discretion under the IAS.

In terms of meeting the IAS 38 criteria to capitalise development expenses, senior management has the opportunity to manipulate real operational procedures and organisational activities. Thus, REM strategies often cite reduced discretionary spending on R&D, which strategically concentrates on affecting the income statement, the balance sheet, and the cash flow statement (Srivastava, 2019). Therefore, any accounting policy and economic action may be applied through real and ordinary operational activities to preserve the appearance of accounting normality (Graham et al., 2005). Thus, executives choose to follow the law while acting with discretion as regards their investment in R&D. In such a case, various incentives exist for the management to use REM, justified through PAT (Brooks Jr, 2010). Also, any accounting policy adopted by organisations induces economic consequences (Holthausen and Leftwich, 1983); therefore, it is crucial to define and clarify the connection between the impact of the actual economic consequences engendered after the implementation of IAS 38 and their influence on the management's strategic decisions and behaviour relating in investments in R&D. Based on the above, REM represents a useful theoretical instrument to investigate the research questions of this study regarding opportunistic behaviour and the operational manipulation of an entity to meet targets.

2.5. Economic Consequences of Accounting Policies and Choices

2.5.1. Introduction

Positive Accounting Theory (PAT) presents strong, useful assumptions that justify rational and non-rational managerial decisions from accounting perspectives. Watts and Zimmerman (1990) claim that “we prefer “Positive Accounting Literature” to alternative terms that have arisen, particularly the term “Economic Consequences Literature” (Watts and Zimmerman, 1990, p. 148), concluding that decisions on accounting standards and policies are being made on a senior management organisational level, reflecting the core of both theories. For the present study, economic consequences theory cooperates with PAT to provide a useful theoretical framework. Furthermore, the present research investigates the economic consequences generated by accounting policies, which influence management’s decision-making behaviour.

The term “Economic Consequences” was popularised by Stephen Zeff (1978), who defines it as “the impact of accounting reports on the decision-making behaviour of business, government, unions, investors and creditors” (Zeff, 1978, p. 56). Since the first use of the term in the 1940s, it has been encountered in the statements of American policymakers (Deegan and Unerman, 2011). Moreover, said policymakers used it to debate their economic and accounting decisions and policies (Deegan and Unerman, 2011). Subsequently, the term “Economic Consequences” was frequently used by senior management and decision-makers, who argued that both these agents shaped the formation of accounting standards (Zeff, 1978). From the outset, there has been a consistent debate on the term to justify every company’s economic decision that did not seem so rational at the time and simultaneously to avoid any perception of illegality.

In the subsequent decades, numerous influences officially emerged in the accounting profession to manipulate the standard-setting processes. Several individuals and groups started

to actively and vigorously intervene in the process and conjure up arguments different from those generally engaged in accounting matters (Zeff, 1978). The policymakers' exclusive interest was in the disclosure of financial statements and linking financial information between organisations with actual and potential investors (Zeff, 1978). This link resulted in controlling the economic consequences when presenting accurate financial information, and the responsibility for this lay with the Security and Exchange Commission (SEC) in the United States of America (USA) to secure qualitative and complete disclosure in reports to investors (Zeff, 1978).

The choices made by managers and regulators in relation to accounting rules are presented as the result of logical behaviour by reasonable agents focused primarily on the organisation's interests. Taylor and Turley (1986) address the critical role of economic consequences in the standard-setting processes and choice of accounting principles, stating that the two are inseparable and mutually serving. The present section discusses how the economic consequences induce investigation into how accounting choices and their effects influence management's decision-making behaviour. The particular research investigates the importance of the economic consequences generated from the accounting standard-setting choice on an organisation's decision-making behaviour and strategic policies.

2.5.2. Economic Consequences and Impacts of the Accounting Principles on the Organisation's Behaviour.

The economic consequences theoretical concept has been extensively used in the literature to explain and predict rational management's decision-making behaviour. Holthausen and Leftwich (1983) argue that a theory that depends on rational economic behaviour makes it possible to bring predictions coherent with observed behaviour in other applications under the accounting law. Furthermore, the urge to develop and test an economic consequences

hypothesis frequently leads accounting researchers to challenge unsolved issues in finance, management, political science, and organisational theory while indicating that empirical investigations should contribute to other research areas (Holthausen and Leftwich, 1983). Fields et al. (2001) claim that the economic consequences concept provides new paths for in-depth research on the implications of accounting policies from different perspectives. A manager's accounting decision is a multidimensional choice, and it is essential to manage it with respect to the implications, the behavioural changes and the outcomes that originate from this decision (Fields et al., 2001).

Accounting rules and principles lead to various outcomes that may interfere with management's present and future decision-making behaviour. Holthausen and Leftwich (1983) clarify that accounting choices have economic consequences depending on the changes in the accounting principles and the resulting outcomes. Any alteration to accounting principles and laws influences accounting numbers and revises the decision-makers' wealth (Holthausen and Leftwich, 1983). Such changes might strengthen the possibility of inducing economic consequences (Holthausen and Leftwich, 1983). In addition, operational changes in the entity's organisational behaviour can influence accounting numbers (Pope and McLeay, 2011). The accounting numbers reallocate the organisation's cash flows or the wealth of the interested parties and induce any contracting and decision-making process (Pope and McLeay, 2011). Any change in accounting policies affects wealth and induces economic consequences on the organisation's operation and long-term survival.

For an organisation, all activities generate information affecting the entity's behaviour. The recipients communicate and treat such information in a desirable and undesirable way. The above behaviour is succeeded through "information inductance", which is "the process whereby the behaviour of an individual is affected by the information he is required to communicate." (Prakash and Rappaport, 1977, p. 29). Prakash and Rappaport (1977) state that an organisation's

behaviour depends on the accounting information needed for internal and external transactions. Such behaviour is fed back to the sender and is influenced by particular accounting rules and principles (Prakash and Rappaport, 1977). Hence, a decision-making entity's behaviour is connected simultaneously to the presented financial information for personal use and economic data. An organisation is required to disclose to all interested parties through information inductance, following the accounting regulation (Prakash and Rappaport, 1977).

Furthermore, Seybert (2010) argues that US accounting legislation and policy may develop economic consequences affecting the management's decision to invest in continuing R&D projects. Specifically, in continuing R&D projects, there appears to be an interactive relationship between US GAAP-based R&D accounting reporting policy and decisions to overinvest in continuing R&D projects. (Seybert, 2010). The researcher tried to connect negative economic consequences to self-monitoring opportunistic behaviour (Seybert, 2010). Managers choose to overinvest to protect their reputations from potential damage that would be caused by an abandoned capitalised project (Seybert, 2010). Managers are more likely to engage in such behaviour while altering their decisions to prevent reputational damage and avoid any negative economic consequences from R&D investment under US GAAP (Seybert, 2010). Thus, any information and accounting data compulsorily communicated to all interested parties can be influenced by the organisation's decision-making behaviour, which can be characterised as an economic consequence.

2.5.3. Economic Consequences Categorisation and Management's Decision-Making Behaviour.

The economic consequences literature discusses various forms of economic consequences following different classification systems. To understand such phenomena, researchers deem it helpful to outline them in particular categories depending on specific

determinants and utilisation. In reality, a researcher's choice of a particular classification justifies how the economic consequences impact the research while scrutinising further studies (Brüggemann et al., 2013). The most justifiable examples come from Benston and Krasney (1978), Selto and Neumann (1981), Blake (1992), Brüggemann et al. (2013) and Zhang and Yan (2016) (Table 1). This research adopts Blake's (1992) classification system for the perceived causes of economic consequences issues grounded on particular general dichotomies in accounting regulation. Based on the economic consequences concept, the source of the wealth allocations is conditional to the accounting method choice, which may be considered an influential incentive for the accounting rule-making authorities (Whittred and Zimmer, 1988). Furthermore, "accounting choices have economic consequences if changes in the rules used to calculate accounting numbers after the distribution of firms' cash flows, or the wealth of parties who use those numbers for contracting or decision-making." (Holthausen and Leftwich, 1983, p. 77). In the present research, the reference to contracting or decision-making constitutes a critical instrument to identify and distinguish Blake's (1992) classification system.

Table 1: Economic Consequences Classification Systems

Research	Criterion	Category	Subcategory
Benston and Krasney (1978)	<i>Effects of Accounting Information Publicly Reported</i>	Direct	-----
		Indirect	-----
Selto and Neumann (1981)	<i>Those Affected by Accounting Information - Outcomes</i>	Suppliers of Information	-----
		Users of Information	-----
		Potential Suppliers of Information & other Parties	-----
Blake (1992)	<i>Perceived Causes of Accounting Regulation and Requirements</i>	Compliance / Analysis Costs	-----
		Mechanistic Costs	Regulatory
			Contractual
		Judgemental	Micro
Macro			
Brüggemann et al. (2013)	<i>Harmonisation with the Stated Objectives of IAS/IFRS Regulation (supplementary to Blake’s (1992) Judgemental category)</i>	Intended	-----
		Unintended	-----
Zhang and Yan (2016)	<i>Effects of Harmonisation with Stated Objectives of IAS/IFRS Regulation</i>	Intended	-----
		Unintended	Unrealised
			Subsequent – Indirect
			Beyond – Objective
		Prior	

According to Blake’s (1992) classification system, the first distinction arises from decision-making by users of accounts, such as the compliance/analysis costs and judgemental consequences categories. At the same time, the second distinction distinguishes the mechanistic application of the regulation or contracts category from the rest (Blake, 1992). Firstly, the compliance/analysis costs category concerns the account users based on the principle that any change in any accounting regulation can transform any costs for companies (Blake, 1992). In addition, the second category, the judgemental, is “used to refer to those economic consequences issues that arise because of decisions taken by some readers of accounts in response to the information provided” (Blake, 1992, p. 307). On the contrary, the latter, the classification of the mechanistic consequences, is a category that “refers to those economic

consequences issues that arise because the figures reported in the accounts “trigger off” a mechanism that affects the economic position of the reporting entity” (Blake, 1992, p. 306). According to the above, the present study could fall within Blake’s economic consequences classification system (1992) since it proposes that changes in accounting regulation affect the costs, the financial reporting and the decisions taken by account readers. Thus, the present study can be related to the “judgemental category”, which mirrors the judgemental behaviour on management’s decisions and is induced by the interpretation of economic consequences of accounting policies from the managers.

Nevertheless, the need for organisational accounting regulation has motivated other scholars to define the economic consequences according to their harmonisation with the accounting laws and principles. Brüggemann et al. (2013) enhance the scope of the analysis of economic consequences by interpreting Blake’s “judgemental” category with a supplementary subclassification, namely the “intended” and “unintended”. These authors report that the “intended” consequences include financial reporting, capital market and macroeconomic effects (Brüggemann et al., 2013). On the other hand, all the others not grounded on the above objectives must be characterised as “unintended” consequences (Brüggemann et al., 2013). Following the economic consequences’ classification of Brüggemann et al. (2013), Zhang and Yan (2016) add that the accounting standards have either “intended” or “unintended” economic consequences based on their objectives and related empirical evidence, which influence essential business activities. For that particular study, the need to understand that economic consequences are important based on the “judgemental” analysis perspective and that accounting principles influence the decision-making behaviour with either “intended” or “unintended” consequences is accomplished using Blake’s classification system. The said system provides the opportunity for the researcher to investigate all effects without distinguishing between them since all results affect the management’s judgement in financial

reporting and structuring manipulative transactions (Healy and Wahlen, 1999). The present research relies on the “judgemental” classification of the economic consequences being dependent on the interpretation of them by the management team and including both the intended and unintended.

2.5.4. Economic Consequences Influence on the Policymakers and Practical Implications

Reforming an accounting standard may generate benefits and costs in business operations and influence future economic activities. The IASB as a policy setter appears to be an attractive research theme in the international accounting literature. Burchell et al. (1980) support that any implementation of an accounting system has economic consequences, and any change in it is due to particular interests and concerns. Based on the above view, Selto (1982) argues that any internally adopted accounting alterations may affect the company’s performance evaluations and motivate the entity’s management to select performance-favourable actions. All industry sectors may experience unintended side effects generated from the above managerial choices and the impact of changes stemming from the accounting principles under Selto’s policy-development framework (Selto, 1982).

Furthermore, Hoppe and Gray (1982) indicate the existence of a continuous misunderstanding of the political power exercised between the actors involved in the development and implementation of an accounting standard. In practice, such a misunderstanding confuses the accounting setters with the industry’s political power according to an accounting regulation on how, when and by whom power is exercised (Hoppe and Gray, 1982). The scholars mentioned above focus on the importance of the policymakers providing accounting standards that are more efficient, uninfluenced by other political forces, and with predicted economic consequences, which will eliminate any misunderstandings and misuse by the industry based on their framework (Hoppe and Gray, 1982). The aforementioned

frameworks act as a useful benchmark, as they allow the researcher to consider the presence of all the groups affected by the economic consequences, the decision-making behaviour of the internally adapted group following the management's aspect, and the development of an accounting principle and law, from the policy setter's point of view.

Economic consequences research creates opportunities for accounting policymakers to acquire meaningful feedback on how accounting standards affect management's accounting choices (Ruland, 1989; Pope and McLeay, 2011). Holthausen and Leftwich (1983) suggest that the economic consequences have promoted further research in accounting standards and the plethora of companies' decision-making techniques regarding accounting policies. Furthermore, Voulgaris et al. (2015) claim that any particular change in an accounting policy for an organisation, like adopting the IAS/IFRS, may induce policy implications for policymakers and critical consequences for the organisation's key players during the transition period. One crucial implication could be identified in reduced income for key players in organisations, for example, the managers, during the critical period of the change (Voulgaris et al., 2015). The policymakers can confront such an implication as an important reason for appreciating the usefulness of financial statements in an organisation's contracts and, thus, respectfully consider that period when legislating (Voulgaris et al., 2015). Management's accounting choices, accounting setters, stakeholders and policymakers are important agents in economic consequences literature, which influences specific managerial behaviour phenomena.

Any economic effect that originates from accounting policy and choice affects not only an organisation's long-term survival and development but also other interested parties. Allee et al. (2008) face the challenge of assessing both the intended and unintended economic consequences of standards when legislating accounting regulation. The policymakers' demanding role requires them to cooperate with other groups involved with the accounting process, such as accounting educators, and support the training procedure on current and

potential accounting standard users to reduce any adverse economic effects (Allee et al., 2008). Primarily, Nobes and Stadler (2015) suggest that IASB, as an accounting standard setter, may consider qualitative features of its framework and reframe it more efficiently according to the economic effects. These features induce the organisation's management, as well as the accounting standard setters and users, to proceed with particular accounting actions and policies and end up with economic consequences and effects which influence management's decision-making behaviour (Nobes and Stadler, 2015). Notably, von Koch et al. (2014) exemplify that in the information environment of financial analysts, IFRS accounting quality is considered an important economic factor, and its impact depends on the model that it is being used for analysis.

In summary, the company's contractual arrangements with other entities; self-interested managers whose compensation plans or reputation are affected by their decisions, and other external parties, such as actual and potential owners, are categories that are influenced by a company's accounting choice (Fields et al., 2001). The present study recognises the disadvantage for policymakers, namely the IASB, in identifying the need to collaborate closely with other accounting users. All policymakers, like the IASB, have no choice but to work within the suggested frameworks and recognise any productive willingness from the practitioners for collaboration. The specific collaboration focuses on developing more uncomplicated and straightforward accounting standards while providing fewer opportunities for the management to implement discretionary accounting standards, such as the IAS/IFRS. Such a combination of the IASB as a policy setter and the practitioners' willingness to provide realistic data operates as a constructive perspective in the international accounting literature.

2.6. Empirical Literature on Economic Consequences of Accounting Rules and Principles

2.6.1. IAS/IFRS's Development and Contents of IAS 38.

The International Accounting Standards (IAS) and the International Financial Reporting Standards (IFRS) are groups of accounting principles which guide organisations to follow the same standards for reporting and disclosing their financial statements (IFRS, 2022). In general, the IAS/IFRS contribute to the development and appearance of a common accounting language that allows organisations in different countries to standardise their financial reporting under agreed accounting standards (IAS Plus, 2022). The IAS/IFRS regulation is set by the independent International Accounting Setting Board (IASB), which is governed and overseen by the IFRS Foundation Trustees, who are under the control of the IFRS Foundation Monitoring Board (Camfferman and Zeff, 2007). The predecessor of the IASB was the International Accounting Standard Committee (IASC) (Camfferman and Zeff, 2007).

Another predecessor, the International Congress of Accountants (ICA) in 1972 in Sydney, officially addressed the idea of creating a global set of accounting principles due to increasingly globalised markets that called for the harmonisation of accounting regulation and practice (Camfferman and Zeff, 2007). Subsequently, the IASC was officially established in 1973 with a signed agreement and a constitution from the professional accounting bodies of Australia, Canada, France, Germany, Japan, Mexico, Netherlands, UK/Ireland, and the USA (Pope and McLeay 2011). The two primary objectives of this body were 1) to formulate agreeable accounting standards to help and promote globally accepted financial statements; and 2) to continuously improve and harmonise accounting procedures, standards, and regulations, which contribute to presenting understandable financial reporting in the public interest (Camfferman and Zeff, 2007). From the outset, all official efforts to develop an international accounting “language” relied on its worldwide promotion and contribution to the industry and public interest while reducing any misuse and misunderstandings of the accounting standards.

Apart from these main objectives, the IASC promoted reporting quality and comparability of financial statements across different countries and markets (De George et al., 2016). Replacing the IASC, the IASB appeared in 2001, with its main objectives concentrated on Article 2 of the IFRS Foundation Constitution (Mohammadrezaei et al., 2015). In particular, the IASB was responsible for developing high-quality financial reporting standards, promoting the use and application of these standards, and easing the adoption of IFRS by interpreting them in terms of convergence with the national accounting standards (Mohammadrezaei et al., 2015). To date, the IASB has been working on creating, developing, helping, and contributing to the accounting field by constructing a worldwide framework based on accounting principles and rules (De George et al., 2016). Such an accounting framework must be clear and not allow misinterpretation while focusing on an organisation's self-improvement, long-term survival, and benefit stakeholders' interests.

The present study focuses on the economic consequences of the IAS 38 (Intangible Assets) accounting practice and their influence on management's decision-making behaviour. Generally, IAS 38 demarcates the accounting criteria for recognising, measuring, and disclosing Intangible Assets (IFRS, 2022). Notably, the study focuses on investment in R&D. An intangible asset is a non-monetary asset with no physical substance, such as R&D investments (IAS Plus, 2022). In the present form, the conceptualised R&D principle originated in 1977 and was effectively activated as IAS 9 (Accounting for Research and Development Activities) from the 1st of January 1980 (IAS Plus, 2022).

The subsequent decades witnessed interferences and delegations to develop a more functional accounting principle for R&D investment. The most significant developments occurred in December 1993, September 1998, and March 2004 (IAS Plus, 2022). Specifically, in December 1993, IAS 9 was modified from "Accounting for Research & Development Activities" to "Research & Development (R&D) Costs", concentrating more on instructions in

relation to the accounting of R&D from the organisation's point of view (IAS Plus, 2022). In September 1998, IAS 38 superseded IAS 9 and congregated all intangible assets under a single accounting principle (IFRS, 2022). Finally, in March 2004, IAS 38 was revised to its current state, applying it to all intangible assets acquired in business amalgamation (IFRS, 2022). The IASB has always followed a policy that relied on the idea of analytically disclosing all financial information and being transparent to all the entity's stakeholders. The specific standard presents how to disclose intangible assets, while management has the option of choosing the most appropriate policy with the lowest risk for the organisation.

Organisations may invest significant amounts of money in R&D with a view to long-term survival and becoming market leaders. Ravichandran et al. (2009) claim that investment in R&D, especially for the majority of innovative companies, influences the organisations' long-term survival. The findings relying on public data sources show that investing in intangible assets demands a significant proportion of capital budgets, depends on the company's size and diversification, and is more resource-intensive (Ravichandran et al., 2009). So, any managerial decision about investing in them is influenced by both rational economic considerations and legitimacy in providing social support to all stakeholders (Ravichandran et al., 2009). Furthermore, the characterisation of R&D as an intangible asset makes its accounting treatment interesting and affects how the organisation's interested parties understand and interpret it (Tsoligkas and Tsalavoutas, 2011). Tsoligkas and Tsalavoutas (2011) argue that R&D is a strategic resource that can lead to enhanced financial performance, growth, profitability, and long-term competitive advantage in an organisation's strategy. The findings based on public financial data sources present an organisation's positive market value with the capitalised portion of R&D, as it supports the success of the R&D projects and their future economic benefits (Tsoligkas and Tsalavoutas, 2011). Instead, the R&D expenses negatively relate to the entity's market value, indicating failed R&D projects with no future economic benefits

(Tsoligkas and Tsalavoutas, 2011). The present study investigates common accounting practices and practitioners' working experiences under a specific standard relating to R&D investments. It recognises R&D's significance when involved in an organisation's long-term policy influencing its benefits.

Furthermore, Wouters and Verdaasdonk (2002) elevate the importance of the accounting function within a company and suggest that any critical decision needs to integrate the company's senior management under the supervision of specialised accountants. The findings from case studies analysis indicate that accounting information positively assists with infrequent and urgent decisions, by including new evidence on familiar decisions, and minimising data distribution across an entity by translating operational knowledge into accounting information (Wouters and Verdaasdonk, 2002). This state would represent the entity's financial reporting, justified by laws and regulations, with the ability for the company to invest and expense a significant amount of money (Wouters and Verdaasdonk, 2002). The current study contributes to the international accounting and real earnings management literature by understanding the importance of distinct economic consequences of an accounting standard as a determinant of senior management's decision-making behaviour in long-term investment policies. Additionally, it investigates crucial practical accounting issues and highlights the role of CFOs in senior management decision-making processes.

2.6.2. The Empirical Literature on Economic Consequences of Accounting Policies and Choices in R&D Projects.

Accounting researchers discuss the need for common accounting regulations, which can be globally adopted after overcoming any country-incentive and other critical issues. A vast amount of academic research deals with the choice and adoption of accounting principles, the consequences of using them, and their theoretical perspective (Fields et al., 2001). Their

literature review research indicates that such studies focus on the notion of self-interest and stewardship, and the limited presentation of the alternative accounting methods' implications when trying to explain management decisions from the accounting point of view (Fields et al., 2001). Holthausen (1990) argues that the accounting method choice and its economic consequences are influenced by opportunistic behaviour rather than efficient contracting and information quality perspectives. The scholar concentrates on the assumption of opportunistic behaviour, which efficiently explains an accounting method choice, while actual results and the consequences derived from them may underlie monitoring and conflicts of interest between different parties (Holthausen, 1990). Fields et al. (2001) point out that the management's accounting choice is based on the contractual relation of the modern organisation, the management's communication process of organisational information to third parties under opportunistic behaviour, and the implications of the quality and quantity of financial disclosures pursuant to accounting regulations. The management's opportunistic behaviour operate as an important assumption for the current research supporting any accounting choice and its economic consequences.

The growth of R&D investment in organisations has attracted research into the economic consequences under the influence of local GAAP when investing in R&D. Callimaci and Landry (2004) claim that capitalised R&D under Canadian GAAP provides valuable information to market stakeholders who focus on investing in Canadian companies. According to their study on using a valuation model based on public financial databases, under Section 3450 of the Canadian Institute of Chartered Accountants (CICA), the economic consequences when capitalising R&D expenses and, in general, all R&D expenses benefit market participants to collect value-relevant information (Callimaci and Landry, 2004). Furthermore, the capitalised R&D amount helps to explain the investment returns during the year in question, and the credibility and quality of the data (Callimaci and Landry, 2004). However, Cazavan-

Jeny and Jeanjean (2006) claim that the opportunity to adopt particular accounting principles by decision-makers, particularly under the French GAAP, may create endogeneity issues and changes based on different local legal enforcement when investing in R&D. They examine the value relevance of R&D accounting treatment from a public financial database (Cazavan-Jeny and Jeanjean, 2006). The findings present that the economic consequences of the particular accounting principle under the opportunistic behaviour of the senior management may induce adverse effects on stock prices and returns, and, eventually, scare investors and other exogenous agents (Cazavan-Jeny and Jeanjean, 2006). Usually, companies choose to capitalise when successful R&D projects are smaller, with fewer growth opportunities and try to present a more favourable financial image to convey to all stakeholders (Cazavan-Jeny and Jeanjean, 2006).

In addition, Oswald and Zarowin (2007) address the effects of the accounting choice to capitalise or expense R&D expenditures from studying a company's future earnings reflected in current stock returns. This study follows a regression analysis based on data from a public financial database (Oswald and Zarowin, 2007). The information from R&D capitalisation, based on the UK GAAP, may influence managerial policies about the organisation's future earnings. (Oswald and Zarowin, 2007). Any opportunity for higher future earnings may convince the entity's management to communicate through the capitalisation, rather than expensing, of R&D projects (Oswald and Zarowin, 2007). Based on the studies mentioned above, all companies interpret accounting regulation enforcement differently in R&D projects. The decision to capitalise R&D expenses is related to the company's opportunistic communication of certain results to the stakeholders and how it chooses to do this under a given local accounting regulation.

Recent literature has investigated the economic consequences that result from the accounting treatment influencing different agents under IAS 38. Dinh et al. (2015) suggest that the economic consequences of the IAS 38 capitalisation of R&D development costs influence

analysts' earnings forecasts. Specifically, the research analyses a model about R&D capitalisation consequences on earnings forecast in hand-made collected financial data (Dinh et al., 2015). The findings show that capitalising on development costs creates instability and challenges analysts when they try to forecast earnings from R&D investments (Dinh et al., 2015). Forecasting errors and dispersion are higher due to the uncertainty of the benefits from the investment and, simultaneously, the directions of the accounting policy suggested by IAS 38 (Dinh et al., 2015). Besides, substantial underlying environmental uncertainty may impair forecasting accuracy as regards information on capitalised development costs (Dinh et al., 2015). Investors also rely on the usefulness of R&D accounting information under IAS 38, especially the capitalisation of R&D costs (Mazzi et al., 2022). The researchers contact interviews with professional accounting experts in the UK. The findings show that the principle of mandatory capitalisation of development costs exerts a positive influence on the decision-making behaviour of these external stakeholders, as the unique financial insights reveal helpful accounting information (Mazzi et al., 2022). Despite accounting standard setters expecting the generated accounting data to provide a sufficient signal of future value for the R&D assets, the investors do not recognise these insights as benefits in their decisions (Mazzi et al., 2022). This particular expense capitalisation relies on the "perceived vagueness and subjectivity of the conditions currently in the standard" (Mazzi et al., p. 1, 2022). IAS 38 is open to interpretation by the companies, and the specific situation presents unstable conditions and questionable results to all interested parties. All such interested parties have the first impression that it is at the organisation management's discretion to use the economic consequences and, based on the standard's potentiality, to interpret it for the company's benefit.

To date, economic consequences and international accounting literature do not specifically deal with the influence of economic consequences on management's decision-making as determinants. Some studies investigate the influence and contractual relation

determinant of the accounting method choice, witness, for example, Holthausen (1990) and Fields et al. (2001). However, only a few studies concentrate on IAS 38 and explore the results of capitalising R&D expenditures, how different markets react, and the consequences of that particular action, for example, Callimaci and Landry (2004), Cazavan-Jeny and Jeanjean (2006), and Oswald and Zarowin (2007). Another group of studies concentrates on the accounting standard-setting process and how this relates to the accounting method choice and the consequences derived from this choice, for example, Taylor and Turley (1986). To synthesise, all studies mentioned earlier investigate and analyse the management's accounting choice and policy for the organisation and the determinants that influence the particular action, rather than the economic consequences as an influential determinant of management's decision-making behaviour.

The present study focuses on the economic consequences generated from accounting choices and their influence on management's decision-making behaviour. It is crucial to investigate whether management is influenced by the results of its accounting choice based on international accounting rules and principles when required to decide on an organisation's long-term strategy. The current research indicates the influence of international accounting standards on senior management's decisions and whether the economic consequences involve any direct specific decisions. Furthermore, according to economic consequences literature, a manager's accounting decision is rational when influenced by a particular accounting policy. Still, defining what happens in a strategic management's decision under the same circumstances is essential. Standard accounting practices rest on specific accounting policy selections, and "economic consequences theories view managers' and regulators' choices of accounting rules as choices made by rational economic agents" (Holthausen and Leftwich, 1983, p. 79). The present research is motivated by the extant literature and the need to investigate whether and how the

economic consequences of particular accounting standards influence senior management's decision-making behaviour.

2.6.3. Earnings Management and Management's Decision-Making Influenced by the Accounting Choice

The current research focuses on whether the economic consequences of particular accounting standards affect management's decision-making behaviour in an organisation. Many organisational determinants may influence management's choices; however, one of the most important is the accounting policies and choices, any alterations that ensue from them and how these may contribute to changing the organisation's long-term strategy (Shakespeare, 2020). O'Connell et al. (2018) recognise the positive consequences of the IAS 38's implementation in European countries and express great interest from US R&D professionals in adopting it in the US market. Such a view is generated by measuring a model of R&D programme success using data from a public financial database (O'Connell et al., 2018). According to their findings, the accounting choice for a company's capitalisation of R&D's development expenditures under IAS 38 positively impacts and is connected with any evaluative measure of the R&D programme performance (O'Connell et al., 2018). Broadly speaking, the capitalisation of R&D expenditures, combined with a successful R&D programme evaluation, may prevent any opportunistic organisational activities by the senior management while positively affecting shareholder value (O'Connell et al., 2018). The management relies on the R&D programme's success measurements and tries to develop more accurate and robust indicators of such a programme following the European markets (O'Connell et al., 2018). To summarise, any effort to impede the organisation's earnings management strategy by developing more accurate R&D programme success evaluation measures will support the positiveness and functionality of IAS 38 while reducing information

asymmetry. Such combinations positively reflect on an entity's decisions and lead the decision-makers to follow suitable policies.

An organisation's decision-making behaviour depends on different policies and varies on the relationships with all interested agents. Wilner (1982) discusses the effect of economic consequences on management's decision-making behaviour in adopting a particular accounting policy. Thus, the information inductance behaviour incurs in management's decision-making behaviour (Wilner, 1982). Managers may choose alternatives that present their effort more positively, which may not correspond to the companies' actual financial position (Wilner, 1982). The findings may also be related to the policy setters and convince them to always consider changes to behaviour in the company bookkeeping procedures (Wilner, 1982). Moreover, this experimental study tests the subjects' behaviour outside an organisational context under the US GAAP, ignoring the operational hierarchy and specific fixed alternatives tests (Wilner, 1982). Based on the above, there appears to be a prompt for further research on how organisations interact with other accounting legislations, like the IAS/IFRS, and how manipulative the economic consequences might become upon the management's decision-making behaviour while resulting in insufficient opportunistic strategies.

Accounting policies in R&D investment force the decision-makers to proceed in questionable activities that will impact the R&D strategy. Cooper and Selto (1991) claim that changes in accounting methods for R&D expenditures affect the decentralised decision-makers to alter their behaviour in relation to long-term investment R&D policies. The research is an experiment on US full-time job-related managers following the US GAAP. The findings present that the decision-makers undervalue their R&D investments (by excluding or reducing them) and, hence, the company's long-term R&D performance (Cooper and Selto, 1991). Furthermore, the only difference in the participants' behaviour is the reaction level depending on the company's performance in terms of expensing or capitalising R&D costs, the selection

period, and the investment risk (Cooper and Selto, 1991). The results from that particular study are based only on non-R&D related but full-time job-related managers, and more empirical results are needed to approximate real-world complexities (Cooper and Selto, 1991). In conclusion, the company's performance and R&D investment under the IAS/IFRS should be investigated, comparing any differences from other local GAAP. Such an effort might rely on using more empirical results and setting the research to pragmatic conditions, facts, and situations.

Investing in R&D projects appears to be related to accounting laws and rules, which may influence the focus and the final result of the organisation's investment strategy. Seybert (2010) argues that US accounting legislation and policy may affect the management's decision to invest in R&D projects. This is an experiment utilising MBA student participants about US GAAP followed by a survey of executives enrolled in a professional training course (Seybert, 2010). The findings show that in continuing R&D projects, there appears to be an interactive relationship between the accounting reporting method and the management's responsibility for choosing a suitable strategy (Seybert, 2010). The results suggest managers have a preference to overinvest in ongoing R&D projects to prevent reputational damage and engage in intensive self-monitoring behaviour (Seybert, 2010). When the managers are responsible for both the R&D project and its financial disclosure, they decide to overinvest in continuing R&D projects (Seybert, 2010). Thus, the researcher's approach, via earnings management, tries to connect negative economic consequences to self-monitoring behaviour (Seybert, 2010). Consequently, further research is required on accounting practices drawing insights from "real" problems and publicly available data regarding investment in R&D projects under IAS/IFRS regulation. Questionable practices are common strategies and are related to the management's ethics.

Any ethical concern about a company's standard accounting and operational practices is crucial to the management's ambiguous behavioural view. Bruns and Merchant (1990)

discuss the ethical framework and objectivity used by senior management in reporting short-term earnings and the quality of financial information under the prism of earnings management. Their research follows an experimental survey on managers under the US GAAP. The findings present that many managers support that following any practice that is non-explicitly prohibited or slightly deviates from the legislation appears ethical and acceptable (Bruns and Merchant, 1990). The scholars maintain that all interested parties seem to be “vulnerable to misinterpretation, manipulation, or deliberate deception” (Bruns and Merchant, 1990, p. 22).

Following the last-mentioned research, Fischer and Rosenzweig (1995) confirm that all managerial groups show greater tolerance to earnings management strategies. These scholars assert the existence of management’s manipulation of expenses of operational activities while ignoring any legalities if something is not explicitly and clearly prohibited (Fischer and Rosenzweig, 1995). Their survey of MBA students under the US GAAP shows that earnings management is not problematic, provided the management considers disregarding any ethical responsibilities (Fischer and Rosenzweig, 1995). On the other hand, from the stakeholder’s perspective, an accounting or an operating manipulation appears unethical and questionable when misrepresented by the financial statement’s users (Fischer and Rosenzweig, 1995). Thus, any choice or way accountants and managers may influence an organisation’s financial disclosure, viz earnings management, must be controlled with sensitivity in relation to all ethical ramifications. The present research, therefore, utilises the ethics of earnings management under the economic consequences of IAS/IFRS in the management’s decision-making behaviour when investing in R&D.

The above studies strengthen the need for further empirical and practical research on how the economic consequences generated by the IAS/IFRS legislation influence management’s decision-making behaviour. Based on the above discussion, some studies debate the IAS 38 and its positive economic consequences. They also investigate the opportunity to

apply the IAS 38 to the US market and the need for more accurate programmes to evaluate the success of its practical application, such as O'Connell et al. (2018). Moreover, other researchers try to evaluate accounting legislation on investments under US GAAP and management accounting behaviour by investigating MBA students and executive managers not under pragmatic conditions but in particular controlled environments, such as in Wilner (1982), Cooper and Selto (1991), and Seybert (2010). To synthesise, these studies concentrate on the US GAAP and its interaction with management's behaviour in R&D investment decisions in the US market (Wilner, 1982; Cooper and Selto, 1991; Seybert, 2010). Their selected research strategy is based on experiments, which investigate a specific situation within its real-life context, but not under pragmatic conditions and by ignoring senior management's self-interest circumstances (Wilner, 1982; Cooper and Selto, 1991; Seybert, 2010). Moreover, the selected samples are MBA students and executives outside the organisational context, not experienced practitioners and professionals in actual ordinary circumstances regarding R&D projects (Cooper and Selto, 1991; Seybert, 2010). The studies mentioned above support as commonplace their suggestions for future research that could benefit from actual pragmatic IAS/IFRS conditions and how these standards and their economic consequences influence management's decision behaviour.

The present study concentrates on IAS/IFRS and is influenced by accounting professionals and practitioners who insist on coping with common accounting issues originating from adopting IAS/IFRS in more countries. Specifically, it investigates how the economic consequences of IAS 38 operate and influence the way management works and makes decisions for the organisation's strategic policies. The current thesis relies on more accurate facts, tests, and analyses of a larger sample of data. It uses a mixed-methods strategy influenced by reality, simultaneously employing quantitative and qualitative techniques to investigate the same issue from different angles, followed by a convergent triangulation of the methods' results. It

combines quantitative research, a survey, and a qualitative approach, a personal, in-depth interview with the practitioners.

Consequently, the current study attempts to indicate whether an accounting choice based on the IAS/IFRS and its economic consequences influences management's decision-making behaviour when investing in R&D. Following the above, does the management use real earnings management strategies in this process? According to economic consequences literature, accounting regulations and principles rationally influence managers' accounting decisions. However, do the economic consequences of international accounting choices affect management's decisions and behaviour? From this point of view, this study contributes to real earnings management and international accounting literature from a more empirical and practical perspective. Approaching real business world complexities from a more empirical and pragmatic view contributes to solving such cases and developing more transparent and ethical conditions. Furthermore, investing in mixed-methods research results in practicable outcomes and the possible adaptation of organisations and interested parties. Taking the foregoing into consideration, this research tries to set solid bases on "if" and "how" the non-anticipated economic consequences of adopting the IAS/IFRS, like the IAS 38, positively influence the organisations and their short- and long-term strategies, namely investing in R&D. Any accounting policy and choice result in economic consequences (Holthausen and Leftwich, 1983), and there is a research gap regarding whether the above influences management's decision-making behaviour as an important determinant.

2.6.4. Importance of Financial Statements in the Organisation's Decisions.

All management decisions rely on every kind of information and data from the financial statements, influencing their diverse consequences in different functional areas and departments. Wouters and Verdaasdonk (2002) claim that various insights support most

management decisions, especially on ex-ante accounting information, such as “the expected financial impact of a decision alternative on one or more financial criteria.” (Wouters and Verdaasdonk, 2002, p. 83). Their research, including case studies’ analysis, shows that the management decisions’ quality evolves into converting operational effects into accounting numbers as a standard measure to minimise uncertainty (Wouters and Verdaasdonk, 2002). The greater the ex-ante accounting information stemming from the financial statements, the higher the dispersion is among interested parties and, as a result, the better the decisions are for the company (Wouters and Verdaasdonk, 2002). All interested parties rely on the accounting information generated from the financial statements to focus on various performance measurements and decide on an organisation’s strategy (Almeida, 2019). The financial statements appear essential for the management and link the strategic targets with short-termism investments.

The size of a company does not influence the managers’ view about the importance of the financial statements to them. When it comes to Small and Medium-sized Enterprises (SMEs), owner-management feels more confident in making a decision when external actors prepare their financial statements and have the ability and appropriate training to interpret them (Carragher and Van Auken, 2013). Their survey focuses on small firms located in a southwestern US state. The results show that SME management is ideally more confident in using prepared financial statements from external agents when making decisions, as the contained information influences their understanding and cognitive knowledge (Carragher and Van Auken, 2013). This considerable sense of comfort extends to interpreting the information emanating from the financial statements that affects the SME’s performance despite the management lacking solid financial skills, knowledge and understanding (Carragher and Van Auken, 2013). On some occasions, the SME’s owner fails to understand the impact of its decisions on the company’s viability and to recognise the vital connection between the financial statement information and

the development of investment opportunities (Carragher and Van Auken, 2013). All knowledge, facts, and data obtained by a particular arrangement are crucial to everybody and signal the entity's performance. In business, any information stemming from financial statements appears to aid decision-making and usually generates new data and knowledge.

Moreover, various company stakeholders ascribe some importance to the financial statements, and the information and data generated. For example, security analysts are keen on using cash flow and earnings information in their professional reports while developing outcomes based on financial statements (Govindarajan, 1980). Following a discourse analysis of security analyst firms for the US market, the results support that the analysts use specific accounting information to compile exclusive professional reports (Govindarajan, 1980). The findings show that the analysts identify the importance of the financial statements' primary objective to provide information on all the organisation's interested parties (Govindarajan, 1980). In agreement with the above, the FASB's primary position states that all stakeholders must gather the information that assists the organisation's evaluation and prediction of future cash flow (Govindarajan, 1980). Any earnings and cash flow data derived from the financial statements appear vital for the stakeholders' decisions (Govindarajan, 1980).

Mia and Clarke (1999) claim that the management invests in the information provided by the management accounting system to improve business unit performance in a competitive market. Through a survey of managers from the Australian market, the researchers show that the managers demand various data on the decision-making process and identify that accounting information is an essential determinant of this process (Mia and Clarke, 1999). All the management accounting system data play a mediating role in business performance and the management's strategy, especially in relation to market competition (Mia and Clarke, 1999). The entity's interested parties recognise the critical influence of the accounting information on

the decision-making process by identifying each agent's role and the need for more analytical data.

Realistically, most decisions made by the organisation are likely to appear as a product derived from complex group processes and performance. Beattie et al. (2006) state that a company's financial statements and performance measures seem vital in long-term strategic decisions. This study is a survey of UK-listed company executives (Beattie et al., 2006). The findings show that financial knowledge and performance provide unique information to the management's corporate financing decisions, such as on its capital structure (Beattie et al., 2006). The long-term survivability of the company requires a specific capital structure policy developed through detailed financial information, such as the debt level and the actual economic status of the entity (Beattie et al., 2006). Hence, the complexity and diversity of an organisation's structure rely on financial information while processing important financial data for its management.

Accordingly, the quality of the financial statement in describing an organisation's performance is essential to various stakeholders, such as the lenders (Donelson et al., 2017). Their study is a survey of finance professionals employed by banks while being members of the risk management association. The findings present that, in practice, a stakeholder primarily evaluates the financial statement quality by providing the entity's predicted repayment ability and reducing any risk involved (Donelson et al., 2017). Disclosure quality is associated with the importance of the financial statements for an interested party to clearly analyse and identify the company's financial position (Donelson et al., 2017). Usually, all stakeholders require a clear picture of the organisation's financial position based on performance and the high disclosure quality of the accounts (Donelson et al., 2017). The disclosure of financial statements provides all the necessary information for the stakeholders to decide about an entity.

Essentially, the level of importance varies for each stakeholder, but all of them characterise the vital significance of informative analytical disclosure for any decision to be made.

2.6.5. Information Asymmetry as an Influential Factor for the Organisation's Decisions.

Information constitutes a crucial component for all the organisation's interested parties, impacting decisions, points of view, and the sequence of events – influencing the real world. Reality arises in a state of information asymmetry where different interested parties do not share the same information, and one may have more than another about a situation (Chia, 1995). Information asymmetry appears as a vital agency variable since “it affects the motivation aspects of the individual managers as well as being potentially dysfunctional to organisational performance” (Chia, 1995, p. 610). Dunk (1993) defines it as a status between two agents in which one party has more or better information than the other, usually reflected in transaction decisions. All available, reliable, and timely financial information allows the company's stakeholders to understand better and manage the entity more efficiently (Van Auken, 2005). Through a model analysis of SMEs' capital, the scholars show that timeliness and reliability of accurate financial information represent the primary determinants for management making “good” investment decisions (Van Auken, 2005). The findings address that high-quality and detailed information leads management to efficient decisions, resulting in opportunities for successfully executing the company's strategy (Van Auken, 2005). SMEs' capital and investment decisions also demand timely information availability as a primary factor (Van Auken, 2005). Misinformation or lack of financial information constitutes an obstacle to developing accurate and successful investment strategies and impacting the company and its stakeholders (Van Auken, 2005).

For each company, it is crucial that disclosed financial information is made widely available to all stakeholders. Ross et al. (2016) suggest that successful investment and financing

decisions require reliable, accurate and on-time information so that the management recognises all sufficient data and overcomes any asymmetric information issues. “Thorough” knowledge is unrealistic, while management steers decisions under uncertain conditions and may overreact or underreact to market conditions and various pieces of information (Ross et al., 2016). The last-mentioned reality stems from asymmetric and untimely information, while it is of utmost importance to tackle it and find solutions that minimise it (Ross et al., 2016).

Other concerns about a company’s information and financial reporting refer to an issue regarding the timing of the reporting (Francis and Schipper, 1999). All financial reporting schedules and the extent to which competing information pre-empts financial statement disclosure fail to sufficiently serve companies and their stakeholders simultaneously (Francis and Schipper, 1999). Timeliness is a solid determinant of capturing and reflecting value-relevant events in the proper period (Francis and Schipper, 1999). It adds value to the company’s reputation for competing and reliable information sources (Francis and Schipper, 1999). The time and the quality of the information are vital for any decision regarding an organisation. The more significant, prompt and thorough the financial data, the more effective the decision-making process and the less risky the chosen strategy.

Nevertheless, there appears to be a time difference between the information provided and needed by all interested parties in real time, especially regarding financial data. Seybert (2010) argues that a company’s corporate culture forces management to focus more on the financial reporting of R&D investment and identify the immediate economic consequences of its decisions. The researcher follows a survey of MBA students and executives of an education program about the US market (Seybert, 2010). The corporate policy is responsible for minimising information asymmetry with all stakeholders and contradicts the managers’ wish to avoid disclosing further information (Seybert, 2010). Managers are concerned with preventing future impairment, which would generate implications and risks to their reputation in practice

(Seybert, 2010). According to Graham et al. (2005), managers recognise that information asymmetry is a fact and suggest that all stakeholders positively view a voluntary disclosure of more financial information. The scholars surveyed financial executives in the US market (Graham et al., 2005). Significantly, the findings show that any CFO views voluntary disclosure in the present circumstances as a valuable tool to reduce information risk to the company's stock, promote a reputation for transparency, and minimise any defections of mandatory reporting (Graham et al., 2005). Those researchers argue that in practice, managers fear that voluntary disclosure of data may prove challenging to maintain in the future in case they have to release "bad" news faster, which may affect their reputation (Graham et al., 2005).

Several studies investigate the accounting choice between IAS/IFRS and other GAAPs attempting to minimise information asymmetry, as well as the economic consequences of such decisions. Leuz and Verrecchia (2000) claim that a company aiming to increase the levels of disclosure focuses its accounting policy on selecting specific GAAP. The scholars follow a cross-sectional analysis of public financial data regarding German-listed firms. The findings show that a particular action may result in statistically significant positive economic consequences/benefits for the company (Leuz and Verrecchia, 2000). Notably, the findings support that the entity benefits more from adopting the international reporting policies and enhances the organisation's contribution by manipulating the financial result of the asset, namely to lower bid-ask spreads and higher share turnover (Leuz and Verrecchia, 2000). Mandatory adoption of the IAS/IFRS by European organisations has promoted an environment for them to interpret these changes to benefit the organisation in relation to other stakeholders.

The voluntary disclosure of financial information is crucial to convince all stakeholders positively and reflect any innovative and important strategy for the organisation's long-term strategy. Prior research reveals that a voluntary financial disclosure based on IAS/IFRS positively affects a company's liquidity and valuation effects (Daske et al., 2008). The study

uses firm-year panel regressions to analyse the hand-collected public financial data from firms worldwide (Daske et al., 2008). The results show that any change in the IAS/IFRS adoption policy reflects changes in the company's broader reporting strategy, which may not stem exclusively from the standard's evolution but benefits through reducing information asymmetry (Daske et al., 2008). In general, belief in the management is driven by a commitment to transparency and the adoption of transparent procedures to strengthen the company's broader strategy (Daske et al., 2008). The information asymmetry regarding R&D investments, especially in R&D-intensive companies, is empirically associated with the value-relevance of these investments with increased risk while relating to the neediness for more understandable financial data (Anagnostopoulou, 2008). The users of financial statements of R&D-intensive companies need to clearly identify the observed consequences of investing in R&D in a timely manner, as these consequences may appear as determinants of R&D investment (Anagnostopoulou, 2008). Based on the above, accounting information is vital for all interested parties; managers acknowledge the need to disclose more often than is required, but currently, they do this voluntarily.

A manager must face all appropriate observations based on the organisation's data to make any decisions at a particular point in time. Li et al. (2021) argue that disaggregation of operational processes lowers information asymmetry between internal agents and accounting information users while enhancing the reliability of the accounting figures. The researchers analyse a model based on data from a public financial database (Li et al., 2021). The findings show that all the organisation's stakeholders prefer more reliable accounting data to avoid financial statement misreporting and trust the management to behave more honestly when presenting the company's actual performance (Li et al., 2021). Strictly following IAS/IFRS for disclosure and disaggregation of intangible assets, a weaker information asymmetry state promotes more value-relevant information to investors and all interested parties (Li et al., 2021).

However, implementing an IAS/IFRS accounting policy creates execution errors, resulting in an initial increase in information asymmetry (Loyeung et al., 2016). The scholars follow OLS analysis in public financial data for Australian listed firms (Loyeung et al., 2016). The results show that market participants acknowledge these errors and distrust both the management and the disclosed accounting information when the entity continuously repeats the errors (Loyeung et al., 2016). As a result, various costs, such as the auditor's fees, appear when implementation errors are disclosed, and the specific amounts must be reduced in the short term (Loyeung et al., 2016). Reducing information asymmetry of accounting information is extremely important to an organisation's stakeholders and directly affects their decision-making behaviour. Usually, the management prefers to preserve the specific problem even though expected and unexpected costs will appear short-term.

2.7. Survey's Hypothesis Development

2.7.1. Development of Hypothesis 1

Previous subsections discussed theoretical and empirical insights concerning the economic consequences of IAS 38, accounting practices based on the particular accounting standard, and management's behaviour when engaging and manipulating actual organisational transactions to perform the different financial positions of a company. Specifically, the present study examines the relationship between a company's financial performance through its financial statements and management's behaviour on R&D investments by manipulating the actual financial outcomes through REM while following the IAS 38. Any managerial behaviour appears as part of the business unit strategy, which is an important antecedent of an organisation's performance and serves to enhance it (Hoque, 2004). Cooper and Selto (1991) investigate the effect of suboptimal investment in R&D behaviour provoked by the accounting treatment in SFAS No. 2 and the suboptimal long-term performance of a company. The

researchers recognise that any changes in the accounting method of R&D cause shifts in a company's performance, and all the above results in a behavioural variation in those investment decisions (Cooper and Selto, 1991). Their experimental research supports that SFAS 2 led decision-makers to reduce or even cease their investment in R&D projects and, eventually, to suboptimal long-term performance due to investment budget constraints (Cooper and Selto, 1991). Companies that evaluate their managers based on earnings may influence the management's R&D investment decision when R&D is expensed (Cooper and Selto, 1991).

In another research following Cooper and Selto's (1991), Seybert (2010) discusses the interactive effects between US GAAP-based R&D accounting reporting policy and decisions to overinvest in continuing R&D projects. The scholar, through a survey, says that managers choose to overinvest to protect their reputations from potential damage that would be caused by an abandoned capitalised project (Seybert, 2010). Such a pattern presents management as responsible for the accounting reporting of R&D projects, and its effects thereof could intensify real earnings management strategies for an organisation (Seybert, 2010). Managers are more likely to engage in such behaviour, alter their decisions to prevent reputational damage, and avoid any negative economic consequences from R&D capitalisation (Seybert, 2010). The findings of the last two mentioned studies indicate an opportunistic behaviour from the managers to protect their interests by adopting questionable practices regarding R&D under the US GAAP. Also, these studies present a diachronical interest in investment in R&D and how management interprets and applies accounting regulation.

Moreover, prior research on the US GAAP documented management's generally positive engagement in the manipulation of actual outcomes of financial statements via real earnings management strategies (Gunny, 2010). Improved future performance represents a crucial determinant for management and impacts all the decisions relating to an investment in R&D (Gunny, 2010). These decisions appear non-opportunistic and concern the manipulation

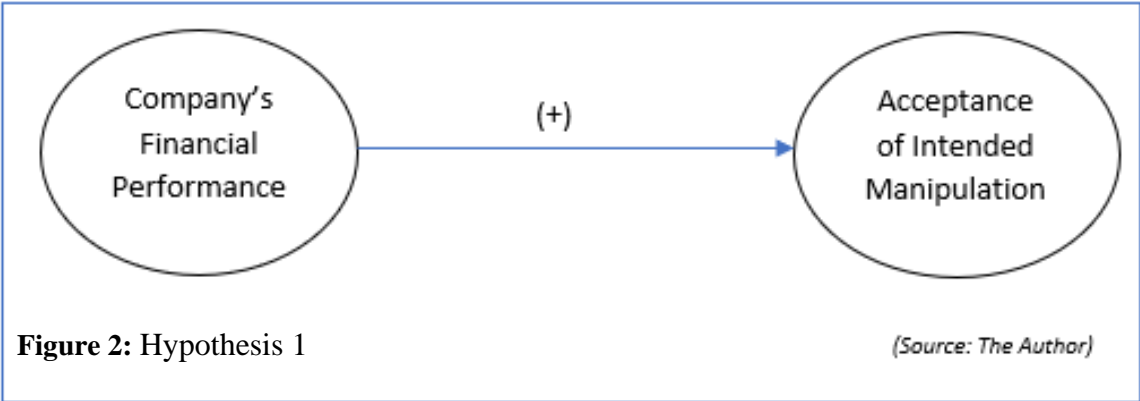
of real activities to affect accounting performance and earnings (Gunny, 2010). Managers also interpret actual economic transactions with the perspective of achieving earnings benchmarks (Graham et al., 2005). The last-mentioned researchers recognise a trend in managers' behaviour of choosing operational activities to achieve various objectives and justify the legality of those actions (Graham et al., 2005). One significant concern for managers is to maintain predictability in earnings and financial disclosures by regularly working on them (Graham et al., 2005). The outcomes of these studies surprised all interested parties in that the management tended to adopt real economic activities within local GAAP accounting discretion to meet economic targets and manage financial and accounting disclosure.

Additionally, Bruns and Merchant (1990) identify the phenomenon that many managers affirm that any practice is ethical, moral, and fair when it "is not explicitly prohibited and is only a slight deviation from rules." (Bruns and Merchant, 1990, p. 22). The management intentionally ignores any affection on the stakeholders that these practices induce or the information flowing from such activities (Bruns and Merchant, 1990). As a result, the researchers argue that management develops conditions vulnerable to misinterpretation, manipulation, or deliberate deception for all interested parties by disclosing all the intentionally desirable accounting information (Bruns and Merchant, 1990). Following the above study, Fischer and Rosenzweig (1995) recognise an attitudinal tolerance of management's operating manipulations to influence the organisation's reported accounting results. The researchers identify a pattern in the ethical acceptability of objectionable earnings management actions to achieve a more remarkable performance (Fischer and Rosenzweig, 1995). In everyday business decisions, senior managers, especially high-ranked accountants, must perform more under their ethical responsibilities and always recognise how harmful any operating manipulation could be to all stakeholders and the public trust (Fischer and Rosenzweig, 1995). Based on the above, in the present study, the researcher examines the relationship between a company's financial

performance and management's acceptance to manipulate operational activities regarding investment in R&D under the IAS 38, which leads to the following hypothesis (Figure 2):

Hypothesis 1: *A company's non-anticipated financial performance positively impacts the management's manipulation of operational activities regarding R&D investment (IAS 38) to alter the financial reporting.*

Management brings up the company's financial performance through operational activities and under the IAS 38 accounting policy. Additionally, it controls the organisation's fundamental activities and adopts real economic actions in the company's operations. This study examines the relationship between financial performance and management's manipulation of operational activities, namely management's decision-making behaviour, to impact the financial statements' actual outcomes. Furthermore, CFOs acknowledge that IAS 38 provides specific instructions and the option of disclosing the expenses on developing R&D projects, which gives management leverage to choose an appropriate opportunistic accounting policy. As a result, they all, directly and indirectly, impact the company's performance and the presented outcomes to all stakeholders.



2.7.2. Development of Hypothesis 2

Evaluating a company's performance using the actual outcomes via the financial statements has been a powerful instrument for all interested parties. One helpful indicator that presents a company's effectiveness is performance, which encompasses financial performance as its actual outcomes (Richard et al., 2009). Performance is usually inseparable from the financial statements' disclosure to all interested parties of an organisation (Richard et al., 2009). Exploring and measuring organisational performance allows researchers and managers to evaluate specific actions and activities of both companies and managers (Richard et al., 2009). Based on the above, financial performance contexts derive insights from financial reporting and any official reporting model (Francis and Schipper, 1999). Prior research discusses the users of a company's financial statements and how they use them without focusing on the importance of these statements to the management team (Francis and Schipper, 1999). Financial information is highly valuable, contains the data to disclose, and provides evidence to all interested parties over a long window (Francis and Schipper, 1999). Most stakeholders develop an interest in the disclosure of financial statements and the company's actual performance and outcomes.

All decisions about an organisation rely on accounting information, which effectively influences the decision-making behaviour of all interested parties. Wouters and Verdaasdonk (2002) identify the management's need to gather accounting information from various sources when making decisions about an organisation. The more detailed the accounting and financial data, the more accurate and effective the decision and the better the alternatives (Wouters and Verdaasdonk, 2002). All stakeholders rely on the ex-ante accounting and financial information stemming from the financial statements, and each of them demands the most suitable when making decisions (Wouters and Verdaasdonk, 2002). Also, dispersing the data between all interested parties minimises uncertainty and strengthens trust in the management (Wouters and

Verdaasdonk, 2002). Likewise, the organisation's stakeholders use various suitable performance measurements to clarify and understand the entity's status (Almeida, 2019). As a matter of fact, most performance measurements rely on the accounting disclosure and results to guide the interested parties' decisions (Almeida, 2019). The more analytical the financial statement disclosure, the more specific and understandable the measurements by the stakeholders, hence the more they rely on them (Almeida, 2019).

All financial information relies on the sources that generate and promote it to all the organisation's interested parties. Organisational data are crucial for the management's decision-making behaviour (Mia and Clarke, 1999). The entity's performance is presented in all kinds of data, and the financial statements generate a significant part of this data (Mia and Clarke, 1999). The management invests in organisational systems to gather analytical and reliable data that will impact its strategy in market competition (Mia and Clarke, 1999). All sources act vitally in influencing the management's strategic decisions by promoting financial knowledge (Beattie et al., 2006). Management trusts the quality of the results generated from its sources, uses all generated data for corporate financing decisions, and converts the information into performance measurements (Beattie et al., 2006). The long-term survivability of the organisation relies on the importance given to all financial data by its management (Beattie et al., 2006). As indicated in, the financial statements provide an analytical and accurate description of the outlook and the organisation's performance to all stakeholders; the latter choose to trust even more the management's disclosure (Donelson et al., 2017). The importance of the financial statements for all stakeholders, but especially for the entity's managers, is associated with the disclosure quality (Donelson et al., 2017).

In fact, all sources must provide appropriate data clearly and analytically, influencing decision-making (Donelson et al., 2017). Following the above, the researcher investigates the importance of financial statements, particularly for the management, and how this is reflected

in the connection between the organisation’s performance and management’s manipulation of operational activities, namely management’s decision-making behaviour. All the elements mentioned above result in the following hypothesis (Figure 3):

Hypothesis 2: *The importance of the financial statements to the manager strengthens the positive impact of a company’s non-anticipated financial performance on the management’s manipulation.*

Financial statements relate to the company’s economic performance, and all this financial information is reflected in all interested parties’ decisions. This research investigates the importance of financial statements for the management, impacting its decision-making behaviour. The more important the financial statements are for the management, the greater the connection between the company’s financial performance and management’s manipulation of operational activities. Therefore, the particular condition results in a stronger bond between the financial statements and the company’s performance, while management is more likely to commit to such kind of activity.

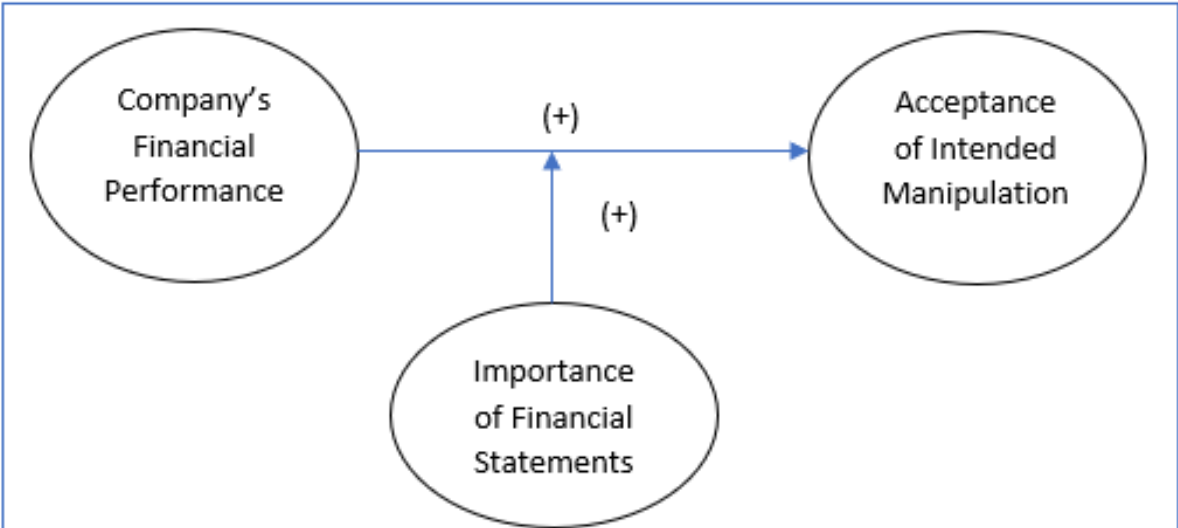


Figure 3: Hypothesis 2

(Source: The Author)

2.7.3. Development of Hypothesis 3

In reality, the lack of or willingly undistributed knowledge to different negotiating agents of an organisation exacerbates an imbalance and develops a competitive advantage for one side that may influence strategic decisions. An organisation's related agents count on equally dispersed information to efficiently identify and understand the entity's status (Van Auken, 2005). Accurate data are the principle for making efficient investment choices for all stakeholders and establishing trust in the management team (Van Auken, 2005). Several types of companies depend on the availability of accurate and on-time knowledge to help the management, in some cases the owner, to successfully develop and follow an investment strategy (Van Auken, 2005). This specific condition minimises the lack of knowledge and the risk of investment failures for both organisations' interested parties (Van Auken, 2005). Successful investment decisions rely on accurate and prompt data, especially financial information, for the management to act in market conditions (Ross et al., 2016). Usually, an entity's management pushes through strategic decisions under unstable and uncertain conditions, which may be caused by information asymmetry, increasing the level of mistrust in such information (Ross et al., 2016). Thus, the type and quality of the information are vital to the organisation's stakeholders when deciding on an administration and investment strategy, as long as the entity equally disperses the data.

Following the above, the timeliness of the disclosed information is another issue that may increase the level of information asymmetry between the interested parties. In practice, prompt financial disclosure does not usually serve stakeholders sufficiently (Francis and Schipper, 1999). Any delay changes the actual reflection of a company's performance and impacts the real value (Francis and Schipper, 1999). The management acknowledges the specific condition and relies on its ethical responsibilities to eliminate the information

asymmetries or use them opportunistically (Francis and Schipper, 1999). By law, any corporate policy is responsible for providing stakeholders with accurate and prompt financial information (Seybert, 2010). Minimising information asymmetry conditions is vital for the corporate culture and, in the long run, contradicts management's desire to delay the disclosure of specific knowledge (Seybert, 2010). The management focuses on choices that may prevent future impairments and risk its reputation, even by delaying and choosing not to communicate reliable data (Seybert, 2010). Indeed, time and reliability are connected and appear as crucial determinants that force the organisation's managers to follow a policy to reduce information asymmetry, albeit sometimes unsuccessfully.

Information asymmetry problematises the organisation's management as it creates instability, mistrust and other negative emotions in the stakeholders, while the only way to minimise it is through voluntary or mandated disclosure. Any disclosure, whether voluntary or mandated, operates as a valuable tool for managers to reduce information asymmetry conditions (Graham et al., 2005). Such disclosure reduces undesirable and strengthens desirable situations for the management and organisations (Graham et al., 2005). In reality, the management team has to face the fear of disclosing data that will become unpleasant and have unexpected results in the future (Graham et al., 2005). Such risk works as a skid inducing management to hold performance-related knowledge from all stakeholders, even though the administration team acknowledges the usefulness of minimising information asymmetry (Graham et al., 2005).

Nevertheless, any voluntary financial disclosure motivates management to commit to transparency and strengthen a broader strategy (Daske et al., 2008). Minimising information asymmetry develops influential conditions for all organisations, extending the company's liquidity and valuation effects (Daske et al., 2008). In the long term, the management stays motivated to gradually eliminate information asymmetry conditions and disperse organisational knowledge to all interested parties (Daske et al., 2008). Especially companies that invest in

R&D need to decrease the level of risk for their stakeholders by disclosing more readily available financial data (Anagnostopoulou, 2008). Managers acknowledge the need to voluntarily provide financial information to the users of financial statements so that they may correctly identify the economic consequences of the R&D investments (Anagnostopoulou, 2008). The entity's management recognises that the solution to reduce the impact of the information asymmetry problem concentrates on responsibly providing accurate information and improving investment efficiency.

In effect, an organisation's interested parties positively value the analytical and rightfully distributed accounting information for all operational processes, reducing knowledge discrepancies between agents. Dispersing accounting data analytically through disaggregation of the operational processes is an effective managerial policy that may alleviate the information asymmetry issue (Li et al., 2021). The stakeholders collect all appropriate accounting information quickly and effortlessly for their personal needs (Li et al., 2021). Disaggregated accounting data are more reliable and classified on the proper operational processes (Li et al., 2021). Furthermore, the entity's management may obtain more significant value-relevant information for all interested parties through the combination of disaggregated and disclosed accounting data (Loyeung et al., 2016). Therefore, this particular condition reduces any implementation errors, convincing the market to have more trust in the management team (Loyeung et al., 2016). All expected costs become acquainted in the short term, and any repeated mistakes are eventually encountered (Loyeung et al., 2016).

Based on the above, the appropriate dispersion of the accounting information is vital for all interested parties; managers acknowledge the need to disclose even before the mandated deadline, but they do so voluntarily now. This phenomenon leads to the following (Figure 4):

Hypothesis 3: *Additional disclosure of R&D investments (IAS 38) weakens the positive impact of a company's non-anticipated financial performance on the management's manipulation.*

Additional and timely reporting on R&D investments, based on IAS 38, positively impacts the knowledge and financial insights for all interested parties. Communicating R&D financial information every six months, providing detailed financial disclosure on all R&D investment projects, and disclosing additional financial details on R&D expenses that are not included in the mandatory financial disclosure of IAS 38 are motives for greater managerial transparency. The more transparent the financial reporting on R&D investments, the weaker the influence of the company's financial performance on management's manipulation. Such a condition strengthens stakeholders' trust in management's decisions and enhances its reputation and transparency. Any interested party acknowledges that management is keener to reduce information asymmetry about financial data and present its actual state.

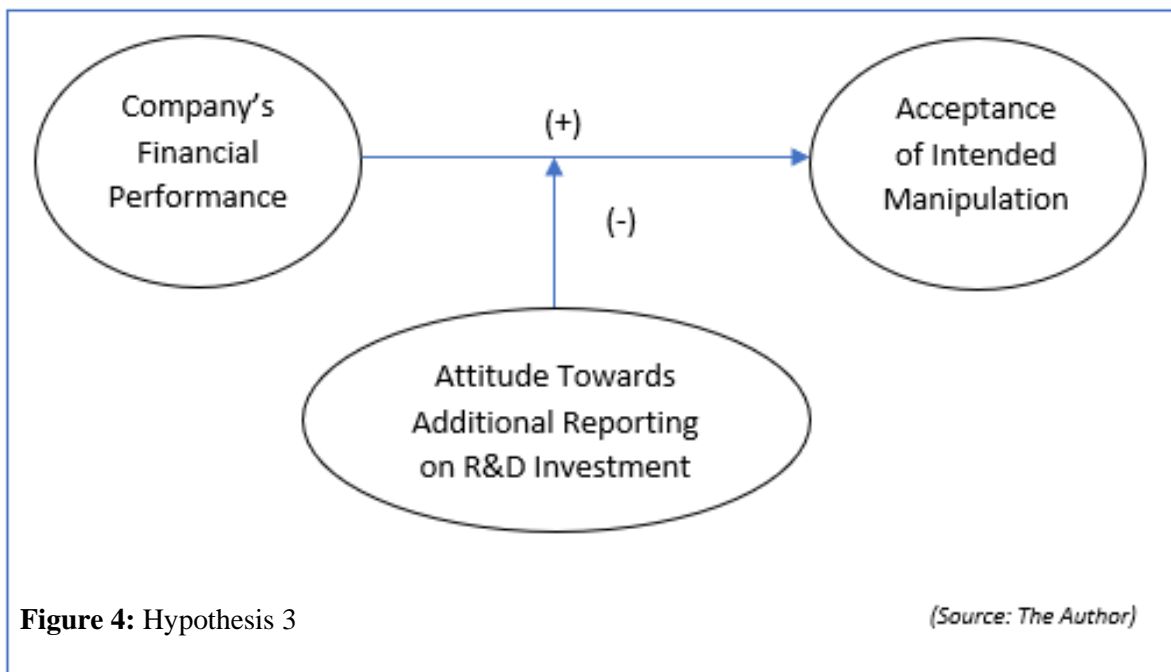


Figure 4: Hypothesis 3

(Source: The Author)

All those mentioned above are identified in the study survey overview, which is presented in Figure 5. This figure depicts the theoretical model for the quantitative part of the research and shows the relationships between the variables and all the interactions.

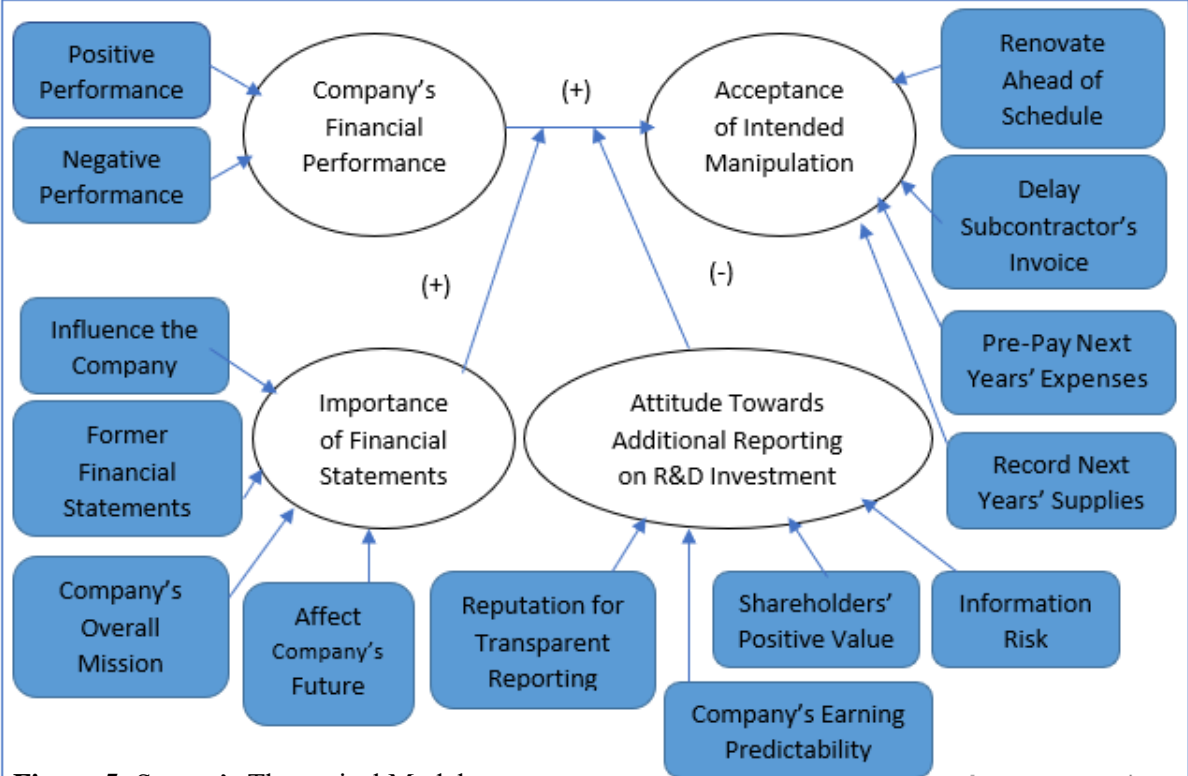


Figure 5: Survey's Theoretical Model

(Source: The Author)

3. Methodology

3.1. Introduction

The present study is inspired by phenomenon-driven research, like any research focusing on providing accurate and insightful information to the real world (Doh, 2015), and professional accountants, who argue about the importance of accounting policies and the impact of their economic consequences on the organisation's decision-making behaviour. Thus, the main research question focuses on the aspects of "if" and "how" do the non-anticipated economic consequences of adopting the IAS 38 positively influence the organisation's management decision-making behaviour regarding investments in R&D. The researcher identified the concept in question and how it related to a studied phenomenon (Lewis-Beck et al., 2003). A concept or construct is an idea with any theoretical meaning representing a phenomenon (Lewis-Beck et al., 2003). Bryman and Bell (2015) claim that the concept, as a measured variable, provides a possible explanation of a specific aspect or attitude or something to be explained in a social world. Any differences and characteristics may be outlined and gauged by measuring them, and any relationships may be identified and estimated (Bryman, 2015).

As scientific research, the current study investigates a concept in a specific field, namely accounting, and focuses on contributing to that field. Scientific research endeavours to express and unfold information on areas and disciplines of expertise; and comprises facts, principles, and updated knowledge (Hopper and Powell, 1985). The scope of social science covers any relationship between humans and their environment as "human beings responding in a mechanistic and or even a deterministic fashion to the situations encountered in their external world." (Burrell and Morgan, 2019, p. 2). Lukka (2010) mentions that the accounting discipline is dominated predominantly by a single paradigm, the concept of profit at all agents, in principle or practice. Hence, the present research deals with how the economic consequences, anticipated

by the manager's professional experience, actually influence management's decision-making behaviour, including their attempts to influence R&D investments (by accounting choices if possible and/or by strategies that affect earnings – sometimes termed real earnings management).

The researcher focuses on conceptualising a professionally observed phenomenon of the economic consequences of an accounting policy. Specifically, the research refers to how the economic consequences influence the management's decisions to manipulate earnings and, in practice, how accounting professionals and experts debate this issue. The researcher adopts a practical approach to a situation while judging the outcomes rather than principles, which is the core idea of pragmatism (Lorino, 2018). Thus, the current study's philosophical position stemmed from a pragmatistic approach with key assumptions originating from practical rather than theoretical considerations. Goles and Hirschheim (2000) suggest that pragmatists view the process of knowledge development as a continuum, and pragmatism is positioned somewhere between objectivity and subjectivity. Pragmatism is considered a pluralistic position promoting a methodological fit between the research question and methodology, allowing for qualitative and quantitative tools (Goles and Hirschheim, 2000).

As a research approach, pragmatism carries the practical evaluation of ideas and beliefs through qualitative and/or quantitative research strategies, both of which will be used for the present research. Scholars promote mixed-methods research in a pragmatistic approach by simultaneously using quantitative and qualitative methods, addressing problems logically and practically (Morgan, 2014). Pragmatism carries a dynamic “to closely engage and empower marginalised and oppressed communities and provides hard evidence for micro- to macro-level discourse.” (Kaushik and Walsh, 2019, p. 12).

Pragmatistic observation coincides with the mixed methods approach undertaken in this study. Two (2) research instruments are applied: a self-completion electronic survey

(quantitative) and an open-ended semi-structured interview method through telecommunication platforms (qualitative). As mentioned earlier, the methods examine all insights and data methodologically and comprehensively under a mixed-methods approach prism. Furthermore, a mixed-methods perspective combined with triangulation underpins pragmatism as the appropriate position to support and analyse the study outcomes. Following the discussion in the current chapter, the researcher discusses the ontological, epistemological, and methodological assumptions and outlines since these are the primary components of this chapter.

3.2. *Ontology*

The social science paradigm encompasses specific ontological, epistemological, and methodological assumptions. Usually, a scholar's primary view concentrates on the belief of "what" to research. Grix (2002) and Moon and Blackman (2014) suggest that in social science research, the layers of ontology, epistemology and methodology establish the core foundations of the research. Ontology captures the nature of reality and, thus, the investigated phenomena (Grix, 2002), all that exists in the real world and can lead to acquired knowledge (Moon and Blackman, 2014). Burrell and Morgan (2019) claim that social scientists approach a subject through ontological assumptions about the nature of knowledge that influence how fundamental questions relate to phenomena of the social world. Social scientists address the above assumptions about whether "reality" is external to the individual, whether produced from the individual's perception or provided freely in the real world (Burrell and Morgan, 2019). In short, social scientists engage in what they construe as a "social reality" and understand as nature, existence and appearance, and ways in which each unit interacts with one other in the "social reality" (Blaikie, 2005). The present research relies on the "reality free-out in the world" ontological view as it recognises the accounting practices in ordinary business life.

The nature of accounting concepts usually reflects the existing reality in a particular period, and the present study relies on how IAS/IFRS operates nowadays. Lukka (1990) argues that much research in accounting reflects an objectivist ontology. The scholar also debates that “traditionally, and even today, the general idea of objectivity dominates the thinking in both accounting theory and practice: accounting concepts are usually interpreted as reflecting the reality that exists somewhere “out there”.” (Lukka, 1990, p. 239). For Chua (1986), accounting research often assumes the existence of an independent objective reality of the world, characterised as physical realism. Accounting knowledge development grounds the distinction between what people confront as information–processing mechanisms or as active makers of social reality (Chua, 1986).

The current research is governed by pragmatistic ontological realism and advances social practice. According to Dewey (1939), using the word “pragmatic” helps translate and analyse social phenomena and their consequences and, as a result, resolves specific existing problems. In short, the consequences mentioned above develop knowledge, meaning, and value (Dewey, 1939). At the same time, they make a difference in decision-making procedures, simultaneously presenting a positivistic and pragmatistic view (Dewey, 1939). Morgan (2014) discusses “pragmatism” as an instrument that helps translate and analyse social phenomena and their consequences. Such consequences operate as devices that impact someone’s reality while trying to join up with the world (Morgan, 2014). Through pragmatism, an ontological view inspires accounting practice (Rutherford, 2017). Pragmatism’s commitment to the truth is manifested in the financial standards while demonstrated in financial reporting (Rutherford, 2017). In accounting practice, pragmatism is vital (Rutherford, 2017). It facilitates a conceptual framework that can provide the researcher’s reach through reality, the fragilities of knowledge discovered from practice, and the problematic character that intervenes through experience

(Rutherford, 2017). Today, the IAS/IFRS operates in actual conditions and guides an entity's accounting policy, influencing its decision-making processes.

In fact, the current study looks at actual economic conditions, financial reality, and accounting "truth". Concurrently, it improves the real world while avoiding the intended and unintended consequences of influencing management's activities through manipulative decisions. Pratt (2016) notes that a pragmatic analytical framework investigates the normative features of reality, traces actors and their transactions, and transforms knowledge and the scientist's understanding of reality to alter the world. Pragmatism demands an active human being and rejects any form of determinism (Rorty, 1982). It needs to point beyond the traditional scene, and address problems to be rationally and practically encountered (Rorty, 1982). Putnam (1989) maintains that pragmatism translates the facts, signs, and knowledge by corresponding to specific objects in certain schemes while being employed by users.

Pragmatism is the leading ontological view adopted in this study, taking a more practical look at the financial and economic reality while respecting the real earnings management conceptions of the truth. REM's idea of truth stems from any extensive departure from normal operational activities motivated by the human's desire to mislead others' financial beliefs given certain economic consequences (Roychowdury, 2006). Ontologically, pragmatism aligns with the idea of a conceptual, non-absolute objective truth shaped by human actions (James, 1907). In pragmatism, such truth is connected with the consequences of an idea stemming from events, verified and validated by verities (James, 1907). In the case of real earnings management, anything considered true or accurate in financial reporting may vary following specific circumstances and flexible goals of an entity. At the same time, pragmatism identifies that truth is often context-dependent (Rutherford, 2017). Real earnings management is not a panacea as a managerial strategy, and the context of the stakeholders receiving the actual financial picture of an entity depends on its consequences.

3.3. Epistemology

All studies involve a distinct relationship between ontology and epistemology. Epistemology is inseparable from knowledge and its proper acquisition through outside observation, which results in the individual acting appropriately on it. The English Oxford Living Dictionary (2019) defines epistemology as “the theory of knowledge, especially regarding its methods, validity, and scope, and the distinction between justified belief and opinion.”. Grix (2002) and Burrell and Morgan (2019) address epistemology as a distinct and related part of a social science dimension. The epistemological positions taken by social scientists vary between objectivist appreciations and subjectivist preferences (Grix, 2002; Burrell and Morgan, 2019). Epistemology is directly connected to knowledge and focalises on knowledge-gathering processes (Grix, 2002). It makes assumptions about the nature of knowledge and how researchers produce it (Moon and Blackman, 2014). Objectivists view knowledge as involving little interpretation and can easily communicate with others. Meanwhile, subjectivists prefer to concentrate on interpretation, sense-making, and double hermeneutic understanding (Grix, 2002; Burrell and Morgan, 2019). Epistemological assumptions are related to the nature of knowledge, connected to its form and how it can be obtained and transmitted (Grix, 2002; Burrell and Morgan, 2019).

Social researchers perceive epistemology as a “truth” and relate it to qualitative, reliable, and applicable knowledge. Epistemology defines how a scholar chooses the knowledge (truth) that is acceptable and suitable for their study (Chua, 1986). Furthermore, Hopper and Powell (1985) argue that epistemology relies on the nature of knowledge and guides people on how to obtain it. A researcher may note an objective–subjective continuum (Hopper and Powell, 1985). At the one end, knowledge is seen to be gained by observation, and at the other extreme, by a more subjective and personal interference (Hopper and Powell, 1985). Burrell and Morgan (2019) argue that knowledge grounded on epistemological assumptions entails, classifies, and

communicates new ideas to society. Viewed in this light, the main scope of knowledge appears beneficial for humans and society (Burrell and Morgan, 2019). Through the present study, the researcher tries to investigate and identify an accounting interference with the management's decision-making processes, which constitutes a real case in organisations.

Epistemologically, any research relies on fundamental theoretical and philosophical assumptions about the nature of knowledge, and how an emphatic understanding of it can be gained and communicated. Epistemological assumptions rely on worthy and fitting knowledge obtained about a subject (Lorino, 2018). Such epistemological assumptions are reflected in pragmatism, which is “used to clarify concepts and hypotheses of inquiry by considering their practical considerations in an effort to dissolve ontological disputes.” (Hookway 2010, quoted in Moon & Blackman 2014, p. 1175). Pragmatism influences this study's epistemological assumptions and could serve as an approach that “allows researchers to focus on empirical problems and get on with the process of producing scholarship, without having to spend ages debating first principles or meta-theoretical standpoints.” (Pratt 2016, p. 509). Hempel (1965) claims that the essential doctrine of pragmatism that influences any hypothesis or enquiry is the so-called criterion of empirical testability. This criterion addresses that a hypothesis may have an effect that makes a real difference after testing by experiential evidence (Hempel, 1965). Moon and Blackman (2014) claim that pragmatists explore ideas, values, and hypotheses regarding consequences. They seek to compound the knowledge gained from experience that is emanated from logical and deductive reasoning (Moon and Blackman, 2014). Simultaneously, they clarify the hypotheses and assumptions of research by combining them with practical thoughts (Moon and Blackman, 2014). In pragmatism, all critical approaches may have an impact and be used as an instrument to interpret research problems,

The present research adopts a pragmatistic position to investigate the interface between international accounting regulation, policies, choices, managerial decisions, and especially,

organisational transactions between different parties. Any accounting choice may generate economic consequences and, as a result, appear to influence senior management's decision-making behaviour. Merino (1993) signals the need for accounting researchers to rely on philosophical positions that help the discipline deal with real problems in accounting practices. Simultaneously, the scholar argues that: "Pragmatism offers an alternative framework for analysis of power/knowledge relationships." (Merino, 1993, p. 163). Specifically, pragmatism offers researchers the opportunity to examine "how key actors change their goals over time, learning to desire new things as a result of new means to things becoming available, or refining their goals as they develop a better sense of what is possible." (Pratt, 2016, p.521). This last observation leads the present study since organisations choose and change their accounting policy according to the current circumstances and conditions. A pragmatistic aspect directs researchers to solve specific problems by adhering to the above assumption.

Since pragmatism acts as the epistemological adopted view of the particular study, it allows the researcher to focus on empirical scholarships and conceptions of truth in the context of real earnings management. A common epistemological assumption in earnings management research to the real world is that the truth stems from the prepares' intentions and behaviours when preparing an entity's financial reporting (Brennan, 2021). Truth in financial reporting means accurately providing all stakeholders with transparent and reliable information when epistemological scepticism usually leads to questioning the truthfulness of financial disclosure (Rutherford, 2017), where real earnings management is suspected. All epistemological considerations regarding pragmatism and truth involve an assumption for a continuous "reflexive awareness of the position of the enquirer as a socially situated and political empowered subject." (Pratt, 2016, p. 512). As a managerial strategy, REM contains questionings regarding an entity's actual financial disclosure, and pragmatism assists in identifying such speculations.

3.4. Research Methodology and Methods

3.4.1. Methodology's Theoretical Perspective

Scholars design specific processes for developing and carrying out research as a unique and suitable strategy. Grix (2002) defines methodology as the science that concentrates on the strategic use of methods to produce knowledge. The processing approaches followed by them verge on various views and philosophical assumptions, impacting studies and their data collection methods (Hudson and Ozanne, 1988). Methodology pertains to actual methods and sources and influences a researcher's course of action (Grix, 2002). Philosophically, there is a link between ontological assumptions, epistemological positions, and methodological choices (Kuhn, 1962). Grix (2002) suggests that the strategy for an empirical study contains the researcher's thoughts for investigation. Empirical research studies how these thoughts relate to cognitive knowledge over theoretical and practical perspectives and, at the same time, investigates and develops future understanding (Laughlin, 1995). The first two elements, ontology and epistemology, can never support themselves without the methodological approach of discovering and contributing knowledge (Laughlin, 1995). Besides, a researcher must choose the appropriate methodology to formally observe, argue and define a particular position concerning the knowledge discovery process (Burrell and Morgan, 2019).

A tentative framework covers an area from the superficial aspects of data collection to concept formation and philosophical boundaries. Scientific methods in accounting may impact and contribute to the accountant's social responsibility and build their practical structure on fulfilling these responsibilities (Devine, 1960). Chua (1986) specifies that methodological assumptions shape the appropriate research methods used to collect evidence and support a study's aim concerning the accounting discipline. Hence, a researcher chooses a methodological approach that flows from the study's ontological and epistemological views (Chua, 1986). Laughlin (1995) claims that methodologically, an empirical investigation

conducts a theoretical or a practical, more reliable model. The particular model rests on the observer's qualifications, abilities, and role, while relying on evidence standing in the centre of the continua (Laughlin, 1995). Ryan et al. (2002) define that the dominant methodology for scientific development in the financial and accounting disciplines borrows from an empiricist perspective, suggesting that projects rely on “models” rather than theories.

Furthermore, pragmatism influences the ontological, epistemological, and methodological stances of this research. Pragmatism concentrates on real effects and consequences while it “could be used as a way to examine problems within the social sciences and their fit to particular methods of resolution.” (Maxcy, 2003, p. 81). A researcher’s pragmatistic viewpoint concentrates on the desire to gain more information about the world (Susman, 1983). Following the latter perspective, the world would be blocked from achieving the desired outcomes, resulting in greater understanding and direct engagement with reality (Susman, 1983). Goles and Hirschheim (2000) and Moon and Blackman (2014) argue that pragmatism, as a methodological strategy, provides the opportunity to illuminate hypotheses and concepts of an inquiry and conflicting paradigms. Pragmatism relies on investigating claims, ideas, truth (reality), and the value of their consequences in social life (Goles and Hirschheim, 2000; Moon and Blackman, 2014). One advantage of pragmatism is its methodological pluralism, allowing the researcher to draw data from different qualitative and quantitative perspectives (Goles and Hirschheim, 2000; Moon and Blackman, 2014). Hopper and Powell (1985) claim that methodological pluralism in accounting research informs how accounts and accounting rules are created and suggest that these are not based only on objective and neutral perspectives but also influence multiple interests and political processes. Accordingly, the researcher identifies in practice a specific situation affecting the business operationally and tries to identify it clearly.

As a result, the study uses mixed methods, in other words, quantitative and qualitative research, such as a survey and personal in-depth interviews. Howe (1988) and Modell (2010) claim that mixed-methods research, which combines qualitative and quantitative methods, can be supported by a pragmatistic philosophical position. Grafton et al. (2011) define mixed methods as a research design that includes both a quantitative and a qualitative component of data collection, analysis reporting, and discussion. Howe (1988) also encourages social scientists to consider mixed methods under pragmatism for their studies by putting forward for consideration that “the pragmatic suggestion regarding the methodology is thus for researchers to forge ahead with “what works”.” (Howe 1988, p.15). Following the last statement, Tashakkori and Teddlie (1998) argue that the most appropriate method or mixed-method approach is the one that addresses the purpose of the study.

Moreover, a mixed-methods approach relies on the quality and validity of the chosen methods for investigation. A methodological choice of mixed-methods strategy under the triangulation of methods’ findings supports the combination of quantitative and qualitative methods’ strengths while mitigating each method’s limitations, ultimately leading to more robust and trustworthy research outcomes (Turner et al., 2017). Quality and validity criteria are essential for researchers who pursue mixed-methods strategies (Tashakkori and Teddlie, 1998). Ihantola and Kihn (2011) present a framework that addresses mixed-methods quality in accounting research. The framework’s criteria include, firstly, the legal validity and reliability standards of qualitative and quantitative approaches during the research design, data collection and analysis, and integration stages (Ihantola and Kihn, 2011). Secondly, the vocabulary used to discuss the validity and credibility in bridging qualitative and quantitative concepts is also a factor (Ihantola and Kihn, 2011). Thirdly, the objectives occur on a continuum of iterative and interactive processes at each stage of the mixed research approach (Ihantola and Kihn, 2011). In the present study, the researcher uses a mixed-methods approach following the above

framework and recommendations to secure the research process. Both quantitative and qualitative methods appear helpful in investigating the research question, as the pragmatic view demands efficient and practical answers.

3.4.2. Research Approach and Strategy

The research strategy of the present study includes a combination of methods, namely a quantitative and a qualitative component. Accordingly, the particular approach is a detailed logical plan for answering the study's research questions (Saunders et al., 2016). For the specific study, the research question focuses on the aspects "if" and "how" the economic consequences ostensibly engendered by the adoption of IAS 38 – "Investment in R&D" influence the organisation's management decision-making behaviour regarding investment in R&D. Any research strategy needs two critical choices; the first reflecting on the research design, and introducing a logical structure that impacts the research method's execution followed by the analysis of the collected data (Bryman and Bell, 2015). The second choice deals with the techniques used to collect data and the suitable instruments employed (Bryman and Bell, 2015).

In the present research, the researcher gathers objective data about the reactions of firms in relation to investment in R&D under the specific phenomenon in terms of the quantitative method. The researcher investigates the meaningful relationship between financial outcomes and performance via financial statements and the influence on managerial decision-making behaviour. The above relationship takes note of the IAS 38 accounting policy on an organisation's decisions upon investment activity on R&D. The researcher proposes the application of a survey to provide evidence about any managerial changes in the long-term investment strategy on R&D of an entity. Via the quantitative part, the researcher attempts to identify the importance of these financial outcomes on management's decision-making

behaviour and how this feedback influences and impacts any strategic changes that shape the actual results.

On the other hand, the qualitative method provides helpful in-depth insights into management's behaviour and, at the same time, investigates the economic consequences of specific accounting policies. Specifically, the qualitative component of the research, the second study, considers the connection and effect between the IAS 38 accounting policy, its economic consequences, and the organisation's management decision-making behaviour regarding R&D. Via the qualitative part, the researcher investigates how the management team analyses financial results, couples them with the R&D strategy and finally chooses to model, alter, or influence the operational activities and the actual outcomes of a fiscal year, eventually impacting the investment strategy.

Establishing any connection between the economic consequences of accounting policy and the organisation's activity is to define and understand the relationship and influence between said economic consequences and the management's decision-making behaviour, which is one of the study's objectives. The above-mentioned objective deals with the economic consequences generated by the IAS 38 and how these influence the organisation's management and its decision-making behaviour. Following the methods mentioned above, the particular research relies on the triangulation of the results. A triangulation of methods ensures the study's credibility and trustworthiness (Modell, 2005). Triangulation is the combination of different methods to accurately identify complementary data upon a phenomenon by approaching it from other points and techniques and ensuring its validity (Modell, 2009; 2015). Two or more methods cooperate, and their collected findings collaborate for a particular phenomenon (Bryman, 2015). Erzberger and Kelle (2003) address triangulation as a critical element of a mixed-method research strategy. Using multiple data sources, findings or methods on a mixed-methods approach, triangulation can provide a more comprehensive understanding of a research

problem and enhance the validity of findings, strengthening the inferences drawn from both qualitative and quantitative data, leading to more robust and credible findings (Turner et al., 2017). Literally, triangulation involves validating methods, research, and results to identify threats and accurately picture the social phenomena under study (Erzberger and Kelle, 2003).

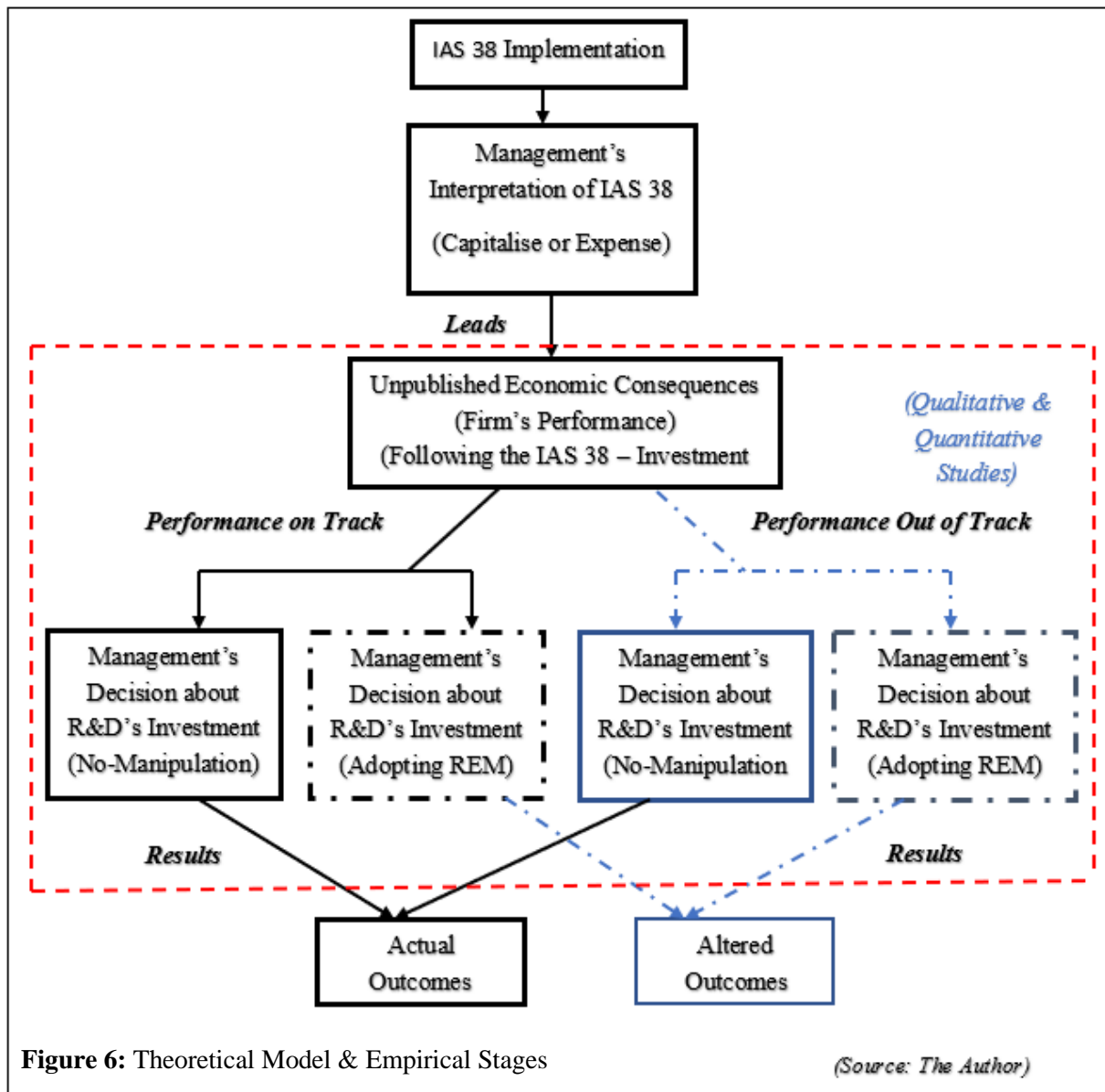
According to the methodological design of the current research, one important issue is to establish the preferred mixed–method approaches for data collection, data analysis and reporting. Caracelli and Greene (1993) maintain that the mixed methods approach practically operates under the spectrum of multiple methods strategy. Triangulation provides the researcher with the opportunity to investigate a broader range of historical, attitudinal and behavioural issues, improving the reliability of the study (Yin, 2009). The researcher follows a “between” method of triangulation to extract the best aspect of each method and overcome their unique deficiencies (Denzin, 2009). The researcher analyses each method separately using the “between” convergent method process on the results for this study. Thus, the results investigate how senior management thinks about and operates long-term decisions of organisations under specific accounting policies, which appear as crucial components of the management’s strategy. Any economic consequences arise as issues that are too critical to be ignored. All interested parties must consider the economic consequences and strive to develop the appropriate circumstances for achieving the best for organisations.

3.4.3. Data Collection Processes

The present study applies a combination of two research methods to investigate the research question, namely a quantitative and a qualitative approach. The quantitative method is an electronic survey addressed to CFOs. The specific participants are experts on the IAS/IFRS who manage UK-listed firms. A quantitative approach applies to test causal relationships, generalise results to a broader population and define patterns (Bryman and Bell, 2015). Thus, a

survey provides answers regarding relationships, concentrating on a specific target audience and following the research objectives (Nardi, 2018). Accordingly, the electronic survey collects data to investigate the relationship between the economic consequences and their influence on management's decision-making behaviour. Simultaneously, the method, specifically the electronic survey, examines any forces generated from other factors that may strengthen or weaken the particular relationship, focusing on the management team's choice of real earnings management.

Moreover, the qualitative research method is a personal, in-depth, semi-structured interview with CFOs. Thus, the researcher selects open-ended questions and seeks to understand these experts' opinions on how the economic consequences influence their organisation's decisions when working on and under an accounting principle, specifically IAS 38. Simultaneously, the interview method investigates the management's pragmatic reaction following a selected strategy (Braun and Clarke, 2013), like real earnings management. On top of that, the qualitative approach explores organisations' final investment policy decisions in R&D and how the generated economic consequences from the accounting principles and regulations, like the IAS 38 – Investment in R&D, influence the above decision-making process, persuading them to adopt real earnings management strategies. Various factors influence these experts' decisions. Specifying these factors when setting and developing a new accounting principle or altering an existing one is essential, considering their impact on the management's decision-making behaviour of an entity.



According to the theoretical model (Figure 6), all the above is presented analytically with the empirical stages' help. Combining a quantitative method with the specific qualitative approach is an appropriate choice to investigate the research question efficiently. Notably, each method provides insights that interact with the theoretical model. Furthermore, the qualitative approach is a helpful tool to explore, in general, these behavioural phenomena in the present study, while the quantitative identifies the relationship. The IAS 38 guides firms to bookkeep everything relating to intangible assets and R&D investments. Management is obliged to follow

the particular accounting policy, leading to specific behaviour and finally influencing their final long-term strategy based on the company's outcomes and financial performance.

3.5. Survey

3.5.1. Introduction

Performing impactful research relies on a proper theoretical perspective in collaboration with suitable research methods, finally distinguishing the successful extraction of thorough and impactful knowledge. The specific approach is a continuous choice “between modes of engagement entailing different relationships between theory and method, concept and object, and researcher and researched” (Morgan, 1983, p. 19). Since the study at hand engages in the social science field, a social scientist's task is usually focused more on producing generalisable knowledge as a set of substantiated empirical findings (Pugh, 1983). Furthermore, Pugh (1983) argues that this route to knowledge acquisition strengthens wisdom as a “stock of insight” that impacts organisational knowledge and reinforces the need to use methods that provide clear empirical findings, like a survey. Such an empirical study in financial accounting urges the use of surveys to explore the attitudes and opinions of interested parties (Ryan et al., 2002). The latter is involved in behavioural accounting research and navigates through producing and using all financial information (Ryan et al., 2002). Hence, the choice of a survey constitutes an integral part of empirical research. As part of social science, the accounting discipline needs this methodological approach to develop impactful and valuable knowledge.

As mentioned above, one of the data collection methods for this study is an online survey of managers and international accounting experts. In social science, the SAGE Encyclopedia states that a survey is “a widely used method of collecting and analysing social data for academic, government, and commercial research.” (Lewis-Beck et al., 2003, p. 1102). Realistically, a survey is a structured set of data that uses questions to collect information about

the same characteristics through populations (De Vaus, 2014). In the present study, the necessity to adopt a survey research method contains insights regarding peoples' knowledge, attitudes, beliefs, and behaviour through a direct or indirect procedure (Fink, 2003). Insofar as the present study relies on the last mentioned statement, the particular method supports developing statistical inferences about the studied population and clarifies specific phenomena (De Vaus, 2014).

In social science, survey research materialises a set of questions, statements, or scales presented on paper, by telephone, or on a screen in the same way to all participants to draw subjective results and data from many of them (Stake, 2010). In the present study, the specific method adopts the idea generated in social science and investigates any interrelationships of sociological, psychological, and behavioural variables (Mahmoudian et al., 2018). Accounting scholars usually choose this method to collect data for various topics, such as responses to organisational changes or attitudes towards strategies and policies (Mahmoudian et al., 2018). Also, Bloomfield et al. (2016) clarify that a survey involves the researcher's intervention to extract opinions and various insights from practitioners in a natural, secure setting. Consequently, the researcher considers that survey research represents an appropriate choice and applies it in diverse and multiple areas to investigate attitudes, behaviours, and interrelationships among humans. This subsection discusses the survey sample, web survey form, questionnaire development, survey measurements, and pilot approach as primary components.

3.5.2. Sample and Web Survey

The study population sample tries to draw an inference that includes managers, specifically CFOs, from publicly-listed companies in the UK that have adopted IAS/IFRS and meet the professional managerial experience and accounting knowledge. Any participant is

equally likely to be included in the sample by following the simple random sample strategy (Bryman, 2015). All units have an equal chance of being selected in simple random sampling (Fink, 2003). Thus, once a subject is selected, the same subject is rendered ineligible for reselection from the pool (Fink, 2003). All participants from UK-listed companies are required to adopt IAS/IFRS. Thus, the participants are accounting experts and knowledgeable regarding IAS/IFRS. Accordingly, all survey questions and response options are consistent with the participant's education level and explicit knowledge, precluding misinterpretations and misunderstandings (Glasow, 2005). In addition, prepaid incentives constitute a practical solution to increase the number of invitees and those who complete it. The researcher randomly granted ten (10) Amazon vouchers for £50 each to reduce bias and increase the number of completed questionnaires (Singer, 2018).

Ultimately, the researcher targeted approximately 1,265 UK-listed companies based on the Financial Analysis Made Easy (FAME) database and, as a result, a proportionate number of participants, namely the CFOs (Table 2). FAME is a database that contains information on UK and Irish companies, listed or not, searches for companies with specific characteristics and profiles, and performs detailed analysis (Stoian et al., 2018). Subsequently, the researcher extracted the CFOs' personal information and sought to obtain their email addresses from the FAME database. In cases where it was impossible to identify their email, the researcher used "RocketReach.co" and "LinkedIn". The first is an online software database that provides verified emails and other contact information for professionals worldwide (RocketReach, 2022). LinkedIn is an online service company for professional networking and career development (Cho and Lam, 2021). The researcher then extracted all the appropriate data about the company, managers and board members' names, and emails for all participants on an Excel table, which was used to communicate with them. However, for 155 companies, it was impossible to find any communication data for their CFOs, or the particular manager was the

same in another company. 64 CFOs appeared in more than one company with the same role. So, the researcher managed to send invitations to 1,110 participants.

All participants engaged in the web survey were invited by email and joined and responded to an online self-completion questionnaire. Each individual could participate in the web-based survey study anytime and anywhere without worrying about confidentiality issues (Rea and Parker, 2014). Any confidentiality issues were avoided because the present study is an online self-administered survey, often providing minimal contact between the researcher and the participant (Cowles and Nelson, 2015). The researcher hid all information that would let the participant be identified and disengaged the relative functions from the survey software. Thus, the respondent is likelier to answer the questions truthfully and elicit easier, more sensitive answers (Cowles and Nelson, 2015). Mahmoudian et al. (2018) claim that online surveys allow for more rapid circulation to a larger pool, lower cost, and are more secure for the participants. Requesting a high number of respondents' demographic information helps generalise the interested population (Mahmoudian et al., 2018). The present self-administered survey is based on the internet and electronic sources and is designed to utilise the respective advantages.

An electronic survey follows a standard procedure, like all other surveys, except for the vital part of the primary electronic processes. Firstly, all participants have the opportunity to complete the consent form before starting the survey electronically and confidentially. Ashenfelter (2018) suggests that nowadays, it is common sense to use all new technologies, like self-reported online surveys, as a solution to capitalise on the results of new technological equipment in research. A written response via electronic sources requires minimum effort and resources to collect data and immediately extract confidential information from participants (Glasow, 2005). Furthermore, an email containing a URL-embedded survey encourages participants to securely visit a web address by clicking on it (Brace, 2018). In the present study,

the researcher conducted the survey electronically to capture the required data. The whole data collection procedure relies on URL-embedded email invitations. The respondents followed the appropriate link to participate in the survey.

All the participants had the choice to engage in the survey or to refuse. The study was granted approval by the University of Sheffield Management School ethics committee, and the researcher followed all the appropriate and suggested processes. During the data collection period, the researcher informed the candidates through invitation emails with a “*Survey Cover Letter*” (Appendix 1). Simultaneously, the “*Survey’s Information Participant Sheet*” (Appendix 3) was attached to the specific invitation email, where all the study details were referred to clearly and analytically. In complete agreement with the ethical approval strategy, the survey began with the “*Consent Form*” (Appendix 2) in English to ensure proper responses from the participants and provide them with the opportunity to reconsider their engagement.

Since the study was a web survey, the researcher used “*Qualtrics Surveys*” to proceed with the investigation. “*Qualtrics Surveys*” is a web-based survey software suitable for developing surveys, collecting data from participants worldwide, storing the collected data, and producing reports (Qualtrics, 2022). From November 2021 until the end of February 2022, 165 CFOs fully participated in that data-collection period (Table 2). The participants received the first invitation by email on the 1st of November 2021, the second on the 1st of December 2021, the third on the 5th of January 2022, and the fourth and final invitation on the 1st of February 2022. The web survey ran until the 28th of February, 2022. Those who agreed to participate could proceed to answer the survey questions. Also, all participants had the chance to withdraw at any time without giving any reason, in which case their answers would not be recorded. Finally, the response rate was 14,86% (Table 2), which is relatively satisfying considering that it is between the range of 10% and 20% and the characteristics of the participants (Baruch and

Holtom, 2008). Usually, organisations' upper-echelon members are not incentivised to participate in a survey; and find it time-consuming and irrelevant (Baruch and Holtom, 2008).

Table 2: Survey's Targeted Population and Response Rate

Companies	CFOs	Emails Sent	Omitted	Answered Surveys	Response Rate
1.265	1.201	1.110	155	165	14,86 %

3.5.3. Measurements

The data were collected using measurement scales for an empirical survey regarding attitudes to ensure quality and steadiness in the relationships between variables. As a means of conducting empirical research, the researcher tests any direct implications of the model and any divergence range, confirming and strengthening the status (Ryan et al., 2002). Any model could be tested by establishing relationships between dependent or independent variables through a defined measurement system (Ryan et al., 2002). According to the SAGE Encyclopedia, a measurement constitutes a crucial part of a survey while operating as a process to assign labels to the variables (Lewis-Beck et al., 2003). Scales indicate how variables are defined and categorised through an empirically measured theoretical construction (Schäffer, 2007). A researcher can use a developed scale as “a basis for supplementation and development.” (Schäffer, 2007, p. 1). Available measurement scales are instruments adopted to meet and benefit research needs (Johnson and Morgan, 2016).

For the core part of the questionnaire, the researcher adopts part of a measurement scale developed for managers by Bruns and Merchant (1990) and advanced by Fischer and Rosenzweig (1995). The measurement scale was initially developed by Bruns and Merchant (1990) in the USA and later evolved by Fischer and Rosenzweig (1990). In this particular scale, the questions describe and investigate various situations in which managers engage in earnings management activities and how acceptable these activities are to them (Bruns and Merchant,

1990; Fischer and Rosenzweig, 1995). Moreover, it describes the acceptability of unethical, illegal or questionable management decisions and choices influencing accounting activities and operational processes (Bruns and Merchant, 1990; Fischer and Rosenzweig, 1995). Specifically, the accounting manipulation factor includes four (4) indicators (Fischer and Rosenzweig, 1995), which appear to be the most useful for investigating accounting matters. In the present research, all participants rate certain unethical and questionable actions from “*acceptable*” to “*unacceptable*” on a seven-point Likert scale. All described activities violate IAS/IFRS, but each one could be construed as involving earnings management.

In the second measurement scale, the researcher uses one developed by Noble and Mokwa (1999). The scale includes four (4) indicators and measures how a strategy is perceived as having potentially critical organisational consequences (Noble and Mokwa, 1999). In the present research, the adopted scale investigates the importance of financial statements in relation to management’s administrative decisions and outcomes (Noble and Mokwa, 1999). On a seven-point Likert scale, all participants rated specific assertions related to financial statements from “*strongly agree*” to “*strongly disagree*”. The adopted facts indicate the importance of the financial statements to the company’s long-term strategy when deciding on crucial activities and investments, like investment in R&D.

Finally, the third measurement scale is part of one developed by Dunk (1993) combined with elements of the survey from Graham et al. (2005). The researcher chooses four (4) indicators from the scale to concentrate on the information asymmetry between two different groups of actors, namely the organisation and its stakeholders (Dunk, 1993). As a result, four (4) statements are developed to measure the management’s motives for disclosing and communicating extensive financial information (Graham et al., 2005). Specifically, the adopted subscale investigates the level of management’s motivation to inform all stakeholders more extensively and sooner about investment managerial decisions and their progress involving

different projects, such as R&D projects (Dunk, 1993; Graham et al., 2005). The participant rates each statement from “*strongly agree*” to “*strongly disagree*” on a seven-point Likert scale. All these statements describe the participants’ desire to mandatorily or voluntarily disclose more financial information than defined by the IAS/IFRS as members of the upper management, for example, the guidance provided by the IAS 38.

As mentioned above, the researcher chose a well-known and helpful measurement device for all measurement scales, the Likert-scale technique. This technique is a “device for measuring people’s attitudes, beliefs, emotions, feelings and perceptions, personality characteristics and other psychological constructs.” (Lewis-Beck et al., 2003, p. 572). In the current study, this technique measures various tensions and positions on human feelings related to specific, focused areas while using questions as its tool in a quantitative continuum (Bryman, 2015). The Likert scale functions as a multiple-item measurement technique to offset misunderstandings and their various effects. It resolves any issue by entering a broader range of subject aspects and focusing on crucial and specific distinctions.

For the present survey, the researcher incorporated a seven-point Likert-type scale to address participants’ responses and describe them in a format that can be analysed. To ensure successful adoption, the researcher considers three serious pointers for using a Likert scale in a survey (Lewis-Beck et al., 2003). Firstly, multiple items are used exclusively as statements for each respondent, not as questions (Lewis-Beck et al., 2003). Secondly, all these items should be combined and interrelated to the same object-theme (Lewis-Beck et al., 2003). Finally, interested parties must complete the scale by choosing only one option through several responses along a continuum (Lewis-Beck et al., 2003). The final results connect respondents with a series of attitude dimensions, where they must administrate an opinion or aspect through a scale battery (Brace, 2018), for example, between “*strongly disagree*” and “*strongly agree*”. The Likert scale used in the survey at hand is a seven-point scale ranging from “*strongly*

disagree” to “*strongly agree*” and from “*unacceptable*” to “*acceptable*”. A particular pattern allows the respondent to feel familiar with the questionnaire and answer honestly.

Furthermore, using a seven-point Likert scale provides a valuable research tool to measure attitudes, opinions, and behaviours in social science behavioural research. An optimal choice of a seven-point Likert scale offers balance with a controlled and enough-to-respond option for consideration while recovering enough information to study (Matell and Jacoby, 1972). Such a seven-point scale would result in a greater data spread, providing more statistical flexibility when analysing the data (Dawes, 2008) while exhibiting good reliability and validity properties when measuring attitudes and behaviours (Hair et al., 1999). Hence, the seven-point Likert scale acts as the appropriate option for the particular research, focusing on the optimal determination of participants’ (human) behaviour under sensitive circumstances without developing more complex and time-consuming conditions preventing them from participating.

3.5.4. Questionnaire and Questions

3.5.4.1. Introduction

One well-known tool used in social science to study and measure a phenomenon of interest via the survey method is a questionnaire. The researcher employs the questionnaire as a research instrument consisting of a series of questions with a choice of answers to gather accurate and efficient data for a survey or statistical study (Lewis-Beck et al., 2003). Hence, in the present study, the questionnaire constitutes a communication agent between different segments, namely the researcher/interviewer and the subject (Brace, 2018). The researcher thereby converses and elicits answers to similar questions from the subject (Brace, 2018). Due to the fact that questionnaires may be developed by choosing either open-response or closed-response items for a survey, the choice of open-ended questions behaves as unstructured and free-response questions where the researcher records the participants’ answers verbatim (Brace,

2018). On the other hand, the format of the closed-response items provides various options for responses and propels the participant to select one of the proposed options (Johnson and Morgan, 2016). Following those mentioned above, the researcher identifies that closed-ended questions provide “a fixed list of alternative responses and ask the respondent to select one or more of them as indicative of the best possible answer.” (Rea and Parker, 2014, p. 50). Hence, the present research uses mostly closed-ended questions on the questionnaire and a few open-ended questions, the latter being used to try and extract the maximum from the participants.

A series of open-ended survey questions in the questionnaire behave like a written interview, gathering all types of data and various information from the correspondents. Since the open-ended questions reflect the respondent’s knowledge, feelings and understanding (Cowles and Nelson, 2015), all responses are probed in a detailed and descriptive way on a specific subject (Brace, 2018). In the present study, the choice of a web survey gives the researcher an option to provide sufficient space and allow respondents to type their answers in a narrative and simple formatting element (Rea and Parker, 2014) while ensuring confidentiality. Accordingly, participants are usually interested in answering open-ended responses where the information is already known to the interviewer and easy to respond to in a couple of minutes (Geer, 1988), such as the name of their company, age, and other information. Thus, all the above responses usually vary and represent a broad diversification of themes from a short indicative phrase to a whole paragraph (Jackson and Trochim, 2002). The present survey includes a small portion of open-ended responses, which serve the researcher to gather specific information from the participants, like their gender, age, educational level, period of professional experience, name of their company and verification of their email. All the open-ended questions appear in the demographic part of the questionnaire while comforting and encouraging the participants to continue answering the remaining close-ended questions.

Furthermore, the rest of the questionnaire, namely the closed-ended questions, proposes to instil conciseness and concreteness in the questionnaire. Through the questionnaire, the researcher tries to cover all appropriate subjects concisely, following the strategy of avoiding discouraging participants by asking tedious and monotonous or lengthy questions, which engender a reluctance to complete them (Rea and Parker, 2014). Furthermore, the present survey follows the critical constructive elements for the closed-ended questions of specificity, clarity, and brevity, which will provide valid, reliable, and unbiased data for the research (Cowles and Nelson, 2015). Also, the specific closed-ended questions on the questionnaire provide excellent uniformity and exclusivity and precisely target responses to create a comfortable feeling for the respondents (Cowles and Nelson, 2015). In this configuration, the set of closed-ended questions demands subjective answers that describe and evaluate people, attitudes, places, and events. The specific set of closed-ended questions challenges the participants to make self-assessments according to their personal beliefs and identify identical attitudes (Glasow, 2005). Furthermore, the close-ended questions follow an “agreement continua”, which requires the participants to agree or disagree with given statements and can be answered even by those less educated and knowledgeable (Glasow, 2005; Johnson and Morgan, 2016). Following the closed-ended questionnaire format, the researcher selects to adopt only one possible answer to each question. All questions precisely target the aim of the research, investigate its objectives, and utilise all the types of responses below.

The present survey consists of a questionnaire with open and closed-ended questions and tries to gather specific managerial insights about attitudes expressed through specific measurement scales. The attitude construct is demarcated as an ongoing evaluation of one’s opinions, beliefs, feelings, intents, preferences, positions and values concerning an attitude object (Johnson and Morgan, 2016). Preparation for measuring an entity’s attitude and the respondent’s feelings “involves locating the individual’s ‘typical’ response toward the attitude

object of an evaluative continuum.” (Ostrom, 1971, p. 593). Consequently, the researcher relates the closed-ended questions that appear through nominal, ordinal-scaled, and numerical responses (Fink, 2003). Specifically, for this questionnaire, the researcher prefers ordinal data; hence, the Likert-scale technique was used (Brace, 2018). The participant’s ordinal responses rate or order a list of positive to negative items, and the numerical answers are to questions such as age and height (Fink, 2003). Finally, the questions included were filtered through an extensive review of the relevant literature. Simultaneously, they were adjusted to fit the conceptual development proposed in this study.

3.5.4.2. Introductory and Screening Questions – First Part of the Survey Questionnaire

Analysing the questionnaire, the first part involves the introductory and screening questions as a critical combination to identify the participant’s interests and exclude those who do not meet the screening criteria and those who might decide not to continue. Therefore, the introductory part elicits basic and uncomplicated information without offending, confusing and boring the participant (Rea and Parker, 2014). Even though the researcher defines a survey sample with specific demographic, behavioural or attitudinal characteristics, it is crucial to use screening questions in the introductory part to ensure suitable participants (Brace, 2018). These questions secure the survey’s eligibility and the ability of the population to inform the study (Brace, 2018). In the first section of the questionnaire, a series of questions is concentrated and organised in nominal data, where all the data are classified into discrete categories under specific labels (Brace, 2018). The choice of numerical responses provides the researcher with detailed insights about the respondents and simultaneously relates to the study (Brace, 2018). All the questions in this section are necessary and valuable for the questionnaire’s validity and inform the researcher about the participants’ identity and understanding.

In the introductory section, a participant usually finds various demographic questions about gender, age, level of education, professional experience, or others. Nowadays, gender identification is an essential factor influencing participants' behaviour (Yong et al., 2016), which is suitable for starting a survey. "*Gender*" usually operates as a control variable since it represents a variable of easy-to-gather information and creates a comfort zone in a survey study (Bernerth and Aguinis, 2016). In organisational research, most studies rely on the influence of gender on behaviours and attitudes, while the chance to add more categories that would be selected might present any impacts on behavioural relationships in the near future (Bernerth and Aguinis, 2016). Moreover, demographic questions about participants' age and years of professional experience inform the researcher of the sample's eligibility relating to its knowledge and expertise (Yong et al., 2016).

Identifying the participant's level of education influences the researcher's ability to recognise how appropriate that person is to answer the questionnaire (Alewine et al., 2016). The respondent's classification as a certified and/or chartered accountant also identifies how knowledgeable the participant is (Kelley and Margheim, 1990). Likewise, the level of accounting knowledge constitutes a crucial indicator of a subject's acceptance to participate and informs the researcher about IAS/IFRS expertise (Ghio and Verona, 2018). Additionally, Onsi (1973) suggests that one helpful characteristic should reflect the company's exact state in relation to essential information on knowledge, stability, and accounting responsibilities (Onsi, 1973). All the above appear as questions in the first part, namely the demographic information chapter, providing crucial insights into the study and helping the researcher achieve eligibility and suitability regarding the questionnaire.

3.5.4.3. Impact of Economic Consequences on Managerial Practices – Second Part of the Survey Questionnaire

From this point onward, the present questionnaire follows a strategy of group-related questions to help participants follow its flow and make them feel keen and comfortable responding to the questions [Appendix 4 (positive performance scenario) and Appendix 5 (negative performance scenario)]. As a strategy, grouping related questions positively impacts any participant to correspond in a normal conversation (Dillman et al., 2014). The whole questionnaire appears as a logical conversation, following a standard order, eliciting relevant information, well-thought-out responses and engaging more with the questionnaire. (Dillman et al., 2014). The survey's first group-related questions focus on Research Question 1, "*Do the non-anticipated economic consequences (translatable into financial performance) positively impact the management's decision-making behaviour with regard especially to real earnings management when investing in R&D under IAS 38?*". Following the above, the fundamental part of the survey, namely the "*Perception of Managerial Practices*" chapter, appears in the next paragraph investigating **Hypothesis 1: A company's non-anticipated financial performance positively impacts the management's manipulation of operational activities regarding R&D Investment (IAS 38) to alter financial reporting.** Hence, the positive relationship between the influence of a company's non-anticipated financial performance on the manager's acceptance while manipulating earnings and intentionally engaging in earnings management activities. The way to achieve this is to use a quasi-experiment, which involves managing a presumed cause due to an independent variable to discover any impacts or effects of such intervention (Lewis-Beck et al., 2003). The present study's independent variable is the company's financial performance, while the presumed cause is the management's acceptance of manipulation.

Apropos, the company's financial performance identifies how efficiently an entity generates revenues, invests in new assets, manages all of them, reduces liabilities, and achieves profits. An organisation's performance appears to be a critical part of its effectiveness while including operational and financial results for all stakeholders (Mia and Clarke, 1999). The management chooses to regularly use the entity's financial data with the market's response to debt and equity issues and always considers its long-term survivability (Beattie et al., 2006). In practice, the management analyses the company's financial statements and uses financial performance measures to understand its financial position (Beattie et al., 2006). In the present study, the researcher developed two cases, one with a positive performance scenario and one with a negative performance, the independent variable for the presumed cause part.

Moreover, the management's acceptance of intended manipulation, the dependent variable, appears as a crucial value and presents the ethical acceptability of management's actions. The researcher takes the opportunity to adopt a part of the existing measurement and questionnaire to collect data and measure the variable, which implies modifying it by retaining only the needed items for the study, deleting all unnecessary items, and revising the remaining ones suited to the study (Johnson and Morgan, 2016). In the present survey, the researcher adapts a questionnaire that describes various situations in which a manager engages in earnings management activities applicable to general, finance, control and audit managers (Bruns and Merchant, 1990). The participants rate the ethical acceptability of said intended actions to manipulate operating activities and accounting disclosure (Bruns and Merchant, 1990). Many managers choose to use various methods to manage short-term earnings and approve these actions even though they are questionable and involve non-disclosed deceptions (Bruns and Merchant, 1990).

Developing the Bruns and Merchant (1990) study, Fischer and Rosenzweig (1995) adapted the questionnaire and extracted four (4) different factors, including accounting-related

matters and the manipulation of operating decisions. Manipulating operational decisions is somewhat more questionable ethically when the management chooses to change the timing of expenses (Fischer and Rosenzweig, 1995). Also, the forms of accounting manipulation indirectly reflect management's operating manipulation while influencing the final financial results (Fischer and Rosenzweig, 1995). In the present study, the researcher adapted the accounting-related questions (statements) regarding R&D-related activities and the current conditions using a seven-point Likert scale ranging from “*unacceptable*” to “*acceptable*”. “*Renovation ahead of Schedule*”, “*Record supplies next year*”, “*Prepay next year expenses*”, and “*Delay consultation invoice*” are the adopted factors from the subscale. The researcher altered and modified them to reflect today's conditions and represent activities that could occur while reflecting questionable or unethical activities.

3.5.4.4. How the Economic Consequences impact Managerial Practices – Third and Fourth Part of the Survey Questionnaire

The following parts of the questionnaire investigate the study's second research question through the next two (2) hypotheses. The researcher investigates **Hypothesis 2**, “*The importance of the financial statements to the manager strengthens the positive impact of a company's non-anticipated financial performance on the management's manipulation*”, to measure the importance of financial statements on management decision-making behaviour. Specifically, this hypothesis interferes with the relationship between the company's financial performance and the manager's acceptance of manipulating and engaging in earnings management activities. An organisation's management relies on specific financial information to measure financial ratios, which affects managerial decisions (Almeida, 2019). In practice, all analytical financial data generated from the financial statements are valuable, and their quality and disclosure reflect the management's decisions (Almeida, 2019). Carracher and Van Auken

(2013) argue that an SME's management uses financial statements extensively and demands a quality disclosure of their components to make decisions regarding the entity. Also, Donelson et al. (2017) support that most stakeholders of an organisation insist on the quality of the financial reports and all annual financial documents. All financial statements from a company are valuable tools for all stakeholders and provide precious insights related to the quality of disclosure of the component. Their presence engages different motivations on all parts and impacts exact decisions accordingly.

To investigate the second hypothesis, the researcher uses a developed scale regarding the importance of financial statements on managerial behaviour. The specific survey section adopts all indicators from the scale developed by Noble and Mokwa (1999) to measure the importance of the financial statements to the management. Therefore, these questions extract results and insights to investigate how important the financial statements and their components are for the administration. All an organisation's strategies are based on the information provided to the management team (Noble and Mokwa, 1999). The financial information generated from the financial statements is crucial to management's decision-making behaviour (Almeida, 2019). Thus, the researcher adopts the four (4) questions (statements) and adapts them to R&D-related activities and on the present conditions using a seven-point Likert scale, ranging from "strongly disagree" to "strongly agree". The financial statements "will influence the company", "are extremely important", "were pretty minor" (Reverse question), and "were expected to affect the company's future" are the adopted factors from the scale. The researcher modified them to reflect the investments in R&D and IAS 38 accounting policy.

Finally, a different part of the questionnaire deals with **Hypothesis 3**: "*Additional disclosure of R&D investments (IAS 38) weakens the positive impact of a company's non-anticipated financial performance on the management's manipulation*", such as the information asymmetry between the company's financial disclosure from management and the

stakeholders. As mentioned earlier, this phenomenon is common practice and allows management to choose what to disclose voluntarily (Graham et al., 2005). Owners-management who have the financial statements prepared less often and do not voluntarily provide additional information are keener on interpreting them. (Carragher and Van Auken, 2013). Graham et al. (2005) argue that managers are keen to disclose more financial data regarding earnings and other themes voluntarily. The specific choice helps them to present the company's stability while reducing information risk and boosting stock price (Graham et al., 2005). Simultaneously, this voluntary disclosure is limited and helps to maintain only the necessary data while avoiding setting disclosure precedents that are difficult to forsake in the future (Dunk, 1993).

In this section of the survey, the researcher adopts part of Dunk's (1993) measurement scale, combined with elements from Graham et al.'s (2005) questionnaire and modifies it based on R&D activities and IAS 38 to investigate their actual disposal of additional reporting in R&D investments. Minimising information asymmetry between the management and all interested parties is a valuable factor in avoiding unethical or unorthodox managerial activities. Transparency and accuracy are essential values of the IAS/IFRS (IFRS, 2022), and until now, managers have usually chosen to adopt them and are tolerant of disclosing additional data voluntarily (Graham et al., 2005). It should also be acknowledged that information asymmetry attenuates the positive effect of additional data on the company's permanent low-risk reputational stability and stakeholder protection (Cui et al., 2018).

Following the discussion, Graham et al. (2005) state that the organisation's voluntary disclosures place great importance on promoting its reputation for transparent and accurate reporting to the stakeholders. Simultaneously, such disclosure positively values the possibility of facing negative expected and predicted results through disclosing more financial data (Graham et al., 2005). Also, the organisation's voluntary financial disclosure reinforces the entity's earning predictability to the markets for quarterly reporting and voluntary disclosure

decisions (Graham et al., 2005). The latter case strengthens and motivates the management's choice to reduce "information risk" through voluntary disclosure of financial information (Dunk, 1993). Transparency weakens any unscrupulous managerial actions while utilising the company's gains against third parties (Dunk, 1993). In the present study, the researcher adopts the above questions and alters them based on investments in R&D and IAS 38, using a seven-point Likert scale from "*strongly disagree*" to "*strongly agree*". Hence, as mentioned above, "*Information Risk*", "*Shareholders' Positive Valuer*", "*Company's Earning Predictability*", and "*Reputation for Transparent Reporting*" are the adopted factors from the scale. The researcher altered and modified them to reflect today's conditions and represent activities that could occur while reflecting the influence of information asymmetry on reducing questionable or unethical activities from the management.

3.5.5. Piloting the Questionnaire

It is crucial to pilot and test a questionnaire with a small number of participants before running the study. The researcher conducted a small-scale draft implementation to estimate the questionnaire's clarity, comprehensiveness and acceptability (Rea and Parker, 2014). Via the pilot run, the researcher identified some critical issues considered and adopted in the questionnaire, as such feedback influenced its overall quality (Rea and Parker, 2014). Furthermore, thoroughly piloting and testing a questionnaire's scale for reliability and validity is crucial and ensures the lack of errors (Brace, 2018). The concept of reliability deals with the consistency of the participant's answers under the same conditions, and, as a result, the same response is elicited across similar respondents (Cowles and Nelson, 2015). Reliability also interacts with validity. The latter simultaneously forms an accurate reflection of the perfect measurement choice for the specific concept (Brace, 2018). The above concepts appear as factors that inherently positively influence the participants for the survey. A researcher may

create secure, friendly, and understandable conditions through the questionnaire to all individuals and positively challenge the majority to engage.

As a result, the researcher did some cognitive interviews to determine how respondents reacted and interpreted the whole questionnaire for the present survey. Piloting the questionnaire through the cognitive interviews approach demands selecting some individuals and administering the survey with them under the researcher's surveillance. Simultaneously, all were asked their opinion about the questionnaire and what they meant by their choice (Cowles and Nelson, 2015). The above piloting activity allows the researcher to revise and modify a questionnaire to appear more understandable and attractive to the respondents, thus encouraging them to participate and complete it (Brace, 2018). All the above were materialised via think-aloud cognitive testing interviews, where the participants think aloud and inform the instructor about their thoughts relating to all parts of the questionnaire (Dillman et al., 2014). Thus, the researcher interviewed four (4) people, probing and discussing the whole questionnaire simultaneously via telecommunication platforms. The specific participants were manager-practitioners and academics in the accounting field who were knowledgeable about the topic. There appeared critical suggestions for changes in the questionnaire through this process, which adjustments improved the quality and facilitated the researcher's work. Their suggestions modified the questionnaire, making it more understandable by changing phrases, words, or themes.

3.6. Interview

3.6.1. Introduction

This subchapter introduces and explains the research method adopted for the qualitative study, namely the semi-structured interview. Such a research approach allows the researcher to investigate and understand management's decision-making behaviour in investing in R&D

under the IAS 38 accounting policy and its influence on the organisation's economic consequences. Essentially, the researcher relies on this fundamental research technique to extract analytical information through conversation and face-to-face discussion with an informant (Berger, 2020). Likewise, the choice of semi-structured qualitative interviewing is different from interviews in quantitative research because of a less structured approach (Bryman and Bell, 2015). Considering the study's approach, the researcher shows a greater interest in the interviewee's point of view, a more flexible and detailed attitude, extracting more comprehensive data, and the chance that interviewers must depart from their schedule (Bryman and Bell, 2015). Also, the semi-structured interview study sought to investigate and contribute to the theory by answering the following research questions, as discussed in Chapter 2:

Research Question 1: *Do the non-anticipated economic consequences (translatable into financial performance) positively influence management's decision-making behaviour with regard especially to real earnings management when investing in R&D under IAS 38?*

Research Question 2: *How do the non-anticipated economic consequences (translatable into financial performance) positively influence management's decision-making behaviour with regard especially to real earnings management when investing in R&D under IAS 38?*

Given that an interview is a structured one-to-one conversation between two participants, whereby the interviewer asks the questions and the interviewee responds, the researcher aims to assemble more information suited to the research questions and elicit vital and unique insights.

However, qualitative interviewing varies in the researcher's approach and emphasises how the interviewee frames and understands the topic, patterns, events, and behaviours. The researcher's choice of the semi-structured interview is based on the fact that the research

approach uses “a list of questions on fairly specific topics to be covered, often referred to as an interview guide, but the interviewee has a great deal of leeway in how to reply.” (Bryman and Bell, 2015, p. 467). Before the interview, the researcher developed a written list of themes and key questions in line with his intended objectives during the conversation but always kept in mind not to exclude any other questions or points for further discussion (Saunders et al., 2016). In an exploratory study, the semi-structured interview may provide the necessary background or contextual material to determine what is happening and understand the study’s context (Saunders et al., 2016). In the present research, the choice of a semi-structured interview appeared to be the most appropriate for an in-depth investigation of the management’s attitudes and behaviours. According to the study’s pragmatistic philosophical approach, it is vital to recognise and translate any actual managerial activities while the companies use accounting policies for their ordinary transactions and activities (Rutherford, 2017). This subsection encompasses the interview’s research questions, research strategy, the researcher’s profile and role, the study sample and participants, data collection, and the subsequent procedure.

3.6.2. Interview Research Strategy

Field research relies on specific qualitative methods to investigate and solve existing research problems through observation and interpretation of the subject of the study, such as the interview (Walliman, 2018). Interviews extract and collect data about indirectly unobserved phenomena (Saunders et al., 2016). Since the researcher selects the qualitative interviewing method for the study, the aim is to observe and explain a phenomenon by investigating a person’s experience and knowledge in a particular situation and under specific conditions (Stake, 2010). Specifically, the present study is primarily focused on managers’ behaviours and attitudes. At the same time, it aims to follow an “illuminative evaluation” to “make behaviours or attitudes in a given context visible for contemplation.” (Hart, 1998, p. 46). Thus, semi-

structured interviews appeared appropriate for first-hand learning and in-depth capture of participants' perspectives and experiences (Saunders et al., 2016) regarding “if” and “how” the economic consequences impact management's decision-making behaviour in R&D investments.

In the semi-structured interview, the interviewer works with a series of questions in a general form on the interview schedule and is provided with the chance to vary the questions during the interview process (Bryman and Bell, 2015). The researcher relied on the method's flexibility in how the interviewer could utilise the research questions during the procedure via the semi-structured questionnaire (Saunders et al., 2016). Also, the choice of the semi-structured interview rests on less formal, flexible, and dynamic facts while enabling the participant to provide fuller and richer information to the researcher (Brace, 2018). From this point of view, the interviewer could get insights into the interviewees' ethical values, attitudes, beliefs, and pragmatic preferences (Stake, 2010), which is part of the study's core. The interviewer also has some latitude to ask further questions regarding the interviewee's answers (Saunders et al., 2016). On the other hand, the participants could provide insights to the researcher regarding their attitudes and behaviour in terms of the managerial decisions they make (Hart, 1998). This aspect supported the researcher in extracting more detailed insights into the research questions and even scrutinising new data.

Modern-day circumstances widely promote alternative interviewing methods without replacing the traditional face-to-face interview. After the Covid-19 breakthrough and the restrictions that came from it, the researcher adopted an alternative interviewing approach via telecommunication software to perform the interviews. Communication technology advances for videoconferencing were used for more real-time and online synchronous conversations to frequently occur and for critical data to be collected in a practical manner (Saunders et al., 2016). The researcher adopted the idea of videoconferencing services for qualitative

interviewing to minimise logistical inconveniences and practical disadvantages, using “Zoom” and “GoogleMeet” software (Irani, 2019). Such a new recommended qualitative interviewing mode evolves and promotes feasible, potentially low-cost, and time-saving tools without replacing traditional interviewing methods (Irani, 2019). As a result, the present circumstances under the Covid-19 crisis and the participants’ geographical differences forced the researcher to choose online interviews through videoconferencing software. This choice led to people being interviewed from all over Europe and the United Kingdom, even though the companies they represented were UK-listed.

3.6.3. Researcher’s Profile and Role in the Interview Process

Qualitative research is a dynamic process and demands an active role of the researcher (Stake, 2010). Based on this dynamic process, a qualitative researcher needs to reflect on the participant’s sensitivity systematically, respect the interviewee’s personality, and, at the same time, be objective (Bryman and Bell, 2015). Accordingly, the researcher’s profile respects and understands the participants due to previous professional experience and extensive knowledge of the accounting field. Additionally, previous professional experience in education helps to clarify the limitations and the techniques to approach the interviewees while developing more comfortable and appreciative conditions. All those mentioned above always demand the researcher to consider the study’s reliability, validity, credibility, dependability, generalisability, transferability, and the participants’ cultural differences (Saunders et al., 2016).

The researcher’s background is related to the primary data collected through the interviewing method since he worked as an accountant in the industry for twelve (12) years while holding a Bachelor’s degree in Economics and a Master of Science in Management and Information Technology. Since 2010, he has simultaneously been the Head of the Business

department at a private college while being responsible for the student service department and personnel. During this period, the researcher trained in accounting, specifically in the IAS/IFRS. He has been trained in the necessary skills to carry out the study, including interviewing, listening, and qualitative research skills. All of the above reflect on the questionnaire as a crucial data collection instrument and describe the unbiased role of the researcher in the data collection procedure.

3.6.4. Study Participants / Sample

The population in a study refers to a specific targeted community or group of people who are involved and participate after the researcher has defined all appropriate sampling units with particular characteristics (Reid, 2014). For the present study, the primary population is CFO managers from publicly-listed companies in the UK that have adopted IAS/IFRS, who also have the adequate professional managerial experience and accounting knowledge. Additionally, the companies they represent must have an R&D department and follow the IAS 38 accounting policy. Also, the researcher employed the purposive sampling method for the participant selection as a non-probability form of sampling on an intentionally chosen sample that expresses their willingness to participate in the present study (Bryman, 2015). The specific sampling method's goal is to strategically create a selective sample relevant to the research questions and provide helpful information to the study (Bryman, 2015).

Following the above, the researcher used the FAME Database, categorised the companies into those with R&D, and gathered all the participants' information. The researcher targeted approximately 247 UK-listed companies based on the database mentioned above and, as a result, a proportionate number of participant CFOs. All companies needed to include an R&D department in their operations, and all the selected disclosed the R&D's existence information. So, the R&D appears as an essential part of their operations while they invested in

it. As a result, the preferred types of these organisations were medical, telecommunication, manufacturer, electronic, and software engineering entities. Since the study focused on investment in R&D, the managers in the head office, specifically the CFOs, were the most appropriate to provide information regarding the company's reactions under IAS/IFRS.

After that, the researcher obtained their communication insights from their company's website, LinkedIn or RocketReach.co and contacted them electronically. Social networking sites like "LinkedIn" and "RocketReach.co" allow users to connect and network (Zide et al., 2014). Their utilisation focuses on sourcing and collecting personal and communication data (Zide et al., 2014). LinkedIn is a business, employment-oriented social networking platform that operates via websites and allows members to personally self-develop and connect with other professionals (Cho and Lam, 2021). RocketReach.co is a data mining web-based software which enables users to locate contact and personal information about company representatives and professionals worldwide (RocketReach, 2022). All contact information collected from the above data mining software, networking platforms, and the company's websites supports the retrieval of accurate communication data for all participants.

All the participants had the choice to be interviewed or to refuse. The researcher sent the participants five (5) invitation emails with an "*Interview Cover Letter*" (Appendix 6). In the emails, the participants received all the relevant insights through the "*Interview's Information Participant Sheet*" (Appendix 8) and the "*Interview Consent Form*" (Appendix 7). All the documents mentioned above were developed in English to ensure proper responses from the participants. Everyone received the first invitation through email on the 1st of November, 2021. As the initial number of participants was low, the researcher sent another reminder to those who had not participated after thirty (30) days on the 1st of December, 2021. In addition, the researcher continued with three (3) more invitations to increase the number of participants. Thus, the third invitation was sent on the 5th of January, 2022, the fourth on the 1st of February,

2022, and the fifth on the 7th of March, 2022. The interview data collection process ran until the 31st of March, 2022.

Throughout the data collection period, the researcher used the above-mentioned email invitations to ask the recipients to voluntarily participate in the research by arranging a specific online semi-structured personal in-depth interview, asking them to return the signed “*Interview Consent Form*” (Appendix 7) by the time of the interview. The interviewer conducted all one-on-one interviews through telecommunication platforms like “Zoom” and “Google Meet”. From November 2021 until the end of March 2022, ten (10) CFOs fully participated. All the participants sent back the signed consent form before the scheduled interview. Since the study was granted the University of Sheffield Management School’s ethical approval, the researcher followed all appropriate processes and used all the relevant approved documents.

3.6.5. Data Collection Process

For the semi-structured interview study, the researcher designed the interview guide and questions (Appendix 9), namely the instruments to pursue the study, in the English language to ensure proper responses from the participants. All the participants had the choice to participate in the study or refuse. The interviewees could also withdraw from the interview process at any time without giving any reason. Finally, the researcher interviewed ten (10) participants individually while sitting alone in a private, quiet room and using the interview guide with the semi-structured questions. All interviews were carried out through the Internet only. Simultaneously, the researcher video recorded seven (7) interviews using the “Zoom” and “Google Meet” telecommunication platforms’ conference recording services. Recording of the interviews was only executed with the participant’s informed consent after signing and also verbally accepting the consent form at the beginning of the interview.

On the other hand, the other three (3) CFOs agreed to participate and refused, either written or verbally, to be recorded during the interview. Therefore, it was crucial that the researcher kept written notes to capture any research thoughts and issues during and after each interview (Bryman, 2015). After each interview, the researcher transcribed all discussions and responses in English by himself. On average, the total length of the whole interview process was approximately forty-five (45) minutes.

3.6.6. Semi-structured Interview Guide.

3.6.6.1. Introduction and Introductory Questions

Before beginning the interview process, the researcher developed a semi-structured interview guide (Bryman and Bell, 2015). To develop the interview guide, considerations were taken from the literature to create a combined sense of comfort and acceptable questions for the interviewees (Bryman and Bell, 2015). The whole questionnaire appears as a logical conversation, following a standard order, eliciting relevant information, well-thought-out responses and engaging more with the questionnaire. (Dillman et al., 2014). All the questions were set on a step-by-step structured list of issues to address or “guiding” questions to be asked, which were then supplemented by follow-up or probing questions (Bryman, 2015). In the introductory part of the interview, the researcher aimed to get the participants’ attention, comforted them during the entire interview process, and convinced them to continue until the end (Dillman et al., 2014). The discussion began with some general introductory questions, like the nature of the participant’s company. Firstly, identifying the company is essential for the management team while influencing the business performance (Mia and Clarke, 1999). The manager identifies all the organisation’s characteristics and, as a result, can effectively face competition and improve both the units and business performance (Mia and Clarke, 1999). So, the interview’s first question, “How would you describe your company in a few sentences as a

manager?”, focuses on investigating the participant’s knowledge regarding the particular company.

Furthermore, all the social characteristics of an accountant contribute to how the company adopts and implements accounting policies. Ghio and Verona (2018) recognise the importance of the practitioner’s role and professional history in how the company’s accounting is harmonised with the IAS/IFRS, such as implementing the accounting policies in the company’s operational functions. The above social characteristics coexist with the entity’s political direction while implementing an accounting policy, like IAS/IFRS, and influence the adoption of new accounting rules (Ghio and Verona, 2018). The study’s second question, “Could you describe your role and history in your company in a few sentences?”, tries to identify the participant’s level of importance in the organisation and recognise any social characteristics that may influence that role inside the organisation.

Additionally, strategic information management occurs when all responsible parts utilise the information to benefit the organisation and positively influence the entity’s actual activities. All accounting implementations and policy adoptions impact the company’s philosophy and performance in the long term (Mia and Clarke, 1999). Each organisation uses specific decision processes to adopt policies, like accounting policies, based on its framework and business model, philosophy, and accounting knowledge (Jaworski and Young, 1992). Accounting knowledge primarily generates symmetrical information diffusion to all interested parties (Jaworski and Young, 1992). Moreover, it reduces the lack of financial information and the misrepresentation of reality in the organisation’s financial statements (Jaworski and Young, 1992). The researcher examines the influence of the participant’s comprehensive accounting knowledge, particularly the IAS/IFRS, on the entity’s decisions by asking, “How does your knowledge of the accounting field, especially on IAS/IFRS, influence the company’s decisions?”

3.6.6.2. Economic Consequences Influence on Management's Decisions in Investing in R&D

Following the questionnaire's course, the next part refers to the study's research question. It investigates the influence of the anticipated economic consequences stemming from the IAS 38 on management's decisions regarding investments in R&D. In practice, an organisation's management tries to make the most rational decisions to favour the entity and secure the long-term efficiency of its decisions (Goll and Rasheed, 2005), likely the investments. The management of an organisation identifies that the management's plans or intentions may affect the disclosure of the income statement, which impacts performance (Yong et al., 2016). The management intends to respect and follow existing IAS/IFRS rules while disclosing and reporting all transactions, and adopting an accounting policy (Leisenring et al., 2012). Yong et al. (2016) argue that adopting an accounting policy must follow the law's guidance precisely and limit any misinterpretations by the management. In this study, the researcher investigates an organisation's decision-making process while deciding about accounting policies through the question, "How do you make decisions about accounting policies? (please describe the procedure)".

Moreover, an organisation's strategy regarding financial statement elements entails analytical feedback for its efficient implementation. Mia and Clarke (1999) argue that management chooses to continuously track financial statements as a solution to face competition effectively. Also, reliable monitoring of financial information positively impacts more uncomplicated operational activities and improves the company's performance (Mia and Clarke, 1999). Thus, the next question, "Do you believe that management's continuous monitoring of financial statements provides enough information about the company's performance that may require immediate management's attention? (Please describe any situation relating to R&D investment)", examines the influence and the importance of financial

information in the organisation's decisions while the operations are in progress. Simultaneously, the management monitors them to avoid any complicated results.

In the next part of the guide, the researcher focused on the influence of economic consequences on managerial decision-making behaviour. In reality, various determinants, such as the organisation's financial performance, affect all types of investment, ensuring an entity's long-term survivability. Zeff (1978) claims that the accounting reports provide insights that impact management decisions. All management decisions, especially about investments, constitute multidimensional and complex processes which rely on financial information and pursue the company's long-term survivability (Beattie et al., 2006). The researcher considers it very important to understand how CFOs identify and recognise the impact of an organisation's financial performance on the decision-making behaviour regarding investment in R&D. Thus, the question, "In general, how may the company's performance impact a decision in R&D investment based on the financial statements? (please describe an example)", helps to investigate the above and focus mainly on investment in R&D.

Further on, the management focuses on following different strategies to help an organisation in the long term; apparently, some are questionable and affect the stakeholders directly and/or indirectly. Fischer and Rosenzweig (1995) discuss how important it is for accounting practitioners' ethical sensitivity to adopt an earnings management strategy as a solution to manipulate earnings and meet targets. The management chooses to take economic actions within accounting choices to manage earnings and follow a strategy to voluntarily disclose and inform all interested parties when the stakeholders have the appropriate knowledge (Graham et al., 2005). In practice, the management team usually decides to follow and adopt questionable methods or activities to manage short-term earnings based on the company's performance (Bruns and Merchant, 1990). Eventually, the management generates a generally high tolerance for operational manipulations in the short term to temporarily affect the results

(Bruns and Merchant, 1990). So, the researcher uses the following question, “How possible is it for a company to do some operating manipulations when deciding upon investment in R&D? (please describe any situation based on your professional experience and knowledge)”, to investigate the presence of real earnings management strategy which affects the investment in R&D and influences the disclosure on the financial statements.

Management’s ethical considerations contrast with the organisational values that rule an entity and provide guiding principles. In practice, corporate values drive and form various management decisions (Schmidt and Posner, 1983). All workplace behaviours are directly affected and influenced by the organisation’s values, resulting in alterations in productivity and performance (Dobni et al., 2000). A value system dominates and leads all the organisation’s members and control mechanisms (Dobni et al., 2000). Thus, the question, “What are the most important values you follow in your company to disclose R&D reporting based on the IAS 38 accounting policy? (please clarify your choice)”, indicates to the researcher the management’s commitment to follow specific policies generated from ethical decisions.

3.6.6.3. Management’s Evaluation of IAS 38 and Recommendations for the Accounting Standard

In the final part of the interview guide, the researcher engages in the theme that each accounting standard service explicitly needs to recognise, present, and disclose the company’s transactions and financial information. Through this part, it is tried to extract insights about how the accounting standard grants management the option to manipulate the actual financial disclosure. Financial reporting regulators, accounting standard-setters, and accounting researchers individually lack the appropriate empirical knowledge to evaluate an accounting standard’s efficiency (Madsen, 2013). A practical approach is to rely on a panel or a team of experts to assess a most insightful evaluation of an accounting standard based on their

professional knowledge and expertise (Madsen, 2013). Management is more likely to behave opportunistically in an environment with inefficient and negatively evaluated accounting standards, resulting in weak stakeholder protection (Hung, 2001). Therefore, the researcher intends to investigate how the practitioners identify the utility of the IAS 38 as an established accounting standard through the following question: “How do you evaluate the IAS 38 – investment in R&D as an accounting policy for your company, based on your professional experience? (please analyse your aspect about its functionality)”.

Finally, each accounting standard is open to either large- or small-scale changes, which will assist the organisation in reflecting and adapting reality to the disclosure of the financial information. Graham et al. (2005) argue that companies are open to voluntarily disclosing financial information to ensure investors’ clarity, understanding, and stability. Voluntary disclosure is subject to the organisation’s managerial discretion, while mandated disclosure regulation would limit management’s discretion to selectively disclose financial information (Cheng and Courtenay, 2006). The company’s voluntary selective disclosure benefits from shaping stakeholders’ perceptions and influencing improved terms of exchange between all interested parties (Graham et al., 2005). Thus, the researcher investigates how motivated the practitioners appear regarding mandatory financial disclosure and how they appreciate any changes in IAS 38 that force them to communicate more information about investment in R&D through the question: “How motivated is it for a company to communicate more financial information than those based on the IAS 38 for an R&D investment? (please justify your answer)”. The researcher acknowledges all the above and develops a questionnaire guide that tries to elicit any actual attitudes, thoughts, and behaviours from the practitioners relating to IAS 38 and the organisation’s investment in R&D.

3.6.7. Procedures Followed

Given the explorative nature of the present study, the researcher's objective is to investigate, through a semi-structured questionnaire, how the anticipated economic consequences influence the decision-making behaviour of management while investing in R&D under the IAS 38. All the questionnaire questions are derived from the literature's most relevant studies and provide the researcher with knowledge for new explanations (Bloomfield et al., 2016). The extended use of the questionnaire through interviews sheds additional light on and, simultaneously, leads to a more in-depth investigation of the results, while this supplemental information provides valuable contextualisation (Graham et al., 2005). Thus, before engaging with the participants, the researcher began a preliminary phase to check the questions and receive open commentaries (Ghio and Verona, 2018). In the qualitative study, the researcher reviewed the questionnaire with three (3) people with different backgrounds, ages, and genders but with comprehensive knowledge of the accounting discipline, particularly the IAS/IFRS. All suggestions and comments were adopted, and the questionnaire was refined in the final version.

Before beginning the interview process, the researcher also applied for and received ethical approval from the University of Sheffield Management School's ethical committee regarding the interview study. Firstly, the researcher emailed individuals and invited them to participate in the study, sending them the participation sheet. After that, the researcher collaborated with the first batch of participants who accepted the invitation by sending the consent form and scheduling a specific meeting. All interviews were carried out through telecommunication platforms, and the researcher took the participant's consent form before the interview. As part of the interview introduction, the interviewer confirmed that the participant was in a separate room, felt comfortable and consented to the whole interview being recorded. The researcher did not proceed with the interview process without confirming the participant's

written and verbal consent. Each of the interviews took place in a single one-on-one interview session.

At the end of each interview, the researcher transcribed each analytically and used all the notes captured during the interview process for his own review. The video-recorded interviews were listened to individually, and simultaneously, the researcher transcribed them word-by-word on Microsoft Word documents. On the other hand, the unrecorded interviews could not be transcribed verbatim; thus, the researcher began the transcription process immediately after the end of the interview to avoid forgetting vital information. After that, each transcribed document included all the interviewees' sentiments and reactions added to the interview content and presented anything upon reflection. Following the endorsement of the recorded sentiments, the researcher made some edits as necessary to the transcribed document and included any additional reflective thoughts following the interview process. At that point, the participants were no longer involved in the writing or editing of the actual analysis and results. They had no access to any other interview. It was also not appropriate for insight to be provided into how individuals collectively may have similar or different perspectives.

Finally, the researcher consistently recorded memos in written form throughout the interview study. Keeping records of an interview study in collaboration with constant comparative analysis minimises bias and results in objectivity throughout a study (Stake, 2010). The written memos served as a tool to organise the researcher's thoughts while impacting the study's concerns, emerging codes, categories, topics, and reflective theories. All of the above led to the researcher's data analysis strategy on the qualitative method and helped with the investigation of the study's research question.

3.7. Data Analysis Strategy

3.7.1. Introduction

The data collection activities culminated in the completion of a formal retrievable database containing the results from two different research methods. Simultaneously, the researcher engaged with a quantitative approach, namely the survey, and qualitative data analysis, namely the interview. All the approaches focused on investigating and examining the research question in-depth. Since the data were collected at the same period, the researcher tried individually to proceed with the data analysis for each method. Afterwards, the researcher employed triangulation of results to address the research questions.

In the following subsection, the researcher discusses the quantitative data analysis approach, focusing on transforming raw inconclusive data into meaningful information (Bryman and Burgess, 1994). All the collected data are discussed analytically and result in the final model, following specific steps in the quantitative data analysis strategy. To conclude with the data analysis strategy, the researcher continues and covers the qualitative part and presents the in-depth reasoning and quality of the data (Bryman and Bell, 2015). The following qualitative analysis shows the beliefs, attitudes, values, and motivations regarding the management's behaviour. The qualitative analysis aims to increase the overall understanding of a researched subject matter and focuses on gaining as much data as possible to investigate a theme (Stoian et al., 2018).

3.7.2. Quantitative Data Analysis Strategy

Firstly, regarding the quantitative method, for four months, beginning the 1st of November 2021 until the 31st of March 2022, the researcher collected 165 positively answered consent forms, so 165 completed surveys (81 with the “*positive*” and 84 with the “*negative*” performance scenario). All questionnaires were subsequently entered manually into the IBM

SPSS 26 statistical software suite exclusively by the researcher to gather advanced statistical data analysis, data management, multivariate analysis, and open-source extensibility for sophisticated statistical analysis to researchers (Diamantopoulos and Schlegelmilch, 2000). The researcher found it easy to use such statistical analysis software, relying on support from the University via training on the software and the IBM SPSS organisation through exclusive webinars and forums, and under the guidance of experienced academics.

The researcher began with the data preparation to avoid complexities and misunderstandings. The process continued with the data coding to secure the appropriateness of the results, followed by the data controlling to ensure there were no missing or wrong values (Field, 2018). In fact, the above actions reminded the researcher to transform a reversed scale variable into the same flow as the others since it ensured that all participants answered each question honestly (Fink, 2003). At the same time, some other variables were recoded into a different group-variable, like the “age” and “professional experience in months”. Finally, the researcher formed a new variables-constructs scale for each of the measurements, each of which included four (4) items. Eventually, the data were “ready” to be analysed, starting with the descriptive statistics of each variable, like the “Mean”, “Mode”, “Median”, “Range”, “Minimum”, and “Maximum” of the population scores (Diamantopoulos and Schlegelmilch, 2000).

Following the data analysis process, one of the necessary tests for the scale reliability of the survey is Chronbach’s Alpha to measure the internal consistency of the measurements (Diamantopoulos and Schlegelmilch, 2000). In the present research, there are three (3) different measurements; thus, the researcher uses Chronbach’s Alpha for each of the survey’s scale measurements. At the same time, the researcher examines the parametric test assumptions about the population and distributions, namely the linearity, independence with the Durbin-Watson test (Field, 2018), normality under the Central Limit Theorem (Johnson, 2004), and

homogeneity of variance by using Levene's Test (Field, 2018). Based on the above, the researcher uses the independent one-tailed t-test to compare the mean of the two groups (Diamantopoulos and Schlegelmilch, 2000). Subsequently, the researcher tests "Hypothesis 1" between the company's financial performance and the acceptance of the operation's intended manipulation to alter the financial reporting, as presented in subchapter 2.7.1. Furthermore, the researcher measures the correlation of the two variables, namely the dependent and the independent, the company's performance and the acceptance of manipulation, respectively (Field, 2018).

Finally, the quantitative data analysis is concluded with multiple regression analysis to investigate the study's research objectives. In the beginning, the key assumptions of the multiple linear regression analysis are examined through collinearity statistics, the Durbin-Watson test, and the Cook's and Mahalanobis distance (Diamantopoulos and Schlegelmilch, 2000). Subsequently, the analysis begins with the first research objective. The first research objective concentrates on identifying the positive effect of the non-anticipated economic consequences (translatable into financial performance) on management's decision-making behaviour, with regard especially to real earnings management, viz to evaluate the positive linear relationship between the company's non-anticipated performance and the management's manipulation of operational activities (Hypothesis 1). So, the analysis uses the company's performance (independent variable), represented from two different scenarios, with the management's manipulation of operational activities (dependent variable) through the scale measurement of "*acceptance of manipulation*". From the above process, the analysis can provide the primary regression model of the research.

Afterwards, the analysis advances to the multiple regression part, examining research objectives 2 and 3. This is achieved by including a control variable, namely "*Gender*", into the regression model while being influenced by two (2) moderators. In the multiple regression

analysis, the researcher endeavours to statistically analyse the relationship between a single dependent and several independent variables (Diamantopoulos and Schlegelmilch, 2000). The moderators are the “*Importance of Financial Statements*” and the “*R&D’s Financial Disclosure*”, which both are scale measurements and operate as independent variables. This process examines Hypotheses 2 and 3, referring to the two (2) moderators mentioned, respectively. Hence, following a hierarchical multiple regression analysis, it is explained a statistically significant amount of variance in the dependent variable. As a result, the researcher develops and presents the final regression model.

3.7.3. Qualitative Data Analysis Strategy

Proceeding with the data analysis, the researcher presents the qualitative data analysis approach based on the semi-structured interview data collection method. During the five (5) months, from 1st November 2021 until 31st March 2022, ten (10) CFOs fully participated in the interview. As a result, ten (10) positively answered consent forms were collected, plus sixty-seven (67) pages of single-spaced interview transcripts, seven (7) video-recorded electronic files, and twenty (20) pages of organised field notes, which were held during the process by the interviewee. As mentioned, all interviews lasted approximately forty-five (45) minutes and were carried out through “Google Meet” and “Zoom” telecommunication platforms. Seven (7) participants agreed to be fully recorded during the interview, and the rest, three (3), refused written and verbal to be recorded.

At the end of the interview data collection period, the researcher uploaded all the transcribed documents to NVivo 12 data analysis software. While investigating the research objectives, the analyst relied on the specific software to conceive and develop interrelated codes and consider any possible connections between them (Bryman and Bell, 2015). Also, via the NVivo software analysis tool, the researcher managed data and various types of information

while querying, visualising, and reporting from them (Bazeley and Jackson, 2013). To complete the above, the analyst took some training from the University, visited some electronic forums about NVivo, and followed the instructions of experienced academics in the field.

The researcher follows a thematic analysis strategy in the qualitative study to investigate in-depth the research questions. Since the primary focus is thematic coding, the researcher identifies the need to investigate the significant thematising meanings (Holloway and Todres, 2003). The thematic analysis approach concentrates on the categorised coding scheme designed to capture the dominant themes in a text based on the researcher's knowledge (Lewis-Beck et al., 2003). In the beginning, the data analysis relies on an initial familiarisation with the interview transcripts, identifying any connections between the transcripts and the research objectives. Essentially, the researcher reads each individual transcript several times to identify the manager's interpretation (Stoian et al., 2018) of the economic consequences and the influence on management's decision-making behaviour about investment in R&D. Some initial understanding of the interviewees' interpretations was drafted into short summaries, which constituted the first step in disclosing the data following the *a posteriori* coding strategy (Gioia et al., 2013). The process, as mentioned earlier, follows the identification of 1st-order codes generated directly from the participants' knowledge during discussions with them (Corley and Gioia, 2004). All the data management begins and continues with NVivo 12, strategically assisting in shifting between the different transcribed documents and codes.

After that, the researcher continues by merging the results from the 1st-order codes into the 2nd-order codes (Gioia et al., 2013). All the emerging 1st-order codes generated from the empirical dataset and combined with rereading the transcripts provide fewer new concepts corresponding to the theoretical themes (Gioia et al., 2013). Finally, in the third step, after rereading the transcripts, the researcher focuses on understanding how the interviewees organise and dissociate their knowledge and experience (Gioia et al., 2013). As a result, the

researcher follows a thematic analysis strategy that relies on the categorised coding scheme, designed to capture the dominant schemes in a text based on the researcher's knowledge (Lewis-Beck et al., 2003).

The data analysis then continues in an experiential categorisation approach based on the categorised coding themes. The specific approach aims to address or analytically discuss a theme while reflecting all familiar data (Braun and Clarke, 2006). As a result, the researcher initialises the analysis with descriptive statistics by describing features of a data set by generating summaries of data samples (Field, 2018). Furthermore, while quoting the interviewees' statements, the analyst simultaneously discusses and analyses all the engendered themes and results from the transcribed documents.

3.7.4. Generating Codes and Familiarising the Data for the Thematic Analysis

As mentioned above, the researcher begins by familiarising himself with the data and through coding to identify and filter the themes (Terry et al., 2017). Data familiarisation usually begins with the transcriptions (Stoian et al., 2018). Patterned themes are primarily generated from the texts and capture significant and interesting meanings about the data and the research question (Braun and Clarke, 2006). Hence, the thematic analysis strategy relies on a categorised coding framework which is focalised on capturing all dominant text-based themes (Bryman and Bell, 2015). Initially, it is essential to organise the data systematically and meaningfully through coding (Holloway and Todres, 2003). In the first step, the researcher develops the first order, the codes, relying exclusively on the transcribed interviews (Corley and Gioia, 2004). Subsequently, the results from the first-order codes are merged into the second-order theoretical themes based on the empirical dataset and the rereading process of the transcripts (Gioia et al., 2013). Finally, the researcher proceeds with a further merger between various themes and results, in an aggregation more closely related to the research questions (Nag et al., 2007). In

the current qualitative study, the researcher had initial ideas about the primary codes, which connected them with the research objectives. Accordingly, some more codes were generated through the first transcripts, which developed a more robust idea about the finalised codes. In the end, the researcher derived the final number of themes, which helped him achieve the result below (Table 3).

Table 3: Themes and Codes for the Thematic Analysis

1st-Order: Codes	2nd -Order: Themes	3rd-Order: Aggregate
Role <i>Example:</i> “I am the CFO; I have been in charge of financial strategy, IT and HR, [...] but also the strategic direction of the business.” (P1442)	Personal Knowledge	Multiple Factors and Ways Influencing Decision-Making Behaviour Influenced by the Real Earnings Management Strategy
Working Experience <i>Example:</i> “My previous experience influences the decisions, and finally, I guide the company about any legal restrictions and demands.”. (P373)		
Accounting Knowledge as Management’s Decision-Making Factor <i>Example:</i> “Well, I think, fundamentally, that a company is valued based on its financial statements. [...] So, therefore, in combination, my accounting knowledge is used when the company makes decisions.”. (P.389)		
Company’s Description <i>Example:</i> “The company is a B2B technology business [...] So, we serve businesses, and we help them be successful when selling their goods online.” (P316)	Company’s In-depth Knowledge	
R&D Department <i>Example:</i> “I would say our R&D is defined, [...], and it really makes lots of blind bit of difference how we account for it, [...] That is what drives what we do or do not do.” (P861)		
Grant Funding as Management’s Decision-Making Factor <i>Example:</i> “We have focused a lot on grant funding in the early years of the business. [...], And there is a phrase that investors use, which is called grant junkies.” (P1432)	Factors Influencing Decision-Making Behaviour	
Management Decision-Making Behaviour <i>Example:</i> “The CEO is very careful with the company’s performance course, liquidity, and cash flow. [...] In the meetings, you could see that they do not want to take any decision before checking the company’s financial position. So, positively, all of our decisions are influenced from the company’s accounts.” (P1442)		
Financial Statements’ Continuous Monitoring <i>Example:</i> “So, I would say our board are very much aware of our financial position on a continuing basis. [...] I produce management accounts for our board every month.” (P1086)		
Information Asymmetry and Management Decision-Making Behaviour <i>Example:</i> “The IAS 38 does not consider the size of a company and also challenges the ESG. [...] Last month, our CEO was wondering about the changes that we have to do to follow ESG restrictions. [...] The management knows that this is impossible, but everyone needs to present them not as expenses but as investments.” (P373)		
Other Factors as Management’s Decision-Making Factor <i>Example:</i> “Whereas the sort of legislative approval of the product by government bodies, I say that you sell it, or you do not sell it; basically, it is a real gate.” (P861)	Way of Using Real	
Acceptance of Manipulating Financial Statements – RQ2: “How?”		

<p><u>Example:</u> “Postponing an investment is a common choice. [...] you choose to adjust your strategy, your processes, anything to change the whole picture.” (P1133)</p>	<p>Earnings Management Strategy</p>	
<p>Company’s Performance Importance <u>Example:</u> “It is strongly the impact of the performance. I would say our CEO is always looking to invest in our development and R&D teams. [...] Same time, it does look to tightly control the cost in the kind of non-R&D departments.” (P1086)</p>		<p>Use of Real Earnings Management Strategy</p>
<p>Acceptance of Manipulating Financial Statements – RQ1: “If?” <u>Example:</u> “This is a highly judgemental area. You can, [...] Or, on the other hand, is it really possible that this percentage of what another company is spending will qualify as being an asset? So yeah, there are extremes.” (P316)</p>		

4. Presentation of Results

4.1. Introduction

The present chapter discusses the data analysis processes and findings of the research. Two approaches, a survey as quantitative and an interview as qualitative, were chosen to collect the data, investigate and examine the study's research question. As a result, the researcher analysed the data through a quantitative and simultaneously qualitative approach. The data were collected concurrently to complementary examine and address the research questions. The research aims to investigate the influence of the economic consequences on an entity's management's decision-making behaviour while deciding on an investment in R&D under the IAS 38. Furthermore, the researcher tries to clearly identify possible ways for the management to intentionally engage in manipulative behaviours that ensue in affecting the actual result of the financial statements.

The current chapter presents the results generated from the quantitative method, namely the survey, and the study's data presentation continues in the next chapter with the qualitative method's outcomes. All the above were checked and modified to assist in the analysis based on the literature. Launching with the quantitative analysis, the descriptive statistics present the participants' responses using appropriate tables. Afterwards, the quantitative data discussion continues with the parametric test assumptions addressing the independent t-test as the most suitable. As a result, the researcher examines the control variables and follows a hierarchical multivariate analysis to develop the study's models. Concurrently, the qualitative study relies its data analysis on the thematic analysis strategy. In the beginning, the researcher uses descriptive statistics to describe the data. Following that, a thematic framework appears, which results in analysing and discussing all the study's appropriate themes.

4.2. Presentation of Quantitative Method's Results

4.2.1. Introduction

Beginning with the quantitative data analysis, the researcher anticipates transforming raw, inconclusive data into meaningful information through a rational theoretical approach and critical thinking (Bryman and Burgess, 1994). For the quantitative approach, the researcher relies on numbers-based data easily transformed into numbers and investigates formulated hypotheses (Simonton, 2003). The abovementioned could be succeeded through various data analysis software, but the researcher chooses the SPSS 26 software. The ground for the particular choice, namely the IBM SPSS 26 software platform, is the ease-of-use statistical software suite for data management, flexible and scalable for all skill levels of users (IBM SPSS, 2022). Also, the particular software supports advanced statistical analysis of data, machine learning algorithms, multivariate analysis, and open-source extensibility for integrating big data with a complete hypothesis testing approach (Diamantopoulos and Schlegelmilch, 2000).

The researcher analytically discusses the data collected from the quantitative approach through the current subchapter. Thus, the following subchapters analyse the processes followed regarding the survey's results and data. For the analysis, the researcher addresses the descriptive statistics for all variables from the survey. It is discussed Cronbach's alpha-reliability of measurements for all adapted measurement scales in the specific study. Moreover, all parametric test assumptions are analytically reported, which addressed the independent t-test as the most appropriate. Also, the researcher discloses the correlation and "Gender" as a control variable. Finally, the hierarchical multiple regression analysis is analysed and clarified with the finalised model.

4.2.2. Data Preparation

The first step of analysing the survey's data was to enter all data into the SPSS 26 software. Successful data analysis relied on preparing the data properly while avoiding complexities and misunderstandings (Diamantopoulos and Schlegelmilch, 2000). Even though data coding is usually taken for granted, the researcher organised, managed, and retrieved the most meaningful points of the quantitative data. Firstly, the researcher entered the data in a wide format, where "each row represents data from one entity, and each column represents a variable" (Field, 2018, p. 216). Simultaneously, while applying data coding and checking through the "Variable View" tab of the data editor, the data quality, the variable names, labels, and measurement levels were ideally modified (Field, 2018). The researcher utilised short and clear construct names, assigned numbers (codes) to the possible answers, set code missing values (-999), and finally defined the appropriate measurement levels on the variables (Field, 2018).

Since the survey uses two different scenarios, one with negative and another with positive performance, it is assigned "0" for the negative and "1" for the positive scenario (Diamantopoulos and Schlegelmilch, 2000). Also, regarding the "Gender" variable, it is assigned a "0" value for male and "1" for female participants (Diamantopoulos and Schlegelmilch, 2000). Even where the intended focus is on respondents' answers, it is inevitable for the analysis to follow the classification and labelling process on satisfactory coding while securing the appropriateness of the results.

Although all researchers endeavour to collect complete data sets, participants often miss out on questions or even exert their right not to answer any of them. Before engaging with anything else, it is crucial to control for typing errors, missing values, and inconsistent data (Glasow, 2005). The researcher checked for wrong and missing values and inconsequent data. Firstly, no typing errors appeared by exploring and calculating variable value ranges. Secondly,

there were no missing values because of the restrictions used to set the survey on the “Qualtrics Surveys” software. For the participants who did not manage to answer the whole questionnaire, their answers were not recorded from the “Qualtrics Surveys” software. Nevertheless, even one case did not appear after controlling for missing values.

Appropriate and justifiable data analysis depends on the dataset’s reliability and validity while editing, recoding, and forming the variables. Diamantopoulos and Schlegelmilch (2000) argue that transforming a reversed scale variable, changing measurements’ levels and recoding into different variables, and forming new variables-constructs are essential actions for ensuring the analysis's validity from the beginning. In fact, there appeared to be a reversed variable on the survey to ensure that the participants would frankly answer each question and not follow a pattern by choosing the same answer on the questionnaire (Fink, 2003). Indeed, the reversed variable was the “*company’s overall mission*”, in which the statement presented the former financial statements as minor for the firm’s overall mission. The researcher transformed the reversed scale variable into the same flow as the others by recoding into a different variable. Hence, the specific scale variable resulted in presenting the previous years' financial statements to appear as “*not minor for the company’s overall mission*”.

Also, the “*age*” and the “*professional accounting experience*” variables collected data with numerical responses from the participants. The researcher decided to group the answers into specific categories and analysed the data following the specified grouping. Firstly, the “*age (in years)*” variable was recoded into a different variable using six (6) different decade scales based on the responses of the participants. As a result, it appeared the “0: *0-30 Years Old*”, the “1: *31-40 Years Old*”, the “2: *41-50 Years Old*”, the “3: *51-60 Years Old*”, the “4: *61-70 Years Old*”, and the “5: *71-100 Years Old*” scales. Also, the second variable, “*professional accounting experience (in months)*”, was recoded into a six-scale (6) classification using a hundred categorisations. Thus, there appears the “0: *0-100 Months*”, the “1: *101-200 Months*”, the “2:

201-300 Months”, the “3: 301-400 Months”, the “4: 401-500 Months”, and the “5: 501-700 Months” scales.

Finally, the researcher formed new variables-constructs from the information the scaled measured items provided. Specifically, three (3) different complex constructs were used for the specific study, measured with four (4) items each. As a result, the researcher incorporated all the information of these four (4) items into one summated scale variable for further use in the analysis. Each of the three new “variables-constructs” arose by summing the four (4) items’ results and dividing them by the number of the items, namely number four (4). The first construct variable relied on the “*influence the company*”, the “*former financial statements*”, the “*company’s overall mission-reversed*”, and the “*affect company’s future*” variables, which became the “*importance - new construct*” variable. Also, the second construct variable, which included the “*reputation for transparent reporting*”, the “*company’s earning predictability*”, the “*information risk*”, and the “*shareholder’s positive value*”, developed the “*R&D’s disclosure – new construct*” variable. Finally, the third construct variable rested in the “*renovate ahead of schedule*”, the “*delay subcontractor’s invoice*”, the “*pre-pay next year’s expenses*”, and the “*record next year’s supplies*” variables; and, as a result, created the “*practices - new construct*” variable.

4.2.3. Descriptive Statistics of the Quantitative Study

The researcher ran the internet-based survey for four (4) months through the “Qualtrics Surveys” software. Randomly, each participant was allocated to one of the two (2) scenarios. At the end of the period, on the 28th of February, 2022, one hundred sixty-five (165) correspondents fully participated, from which eighty-one (81) people answered the optimistic (positive performance) and eighty-four (84) the pessimistic (negative performance) scenarios (Table 4). The results showed that the average for positive performance is less than for negative

performance, with an average of $\mu=0.49$. Thus, managers find manipulation when performance is negative compared to positive is more acceptable. However, such a case does not mean managers are more likely to undertake an actual manipulation since these are hypothetical cases and the results are almost identical.

Table 4: Quantitative Analysis - Descriptive Statistics

Variable	Choices	Frequency	Percent	Valid %	Cumulative %
Performance Scenario	Negative (-)	84	50.9	50.9	50.9
	Positive (+)	81	49.1	49.1	100.0
	Total	165	100.0	100.0	
Gender	Male	139	84.2	84.2	84.2
	Female	26	15.8	15.8	100
	Total	165	100.0	100.0	
Certified / Chartered Accountant	Yes	138	83.6	83.6	83.6
	No	27	16.4	16.4	100
	Total	165	100.0	100.0	100.0
R&D Division	Yes	60	36.4	36.4	36.4
	No	105	63.6	63.6	100
	Total	165	100.0	100.0	
Age (in Years)	18-40 Years Old	21	12.7	12.7	12.7
	41-50 Years Old	66	40.0	40.0	52.7
	51-60 Years Old	66	40.0	40.0	92.7
	61-70 Years Old	12	7.3	7.3	100.0
	Total	165	100.0	100.0	
Professional Experience in the Accounting Field (in Months)	0-100 Months	2	1.2	1.2	1.2
	101-200 Months	25	15.2	15.2	16.4
	201-300 Months	46	27.9	27.9	44.2
	301-400 Months	61	37.0	37.0	81.2
	401-500 Months	28	17.0	17.0	98.2
	501-700 Months	3	1.8	1.8	100.0
	Total	165	100.0	100.0	
Education	No-Degree	2	1.2	1.2	1.2
	High School	2	1.2	1.2	2.4
	BSc (University / College)	116	70.3	70.3	72.7
	Master's Degree	41	24.8	24.8	97.6
	Doctorate / PhD	4	2.4	2.4	100.0
	Total	165	100	100	

IAS/IFRS Knowledge Level	Low	0.0	0.0	0.0	0.0
	A little	0.0	0.0	0.0	0.0
	Some Kind	1	0.6	0.6	0.6
	Basic	1	0.6	0.6	1.2
	More than the Basic	51	30.9	30.9	32.1
	Almost Expert	89	53.9	53.9	86.1
	High	23	13.9	13.9	100.0
	Total	165	100.0	100.0	

Even though there were four (4) different options regarding “gender”, namely “male”, “female”, “prefer not to say”, and “other (please specify)”, the participants responded to only the “female” and “male” alternatives and avoided to respond with any other option if there was such a case. As a result, twenty-six (26) ($\mu=0.16$) of them declared to be women and one hundred thirty-nine (139) men (Table 4). Hence, the results present a disproportion between the genders, where males are greater in numbers than others.

Furthermore, the participants could declare whether they are certified/chartered accountants or not. On average, they are certified or chartered accountants ($\mu=0.16$), as one hundred and thirty-eight (138) of them affirmed and the rest twenty-seven (27) denied (Table 4). The above is logical since certified or chartered professionals are more likely to be promoted to specific positions as CFOs (Ferris and Sainani, 2021). Especially, listed companies easily entrust knowledgeable and experienced people for the particular job (Ferris and Sainani, 2021).

Also, in the following question regarding whether their company maintains an R&D division, on average, the participants stated negatively ($\mu=0.64$). Hence, one hundred and five (105) responded that their company does not have an R&D division. At the same time, the rest, sixty (60), confirmed the particular question of the existence of an R&D division (Table 4). The result emanates from selected companies and industries officially presented through the FAME database with an R&D department. So, it appears reasonable to receive more answers from CFOs with no R&D department than the opposite when the ones generated from FAME are only included in the interview method.

After grouping the participants' responses regarding their “age” into decade categories, the researcher focused on getting a deeper and more precise understanding of a specific topic (Diamantopoulos and Schlegelmilch, 2000). On average, respondents’ “age” in our sample fell in the range of “41-50 years old” ($\mu=2.42$). Most respondents’ “age” choices fall in the second scale of the variable (Mode(x)=2), while 50% of them were below the “age” of “41–50 years old” (Med(x)=2), and 50% were above that “age” scale. 25% of the respondents were below “50 years old”, almost equal to the 50% and the mean, while 75% were below “60 years old”. Also, the overall dispersion of values in the dataset is between the “18-40 Years Old” (Min(x)=1) and the “61-70 Years Old” (Max(x)=4), with a Range(x)=3 (Table 4). All organisations usually focus on the age of someone when it comes to higher management positions (Ferris and Sainani, 2021). The choice of older, experienced people appears as a policy that makes the entity’s shareholders feel more secure regarding the experts’ administration and managerial suggestions (Ferris and Sainani, 2021).

In addition, the participants’ “age” appears to act parallel with their “*professional experience (in months) in the accounting field*”. Similarly to the “age”, the researcher classified the participants' responses relating to “*professional experience*” into a hundred categories, following a deeper understanding policy (Diamantopoulos and Schlegelmilch, 2000). The participants, on average, had “301-400 months” of professional experience ($\mu=2.59$). Most of their “*professional experience*” lay on the third scale (301-400 Months) of the variable (Mode(x)=3); at the same time, 50% of them worked in the accounting field between “301-400 Months” (Med(x)=3). 25% of the respondents have less than “201-300 Months” of professional accounting experience, while 75% have more than “400 months” of experience. Also, the overall dispersion of values in the dataset is between the “0-100 Months” accounting experience (Min(x)=0) and the “501-700 Months” (Max(x)=5), with a Range(x)=5 (Table 4). In the industry, professionals trust people more easily with much professional experience, especially

in the accounting field, as it is a factor of secureness and eligibility in an organisation's administration (Yong et al., 2016).

Furthermore, concerning the participant's "*education*", on average, respondents in our sample have a bachelor's degree ($\mu=3.24$). Most respondents choose this degree ($\text{Mode}(x)=3$), while 50% of them are below the "*BSc (University/College)*" ($\text{Med}(x)=3$), and 50% are above that. 25% of the participants have at least a bachelor's degree, which is approximately equal to the mean; at the same time, 75% also got a master's degree. The overall dispersion of values in the dataset regarding the participants' education is between the "*No-Degree*" ($\text{Min}(x)=0$) and the "*Doctorate/PhD*" ($\text{Max}(x)=5$), with a $\text{Range}(x)=5$ (Table 4). A notable fact generated from the responses is that a few of them, two (2) people, selected the "*No-Degree*" choice, an option that is not so important to clarify and analyse and does not influence the reliability of the survey, relying on the small number of the answers.

On top of that, following the last two mentioned questions, namely the "*professional experience*" and "*Education*", the "*IAS/IFRS knowledge*" concludes with the level of influence of the CFOs on managerial practices and general administrative activities (Ferris and Sainani, 2021). The participant's knowledge of IAS/IFRS shows their ability to efficiently use the particular accounting standards based on their responsibilities. On average, the participants' "*IAS/IFRS knowledge*" is almost expert ($\mu=5.80$). Most declared they are "*almost expert*" and knowledgeable ($\text{Mode}(x)=6$). Concurrently, 50% believe their knowledge is below the "*almost expert*" level, and the rest above that ($\text{Med}(x)=6$). 25% of the respondents know more than the basics of IAS/IFRS, while 75% declare their knowledge to be "*almost expert*". Also, the overall dispersion of values in the dataset lay between the "some kind" of knowledge on IAS/IFRS ($\text{Min}(x)=3$) and the "high level" of knowledge ($\text{Max}(x)=7$), with a $\text{Range}(x)=4$ (Table 4). Thus, the results determine the importance of the "*IAS/IFRS knowledge*" for the people assigned to the CFO role and how organisations respect their knowledge and expertise.

In the rest of the questionnaire, the researcher uses three (3) measurements with four variables each to measure the related concepts, as analysed in Subchapter 3.5.4. *Firstly*, the dependent variable's measurement, namely the acceptance of manipulation (behaviour), includes four (4) different variables (Table 5). Analytically, the four variables are the “*renovation ahead of schedule*”, “*postponement on recording paid supplies for next fiscal year*”, “*prepayment of next fiscal year's expenses*”, and “*delay to issue R&D subcontractor's invoice for next year*”. The participants answered each question taking into consideration how acceptable the management's behaviour is according to them, relying on a seven-Likert scale, starting from a low “1: *Unacceptable*”, continuing to “4: *Neutral*”, and finishing with a high “7: *Acceptable*” choice.

The first question, “*renovation ahead of schedule*” (Statement 1), describes a situation where a manager engages in earnings management to alter the earnings disclosure in the current year by transferring organisational activities and expenses from future years (Bruns and Merchant, 1990; Fischer and Rosenzweig, 1995). The specific condition tests the manager's ethical acceptability to proceed in this kind of activity (Bruns and Merchant, 1990; Fischer and Rosenzweig, 1995). On average, respondents in our sample believed that this behaviour is “A Little Acceptable” ($\mu=5.45$) on the specific question, namely, to transfer earlier and prepay the following year's scheduled renovation. Most respondents chose the “*A Little Acceptable*” choice (Mode(x)=5), while 50% of them are below the “*Almost Acceptable*” (Med(x)=6), and 50% are above that. 25% of the participants also chose the “*A Little Acceptable*” behaviour, while 75% said that this is an “*Almost Acceptable*” behaviour. The overall dispersion of values in the dataset regarding the behaviour is between the “*Unacceptable*” (Min(x)=1) and the “*Acceptable*” (Max(x)=7), with a Range(x)=6 (Table 5). Following the participants' responses, the majority, namely more than 75%, accept this behaviour and judge that the possibility of

appearing in an organisation is high while influencing a part of the disclosure on the current fiscal year.

Table 5: Acceptance of Manipulation Measurement Scale (4 Statements)

Renovation Ahead of Schedule (Statement 1)				Postponement on Recording Paid Supplies for Next Fiscal Year (Statement 2)			
		Frequency	Per cent			Frequency	Per cent
Valid	Unacceptable	1	0.6	Valid	Unacceptable	6	3.6
	Almost Unacceptable	4	2.4		Almost Unacceptable	8	4.8
	A little Unacceptable	3	1.8		A little Unacceptable	9	5.5
	Neutral	25	15.2		Neutral	32	19.4
	A little Acceptable	48	29.1		A little Acceptable	51	30.9
	Almost Acceptable	47	28.5		Almost Acceptable	50	30.3
	Acceptable	37	22.4		Acceptable	9	5.5
	Total	165	100.0		Total	165	100.0
Prepayment of Next Fiscal Year's Expenses (Statement 3)				Delay to Issue R&D Subcontractor's Invoice for Next Fiscal Year (Statement 4)			
		Frequency	Per cent			Frequency	Per cent
Valid	Unacceptable	3	1.8	Valid	Unacceptable	5	3.0
	Almost Unacceptable	6	3.6		Almost Unacceptable	6	3.6
	A little Unacceptable	3	1.8		A little Unacceptable	10	6.1
	Neutral	31	18.8		Neutral	16	9.7
	A little Acceptable	32	19.4		A little Acceptable	44	26.7
	Almost Acceptable	45	27.3		Almost Acceptable	50	30.3
	Acceptable	45	27.3		Acceptable	34	20.6
	Total	165	100.0		Total	165	100.0

Secondly, the participants had to answer how acceptable the management's behaviour is to postpone recording this year's paid invoice for supplies for the following fiscal year. On the second question of the measurement, "*postponement on recording paid supplies for next fiscal year*" (Statement 2), the researcher describes a situation where a manager engages in earnings management to alter the earnings disclosure in the current year by postponing a current year's invoice to a next fiscal year (Bruns and Merchant, 1990; Fischer and Rosenzweig, 1995). The specific case tests the manager's ethical acceptability to proceed in this kind of activity and

influences the legality of the bookkeeping process (Bruns and Merchant, 1990; Fischer and Rosenzweig, 1995). On average, participants in our sample believed that this kind of behaviour is “*A Little Acceptable*” ($\mu=4.85$). Most respondents chose the “*A Little Acceptable*” choice (Mode(x)=5), while 50% of them were below the “*A Little Acceptable*” option (Med(x)=5), and 50% were above that. 25% of the participants also chose the “*Neutral*” behaviour, while 75% said this is an “*Almost Acceptable*” behaviour. The overall dispersion of values in the dataset regarding this behaviour is between the “*Unacceptable*” (Min(x)=1) and the “*Acceptable*” (Max(x)=7), with a Range(x)=6 (Table 5). Approximately 65% of the responses indicate the level of acceptance of following such actions purposely to promote changes in the actual results while following unethical and illegal processes.

On the third question of the scale measurement, the participants had to answer how acceptable the management’s behaviour is to prepay next year’s expenses earlier this year. Notably, the third question, “*prepayment of next fiscal year’s expenses*” (Statement 3), describes a situation where a manager engages in earnings management to alter the earnings disclosure in the current year by transferring payments from future fiscal years (Bruns and Merchant, 1990; Fischer and Rosenzweig, 1995). The specific condition tests the manager’s ethical acceptability to proceed in this type of activity and influences the actual disclosure in the current year and simultaneously in the future fiscal years (Bruns and Merchant, 1990; Fischer and Rosenzweig, 1995). On average, participants in our sample believed that this kind of behaviour is “*A Little Acceptable*” ($\mu=5.41$). Most respondents chose the “*Almost Acceptable*” choice (Mode(x)=6), while 50% of them were below the “*Almost Acceptable*” option (Med(x)=6), and 50% were above that. 25% of the participants also chose the “*Neutral*” behaviour, while 75% said this is an “*Acceptable*” behaviour. The overall dispersion of values in the dataset regarding this behaviour is between the “*Unacceptable*” (Min(x)=1) and the “*Acceptable*” (Max(x)=7), with a Range(x)=6 (Table 5). After the researcher analysed the

responses, approximately 75% of the participants considered it acceptable to pursue such activities, even though the actual financial image of the company is affected and, as a result, the financial picture of the interested parties about the organisation.

Finally, on the scale measurement's fourth question, the participants had to respond on how acceptable the management's behaviour is while asking an R&D subcontractor to delay issuing an invoice for the next fiscal year. Specifically, the present statement, "*delay to issue R&D subcontractor's invoice for next fiscal year*", describes a case where a manager engages in earnings management to alter the earnings disclosure in the current year (Bruns and Merchant, 1990; Fischer and Rosenzweig, 1995). Such activity relies on intentionally delaying recognising an expense using a personal relationship with a subcontractor's company for the next fiscal year (Bruns and Merchant, 1990; Fischer and Rosenzweig, 1995). The specific condition tests the manager's ethical acceptability to proceed in this kind of activity by exploiting disrespectful means and impacting the actual financial performance (Bruns and Merchant, 1990; Fischer and Rosenzweig, 1995). On average, participants in our sample believed that this kind of behaviour is "*A Little Acceptable*" ($\mu=5.27$). Most respondents chose the "*Almost Acceptable*" choice ($\text{Mode}(x)=6$), while 50% of them were below the "*Almost Acceptable*" option ($\text{Med}(x)=6$), and 50% were above that. 25% of the participants also chose the "*A Little Acceptable*" behaviour. At the same time, 75% said this is an "*Almost Acceptable*" behaviour. The overall dispersion of values in the dataset regarding this behaviour is between the "*Unacceptable*" ($\text{Min}(x)=1$) and the "*Acceptable*" ($\text{Max}(x)=7$), with a $\text{Range}(x)=6$ (Table 5). More than 77% of the participants agree to use a social relationship as leverage to impact the financial outcomes of their company and present an alternate status of the organisation's performance.

The survey's statements about the CFOs' acceptance of adopting questionable and unethical practices present a couple with no legal violations and the rest that breach the

accounting regulation. The above violations correlate to various accounting standards, including the IAS 38. In their answers, the managers' judgement shows that reducing earnings is more acceptable, as the direction of earnings matters while investing in R&D. The essence of an unethical approach adopted by the CFOs demonstrates a practical choice taken to serve opportunistic behaviour and interests. The managers believe that they are obliged to manipulate operational activities through real earnings management strategies. Especially for potentially irregular alternatives, managers identify them as obligations and choose more questionable policies over unethical ones. In the participants' responses, it appears to be a pattern that exacerbates unethical and questionable strategies to manipulate the actual financial disclosure both in the short and long term.

Regarding the second measurement, the independent variable on the importance of financial statements for management, the researcher included four variables to measure the related concept (Subchapter 3.5.4.). Analytically, the four variables are the "*financial statement's disclosure will influence the company for years*", "*financial statements are extremely important*", "*financial statements performance was minor in the overall company's mission*" (reverse variable), and "*financial statement's disclosure was expected to affect the future of the company*" (Table 6). Such scale measurement relies on variables to extract results and insights into the importance of the financial statements for the organisation's management (Noble and Mokwa, 1999). Specifically, all organisation's strategies rely on the data provided to the management team (Noble and Mokwa, 1999), where a part of it is the financial information generated from the financial statement disclosure (Almeida, 2019). The participants answered each statement taking into consideration how important the financial statements' disclosure is for the management, relying on a seven-Likert scale, starting from low "1: *Strongly Disagree*", continuing to "4: *Neutral*", and finishing to high "7: *Strongly Agree*" choice.

On the first question of the specific measurement scale, namely, the “*financial statement’s disclosure will influence the company for years*” (Statement 1), the researcher asks participants about their views regarding the future disclosure of the financial statements and how important it is according to their opinion (Noble and Mokwa, 1999). On average, respondents in our sample stated that they agreed a little with the statement ($\mu=5.36$). Most respondents chose the “*Agree*” choice ($\text{Mode}(x)=6$), while 50% of them were below the “*Agree*” statement ($\text{Med}(x)=6$), and 50% were above that. 25% of the participants also chose the “*A Little Agree*” choice for the statement. At the same time, 75% said they “*Agree*” with it. The overall dispersion of values in the dataset regarding their agreement with the statement of influence of the financial statements for years to come is between the “*Strongly Disagree*” ($\text{Min}(x)=1$) and the “*Strongly Agree*” ($\text{Max}(x)=7$), with a $\text{Range}(x)=6$ (Table 6). Approximately 85% of the participants believe that the financial statements will continue to impact the company independently, so the importance of the financial statements will continue to appear as an essential factor for the entity’s performance.

Table 6: Importance of Financial Statements for Managers Measurement Scale (4 Statements)

Financial Statement’s Disclosure Will Influence the Company for Years <i>(Statement 1)</i>				Financial Statements are Extremely Important <i>(Statement 2)</i>			
		Frequency	Per cent			Frequency	Per cent
Valid	Strongly Disagree	1	0.6	Valid	Strongly Disagree	1	0.6
	Disagree	4	2.4		Disagree	0	0.0
	A little Disagree	6	3.6		A little Disagree	1	0.6
	Neutral	15	9.1		Neutral	4	2.4
	A little Agree	55	33.3		A little Agree	32	19.4
	Agree	66	40.0		Agree	54	32.7
	Strongly Agree	18	11.0		Strongly Agree	73	44.3
	Total	165	100.0		Total	165	100.0
Financial Statements’ Performance was Not Pretty Minor <i>(Statement 3)</i>				Financial Statements’ Disclosure was Expected to Affect the Company <i>(Statement 4)</i>			
		Frequency	Per cent			Frequency	Per cent
Valid	Strongly Disagree	1	0.6	Valid	Strongly Disagree	2	1.2
	Disagree	3	1.8		Disagree	6	3.6
	A little Disagree	1	0.6		A little Disagree	5	3.0
	Neutral	15	9.1		Neutral	20	12.1
	A little Agree	29	17.5		A little Agree	64	38.9
	Agree	58	35.2		Agree	55	33.3
	Strongly Agree	58	35.2		Strongly Agree	13	7.9
	Total	165	100.0		Total	165	100.0

Secondly, the participants had to agree or disagree with the case that the financial statements are extremely important for the company. The researcher clearly states that the financial statements are important for the participants on the specific scale's variable. Such a statement, “*financial statements are extremely important*” (Statement), relies on clearly rendering the interviewee to declare their importance from a personal point of view (Noble and Mokwa, 1999). Also, the participants had to consider the rest of the management team members' perception of the importance of the financial statements' existence and disclosure (Noble and Mokwa, 1999). On average, respondents in our sample declared they “Agree” with the statement ($\mu=6.15$). Most respondents chose the “Strongly Agree” choice ($\text{Mode}(x)=7$), while 50% of them were below the “Agree” statement ($\text{Med}(x)=6$), and 50% were above that. 25% of

the participants also chose the “Agree” choice for the statement. At the same time, 75% said they “Strongly Agree” with it. The overall dispersion of values in the dataset regarding their agreement with the influence of the financial statements for years to come is between the “Strongly Disagree” (Min(x)=1) and the “Strongly Agree” (Max(x)=7), with a Range(x)=6 (Table 6). Following the responses, more than 96% of the participants support the case regarding the high importance of financial statements.

Succeeding on the third question for the specific measurement scale, the participants replied that they agree or disagree that the financial statements’ performance is pretty minor in the firm’s overall mission. Such a statement demarcates and recognises the importance of the financial statements’ performance for the organization through the manager’s view and derogating their usefulness personally (Noble and Mokwa, 1999). The “*financial statements’ performance was minor in the overall company’s mission*” (Statement 3) is a reversed scale question. Thus, the researcher transformed the question and formed a new construct which dealt with the “*financial statements’ performance was not pretty minor in the company’s overall mission*” (Statement 3). On average, respondents in our sample expressed that they “Agree” with the particular statement ($\mu=5.87$). Most respondents chose the “Agree” choice (Mode(x)=6), while 50% of them were below the “Agree” statement (Med(x)=6), and 50% were above that. 25% of the participants also chose the “A Little Agree” choice for the statement, while 75% said they “Strongly Agree”. The overall dispersion of values in the dataset regarding their agreement with the influence of the financial statements for years to come is between the “Strongly Disagree” (Min(x)=1) and the “Strongly Agree” (Max(x)=7), with a Range(x)=6 (Table 6). 88% of the participants stated the high level of financial statements’ importance for the company’s performance and, in combination with the last-mentioned question, admitted that they rely on them for the entity’s administration. The management, until today, depends on

the disclosed numbers provided through the financial statements while trying to decide on important things.

On the fourth and final question of the specific measurement scale, the participants answered how they agreed with the statement that “*financial statements disclosure was expected to affect the company*” (Statement 4). The particular statement presents the manager’s expectation about the financial statements’ influence on the overall company’s performance, which is justified by the CFO’s role and expertise (Almeida, 2019). Such a question investigates the long-term beliefs of the participants regarding the statement mentioned above (Noble and Mokwa, 1999). On average, respondents in our sample expressed that they “*Agree*” somewhat with the statement ($\mu=5.15$). Most respondents chose the “*A Little Agree*” choice ($\text{Mode}(x)=5$), while 50% of them were below the “*A Little Agree*” statement ($\text{Med}(x)=6$), and 50% were above that. 25% of the participants also chose the “*A Little Agree*” choice for the statement. At the same time, 75% said they “*Agree*” with it. The overall dispersion of values in the dataset regarding their agreement with the influence of the financial statements for years to come to the company is between the “*Strongly Disagree*” ($\text{Min}(x)=1$) and the “*Strongly Agree*” ($\text{Max}(x)=7$), with a $\text{Range}(x)=6$ (Table 6). As a result, approximately 80% of the participants expected that the financial data would impact the entity in the long term and, combined with all the above, would continue to be very important for the organisation.

Following the discussion about the second scale measurement, namely the “importance of financial statements”, the statements extract insights into how important they are for the organisation’s management. The more important the financial statements are for the managers, the more significant they reflect on their decision-making behaviour. Managers deem the financial statements very important, so they could choose more questionable or unethical practices, which alter the actual financial disclosure. The CFOs stated that a company’s performance is vital for management, especially the results generated from the financial

statements. Most of them consider the financial statements vital for the entity's decisions and believe diachronically that these operate as an integral part of the management.

For the third and final measurement, the independent variable of the perceived additional reporting on R&D investment for the management, the researcher included four (4) variables to measure the related concept (Table 7). Any disclosure displays reality and reduces riskiness and information asymmetry phenomena in organisations (Dunk, 1993). The management team needs to participate in ways to strengthen and motivate the organisation's financial disclosure, focusing on minimising the formal diffusion of the entity's information (Dunk, 1993). Usually, organisations support a voluntary disclosure of any information to promote identical details based on the management's will (Graham et al., 2005). Analytically, there were the following statements, namely: "*communicating R&D's financial information every six months promotes the company's reputation*", "*detailed R&D's financial disclosure increases the predictability of the company's future prospect*", "*communicating R&D's financial disclosure every six months reduces information risk*", and "*additional voluntary disclosure in R&D expenses provides important information*". The participants replied to each question concerning how they believe that reducing the information asymmetry for R&D disclosure is necessary for the management and company's image, on a seven-Likert scale, starting from low "1: *Strongly Disagree*", continuing to "4: *Neutral*", and finishing to high "7: *Strongly Agree*" choice.

Table 7: Information Asymmetry Measurement Scale (4 Statements)

Communicating R&D’s Financial Information Every Six Months Promotes the Company’s Reputation <i>(Statement 1)</i>				Detailed R&D’s Financial Disclosure Increases the Predictability of Company’s Future Prospect <i>(Statement 2)</i>			
		Frequency	Per cent			Frequency	Per cent
Valid	Strongly Disagree	2	1.2	Valid	Strongly Disagree	2	1.2
	Disagree	3	1.8		Disagree	3	1.8
	A little Disagree	11	6.7		A little Disagree	6	3.6
	Neutral	29	17.6		Neutral	15	9.1
	A little Agree	61	36.9		A little Agree	52	31.5
	Agree	47	28.5		Agree	62	37.6
	Strongly Agree	12	7.3		Strongly Agree	25	15.2
	Total	165	100.0		Total	165	100.0
Communicating R&D’s Financial Disclosure Every Six Months Reduces Information Risk <i>(Statement 3)</i>				Additional Voluntary Disclosure in R&D Expenses Provides Important Information <i>(Statement 4)</i>			
		Frequency	Per cent			Frequency	Per cent
Valid	Strongly Disagree	2	1.2	Valid	Strongly Disagree	1	0.6
	Disagree	3	1.8		Disagree	3	1.8
	A little Disagree	10	6.1		A little Disagree	5	3.0
	Neutral	33	20.0		Neutral	14	8.6
	A little Agree	51	30.9		A little Agree	57	34.5
	Agree	48	29.1		Agree	49	29.7
	Strongly Agree	18	10.9		Strongly Agree	36	21.8
	Total	165	100.0		Total	165	100.0

Beginning with the first question, namely, “communicating *R&D’s financial information every six months promotes the company’s reputation*” (Statement 1), the researcher identifies the usefulness of tactically disclosing financial information, which results in gaining their stakeholders’ trust and enhancing the company’s reputation, even though voluntarily (Dunk, 1993; Graham et al., 2005). On average, respondents in the sample expressed that they “*A little Agree*” with the statement ($\mu=5.02$). Most respondents chose the “*A Little Agree*” option ($Mode(x)=5$), while 50% of them were below the “*A Little Agree*” choice ($Med(x)=5$), and 50% were above that. 25% of the participants also chose the “*Neutral*” answer for the

statement. At the same time, 75% said they “*Agree*” with it. The overall dispersion of values in the dataset regarding their agreement with the “*communicating R&D’s financial information every six months promotes the company’s reputation*” is between the “*Strongly Disagree*” (Min(x)=1) and the “*Strongly Agree*” (Max(x)=7), with a Range(x)=6 (Table 7). More than 70% support the management's perception that tactically communicating financial information strengthens the company’s presence in the market while earning the trust of all interested parties.

On the succeeding measurement’s question, the participants replied on how much they agreed with the statement that “*detailed R&D’s financial disclosure increases predictability of company’s future prospects*” (Statement 2). Any organisation promoting a detailed disclosed financial policy reduces information asymmetry and assists all interested parties in clearly predicting its future (Dunk, 1993). Usually, organisations support a voluntary disclosure policy when all circumstances favour promoting the organisation (Graham et al., 2005). On average, respondents in the sample stated that they “*A little Agree*” with the statement ($\mu=5.41$). Most respondents chose the “*Agree*” choice (Mode(x)=6), while 50% of them are below the “*Agree*” statement (Med(x)=6), and 50% are above that. 25% of the participants also chose the “*A Little Agree*” choice for the statement. Simultaneously, 75% said they “*Agree*” with it. The overall dispersion of values in the dataset regarding their agreement with the detailed financial disclosure on all R&D projects promotes the company’s reputation is between the “*Strongly Disagree*” (Min(x)=1) and the “*Strongly Agree*” (Max(x)=7), with a Range(x)=6 (Table 7). In fact, 84 % support a more detailed financial disclosure policy to present the management’s successful decisions and stories in real time while influencing the interested parties for the company’s prospects and future projects.

For the third question of the measurement scale, the participants responded on how much they agreed with the statement that “*communicating R&D’s financial information every*

six months reduces information risk” (Statement 3) for the stakeholders. Significantly, the researcher identifies a need for the stakeholders to perceive analytical information regarding R&D’s investment, which would minimise any riskiness about the actual image of an organisation (Dunk, 1993; Graham et al., 2005). On average, respondents in the sample declared they ”*A little Agree*” with the statement ($\mu=5.08$). Most respondents chose the “*A Little Agree*” option (Mode(x)=6), while 50% of them were below the “*A Little Agree*” statement (Med(x)=5), and 50% were above that. 25% of the participants chose the “*Neutral*” option for the statement. At the same time, 75% said they “*Agree*” with it. The overall dispersion of values in the dataset regarding their agreement with “*the communication of R&D’s financial information every six months reduces information risk for the investors*” is between the “*Strongly Disagree*” (Min(x)=1) and the “*Strongly Agree*” (Max(x)=7), with a Range(x)=6 (Table 7). Approximately 70% declare the need to force management to disclose more financial information and analytically present data that identify the management’s strategies without following a notably voluntary disclosure of any information.

On the fourth and final question on the specific measurement, the participants responded how much they agreed or disagreed with the statement that “*additional voluntary disclosure in R&D expenses provide important information*” (Statement 4) to all stakeholders. Following the above statements, the researcher utilises the fact of promoting any additional information about R&D Expenses to present the financial status of the R&D projects voluntarily and also advances a specifically intended position regarding the management’s investment choices (Dunk, 1993; Graham et al., 2005). Any additional disclosure minimises information asymmetry and reveals data essential for all stakeholders (Dunk, 1993). On average, respondents in the sample said they ”*Agree*” with the statement ($\mu=5.51$). Most respondents chose the “*A Little Agree*” choice (Mode(x)=5), while 50% of them were below the “*Agree*” statement (Med(x)=6), and 50% were above that. 25% of the participants also chose the “*A Little Agree*” answer for the statement.

Simultaneously, 75% declared that they “*Agree*” with it. The overall dispersion of values in the dataset regarding their agreement with the influence of the financial statements for years to come is between the “*Strongly Disagree*” (Min(x)=1) and the “*Strongly Agree*” (Max(x)=7), with a Range(x)=6 (Table 7). As a matter of fact, 84% of the respondents support voluntarily disclosing more information about R&D expenses since the feeling of proving the efficiency of their investment choices seems identical while supporting the chosen strategies.

Regarding the final scale measurement, the perceived additional reporting on R&D investment for the management, any disclosure displays reality while reducing information asymmetry phenomena in organisations. The CFOs believe that knowledge dissemination is valuable for the long-term survivability of an organisation. Their answers encouraged that reduced information asymmetry with the stakeholders can be achieved through specific policies and strategies, even more so when the provided information is timely and prompt. However, the managers hesitate with the compulsory aspect of the additional and prompt disclosure. In the first three mentioned statements, the answers show such hesitation regarding the managers’ obligation to disclose more regularly and become more descriptive about the progress of the R&D investments. On the other hand, the responses to the last statement show their preference to voluntarily disclose any additional information whenever the managers choose to do so.

4.2.4. Cronbach’s Alpha – Reliability of Measurements

The survey consisted of three measurements, which collaborated to investigate the survey’s research questions and test its hypotheses. The researcher used Bruns and Merchant’s (1990) scale to measure ethical acceptance of managerial activities engaging in earnings management. The scale consisted of four (4) items in the subscale, and the value of Cronbach’s alpha reliability coefficient was ($\alpha=0.753$) (Table 8). The result indicated a reliable subscale measurement of the management’s ethical acceptance. Furthermore, the study measured the

importance of the financial statements for the management. For the survey, it was used the Noble and Mokwa (1999) scale to approach and test the hypothesis, which consisted of four (4) items with Cronbach's alpha ($\alpha=0.779$) (Table 8). As a result, the importance of financial statements for the management was found to be a reliable scale. Finally, the researcher chose Dunk's (1993) subscale, shaped by Graham et al.'s (2005) questionnaire, to measure additional reporting on R&D investment. The subscale consisted of four (4) items, and the value of Cronbach's alpha was ($\alpha=0.843$) (Table 8). This result indicated a very reliable subscale to measure how managers perceive the disclosure of R&D investments, focusing on reducing information asymmetry through reporting more data frequently. To summarise, the chosen measurement scales range above 0.75, providing the study with fairly high and reliable rankings to investigate the hypotheses via the survey.

Table 8: Reliability of Survey's Measurement Scales

Acceptance of Manipulation		Importance of Financial Statements for Manager		Additional Reporting – Information Asymmetry	
Items	4	Items	4	Items	4
Chronbach's α	0.753	Chronbach's α	0.779	Chronbach's α	0.843

4.2.5. Parametric Test Assumptions

All analytical methods' accuracy depends on the assumptions about the population parameters and distributions (Diamantopoulos and Schlegelmilch, 2000). The linearity, independence, normality, and homogeneity of variance are the appropriate assumptions that ensure the statistical requirements for the chosen parametric test (Diamantopoulos and Schlegelmilch, 2000). In the present research, all observations are independent, seeing that the Durbin-Watson test gives "1.826". The result shows that one person's behaviour does not influence another person's behaviour. In addition, Levene's Test examined the homogeneity of variance, and the result was shown (Sig.=0.349>0.05). Thus, the variances are equal, and there

is a homogeneity of variance between the two (2) groups. The populations are identical, and both groups spread their scores similarly.

Moreover, the relationships among variables are linear since all variables' relations follow a straight line graphically. The scatterplots of the relationships show graphically that the points of one variable against another fall in a straight line. Also, since the estimates in a population and the residuals/errors need to be normally distributed to get the optimal estimates, the normality assumption is important. Based on the Central Limit Theorem, any sample with an $N > 50$ assumes that the estimate's sampling distribution tends to be normal (Johnson, 2004). For the present research, normality can be considered since the $N = 165$ is greater than the limit from the Central Limit Theorem. Based on the above, all assumptions are confirmed regarding the population parameters and the distributions from which data are drawn. As a result, the researcher followed a parametric test to ensure that the applied analytical method delivered accurate results. Specifically, the study's data analysis strategy used the independent t-test to test the hypothesis based on the data from two (2) groups and the interval/ratio nature of the dependent variable. Diamantopoulos and Schlegelmilch (2000) advise that the combination of parametric tests on two (2) groups with the interval/ratio-dependent variable falls on an independent one-tailed statistical t-test to investigate the hypothesis.

4.2.6. Independent One-tailed t-test and Simple Linear Regression

The researcher used the independent t-test to determine the statistical significance difference between the means in two unrelated and different groups (Fields, 2018). Firstly, the statistical test compared the statistical evidence on the associated population means between the two groups. Subsequently, the researcher tested the first hypothesis, “*A company's non-anticipated financial performance positively impacts the management to manipulate the operational activities regarding R&D Investment (IAS38) to alter financial reporting*”. The

researcher investigated the impact of the company’s non-anticipated financial performance on management’s acceptance to intentionally manipulate operational activities, which would alter financial reporting. The results showed that in 165 observations (N), an independent one-tailed t-test with an ($\alpha=0.05$), the p-value=0.007 (one-tailed) <0.05 and 163 degrees of freedom, with the performance (scenario) operated as a dummy variable (negative performance=0, and positive performance=1). As a result, the researcher accepts the above hypothesis 1 while rejecting the null hypothesis. Also, the participants’ opinions were better than neutral in both groups, with a mean (positive performance)=5.44 and a mean (negative performance)=5.04 (Table 9). The standard deviations of the sampling distribution of means are close to “1” in all groups.

Hence, a company’s non-anticipated financial performance positively impacts management to intentionally accept and manipulate operational activities focused on altering financial reporting. Since the survey’s scenarios were hypothetical, it cannot be interpreted that managers are more likely to actually undertake manipulation. Also, the finding that the mean (positive performance) is higher than the mean (negative performance) suggests that the managers find it more acceptable to manipulate the operational activities when the performance is positive compared to when it is negative (Table 9).

Table 9: Company’s Performance with Management’s Acceptance of Manipulation (Hypothesis 1)

	Scenario	N	Mean	Std. Deviation	Std. Error Mean
Performance – Acceptance of Manipulation	Negative Performance (-)	84	5.04	1.076	.117
	Positive Performance (+)	81	5.44	1.002	.111

The results show a positive relationship between the dependent and independent variables. So, the extracted primary model relies on the coefficient’s results in Table 10 below.

Table 10: Primary Model’s Coefficient

Model		Unstandardised Coefficients		Standardised Coefficients Beta	t	Sig.	Collinearity Statistics	
		B	Std. Error				Tolerance	VIF
1	(Constant)	5.039	.113		44.399	.000		
	Company’s Performance	.403	.162	-.191	-2.486	.007	1.000	1.000

a. Dependent Variable: Acceptance of Manipulation

As a result, the primary linear regression model is represented analytically by the equation below, also relying on Table 11:

$$y = 5.039 + 0.403 * X_{11}$$

Table 11: Primary Model’s Variables Analysis Symbols

y:	Acceptance of Manipulation (Dependent Variable)
X ₁₁ :	Company’s Performance (Independent Variable)

In the above equation, the intercept “5.039” represents the estimated value of “*Acceptance of Manipulation*” (Dependent Variable) when “*Company’s Performance*” (Independent Variable) is equal to Zero (0). Also, the “0.403” acts as the slope of the regression line, indicating that for a one-unit increase in “*Company’s Performance*”, the “*Acceptance of Manipulation*” is expected to increase by “0.403”, on average. Hypothetically, such a positive relationship between the company’s non-anticipated financial performance and management’s intention to manipulate shows the managers' tendency to alter the financial disclosure opportunistically and present a manipulative result.

4.2.7. Correlation and “Gender” as a Control Variable

One of the primary targets of the study is to investigate the linear relationship between the two variables through correlation (Diamantopoulos and Schlegelmilch, 2000). Afterwards, it is examined the response of the linear relationship under a control variable and how it is influenced (Diamantopoulos and Schlegelmilch, 2000). In the current research, the company’s

performance relates to the management’s acceptance of manipulating operational activities, namely managerial decisions, intentionally through real earnings management strategies. The researcher measured and examined these two variables' correlations and found a positive connection with 0.191, while N=165, p-value=0.007 (one-tailed), and $\alpha=0.05$ (Table 12).

Table 12: Correlation Between the Company’s Performance and Acceptance of Manipulation

		Company’s Performance	Acceptance of Manipulation
Company’s Performance	Pearson Correlation	1.000	.191*
	Sig. (1-tailed)		.007
	N	165	165
Acceptance of Manipulation	Pearson Correlation	.191*	1
	Sig. (1-tailed)	.007	
	N	165	165

*. Correlation is significant at the 0.05 level (1-tailed).

Furthermore, the researcher measured the strength and direction of a linear relationship between two variables by controlling for the effect of other control variables (Field, 2018). Following the analysis in subchapter 3.5.4., “*Gender*” is examined as the control variable to influence the linear relationship between the company’s performance and the management’s acceptance of manipulation. In organisational research, “*gender*” promotes an interesting factor in impacting behaviours and attitudes (Bernerth and Aguinis, 2016). Actually, in the last couple of years, the official advance of more choices on gender categorisation signals the opportunity that “*gender*” behaviourally might affect relationships (Bernerth and Aguinis, 2016).

The results present a small positive impact of the “*Gender*” variable. At the same time, it reduces the p-value to 0.006 (one-tailed) and increases the result of the positive relationship to 0.195, with N=165, $\alpha=0.05$ and df=162. Hence, the results show a slight increase in the correlation results and a small drop-off in the p-value (Table 13). The “*Gender*” control variable positively influences the linear relationship with a small significant effect, which the researcher adds to the multiple regression analysis.

Table 13: Primary Model’s Coefficient Influenced by the Gender Control Variable

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error				Beta	Tolerance
1	(Constant)	5.039	.113		44.399	.000		
	Company’s Performance	.403	.162	.191	2.486	.007	1.000	1.000
2	(Constant)	5.007	.120		41.593	.000		
	Company’s Performance	.410	.162	.195	2.525	.013	.997	1.003
	Gender	.175	.223	.060	.784	.437	.997	1.003

a. Dependent Variable: Acceptance of Manipulation

As a result, the primary model influenced by the “Gender” control variable is presented below,

with the help of Table 14:

$$y = 5.007 + 0.410 * X_{11} + 0.175 * X_{21}$$

Table 14: Primary Model’s Variables under the Effect of Control Variable - Analysis Symbols

y:	Acceptance of Manipulation (Dependent Variable)
X ₁₁ :	Company’s Performance (Independent Variable)
X ₂₁ :	Gender (Control Variable)

In the above equation, the intercept “5.007” represents the estimated value of “Acceptance of Manipulation” (Dependent Variable) when “Company’s Performance” (Independent Variable) is equal to Zero (0). When using the “Gender” control variable, as “Gender” increases, “Acceptance of Manipulation” increases when “Company’s Performance” is held constant. Also, the “0.175” acts as the slope of the regression line, indicating that for a one-unit increase in “Gender”, the “Acceptance of Manipulation” is expected to increase by “0.175” when the “Company’s Performance” is held constant, on average. Hypothetically, such a positive relationship between the company’s non-anticipated financial performance and management’s intention to manipulate shows the managers' tendency to alter the financial disclosure opportunistically and present a manipulative result while influenced positively by the manager's gender.

4.2.8. Multiple Regression Analysis

The researcher assessed the strength and importance of the linear relationship between the “*Company’s Performance*” (independent variable) and the management’s “*Acceptance of Manipulation*” (dependent variable). Moreover, “*Importance of Financial Statements*” and “*R&D’s Financial Disclosure*” are used as moderators of this relationship. Following the specific approach, the researcher analyses a linear relationship between a single dependent and several independent variables (Fields, 2018). In the present study, the researcher chose these two (2) different moderators to investigate their potential conditioning impact on the linear relationship. Also, the researcher used “*Gender*” as a control variable.

In the beginning, examining the key assumptions of the multiple linear regression analysis were assessed. Firstly, the dependent variable is continuous, and the predictors and the control variable are either continuous or dichotomous. (Table 15).

Table 15: Variance and Standard Deviation – Multiple Regression Analysis

		Company’s Performance	Acceptance of Intended Manipulation	Gender	Importance of Financial Statements	R&D’s Financial Disclosure
N	Valid	165	165	165	165	165
	Missing	0	0	0	0	0
Std. Deviation		.501	1.056	.365	.859	.985
Variance		.251	1.116	.134	.738	.971

Also, the examination shows no multicollinearity since the predictors are not highly correlated. The collinearity statistics show the Tolerance>0.20 and the VIF<1.51. Furthermore, the errors are independent and uncorrelated, seeing that the Durbin-Watson=1.327; principally, the value should be between 1 and 3. Over and above, the data points are evenly dispersed throughout the plot without following any pattern (Figure 7). Thus, the data show homoscedasticity in the variance of the errors. Also, the errors are normally distributed as presented on the histogram below (Figure 8).

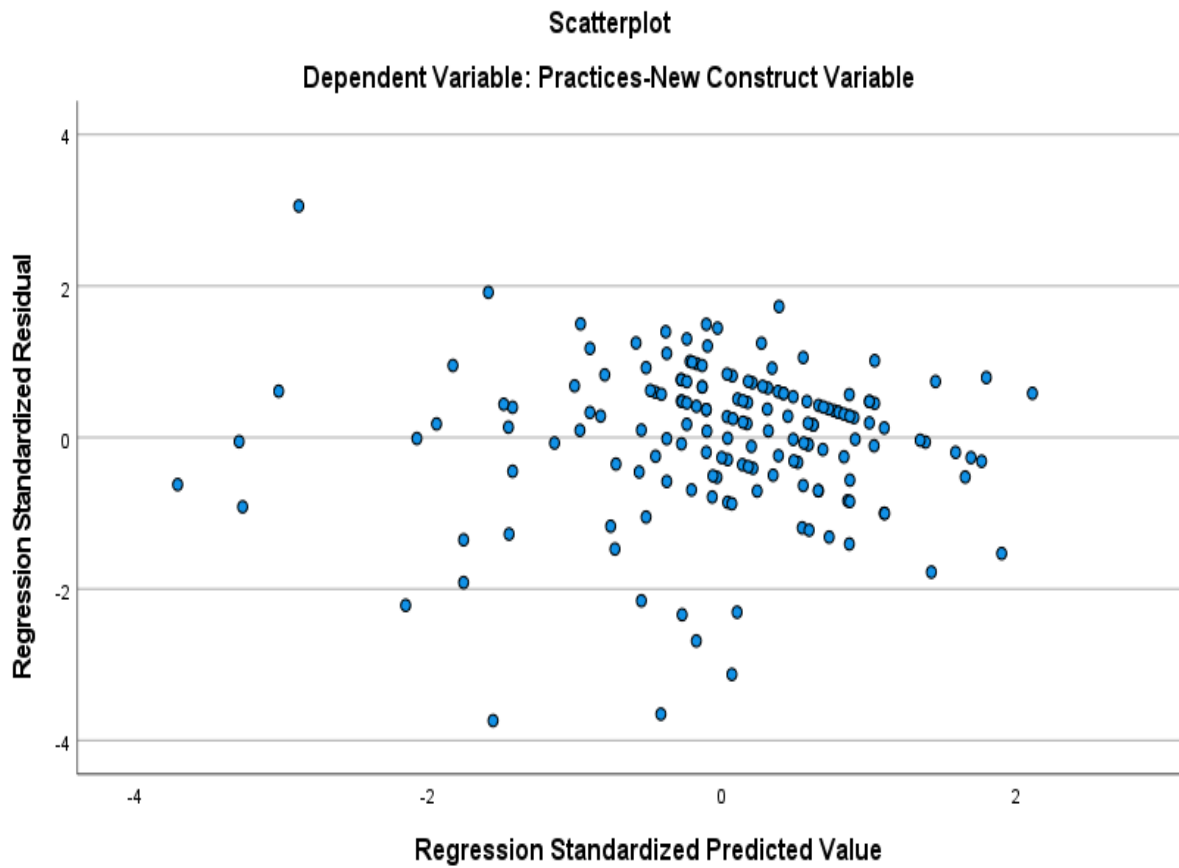


Figure 7: Scatterplot – Hierarchical Multiple Regression Analysis

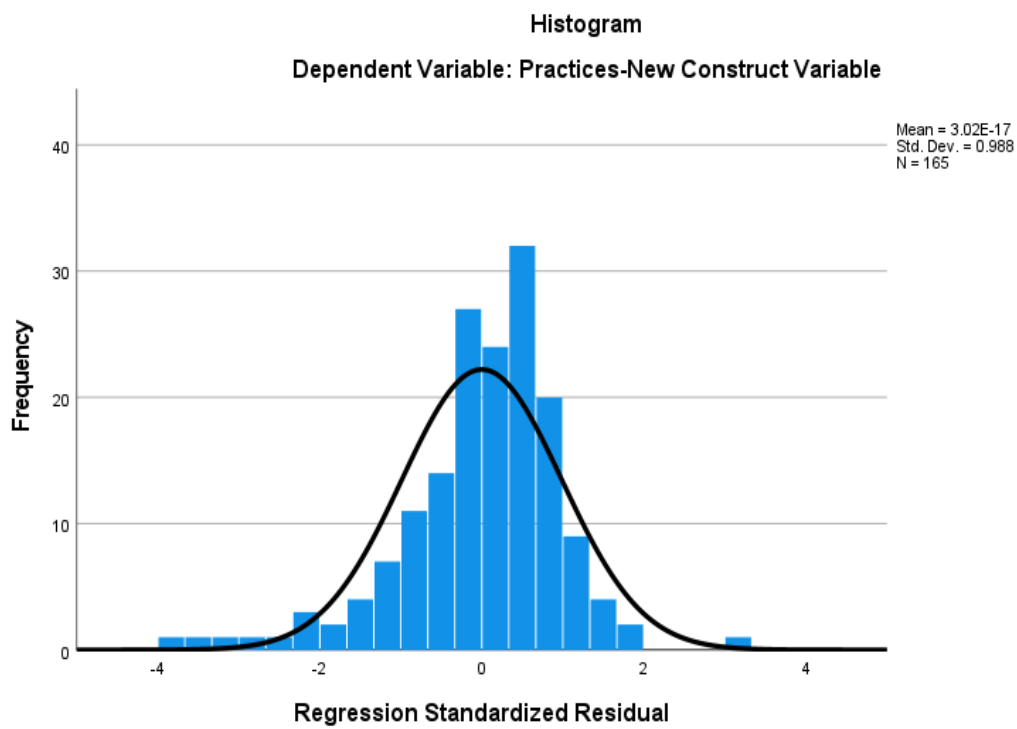


Figure 8: Histogram – Hierarchical Multiple Regression Analysis

Moreover, the researcher examined outliers by investigating influential cases that are caused by concern. The results showed that no case might unduly influence the model since the Cook's distance is less than one (1) and Mahalanobis distance is less than 25 (Table 16).

Table 16: Influential Cases - Residuals Statistics ^a

	Minimum	Maximum	Mean	Std. Deviation	N
Mahal. Distance	1.238	19.165	3.976	3.197	165
Cook's Distance	.000	.221	.008	.022	165

a. Dependent Variable: Acceptance of Manipulation

To investigate Hypothesis 2 and Hypothesis 3, a moderator analysis was performed using PROCESS (Model 2). The outcome variable for analysis was “*Acceptance of Manipulation*”. The predictor variable was the “*Company's Performance*”. The moderator variables for the analysis were the “*Importance of Financial Statements*” and the “*R&D's Financial Disclosure*”. The control variable was “*Gender*”. The interaction between the “*Company's Performance*” and the “*Importance of Financial Statements*” was found to be non-statistically significant ($B=0.274$, 95%, $p=.8946 > .05$), and the “*R&D's Financial Disclosure*” was found to be non-statistically significant ($B=-0.0836$, 95%, $p=.6324 > .05$) (Table 21). These results identify the “*Importance of Financial Statements*” as a non-moderator of the relationship between “*Company's Performance*” and “*Acceptance of Manipulation*”. Also, the results identify “*R&D's Financial Disclosure*” as a non-moderator of the relationship between “*Company's Performance*” and “*Acceptance of Manipulation*”.

Hence, both moderators appear not to have a statistically significant effect on the relationship between the independent and dependent variables. The analysis shows that the researcher must accept the null hypothesis for both Hypothesis 2 and Hypothesis 3. On the other hand, both of the variables, namely the “*Importance of Financial Statements*” and “*R&D's Financial Disclosure*”, affect the dependent variable as predictors (Table 17).

Table 17: Multivariate Analysis – Moderators' Impact

Model	Coefficients	Std. Error	t	Sig.	LLCI	ULCI	
(Constant)	1.3490	.78	1.7316	.853	-.1897	2.8877	
Company's Performance (V1)	.6913	.998	.6924	.4897	-1.2806	2.6631	
Gender (V2)	.056	.192	.291	.771	-.3245	.4365	
Importance of Financial Statements (V9_12)	.2376	.1591	1.493	.1374	-.0767	.5519	
Int_1	.0274	.2063	.1327	.8946	-.3802	.4349	
R&D's Financial Disclosure (V13_16)	.4457	.1185	.37611	.0002	.2116	.6797	
Int_2	-.0836	.1744	-.4792	.6324	-.4280	.2609	
Model Summary	R	R ²	MSE	F	df1	df2	Sig.
	.5592	.3127	.796	11.973	6	158	.000
Test(s) of highest order unconditional interaction(s)							
	R2-chng	F	df1	df2	Sig		
Int_1: V1 * V9_12	.0001	.0176	1.000	158	.8946		
Int_2: V1 * V13_16	.0010	.2297	1.000	158	.6324		
Both	.0011	.1296	2.000	158	.8785		

a. Dependent Variable: Acceptance of Manipulation

Following the above analysis, the researcher follows a hierarchical multiple regression analysis. Based on the literature, a hierarchical method adds multiple predictors and control variables in a multiple regression analysis (Diamantopoulos and Schlegelmilch, 2000). Hierarchical regression is a particular form of a multiple linear regression analysis following an additional process with multiple variables (Diamantopoulos and Schlegelmilch, 2000). The whole procedure relies on separate steps to explain a statistically significant amount of variance in the dependent variable (Diamantopoulos and Schlegelmilch, 2000). Firstly, the researcher added the control variable “Gender” to the linear relationship between the “company’s performance” and the management’s “acceptance of manipulation”. Afterwards, in the analysis, each of the predictors was added, namely the “Importance of Financial Statements” and “R&D’s Financial Disclosure” (Table 18).

Finally, the hierarchical multiple regression analysis followed the entering of variables method; thus, three (3) models were developed. In the beginning, the analysis presented the first model containing the linear relationship between the “*Company’s Performance*” and the management’s “*Acceptance of Manipulation*”, controlled by the “*Gender*” variable (Table 18). The results showed a $p\text{-value}=0.036<0.05$, $F=3.390$, $R\text{-Square}=0.040$, $N=164$, $df=162$, and $\alpha=0.05$ (Table 19 and Table 20). Subsequently, the researcher added the first moderator, “*Importance of Financial Statements*” (Table 18); thus, the current model showed a smaller $p\text{-value}=0.000<0.05$, a greater $F=14.785$, a larger $R\text{-Square}=0.216$, $R\text{-Square_Change}=0.176$, $N=164$, $df=161$, and $\alpha=0.05$ (Table 19 and Table 20). Eventually, the researcher added the “*R&D’s Financial Disclosure*” moderator to the last model through the hierarchical multiple regression process (Table 18). Thus, the results showed the same $p\text{-value}=0.000<0.05$, a larger $F=18.101$, a greater $R\text{-Square}=0.312$, $R\text{-Square_Change}=0.096$, $N=164$, $df=160$, and $\alpha=0.05$ (Table 19). Hence, the third model is statistically significant, with a 31.20% variation in the dependent variable.

Table 18: Hierarchical Multivariate Analysis - Variables Entered/Removed ^a

Model	Variables Entered	Variables Removed	Method
1	Gender, Company’s Performance ^b	.	Enter
2	Importance of Financial Statements ^b	.	Enter
3	R&D’s Financial Disclosure ^b	.	Enter

a. Dependent Variable: Acceptance of Manipulation

b. All requested variables entered.

Table 19: Hierarchical Multivariate Analysis - Model Summary ^d

Model	R	R Square	Adjusted R Square	Std. error of the estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.200 ^a	.040	.028	1.041	.040	3.390	2	162	.036	
2	.465 ^b	.216	.201	.944	.176	36.107	1	161	.000	
3	.558 ^c	.312	.294	.887	.096	22.206	1	160	.000	1.327

a. Predictors: (Constant), Gender, Company’s Performance

b. Predictors: (Constant), Gender, Company’s Performance, Importance of Financial Statements

c. Predictors: (Constant), Gender, Company’s Performance, Importance of Financial Statements, R&D’s Financial Disclosure

d. Dependent Variable: Acceptance of Manipulation

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.353	2	3.676	3.390	.036 ^b
	Residual	175.679	162	1.084		
	Total	183.032	164			
2	Regression	39.534	3	13.178	14.785	.000 ^c
	Residual	143.498	161	.891		
	Total	183.032	164			
3	Regression	57.023	4	14.256	18.101	.000 ^d
	Residual	126.009	160	.788		
	Total	183.032	164			

a. Dependent Variable: Acceptance of Manipulation

b. Predictors: (Constant), Gender, Company’s Performance

c. Predictors: (Constant), Gender, Company’s Performance, Importance of Financial Statements

d. Predictors: (Constant), Gender, Company’s Performance, Importance of Financial Statements, R&D’s Financial Disclosure

Table 20: Hierarchical Multivariate Analysis – Finalised Model - ANOVA ^a

Hence, the hierarchical multivariate analysis based on the “*Enter*” method showed that the third model is the best. The specific relationship is impacted by four (4) predictors (Table 21). The model indicates that the “*Company’s Performance*” positively influences “*Acceptance of Manipulation*”. The non-anticipated economic consequences positively affect the decision-making behaviour of the organisation’s investment in R&D. A non-anticipated financial performance impels the management to use more real earnings management strategies and alter the actual financial outcome. In this relationship, “*Gender*” has no impact. Also, the “*Importance of Financial Statements*” predictor influences positively, showing that the more important the financial statements are for the managers, the greater the influence is. Finally, the last predictor, the “*R&D’s Financial Disclosure*”, positively influences and presents it greatly.

Table 21: Hierarchical Multivariate Analysis – Finalised Models’ Coefficients ^a

Model		Unstandardised Coefficients		Standardised Coefficients Beta	t	Sig.	Collinearity Statistics	
		B	Std. Error				Tolerance	VIF
1	(Constant)	5.007	.120		41.593	.000		
	Company’s Performance	.410	.162	.195	2.525	.013	.997	1.003
	Gender	.175	.223	.060	-.265	.434	.997	1.003
2	(Constant)	2.083	.499		4.175	.000		
	Company’s Performance	.455	.147	.216	3.086	.002	.994	1.006
	Gender	.113	.202	.039	.557	.578	.994	1.006
	Importance of Financial Statements	.517	.086	.420	6.009	.000	.995	1.006
3	(Constant)	1.496	.485		3.082	.002		
	Company’s Performance	.406	.139	.192	2.917	.004	.988	1.012
	Gender	.113	.191	.020	.302	.763	.990	1.010
	Importance of Financial Statements	.247	.099	.201	2.488	.014	.662	1.511
	R&D’s Financial Disclosure	.408	.087	.380	4.712	.000	.661	1.514

a. Dependent Variable: Acceptance of Manipulation

As a result, the finalised model is the third one, presented analytically in Table 22:

$$y = 1.496 + 0.406 * X_{11} + 0.247 * X_{12} + 0.408 * X_{13} + 0.113 * X_{21}$$

Table 22: Finalised Model’s Variables Analysis Symbols

y:	Acceptance of Manipulation (Dependent Variable)
X ₁₁ :	Company’s Performance (Independent Variable)
X ₁₂ :	Importance of Financial Statements (Independent Variable)
X ₁₃ :	R&D’s Financial Disclosure (Independent Variable)
X ₂₁ :	Gender (Control Variable)

4.3. Conclusion

In the current chapter, the researcher analyses the collective data from the quantitative method. The quantitative method investigated the study’s first research question from a different perspective, such as “*Do the non-anticipated economic consequences (translatable into financial performance) positively influence management’s decision-making behaviour with regard especially to real earnings management when investing in R&D under IAS 38?*”. All data were collected from CFOs whose companies are UK-listed. Specifically, the FAME database provided the list of candidates, and the researcher categorised them according to the appropriate method. The data collection period for the quantitative approach was between the 1st of November 2021 and the 28th of February 2022. During the period mentioned earlier, 165 CFOs participated in the electronic survey.

Following the above process, the researcher independently continued the data analysis procedure for the quantitative method, namely the survey. The researcher began with data preparation, coding, recoding variables, and forming new-scale variable constructs. Afterwards, the descriptive statistics of the data sample and each measurement were analysed and presented, while the scales’ reliability was tested with Chronbach’s Alpha. All three (3) different measurement scales were approved to be reliable.

Then, the researcher examined the parametric t-test assumptions about the distribution population, like the linearity, independence, normality, and homogeneity of variance. All

assumptions led to the independent one-tailed t-test and compared the associated population means of the two (2) groups. The results supported Hypothesis 1, “*A company’s non-anticipated financial performance positively impacts the management’s manipulation of operational activities regarding R&D Investment (IAS 38) to alter the financial reporting.*”, and showed a positive linear connection between the dependent and independent variables. Following the above, the “*Gender*” as a control variable was investigated, measured and found to have a small effect. Subsequently, the researcher followed a multiple regression analysis to evaluate the linear relationship influenced by two (2) moderators, the “*Importance of Financial Statements*” and “*R&D’s Financial Disclosure*”, and the control variable, namely the “*Gender*”. The results did not support the second hypothesis, “*The importance of the financial statements to the manager strengthens the positive impact of a company’s non-anticipated financial performance on management’s manipulation.*”. Furthermore, the third hypothesis was also not supported, and the results also showed no influence regarding the relationship, namely the “*Additional reporting upon R&D investments (IAS 38) weakens the positive impact of a company’s non-anticipated financial performance on the management’s manipulation.*”. On the other hand, the analysis showed that both the “*Importance of Financial Statements*” and “*R&D’s Financial Disclosure*” act as predictors and the “*Gender*” as a control variable. Eventually, the finalised model's presentation completed the quantitative data analysis.

5. Presentation of the Qualitative Method's Results

5.1. Introduction

Semi-structured interviews were conducted to investigate how economic consequences influence organisational management's decision-making behaviour in investing in R&D under IAS 38. To elaborate, the research question focuses on the aspects of "if" and "how" the non-anticipated economic consequences after the adoption of the IAS 38 influence the organisation's management decision-making behaviour in investment in R&D. The researcher operated the thematic qualitative analytic method using NVivo 12. NVivo serves as a qualitative data analysis software and offers intuitive, deeper qualitative data analysis research (QSR International NVivo, 2022). The specific software is a set of tools that facilitates managing data and ideas, querying and visualising data, and reporting from the data (Bazeley and Jackson, 2013). From the analyst's perspective, the specific qualitative data analysis software invites the investigator to think and develop interrelated codes in terms of trees and consider possible connections between them (Bryman and Bell, 2015).

In the present chapter, the researcher addresses and discusses the semi-structured interviews' collected data. Initially, the researcher concealed interviewees' personal data and characteristics to ensure that nobody would be identified and follow the University's Ethical Guidance. It was achieved by coding them with the letter "P", like the initial letter from the word "*Participant*", and a random number; only the researcher can identify them. Subsequently, the descriptive statistics regarding the participants and their characteristics are discussed before pursuing the thematic analysis process. Following the discussion, each theme is analysed and discussed based on the participants' pragmatic views, aspects, and knowledge. The thematic analysis begins with the management's acceptance of using real earnings management in organisational practices and how its acceptance is affected by the company's performance. Afterwards, the qualitative data discussion continues by presenting the ways of manipulating

the financial statements through operational activities. Finally, the thematic analysis discussion is finalised through the presentation of the factors impacting managers to adopt real earnings management strategies.

5.2. Descriptive Statistics of the Qualitative Study

The researcher ran the interview process for five (5) months through telecommunication platforms, namely “Zoom” and “Google Meet”. At the end of the period, on the 31st of March, 2022, ten (10) CFOs corresponded and fully participated. All interviewees agreed, signed, and sent the interview consent forms before the scheduled meeting through email. At the beginning of each interview, all interviewees also verbally agreed to participate in the interview process. On the other hand, some interviewees only refused to record the interview verbally or even in writing. Actually, seven (7) agreed to record our discussion, and three (3) refused (Table 23). Thus, the researcher followed the ethics policies in the specific cases and had to transcribe the non-recorded interviews immediately to avoid misunderstandings and bias in the transcribed texts. The results showed a lack of trust from the participants in the interview process, which is usually irrelevant to the interviewer’s presence. Such cases could influence the interview process and even force the participants to drop out. Despite that, the interviewees showed considerable trust in the researcher by answering all the interview guide’s questions without complaining and following the interviewer’s comments. It is crucial to note that all participants are CFOs of the UK’s publicly listed firms, so it is challenging to approach and contact them, with many time limitations. They usually avoid participating in interviews and surveys because of the last; as a result, interacting with these experienced professionals is a chance to excavate valuable knowledge and experience.

Table 23: Qualitative Analysis - Descriptive Statistics

Variable	Choices	Frequency	Percent	Valid %	Cumulative %
Recording the Interview	Positive (+)	7	70.0	70.0	70.0
	Negative (-)	3	30.0	30.0	100.0
	Total	10	100.0	100.0	
Gender	Male	8	80.0	80.0	80.0
	Female	2	20.0	20.0	100
	Total	10	100.0	100.0	
Certified / Chartered Accountant	Yes	9	90.0	90.0	90.0
	No	1	10.0	10.0	100
	Total	10	100.0	100.0	100.0
Age (in Years)	18-40 Years Old	2	20.0	20.0	20.0
	41-50 Years Old	5	50.0	50.0	70.0
	51-60 Years Old	3	30.0	30.0	100.0
	61-70 Years Old	0	0.0	0.0	
	Total	10	100.0	100.0	
Professional Experience in the Accounting Field (in Months)	0-100 Months	0	0.0	0.0	0.0
	101-200 Months	1	10.0	10.0	10.0
	201-300 Months	6	60.0	60.0	70.0
	301-400 Months	1	10.0	10.0	80.0
	401-500 Months	2	20.0	20.0	100.0
	501-700 Months	0	0.0	0.0	
	Total	10	100.0	100.0	
Professional Experience in the Same Company (in months)	0-50 Months	4	40.0	40.0	40.0
	51-100 Months	5	50.0	50.0	90.0
	101-150 Months	1	10.0	10.0	100.0
	151-200 Months	0	0.0	0.0	
	201-300 Months	0	0.0	0.0	
	More than 301 Months	0	0.0	0.0	
	Total	10	100.0	100.0	
Education	No-Degree	0	0.0	0.0	0.0
	High School	0	0.0	0.0	0.0
	BSc (University / College)	9	90.0	90.0	90.0
	Master's Degree	1	10.0	10.0	100.0
	Doctorate / PhD	0	0.0	0.0	
	Total	10	100	100	
Participant's Company	Biotechnology	1	10.0	10.0	10.0
	Software Engineering	4	40.0	40.0	50.0
	Health and Medical	3	30.	30.0	80.0

	Manufacturer	2	20.0	20.0	100.0
	Total	10	100.0	100.0	

At the end of the data collection period, there were eight (8) males and two (2) females; regarding “gender”, thus, $\mu=0.20$ of them were women (Table 23). As happened in the quantitative study, the qualitative shows a disproportion between the genders in the CFO position. Women CFOs are much fewer than men in the same position. At the same time, all participants respond only to the “male” and “female” choices and ignore other options.

Furthermore, the participants could declare whether they are “certified/chartered accountants” or not. As a result, the majority of them are certified or chartered accountants ($\mu=0.90$), with nine (9) positive and only one (1) negative answer (Table 23). The specific result shows the demand from the organisations to choose certified/chartered people to occupy the particular position. Any official certification approves the knowledgeability of the people regarding the field and the position’s requirements.

On average, the respondents’ “age” in our sample fell in the range of “41-50 years old” ($\mu=2.42$) (Table 23). Most respondents’ “age” choices fall in the second scale of the variable (Mode(x)=2), while 50% of them were below the age of “41-50 years old” (Med(x)=2), and 50% were above that “age” scale. 25% of the respondents were below 50 years old, almost equal to the 50% and the mean, while 75% were below 60 years old. Also, the overall dispersion of values in the dataset is between the “18-40 years old” (Min(x)=1) and the “51-60 years old” (Max(x)=3), with a Range(x)=2. Based on the result, the organisations usually choose to promote in the particular position people around the age of 50 years old. The choices show that the organisations prefer to invest in knowledgeable and experienced people who could efficiently serve in the particular position, such as CFOs, in the long term.

In addition, the participants’ age appears to relate in most cases to their “professional experience (in months) in the accounting field”. The participants, on average, had “201-300

months” of professional experience ($\mu=3.51$) (Table 23). Most of their professional experience lay on the third scale (*201-300 months*) of the variable ($\text{Mode}(x)=2$); at the same time, 50% of them worked in the accounting field between “*201-300 months*” ($\text{Med}(x)=2$). 25% of the respondents have less than “*201-300 months*” of professional accounting experience, while 75% have up to 400 months of experience. Also, the overall dispersion of values in the dataset is between the “*101-200 months*” accounting experience ($\text{Min}(x)=1$) and the “*401-500 months*” ($\text{Max}(x)=4$), with a $\text{Range}(x)=3$. Logically, CFOs must have extended professional experience in the accounting field to successfully and efficiently manage an entity. Any professional accounting experience usually follows the participant’s age, which is understandable and falls into the requirements of the job.

On the contrary, the participants’ age and professional experience in the accounting field appear not to follow their “*professional experience (in months) in the same company and position*”. The participants, on average, remain “*51-100 months*” at the same company ($\mu=1.15$) (Table 23). Most of them are on the second scale (51-100 Months) of the variable ($\text{Mode}(x)=1$); at the same time, 50% of them have been working in the same organisation between “*51-100 months*” ($\text{Med}(x)=1$). 25% of the respondents work between “*0-50 months*” at the same organisation, while 75% stay “*51-100 months*”. Also, the overall dispersion of values in the dataset is between the “*0-50 months*” professional experience in the same company ($\text{Min}(x)=0$) and the “*101-150 months*” ($\text{Max}(x)=2$), with a $\text{Range}(x)=2$. The respondents acknowledge that they usually choose to stay in the same organisation until they feel they could continue to successfully and effectively service while the position satisfies their personal needs. In other cases, they decide to quit their job at an organisation and move to another as soon as possible, without rejecting any future return in the long term.

Furthermore, concerning the “*participant’s education*”, on average, respondents in our sample have a bachelor’s degree ($\mu=3.5$) (Table 23). Most respondents declare this degree

(Mode(x)=3), while 50% of them are at the “*BSc (University/College)*”. The overall dispersion of values in the dataset regarding the “*participants’ education*” is between the “*BSc (University/College)*” (Min(x)=2) and the “*Master’s Degree*” (Max(x)=3), with a Range(x)=1. Actually, the results present the organisations’ trust in educated people with at least a bachelor's degree. Apart from the above, the results showed that the respondents chose to become certified or chartered rather than continue with a Master’s degree. Any official certification is time-consuming and usually demands a lot of effort from everyone, forcing them to avoid continuing to a higher degree.

Finally, the researcher chose companies that invested in R&D and relied on the results generated from the FAME database. So, the CFOs from the specific selection were the ones who got the invitation to participate in the study by interviewing them. Most of the respondents in our sample represent companies that fell in the “*Software Engineering*” industry sector ($\mu=1.6$) (Table 23). Also, most interviewees’ choices fell in the “*Software Engineering*” scale of the variable (Mode(x)=1). The results show that people from the “*Software Engineering*” and “*Health and Medical*” industry sectors are more accepting of participating in interviews. Beyond that, the last changes in the IAS 38 from the IASB impacted all software-related organisations and the CFOs considered protesting about them. Their CFOs believed they needed to discuss the particular development, and debate their opinion and perspectives analytically.

5.3. Thematic Analysis

5.3.1. Introduction

The thematic analysis appears as the most common form of analysis in qualitative research. As part of the qualitative data analysis, it is an ideal tool for different qualitative research methods (Boyatzis, 1998). Thematic coding and the final result of the thematising

meanings appear as the generic core tools for qualitative analysis, which is an approach performed within analytic traditions in its own right (Holloway and Todres, 2003). The thematic analysis approach relies on the categorised coding scheme (Table 2) and is usually applied to a set of texts, where the researcher examines the data to identify common and repeated themes, topics, ideas, and patterns (Terry et al., 2017).

Usually, management's behaviour relies on multiple determinants and reflects on the company's reactions. In the present qualitative study, the researcher gathers objective data and helpful insights about the management's behaviour and how the economic consequences influence this behaviour. Specifically, the qualitative component of the study considers the connection and effect between the organisation's IAS 38 accounting policy, its economic consequences, and the entity's management decision-making behaviour upon R&D. In qualitative research, the primary emphasis is on the content of a text; thus the "what" and "told" meanings direct to the sense of the context (Braun and Clarke, 2013). According to the theoretical model (Figure 6), a qualitative approach is a helpful tool for investigating in depth these behavioural phenomena. The qualitative analysis applies to a set of texts, such as the interview transcripts (Kwok et al., 2017). Initially, the researcher identifies the thematic features of the investigated areas; thus, a specific structure of themes helps to conceptualise events, people, and interactions in their context (Kwok et al., 2017). During the following subsections, the researcher analyses all the generated themes from the interviews with the CFOs and presents the results from the analysis.

The researcher follows an experiential categorisation approach by analysing reality based on theoretical assumptions, which is more flexible. The experiential orientation thematic analysis focuses on the participant's thoughts, feelings, and actions, where reality is expressed through the used language (Braun and Clarke, 2013). Thematic analysis's goal concentrates on identifying themes and using them to flexibly address research or analytically discuss an issue

(Braun and Clarke, 2013). Those mentioned above recommend a more flexible qualitative approach to coding and theme development, which begins with data familiarisation and, through theme development, results in coding (Terry et al., 2017).

5.3.2. Acceptance of using Real Earnings Management Strategies

5.3.2.1. Acceptance of Manipulation of Financial Statements through Organisational Practices to Meet Targets

In investigating the study's research question, the researcher had a dialogue with the participants about the ethical sensitivity of managers to real organisational practices. Specifically, the first research question queries, "*Do the non-anticipated economic consequences (translatable into financial performance) positively influence management's decision-making behaviour with regard especially to real earnings management when investing in R&D under IAS 38?*". Graham et al. (2005) argue that the management's openness to adopt strategies, sometimes questionable, relies on managing earnings, influences the company's financial disclosure, and generates information asymmetry with the stakeholders. In practice, the organisation's upper management obtains a generally high tolerance for short-term operational manipulations, resulting in temporally affected earnings (Bruns and Merchant, 1990). Thus, the researcher investigates the presence of a real earnings management strategy which affects the investment in R&D and influences the disclosure of the financial statements. Even though all the participants claim that they do not follow such kind of behaviour, in fact, every single one of them positively acknowledges the existence of real earnings management in the organisation's operational activities to manipulate the financial disclosure, even when deciding upon investment in R&D. Based on their statements, the participants clearly agreed on the existence of manipulative strategies during a fiscal year and before definitively disclosing the entity's financial statements.

Surprisingly, all the participants, ten (10) CFOs, answered the study's first research question positively and quoted, "Yes, yes. I suppose the theory would be that one could manipulate the results. So, it depends whether you have long-term surety of what your results are going to be as to how much you can decide to invest in it." (P861), "High. Several things are purely hypothetical regarding what companies can or cannot do. In practice, you can run on companies that capitalise a lot, others that do not capitalise anything, and some who try to balance it. The standard guides you on how to do it when you have the asset. Finally, it is a judgement and upon the people's interpretation, ethics, and plenty of other reasons." (P543), and "In general, positively, there are several opportunities to do any unethical activities. Unethical and illegal activities are something anyone will try to do with the auditors and others. The management can decide on the strategy, change parts, add or remove any business lines, and other activities." (P1133). All participants debated a hypothetical and theoretical chance for the management to proceed with unethical and manipulative activities. The responses reflected a reality that affects the quality disclosure of the financial statements and actually changes the actual organisation's financial image.

In fact, the interviewees claimed that the accounting standard leads the decision makers on the way to cope with an R&D intangible asset and provides them with the option of choice. Such opportunity feeds the management to follow even questionable strategies whenever necessary. An example of manipulation of the financial disclosure theoretically is cited from "P861", who stated, "The legislative accounting approval of a product guides to sell it or don't sell it, basically, it's a real gate, whether you can get through to capitalise development expenses when it comes to the new product. That's a difficult one, and that development can be a very expensive thing to do. So it depends on whether you've got long-term surety of what your results are going to be as to how much you can decide to invest in it. So, here, theoretically, may appear a real manipulation.". Some other participants said, "A common activity is to postpone an

investment if the numbers are not so clear. So, it is a judgemental decision, and the ways to interpret it are so many. The management is concentrated on the cash flow, where the money goes, the liabilities, and other things. It is very easy to change anything you want, and nobody understands what you have done. All the above may impact all numbers and accounts.” (P543), and “To capitalize an expense, it is some kind of judgemental. As long as you follow the auditor’s guidelines, then everything is acceptable. On the contrary, the option to change anything in your operations and influence the results is an option that nobody can prove that it is unethical. The management always wants to present a profitable financial position, with a related cash flow, and report heavy costs-expenses capitalized.” (P1133). P543 and P1133 steadily nodded and simultaneously smiled while discussing the theoretical manipulation case. Such a reaction confirms the reality of the manipulation through real earnings management when the financial performance is out of target, even theoretically. Hence, all the participants above discussed the theoretical opportunity to manipulate an entity’s financial disclosure by following the guidelines and opportunistically interpreting them. The judgemental decision of an expense, any transfers of the expenses to other costs, and the long-term survivability of a project are some ways to proceed theoretically.

Following the above statements, the hypothetical and theoretical perspective is replaced by reality and the pragmatic view of common managerial practices. Some other respondents quoted, “So, when we talk about R&D spending, generally people look at the disclosure in the accounts. So, that number, I mean, you can pretty much put whatever you want in there.” (P389), “Incredibly High. If you want to do it, you can do it. In our company, we avoid any illegal activities. We follow the rules. But an experienced and knowledgeable professional can easily change processes or adopt activities that finally will result from changing the real picture of your company.” (P892), and “This is a highly judgemental area. You can, in a very cursory glance, search all tech companies. You will be able to identify who capitalises or not, and you

will be able to say, is it really possible that some of these companies are investing this much money in research and development, and they are not creating something capable of being an asset? Or, on the other hand, is it really possible that this percentage of what another firm is spending will qualify as an asset? So yeah, there are extremes.” (P316). During their responses, the last two participants emphasised every word they used and changed their tones, adopting a serious mood. Their actions showed the seriousness of these activities and how they carefully chose the words to avoid misunderstanding and misinterpretation. Usually, their answers focused on the idea that they do not follow such policies and these things exist because of others.

All the above statements recognised the issue of management’s adoption of manipulative actions when their focus is to present a different financial outcome for their organisations. Any extreme case of expensing or capitalising development costs relies on the judgemental option to characterise an R&D project as technically viable and, in the short-term, commercially profitable, following the IAS 38 directions. Whenever an investment in R&D jeopardises a company's profits, the large investment amounts would be in the management’s decision of how to use them practically. Also, many organisations invest simultaneously in different projects, making transferring costs easily from one to another when the viability is unguaranteed. So, multiple factors lead to unethical and illegal activities; nevertheless, the management’s focus on real earnings management strategies appears the most preferable. In summary, all participants identified unethical and questionable actions focusing on the company’s status and performance to meet its targets. Even though they all claimed they avoided following these practices in their companies, they finally acknowledged them. During the interview process, some participants indirectly admitted that they followed them on a few occasions in the past.

5.3.2.2. Company's Performance Enhances the Management's Acceptance of Manipulation of Financial Statements

All management decisions rely on the organisation's information availability and other data-disclosing determinants. Accounting reports provide practical insights influencing management's decisions (Zeff, 1978). Beattie et al. (2006) argue that management's investment decisions are multidimensionally relying on complex organisational processes, the relevant environment and capital structure, especially regarding financial information. Six (6) interviewees admitted that the financial performance, as indicated in the financial statements, impacts the management's decisions and impels the management to adopt various practices that would change the actual financial performance. The other four (4) identified the importance of financial statements; however, their organisation's status and dependence on multiple factors influence the managerial decision-making behaviour more than others, such as grant funding. Hence, financial reports are essential for managerial practices and lead future strategies by providing different information depending on the company's needs.

Exclusively, one of the participants claimed, "It is strongly the impact of the performance. I would say our CEO is always looking to invest in our development and R&D teams. So, any kind of spare capacity in the forecast to bring in extra cost will be put into those teams. At the same time, it does look to tightly control the cost in the kind of non-R&D departments." (P389). Others said, "In general, all companies react based on their numbers and the financial position. Especially research-oriented companies have to protect their financial position from extensive and sudden expenses. Usually, these are the ones that will change the whole picture. If the performance is acceptable from the management, then everyone is happy and does not consider to stop or postpone any investment." (P1133), and "Yeah, and the way the Western world measures the making of money is through financial statements. And that is expressed in the income statement and the cash flow statement. Effectively, the income

statement is a driver of something called EPS, as EPS is a driver of the stock market effectively, part of the way a company's value is determined. So, any CFO who tells us that they ignore EPS, if they are a listed company, if they are a CFO on a company, I do not think is correctly doing their job because it has to have regard for all things that impact a company's valuation. Which following on what activities they use, if they are a CFO, to impact real company's valuation." (P316). An organisation's performance is vital for the management, especially the results generated from the financial statements.

Through the discussions, the interviewees admitted that the management team usually finds a way to proceed with questionable activities based on performance. All participants clearly stated through the change of their voice or emphasising the importance of the financial statements on the entity's actions and decisions. They clearly identified that stopping an investment and transferring all the costs to other projects, which will be characterised as successful, is a way to manipulate the capitalisation of the costs illegally. Also, postponing an R&D investment appears unethical to interfere with the financial disclosure and provide any adjusted results, even though the company officially announced the investment. Based on the participants' statements, all the aforementioned activities are ways to proceed with illegal and unethical actions. The organisation's decision-making process relies on the disclosure of financial data; at the same time, the executives are forcing themselves to make choices that meet the targets.

5.3.3. Ways and Factors of Manipulation while Using Real Earnings Management Strategies

5.3.3.1. Ways of Manipulation of Financial Statements through Organisational Practices

Following the study's research question 2, the researcher investigates the possible ways a manager would follow to adopt real earnings management strategies and result in

manipulation of the actual outcomes of the financial statements. Specifically, the second research question asks, “*How do the non-anticipated economic consequences (translatable into financial performance) positively influence management’s decision-making behaviour with regard especially to real earnings management when investing in R&D under IAS 38?*”. During the dialogue the researcher had with the participants about the ethical sensitivity of managers to adopt questionable organisational practices, he identified possible ways that lead to the specific strategy. Any managerial strategies focusing on the organisation’s operations rely on common practices and are placed in the financial statements disclosure (Graham et al., 2005). Actually, the management follows economic actions based on the accounting policies and discloses them to the stakeholders through the financial outcomes (Graham et al., 2005). All managers, especially accounting practitioners, have to indicate exceptional ethical sensitivity while adopting an earnings management policy (Bruns and Merchant, 1990). Eventually, the management team follows a specific strategy, which in some cases is questionable, and manages the company’s performance in the short term (Bruns and Merchant, 1990).

Once more, all participants, ten (10) CFOs, asserted that such questionable strategies are abandoned in their organisations, even though they acknowledge and identify a couple of them based on their professional knowledge and experience. Specifically, some of them claimed, “For example, R&D is huge for us, and with this new monitor coming out, all the forces are behind there. So yes, I think there is definitely a postponement of recruitment in some of our teams. For example, we are waiting to see the upside from the completion of the R&D project. Before we do that, I guess there is some manipulation or no manipulation. There is movement in decision-making. But R&D is a big priority for our company, and it is a huge part of our company, and always has been.” (1086), and another said, “We did much development work rather than research. So, we licensed in the IP, the early-stage research we did not do. So we were always on development, which made it easier to do that. You could allocate a lot of

the grand work for or against the cost you wanted. We were doing both third-party-funded development work and grant-funded development work. Thus, there are three subjective elements just there to say yes. Do you put it in or do not? You can add, decide on your depreciation levels, and then how much depreciation goes into the development work. So, it is easy to manipulate it to where you do not have to capitalise all those costs; you may want it all upfront.” (P1432). Also, someone else said, “There is always some kind of cost optimisation project ongoing, where we will look down line by line all of the operating expenses and say, “What is this?”, “Go away and save ten (10) grand on this”. And generally, that will be funnelled back to a point yet recruiting more people to work on R&D projects.” (P389).

Following the above, the participants claimed the way a manipulation activity exists in their organisation. The responses identified that postponing an expense, allocating the costs based on the result, and choosing to include or not an expense are some real earnings management activities influencing the actual financial disclosure. All the actions mentioned above are ways of manipulation depending on the organisational strategy the management chooses to follow. Neither of the respondents stated any difference in their importance and easy adoption. Such actions are clearly judgemental and rely on the option that the accounting standard grants to the accounting standard users.

On the other hand, the perspective to discuss a personal paradigm is replaced by the aspect of describing cases coming from others. The last mentioned case supports that the participants know about the particular activities based on their professional experience. Thus, someone said, “I think, generally, companies will. They will decide to expense; generally, they will take this view, and again, if you are a pre-revenue firm, people generally expect to see your expense items. Generally, the view I have taken in the businesses is that if we can, we will try and expense all our costs rather than capitalising them in the early stages. I think people can get hesitant when they see too much intellectual property growing on the balance sheet.” (P1442).

Also, someone else claimed, “Postponing an investment is a common choice. However, anyone can even move assets from one project to another without being obliged to report it. Usually, when you have an excessive cash runway with the perception of presenting losses in the near future, you choose to adjust your strategy, your processes, or anything to change the whole picture. The investors are very sensitive when they sense losses.” (P892).

Moreover, some other interviewees supported the below, “I think there are several things here; these are purely hypotheticals about what companies can or cannot do. Namely, the capitalisation of R&D is a highly judgemental matter. Some companies capitalise a lot, some other companies capitalise not very much, and some companies miraculously do not capitalise anything, which is obviously not in accordance with the standard, which requires you to capitalise in the event that you have the capitalisable asset. However, the definition of a capitalisable asset is a judgement; therefore, judgements are open to interpretation. And different people will make different judgements on things; it is one of the issues that we have with our accounting standards.” (P543) continued, “A common activity is to postpone an investment if the numbers are not so clear. So, it is such a judgemental decision. The ways to interpret are so many.”. And (P373) mentioned, “Given that you could not get still in periods in which the firm struggles to manage or achieve the analyst forecasts, and the management might be tempted to abort certain R&D activities just to preserve the profits they need. Whereas IAS 38 allows differentiating the profitability of the current business and investments into future products.” (P373) continued, “So, either you have an outsourced development expense. Then you could, of course, choose when exactly to start the project and maybe push it into future periods or do it earlier.” (P373).

Epitomising, the participants agreed on the presence of unethical and questionable activities generated by the management team. In addition, all of them disclosed many different ways of manipulating policies by compromising the validity of the accounting standard while

using the option to judge, interpret and act. Such strategies follow a specific pattern, like postponing an expense relating to an investment and choosing whether to capitalise it or not. In addition, aborting an investment and allocating an expense based on the result appear as more strategic options for the management that result in adopting real earnings management activities. Multiple concepts are mentioned, providing pragmatic evidence that answers the study's second and first research questions. All the above managerial practices (ways) focus on opportunistic behaviour relying on information asymmetry circumstances.

5.3.3.2. Company's Performance as a Factor of Manipulation of Financial Statements through Organisational Practices

Since management decisions rely on the organisation's information availability and other determinants responsible for disclosing data, the entity's performance appears as a factor that causes behavioural variations in managerial decisions, such as investment decisions (Cooper and Selto, 1991). Actually, the investment decisions are multidimensional and based on complex organisational processes (Beattie et al., 2006), even though they appear non-opportunistic and could engage in real manipulative activities that affect the actual performance (Gunny, 2010). Six (6) participants debated that financial performance operates as an influential factor for the management to follow questionable practices, resulting in altered financial statements. Moreover, the other four (4) recognised the management's need to use the organisation's performance but not exclusively and primarily, which sometimes comes after the product's variety and quality.

One participant said, "No, not a significant amount, because of the type of company we were. We were a loss-making company looking to develop products. The value of the company was in getting the products out rather than driving revenue and trying to become profitable. Because the value was all about the quicker you got the products out, and the better they were,

the closer you were to big evaluation, etc.” (P1432) and continued, “It helps portray it better. And I think it helps to present you to the investors. But for running a business, our focus has got to be on the product. Until and at once you are selling products, and you are getting product sales, then it becomes far more important and usable to provide changes on the accounting numbers.” (P1432). Another interviewee claimed, “The CEO is very careful with the firm’s performance. He always wants to look for the EPS, the firm’s valuation, the income statement’s positive position, and, of course, liquidity and cash flow. All the above are extremely important for the management. In the meetings, you could see that they do not want to take any decision before checking the firm’s financial position. So, positively, all of our decisions are influenced by the firm’s accounts and, at the same time, the decisions at the accounts.” (P543).

Furthermore, a last one supported, “In general, they have to sell a future for their company. I am speaking for the potential of a company and its products. When running a business to focus on sales when you are selling products is vital, and management must focus on how to sell. So, all the numbers that come from the accounts are necessary and impact the long-term investment strategy in R&D variously, especially for a firm which concentrates more on the R&D projects.” (P892). In summary, the respondents identified the importance of the company’s performance in any managerial decisions and the impact of the numbers on long-term strategies. However, one of the participants diminished the importance of the company’s performance for the management of a loss-making company by stating that other factors might be more valuable for the managers, like the development of the products. Even though the interviewee indicated that the company’s performance is a valuable driver of the management’s decisions under normal conditions and identified the existence of this relationship. Following the above discussion, the management could choose to use performance to proceed even on questionable actions, resulting in a respective change in the actual financial disclosure.

5.3.3.3. Financial Statements' Continuous Monitoring as a Manipulative Decision-Making Factor

An organisation's financial performance is a snapshot of its economic health. It provides the stakeholders with information about the management's decision quality. Monitoring the organisation's financial performance develops a sentiment of stability and confidence in the management team (Mia and Clarke, 1999). Also, reliable and continuous monitoring of the financial statements strengthens management's choices to influence operational activities and outperform the competition while providing a valuable track for the future (Mia and Clarke, 1999). Eight (8) CFOs positively addressed that the management follows similar policies and relies on their decisions in a continuous financial performance monitoring strategy. The other two (2) debated that the only reason to continuously monitor financial statements focuses on following and fitting the accounting standard rules appropriately. The management focuses on constantly acknowledging the firm's performance as a valuable tool to control and correct unacceptable results or urgent situations (Mia and Clarke, 1999).

Specifically, one of the interviewees said, "It depends on the size of the firm and how they operate. For them, it is a continuous observation combined with their concentration on their target. Especially when it comes to investment in R&D, they try to follow some specific standards without spending more money than they do on average. It seems very complicated, but their R&D team is very active and sometimes not 100% effective. So, positively, they are obliged to monitor their accounts and react as fast as they can." (P1133), and someone else claimed, "As a CFO, I monitor every 15 days all the financial progress. I am very careful with the company's strategy, and I must present to the investors the analytical progress of the investment. Also, this company is a "grant junkie". The management tries on a monthly basis to check the progress of their investment and their financial position. Until now, they have taken a couple of immediate actions just to ensure that they are on track. Unofficially, all companies

do these types of actions. Furthermore, intangible assets (especially R&D) are extremely sensitive to management decisions and long-term strategy, as it is impossible to know from the beginning if they are viable and profitable.” (P892). The above respondents identified the case of management’s continuous monitoring to react to undesirable results successfully. Reasonably, such actions result in altering the actual performance of a company or R&D projects, which are presented analytically to the stakeholders.

Furthermore, another interviewee responded, “I mean, yes, it does influence the decisions. We tend to have fairly simple management reporting and do not worry too much about whether that is reflective of what the standards say for our statutory reporting. So, management reporting tends to be, I guess, less standard driven and more information.” (P1442), another claimed, “Yes, management looks at financial reports to understand what the business is doing. And you can make short-term or long-term decisions as a result. Looking at them generally, absolutely is a good tool and something that management use specifically to R&D.” (P861), and a last one supported, “Continuous monitoring is a habit on this company. This is something that I did not find in my previous jobs. At least once a month, the senior management discusses the progress of their projects, any innovative ideas, strategic decisions, and the financial position of the company. It seems that we always need to monitor our position as they are trying to expand, and their long-term strategy is not being influenced so much, but in the short term, they are trying to be on track and recruit new people and many more investors. They want to present a profit-promising face to all the stakeholders. In fact, the last year, we have been very careful with the company’s accounts and unexpected expenses, as we are trying to attract more investors for a long-term innovative project.” (P543). In general, the management continuously monitors the financial data stemming from policies and choices. Its decisions acknowledge a significant need for updated financial information since the R&D

department depends on them. In conclusion, it appears a valuable tool for any company to avoid meeting unexpected negative results or even to minimise the failure of a strategy.

5.3.3.4. IAS 38's Information Asymmetry as Manipulative Factor on Management's Decision-Making Behaviour

Each accounting standard service explicitly needs to recognise, present, and disclose the organisation's transactions and financial information. Madsen (2013) supports that practitioners appear as the most suitable to evaluate and criticise the efficiency of an accounting standard. Inefficient or negatively evaluated accounting standards grant the organisation's management to behave opportunistically based on the lack of information provided to the stakeholders (Hung, 2001). Six (6) of the participants stated that corporate analytical information is the guarantee between the company and the rest of the stakeholders of securing the proper functioning of the entity and limiting opportunistic behaviours. The investment in the R&D part needs to apply separately from the IAS 38 without adding more work to the practitioners and securing to restrict any information asymmetry status. Such action would present all appropriate information analytically for the accounting administration regarding investment in R&D and make more accessible the adoption processes of any functional changes.

At the same time, the R&D concept needs to relate to the ESG, focusing on the fact that all organisations need to invest more in the specific policy. Some participants said, "The IAS 38 discusses intangible assets in general. But today, many companies have R&D departments and need clear instructions. Furthermore, a unique standard in R&D will be able to follow any changes and easily adjust them. For example, in the last couple of years, the management has been working a lot on the ESG policy of the firm. One huge issue is the huge amount we have to invest, which at some point is related to the R&D department." (P1133) and "The IAS 38 does not consider the size of a firm and also challenges the ESG. There are no references for it

when today it is a very important part of our operations. Last month, our CEO was wondering about the changes that we have to do to follow ESG restrictions. The main issue was how to add all these expensive activities to the R&D projects. The management knows that this is impossible, but everyone needs to present them not as expenses but as investments. So, the IAS 38 needs to be modernised.” (P892). Some interviewees identified the need for an accounting standard that engages with the ESG and simultaneously reduces information asymmetries. Today, the adoption of ESG strategies operates as a skid for the R&D. At the same time, the organisation could not capitalise on any related costs as the accounting standard does not clarify and illustrate any particular way. As a result, many firms are obliged only to expense any investment under the ESG policy regarding R&D, increasing expenses while simultaneously decreasing profits. The management identifies increased expenses, acknowledging that this comes from ESG investments in R&D projects. In fact, the IAS 38 does not provide guidance on explicitly facing such costs and the option to capitalise on them. So, the management tries to minimise the expenses by transferring the costs to other accounts or reducing the investment’s amounts. Another choice is to avoid investing in more R&D projects influenced by ESG, which operates as a disincentive for the management team. Therefore, the participants’ suggestion for a modernised accounting standard, including the case of ESG investments or even an exclusive standard about investment in R&D, appears as an ideal solution.

Moreover, some other interviewees concentrated on the dysfunctionality of the accounting standard that exacerbates information asymmetry status and demands the use of knowledgeable specific experts. Someone mentioned, “Now, it is so fiendishly complicated that you have to have specialists in it. And so, again, from a small firm’s perspective, if you do not have the specialists there, you are reactive to what is required to report rather than necessarily having enough knowledge to use it beneficially.” (P1432), another participant said, “Over the years, you gain experience on what is needed and what to look for. And because it is quite a

detailed area, you would aim to get advice from both your auditors and tax advisors. So, there is quite a considerable burden in putting together the information that is published.” (P861). The role of the auditors and tax advisors is important for every organisation. Both are knowledgeable and might provide sufficient information from their unique perspective. In the first case, the auditors identify and guide how financial activity must be faced under specific accounting standards while protecting and warning for their legality. Regarding the tax advisors, their duties focus on "translating" any investment and economic activity into amounts that will be advantageous for the organisation. So, the company is compelled to hire those experts, enhancing the entity's expenses but gaining from their knowledge whenever needed. In fact, all the above participants supported the case that the specific accounting standard promotes cases of information asymmetry for different reasons, compelling the companies to depend on the experts' opinions and advice. Such situations emerge the need to develop an autonomous and transparent accounting standard, modernised and familiarised with the current conditions, and easier to deal with daily.

5.3.3.5. Other Manipulative Factors Influence Management's Decision-Making Behaviour

In common practises, accounting knowledge appears to be an essential factor impacting management's strategic decisions, especially organisational decision-making behaviour. Accounting professionals rely on their knowledge, expertise, and ability to implement accounting policies in organisations, affecting their performance and corporate philosophy (Mia and Clarke, 1999). Jaworsky and Young (1992) address that the experts' accounting knowledge influences a company's decision-making processes in the same way as the business model and other factors. Notably, seven (7) participants agreed that their accounting knowledge influences, in many cases, the management's decisions and, at the same time, any changes in the accounting regulation route in the long-term predetermined managerial choices. The other three (3)

interviewees supported that accounting knowledge is precious, especially when the accounting standards veritably demarcate their organisation's accounting policy. Such statements enhance the power of the accounting standard to influence managerial decisions and underestimate the professional's value regarding accounting and professional knowledge. Some participants said, "So well, a lot of decisions that we make, I do in-depth reviews. So, at the moment, we have just done the full budget-setting process and working capital reviews. So, everything we do involves accounting to back up a lot of what we do in a lot of our decision-making." (P1086), and "Well, I think, fundamentally, that a company is valued based on its financial statements. I am in charge of investor relations. I understand the impact of financial statements on investors. I also sign off on every major financial decision that the company makes. So, therefore, in combination, my accounting knowledge is used when the firm makes decisions." (P316).

Furthermore, another interviewee claimed, "First, we always try to do the right things to create shareholder value. But, certainly, the options to present the right things that we do differently to shareholders under IFRS have some impact. How your decisions will then be reflected because some, maybe some, costs that you engage might then end up on the IAS 38. Right on the balance sheet than in the income statement. How your decisions will then be reflected because of some, maybe some, costs that you engage might then end up on the IAS 38, right on the balance sheet, than in the income statement." (P373). Finally, someone else mentioned, "I am a very knowledgeable, experienced, "workaholic", responsible for the financial strategy. When it comes to investments, I am a crucial part of the decision. Usually, the upper management (especially the CEO) asks me whether to invest or not. My previous experience influences the decisions, and finally, I guide the firm about any legal restrictions and demands." (P892). To put it succinctly, the expert's accounting knowledge influences how an entity implements and adopts accounting policies, even though some are very influential for the organisation's operations. There are crucial decisions where an accounting expert's

judgement relies on identifying the law's requirements and application. The stakeholders demand that the company meet all targets.

Moreover, three (3) participants added that accounting knowledge is vital for management, but grant funding appears to be an extremely important factor in decision-making, especially in investment choices. Specifically, the interviewees argued that focusing on grants forces companies to disclose many costs to meet the grant's requirements. One participant said, "We have focused a lot on grant funding in the early years of the business. And between you and me, I think we focus too much on grant funding. And there is a phrase that investors use which is called "grant junkies". I do not know if you have met, you know, that is probably working out where people rely too much on grant funding. We are to focus on the grant focus, and so we have to drop; we have to incur too many costs to meet the requirements of grants. So, there is a reason for doing so. It does lead on IAS 38. In order to apply successfully for a grant, you have to show that at least 50% of your shareholder equity is still valid and that you are not looking at all of it, and you have not got all of it, even though your P&L has retained losses. So, therefore, applying IAS 38 and capitalising a lot of the costs, you know, in terms of development is really important because then it moves a lot of that investment work onto the balance sheet." (P1432).

Moreover, others stated, "We have been awarded innovative grants from the government. So obviously, we can hold R&D development because we are funded or part-funded by Innovate UK or other European bodies. So, we continue to progress with our R&D projects. Now, we are about to release a new next-generation monitor. And so, even though the cost of getting it to market is currently quite big, if we were to hold that now, it would impact our future revenues. So, we are taking it into account." (P1086), and "This firm is a "grant junkie". The management tries on a monthly basis to check the progress of their investment and their financial position. Until now, they have taken a couple of immediate actions just to ensure

that they are on track. Unofficially, all companies do these types of actions. Furthermore, intangible assets (especially R&D) are extremely sensitive to management decisions and long-term strategy, as it is impossible to know from the beginning if they are viable and profitable. So, the grant and only the grant.” (P892). Grant funding appears as an influential factor in the managerial decision, which might demand independent administration to follow the grant’s requirements. All replies focus on the individual administration of the accounts connected with the grant funding. In some cases, the participants stated that they had to manipulate the numbers to fill the prerequisites of the grant funding. In other cases, the dependence on them obliged the management to focus more on the R&D projects and, when necessary, to follow some corrective actions. The interviewees admitted the use of questionable methods, which might result in changes in the actual financial picture of the organisation.

Finally, the participants mentioned other factors the management considers when deciding the investment strategy. Remarkably, they discussed the commercial aspect of a product, the firm’s growth rate, value, and the official bodies’ about legislative approval of a product. Specifically, the interviewees claimed, “Whereas the sort of legislative approval of the product by government bodies, I say that you sell it, or you do not sell it; basically, it is a real gate.” (P861), and another continued, “So, its financial position is taken into account, but also commercial decisions and future financial decisions are taken into account. So, it is not purely on what you see; as a result, for the current time, it takes into account where the firm needs to go and the growth rate.” (P1086). Some others focused more on the strategy and the future of an organisation, “I think that is driven by the strategic requirements of the business. So, if a company decides that it needs to invest in, say, research and development to create more value, then that is the driver for making those sorts of investments.” (P1442), and “They have to sell a future for their company, the potential of a company and its products. When running a business to focus on sales when you are selling products is vital, and management must focus

on how to sell. So, all the numbers that come from the accounts are necessary and impact the long-term investment strategy in R&D, especially for a company who is more concentrated on the R&D projects.” (P892). Consequently, all the last-mentioned factors reflect an interesting case in which the management might use different reasons to follow a questionable practice. The focus is mainly on the final result and how the managers would present it to all interested parties. Any questionable action is justified for the management team under various justifications, even though some might be unethical and manipulative.

5.3.3.6. CFO’s Role and Working Experience as Influencing Factors in the Company’s Strategies

A personality’s social and professional characteristics contribute to how an organisation implements accounting policies and makes decisions about strategies. The practitioner’s role and professional experience usually harmonise the accounting rules with the respective accounting policies at the organisation (Ghio and Verona, 2018). Ghio and Verona (2018) support the importance of the above characteristics on the accounting policies and the entity’s operationalisation. The researcher addresses how a company reflects an accountant’s suggestions and recognises the importance of professional knowledge from the accounting field in the management’s decision-making process.

Seven (7) participants clarified and debated the key aspects of their role in the company analytically; at the same time, the rest, three (3), addressed their role without analysing more about it. Some participants ideally said, “I am the CFO; I have been in charge of financial strategy, IT and HR, as well as strong input and guidance on the main strategy for the business. That involves the standard running on the finance team and reporting on both financial and non-financial information, but also the strategic direction of the business.” (P1432), “I have been the CFO since 2014. Today, I also hold the same position in another company. My experience

and knowledge are very critical for the further expansion of the company.” (P1133), and “I am the CFO. Therefore, in a small team, I guess for somebody like me, there is quite a lot of autonomy and quick decision-making; we do not have many layers to talk to. So yeah, I probably make a lot of autonomous decisions, but then also talk with the CEO for other stuff where, you know, you need to make joint decisions.” (P1442). Most participants stated how necessary their professional knowledge and working experience are for the entity’s strategic decisions. Half insisted on the direct relationship between them and the CEO, which helps to make immediate and prompt decisions. At the same time, some of them emphasised the importance of their presence in the company’s decision-making behaviour based on their knowledge, professional experience, and expertise.

Moreover, regarding the interviewees’ role in the company, some addressed, “My role is responsible for the group’s internal and external reporting, including the reporting to the city, the application of IFRS of tax and treasury, and budgeting forecasting. At the moment, I am working on a corporate simplification project. So, over time, we have been quite acquisitive; we have probably acquired, on average, a couple of companies a year. So, the group structure is a bit of a mess. Since the minute we were transferring all the trade and assets into one main trading company.” (P389), and “Usually, the upper management (especially the CEO) asks me whether to invest or not. My previous experience influences the decisions, and finally, I guide the firm about any legal restrictions and demands.” (P892). Undeniably, the participants understood their importance to their companies and acknowledged their increased responsibilities regarding their positions. Their expertise and professional experience made them concede the high possibility of participating in the decision-making process and, as it happens, impacting other management team members.

5.3.3.7. Company's Description and R&D Department as Influential Factors on Decisions

Identifying precisely an organisation's characteristics is vital for its successful administration and effectiveness of strategic decisions. Mia and Clarke (1999) state that identifying the company's characteristics is an essential factor for the entity's performance. Knowing all the organisation's characteristics clarifies the manager's awareness regarding the particular entity (Mia and Clarke, 1999). Most of the participants addressed specific information about their organisations and bore out the existence of an active R&D department. Actually, nine (9) respondents described their company analytically, showing how well they know it. Specifically, some of them said, "So, the firm is a b2b technology business. So, we serve businesses, and we help them be successful when selling their goods online. So, we help many brands to be successful in selling their goods online, and we provide the technology to do that." (P316), "A very old brass manufacturer who makes and offers bathroom taps, bathroom fittings, architectural hardware." (P861), "So, we are a medical technology firm, and we provide hemodynamic monitoring for use in intensive care and elective surgery. So, it is a really exciting firm because it will progress healthcare systems around the world." (P1086), and someone else mentioned, "We provide software and related services to various healthcare settings to help improve patient care. We focus on interoperability of healthcare products across different healthcare settings to basically enable longer and healthier lives for patients." (P389). The participants confirmed with their answers that knowing the organisation is essential to operate, positively perform, and actively engage in management's decisions. In fact, any particular knowledge regarding their organisation makes them more capable of making managerial decisions about the firm's operational activities. At the same time, they feel more confident that they are following the company's standards.

Following the above, eight (8) interviewees confirmed the existence of an internal R&D team. The respondents clearly stated the department's presence, and, at the same time, some

provided more information about future prospects. Distinctively, the participants addressed, “There is a lot of development work for a number of products going on; we are looking to transition towards production. But effectively, we are in the sort of advanced prototype stage for some of the products; some are in an earlier stage, and we have a portfolio of them.” (P1432), “The board has made the decision to develop another stream and complete our portfolio of products, and that has come about by assessing all the impacts on revenues of external factors. And if COVID had not happened, we probably would not have started pushing our R&D in that direction.” (P1086), and one last interviewee said, “I would say our R&D is defined. An awful lot of R&D is actually just to meet legislative requirements because we are selling bathroom fittings, and let us say, primarily things like taps and showers.” (P861). Undoubtedly, the participants acknowledged the existence of the R&D department in their company. Following the previous, the management team identified the need to learn better about the organisation. The particular policy gives the managers the secureness to make critical decisions more straightforwardly and with great confidence that this is the best choice for the entity.

5.4. Conclusion

In the current chapter, the researcher analyses the collective data from the qualitative method. Also, the qualitative approach investigated the study’s research question from a different perspective, such as “*Do the non-anticipated economic consequences (translatable into financial performance) positively influence management’s decision-making behaviour with regard especially to real earnings management when investing in R&D under IAS 38?*”. All data were collected from CFOs whose companies are UK-listed. Specifically, the FAME database provided the list of candidates, and the researcher categorised them as suitable for participation in the qualitative study. The data collection period for the qualitative approach

was between the 1st of November 2021 and the 31st of March 2022. During this period, ten (10) CFOs were interviewed.

Following the above process, the researcher independently continued the data analysis procedure for both methods. Regarding the qualitative data analysis, the researcher began by transcribing the interviews in Word documents, which also helped him to familiarise himself with the data. Also, the researcher added all personal information and notes generated during the interviews to the transcribed documents. At the end of the interview collecting period, all transcribed documents were uploaded to NVivo 12 data analysis software. The qualitative analysis process relied on the thematic analysis approach. Thus, the researcher developed a thematic analysis framework, which began with the “1st-Order: Codes”. Next, the researcher merged the results from the “1st-Order: Codes” into the “2nd-Order: Themes”, which was achieved by rereading the transcribed documents. Finally, the researcher proceeded on a “3rd-Order: Aggregate” by merging the “2nd-Order: Themes” while rereading the transcripts. Subsequently, the researcher continued the analysis using an experiential categorisation approach based on the generated themes. Following the above procedure, the researcher continued with the descriptive statistics by describing features of a data set via generating summaries of data samples. Hence, all themes were analysed and discussed while quoting the interviewees’ statements.

Finally, the results presented the positive effect of the economic consequences on the management’s decision-making behaviour while investing in R&D under IAS 38 (Research Question 1), “*Do the non-anticipated economic consequences (translatable into financial performance) positively influence management’s decision-making behaviour with regard especially to real earnings management when investing in R&D under IAS 38?*”. Also, the results showed that the more important the financial statements are for the management, the greater the impact on the decisions to follow questionable practices. Additionally, the researcher

identified the ways through which the managers under the IAS 38 guidance utilise the option to alter the financial statement's actual outcome and the factors that enhance such actions (Research Question 2), "*How do the non-anticipated economic consequences (translatable into financial performance) positively influence management's decision-making behaviour with regard especially to real earnings management when investing in R&D under IAS 38?*". The results presented the case of management's continuous monitoring to react to undesirable results successfully as one way of adopting questionable practices. Also, enhancing information asymmetry conditions stemming from ineffective, finite and outdated accounting standards is another way to intensify REM strategies. Reasonably, such actions result in altering the actual performance of a company or R&D projects, which are presented analytically to the stakeholders.

In addition, various factors enhancing questionable managerial policies influence all the above-mentioned activities. Experts' accounting knowledge influences how an entity implements and adopts accounting policies, even though some are very influential for the organisation's operations. So, accounting knowledge, professional experience, and upgraded roles might cultivate the judgemental conditions which the accounting standard permits to choose. Also, some exogenous factors are the reason for adopting REM strategies. One essential is the "grant" funding. The results present grant funding as a vital factor that might drive the management's strategy regarding serious investments. All the above are complementary and answer the study's research question by evidencing how such activities are possible in an organisation.

6. Discussion of Findings

6.1. Introduction

The present research concentrates on the economic consequences generated by IAS 38 and how the organisation's management interprets and uses them in the entity's operational activities. As a result, the management focuses on modifying the actual financial disclosure to the stakeholders. Such situations tend to appear as a managerial effect on an entity's decision-making behaviour, especially when deciding on R&D investments. Specifically, the research question focuses on the aspects of "if" and "how" the non-anticipated economic consequences of adopting IAS 38 – "Investment in R&D" positively influence the organisation's decision-making behaviour. All organisations rely on their accounting policies, which directly and indirectly affect and form management's decisions and policies (Watts and Zimmerman, 1990). Thus, accounting policies are part of an organisation's reality and influence standard operational accounting-based processes based on positive accounting theory (Watts and Zimmerman, 1990). Although standard organisational practices and transactions affect the related outcomes in the financial statements, according to real earnings management (Gunny, 2010), in practice, they end up with specific economic consequences that affect all of the organisation's interested parties (Zeff, 1978).

Accordingly, the researcher investigates the case regarding the economic consequences of the management's decision-making behaviour in R&D investment being influenced under the IAS 38 accounting policy (Research Question 1). The researcher, therefore, also investigates possible ways in which the management alters the actual financial outcomes, impacting the pragmatic decisions (Research Question 2). Additionally, the actual factors that can exacerbate such ordinary cases and force the management to use real earnings management strategies are also explored (Research Question 2). After analysing the quantitative and qualitative data, the researcher interprets and discusses the findings and their relationship with the theoretical part

of the study in the current chapter. The discussion begins with the findings derived from the quantitative method, followed by the findings from the qualitative approach, and concludes with a triangulation of results.

6.2. Discussion of Findings from the Quantitative Method

6.2.1. The Relationship Between the Economic Consequences and Management's Decisions

Prompting the study's main research question, the researcher investigates the impact of the economic consequences on management's decision-making behaviour in investing in R&D through real earnings management strategies, such as "Do the non-anticipated economic consequences positively influence management's decision-making behaviour in investing in R&D under IAS 38?". In an organisation, the economic consequences are associated with all accounting reports, specifically its financial statements (Zeff, 1978). So, any financial disclosure generates economic consequences, which provide valuable insights into the decision-making process (Zeff, 1978). Based on the above, in the quantitative part, the specific research question was examined via a web survey, and under the first hypothesis, namely, "*A company's non-anticipated financial performance positively impacts the management's manipulation of operational activities regarding R&D investment (IAS 38) to alter the financial reporting*".

Accounting policies influence an organisation's standard transactions and procedures (Zeff, 1978), which provide valuable information on the development of the entity's financial statements and financial disclosure (Milne, 2002). In practice, the management's decisions rely on the data generated from operational processes, which reflect the current status of an organisation (Li et al., 2021). Managers engage in business activities and choose to manipulate them, focused on achieving specific financial targets (Roychowdury, 2006). In particular cases, such manipulation is identified as questionable and results in affecting the informativeness of

the financial reports (Järvinen and Myllymäki, 2016). Hence, it is important to investigate the conditions under which financial performance influences the management's decision-making behaviour (Li et al., 2021), whereas specific conditions may be affected by questionable modifications to actual business activities, influencing the quality of the financial disclosure (Healy and Wahlen, 1999).

Furthermore, the accounting treatment of intangible assets, especially investment in R&D, under IAS 38, appears as an interesting, complicated, and crucial topic for all organisations (Oswald et al., 2021). IAS 38 operates as a key accounting policy to promote the disaggregation of specific transactions and expenses on the accounts being disclosed in the financial statements (Li et al., 2021). Following the above discussion, the researcher identifies a relationship between the company's financial performance and the management's acceptance of adopting manipulative operational practices under IAS 38 when investing in R&D. The above operational practices rely on the management's decision-making behaviour and real earnings management strategies, and result in altering the financial reporting.

The results showed a positive linear relationship between the two variables. Hence, the company's non-anticipated financial performance appears to positively impact management's decision-making behaviour about investment in R&D. Thus, an organisation with out-of-track performance leads the manager to follow more questionable practices intentionally, such as postponing an investment, delaying the recording of any expenses in the books, or transferring any costs from one project to another. The decisions mentioned above alter the actual result on the financial statements and provide a modified picture regarding the status of the organisation, which, in fact, is significantly different from the original. Hence, manipulative behaviour changes the actual results presented to the stakeholders and gives a false view regarding the organisation. On the contrary, an organisation's on-track performance might discourage the managers from adopting any questionable practices that may result in an unreal financial picture

of the entity. In such a case, the management team might choose not to interfere, leaving the organisation to operate as always. Therefore, the results meet the researcher's expectations and present the case mentioned above as it appears in practice.

In the literature, Bruns and Merchant (1990) identify the phenomenon that, generally, managers consider all practices ethical, moral, and fair when they are not explicitly prohibited. Such a view intentionally ignores other organisations' interested parties and how they use and interpret any modified financial disclosure, which is far removed from reality (Bruns and Merchant, 1990). Accordingly, Fischer and Rosenzweig (1995) agree that a management's attitudinal tolerance on earnings management actions appears to modify the reported accounting results, especially from high-ranked accounting experts. Also, Fischer and Rosenzweig (1995) identify a general pattern in the ethical acceptability of objectionable earnings management actions to achieve a more impressive performance. Senior managers follow some ethically irresponsible policies in extreme cases, which harm the stakeholders and the public trust (Fischer and Rosenzweig, 1995). As a consequence, the findings herein support the above and reflect the general view that the manager's ethical responsibilities are questioned by adopting real earnings management policies to achieve more impressive performance. In addition, the researcher goes a step further to conceptualise such situations related to strategic decisions in R&D investment. He also presents the CFOs as responsible agents for enhancing such conditions and clarifies that in vital R&D investments, such policies result in being harmful to all interested parties, even under IAS 38.

All the survey statements related to the abovementioned relationship indicate the CFOs' acceptance of following real earning management strategies and the impact on actual financial disclosure. Notably, in the "*Prepay Future Renovation Expenses*" and "*Prepay Next Fiscal Year's R&D Expenses*", the researcher expected the responses to show questionable behaviour by the CFOs since the statements present two legal conditions which affect the results in the

short term. The respondents' answers show agreement regarding the adoption of questionable practices and intentional manipulation of the actual financial disclosure. Any early liberal transfer and payment in an earlier fiscal year for the next fiscal year's scheduled investment in R&D support the short-term earnings manipulation with questionable financial information quality. Indeed, the manager's judgement shows that reducing earnings is more acceptable, as the direction of earnings affects matters for investment in R&D. Thus, the CFOs choose to adopt questionable and unethical practices to manipulate the earnings in the short-term and present some manipulated results regarding such an R&D-related investment. Moreover, managers do not distinguish the value of such time period-related choices, as they treat these choices equally to achieve R&D investment budget targets. The managers focus on the result and disregard the affected parties. Management usually finds it much more ethical to manage short-term earnings in one period and not impact others while following manipulative strategies through operational activities.

Furthermore, the "*Postpone Record an Invoice for Next Fiscal Year*" and "*Subcontracted R&D Company Issue the Invoice at Next Fiscal Year*" statements focus on the managers' desire to postpone such situations to the following fiscal year. The researcher, therefore, expected managers to prefer questionable activities based on the fact that the cases of postponing recording an invoice to the next fiscal year and delaying the issue of an invoice to the next fiscal year breach the accounting regulation. In reality, the above violations are correlated to accounting standards other than IAS 38. The respondents declare that any decisions generated at the end of a fiscal year to manage expenses are more important than others. At such times, managers find it more acceptable to manage earnings by changing or manipulating operating procedures than to follow questionable accounting methods in the short term. The result is always the same and relates to managing earnings temporarily. Hence, a manager deems it more ethical to attempt to convince an external stakeholder to postpone the

issue of a service invoice for a few months to the following fiscal year (operating process) than to delay the book recording of a small-value invoice to the next fiscal year (accounting method). Again, the essence of an unethical approach adopted by CFOs demonstrates a practical choice taken to serve individual interests. The managers believe that they are obliged to manipulate short-term operational activities through real earnings management strategies. Especially for potentially irregular alternatives, managers identify them as obligations and choose more questionable policies over unethical ones.

In addition, Cooper and Selto (1991) identify that managers pursue a positive evaluation of their choices to invest in R&D representing their organisations. When the company's performance is at stake, in the long run, such decision-makers choose to reduce or even exclude investments in R&D projects, like suboptimal investments (Cooper and Selto, 1991). The literature discusses that managers ethically follow such investment choices in R&D and addresses them as manipulative operational activities that influence financial disclosure for more than one year (Cooper and Selto, 1991). Moreover, managers also pursue a positive evaluation of their choices to invest in R&D through long-term overinvestment, especially when they are responsible for the R&D project's development (Seybert, 2010). In this case, the managers consider any changes in the operational processes acceptable to protect their reputation, resulting in overinvesting in R&D projects (Seybert, 2010). The literature addresses that the management usually follows such operational activities while adopting real earnings management strategies to manipulate the organisation's performance, which in some cases influences the investment for many years (Seybert, 2010; Cooper and Selto, 1991). Hence, the findings of this research support the case that managers are receptive to adopting operational manipulation strategies to put on track and/or achieve more impressive performance while investing in R&D projects rather than following strategies that breach accounting regulations. The researcher also addresses that the CFOs, as responsible agents, agree to follow accounting-

related activities, such as early liberal transfer and payment of next fiscal year's scheduled investment in R&D in an earlier fiscal year, and convince an external stakeholder to transfer a completed service invoice to the following fiscal year. So, the researcher adds to the real earnings management literature that accounting-related activities, which do not violate the law, are possible ways for the management to manipulate earnings in the short term. The managers opt to impact any alterations in the short term and, consequently, feel safer about their decisions. All the above signalise a managerial pattern, which acts similarly under any GAAP.

6.2.2. Importance of Financial Statements in Management's Manipulative Decisions

Since financial statements operate as indicators of the organisation's performance and management's effectiveness, researchers have seized the opportunity to evaluate specific managerial actions through them (Richard et al., 2009). Thus, the financial statements operate as an impactful tool for the organisation's management to evaluate performance and strategic decisions (Richard et al., 2009). Carraher and Van Auken (2013) claim that the source reliability of financial statements represents a critical factor in leading the decisions for an entity. All quality information emanating from the financial disclosure behaves comfortably for managers and influences their decision-making behaviour (Carraher and Van Auken, 2013). Following the above, the researcher investigated the second research question, "*How do the non-anticipated economic consequences (translatable into financial performance) positively influence management's decision-making behaviour with regard especially to real earnings management when investing in R&D under IAS 38?*". Initially, he relied on the importance of the financial statements as a factor that impacts the above relationship.

Furthermore, various stakeholders, such as the investors, extract valuable information from the financial statements, and their decisions rely on the quality of the financial outcome (Francis and Schipper, 1999). Thus, financial statements appear valuable to many interested

parties because they contain disclosed financial data and provide evidence for the actual performance (Francis and Schipper, 1999). All managerial decisions rely on financial information from various sources to benefit the organisation's decision-making process (Wouters and Verdaasdonk, 2002). The dispersion of financial information to the organisation's stakeholders minimises uncertainties and strengthens management trust (Wouters and Verdaasdonk, 2002). Hence, the above discussion advocates the importance of financial statements as a moderator for the managers to decide about an organisation's R&D investment, even though their decisions concern manipulative policies. Thus, the second hypothesis of the survey states: "*The importance of the financial statements to the manager strengthens the positive influence of a company's non-anticipated financial performance on the management's manipulation*".

The results did not support the hypothesis and showed no impact of the financial statements' importance on the positive linear relationship between a company's non-anticipated performance and management's acceptance of manipulation. So, the "importance of financial statements" does not act as a moderator that influences the linear relationship, but the results present its influence as a predictor. Hence, the "importance of financial statements" acts as a predictor, namely an independent variable, on the dependent variable. The financial statements' importance is positively related to the "*acceptance of intended manipulation*". The researcher expected to find a positive impact generated by the importance of the financial statements, which would strengthen the linear relationship. On the other hand, it was presented as a predictor that collaborates with the company's performance in the management's desire to follow real earnings management policies.

In the literature, Mia and Clarke (1999) maintain that the management relies upon analytical and reliable data to lead the strategy in the market competition. A significant part of the organisation's data is derived from the financial statements and displays the entity's

performance, as the organisation characterises them as crucial to the decision-making behaviour (Mia and Clarke, 1999). Management trusts, utilises, and converts all self-generated financial data (Beattie et al., 2006). The long-term survivability of the organisation counts on the importance of the financial data sources as indicated in the financial disclosure quality describing the entity's accurate picture (Beattie et al., 2006). Donelson et al. (2017) insist that the importance of financial statements is associated with their disclosure quality. All sources must provide clear and analytical data that affect the organisation's decisions (Donelson et al., 2017). The more analytical the financial statement disclosure, the better understood and recognised they are by the stakeholders, such as managers of the organisation (Almeida, 2019). Consequently, the findings support the above and present the perspective that the more important the financial statements are for the managers, the more significant they reflect on their decision-making behaviour. Furthermore, the researcher goes one step further to conceptualise that the financial statements' importance for the managers is an influential factor for the real earnings management strategies regarding R&D investment. Managers deem the financial statements very important, so they choose more questionable or unethical practices, which alter the actual financial disclosure. Therefore, provided the financial statements are significant for the managers, they will follow more questionable practices regarding the organisation's operational activities, such as more real earnings management strategies.

6.2.3. Reduced Information Asymmetry on Management's Manipulative Decisions

Successful investment decisions rely on accurate and timely financial data, which leads management to act perfectly in market conditions (Ross et al., 2016). So, advancing the second research question, information asymmetry appears as a second moderator for the management, following the importance of the financial statements. The concept of information asymmetry speaks to a lack of or willingly undistributed knowledge between two related agents (Healy and

Palepu, 2001). Management relies on accurate and timely information to make efficient investment choices and establish trust among stakeholders (Van Auken, 2005). Especially when an entity invests in R&D, management's concern focuses on reporting less financial information to the stakeholders, so their decisions rely on information asymmetry to avoid future risks regarding their reputation (Seybert, 2010). Thus, the status of information asymmetry in an organisation negatively affects the management's motivation to prevent dysfunctional and questionable practices that affect organisational performance (Chia, 1995). Accordingly, the third hypothesis of the survey is: "*Additional disclosure of R&D investments (IAS 38) weakens the positive impact of a company's non-anticipated financial performance on the management's manipulation*". The researcher expects that reducing the effect of information asymmetry will diminish the influence of a company's performance on management's real earnings management policies. Thus, more available quality knowledge reduces information asymmetry between the interested agents.

The results showed no impact of the additional reporting on R&D investments on the linear relationship between a company's performance and management's acceptance of manipulation. Accordingly, the variable appears not to influence the linear relationship, but the results showed that it acts as a predictor-independent variable. Hence, additional reporting on R&D investments positively influences the management's acceptance of manipulation, forcing the managers to use real earnings management policies to invest in R&D. The researcher expected a negative impact from the additional reporting on R&D investments, weakening the linear relationship. On the contrary, the "*additional reporting on R&D investments*" operates as a predictor-independent variable, collaborating with the company's performance in the management's desire to follow real earnings management policies.

In the literature, Van Auken (2005) says that excellent information dissemination by an organisation reduces information asymmetry among all interested parties. Accurate data are the

basic principle for establishing trust with the management team (Van Auken, 2005). The stakeholders recognise that the presented information is part of a clear and accurate picture of the organisation, representing reality (Van Auken, 2005). Ross et al. (2016) hold that successful investment decisions rely on accurate and prompt information. Usually, the management team decides under unstable and uncertain conditions when reduced information asymmetry is a necessary fact for successful decisions (Ross et al., 2016). Hence, information asymmetry for the organisations is a burden that develops mistrust among all stakeholders (Ross et al., 2016). Nevertheless, reduced information asymmetry motivates management to commit to transparency, develops influential conditions within the markets, and promotes stability and positive performance (Daske et al., 2013). As a result, the findings support the above and describe the CFOs' beliefs that knowledge dissemination is valuable for the long-term survivability of an organisation. Also, the CFOs support the view that reduced information asymmetry with the stakeholders can be achieved through specific policies and strategies provided the information is timely and prompt.

On the other hand, Graham et al. (2005) debate that the management team officially supports the disclosure of an organisation's relevant and valuable information. Nevertheless, in some instances, it must face the fear that disclosing specific information now may turn unpleasant with unexpected results in the future (Graham et al., 2005). This particular condition works as an excuse for the management to conceal specific information from the stakeholders and, as a result, exacerbate the information asymmetry with them (Graham et al., 2005). All the survey statements regarding information asymmetry investigated the CFOs' perspectives in promoting compulsory or/and voluntary policies to reduce such asymmetry among stakeholders regarding R&D investments. Such policies force management to avoid adopting real earnings management, provide transparency, and restore trust among all interested parties.

In fact, three (3) of the statements promoted the compulsory use of either timely or more descriptive and informative disclosure on investment in R&D projects. Specifically, the statements are “*Communicating R&D’s Financial Information Every Six Months Promotes Company’s Reputation*”, “*Detailed R&D’s Disclosure Increases Predictability of Company’s Future Prospect*”, and “*Communicating R&D’s Financial Disclosure Every Six Months Reduces Information Risk*”. The other suggested an additional voluntary disclosure of the above information, viz “*Additional Voluntary Disclosure in R&D Expenses Provides Important Information*”. The researcher expected all respondents to equally support timely and more descriptive disclosure on investment in R&D projects, which reduces information asymmetry and promotes beneficial results for the organisation and its management in the long run. As discussed, the respondents believe in reduced information asymmetry with the stakeholders but hesitate with the compulsory aspect. In the first three mentioned statements, the answers show such hesitation regarding the managers’ obligation to disclose more regularly and become more descriptive about the progress of the R&D investments. On the other hand, the responses to the last statement show their preference to voluntarily disclose any additional information whenever the managers choose to do so.

Following the findings exposed above, the managers exhibit limited questionable behaviour since the fear of being exposed in the future and destroying their reputation is vital to them when the accounting regulation permits them to do so. Seybert (2010) supports the idea that management chooses to disclose information that may prevent future impairment and risk its reputation. This is done by delaying the disclosure of information until the critical deadline or by completely avoiding the reporting of reliable data, taking for granted that they are not obliged to do so (Seybert, 2010). Furthermore, Anagnostopoulou (2008) acknowledges that the management needs to voluntarily disperse organisational information and reduce information asymmetry status with all interested parties. All managers recognise that specific need and

justify such actions by the early identification of the economic consequences of the R&D projects before the critical time to disclose any information (Anagnostopoulou, 2008). However, they usually avoid doing so (Anagnostopoulou, 2008). Hence, the researcher goes a step further and adds to the international accounting literature with the claim that IAS 38 provides options to the management to capitalise or expense, which operates as the basis for enhancing information asymmetry with the stakeholders. Accordingly, the accounting regulation becomes a factor that causes and exacerbates information asymmetry based on the managers' acknowledgement of promoting opportunistic behaviour. The accounting regulation must be more explicit and prohibit managers' opportunistic behaviour via ignorance.

6.2.4. Conclusion of the Discussion on Quantitative Findings

The research findings support the context that the company's financial performance appears to impact management's decision-making behaviour about investment in R&D, and the influence is negative. The findings, therefore, reflect the perspective that the management uses more real earnings management policies to manipulate the company's performance when they do or do not meet the targets. Also, the findings help the researcher to conceptualise specifically the direct influence of the CFOs on the investments in R&D through real earnings management and identify them as vital agents who exacerbate such situations with their behaviour. Furthermore, the findings support the hypothesis that managers practically choose to manipulate operational activities as they feel more secure in the long run with their decisions. In addition, the researcher identifies that managers prefer to follow real earnings management even more by manipulating operational activities in the short run. The reason for this is that they feel more secure in controlling such questionable practices in a short period. Following the above discussion, the study contributes to the real earnings management literature that the economic consequences operate as a factor for the management to adopt real earnings

management policies. Another point that the present study advances for the real earnings management literature is that managers feel more secure following real earnings management activities in the short run, in view of the fact that they can easily control such activities in a short period of time.

Furthermore, the findings support the context that the importance of the financial statements for management positively affects their decision to promote manipulative operational policies about investment in R&D. Hence, the more important the financial statements are for the managers, the more likely it is that they decide to use real earnings management strategies while investing in R&D. Following the above discussion, the last-mentioned finding contributes to the real earnings management literature too. The importance of the financial statements appears as an influential factor for managers to promote real earnings management strategies regarding R&D investments, which results in modifying the organisation's actual financial picture.

Finally, the research findings showed an impact of the additional reporting on R&D investments on the managers' decision to proceed with more manipulative activities. Hence, the more detailed the mandated financial disclosure on R&D investments, the less intense the information asymmetry and the more likely it is that managers follow more real earnings management policies when investing in R&D. This particular finding contributes to the real earnings management literature, where information asymmetry works as a factor that promotes real earnings management in organisations. In addition, the researcher goes a step further and identifies that the choices promoted from an accounting standard, like IAS 38, grant management the option to use the information asymmetry phenomenon and proceed with real earnings management to meet the company's performance. So, when an accounting standard provides managers with the option to choose, the information asymmetry is greater. The above discussion shows that the last finding contributes to the international accounting literature and

provides evidence that when an accounting standard offers different options to managers, their choices lead to information asymmetry. Thus, the managers' opportunistic behaviour exacerbates the information asymmetry between the agents, and a more flexible accounting regulation promotes such situations.

6.3. Discussion of Findings from the Qualitative Method

6.3.1. Influence of Economic Consequences on Decision-making Behaviour under Real Earnings Management

In investigating the study's first research question, the researcher focuses on managers' ethical sensitivity to follow questionable organisational practices when performance is off track, aiming to alter the actual financial disclosure. Management's behaviour operates as part of the business strategy and directly influences the company's performance diversely (Hoque, 2004). The management sometimes follows questionable strategies relating to managing earnings, influences the organisation's financial disclosure, and generates information asymmetry with the stakeholders (Graham et al., 2005). Accounting reports provide insights that impact management decisions, and accounting report development relies on accounting standards (Wilner, 1982). Following the discussion, the study's research question is: *“Do the non-anticipated economic consequences (translatable into financial performance) positively influence management's decision-making behaviour with regard especially to real earnings management when investing in R&D under IAS 38?”* Any tolerance of questionable practices from the management relies on various reasons that alter earnings and intentionally manipulate the actual financial outcome of the organisation (Bruns and Merchant, 1990). Wilner (1982) proposes that it is beneficial to investigate the effects of various accounting standards on managerial behaviour for all interested parties.

For the present study, the researcher investigated the presence of real earnings management strategy, which affects decisions on investment in R&D and influences the disclosure of the financial statements under IAS 38. The researcher expected that the managers would follow and adopt real earnings management policies regarding R&D investments when the organisation's performance is out of track. In their answers, the interviewees unanimously stated that hypothetically and pragmatically, the option for the management to proceed with unethical and manipulative activities is pragmatic and influences investment decisions, such as in R&D. The CFOs' responses analytically described a reality that affects the quality disclosure of the financial statements and actually changes the organisation's financial image. Such a reflection of reality presented a clear picture of how the industry works and how managers react to standard organisational practices. Moreover, all participants' statements recognised as a fact the management's adoption of manipulative actions when their focus is to present a different financial outcome for their organisations. In summary, the results showed that all participants identified unethical and questionable activities focusing on the company's status and performance, specifically about investment in R&D. Even though some of them claimed that they avoided following such practices in their companies, some interviewees indirectly admitted adopting them on a few occasions in the past. The results support the researcher's belief that the management follows manipulative policies when the performance is not on target, especially regarding investment in R&D. Multiple factors lead to unethical and illegal activities; nevertheless, the management's focus on real earnings management strategies appears the most preferable.

In the literature, Bruns and Merchant (1990) discuss management's high tolerance in earnings management practices regarding the organisation's operations, which affects financial disclosure. In general, the management team follows operational practices based on opportunistic behaviour and simultaneously considers the organisation's short-term

performance (Bruns and Merchant, 1990). An accounting or an operating manipulation appears unethical when it misleads the users of the financial statement (Fischer and Rosenzweig, 1995). In practice, there appears to be a pattern in the ethical acceptability of objectionable earnings management actions. Such actions focus on ameliorating an organisation's performance and usually occur in standard organisational practices (Fischer and Rosenzweig, 1995). Seybert (2010) further discusses the management's preference to proceed with questionable practices to prevent the fear of damaging its reputation. The management operates under opportunistic behaviour, and its concern focuses only on following the accounting regulations in the USA (Seybert, 2010).

Consequently, the current findings support the appearance of a real earnings management strategy, which affects decisions about investment in R&D and influences the disclosure of the financial statements. Managers would follow and adopt real earnings management policies regarding R&D investments when the organisation's performance is not on track. Furthermore, the researcher goes a step further and conceptualises such situations in R&D investment strategic decisions and specifies that even under IAS 38, the CFOs, as responsible agents, follow real earnings management practices, which are detrimental to all interested parties. The latter results from a more pragmatic approach since the interviewees are practitioners responsible for such managerial behaviour.

In addition, regarding the first research question, the researcher investigated the influence of the organisation's performance on management's decisions to adopt real earnings management strategy regarding R&D investment, which influences the disclosure of the financial statements under IAS 38. Zeff (1978) says all accounting reports provide practical insights and describe an organisation's performance, influencing management's decisions. Investment decisions especially require financial information, which feeds the decision-maker (Beattie et al., 2006). Any financial information is vital for all stakeholders' decisions and leads

the organisation's evaluation and future predictions (Govindarajan, 1980). The management's quality of decision relies on the correct presentation of the organisation's standard transactions via the accounting numbers, which minimises risk and uncertainty (Wouters and Verdaasdonk, 2002). An organisation's financial performance relates to the quality of accounting information and controls the level of influence of information asymmetry on the stakeholders (Wouters and Verdaasdonk, 2002).

The researcher investigated the importance of the organisation's performance on the management's decisions in the above condition. In fact, the researcher expected that the managers considered the organisation's performance very important when deciding on their strategy for investment in R&D under IAS 38. The results showed that financial performance, insofar as its presentation in the financial statements, impacts the management's decisions and steers it to adopt various practices that would change the actual financial performance. Also, financial reports are essential for managerial practices and lead future strategies by providing different information depending on the entity's needs. All respondents said that a company's performance is vital for management, especially the results generated from the financial statements. Even those representing loss-making organisations stated that their first decisions usually focus on producing new products, but in the end, the financial performance guides the management's decisions. Following the discussion, the management team usually finds a way to proceed with questionable activities based on performance; thus, the organisation's decision-making behaviour relies on the disclosure of financial data. At the same time, the executives are forced to make choices that meet the targets. Hence, the results support the researcher's hypothesis that an organisation's performance is very important for the management and guides its decision-making behaviour.

In the literature, Mia and Clarke (1999) acknowledge the management's need for qualitative accounting information when deciding on important issues in a competitive market.

Financial information is highly valuable, contains the data to disclose, and provides evidence to all interested parties over a long window (Francis and Schipper, 1999). When evaluating an organisation, all stakeholders depend on the quality of the financial statement, which also describes the organisation's performance (Donelson et al., 2017). Exploring and measuring organisational performance also allows researchers and managers to evaluate specific actions and activities by companies and managers (Richard et al., 2009). All performance measurements rely on the accounting disclosure and result to guide the interested parties' decisions (Almeida, 2019). The more analytical the financial statement disclosure, the more specific and understandable the measurements are by the stakeholders, so the more they rely on them (Almeida, 2019). Inevitably, the findings from the present research support the fact that the organisation's performance is very important to the management's decision-making behaviour. The more important the financial statements are for the management, the more reliant the organisation's performance is on the real earning management strategies regarding investment in R&D.

6.3.2. How the Economic Consequences Influence Decision-making Behaviour through Real Earnings Management

Following the study's first research question, the researcher proceeds to investigate the second research question. Graham et al. (2005) state that standard operational practices and various factors influence the organisation's strategies, which are placed on the financial statements at the end of the fiscal year. In everyday business decisions, the management team makes decisions under the pressure of performance targets and must constantly recognise the most appropriate actions under the accounting regulations and with ethical responsibility (Fischer and Rosenzweig, 1995). Following the discussion, the study's second research question is: *"How do the non-anticipated economic consequences (translatable into financial*

performance) positively influence management's decision-making behaviour with regard especially to real earnings management when investing in R&D under IAS 38?". Therefore, the researcher also investigates how the management uses the economic consequences that impact the pragmatic decisions through real earnings management and alters the actual financial outcomes. Furthermore, the researcher investigates the factors that exacerbate such ordinary cases, which force the management to use more real earnings management strategies.

Organisations operate using contracts with various agents with respect to the choice of accounting methods (Holthausen, 1990). Hence, the financial results and consequences derived from the said contracts may lay under monitoring and the conflicts of interest between different parties (Holthausen, 1990). The management of an organisation usually chooses to continuously monitor financial statement progress as a solution to face competition effectively (Mia and Clarke, 1999). Moreover, such organisational policy leads to reliably keeping track of financial information and positively impacts more uncomplicated operational activities, ultimately improving the company's performance (Mia and Clarke, 1999). Monitoring the performance of existing R&D projects, in particular, operates as a way to protect the manager's reputation (Seybert, 2010). The researcher, therefore, expected managers to follow continuous monitoring of the financial data policy to avoid unexpected negative results or even to minimise the failure of a strategy.

The results showed that most interviewees follow or suggest a continuous monitoring policy of the financial statements and performance. By adopting such policies, the interviewees succeeded in preventing any unexpected and urgent results. The management's intention focused on consistently and promptly identifying any deviations from the targets. Such continuous monitoring of the performance policy operated as an influential factor in an organisation's decision-making behaviour, supporting the importance of financial statements and enhancing real earnings management activities. In some cases, the respondents admitted

that the specific strategy was followed while the organisation's operations were in progress and that the management reacted to protect the organisation's interest.

In the literature, Mia and Clarke (1999) discuss the continuous monitoring of financial statement progress as a helpful strategy for the management of the organisation. Reliable monitoring of financial information positively impacts more uncomplicated operational activities and improves the organisation's performance (Mia and Clarke, 1999). The management constantly acknowledges the entity's performance as a valuable tool to control and correct unacceptable results or urgent situations (Mia and Clarke, 1999). Seybert (2010) identifies the specific strategy as a highly self-monitoring behaviour adopted by managers, which protects them from reputational damage and focuses on controlling continuing risky R&D investments. Furthermore, monitoring the organisation's financial performance nurtures a feeling of stability and confidence in the management team (Mia and Clarke, 1999). Following the discussion, the current research's findings support the existence of manipulative strategies for the managers' decision-making behaviour when the organisation's performance is off track. The researcher goes a step further and identifies that the continuous monitoring of financial statements policy behaves as a way to exacerbate real earnings management strategies in R&D investments under IAS 38.

Likewise, the researcher proceeds to investigate the second research question by discussing another way management might utilise the economic consequences with real earnings management and alter the actual financial outcomes. In practice, the lack of knowledge between two agents reflects a desire for one of them to influence the transactional decisions opportunistically, namely the information asymmetry phenomenon (Dunk, 1993). Chia (1995) emphasises the fact that the existence of information asymmetry in an organisation constitutes a potential reason for creating dysfunctionalities in organisational operations and altering performance. Prompt, high-quality, and detailed financial information forms good investment

decisions for management and acts as the primary determinant along with reduced information asymmetry (Van Auken, 2005). The researcher, therefore, expected management to insist on preserving information asymmetry to exacerbate the option of following real earnings management policies because of the organisation's negative performance. In addition, inefficient or opportunistic use of accounting standards grants the organisation's management the option to operate with questionable strategies based on the lack of information provided to the stakeholders (Hung, 2001).

The results showed that the management prefers to exacerbate information asymmetry conditions when the organisation's performance is off track, which conditions facilitate the adoption of real earnings management strategies. Information asymmetry exacerbates opportunistic behaviours and focuses on ways of manipulating the actual financial disclosure of the organisation. Such practices rely on accounting standards which are open to opportunistic use and interpretation. The respondents stated that IAS 38 promotes cases of information asymmetry for different reasons. "Investment in R&D" needs to be separate from IAS 38 without adding more work to the practitioners and restricting any information asymmetry status. Such a solution would display all appropriate information analytically regarding the accounting administration of investment in R&D and make adopting any future functional changes easier. Some interviewees also debated the need for the accounting standard to engage with ESG. Nowadays, ESG is vital to the organisation's investments and creates essential issues in the management's investment decisions regarding the bookkeeping process, especially in relation to R&D.

In the literature, Ross et al. (2016) state that "thorough" knowledge is unrealistic for organisations since reality supports conditions for asymmetric and not on-time information. The organisation's managers, specifically the CFOs, support practices that voluntarily promote disclosure and transparency regarding financial information (Graham et al., 2005).

Nevertheless, in practice, the managers fear that voluntarily disclosed data may prove challenging to maintain in the future and release “bad” news faster, which may affect their reputation (Graham et al., 2005). Furthermore, Seybert (2010) says that management’s fear is primarily of disclosing information that may have reputation-damaging implications in the future. Indeed, the role of the accounting standard is primarily to provide understandable information to all interested parties, resulting in information disclosure and reduced information asymmetry (Wilner, 1982). Each accounting standard includes specific guidance for its administration, and the practitioners are the best-placed to criticise it (Madsen, 2013). Thus, the findings support that the management continues to adopt information asymmetry policies focusing on using real earnings management when performance is off track. The researcher goes a step further by identifying that IAS 38 promotes cases of information asymmetry by giving options to managers to adopt different policies. At the same time, the practitioners ask for an updated accounting standard following critical issues combining R&D investments and ESG. Such a situation leads to the emergence of the need to develop an autonomous and transparent accounting standard which is modernised and reflective of the current conditions. The findings, therefore, contribute to the international accounting literature, debating the development of accounting standards which promote exclusive guidance while eliminating the option to use real earnings management and being relevant to the current conditions.

6.3.3. Factors Influencing the Economic Consequences' Impact on Management's Decision-making Behaviour through Real Earnings Management

Following the above analysis, the researcher proceeds to investigate the second research question by discussing factors that affect the management’s use of real earnings management under the influence of the economic consequences to alter the actual financial outcomes. It is advantageous for the management to be able to clearly identify all essential factors that affect

the organisation's performance (Mia and Clarke, 1999). All the factors associated with the organisation's characteristics and the management's cognisance of them characterise its awareness of the particular entity (Mia and Clarke, 1999). Thus, the researcher expected to identify some factors that impact management's decision-making behaviour to use the economic consequences in real earnings management and alter the actual financial outcomes under IAS 38.

According to the responses, the results showed that the CFO's accounting knowledge, role and professional experience, the organisation's cognisance, and grant funding are all important factors. The experts' accounting knowledge influences how an entity implements and adopts accounting policies, even though some are very influential for the organisation's operations. There are crucial decisions involving the essential participation of an accounting expert to identify the law and use it for the company's benefit, besides the fact that the stakeholders demand all targets to be met. Such expertise and professional experience lead to substantial participation by the CFO in the decision-making process and to his or her impacting other management team members. Accordingly, the expert's role in the organisation is vital due to his or her increased responsibilities. As mentioned earlier, all such responsibilities reflect the personal and professional characteristics that influence the decision-making behaviour of the management team. Lastly, grant funding operates as an influential factor in the managerial decision, which might demand independent administration to follow the grant's requirements. All respondents admit the use of questionable methods to meet the basic requirements regarding this funding, which might result in changes in the actual financial picture of the organisation.

In the literature, the practitioner's role and professional experience usually harmonise the accounting rules with the respective accounting policies adopted at the organisation (Ghio and Verona, 2018). Ghio and Verona (2018) argue the importance of the above characteristics on the accounting policies and the organisation's operationalisation while characterising them

as influential factors for the entity. In fact, accounting professionals rely on their knowledge and ability to implement accounting policies in organisations, affecting their performance and corporate philosophy (Mia and Clarke, 1999). Jaworsky and Young (1992) argue that the experts' accounting knowledge influences an entity's decision-making processes in the same way as the business model and other factors. Consequently, the findings support the influence of the above factors on management's decision-making behaviour to use the economic consequences with real earnings management and alter the actual financial outcomes. The practitioner's role, professional experience, and accounting knowledge operate as influential factors in the organisation's decision-making process. Furthermore, the researcher goes a step further to add the existence of grant funding as an important factor. Grant funding operates as a vital factor for organisations in the long run. There are, in fact, companies the stakeholders call "Grant Junkies", which rely on funding explicitly, making that factor equally important for the management's decision-making behaviour.

6.3.4. Conclusion of the Discussion on the Qualitative Findings

Completing the discussion about the qualitative study, the findings support the case that the company's non-anticipated financial performance positively impacts the management's decisions about investment in R&D through real earnings management strategies. Thus, the findings answer the study's first research question and indicate that managers prefer to adopt questionable policies to manipulate operational activities and alter the entity's financial disclosure. The interviewees' responses help the researcher conceptualise a direct relationship between the CFO's decision-making behaviour and R&D investment using real earnings management when the company's financial performance is off track. In fact, the findings support hypothetically and pragmatically that the managers, in practice, choose questionable or unethical practices to manipulate the organisation's operations when the results are not as

expected, which impacts the R&D investments. All the CFOs described analytically such questionable cases and characterised them as pragmatic and part of a standard process for some organisations. Their knowledge and experience identified the effect on the financial statements and how such cases influence the quality of the actual financial disclosure.

Also, despite some respondents claiming they avoid following such questionable practices in their organisations, their analytical answers displayed quite the opposite during the discussion. From the data analysis, the researcher distinguished that, in reality, the respondents followed such questionable practices when necessary. Furthermore, their answers presented ways and factors that lead to unethical and illegal activities, claiming that these practices are preferred by the organisation's management team. Following the above discussion, the particular study contributes to the real earnings management literature by presenting the economic consequences as a factor for the management to follow questionable policies when necessary. Furthermore, the study's contribution justifies that the managers proceed with real earnings management policies with the perception of controlling any non-anticipated consequences and developing more secure circumstances for themselves.

Following the study's first research question, the researcher proceeds to investigate the second research question related to the ways and factors that force the management to follow real earnings management strategies influenced by the economic consequences. The findings showed the importance of the organisation's performance in the management's decision-making behaviour. The researcher identified that the financial performance, stemming from the financial statements, impacts the management's decisions and induces the management to adopt various practices that would change the actual financial disclosure. All respondents admitted that an organisation's performance is vital for the entity's management, especially the results generated from the financial statements. Realistically, some managers rely heavily on financial performance, leading to decisions about future managerial strategies. Inevitably, the findings

support the fact that the more important the financial statements are for the management, the more the organisation's performance depends on the real earnings management strategies concerning investments in R&D. Hence, the latter finding contributes to the real earnings management literature as well, by presenting the importance of financial statements as an influential factor for the managers, while promoting questionable practices regarding R&D investments.

Furthermore, the findings showed that the managers follow a policy of continuous monitoring of the financial data to avoid unexpected negative results or even to minimise the failure of a strategy. The findings support that, in reality, the management focuses on consistently identifying any deviations from the targets and promptly reacting. Through the specific policy, the managers could easily follow a real earnings management strategy when the results are not as expected and influence the decision-making process, such as the investment in R&D. So, the particular policy operates as an influential factor in a company's decision-making behaviour, supports the importance of financial statements, and exacerbates the real earnings management activities. Also, in some cases, the CFOs admitted that the specific strategy was followed while the operations were in progress, and the management reacted to protect the organisation's interest. Thus, the finding contributes to the real earnings management literature as it shows that the continuous monitoring of the financial data operates as an influential factor for the management to adopt questionable actions and influence the financial statements.

Following the discussion, another finding presents information asymmetry as an influential factor in a manager's decision-making behaviour. The management preserves information asymmetry with all interested parties to promote real earnings management policies when the performance is out of track. In reality, information asymmetry promotes opportunistic behaviours and focuses on ways of manipulating the actual financial disclosure of the

organisation. Such practices rely on accounting standards which permit opportunistic use and interpretation. IAS 38 provides managers with the option to select and follow any accounting policy. The respondents identified that “Investment in R&D” needs to be individual as an accounting standard and be developed in ways to secure reducing cases of information asymmetry. Such a solution would display all appropriate information analytically regarding the accounting administration of investment in R&D and make adopting any future functional changes easier. Also, some interviewees debate the need for the accounting standard to engage with the ESG, which is vital to the organisation’s investments nowadays. This finding, therefore, contributes to the international accounting literature and provides evidence regarding the efficiency of accounting standards, such as IAS 38.

Finally, the research findings present other factors that impact the manager’s decisions and promote real earnings management. The results show that the CFO’s accounting knowledge, role and professional experience, the firm’s cognisance, and grant funding are important to lead management to follow questionable practices. The expert’s accounting knowledge influences the way an organisation follows accounting policies. At the same time, the manager’s role relies on the manager’s obligations and power to promote any decision and policy. All the above reflect the personal and professional characteristics that influence the decision-making behaviour of management team members. Lastly, grant funding operates as an important, influential factor that leads the organisation’s policies and managers’ decisions. The last-mentioned factor relies on an independent administration and forces the organisation to focus more on the grant requirements. Following the above discussion, the finding related to grant funding contributes to the real earnings management literature. The responses indicate excessive accounting administration for the grant funding, which in specific cases forces the management to proceed with questionable practices merely to meet the funding’s requirements.

6.4. Triangulation of Results

In the remaining part of the chapter, the researcher briefly discusses the study's results following the triangulation of results. The author employed triangulation to provide confirmation of the quantitative and qualitative findings, more comprehensive data and enhance the understanding of the studied phenomenon through different methods (Denzin, 2009). The results correspond to each of the research objectives mentioned below in the present subchapter and relate to the study's research questions.

Objective 1: Identify the positive effect of the non-anticipated economic consequences (translatable into financial performance) on management's decision-making behaviour with regard especially to real earnings management when investing in R&D under IAS 38.

In an organisation, the economic consequences are associated with all accounting reports, and any financial disclosure generates economic consequences, which provide valuable insights into the decision-making process (Zeff, 1978). In practice, the management's decisions rely on the data generated from operational processes, which reflect the current status of an organisation (Li et al., 2021). Managers engage in business activities and choose to manipulate them, focusing on achieving specific financial targets (Roychowduryi, 2006). In particular cases, such manipulation is identified as questionable and results in affecting the informativeness of financial reports (Järvinen and Myllymäki, 2016). Such questionable strategies include managing earnings, influencing an organisation's financial disclosure, and generating information asymmetry with the stakeholders (Graham et al., 2005).

Any tolerance of questionable practices from the management relies on various reasons that alter earnings and intentionally manipulate the actual financial outcome of the organisation (Bruns and Merchant, 1990). Accounting reports provide insights that impact management's decisions, while the organisation's development of the accounting report relies on the

accounting standards (Wilner, 1982). Wilner (1982) proposes that it is beneficial for all interested parties to investigate the effects of various accounting standards on managerial behaviour. Following the above discussion, the researcher observes the existence of managers' "relaxed" ethical principles in their decision-making behaviour (metaphor). Thus, he identifies a relationship between the company's financial performance and the management's acceptance of adopting manipulative operational practices under IAS 38 when investing in R&D (differentiation). The above operational practices rely on the management's decision-making behaviour and real earnings management strategies, altering the financial reporting under real earnings management (conceptualization). So, the researcher investigated the choice of real earnings management strategy when the organisation's performance is off track, which affects decisions about investment in R&D under IAS 38.

Similar to the relevant literature, the findings of the quantitative research indicate that managers use more real earnings management policies to influence their decision-making behaviour when their company's performance is off track, and the relationship is positive. At the same time, the findings of the qualitative research indicate that managers prefer to follow real earnings management strategies when the organisation's financial performance is not on track, impacting the decision-making behaviour. Also, the qualitative study shows that management's opportunistic behaviour might drive adopting real earnings management strategies regardless of company performance. Hence, triangulating the results from both studies, there appears to be a positive relationship between the company's non-anticipated financial performance and management's acceptance of adopting real earnings management policies, thus, its decision-making behaviour. The finding identifies that the economic consequences are an influential factor contributing to real earnings management literature, following the study's theoretical model while supporting the existence of such a relationship in an organisation's operations (Figure 1). Such a case supports the researcher's belief that

economic consequences act as an influential factor in promoting questionable practices and altering financial disclosure.

Furthermore, the researcher goes a step further and conceptualises the above relationship with investment in R&D strategic decisions under IAS 38. The findings show that there is a positive relationship between the company's non-anticipated financial performance and the management's acceptance of adopting manipulative operational practices under IAS 38 when investing in R&D. The above operational practices rely on the management's decision-making behaviour and real earnings management strategies while resulting in altering the financial reporting. In reality, the managers follow and adopt real earnings management policies regarding R&D investments when the organisation's performance is not on track. The appearance of a real earnings management strategy affects decisions about investment in R&D and influences the disclosure of the financial statements. Thus, an entity with off-track performance intentionally leads the manager to follow more questionable practices.

Summarising, the results indicate that all participants identified the existence of unethical and questionable activities that focused on the organisation's status and performance when they had the opportunity, specifically in relation to investment in R&D. Despite some of them claiming that they avoid following such practices in their companies claiming them as unethical and, maybe illegal, some interviewees indirectly admitted that they had occasionally adopted them in the past. The results support the researcher's belief that the management follows manipulative policies when the performance is not on target, especially regarding investment in R&D. Any change in the IAS 38 might reduce such practices while presenting the actual financial image. Following the above discussion, the research contributes to the real earnings management literature by presenting the economic consequences as a factor for the management to follow questionable policies when it is deemed necessary. Theoretically, the research evidences the existence of REM under IAS 38 on investment in R&D while relying

on a dysfunctionality of the accounting standard. Furthermore, the study's contribution practically justifies that the managers tolerate real earnings management with the perception of controlling any non-anticipated economic consequences and developing more secure circumstances for themselves. Any transfer of various development costs between different projects changes the accounts' real image and alters the actual financial disclosure. Such cases are important to be acknowledged by the organisation's stakeholders while demanding further disclosure and enlightenment, which might affect the decisions.

Objective 2: Exploring in detail the process whereby the non-anticipated economic consequences (translatable into financial performance) positively influence management's decision-making behaviour in investing in R&D under IAS 38.

Organisations follow monitoring policies in relation to the financial results, the consequences, and the conflicts of interest between different parties (Holthausen, 1990). The management of an organisation usually chooses to continuously monitor the progress of financial statements as a solution to face competition effectively, to reliably keep track of financial information, and to positively impact more uncomplicated operational activities (Mia and Clarke, 1999). Any financial information is vital for all stakeholders' decisions and leads the organisation's evaluation and future predictions (Govindarajan, 1980). An organisation's financial performance relates to the quality of the accounting information and controls the level of information asymmetry influence on the stakeholders (Wouters and Verdaasdonk, 2002). In reality, financial information is highly valuable, contains the data to disclose, and provides evidence to all interested parties over a long window (Francis and Schipper, 1999). So, exploring and measuring organisational performance allows researchers and managers to evaluate specific actions and activities of companies and managers alike (Richard et al., 2009). All performance measurements rely on accounting disclosure and result to guide the interested

parties' decisions (Almeida, 2019). The more analytical the financial statement disclosure, the more specific and understandable the organisation's measurements for all interested parties (Almeida, 2019).

Based on the above discussion, the researcher identifies the management's choice for continuous monitoring policy of the financial data as a "tool" to avoid unexpected results or even to minimise the failure of a strategy. Such a choice describes a managerial approach of continuously monitoring the accounts and the numbers, focusing on being alert to avoid unexpected results. In practice, all these strategies develop a connection with the company's performance and how these influence the financial statements. The managers identify the importance of continuously checking the numbers and interpreting them while connecting them with the results of their decisions. So, any behavioural relationship is characterised as excused when servicing an interest. In a business concept, the described phenomenon can be extensive, following the management's decisions and hiding under its various strategies.

Similar to the relevant literature, the findings of the qualitative research indicate that managers follow a continuous monitoring policy of the financial statements and performance, preventing any unexpected and urgent results. The management's intention is to identify any deviations from the targets promptly. The author then goes a step further and conceptualises the continuous monitoring policy with real earnings management, influenced by the importance of the organisation's performance. Hence, it is important to investigate the conditions under which financial performance affects the management's decisions and policies (Li et al., 2021). Reliable monitoring of financial information positively impacts more uncomplicated operational activities and improves the entity's performance (Mia and Clarke, 1999). The management constantly acknowledges the organisation's performance as a valuable tool to monitor and correct unacceptable results or urgent situations (Mia and Clarke, 1999).

So, financial statements appear valuable to many interested parties because they contain disclosed financial data and provide evidence for the actual performance (Francis and Schipper, 1999). All managerial decisions rely on financial information from various sources to benefit the organisation's decision-making process (Wouters and Verdaasdonk, 2002). Following the discussion, the researcher investigates the importance of the organisation's performance in relation to the management's decisions and, as a result, its policies. The managers value the company's performance highly when deciding their organisational strategy. Thus, similar to the relevant literature, the quantitative research findings show that an organisation's performance is important for management and leads to its decision-making behaviour. Simultaneously, the findings of the qualitative study indicate that the financial performance, as reported in the financial statements, impacts the management's decisions and promotes the management's adoption of various practices that would change the actual financial performance. Hence, triangulating the results from both studies, the financial statements, like the organisation's financial performance, are vital for the managers when deciding policies and strategies. The more important the financial statements are for the company, the more the management adopts a continuous monitoring policy, ensuring that it would be easier to adopt real earnings management strategies.

So, the connection between the economic consequences and the management's decision-making behaviour is enhanced by a monitoring policy of the important financial statements (Figure 1). The results support the researcher's belief that a continuous monitoring policy acts as a way for the management to proceed with more questionable practices when their strategies are not on track with the anticipated performance. In conclusion, the findings show that managers follow a continuous monitoring policy of the financial data to control risks and unexpected results. This specific decision is more likely to be made when the organisation's financial performance is vital to them. Thus, the findings contribute to the real earnings

management literature and support that a continuous monitoring policy operates as an influential factor for the management, especially when the organisation's performance is important to the managers. Adopting the continuous performance monitoring policy acts as an influential factor in an entity's decision-making behaviour, supports the importance of financial statements, and fosters real earnings management activities. An organisation's interested parties empirically must always identify any chosen policies that will impact the final disclosure, especially when these policies affect reality.

Another way in which the management can influence its decision-making behaviour is via information asymmetry with the stakeholders. Management relies on accurate and timely information to make efficient investment choices and establish trust among the stakeholders (Van Auken, 2005). Prompt, high-quality, and detailed financial information forms good investment decisions for the management and acts as the primary determinant along with reduced information asymmetry (Van Auken, 2005). Information asymmetry in an organisation negatively affects the management's motivation to avoid dysfunctional and questionable practices that affect organisational performance (Chia, 1995). However, when investing in R&D, management's concern focuses on reporting less financial information to the stakeholders, so their decisions rely on information asymmetry to avoid future risks with reference to their personal reputation (Seybert, 2010).

Following the discussion, the researcher identifies the management's desire to preserve information asymmetry conditions, which enhances the option of following real earnings management policies because of the out-of-track performance of the organisation. Information asymmetry fosters opportunistic behaviours and focuses on ways of manipulating the actual financial disclosure of the organisation. Such practices rely on accounting standards which permit opportunistic use and interpretation. Whenever an accounting standard provides the option of choice, the decision-makers can choose different accounting policies. So, the

researcher investigated how the management insists on information asymmetry conditions to adopt more real earnings management activities when the organisation's performance is off track. The researcher expected to find a direct relationship between information asymmetry and the influence of the company's performance on management's decisions, especially on R&D investment.

Similar to the relevant literature, the quantitative research findings indicate an effect of information asymmetry on management's decision-making behaviour. However, the relationship is the opposite of what was expected. In other words, more information disclosure, and therefore less information asymmetry, reflects on the management to follow more real earnings management activities. In fact, the specific condition supports exacerbated information asymmetry upon R&D investment. At the same time, the findings of the qualitative research indicate that the management prefers to strengthen information asymmetry conditions when the organisation's performance is off track, which conditions facilitate the adoption of more real earnings management strategies. Hence, triangulating the results from both studies, information asymmetry promotes ways of manipulating the actual financial disclosure of the organisation when the organisation's performance is out-of-track. The management adopts the information asymmetry status and, at the same time, chooses real earnings management without considering the obligation of disclosing specific and timely data.

Summarising, the findings indicate that management continues to adopt information asymmetry policies focused on using real earnings management when the performance is off track. The CFOs support the view that reduced information asymmetry with the stakeholders can be achieved through specific policies and strategies following timely and prompt information. The respondents also believe in reduced information asymmetry with the stakeholders through voluntary disclosure and hesitate with the compulsory aspect. Graham et al. (2005) argue that management officially supports voluntarily disclosing an organisation's

relevant and valuable information. Even so, the management, in some instances, must face the fear that disclosing specific information today may turn unpleasant for them in the future with unexpected results (Graham et al., 2005). Managers do not hesitate to disclose at any time information that could be modified when they can monitor the performance. After the triangulation of the results, the case of the influence of information asymmetry is real while contributing to the real earnings management literature as an influential factor. The disclosure of the financial performance of the stakeholders is influenced by the information asymmetry policy, which drives the management's choice to follow an REM strategy for investment in R&D (Figure 1). The findings influence REM literature by advancing that the information asymmetry can operate as a way to enhance such policies. Also, in practice, such policies are opportunistic, and all stakeholders must be alert while demanding further knowledge and financial data. However, the fact that there is a diverse reaction shows ideas for future research focused on the specific situation.

Moreover, the findings from the qualitative study demonstrate the need for changes in IAS 38. The responses concentrated on the development of a specific individual accounting standard regarding investment in R&D. The last would display all appropriate information analytically regarding the accounting administration of investment in R&D and make adopting any future functional changes easier. Also, some interviewees debate the need for the accounting standard to engage with the ESG, which is vital to the organisation's investments nowadays. So, the finding contributes to the international accounting literature and provides evidence regarding the efficiency and practicality of accounting standards, such as IAS 38.

Objective 3: Exploring the factors engaged in the positive impact of the non-anticipated economic consequences (translatable into financial performance) on management's decision-making behaviour in R&D investment under IAS 38.

An organisation's management benefits from clearly identifying all the essential factors that affect the organisation's performance, such as the firm's characteristics (Mia and Clarke, 1999). Some other factors, such as the practitioner's role and professional experience, usually harmonise the accounting rules with respective accounting policies at the organisation, focusing on positively reflecting on long-term performance (Ghio and Verona, 2018). In fact, accounting professionals also rely on their knowledge and ability to implement accounting policies in organisations, affecting, in the long run, their performance and corporate philosophy (Mia and Clarke, 1999). Jaworsky and Young (1992) maintain that the experts' accounting knowledge influences an organisation's decision-making processes in the same way as the business model and other factors. Ghio and Verona (2018) support the importance of the above characteristics on the accounting policies and the company's operationalisation while distinguishing them as influential factors for the entity.

Based on the above discussion, the researcher identifies the factors that impact management's decision-making behaviour to use the economic consequences with real earnings management when investing in R&D. Many factors can affect management's decision-making process initialising with the essential organisational characteristics, and continuing with the accounting expert's experience, knowledge, and role. All of the above rely on the accounting expert's presence, while the financial data provide vital information for the management team. In the case of investment in R&D, all the provided financial data appear as a factor impacting decisions and signal the accounting expert as the agent who can drive the decisions.

Similar to the relevant literature, the findings of the qualitative research indicate that the CFO's accounting knowledge, the manager's role and professional experience, the firm's cognisance, and grant funding are all important factors in the management's decision-making behaviour. The expert's accounting knowledge influences how an entity implements and adopts accounting policies, thus leading the management's decision-making behaviour from the

financial disclosure perspective. In reality, such expertise and professional experience make the manager a key player in decision-making by informing and clarifying complexities, finally impacting other management team members. All the factors mentioned above reflect the personal and professional characteristics that influence the decision-making behaviour of managers. The accountant's personal characteristics, professional expertise and knowledge are valuable tools for an organization to secure the quality of the disclosure of the financial statements. However, any exertion different from this can easily promote unethical policies and even manipulative activities of financial data relating to investments in R&D.

All the above-mentioned can impact the operational activities of an organisation by challenging the bookkeeping process indirectly. The accounting experts, relying on their knowledge, can easily suggest transferring the cost centres from one investment to another when they identify any non-anticipated performance. As a result, many accounts may be affected by such activities, influencing the smoothing of the accounting process. Thus, all these factors enhance real earnings management and can appear influential in the REM literature. Also, from a more practical perspective, accounting experts must follow more ethical behaviour even when indirectly promoting illegal actions.

On the other hand, one exogenous factor appears to be highly influential on organisations that invest in R&D, namely "grant funding". This represents an influential factor in the managerial decision (Hogan et al., 2022), which might demand independent administration to follow the grant requirements. Especially in R&D-intensive firms, the impact of "grant" funding on performance is strong, proving the loyalty of specific funding agents to insist correctly (Vanino et al., 2019). Also, the management of the funded entities relies on the funding as soon as it positively impacts the performance and long-term survival of the organisation (Vanino et al., 2019). The positive relationship between public R&D funding,

innovation and a firm's growth is real and supports all managerial efforts to absorb and engage with it (Aguar and Cagnepain, 2017).

In some companies, the management relies on "grant" funding to enhance the investments in R&D. In order to receive it, all organisations must fulfil specific prerequisites, so the managers administrate and prepare the financial data for it. As a result, the more important the funding for the company, the more the management focuses on preparing the organisation for it. Especially for an R&D investment, the management identifies different administration periods, one at the beginning to receive the fund and another during or at the end of the investment to fulfil any critical prerequisites. Such an administration might use the grant funding as an excuse to proceed with questionable policies affecting the final disclosure. All respondents admitted the use of questionable methods to meet the basic requirements of the funding following REM strategies in their organisation's operations, which might result in changes in the actual financial picture of the organisation.

Hence, the "grant" funding operates as an important factor in real earnings management literature while enhancing such questionable policies. Moreover, the stakeholders must always be meticulous when receiving financial data from organisations that rely on funding. In some cases, the management proceeds with questionable strategies relating to fulfilling any prerequisites and resulting on even altering the final result. So, the "grant" funding is an influential factor in the concept of the non-anticipated economic consequences influencing managerial decisions when investing in R&D under the IAS 38. Such influence could be reduced through a more systematic disclosure of the related data and by promoting changes in the responsible accounting standard.

Consequently, the findings address the existence of the above factors influencing management's decision-making behaviour to use the economic consequences with real earnings management and alter the actual financial outcomes. The practitioner's role, professional

experience, and accounting knowledge act as influential factors in the manager's personal views, thus affecting the decision-making behaviour. Furthermore, the researcher goes a step further to add the existence of "grant funding" as an important, influential factor. Grant funding is a vital factor for the long-term survival of the organisations (Hogan et al., 2022). Indeed, there are companies that the stakeholders call "Grant Junkies", which explicitly rely on funding, making this factor equally important as any other. This particular factor needs to be investigated more in the future as it appears as a dominant organisational characteristic in more entities nowadays than in the past decade (Hogan et al., 2022).

7. Conclusions, Implications, Limitations and Directions for Future Research

7.1. Introduction

The present chapter brings the discussion of the current thesis to an end, concentrating on the major findings of the research. Accordingly, it also presents the implications, limitations of the research and future research directions. Notably, in subchapter 7.2., the researcher summarises the findings of the thesis based on the research objectives. In the following subchapter, 7.3., the researcher presents the major theoretical and managerial implications of the study. Subchapter 7.4. illustrates the limitations of the research and subchapter 7.5. concludes with a detailed research agenda grounded on the findings of the study.

7.2. Conclusions of the Empirical Findings

The research question investigated in this study was “if” and “how” do the non-anticipated economic consequences of adopting IAS 38 positively influence the organisation’s management decision-making behaviour to adopt real earnings management policies regarding investment in R&D. The research purpose was to investigate the influence of the economic consequences on an entity’s management’s decision-making behaviour when deciding on an investment in R&D under IAS 38. Furthermore, the researcher identified possible ways for the management to intentionally engage in manipulative behaviours that lead to affecting the actual result of the financial statements as influencing factors. Also, the study excavated specific factors that encourage managers to adopt any questionable practices leading to manipulation of the actual financial disclosure.

The aforementioned research purpose was further broken down into three (3) research objectives, namely to:

- 1) identify the positive effect of the non-anticipated economic consequences (translatable into financial performance) on management's decision-making behaviour with regard especially to real earnings management when investing in R&D under IAS 38.
- 2) explore in detail the process whereby the non-anticipated economic consequences positively influence management's decision-making behaviour (translatable into financial performance) when investing in R&D under IAS 38.
- 3) explore the factors that influence how the non-anticipated economic consequences positively impact management's decision-making behaviour (translatable into financial performance) when investing in R&D under IAS 38.

In order to meet the objectives mentioned above, the author has conducted two (2) different studies: one quantitative and the other qualitative. The data collection methods employed were a survey for the quantitative research and a semi-structured interview for the qualitative. In both studies, the population sample is intended to represent managers, specifically CFOs, from publicly listed companies in the UK that have adopted IAS/IFRS and met the professional managerial experience and accounting knowledge criteria. Analytically, for the survey, the researcher targeted approximately 1,265 UK-listed companies based on the FAME database and, as a result, a proportionate number of participants – the CFOs. On the other hand, for the semi-structured interview, the researcher targeted approximately 247 UK-listed companies based on the FAME database and, as a result, a proportionate number of participants, again the CFOs. Explicitly for the interviews, the companies the CFOs represent must have an R&D department and follow the IAS 38 accounting policy. The sample for the qualitative study was different to that of the quantitative study. So, the FAME database provided a list following all the above criteria for the qualitative study and excluded the rest for the quantitative study.

Subsequently, the researcher obtained the CFOs' communication insights from their organisation's website, "*LinkedIn*" or "*RocketReach.co*", and electronically contacted all the participants in both data collection methods. The survey duration presented in the thesis was four (4) months, from the 1st of November 2021 until the 28th of February 2022, while the semi-structured interview was five (5) months, from the 1st of November 2021 until the 31st of March 2022. All communication processes were conducted electronically by email. Also, the survey was carried out electronically via "*Qualtrics Surveys*" software, and the interviews were conducted through "*Zoom*" and "*GoogleMeet*" telecommunication platforms, with an average duration of forty-five (45) minutes. During that period, empirical data was collected through 165 fully completed surveys and ten (10) detailed, in-depth interviews. Finally, the data collection activities culminated in the completion of a retrievable database containing 165 surveys, ten (10) positive answered interview consent forms, sixty-seven (67) pages of single-spaced interview transcripts, seven (7) video-recorded electronic files, and twenty (20) pages of organised field notes which were held during the process by the interviewee. Unfortunately, three (3) participants refused to be video recorded during the interview process.

Following the quantitative study, specifically at the end of February 2022, all questionnaires were entered manually into the IBM SPSS 26 statistical software suite exclusively by the researcher in a wider format, in a row-entity and a column-variable form. The researcher ran the descriptive statistics process, the independent t-test, and finally, multiple regression analysis. At the end of the qualitative study, namely the end of March 2022, the researcher uploaded all the transcribed documents to NVivo 12 data analysis software. Thematic analysis was performed with the transcribed interviews, including the field notes. Analysis of the qualitative results was based on the thematic analysis technique.

In the remaining part of subchapter 7.2., the researcher briefly discusses the main results of the study corresponding to each of the research objectives as stated below.

Objective 1: Identify the positive effect of the non-anticipated economic consequences (translatable into financial performance) on management's decision-making behaviour with regard especially to real earnings management when investing in R&D under IAS 38.

Management's decisions rely on operational data generated to reflect the current status of the organisation (Li et al., 2021). Any operational activity and organisational transaction reflect a chosen accounting policy adopted by the management and directly affects the accounting reports (Zeff, 1978). Thus, accounting reports follow the organisation's accounting policies and are impacted by the accounting standards (Wilner, 1982). The said reports cause valuable feedback for the organisation's interested parties and eventually influence the entity's managerial decisions, constituting economic consequences (Zeff, 1978). Indeed, all organisational data provide valuable information to the management and summarise the entity's transactions for a specific period (Li et al., 2021). The management, therefore, decides the way an organisation should proceed in ordinary business strategies and activities (Roychowdury, 2006). The managers have the convenience of engaging in all these activities, and it is at their discretion to formulate them in a way to achieve financial targets (Roychowdury, 2006).

In effect, some business strategies and activities appear questionable and relate to influencing an organisation's actual financial disclosure (Järvinen and Myllymäki, 2016). The management follows them, focusing on managing earnings and manipulating certain financial results while generating information asymmetry with the stakeholders (Graham et al., 2005). Any tolerance of questionable practices followed by the management results in altering earnings and intentionally manipulating the actual financial outcomes (Bruns and Merchant, 1990). The findings support the researcher's belief that management decides to adopt manipulative policies when performance is not on target. So, the researcher identifies a relationship between the economic consequences (translatable into financial performance) and the management's

decision-making behaviour, with regard especially to real earnings management, under the accounting regulation. Specifically, there appears to be a positive relationship between the company's non-anticipated financial performance and management's acceptance of adopting manipulative strategies. The researcher conceptualises the above relationship with the strategic R&D investment decisions under IAS 38. Hence, managers will decide on adopting real earnings management strategies regarding R&D investment when the organisation's financial performance is off track under the IAS 38 guidance and control. Such a case of manipulation could appear in all phases of a company's life-cycle and all stages of an investment's growth, namely an R&D investment. Thus, a company with off-track financial performance impels the management to be more accepting of intentionally adopting questionable practices, especially when an accounting standard provides the option for interpretation and misuse. Therefore, a controversial accounting standard, like IAS 38, distorts an organisation's financial reality, making it important to further investigate its dysfunctionality and connection to reality. All the above contribute to the real earnings management literature, presenting that the economic consequences influence the management's decision-making behaviour. Also, in reality, all stakeholders, especially the shareholders, should always consider the demand for further financial disclosure to reduce the possibility of manipulation.

Objective 2: Explore in detail the process whereby the non-anticipated economic consequences (translatable into financial performance) positively influence management's decision-making behaviour when investing in R&D under IAS 38.

One way the economic consequences influence management's decision-making behaviour is through the strategy of continuous monitoring of financial statements and performance. The management regularly checks the organisation's financial disclosure and economic consequences while tracking any conflicts of interest between different

organisational agents (Holthausen, 1990). The managers support the choice of continuously observing and controlling the progress of the financial statements as a solution to effectively face the market competition (Mia and Clarke, 1999). So, a strategy of continuous monitoring of the financial statements leads management to reliably keep track of financial information while influencing uncomplicated operational activities with positive results for the organisation (Mia and Clarke, 1999). Hence, the financial information presents the organisation's performance to all interested parties, leading to its evaluation and future predictions (Govindarajan, 1980). A pragmatic picture of an organisation's financial performance relies on the quality of the accounting information while controlling and efficiently minimising information asymmetry with the stakeholders (Wouters and Verdaasdonk, 2002).

In practice, financial data act as a valuable informational factor to an entity's interested parties in the long run (Francis and Schipper, 1999). Researchers, as well as managers, measure organisational performance to evaluate the company's activities and strategies (Richard et al., 2009). Any performance measurement relies on analytical financial disclosure, and the more precise a measurement is, the more understandable its result is for all stakeholders (Almeida, 2019). Therefore, it is essential to investigate the conditions under which the financial performance status is developed, which status, in turn, affects managerial decisions (Li et al., 2021). A continuous financial information monitoring policy represents an important managerial instrument for organisational control. The researcher expected to find such mechanisms that will influence management's decision-making behaviour. Research findings indicate that the management adopts a continuous monitoring policy of the financial statement and performance to make appropriate decisions to predict and prevent any unexpected and/or negative results. The researcher conceptualises the continuous monitoring policy of financial data as a way of influencing any decisions regarding the organisation's investment in R&D under IAS 38. In reality, it is adopted as a strategic policy that controls management's decision-

making behaviour; thus, it can contribute as a way of enhancing real earnings management to its related literature. Furthermore, all managers trust such policies and use them to predict, prevent, and reflect their decisions in accordance with their organisation's performance.

Additionally, the importance of financial information determines the level of monitoring for an organisation. All managerial decisions rely on financial information to benefit decision-making processes (Wouters and Verdaasdonk, 2002). The disclosed financial data stem from the financial statements while providing valuable evidence for an organisation's actual performance to all interested parties (Francis and Schipper, 1999). The researcher identified that the company's performance is a very important factor in the management's decisions. Hence, financial statements, such as financial performance, are vital insofar as they influence the organisation's strategies and policies. The more important the performance is for the management, the more an organisation will follow continuous monitoring policies of the financial data to prevent risks and secure the expected results. Adopting a continuous performance monitoring policy serves as an influential factor in a company's decision-making behaviour, supports the importance of the financial statements, and enhances real earnings management activities.

Furthermore, another way the management of an organisation can influence decision-making behaviour is by means of information asymmetry in relation to the stakeholders. Prompt, high-quality, and detailed financial information leads to efficient managerial decisions about investment and establishes trust with the stakeholders, along with reduced information asymmetry (Van Auken, 2005). Also, the presence of information asymmetry enhances dysfunctional and questionable practices that affect the organisation's actual performance (Chia, 1995). Organisations follow an imbalanced knowledge policy with their stakeholders to opportunistically enjoy a competitive advantage over the other party (Dunk, 1993). Seybert

(2010) addresses that managers are concerned with reporting less financial information to the stakeholders about R&D investments to avoid future risks and jeopardise their reputation.

Ross et al. (2016) state that “thorough” knowledge is unrealistic for organisations since reality supports asymmetric and not on-time information conditions. The organisation’s managers, specifically the CFOs, support practices that voluntarily promote the disclosure and transparency of financial information (Graham et al., 2005). Nevertheless, in effect, managers fear that voluntary disclosure of data may make it challenging to maintain stability in the future and release “bad” news faster, which may affect their reputation (Graham et al., 2005). The researcher recognised an effect of the information asymmetry regarding the disclosure of financial information on management’s decision-making behaviour. Such an effect follows an inverse impact, so the less information asymmetry, the greater the quality of the financial disclosure. The findings indicate that the management prefers to exacerbate information asymmetry conditions in general and behave opportunistically, but especially when the organisation’s performance fails to meet expectations and even when it is obliged to disclose more information to the stakeholders. Hence, information asymmetry acts as a way of manipulating the actual financial disclosure of the organisation when it is vital for the management to protect its high-ranked members’ reputations. The findings support that the management continues to adopt information asymmetry policies focusing on using real earnings management while investing in R&D. The more the data the organisation is responsible for disclosing, the greater the information asymmetry status is in relation to the interested parties. All information asymmetric cases influence managerial policies and, theoretically and practically, act as ways to follow real earnings management policies.

Objective 3: Explore the factors that influence how the non-anticipated economic consequences (translatable into financial performance) positively impact

management's decision-making behaviour when investing in R&D under IAS 38

Each accounting standard service explicitly needs to recognise, present, and disclose the organisation's transactions and financial information. In practice, the standard can operate as an influential factor in management's decision-making behaviour. One of the standard's core objectives focuses on minimising lack of knowledge while promoting transparency and guidance to all the organisation's interested parties (Wilner, 1982). Accounting practitioners are the most suitable players to practically evaluate and criticise the efficiency of an accounting standard (Madsen, 2013). Inefficient or negatively evaluated accounting standards grant the organisation's management the opportunity to behave opportunistically based on the lack of information conveyed by the entity to its stakeholders (Hung, 2001). The researcher recognised a gap stemming from the application of IAS 38, especially regarding the option provided for managers to interpret and apply the accounting standard, in some cases opportunistically. Therefore, the findings generated from the qualitative study reveal a demand for changes from the practitioners' part in relation to IAS 38. The responses concentrated on developing an individual accounting standard regarding investment in R&D. Such development leads the accounting users to display all information analytically about the administration of investments in R&D while providing evidence about the accounting standard's efficiency and practicality.

Moreover, a separate accounting standard makes it easier to adopt any future functional modifications vital to the organisation nowadays, such as engaging with ESG. The results stemming from the qualitative study showed that the managers are highly sceptical about their organisations' investments in R&D in accordance with the ESG policy. Some interviewees expressed that it is a disincentive for them to invest following the ESG since the administration of these amounts is always to expense them. Hence, the increased amounts reduce the entity's profits or even change the financial status of the income statement from profit to loss. As a

result, the management suggests avoiding adopting ESG strategies as investments, which can be harmful and disadvantageous for the company and society. In the company's case, it may result in breaking the law and paying enormous penalties. Also, society will face another environmental dilemma that will impact all its members. Theoretically and practically, these dilemmas are pragmatic, presenting the dysfunctionality and incompatibility of an accounting standard as a crucial factor in enhancing real earnings management, and identifying the need for an updated and harmonised standard in the international accounting literature.

In addition, an advantage for an organisation's management is the ability to clearly and precisely identify all organisational factors that influence performance (Mia and Clarke, 1999), and, as a result, the management's decisions. All of an organisation's characteristics are important for its accounting policies and operationalisation (Ghio and Verona, 2018). The characteristics of an organisation, and the practitioner's professional traits and abilities act simultaneously and equally as factors influencing the decision-making processes (Jaworsky and Young, 1992). The findings of the qualitative research show that acknowledging the organisation's unique characteristics, the CFO's accounting knowledge, and the manager's role and professional experience are important factors in the management's decision-making behaviour. The researcher's expectations focused on the appearance of these factors while operating as influential to the management's strategic decisions. So, all the above supports the literature that the management relies on these inputs when deciding about investments and other vital organisational activities. In practice, all the factors indicate the crucial importance of the expert's participation in decision-making processes by informing and clarifying complexities, which simultaneously impact other decision-maker agents. Each one acts as a factor enhancing real earnings management, which contributes to the specific literature.

Furthermore, the qualitative study presented another equally important factor influencing decisions, namely the "grant" funding. Grant funding is a factor of utmost

significance for technological innovation, resulting in economic growth (Jacob and Lefgren, 2011). Such an exogenous factor appears to be highly influential on organisations' decisions when investing in R&D. The researcher did not consider the existence of this significant factor, which stemmed from the interviews with the CFOs. The findings reveal that independent accounting administration might be needed to follow the grant's requirements, which can occur in all stages of an investment, for example, the early stage or later. All respondents admitted the use of questionable methods to meet the basic requirements of the funding, which might result in changes in the actual financial picture of the organisation without distinguishing the stage at which this manipulation will appear. Grant funding operates as a vital factor for organisations in the long run when investing in R&D. In fact; there are companies that the stakeholders call "Grant Junkies", which explicitly rely on funding, making that factor equally important and influential as others. Grant funding seems to require further investigation in the near future since some scholars debate its importance and usefulness for the management (Hogan et al., 2022). It appears as a dominant organisational characteristic in more entities nowadays than in the past decade, and governments have promoted investment policies based on grant funding by further supporting it. Furthermore, it can easily characterised as a factor enhancing real earnings management while contributing to the relevant literature.

7.3. Implications of the Research

The present study bears implications for both theory and managerial practice. Previous empirical research in the context of accounting standards, economic consequences and real earnings management has explicitly demonstrated the importance of economic consequences on management decision-making behaviour through real earnings management under an accounting standards regulation, specifically the US GAAP (Wilner, 1982; Cooper and Selto, 1991; Oswald and Zarowin, 2007; Seybert, 2010). The current study also offers empirical

findings regarding the influence of the economic consequences on management's decision-making behaviour when investing in R&D under IAS 38. Moreover, it outlines how the organisation's management interprets them and uses them in the entity's operational activities. As a result, the management focuses on modifying the actual financial disclosure to the stakeholders. Such situations tend to appear as a managerial effect on an entity's decision-making behaviour, especially when deciding on R&D investments. To the best of the researcher's knowledge, such a systematic endeavour to approach the interaction of economic consequences with real earnings management under IAS 38 is among the pioneering studies in the extant literature. It further enlightens the presence of the organisation's real earnings management strategies, their value for the management decisions and their significance on the R&D investment of an organisation. In addition, the present research stresses the difficulties that generate the implementation of real earnings management strategies within the organisation when indirectly allowed by the international accounting standard, such as the IAS 38. Specifically, researchers can delve into the abovementioned issues and more holistically grasp the notion of economic consequences affecting management's decisions via real earnings management while provoking the functionality of an accounting standard.

Besides being theoretically insightful, the current research has several important implications for managers, all stakeholders and policy-setters. Firstly, it offers insights relevant to the managers' tolerance of unethical and questionable activities when investing in R&D. Bruns and Merchant (1990) and Fischer and Rosenzweig (1995) state that such questionable behaviour and willingness from the management to manipulate earnings and meet targets is risky and presents a critical issue related to the manager's ethics and responsibilities. The research findings provide managers with some guidance on the need to be highly aware that ethics and personal integrity are deeply connected to standard business decisions (Fischer and Rosenzweig, 1995; Seybert, 2010). There is no guarantee that someone's behaviour is ethical

only by following the law and organisation's policies, while in reality, the choices alter the actual picture of the entity (Bruns and Merchant, 1990; Fischer and Rosenzweig, 1995; Seybert, 2010). An organisation's stakeholders have to be continuously aware and question the reality of the financial disclosure while never fully trusting the management's ethics and willingness to disclose all appropriate data without altering them. Managers need always to remember that ethics are essential to their decision-making behaviour.

Secondly, the research offers insights relevant to the managers' desire to proceed with unethical and questionable activities when investing in R&D under IAS 38. The management team needs to focus on ensuring the stakeholders' trust and support. Seybert (2010) states that managers have the opportunity to follow real earnings management, even though they are responsible for the financial disclosure of the organisation's investments. Managers operate as the key keepers of the organisation's operations, control them and undertake decisions that change them (Gunny, 2010). The research findings provide the stakeholders with evidence to constantly question the managerial practices since the focus is on managing earnings effectively, even though the management must follow the accounting regulations (Cohen et al., 2008). The management tends to engage in real earnings management strategies due to existing information asymmetry with the stakeholders (Järvinen and Myllymäki, 2016). In reality, the management of an organisation adopts real earnings management policies that rely on the presence of information asymmetry with the stakeholders. Such policies lead the stakeholders to question their trust in the management when they realise that vital information is unavailable.

Thirdly, the research offers insights relevant to managers' intention to follow real earnings management strategies when investing in R&D, despite such strategies being forbidden by international accounting legislation, namely the IAS 38. In practice, policy setters always need to consider the practitioners' discretionary interpretation of accounting standards, which would prevent real earnings management strategies. Hoppe and Gray (1982) and Nobes

and Stadler (2015) state that the accounting standard setter's purpose is to provide accounting standards that are more efficient, uninfluenced by other political forces and with predicted economic consequences. Such accounting standards would eliminate any misunderstandings and misuse from the industry based on their framework (Hoppe and Gray, 1982; Nobes and Stadler, 2015). Economic consequences research creates opportunities for accounting policymakers to acquire meaningful feedback on how accounting standards affect management's accounting choices (Ruland, 1989; Pope and McLeay, 2011). Also, all economic effects behave as critical factors to an accounting standard setter when considering the efficiency of the qualitative framework of an accounting standard, despite the IASB (Nobes and Stadler, 2015). The policy setters are responsible for developing accounting regulations capable of leading the accounting obligations of an organisation effectively and protecting all of the stakeholders' interests while always considering that providing the option of choice to the managers could result in REM.

In summary, it has often been suggested in the literature that opportunistic behaviour, the lack of loyalty and morality, and the need to increase wealth drive the manager's views and decisions (Deegan and Unerman, 2011). The present study provides insights about the presence of REM when the performance is off track, which affects decisions about investment in R&D. As a result, it influences the disclosure of the financial statements under IAS 38. In short, the research findings suggest that an organisation's stakeholders must be "more aware of opportunities for manipulation of reported earnings by means of operating decisions." (Fischer and Rosenzweig, 1995, p. 441). The option of choice afforded by an accounting standard must be beneficial to all interested parties and not only the management team.

7.4. Limitations of the Research

One limitation of this research is associated with the exploratory nature of both studies. In the present research, two (2) different methodological approaches are followed, one quantitative and the other qualitative. Both studies follow an exploratory approach and investigate research questions that aid the researcher in acquiring more in-depth information (Stebbins, 2001). Since the study is among the influential research endeavours to explore the effect of the economic consequences on management's decision-making behaviour via real earnings management when investing in R&D under IAS 38, no definite conclusions can be drawn regarding the causality of relationships outlined in Figure 5. Although reducing information asymmetry positively affects the management's motivation to avoid dysfunctional and questionable practices influencing the organisational performance (Chia, 1995); nonetheless, the results exhibit an opposite effect, which indicates a low extent of generalisability. This, therefore, prevents the articulation of normative conclusions (Rea and Parker, 2014; Stake, 2010) while providing an opportunity for future research to give more insights regarding the above.

Another potential limitation of this research is the use of the experimental survey method to explore the issue under investigation. Charness et al. (2013) argue that experimental study cannot control extraneous variables since the natural environment provides certain challenges. Specifically, in the current study, the appearance of the "Grant Funding" factor as an extraneous variable represents a limitation of the research since it has not been included. Grant funding has been accrued from the qualitative analysis, not the literature. So, to the best of the researcher's knowledge, grant funding in the particular concept has not been investigated. On the contrary, this can also be a potential strength since grant funding is a factor of great importance for technological innovation, resulting in economic growth (Jacob and Lefgren, 2011). Also, the lack of collection of demographics on the companies represented by the

participants is another extraneous variable. The organisation's characteristics, namely size, maturity, performance, etc., are extraneous challenging variables which may act as valuable controls of the experimental survey (Charness et al., 2013). For future research, integrating similar extraneous data might enhance the study's validity and provide new insights.

In the case of the survey's scenarios, a study's limitation is the choice of using one scenario for each participant. All respondents received only one of the two scenarios, preventing the researcher from conducting a comparative analysis. Using both scenarios for each participant could be very useful in understanding and identifying any relative behavioural impact of different factors under different conditions (Dillman et al., 2014). When the research goal is to understand the affection on respondents' attitudes and behaviours influenced by different circumstances and treatments, the more qualified choice is to give each one all possible scenarios (Dillman et al., 2014). A comparative analysis is a suggestion for future research to develop an in-depth investigation of similar research questions and objectives while having the opportunity to generalise similar attitudes and behaviours.

Following the survey mentions, the lack of Likert-scale descriptors given to the respondents is another limitation of the quantitative study. The exact analysis of the four (4) from the seven (7) descriptors was unclarified to the participants. Such a case may increase a bias by providing more response options on either side of the midpoint when the participants identify the mentioned choices clearly (Dillman et al., 2014). In future research, any replication of the current study must clearly present all descriptors' options and develop more reliable conditions while comparing data across different studies.

Another limitation of this study is related to the use of UK-listed companies as the focused stock exchange market context for the research. The selection of this market is also considered a potential strength of the study since it is one of the most prestigious markets, including high-ranked companies, to the best of the researcher's knowledge. Yet, the transfer

of the research to another stock exchange market would be an early priority in order to build a substantial understanding of the investigated subject.

7.5. Directions for Future Research

The limitations of this study allow directing a researcher to paths for further research. The exploratory nature of this research is associated with low generalisability. Indeed, further research should be conducted to provide additional evidence on the research objectives in national contexts. Investigating listed companies on stock markets from other countries may influence more in-depth research on equally prestigious companies listed only in other nations' stock markets. A qualitative approach may provide even more evidence related to the cultural aspect of these nations and how the managers interpret sensitive notions, like ethics and morality, from a professional and personal perspective.

As far as the first research objective is concerned, namely, the “*identification of the positive effect of the non-anticipated economic consequences (translatable into financial performance) on management's decision-making behaviour with regard especially to real earnings management when investing in R&D under IAS 38*”, further interviews with managers in R&D-related organisations may build upon the findings of the present study and seek to validate these findings on a larger scale. Any interviews using more themes generated from the specific research might provide evidence regarding grant funding, information asymmetry, managers' reactions and other matters. Also, for the first research objective, an experimental survey adding the newly generated themes from the qualitative study, including organisations' demographic characteristics, providing each participant with all possible scenarios simultaneously, and developing scenarios with more options about the organisation's financial performance may validate these findings. The new scenarios may adapt to more pragmatic

conditions for the participants and may extract closer-to-reality responses focused on the core of this study.

Regarding the second research objective, “*explore in detail the process whereby the non-anticipated economic consequences (translatable into financial performance) positively influence management’s decision-making behaviour when investing in R&D under IAS 38*”, future studies may build upon the findings of this study and validate them. Furthermore, new research may provide more clues about the managers’ behaviours when deciding about investments. Also, acknowledging these new ways may influence the accounting policy setters to consider these evidences when developing an accounting standard. The practitioners are the appropriate actors to evaluate an accounting standard since they are responsible for its interpretation and use (Allee et al., 2008). Therefore, a mixed methods study, starting with an interview method and following other research approaches, may provide sufficient data about the way an accounting practitioner and/or manager models the financial outcomes.

Concerning the third research objective, “*exploration of the factors that influence how the non-anticipated economic consequences (translatable into financial performance) positively impact on management’s decision-making behaviour when investing in R&D under IAS 38*”, future studies may investigate more factors and build more evidence based on the findings of the specific study. Any new research may provide sufficient support on the importance of the factors to this relationship and identify their economic consequences. Identifying these factors may help accounting policy setters develop a more efficient qualitative features framework influenced by the particular factors (Nobes and Stadler, 2015), especially the IASB. Also, the management needs to acknowledge such factors to better evaluate an organisation’s performance (Donelson et al., 2017). ESG is one of the factors that may influence the accounting standard regulation, and practitioners debate its usefulness extensively. So, a

qualitative approach to new research may provide specific evidence that leads the accounting policy setters.

Furthermore, investigating the economic consequences' influence on management's decision-making behaviour under other accounting standards may build upon the findings of the current research. Again, any further research may provide additional evidence regarding the efficiency of the standard to avoid such manipulative practices. A cross-accounting standard investigation may help identify how other reporting methods impact management's behaviour (Seybert, 2010). Any new research following the methodological strategy of the current study, adopting a pragmatic theoretical approach while focusing on the practitioners' reality and standard practices, may enhance the importance of economic consequences for organisations and how these influence management's additional use of REM strategies.

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Appendices

Appendix 1: Survey's Cover Letter

Dear Sir / Madam,

My name is Angelos Angelakis, and I am a Doctoral Researcher at the University of Sheffield Management School. I am pursuing a study in managerial practices and International Accounting Standards (IAS). I am inviting you to participate in this online survey, which purpose is to define and estimate the connection between the International Accounting Standard (IAS) 38's accounting policy and management's investment strategy. Specifically, it is upon managerial changes in its long-term strategy upon investment in Research & Development (R&D). The resulting dataset will benefit future studies on International Accounting Standards, professional accountants, and the International Accounting Standards Board (IASB). Furthermore, you can also enter a prize draw and win £50 worth of vouchers by completing the survey.

You have been selected to participate since the research concentrates on UK's publicly listed companies which have adopted the IAS/IFRS. Participation is entirely voluntary and will take you no longer than ten (10) minutes to complete. The attached document provides additional information regarding the research study. Also, the link below will direct you to the survey and an online consent form where you may indicate your desire to participate.

If you would like further details, please send me an email to Mr Angelos Angelakis: aangelakis2@sheffield.ac.uk

This research has received ethical approval from the University of Sheffield Ethics Committee in the Management School (Reference Number: 037776).

This research is supervised by Dr. Abongeh Tunyi and Dr. Sarah Lauwo.

Thank you for your ongoing participation in this project.

Kind Regards,

Angelos Angelakis, AFHEA, BSc, MSc.
Doctoral Researcher
Accounting and Financial Management Division
Sheffield University Management School

Appendix 2: Survey's Consent Form

**Economic Consequences of IAS 38 and Impact on Organisation's Management Decision-Making Behaviour when Investing in R&D.
Consent Form**

<i>Please tick the appropriate boxes</i>	Yes	No
Taking Part in the Project		
I have read and understood the project information sheet dated DD/MM/YYYY, or the project has been fully explained to me. (If you answer No to this question, please do not proceed with this consent form until you are fully aware of what your participation in the project will mean.)	<input type="checkbox"/>	<input type="checkbox"/>
I have been given the opportunity to ask questions about the project.	<input type="checkbox"/>	<input type="checkbox"/>
I agree to take part in the project. I understand that taking part in the project will include completing an online questionnaire.	<input type="checkbox"/>	<input type="checkbox"/>
I understand that by choosing to participate as a volunteer in this research, this does not create a legally binding agreement, nor is it intended to create an employment relationship with the University of Sheffield.	<input type="checkbox"/>	<input type="checkbox"/>
I understand that my taking part is voluntary and that I can withdraw from the research, with or without notice, at any time before DD/MM/YYYY; I do not have to give any reasons for why I no longer want to take part, and there will be no adverse consequences if I choose to withdraw.	<input type="checkbox"/>	<input type="checkbox"/>
How my information will be used during and after the project		
I understand my personal details, such as name, phone number, address and email address etc., will not be revealed to people outside the project.	<input type="checkbox"/>	<input type="checkbox"/>
I understand and agree that my words may be quoted in publications, reports, web pages, and other research outputs. I understand that I will not be named in these outputs unless I specifically request this.	<input type="checkbox"/>	<input type="checkbox"/>
I understand and agree that other authorised researchers will have access to this data only if they agree to preserve the confidentiality of the information as requested in this form.	<input type="checkbox"/>	<input type="checkbox"/>
I understand and agree that other authorised researchers may use my data in publications, reports, web pages, and other research outputs only if they agree to preserve the confidentiality of the information as requested in this form.	<input type="checkbox"/>	<input type="checkbox"/>
I give permission for the anonymised data that I provide to be used for future research and learning	<input type="checkbox"/>	<input type="checkbox"/>
So that the information you provide can be used legally by the researchers		
I agree to assign the copyright I hold in any materials generated as part of this project to the University of Sheffield.	<input type="checkbox"/>	<input type="checkbox"/>

Name of Participant [_____] Signature _____ Date _____

Name of Researcher [_____] Signature _____ Date _____

Project contact details for further information:

Angelos Angelakis, Management School, Conduit Road, University of Sheffield. UK. Tel: 0044 (0)756 678 2632, Email: aangelakis2@sheffield.ac.uk

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Dr Sarah Lauwo, Management School, Conduit Road, University of Sheffield. UK., email: s.lauwo@sheffield.ac.uk

The Head of the Accounting and Financial Management (AFM) Subject Group of Management School at the University of Sheffield is Professor Shuxing Yin. She can be contacted at the following address: Professor Shuxing Yin, the Head of Accounting and Financial Management (AFM) Subject Group, University of Sheffield, Conduit Road, Sheffield S10 1FL, UK.

Appendix 3: Survey's Participant Information Sheet

Survey's Participant Information Sheet

1. Research Project Title

Economic Consequences of International Accounting Standard (IAS) 38 and Impact on Organisation's Management Decision-Making Behaviour when Investing in R&D.

2. Invitation

You are invited to participate in a research project led by Mr. Angelos Angelakis (doctoral researcher) and his supervisory team at the University of Sheffield Management School. Before you decide whether or not to participate, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for reading this.

3. What is the project's purpose?

The Research Project is part of a PhD and focuses on the economic consequences of IAS 38 and how these affect management's behaviour regarding the organisation's decision-making process. This knowledge will influence how an accounting standard is developed and intervene in its impartiality and objectivity.

The survey's purpose is to define and estimate the connection between an accounting policy and management's investment strategy. Specifically, it is crucial to recognise and define the importance of the economic consequences of the IAS 38 as an accounting standard upon managerial changes in an organisation's long-term strategy upon investment in R&D. So, we are calling for accounting professionals and experts to provide valuable knowledge and insights.

IAS 38: International Accounting Standard 38 – Intangible Asset

4. Why have I been chosen?

The research concentrates on UK's publicly listed companies that have adopted IAS/IFRS. Thus, you can get involved if your company fills up the above.

5. Do I have to take part?

It is up to you to decide whether or not to take part. If you decide to participate, you will be given this information sheet to keep (and be asked to sign a consent form), and you can still withdraw at any time without it affecting any benefits you are entitled to before DD/MM/YYYY. You do not have to give a reason. If you wish to withdraw from the research, please contact Mr Angelos Angelakis (Principal Investigator). If the research study stops earlier than expected, you will be informed analytically about everything.

Please note that by choosing to participate in this research, this will not create a legally binding agreement, nor is it intended to create employment between you and the University of Sheffield.

6. What will happen to me if I take part?

You will be asked to complete a quick online survey for one time, which we estimate will take no longer than ten (10) minutes. The present survey consists of a questionnaire with closed-ended questions and tries to gather specific managerial insights about attitudes. There are no other commitments or lifestyle restrictions associated with participating.

This research gathers real insights into management's reaction according to investment in Research & Development (R&D) and the implementation of the International Accounting Standard (IAS) 38. The organisation's long-term strategic reaction and the influence of IAS 38 as an accounting policy will be sought. This information will help specify the actual managerial response and decisions regarding IAS 38.

7. What are the possible disadvantages and risks of taking part?

Participating in this research is not anticipated to cause you any disadvantages or discomfort. The potential physical and/or psychological harm or distress will be less or the same as any experienced in everyday life.

8. What are the possible benefits of taking part?

Whilst there is an opportunity for ten (10) participants to win an Amazon Voucher worth £20 each, it is hoped that this work will benefit policymakers and accounting practitioners. The phenomenon of how the actual economic consequences of the International Accounting Standards (IAS) feedback and influence organisation's management decisions and behaviour; is crucial and debatable when an accounting standard is being developed and after. Results will be shared with participants in order to inform their professional work.

You will be informed about the Amazon Voucher via email until DD/MM/YYYY on your responding email.

9. Will my taking part in this project be kept confidential?

All the information we collect about you during the research will be kept strictly confidential and will only be accessible to members of the research team. You will not be able to be identified in any reports or publications unless you have given your explicit consent for this. If you agree to us sharing the information you provide with other researchers (e.g., by making it available in a data archive), then your personal details will not be included unless you explicitly request this.

Data collected may be shared in an anonymised form to allow reuse by the research team. The identifiable data will be stored for two (2) years, and the anonymised will be stored for three (3) years. These anonymised data will not allow individuals or their organisations to be identified or identifiable.

10. What is the legal basis for processing my personal data?

According to data protection legislation, we are required to inform you that the legal basis we are applying in order to process your personal data is that 'processing is necessary for the performance of a task carried out in the public interest' (Article 6(1)(e)). Further information can be found in the University's Privacy Notice: <https://www.sheffield.ac.uk/govern/data-protection/privacy/general>.

11. What will happen to the results of the research project?

Results of the research will be published by Mr Angelos Angelakis (Principal Investigator) and the Supervisory Team only. You will not be identified in any report or publication. Your company will not be identified in any report or publication. If you wish to be given a copy of any reports resulting from the research, please ask us to put you on our circulation list.

Due to the nature of this research, it is very likely that other researchers may find the data collected to be useful in answering future research questions. We will ask for your explicit consent for your data to be shared in this way.

12. Who is organising the research?

The research is being organised by the University of Sheffield Management School, the data controller.

13. Who is the Data Controller?

The University of Sheffield will act as the Data Controller for this study. This means the University is responsible for looking after your information and using it properly.

14. Who has ethically reviewed the project?

The present project has been ethically approved via the University of Sheffield Ethics Review Procedure, as administrated by the Management School. The University of Sheffield's Research Ethics Committee monitors the application and delivery of the University's Ethics Review Procedure.

15. What If something goes wrong?

If you are dissatisfied with any aspect of the research and wish to make a complaint, please contact Mr Angelos Angelakis (Tel: 0044 (0)756 678 2632, email: aangelakis2@sheffield.ac.uk). If you feel your complaint has not been handled in a satisfactory way, you can contact the Head of Accounting and Financial Management (AFM) Subject Group of Management School, Professor Shuxing Yin (see below). If the complaint relates to how your personal data has been handled, you can find information about how to raise a complaint in the University's Privacy Notice: <https://www.sheffield.ac.uk/govern/data-protection/privacy/general>.

16. Contacts for further information

Angelos Angelakis, Management School, Conduit Road, University of Sheffield. UK. Tel: 0044 (0)756 678 2632, email: aangelakis2@sheffield.ac.uk

Dr. Abongeh Tunyi, Management School, Conduit Road, University of Sheffield. UK. Tel: 0044 (0)114 222 0989, email: A.Tunyi@sheffield.ac.uk

Dr. Sarah Lauwo, Management School, Conduit Road, University of Sheffield. UK., email: s.lauwo@sheffield.ac.uk

The Head of the Accounting and Financial Management (AFM) Subject Group of Management School at the University of Sheffield is Professor Shuxing Yin. She can be contacted at the following address: Professor Shuxing Yin, the Head of Accounting and Financial Management (AFM) Subject Group, University of Sheffield, Conduit Road, Sheffield S10 1FL, UK. shuxing.yin@sheffield.ac.uk

You will be given a copy of the Information Sheet.

Thank you for taking part in this research.

Appendix 4: Survey's Questionnaire (Company's Positive Performance Scenario)

Economic Consequences of IAS 38 and Impact on Organisation's Management Decision-Making Behaviour when Investing in R&D.

Thank you for agreeing to participate in this survey. The survey examines managerial practices in a company's long-term strategy upon investment in R&D and IAS in the pre-COVID-19 era. The resulting dataset will benefit many future studies on International Accounting Standards (IAS) and International Financial Reporting Standards (IFRS), professional accountants, and the International Accounting Standard Board (IASB). Furthermore, you can also enter a prize draw and be one of the ten (10) participants to win £50 worth of vouchers by completing the survey.

Demographic Information

We need to ask you a series of demographic questions:

1. To which Gender identity do you most identify yourself:
 - Male
 - Female
 - Prefer not to say
 - Other (*Please Specify*)
2. Please indicate your age in years:
3. Please indicate your highest Education Degree completed:
 - Non-Degree
 - High School
 - Vocational Training
 - BSc (University / College)
 - Master's Degree
 - Doctorate / PhD
 - Other (*Please Specify*)
4. Are you a Certified or Chartered Accountant?
 - Yes
 - No
5. Please indicate your level of knowledge of the IAS / IFRS.
Low **High**
1 2 3 4 5 6 7
6. Please indicate your professional experience in the accounting field in months:
7. Does your company maintain an R&D division?
 - Yes
 - No
8. Please specify the name of your company:

Perceived Importance of Financial Statements

Please indicate the extent to which you *Strongly Disagree* / *Strongly Agree* with the following statements.

1. The Financial Statements' disclosure will influence the company for years to come.
Strongly Disagree 1 2 3 4 5 *Strongly Agree* 6 7
2. The Financial Statements were extremely important.
Strongly Disagree 1 2 3 4 5 *Strongly Agree* 6 7
3. The Financial Statements' performance was pretty minor in the company's overall mission.
Strongly Disagree 1 2 3 4 5 *Strongly Agree* 6 7
4. The Financial Statements' disclosure was expected to affect the company's future significantly.
Strongly Disagree 1 2 3 4 5 *Strongly Agree* 6 7

Perceived Additional Reporting on R&D Investment

Please indicate the extent to which you *Strongly Disagree* / *Strongly Agree* with the following statements.

1. Communicating R&D's financial information every six months promotes the company's reputation for transparent/accurate reporting.
Strongly Disagree 1 2 3 4 5 *Strongly Agree* 6 7
2. Detailed financial disclosure on R&D expenses on all R&D investment projects increases the predictability of the company's future prospects.
Strongly Disagree 1 2 3 4 5 *Strongly Agree* 6 7
3. Communicating financial information on the R&D investment every six months reduces the "Information Risk" investors assign to a company's stock.
Strongly Disagree 1 2 3 4 5 *Strongly Agree* 6 7
4. Additional voluntary disclosures on R&D expenses that are not included in the mandatory financial disclosure of IAS 38 provide important information to investors.
Strongly Disagree 1 2 3 4 5 *Strongly Agree* 6 7

Perception of Managerial Practices

The following section reflects such everyday choices and practices. We would like you to evaluate them as an integral member of the company’s Upper Management during a fiscal year starting on January 1 and ending on December 31. Note that the company has maintained an essential R&D division for many years.

In the Pre-Covid-19 era, the company is way ahead of budget on the financial statements of profit and revenue performance. Furthermore, the company’s Gross Profit Margin (GPM) is approximately 50%, and the Net Profit Margin (NPM) is 25%, which has been rising steadily over the last three (3) years. These two financial indicators suggest that the management has exercised good control over costs.

Based on the scenario above, please read the following practices carefully and indicate your evaluation.

1. The R&D division’s headquarters was scheduled to be improved and renovated in 2022 to solve environmental issues. Based on the above scenario, the division General Manager decided to have the work done in 2021. Amount: £ 100,000. I would personally find this practice to be:

Unacceptable *Acceptable*
 1 2 3 4 5 6 7

2. On December 15, the head of the R&D division ordered £15,000 of office supplies, which were delivered on December 29, 2021. This order was a mistake because the General Management had ordered that no discretionary expenses be incurred for the remainder of the fiscal year, and the supplies were not urgently needed. Office supplies are to be recorded as an expense when delivered. The General Management learned what had happened and asked the accounting department not to record the invoice until January. I would personally find this practice to be:

Unacceptable *Acceptable*
 1 2 3 4 5 6 7

3. At the beginning of December 2021, the General Management ordered the controller to prepay some R&D expenses (e.g., materials, externally provided workers) for a major R&D project to be held in February 2022 and pay them as 2021 expenses. Amount: £60,000. I would personally find this practice to be:

Unacceptable *Acceptable*
 1 2 3 4 5 6 7

- 2 In November 2021, the General Manager called the engagement partner of a subcontracted R&D company doing some work for the organisation and requested the company not send an invoice until next year. The partner agreed. Estimated job done but not invoiced £250,000. I would personally find this practice to be:

Unacceptable *Acceptable*
 1 2 3 4 5 6 7

Please enter your email to participate in the prize draw and win £50 worth of vouchers by completing the survey.

Appendix 5: Survey's Questionnaire (Company's Negative Performance Scenario)

Economic Consequences of IAS 38 and Impact on Organisation's Management Decision-Making Behaviour when Investing in R&D.

Thank you for agreeing to participate in this survey. The survey examines managerial practices in a company's long-term strategy upon investment in R&D and IAS in the pre-COVID-19 era. The resulting dataset will benefit 9+-many future studies on International Accounting Standards (IAS) and International Financial Reporting Standards (IFRS), professional accountants, and the International Accounting Standard Board (IASB). Furthermore, you can also enter a prize draw and be one of the ten (10) participants to win £50 worth of vouchers by completing the survey.

Demographic Information

We need to ask you a series of demographic questions:

1. To which Gender identity do you most identify yourself:
 - Male
 - Female
 - Prefer not to say
 - Other (*Please Specify*)
2. Please indicate your age in years:
3. Please indicate your highest Education Degree completed:
 - Non-Degree
 - High School
 - Vocational Training
 - BSc (University / College)
 - Master's Degree
 - Doctorate / PhD
 - Other (*Please Specify*)
4. Are you a Certified or Chartered Accountant?
 - Yes
 - No
5. Please indicate your level of knowledge of the IAS / IFRS.

Low							High
1	2	3	4	5	6	7	
6. Please indicate your professional experience in the accounting field in months:
7. Does your company maintain an R&D division?
 - Yes
 - No
8. Please specify the name of your company:

Perceived Importance of Financial Statements

Please indicate the extent to which you *Strongly Disagree* / *Strongly Agree* with the following statements.

1. The Financial Statements' disclosure will influence the company for years to come.
Strongly Disagree *Strongly Agree*
1 2 3 4 5 6 7

2. The Financial Statements were extremely important.
Strongly Disagree *Strongly Agree*
1 2 3 4 5 6 7

3. The Financial Statements' performance was pretty minor in the company's overall mission.
Strongly Disagree *Strongly Agree*
1 2 3 4 5 6 7

4. The Financial Statements' disclosure was expected to affect the company's future significantly.
Strongly Disagree *Strongly Agree*
1 2 3 4 5 6 7

Perceived Additional Reporting on R&D Investment

Please indicate the extent to which you *Strongly Disagree* / *Strongly Agree* with the following statements.

1. Communicating R&D's financial information every six months promotes the company's reputation for transparent/accurate reporting.
Strongly Disagree *Strongly Agree*
1 2 3 4 5 6 7

2. Detailed financial disclosure on R&D expenses on all R&D investment projects increases the predictability of the company's future prospects.
Strongly Disagree *Strongly Agree*
1 2 3 4 5 6 7

3. Communicating financial information on the R&D investment every six months reduces the "Information Risk" investors assign to a company's stock.
Strongly Disagree *Strongly Agree*
1 2 3 4 5 6 7

4. Additional voluntary disclosures on R&D expenses that are not included in the mandatory financial disclosure of IAS 38 provide important information to investors.
Strongly Disagree *Strongly Agree*
1 2 3 4 5 6 7

Perception of Managerial Practices

The following section reflects such everyday choices and practices. We would like you to evaluate them as an integral member of the company’s Upper Management during a fiscal year starting on January 1 and ending on December 31. Note that the company has maintained an essential R&D division for many years.

In the pre-COVID-19 era, the company is straining to meet budget objectives on financial statements’ profit and revenue performance. Furthermore, the company’s Gross Profit Margin (GPM) is approximately negative, and the Net Profit Margin (NPM) has been declining continuously for the last three (3) years. These two financial indicators suggest that the management has not exercised good control over costs and is struggling to meet the “break-even” point.

Based on the scenario above, please read the following practices carefully and indicate your evaluation.

- 1. The R&D division’s headquarters was scheduled to be improved and renovated in 2022 to solve environmental issues. Based on the above scenario, the division General Manager decided to have the work done in 2021. Amount: £100,000. I would personally find this practice to be:

Unacceptable *Acceptable*
1 2 3 4 5 6 7

- 2. On December 15, the head of the R&D division ordered £15,000 of office supplies, which were delivered on December 29, 2021. This order was a mistake because the General Management had ordered that no discretionary expenses be incurred for the remainder of the fiscal year, and the supplies were not urgently needed. Office supplies are to be recorded as an expense when delivered. The General Management learned what had happened and asked the accounting department not to record the invoice until January. I would personally find this practice to be:

Unacceptable *Acceptable*
1 2 3 4 5 6 7

- 3. At the beginning of December 2021, the General Management ordered the controller to prepay some R&D expenses (e.g., materials, externally provided workers) for a major R&D project to be held in February 2022 and pay them as 2021 expenses. Amount: £60,000. I would personally find this practice to be:

Unacceptable *Acceptable*
1 2 3 4 5 6 7

- 4. In November 2021, the General Manager called the engagement partner of a subcontracted R&D company doing some work for the organisation and requested the company not send an invoice until next year. The partner agreed. Estimated job done but not invoiced £250,000. I would personally find this practice to be:

Unacceptable *Acceptable*
1 2 3 4 5 6 7

Please enter your email to participate in the prize draw and win £50 worth of vouchers by completing the survey.

Appendix 6: Interview's Cover Letter

Dear Sir / Madam,

My name is Angelos Angelakis, and I am a Doctoral Researcher at the University of Sheffield Management School. I am pursuing a study in International Accounting Standards and Management Decisions & behaviour. I am inviting you to participate in a significant Semi-Structured Interview which explores the economic consequences of the International Accounting Standard (IAS) 38 regarding the management decisions and behaviour upon investment in Research & Development (R&D). Specifically, my research investigates management's behaviour in interaction with other dimensions of investment in R&D, including accounting choices and policies. The resulting dataset will benefit future studies on International Accounting Standards (IAS), professional accountants, managers, and CFOs, along with the International Accounting Standards Board (IASB).

You have been selected to participate since the research concentrates on the UK's publicly listed companies which have adopted the IAS/IFRS. Furthermore, the study focuses on companies that invest in R&D during their long-term organisational strategy. For this study, they have been chosen managers who take part in the company's strategic decisions on R&D and are informed about the accounting policy of IAS 38 – Investment on R&D. Participation is entirely voluntary, and the interview will take no longer than forty-five (45) minutes. In this email, you will see attached a consent form, where you may indicate your desire to participate and an additional information sheet regarding the research study. If you would like further details, please send me an email to Mr Angelos Angelakis: angelakis2@sheffield.ac.uk

This research has received ethical approval from the University of Sheffield Ethics Committee in the Management School (Reference Number: 037776).

This work is supervised by Dr. Abongeh Tunyi and Dr. Sarah Lauwo.

Thank you for your time and consideration.

Kind Regards,

Angelos Angelakis, AFHEA, BSc, MSc.
Doctoral Researcher
Accounting and Financial Management Division
Sheffield University Management School

Appendix 7: Interview's Consent Form

**Economic Consequences of IAS 38 and Impact on Organisation's Management Decision-Making Behaviour when Investing in R&D.
Consent Form**

<i>Please tick the appropriate boxes</i>	Yes	No
Taking Part in the Project		
I have read and understood the project information sheet dated DD/MM/YYYY or the project has been fully explained to me. (If you answer No to this question, please do not proceed with this consent form until you are fully aware of what your participation in the project will mean.)	<input type="checkbox"/>	<input type="checkbox"/>
I have been given the opportunity to ask questions about the project.	<input type="checkbox"/>	<input type="checkbox"/>
I agree to take part in the project. I understand that taking part in the project will include participating in an interview.	<input type="checkbox"/>	<input type="checkbox"/>
I agree that video recordings will be made whilst I am participating in this interview. I agree to being video recorded and for these anonymised video recordings to be used in the research.	<input type="checkbox"/>	<input type="checkbox"/>
I agree that audio recordings will be made whilst I am participating in this interview. I agree to being audio recorded and for transcripts of these anonymised audio recordings to be used in the research.	<input type="checkbox"/>	<input type="checkbox"/>
I understand that by choosing to participate as a volunteer in this research, this does not create a legally binding agreement nor intended to create an employment relationship with the University of Sheffield.	<input type="checkbox"/>	<input type="checkbox"/>
I understand that my taking part is voluntary and that I can withdraw from the study at any time / before 15/09/2021; I do not have to give any reasons for why I no longer want to take part, and there will be no adverse consequences if I choose to withdraw.	<input type="checkbox"/>	<input type="checkbox"/>
How my information will be used during and after the project		
I understand my personal details, such as name, phone number, address and email address etc., will not be revealed to people outside the project.	<input type="checkbox"/>	<input type="checkbox"/>
I understand and agree that my words may be quoted in publications, reports, web pages, and other research outputs. I understand that I will not be named in these outputs unless I specifically request this.	<input type="checkbox"/>	<input type="checkbox"/>
I understand and agree that other authorised researchers will have access to this data only if they agree to preserve the confidentiality of the information as requested in this form.	<input type="checkbox"/>	<input type="checkbox"/>
I understand and agree that other authorised researchers may use my data in publications, reports, web pages, and other research outputs only if they agree to preserve the confidentiality of the information as requested in this form.	<input type="checkbox"/>	<input type="checkbox"/>
I give permission for the anonymised data that I provide to be used for future research and learning	<input type="checkbox"/>	<input type="checkbox"/>
So that the information you provide can be used legally by the researchers		
I agree to assign the copyright I hold in any materials generated as part of this project to The University of Sheffield.	<input type="checkbox"/>	<input type="checkbox"/>

Name of participant [_____] Signature _____ Date _____

Name of Researcher [_____] Signature _____ Date _____

Project contact details for further information:

Angelos Angelakis, Management School, Conduit Road, University of Sheffield. UK. Tel: 0044 (0)756 678 2632, Email: aangelakis2@sheffield.ac.uk

Dr. Abongeh Tunyi, Management School, Conduit Road, University of Sheffield. UK. Tel: 0044 (0)114 222 0989, email: A.Tunyi@sheffield.ac.uk

Dr. Sarah Lauwo, Management School, Conduit Road, University of Sheffield. UK., email: s.lauwo@sheffield.ac.uk

The Head of the Accounting and Financial Management (AFM) Subject Group of Management School at the University of Sheffield is Professor Shuxing Yin. She can be conducted at the following address: Professor Shuxing Yin, the Head of Accounting and Financial Management (AFM) Subject Group, University of Sheffield, Conduit Road, Sheffield S10 1FL, UK.

Appendix 8: Interview's Participant Information Sheet

Semi-Structured Interview's Participant Information Sheet

1. Research Project Title

Economic Consequences of IAS 38 and Impact on Organisation's Management Decision-Making Behaviour when Investing in R&D.

2. Invitation

You are invited to participate in a research project led by Angelos Angelakis (doctoral researcher) and his supervisory team at the University of Sheffield Management School. Before you decide whether or not to participate, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you want to take part. Thank you for reading this.

3. What is the project's purpose?

The Research Project focuses on how the economic consequences of IAS 38 presented on a company's financial statements affect management's behaviour and long-term strategy on investment in Research & Development (R&D). These insights will impact any development and management of the International Accounting Standards from the International Accounting Standard Board (IASB), accounting professionals and experts from a pragmatic perspective.

The Semi-Structured Interview's purpose is to explore and define the relationship between the economic consequences of the IAS 38 in terms of the organisation's management decision and behaviour upon long-term investment in Research & Development (R&D). Specifically, it investigates management's behaviour in interaction with other dimensions of investment in R&D, including accounting choices and policies. The last results on actual consequences and outcomes and acts as feedback on management's long-term decisions.

IAS 38: International Accounting Standard 38 – Intangible Asset

4. Why have I been chosen?

The research concentrates on UK's publicly listed companies that have adopted IAS/IFRS. Also, it focuses on companies that invest in Research & Development (R&D) during their long-term organisational strategy. They have been chosen as interviewee managers, like the CEO and/or CFO, who are part of the strategic decisions of companies on R&D and are informed about the accounting choice of IAS 38. Thus, you can get involved in your company, and your position fills all the above characteristics.

5. Do I have to take part?

It is up to you to decide whether or not to take part. If you choose to participate, you will be given this information sheet to keep (and be asked to sign a consent form). You can still withdraw at any time without it affecting any benefits you are entitled to before DD/MM/YYYY. Please contact Mr Angelos Angelakis (Principal Investigator) if you wish to withdraw from the research. Also, you are free not to answer any questions and stop recording the interview at any time. You do not have to give a reason. If the research study stops earlier than expected, you will be informed analytically about everything.

Please note that by choosing to participate in this research, this will not create a legally binding agreement, nor is it intended to create employment between you and the University of Sheffield.

6. What will happen to me if I take part?

On a scheduled appointment, you will be asked specific open-ended questions, and you have to answer them to the interviewer based on your knowledge, experience and beliefs. You will be asked to be interviewed via telecommunication platforms (Video Conferencing), which we estimate will take no longer than forty-five (45) minutes. The questions will enable open answers about the IAS 38 management's decision to invest in R&D; the relation between the economic consequences from the financial statements and management's behaviour on R&D; and your aspect about R&D disclosure through financial statements. There are no other commitments or lifestyle restrictions associated with participating.

This research gathers real insights about management's reaction according to investment in Research & Development (R&D) and the implementation of IAS 38. The organisation's strategic long-term response and the influence of IAS 38 as accounting policy will be sought. This information will help specify the real managerial reaction and decisions regarding the IAS 38.

7. What are the possible disadvantages and risks of taking part?

Participating in the research is not anticipated to cause you any disadvantages or discomfort. The potential physical and/or psychological harm or distress will be less or the same as any experienced in everyday life.

8. What are the possible benefits of taking part?

While there are no immediate benefits for those participating in the project, it is hoped that this work will have a beneficial impact on policymakers and accounting practitioners. As a result, the participants will benefit indirectly by using the most reliable and helpful accounting standards. The phenomenon of how particular International Accounting Standards and their actual economic consequences feedback and influence organisational management's decisions and behaviour; is crucial and debatable when an accounting standard is being developed. If you wish, results will be shared with participants to inform their professional work.

9. Will my taking part in this project be kept confidential?

All the information we collect about you during the research will be kept strictly confidential and will only be accessible to members of the research team. You will not be able to be identified in any reports or publications unless you have given your explicit consent for this. If you agree to us sharing the information you provide with other researchers (e.g., by making it available in a data archive), then your details will not be included unless you explicitly request this.

Data collected may be shared in an anonymised form to allow reuse by the research team and other third parties. These anonymised data will not allow individuals or their organisations to be identified or identifiable.

10. What is the legal basis for processing my personal data?

According to data protection legislation, we are required to inform you that the legal basis we are applying in order to process your personal data is that 'processing is necessary for the performance of a task carried out in the public interest' (Article 6(1)(e)). Further information can be found in the University's Privacy Notice: <https://www.sheffield.ac.uk/govern/data-protection/privacy/general>.

11. Will I be recorded, and how will the recorded media be used?

The video recordings of your activities during this research will be used only for analysis and illustration in conference presentations and lectures. No other use will be made of them without your written permission, and no one outside the project will be allowed access to the original recordings.

12. What will happen to the results of the research project?

Results of the research will be published by Mr Angelos Angelakis (Principal Investigator) and the Supervisory Team only. You will not be identified in any report or publication. Your company will not be identified in any report or publication. If you wish to be given a copy of any reports resulting from the research, please ask us to put you on our circulation list.

Due to the nature of this research, other researchers may likely find the data collected useful in answering future research questions. We will ask for your explicit consent for your data to be shared in this way.

13. Who is organising the research?

The research is being organised by the University of Sheffield Management School, the data controller.

14. Who has ethically reviewed the project?

This project has been ethically approved via the University of Sheffield Ethics Review Procedure, as administrated by the Management School. The University of Sheffield's Research Ethics Committee monitors the application and delivery of the University's Ethics Review Procedure.

15. What If something goes wrong?

If you are dissatisfied with any aspect of the research and wish to make a complaint, please contact Mr Angelos Angelakis (Tel: 0044 (0)756 678 2632, email: aangelakis2@sheffield.ac.uk). If you feel your complaint has not been handled in a satisfactory way, you can contact the Head of Accounting and Financial Management (AFM) Subject Group of Management School, Professor Shuxing Yin (see below). If the complaint relates to how your personal data has been handled, you can find information about how to raise a complaint in the University's Privacy Notice: <https://www.sheffield.ac.uk/govern/data-protection/privacy/general>.

16. Contacts for further information

Angelos Angelakis, Management School, Conduit Road, University of Sheffield. UK. Tel: 0044 (0)756 678 2632, email: aangelakis2@sheffield.ac.uk

Dr. Abongeh Tunyi, Management School, Conduit Road, University of Sheffield. UK. Tel: 0044 (0)114 222 0989, email: A.Tunyi@sheffield.ac.uk

Dr. Sarah Lauwo, Management School, Conduit Road, University of Sheffield. UK., email: s.lauwo@sheffield.ac.uk

The Head of the Accounting and Financial Management (AFM) Subject Group of Management School at the University of Sheffield is Professor Shuxing Yin. She can be contacted at the following address: Professor Shuxing Yin, the Head of Accounting and Financial Management (AFM) Subject Group, University of Sheffield, Conduit Road, Sheffield S10 1FL, UK. shuxing.yin@sheffield.ac.uk

You will be given a copy of the Information Sheet.

Thank you for participating in this research.

Appendix 9: Interview Guide and Questionnaire

Economic Consequences of IAS 38 and Impact on Organisation's Management Decision-Making Behaviour when Investing in R&D.

This study deals with real managerial practices due to management's decisions & behaviour. The company's management considers the organisation's performance, disclosure of financial statements, and the IAS 38-Investment on R&D criteria to decide the strategy. The questions have been designed to explore in as much depth as possible the attitude of management on R&D investment and any ethical considerations of management decision's procedure. Also, the questions investigate the practitioner's opinion about the flexibility the IAS 38 accounting policy provides and the information asymmetry phenomenon on financial information between the management and other interested parties.

The interview is about listening and understanding; no judgement will be made, and there is no intention to report any problematic areas. The questions have been informed by a range of information sources, including key University policies and a range of research publications. The present questions are intended as a guide, and further questions may be asked to investigate in more detail or any other aspects that come to light and are not covered by the existing questions. The interview process must last approximately forty-five (45) minutes. Some key definitions:

- IAS/IFRS: the publicly listed companies' accounting policies must follow according to the law.
- IAS 38: accounting policy relating to intangible assets and how to disclose any expenses about them. In the present study, the researcher investigates the investment in R&D under the prism of the IAS 38.
- Economic Consequences: the impact of accounting reports on the decision-making behaviour of a business, government, unions, investors, and creditors

General Questions

1. How would you describe your company in a few sentences?
 - a. What does it mean to be a manager in this company?
2. Could you describe your role and history in your company in a few sentences?
3. How does your knowledge of the accounting field influence the company's decisions?
 - a. Particularly your knowledge of IAS/IFRS

Economic Consequences influencing Management's Decisions and Behaviour in investing in R&D under IAS 38

1. Do you believe that management's continuous monitoring of financial statements provides enough information about the company's performance that may require immediate management's attention? Could you please describe any situation relating to an investment in R&D under IAS 38?
 - a. We can clarify the term "monitoring of financial statements" as providing feedback on implementing a company's strategy regarding financial statements' elements, like costs, expenses, profitability, productivity, and others.
2. In general, how much may the company's performance impact a decision in R&D investment based on the financial statements?
 - a. Could you please describe a situation that may have come to your knowledge from your professional experience and expertise?

3. How possible is it for a company to do some operating manipulations when deciding upon investment in R&D? Could you describe any situations based on your professional experience and knowledge?
 - a. We can give examples of operating manipulation if needed: delay costs, prepay next year's expenses, and record supplies of R&D for next year.
4. What are the most important values you follow in your company to disclose R&D reporting based on the IAS 38 accounting policy? Why these? Are there still others?
 - a. If needed, we can give examples of values: integrity, respect, responsibility, servant leadership, trustworthiness, transparency, loyalty, innovativeness, and well-being (employees, employers).

The IAS 38 grants Management the Chance to model Financial Statements' Actual Outcomes

1. How do you evaluate the IAS 38 – Investment on R&D as an accounting policy for your company, based on your professional experience?
 - a. What is your aspect about the functionality of the IAS 38 upon R&D investment based on your company's operations?
2. How motivated is it for a company to communicate more financial information than those based on the IAS 38 for an R&D investment? Please describe a situation.