ACCOUNTING STANDARD PRECISION AND INCENTIVE FOR REVENUE MANAGEMENT

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ABSTRACT

Despite the fact that accounting standards tend to be used as tools to legitimise questionable accounting decisions, it is essential to ensure that the standards provide a proper level of prescription for guiding managers' financial reporting decisions and minimising aggressive reporting. Drawing inferences from the newly issued IFRS 15, this study examined the issues related to the inclusion of indicators in a set of principle-based standards. In addition, taking into consideration that incentives play an important role in the financial reporting process, given different levels of accounting standard precision (principle, principle with indicators), the present study examined the moderating effect of different reported revenue trends (increasing, decreasing, and volatile) and credit rating downgrade types (notch, category) on revenue management through a 2x3x2 between-subject experiment. The empirical results of the experiment show that the inclusion of indicators in a principle-based standard can constrain managers' revenue management intentions. When a standard is less precise, the incentives of reported revenue trends and credit rating downgrades will moderate the manner in which the standard will be interpreted, making it easier for managers to engage in revenue management. The findings of this study not only extend the literature in the field of accounting standard precision and incentives, and their effects on aggressive reporting, they also provide useful insights for standard setters engaged in revisiting accounting standards in use.

ABSTRAK

Hakikatnya bahawa piawaian perakaunan cenderung untuk digunakan sebagai alat untuk mengesahkan keputusan perakaunan yang dipertikaikan, ini adalah penting untuk memastikan bahawa piawaian perakaunan menyediakan tahap ketepatan yang sepatutnya bagi membimbing keputusan laporan kewangan pengurus dan meminimumkan laporan agresif. Dengan mengambilkira IFRS 15, kajian ini meneliti isu-isu yang dipertikaikan mengenai kewujudan petunjuk dalam set piawaian yang berasaskan prinsip. Di samping itu, insentif memainkan peranan yang penting dalam proses pelaporan kewangan apabila piawaian perakaunan mempunyai tahap ketepatan berbeza (umum dan umum dengan petunjuk), kajian ini meneliti kesan perbezaan pendapatan yang dilaporkan (meningkat, berkurangan, dan tidak menentu) dan jenis penarafan kredit menurun taraf (takuk, kategori) mengenai pengurusan hasil melalui 2x3x2 antara-subjek eksperimen.. Hasil kajian eksperimen menunjukkan bahawa kemasukan petunjuk dalam piawaian perakaunan berasaskan prinsip boleh mengekang pengurusan hasil oleh pengurus. Apabila piawaian adalah kurang tepat, insentif trend pendapatan yang dilaporkan dan penurunan penarafan kredit akan menpengaruh cara di mana piawaian tersebut akan ditafsirkan dan memudahkan pengurus untuk melibatkan diri dalam pengurusan hasil. Dapatan kajian ini bukan sahaja akan memanjangkan kesusasteraan dalam bidang ketepatan piawaian perakaunan dan insentif kepada pelaporan secara agresif, ia juga menyediakan maklumat yang berguna untuk penetap piawaian dalam proses menganalisasi kembali piawaian perakaunan yang diamalkan.

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DEDICATION

This thesis is dedicated to my parents, my husband Pang Wei Lao, my son Pang Bo Zen, and my siblings, who were always by my side giving me their unconditional support throughout my studies.

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ABBREVIATIONS

FASB	Financial Accounting Standards Board (US)
GAAP	Generally Accepted Accounting Principles
IAS	International Accounting Standards (issued by the former International Accounting Standards Committee and now part of the IFRS of the International Accounting Standards Board)
IASB	International Accounting Standards Board (setting IFRS from 2001)
IASC	International Accounting Standards Committee (superseded by the IASB in 2001)
IFRS	International Financial Reporting Standards of the IASB (comprising standards issued under the IFRS heading and standards issued under the IAS heading by the previous IASC).
MRT	Motivated Reasoning Theory
SEC	Securities and Exchange Commission (US)
UK	United Kingdom
US	United States of America

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CHAPTER 1:

OVERVIEW OF THESIS

1.1 Introduction

This chapter provides an overview of the study and is organised as follows. Section 1.2 discusses the background of the study. This is followed Section 1.3, which introduces the problem statement. Section 1.4 summarises the study's research questions, while Section 1.5 covers the study's objectives. The significance of the study is presented in Section 1.6, and Section 1.7 discusses the organisation of the study. Section 1.8 concludes the chapter.

1.2 Background of the Study

Revenue is an important benchmark for a company because users of financial statements rely on the reported figures both to judge the performance of the company for the past financial period, and to evaluate the company's financial performance and position (Barton, Hansen, & Pownall, 2010; Chandra & Ro, 2008; Ertimur, Livnat, & Martikainen, 2003; Hangstefer, 2000; IFRS, 2015b; Jegadeesh & Livnat, 2006; Kama, 2009; Swaminathan & Weintrop, 1991). A judgment of how well a company has performed is made by comparing the company's reported financial figures with those of similar companies in the industry, matching them with ones provided by analysts, or by comparing prior performance with the latest reported figures (Dichev & Tang, 2008).

Given the attention that placed by stakeholders on a company's reported revenue, it is not surprising to notice acts of revenue management by managers. Similar to earnings management, which has gained the attention of most researchers in the field, revenue management (which forms a subset of aggressive financial reporting) has also been associated with opportunistic or aggressive financial reporting (Levitt, 1998). Revenue management is defined as the manipulation, by managers, of the timing of revenue

recognition and the amount that is to be recognised (Levitt, 1998; SEC, 2003). One result of such manipulation may be that a higher amount of revenue is recognised even though the underlying revenue transactions do not meet revenue recognition criteria. Such an act is carried out with the aim of influencing a contractual outcome, which then might mislead stakeholders (Healy & Wahlen, 1999; SEC, 2003)

Owing to its complexity, the topic of revenue recognition is the most important and challenging issue that companies are facing nowadays. It is constantly identified as the main source of risk in the accounting and auditing process, and the main cause of internal control weaknesses in financial reporting (Altamuro, Beatty, & Weber, 2005; PWC, 2012; Steele, 2012). The PricewaterhouseCoopers 2014 litigation report identified revenue recognition as the second biggest cause of filed cases. Amongst all cases filed, almost half of those filed in 2014 were due to improper revenue recognition (PWC, 2014a).

In addition, in his famous 1998 speech "The Numbers Game", Arthur Levitt (then Chairman of the US Securities and Exchange Commission) expressed his concern that managers were engaging excessively in premature revenue recognition in order to meet the expectations of Wall Street (Levitt, 1998). Levitt's argument was affirmed in 2002 by a series of accounting scandals involving companies engaging in premature revenue recognition through excessive manipulation of the latitude provided by accounting pronouncements. The scandals made the news headlines and eroded public confidence in the accounting profession (Chen, 2010; Stanley & Sharma, 2011).

Given that accounting standards can be employed as tools to defend and legitimise reporting decisions (Arjoon, 2006; Brown & Wright, 2008; Gibbins, Salterio, & Webb, 2001; Jamal & Tan, 2010; Kang & Lin, 2011; Nelson, 2003; Ronen, Tzur, & Yaari, 2006; Sanders, 2001; Van Beest, 2009; Wang, 2010), different levels of accounting standard

precision will influence managers' reporting behaviour differently. Hence, managers may take advantage of the latitude provided in the standards to engage in opportunistic behaviour. The series of accounting scandals from early 2001 onwards led to various regulatory reforms. Amongst the most significant reforms was the idea of converging the two distinct sets of standards of the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) -- hereafter known as the boards -- in 2002. Such a move would ensure that any newly introduced set of accounting standards would be able to accommodate current business practices, as well as be effective in constraining financial reporting opportunism amongst managers (IASB, 2013).

The aim to remove differences between the sets of standards has led to the initiation of the convergence project and the signing of a memorandum of understanding (MOU) by the boards. Since then, the boards have worked together to review the two distinct sets of standards that are currently in use. In addition, many other standards have been placed in the boards' work plan with the same aim of removing differences between the sets of standards (IASB, 2013). Hence, many new accounting concepts are expected to be developed in order to enhance the sets of standards that are currently in place. The standard on revenue recognition is one of the standards in the boards' work plans, as they acknowledge the importance of revenue to stakeholders. With the importance of revenue to a company, it is inevitable that IFRS 15 *Revenue from Contracts with Customers* has received attention from the public during its development process. This is demonstrated by the thousands of comment letters received by the boards during the development of the standard (Brady, Gagnon, Bement, & Rees, 2010; Gagnon, Eperen, Bement, & Rees, 2009; McManus, North, & Skoglund, 2012). Review of the comment letters revealed various public concerns. One concern was with respect to the level of guidance that the

boards should incorporate into the proposed revenue standard to clarify the newly introduced concept of control (Brady, Gagnon, Bement, & Rees, 2010).

As accounting standards may be used by preparers to justify and legitimise a desired financial reporting outcome (Jamal & Tan, 2010), it is important for the boards to ensure that newly proposed principle-based standards include sufficient guidance to make them free from ambiguous treatment, as well as promote the exercise of professional judgment. At the same time, caution needs to be exercised regarding how much guidance should be included in order to ensure that the standard will not be too rigid and thus open doors for manipulation.

1.3 Problem Statement

In current practise, the US has its own set of Generally Accepted Accounting Principles (GAAP). The principles are "rule-based" accounting standards that provide specific and explicit guidance, with less room for accountants to exercise professional judgment. In the case of the UK, its set of accounting standards, the International Financial Reporting Standards (IFRS), are mainly "principle-based." They are less precise and require the exercise of professional judgment (Deegan, 2009). Prior studies have concluded that different levels of precision in accounting standards will have a different impact on managers' judgment and decision making. While imprecision in a standard might result in diverse interpretations that can lead to a high level of disagreement among practitioners and, consequently, a lack of comparability between financial reports, a standard that is too rigid or precise might promote transaction structuring and manipulation (Chen, Hemmer, & Zhang, 2007; Fornaro & Huang, 2012; Nelson, 2003).

The boards jointly issued the new revenue recognition standard, IFRS 15 *Revenue from Contracts with Customers,* in May 2015. This standard introduces remarkable changes to

current revenue recognition practices, including a five-step revenue recognition model, and the concept that revenue recognition has shifted away from "risks and rewards" to the "concept of control". When the concept of control was first introduced, the boards prescribed a general principle to define it. Due to public demand, a list of descriptions and indicators pertaining to the concept of control was gradually added during the standard development process. This increasing amount of precision related to the concept of control has raised concerns over how precise a set of principle-based standards needs to be in order to be considered appropriate. Drawing inferences from IFRS 15, it is therefore argued that the inclusion of indicators in principle-based standards will have an impact on the financial reporting decisions of managers. This is because the inclusion of indicators increases the standard's level of precision. On the one hand, the inclusion of indicators might increase the level of clarity of the concept of control. On the other, their inclusion might also increase the probability of the indicators being used as a checklist by managers intending to structure transactions.

The review of prior literature revealed that even though the types of accounting standards and their effectiveness in constraining managerial opportunism have received much attention by researchers, most studies have been focused on the implications of financial reporting decisions between rule-based and principle-based standards. There has been limited examination of the impact of financial reporting decisions and the different level of precision in a set of principle-based standards and, specifically, the inclusion of indicators in principle-based standards (Agoglia, Doupnik, & Tsakumis, 2011; Bennett, Bradbury, & Prangnell, 2006; Collins, Pasewark, & Riley, 2012; Jamal & Tan, 2010; Kang & Lin, 2011; Kivi, Smith, & Wagner, 2004; Mergenthaler, 2009; Nelson, 2003; Psaros, 2007; Sennetti, Becker, & Lawrence, 2011; Van Beest, 2009). Considering that the boards are in the midst of reviewing most of the current standards in practise, more new accounting concepts are expected to be introduced. More prescriptions pertaining to

the newly proposed accounting concepts will then be introduced and, hence, the issue of whether the inclusion of indicators in a set of principle-based standards is a wise move will require further investigation.

In examining the impact of accounting standards on decision making, Hail, Leuz, and Wysocki (2010) argued that it is important to ensure that other potential influencing factors such as incentives (or motivation)[1] are taken into consideration. Given that managers are responsible for financial statement preparation, they are entrusted to prepare the financial reports in a true and fair manner. However, it is inevitable that some managers may be enticed by various incentives at some point in the financial reporting process. These incentives might then motivate and direct the managers to make decisions in a manner that does not promote stakeholder interests (Armstrong, Jagolinzer, & Larcker, 2010; Baker, Collins, & Reitenga, 2009; Nelson, Elliott, & TarpIey, 2002; O'Connor, Priem, Coombs, & Gilley, 2006), such as tending to use an accounting standard to defend and legitimise a questionable reporting decision (Jamal & Tan, 2010). Although managers can take advantage of the latitude in the accounting standard to engage in opportunism, it is the presence of the incentives that drives them to take advantage of the provided latitude and report aggressively. The accounting standard merely provides a legal ground to rationalise an opportunistic reporting decision (Bennett et al., 2006; Gibbins et al., 2001; Hail et al., 2010; Jamal & Tan, 2010; Libby, Bloomfield, & Nelson, 2002; Nelson, 2003; Psaros, 2007; Ronen et al., 2006; Sanders, 2001). Hence, a financial accounting study that examines the impact of different levels of precision of accounting standards on financial reporting decisions should factor in the potential impact of incentives or motivations, so as not to result in biased empirical findings. Without considering the presence of incentives, it would be premature to connect types of

[1] This study argues that incentives are a form of motivation, and that the presence of incentives will motivate managers to act in a certain manner. Hence, the terms “incentives” and “motivations” will be used interchangeably in the rest of the discussion.

accounting standards with opportunistic financial reporting behaviour (Cuccia, Hackenbrack, & Nelson, 1995). Given the boards' plans to review most of the accounting standards, and considering that managers will always face different types of motivation during the preparation of financial statements, this study answers the call of Libby et al. (2002) for financial accounting researchers to consider the impact of changes in regulations and other incentives on the aggressiveness of financial reporting.

While there are many different types of incentives, this study focuses on revenue trends and credit ratings. Instead of reported revenue, most prior studies have focused on the importance of earnings (Barnes, 2001; Bartov, Givoly, & Hayn, 2002; Degeorge, Patel, & Zeckhauser, 1999; Healy & Wahlen, 1999; Pinello, 2008). Although a limited number of prior studies have focused on the importance of current reported revenue, a careful scrutinisation of the literature suggests that there is another strand of studies. These studies suggest that market players value performance measures that portray a persistent and healthy growth trend (Barton et al., 2010; Francis, LaFond, Olsson, & Schipper, 2004; Ghosh, Gu, & Jain, 2005). However, there is an absence of empirical studies that bridge these two claims. In addition, instead of focusing on revenue growth persistence, most of the prior studies focused on the persistence of earnings growth (Ghosh et al., 2005; Koonce & Lipe, 2010; Skinner & Sloan, 2002). This further justifies the need to investigate the importance of reported revenue trends in order to extend the literature.

Furthermore, a company's reported revenue will affect many other performance indicators, including its credit rating. There is a dual relationship between credit rating and company reported revenue: while reported revenue will affect a company's credit rating (Kaske, 2014), managers can manage revenue in order to obtain a desirable one (Alissa, Bonsall IV, Koharki, & Penn Jr, 2013; Demirtas & Cornaggia, 2013; Jung, Soderstrom, & Yang, 2013; Kuang & Qin, 2013). The extant credit rating literature is

generally focused on the impact of credit rating revisions to companies. A recent emerging strand of study has begun investigating the association between credit ratings and managers' opportunistic behaviour. Owing to its novelty, there are only a handful of studies that have investigated the link between credit ratings and managers' financial reporting decisions. No prior studies have actually examined the effect of different levels of credit rating downgrades on managers' decisions, or examined the issue experimentally. Hence, the unique relationship between revenue trend and credit rating, justifies the need to examine how managers' decisions will be different given the different levels of guidance and the presence of different types of incentives.

1.4 Key Research Questions

The discussion in the previous sections has led to the formulation of the following research questions:

1. Do different levels of accounting standard precision affect managers' financial reporting decisions?

2. Do managers' financial reporting decisions differ with the presence of the incentives of revenue trends and credit rating downgrades?

3. Do managers' financial reporting decisions differ based on the interaction between different levels of accounting standard precision, revenue trends and credit rating downgrades?

1.5 Research Objectives

The main objective of this study was to examine the joint effect of revenue trends, credit rating downgrades and different levels of accounting standard precision on managers' revenue management intentions. More specifically, the study's aims were:

1. To examine the impact of different levels of accounting standard precision on managers' revenue management intentions.

2. To examine the moderating effect of revenue trends on managers' revenue management intentions.

3. To examine the moderating effect of credit rating downgrades on managers' revenue management intentions.

4. To examine the impact of different levels of accounting standard precision on managers' revenue management intentions in the presence of an interaction between the incentives of revenue trends and credit rating downgrades.

1.6 Significance of the Study

Inspired by IFRS 15, this study examined the moderating impact of the incentives of revenue trends and credit rating downgrades on managers' revenue management intentions, and how different levels of guidance provided in principle-based accounting standards (specifically, the inclusion of indicators) might affect managers' financial reporting decisions. The study, hence, makes a contribution in the theoretical, practical and methodological perspectives.

1.6.1 Theoretical Contributions

By providing evidence of the joint effect of the impact of the incentives of revenue trends and credit rating downgrades, and different levels of guidance provided by accounting standards on managers' revenue management intentions, this study contributes to the extant revenue management and financial reporting literature in four important ways.

First, whilst the extant literature suggests that most prior research has focused on the impact of rule-based versus principle-based accounting standards on managers' judgment and decisions (Bennett et al., 2006; Collins et al., 2012; Jamal & Tan, 2010; Mergenthaler, 2009; Nelson, 2003; Psaros, 2007; Van Beest, 2009), this study provides evidence of how different levels of guidance provided in principle-based standards (specifically, the inclusion of indicators) affect managers' revenue management intentions. Hence, this study is believed to be one of the few that have examined the question of how much prescription is considered sufficient to constrain the opportunism of managers with respect to financial reporting. Thus, this study extends the strand of literature related to levels of guidance on managers' financial reporting behaviour.

Second, given that most of the prior experimental studies in this area of research have focused on users of financial statements rather than on the preparers/managers (Hunton, Libby, & Mazza, 2006; Mazza, Hunton, & McEwen, 2011), this study adds to the current literature by focusing on the judgment and decisions of preparers. The findings will provide useful insight into how incentives and financial reporting standards jointly affect managers' revenue management intentions.

Third, this study extends the literature on incentives and revenue management. To the author's knowledge, there are only a handful of studies that have examined the effect of revenue trends on preparers' reporting decisions. Whist most of the prior studies have focused on the association between current reported revenue surprises and market reactions (Berger, 2003; Ertimur et al., 2003; Fu & Chen, 2013; Han & Wild, 1991; Jegadeesh & Livnat, 2006), another strand of literature concludes that market players pay attention to the persistence of performance measures (Barth, Elliott, & Finn, 1999; Francis et al., 2004). However, only a limited number of studies have linked these study

strands and examined the impact of the persistence of reported revenue over accounting periods. This further justified the need for the present study.

Finally, this study adds to the relatively recent literature on the impact of the incentive of different levels of credit rating downgrades on managers' financial decisions. Most prior studies have focused on the market impact of rating revisions (Avramov, Chordia, Jostova, & Philipov, 2009; Bissoondoyal-Bheenick & Brooks; Cheng & Subramanyam, 2008; Hand, Holthausen, & Leftwich, 1992; Iannotta, Nocera, & Resti, 2013; Kisgen, 2007; Parnes, 2008). However, studies examining the association between credit rating downgrades and managers' reporting decisions are limited (Alissa et al., 2013; Demirtas & Cornaggia, 2013; Jung et al., 2013). While most prior studies have focused on the impact of credit rating category downgrades, this study extends the literature by examining how different types of credit rating downgrades (i.e., notch and category), might motivate managers to engage in revenue management.

1.6.2 Practical Contributions

The findings of this study will provide various stakeholders with several useful insights. First, the study results will provide useful ex-ante evidence to policy makers on the inclusion of indicators in principle-based standards. With the boards' interest in revisiting and improving many of the current reporting standards (IASB, 2015), this study's findings provide useful guidelines to the boards on the level of guidance that should be included in the various standards that will be reviewed. A sufficient level of guidance will ensure that a standard is not just free from ambiguity, and that it will provide sufficient direction to practitioners when it is put into practise, it will also leave room for professional judgment and ensure that the substance of the transaction is adhered to when it comes to reporting (Bennett et al., 2006; ICAS, 2006; Jackson, 2004; Schipper, 2003; SEC, 2003; Shortridge & Myring, 2004; Silva Guerreiro, Rodrigues, & Craig, 2014).

Second, this study's findings will provide various financial reporting watchdogs such as regulators, investors, analysts, auditors, and financial institutions, with valuable insight into the revenue management activities of managers. The joint and isolated impact of revenue trends, credit rating downgrades and accounting standard precision can provide these parties with useful guidance on when they should pay attention to monitoring and evaluating company performance based on the information presented by managers. In addition, a good understanding of the potential contributing factors to revenue management will be helpful in drafting regulatory and controlling mechanisms to help minimise such opportunism. Remuneration and compensation contracts can then be drafted with care to ensure that they do not promote aggressive financial reporting by managers.

A thorough understanding of the factors contributing to managers' opportunism is helpful in constraining their aggressive financial reporting behaviour. Minimising such opportunism will not only assist in improving the financial reporting process, it can also enhance the effectiveness of the financial reporting system and, hence, investor confidence in the capital market (Strier, 2006).

1.6.3 Methodological Contributions

This study contributes methodologically from three important perspectives. First, most prior studies have examined the association between incentives and financial reporting decision making through the archival method. This method suffers from noisy construct measurement and statistical technique bias that have contributed to inconsistent and inconclusive findings in this strand of study (Bonner, 2007; Libby et al., 2002). To overcome these issues, this study examined the research issues using the experimental method, a method that allows for the clean and clear measurement of identified variables.

Second, conducting this study experimentally enhanced the understanding of how different combinations of factors influence the actions and behaviour of managers. As financial reporting is a process involving human decision-making (Deegan, 2009), it is important to ensure that the behavioural aspect is incorporated into the examination of the research issues identified. The experimental method allows for such incorporation and the findings obtained using this method can shed light on how and why managers engage in opportunistic activities (Libby et al., 2002)

Third, prior studies have examined managers' revenue management intentions through the audited financial statements. However, as audited financial statements are the outcome of negotiations between managers and auditors (Libby et al., 2002; Nelson, 2003), it is difficult to examine which parties have contributed to opportunistic financial reporting decisions. Instead of using the audited financial statement, this study examined managers' revenue management intentions through a case study. By doing this, revenue management intentions of managers were captured through the financial reporting decisions made.

1.7 Organisation of the Study

The remainder of the study is organised as follows. The next chapter provides an overview of the extant literature on accounting standard precision and aggressive reporting. Potential research gaps that required further investigation are highlighted.

Chapter 3 reviews the extant literature on incentives (or motivations) behind aggressive reporting. Potential research gaps are subsequently identified. Discussion of the relevant theories underpinning the study's arguments are also presented.

Chapter 4 discusses the study's underlying theoretical framework. The hypotheses aligned with the study's research objectives are also revealed. The chapter includes a

discussion of the research design, research procedure, data collection process and study sample.

Chapter 5 provides an overview of the instrument development and validation process through pilot testing.

Chapter 6 articulates the study's data analysis process and interprets the empirical findings based on the study's statistical results.

Chapter 7 concludes the study with a summary of overall findings and a discussion of the study's theoretical, practical and methodological contributions. Research limitations, areas of improvement, and recommendations for future studies are also discussed.

1.8 Chapter Summary

This chapter provided an overview of the study. It outlined the study's background, research questions and objectives, significance, and the structure of this study.

CHAPTER 2:

LITERATURE REVIEW – ACCOUNTING STANDARD PRECISION AND AGGRESSIVE FINANCIAL REPORTING

2.1 Introduction

This chapter reviews and discusses the extant literature regarding accounting standard precision and aggressive financial reporting. Section 2.2 provides an introduction to the types of standards, and to financial reporting aggressiveness. This is followed by Section 2.3, which presents the pros and cons of the different types of standards. Section 2.4 extends the arguments between the two different types of standards, and focuses on the issues leading to the development of IFRS 15, a principle-based standard that includes indicators. Section 2.5 identifies the gap in literature related to this strand of study, while Section 2.6 summarises and concludes this chapter.

2.2 Types of Accounting Standards and Financial Reporting Aggressiveness

Accounting standards serve the two main objectives of communicating accounting information, and constraining aggressive financial reporting behaviour (Nelson, 2003). In the process of communicating information to outsiders, managers have to ensure that the financial reporting decisions are made, and the financial reports are prepared, in accordance with the guidance prescribed in the accounting standard.

In general, there are two types of accounting standards: rule-based standards, and principle-based standards. A rule-based accounting standard is more precise than a principle-based one. It comes with detailed prescriptions and bright-line tests, has extensive implementation guidelines, and is relatively lengthier. This type of standard provides limited room for practitioners to exercise professional judgment; companies have to ensure that the prescriptions provided in the standard are strictly adhered to. A principle-based accounting standard, on the other hand, is less precise. It is characterised

by fewer prescriptions and bright-line tests, and is more concise. It allows accountants to exercise their professional judgment in solving accounting problems, and its primary focus is on the fair and accurate presentation of the company's financial transactions (Alexander & Jermakowicz, 2006; Bennett et al., 2006; Deegan, 2009; Donelson, McInnis, & Mergenthaler, 2012; Jackson, 2004; Nelson, 2003; Psaros & Trotman, 2004; Schipper, 2003; SEC, 2003).

In responding to the latest convergence project undertaken by the boards, issues related to the impact of the type of standard on financial reporting decisions have received much attention from researchers. It is argued that the different level of precision between the two types of standards will affect the financial reporting process and aggressive financial reporting behaviour differently. In alignment with prior studies, this study uses the terms "US GAAP", and "rule-based standard" interchangeably in the discussion in this chapter. Similarly, "IFRS" and "principle-based standard" are also used interchangeably in this chapter (Boone, Linthicum, & Poe, 2013; Collins et al., 2012; Jamal & Tan, 2010).

2.3 Principle-Based Versus Rule-Based Standards in Financial Reporting: Arguments For and Against

Rule-based accounting standards are considered to have been the main contributor to a series of corporate scandals that occurred over the last few decades. Replacing these with principle-based standards is a move that some claim will restore public confidence in the financial reporting system. Acknowledging the need to improve the US financial reporting and corporate governance system, Section 108 of the Sarbanes-Oxley Act of 2002 gave the SEC the authority to look into the possibility of implementing principle-based standards in the country (SEC, 2003). This move was supported by the FASB, which suggested that focusing on principle-based accounting standards would improve the transparency and quality of financial reporting in the country (MacDonald, 2002). A

review of the impact of the two different types of accounting standards will, hence, be discussed in the coming sections.

2.3.1 Comparability, Consistency, and Transparency

Proponents for rule-based standards have argued that the detailed guidance and prescriptions in the standards are helpful in reducing diversity and inconsistency in practise (Ng, 2004; Shortridge & Myring, 2004), and promote better comparability and consistency of reported financial information as a result (Bennett et al., 2006; Brochet, Jagolinzer, & Riedl, 2013).

This view, however, was contested by Schipper (2003) and SEC (2003), who argued that the numerous exceptions and detailed implementation guidance in rule-based standards could dilute their real intent and result in dissimilar transactions being given similar accounting treatment. As a result, rule-based standards are seen as promoting better comparability on the surface, but not in reality. An ICAS (2006) report supported this view and raised the issue of the difference between comparability and identical financial reporting treatment:

> Comparability has different meanings for different people: some think it means identical accounting treatment for all transactions of a defined class while others accept that comparability is a quality that allows users of accounting information to understand the underlying economic reality of the transaction. (p. 10)

Hence, the report argues that in promoting financial statement transparency and comparability, the focus should be on the consistency in approach rather than on uniformity. Forcing dissimilar transactions into the same bundle will only promote comparability at a shallow level (ICAS, 2006).

The SEC (2003) further argued that a distinction has to be made between principle-only and principle-based standards. A principle-only standard is one that incorporates insufficient guidance and that requires managers or auditors to exercise a significant amount of judgment, especially in cases involving detailed and specific transactions. This type of accounting standard will result in a loss of comparability and will increase disagreement regarding the proper accounting treatment of transactions. A principle-based standard, on the other hand, is defined by the SEC (2003) as a standard that:

> ...involves a concise statement of substantive accounting principle where the accounting objective has been incorporated as an integral part of the standard and where few, if any, exceptions or internal inconsistencies are included in the standard. Further, such a standard should provide an appropriate amount of implementation guidance given the nature of the class of transactions or events and should be devoid of bright-line tests. Finally, such a standard should be consistent with, and derive from, a coherent conceptual framework of financial reporting. (Introduction)

Hence, it is argued that a principle-based standard will provide sufficient details to allow preparers to apply the approach consistently. This will then ensure transparency and comparability, allowing financial statement users to obtain useful information and oversee the financial reporting process (Ng, 2004; SEC, 2003). This argument is further supported by Agoglia et al. (2011) and Collins et al. (2012). With the intention of extending the experimental study by Agoglia et al. (2011), Collins et al. (2012) conducted an archival study by examining financial reporting outcome differences under two different accounting standards. The empirical findings of the two studies were consistent, with both concluding that the concern that a principle-based accounting standard would lead to dispersion in practise was unwarranted.

2.3.2 Financial Reporting Quality and Aggressiveness

Research on financial reporting quality has always been an area of interest to financial accounting scholars, as quality financial reports are important for contracting, making investment decisions, and compensation arrangement purposes. Standard setters tend to associate financial reporting quality with the quality and effectiveness of financial reporting standards. In addition, higher financial reporting quality also implies a lower degree of accounting manipulation (Schipper & Vincent, 2003; SEC, 2003; Sunder, 2009).

As discussed earlier, there are two distinct types of financial accounting standards, each with a different level of precision. The difference in the level of precision between the standards will influence human behaviour differently, and can be used by intended parties to defend and legitimise a decision (Fornaro & Huang, 2012; Kaplow, 1999; Nelson, 2003). Proponents of rule-based standards argue that the latitude provided in a principle-based standard will serve as a double-edged sword. On one side, preparers can exercise their professional judgment and present transactions that reflect their economic substance. On the other, the latitude provides an open door for manipulation (Maines et al., 2003; Nelson, 2003). Thus, it is argued that a rule-based standard will be more effective in constraining preparers' aggressive financial reporting behaviour. The SEC (2003) and Sunder (2009) shared the same view, and argued that the inadequate guidance provided in a principle-based standard will lead to a greater dispersion of reporting outcomes.

On the other hand, opponents of rule-based accounting standards claim that a strict description in the standard will reduce the need to exercise professional judgment. As a result, the focus will shift from considering the best accounting treatment and presenting the economic substance of transactions, to meeting the requirements of the rules

(Shortridge & Myring, 2004) and ensuring that the reporting decision is aligned with the norms (Kaplow, 1992). With that, the standard will result in “form over substance” reporting. The SEC (2003) also acknowledged that a high amount of bright-line tests and detailed implementation guidance increased the level of complexity and uncertainty in applying the standard. As a result, companies could use the complexity to structure transactions towards their desired outcomes. Detailed prescriptions could also provide a good context for managers to use legalistic loopholes to justify and legitimate aggressive reporting decisions (Nobes, 2005). While detailed guidance eases the work of accountants when dealing with disputable business transactions, managers with certain agendas in mind might purposely gear transactions to fulfil the requirements of bright-line tests to obtain their desired financial outcomes (Degeorge et al., 1999; Jamal & Tan, 2010; Kang & Lin, 2011; Lee, Petroni, & Shen, 2006; Mazza et al., 2011; McEwen, Mazza, & Hunton, 2008; Phillips Jr, Drake, & Luehlfing, 2010; Psaros, 2007; Psaros & Trotman, 2004).

Garratt (2007) further supported this claim and argued that companies are fixated on compliance. Detailed bright-lines in rule-based standards might lead to a "checking the checklist" attitude by preparers that inhibits concerns with "true and fair view" financial reporting (Herdman, 2002). This then might result in a "form over substance" type of reporting decision (ICAEW, 2014). Furthermore, as claimed by the SEC (2003), reporting under a rule-based accounting standard might go against the fundamental objective of a financial report, with the focus being on complying with the bright-line thresholds rather than ensuring that the financial report is faithfully presented. The SEC (2003, p. Introduction) asserted:

> In a rules-based system, financial reporting may well come to be seen as an act of compliance rather than an act of communication. Moreover, it can create a cycle of

ever increasing complexity, as financial engineering and implementation guidance vie to keep up with one another.

Furthermore, it is impossible for an accounting standard to iron each and every possible accounting transaction. Detailed standards with strict rules and thresholds might become obsolete across time as business environments evolve. This might then provide an avenue for intended preparers to take advantage and engage in aggressive financial reporting behaviour while still being able to attest to a reporting decision (Maines et al., 2003).

In addition, it is argued that different levels of standard precision will have an impact on the predicted level of vulnerability to subsequent penalties, such as associated fines or damages. This will then influence how the standard will be applied in financial reporting (Kessler & McClellan, 1996; Nelson et al., 2002). Accounting scholars evidenced that rule-based standards could be used to defend aggressive and opportunistic behaviour (Agoglia et al., 2011; Collins et al., 2012; Jamal & Tan, 2010; Kang & Lin, 2011). Benston, Bromwich, and Wagenhofer (2006) argued that rule-based accounting standards were developed in the US based on requests from preparers and auditors. Clear-cut prescriptions and bright-line thresholds in this type of standard can act as a shield to relevant constituents in the case of disputable accounting treatment (Schipper, 2003). The rule-based standard can then act as a "safe harbour" to companies, allowing them to argue that there should not be any misstatement since the rigid prescribed standard was strictly followed. In addition, in the case of mistakes in financial reporting, companies can use the complexity of the rule-based standard to justify them. The argument can be made that, due to the complex nature of rule-based standard, the accounting mistakes were innocent ones. By arguing that the strict guidance in the standard had been closely adhered to,

auditors or other industry watchdogs will be less able to disagree with preparers' financial reporting decisions (Maines et al., 2003; Nelson et al., 2002).

A lower level of precision is, arguably, able to restrict preparers' opportunistic actions, since a less detailed standard increases the possibility that the appropriateness of an accounting treatment will be questioned by outsiders. As a result, as the cost of violating the accounting principle is far beyond the benefits of doing so, preparers will be cautious in interpreting the standard. They will take action to ensure that transactions are presented in a true and fair manner (Nelson et al., 2002). In addition, the increased need to exercise professional judgment tends to deny companies a "safe harbour" while increasing the possibility of public scrutiny of their reporting decisions. A lower level of precision and the need to exercise professional judgment reduce the credibility of the "innocent misstatement" argument and, hence, reduce the probability of success in defending a questionable reporting decision (Benston et al., 2006; Donelson et al., 2012; Fornaro & Huang, 2012; Schipper, 2003). This explains why principle-based standards tend to be associated with less aggressive financial reporting decisions by preparers, and might constrain opportunistic financial reporting behaviour (SEC, 2003).

Despite the above arguments, the extant literature in this field of study revealed inconclusive findings. While Wang and Campbell (2012) concluded that there is no association between the level of standard precision and financial reporting aggressiveness, Lin, Riccardi, and Wang (2012) and Ahmed, Neel, and Wang (2013) revealed a decline in financial reporting quality for firms that had switched from domestic GAAP to IFRS. The findings further reported that the financial reports prepared under IFRS contained a higher level of aggressive reporting, greater income smoothing, delayed loss recognition, aggressive accrual reporting, and less value relevance. Cameran, Campa, and Pettinicchio (2014) reported a similar finding in the examination of private companies

in Italy. Their study reported that, contrary to the boards' position, a principle-based standard does not increase earnings quality. Preparers employed the ambiguity in the principle-based standard to pursue personal interests. This resulted in more earnings manipulation and decreased the reported earnings quality. Similarly, using preparers as the targeted participants, Tan and Jamal (2006) reported that the level of precision of an accounting standard will not prevent preparers from engaging in earnings management. Lowering the level of precision in the standard, however, will open doors for managers to engage in transaction structuring to achieve a desired earnings level, putting the firm's long term growth at risk.

An archival study by Barth, Landsman, and Lang (2008), however, showed a contrast in findings. Covering a total of 327 firms from 21 countries that had adopted a principle-based standard (IAS) between 1994 and 2003, the study found that firms that had adopted the principle-based standard showed better earnings quality compared to those that had not. Further, the adoption of the principle-based standard resulted in less earnings smoothing and less transaction structuring. This finding is further supported by the psychological research of Juslin and Olsson (2004), who examined the differences between rule-based and exemplar-based processing[2] in human judgment. The results of the study concluded that rule-based processing resulted in overconfidence and was subject to bias when it came to decision making.

Research by Chen et al. (2007), which examined the relationship between conservatism in accounting standards and preparers' earnings management intentions, reported the same findings. The study concluded that a preparer's degree of earnings management is lower when the level of conservatism in the accounting standard is lower.

[2] Exemplar-based processing is defined in the study as the rationing of judgment based on general guiding principles and the exercise of professional judgment. Hence, the current study argues that it is another term for principle-based processing.

This is further supported by McCarthy and McCarthy (2014), who found that financial reporting decisions made by preparers under rule-based standards were less accurate compared with those made under principle-based standards. Detailed prescriptions in the rule-based standard prevent preparers from presenting the underlying economic nature of a transaction, which dampens the level of accuracy and comparability of a financial reporting judgment. Experimental studies by Jamal and Tan (2010) and Agoglia et al. (2011) also came to similar conclusions, and reported that a less precise standard and a strong financial reporting watchdog will be effective in constraining preparers' aggressive financial reporting behaviour.

Focusing on auditors, Trompeter (1994) and Hackenbrack and Nelson (1996) concluded that auditors with intended agendas can employ the vagueness in an accounting standard to justify a client's aggressive financial reporting position to third parties. In the presence of incentives in their favour, auditors will be more aggressive in interpreting the latitude in the standard. As a result, auditors with intended agendas will be more willing to allow a client to engage in earnings management when the client is reporting under a rule-based standard -- even in the presence of pressure from an external regulatory party (Cohen, Krishnamoorthy, Peytcheva, & Wright, 2013; Segovia, Arnold, & Sutton, 2009). Hence, the studies call for a more precise standard to act as an effective tool to control auditors and the aggressive financial reporting behaviour of their clients. An experimental study conducted by Hronsky and Houghton (2001) further evidenced that vague phrases in accounting pronouncements serve as a good tool for defending aggressive financial reporting behaviour. Hence, it is important for standard setters to avoid having vague prescriptions in their standards in order to mitigate the possibility of opportunistic financial reporting decisions.

Similar findings were also found by Backof, Bamber, and Carpenter (2013), whose study reported that auditors will allow their clients to engage in aggressive financial reporting if they are reporting under a principle-based standard. However, if the auditors are required to employ a judgment framework[3] in evaluating client judgment, it is more likely that they will disagree with a client's reporting decision. Gibbins et al. (2001) also argued in a similar manner. Less detailed guidance will diminish the power of auditors when it comes to the auditor-client negotiation, as preparers are able to employ the latitude in the standards to justify their aggressive financial reporting decisions. It is argued that a vague accounting standard will diminish an auditor's negotiating power with its client. In the case of great latitude in an accounting standard, auditors face increased difficulty in opposing a client's reporting decisions, leading to more conflict between the two parties (Gibbins et al., 2001). This finding was confirmed by Fornaro and Huang (2012), who asserted that the ambiguity in a principle-based standard will result in greater opportunistic financial reporting behaviour. As a result, effective monitoring by gatekeepers is essential to ensuring that the principle-based standard has been adhered to. Ambiguity in the standard might, hence, tarnish the effectiveness of the industry's watchdog oversight function and provide a legal ground for intended parties to get away with their opportunistic financial reporting behaviour.

Taken as a whole, the current strand of literature provides contradictory arguments regarding how different levels of standard precision affect financial reporting aggressiveness. This is further supported by the inconclusive findings regarding how different levels of accounting standard precision are employed to legitimise reporting decisions.

[3] The study employed a judgment framework based on the one provided by the SEC's Advisory Committee on Improvements to Financial Reporting (CIFiR). The framework recommends that auditors critically evaluate the pros and cons of alternative accounting methods used by their clients.

2.4 Principle-Based Standards and Indicators: Inferences Drawn from IFRS 15

Series of corporate scandals in year 2002 had resulted in various regulatory reform. A Memorandum of Understanding (MOU) which is named as Norwalk Agreement was signed by FASB and IASB in Norwalk, Connecticut, US on September 18, 2002. The boards have pledged to commit on the convergence project and coordinate their future work plans to ensure that the ultimate objective on comparability of the standards is achieved (FASB, 2013). To achieve the comparability objective, several measures have been taken by the boards. Amongst them are short-term project on removing the differences between US GAAPs and IFRSs/ IASs, coordinating future work programs on discrete and substantial projects on inconsistency removal, continue any undertaking joint projects and encourage the coordination on the respective interpretative bodies.

Various accounting standards were placed under the boards' accounting standard review agenda. This also includes the review of the current IASB's conceptual framework which is currently in the exposure draft stage. Besides, the standard on revenue recognition was also one of the standard placed on the reviewing agenda where the boards' main objective is to develop a robust revenue model that is applicable across different industries and business transactions. Investigation into the revenue recognition standard began before the start of the convergence project between IASB and FASB (hereafter known as the boards). Acknowledging the weaknesses in the existing revenue recognition standards, and the diversity in treatment of similar transactions, the G4+1 group of standard setters[4] began looking into the revenue recognition standard at a meeting in Boston, USA in the year 2000 (FRC, 2000). Much of the work on the standard has been conducted by the UK standard setters since then. The main challenge has been the establishment of a broad recognition criterion that can be consistently applied across

[4] Members of the G4+1 group of standard setters consisted of the national standard setting bodies from Australia, Canada, New Zealand, the United Kingdom, and the United States. In addition, representatives of the International Accounting Standards Committee (IASC) attended G4+1 group meetings as observers (Beresford, 2000; FRC, 2000).

different types of industries and revenue generating transactions. With the formation of the IASB in the year 2001, the G4+1 group decided to disband during a meeting in London on 30 January 2001 to avoid diverting resources that might otherwise be used in supporting the convergence effort of the boards (FRC, 2001).

Work on improving the revenue standard was passed to the FASB and the IASB soon after the signing of the memorandum of understanding (MOU) on the convergence project by the boards. The IASB and the FASB initiated a joint project to improve the revenue recognition standard with the signing of the MOU (Ciesielski & Weirich, 2011). The boards issued the Discussion Paper (DP) *Preliminary Views on Revenue Recognition in Contracts with Customers* in December 2008. The main purpose of the DP was to gather public comments on a single, contract-based revenue recognition model that would provide clearer guidance on the timing of revenue recognition, as well as minimise the number of standards to which an entity would need to refer. This new revenue recognition model was expected to facilitate the comparability of financial information, and enhance the understanding of financial statement users (IFRS, 2008). As opposed to being a detailed prescription, the DP provided a preliminary view on the revenue recognition model, and invited public comment on it through the posting of thirteen questions. In general, the boards requested comment on the clarity of the guidance provided on the timing of revenue recognition, and the extent to which the new model would facilitate consistency and comparability across industries (IFRS, 2008)..

After taking into consideration public comments on the DP, the boards issued a First Exposure Draft (ED) – Revenue from Contracts with Customers in June 2010. The ED outlined the future direction of the boards and provided more detailed guidance on the application of the proposed revenue recognition model. The ED included redefined concepts and indicators to clarify the model and ensure that it was robust enough to be

applied across different industries and economic transactions. The first ED received attention from various parties around the world. In response to adverse public comments, and recognizing the importance of the revenue standard to various businesses and industries, the boards decided to re-expose the ED in November 2011 to ensure that unintentional consequences arising from implementation of the new revenue recognition model would be minimized. The boards subsequently revised most of the aspects of the ED issued in June 2010 and comments were invited on the clarity of the prescribed requirements and whether the new model would reflect the economic substance of the transactions.

Based on the comments received on the re-exposed ED, a redeliberated standard was issued by the boards in February 2013. The redeliberated standard included the changes to the re-exposed ED and the tentative decision of the boards on the latest changes to the proposed revenue recognition model. In May 2014, the boards jointly issued the long-awaited IFRS – IFRS 15 Revenue from Contracts with Customers. With an effective date of 1 January 2018, the principle-based IFRS 15 is expected to act as a robust framework for addressing revenue issues across a wide range of industries.

One of the main changes proposed by IFRS 15 is the introduction of the concept of control. The concept has been revised and improved from time to time to enable it to deal with the different practical issues and complex transactions faced by different businesses and industries.

However, the number of prescriptions related to the concept of control increased during development of the standard. Starting as general principles, the prescriptions pertaining to the concept were expanded through the standard development process in order to clarify the concept further. The increasing number of prescriptions, especially the act of including indicators on top of a general principle pertaining to the concept of

control, has resulted in public concern that such an act by the boards might result in the release of a principle-based standard with an underlying rule-based standard. This might then have an impact on managers' financial reporting decision making. Figure 2.1 (below) provides an overview on where IFRS 15 would possibly lie, taking into account public concern.

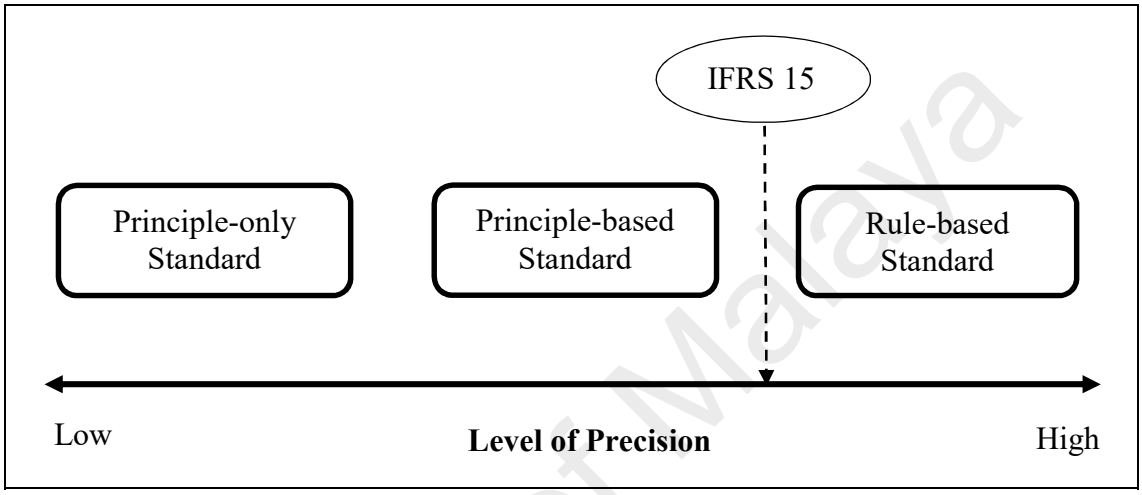


Figure 2.1: Classification of Accounting Standard Types, by Level of Precision

An overview of the standard and the development of the control concept and related issues will be provided in the coming sections.

2.4.1 What is in the New Revenue Recognition Standard?

According to Paragraph 3 of the redeliberated standard issued in February 2013, an entity shall "recognise revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services." (IFRS, 2013, p. 2). As explained in Paragraph 60 of the Basis for Conclusions pertaining to the first Exposure Draft (ED), this revenue model can be considered an asset de-recognition model, as an entity would need to transfer goods or services to satisfy a performance obligation before being able to recognise any revenue (IFRS, 2010a).

As a result, the new revenue model called for entities to apply five revenue recognition steps when recognising revenue from contracts with customers. These are:

Step 1: identify the contract with the customer;

Step 2: identify the separate performance obligations in the contract;

Step 3: determine the transaction price;

Step 4: allocate the transaction price to the separate performance obligations in the contract; and

Step 5: recognise revenue when (or as) the entity satisfies a performance obligation.

Entities are to follow the steps when determining the amount and timing of revenue recognition. To further clarify, the five revenue recognition steps are summarised in Figure 2.2 (below).

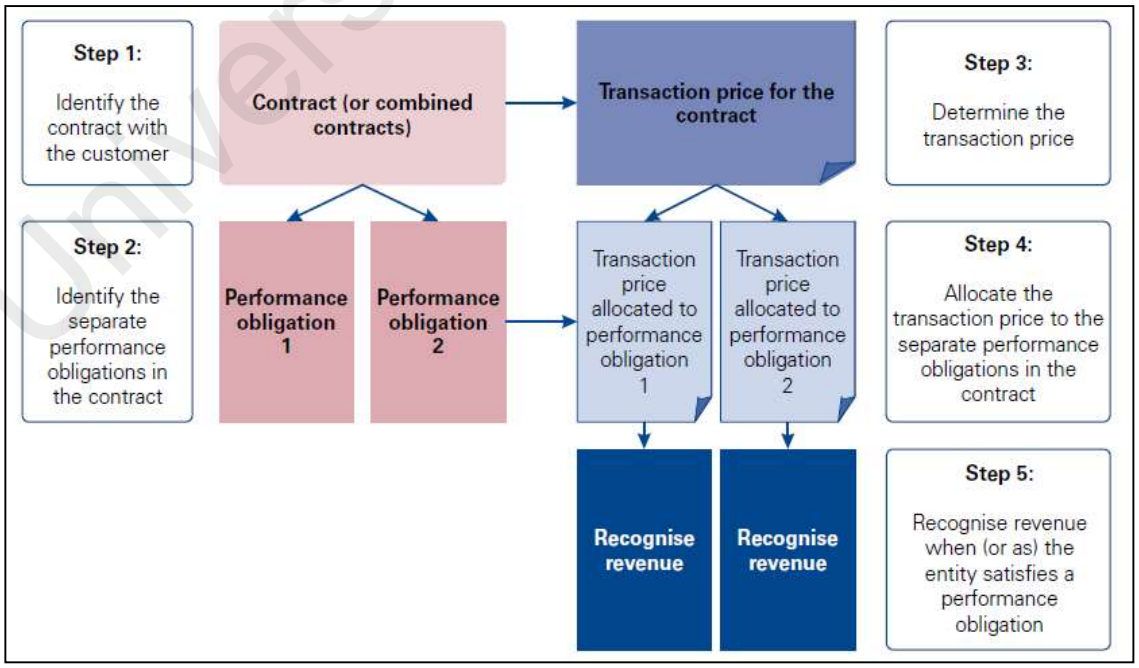


Figure 2.2: Five-step Revenue Recognition Model

(Adapted from KPMG, 2011, p. 7)

Amongst the most significant changes introduced by IFRS 15 is the "concept of control." While revenue was previously recognised on the basis of "risks and rewards", the newly proposed concept of control changed the timing of when revenue should be recognised. The current proposed changes prescribe that no revenue is to be recognised at the contract inception point. Instead, revenue is recognised across the performance obligation period. No revenue is recognised until the company has transferred the promised assets to its customer (i.e., only when the performance obligations under the contract with the customer have been fulfilled, and the customer has obtained control[5] of the goods or services sold) (Colson et al., 2010). As a result of the introduction of the concept of control, the recognition of revenue that might have occurred at an early stage under the prior standard might now need to be delayed. This delay might have an impact on the company's reported revenue and, hence, create a risk to the company in the eyes of investors and financial analysts. A more detailed discussion on the concept of control and its development will be provided in the coming sections.

2.4.2 Introduction of the Concept of Control

According to IFRS 15, control is defined in Paragraph 33 as:

> "the ability to direct the use of and obtain substantially all of the remaining benefits from the asset. Control includes the ability to prevent other entities from directing the use of and obtaining the benefits from an asset. The benefits of an asset are the potential cash flows that can be obtained directly or indirectly in many ways, such as by:
>
> (a) using the asset to produce goods or provide services (including public services);
>
> (b) using the asset to enhance the value of other assets;

[5] Control is defined as "the ability to direct the use of and obtain substantially all of the remaining benefits on the assets transferred."

(c) using the asset to settle liabilities or reduce expenses;

(d) selling or exchanging the asset;

(e) pledging the asset to secure a loan; and

(f) holding the asset." (IFRS, 2014, p. 18)

This is unlike IAS 18 *Revenue Recognition*, which prescribes that revenue shall only be recognized when the "risks and rewards" of the goods and services have been transferred. As well, in order to be able to recognise revenue, an entity has to ensure that the criteria of ascertaining the probability that future economic benefits associated with the revenue will flow into the entity, and that the revenue amount can be reliably measured, are met. The concept of control described in the new revenue recognition model, however, extends beyond the criteria of "risks and rewards."

Since the main change in the revenue recognition standard lies in the concept of control, when and how control is considered transferred will have a direct impact on the timing of revenue recognition. Paragraph 32 of IFRS 15 states that, for each contract, an entity has to determine whether it fulfils the performance obligation of the contract over a period of time (i.e., control is transferred over a period of time), or at a point in time (i.e., control is transferred at a particular point in time) (IFRS, 2014). When control of goods or services is passed to the customer, the entity is considered to have fulfilled the performance obligation in the contract, hence, the revenue associated with the contract is recognized. With that, a good understanding of the concept of control is essential to prevent potential practical problems.

2.4.3 Development of the Concept of Control

Throughout the development of IFRS 15, the concept of control was one of the issues that received the most public comments. In order to clarify the concept of control and ensure its consistent application across different industries, the boards continuously

improved the concept and developed relevant guidelines during the standard development process.

2.4.3.1 Control in the Discussion Paper

When the concept of control was first introduced in the DP, the boards provided a very general principle of what constituted control. Paragraph S21 of the DP prescribed that "in the case of a good, an entity satisfies a performance obligation when the customer obtains control of the good so that the good is the customer's asset. Typically, that occurs when the customer takes physical possession of the good." (IFRS, 2008, p. 10).

This brief definition of control received various comments from the public. Almost all of the comment letters received in response to the DP commented that the definition of control was too general and unable to provide sufficient guidance, especially regarding the point at which control would be considered to have been passed to the customer.

> Recognition of revenue upon the transfer of control is a significant departure from the current risks and rewards model. As such, "control" needs to be defined to ensure consistent interpretation and application of the new revenue recognition principle. (DP-CL 35)

Many respondents urged the boards to provide indicators to clarify and guide the application of the control concept.

> The boards should articulate a clear principle of when control of an asset transfers from an entity to a customer. This principle should be supported by indicators to assist in determining when the principle is met. (DP-CL 68)

> The DP contains insufficient information on 'control' to allow for a meaningful discussion of whether the principles can be applied in practice and to complex

transactions. More discussion and guidance are needed on control and transfer of control to clarify how the principle would operate in practice. (DP-CL 219)

We recommend that the Boards provide a list of indicators that could be used in determining if control has been transferred, as well as provide more complex examples than are currently included in the discussion paper. These indicators should address when control transfers at a point in time and when control transfers continuously over the term of the contract. (DP-CL 214)

In addition, as the DP prescribed physical possession as the main criterion in deciding on transfer of control, many of those operating in the construction sector raised concerns over the proposed concept. One of the most raised concerns was how the new concept would be applied to the construction sector, as customers would only take physical possession of a property upon the completion of the construction project. Furthermore, compared with the retail industry, the point at which a customer would take possession of an asset in the construction industry would normally be much longer.

We believe that the current concept of customer "control" within the goods model in the DP is not appropriate for highly customized, long-term construction/production-type contracts with a limited pool of customers, as it does not reflect the economic substance of our customer transactions.....Control of the goods or services underlying our contracts does not often "transfer" until our contracts are complete. (DP-CL 140)

In many industries, including the construction industry, performance under the contract is a continuous process that may last a period of several years. In such circumstances, financial statement preparers need additional guidance on the indicators of continuous transfer of control. (DP-CL 142)

2.4.3.2 Control in the first Exposure Draft

In responding to the comments on the unclear definition of the concept of control, the boards clarified the concept in the first ED. Compared with the DP, which provided basic concepts and building blocks of the new revenue recognition mode, the first ED provided more detailed guidance on the application of the proposed revenue recognition model. Redefined concepts and indicators were included to further clarify it (IFRS, 2010c). As discussed earlier, since the proposed revenue model could be considered an asset de-recognition model, the redefined definition of control, hence, took into consideration the definition of asset in the current conceptual frameworks[6]. Control was therefore defined in Paragraph 26 of the first ED as:

> "the ability to direct the use of, and receive the benefit from, the good or service. Control includes the ability to prevent other entities from directing the use of, and receiving the benefit from, a good or service." (IFRS, 2010c, p. 22).

In addition to the criterion of physical possession, the definition also took into account the potential economic benefits arising from possession of the goods or services.

To further clarify the concept of control, the first ED included indicators to guide the application of the concept. Paragraphs 27, 28 and 30 prescribed additional indicators of control, including (IFRS, 2010c):

(a) Customers have the ability to direct to use of that asset

(b) The retention of rights to an asset does not constitute control

(c) Customers have an unconditional obligation to pay

(d) Customers have legal title

[6] According to Paragraph 4.4 of IASB's The Conceptual Framework for Financial Reporting, an asset is defined as "a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity." (IFRS, 2010b, p. A38).

Asset is defined in Paragraph 25 of FASB Concepts Statement No. 6 Elements of Financial Statements as "probable future economic benefits obtained or controlled by a particular entity as a result of past transactions or events." (FASB, 1985, p. 16).

(e) Customers have physical possession

(f) The design or function of the good or service is customer-specific

Figure 2.3 (below) provides a summary of the concept of control in the first ED issued in 2010. The boards redefined the general principle of the concept of control and included indicators to further clarify the concept.

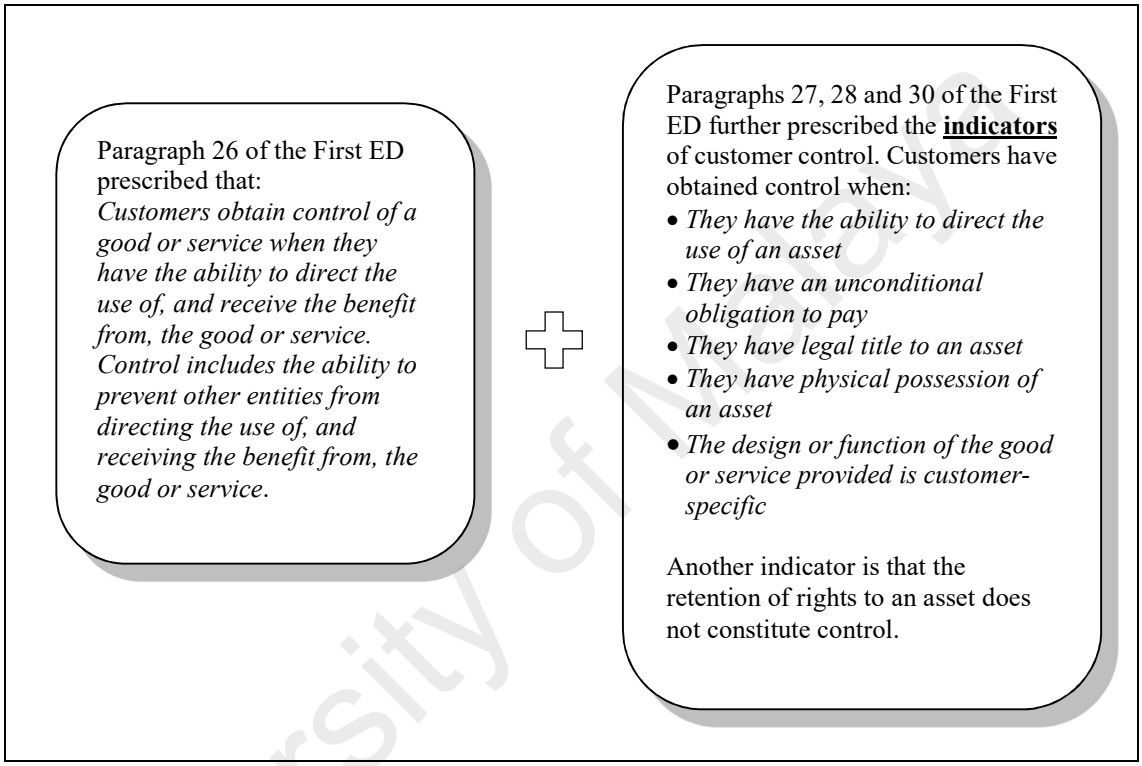


Figure 2.3: Concept of Control in the First Exposure Draft Issued in 2010

Despite revising the definition of control and including indicators of control, almost all of the comment letters received in response to the first ED commented that the practical aspects of the concept needed to be clarified further. It was noted that the indicators might create confusion and be open to differing interpretations when the standard came into force.

> Whist the ED provides guidance around the concept of transfer of control, the indicators governing this passing of control are vague and it is not clear how in practice each contract should be measured against these indicators to determine the accounting treatment. We think clearer language should be used in any final standard. (ED I-CL 274)

> We consider that the indicators are open to differing interpretations and this could give rise to issues between preparers and auditors and to inconsistencies between entities. (ED I-CL 36)

In addition, even though the control concept had been revised, it had still received strong objection from the construction industry especially the one from the US. Concerns were raised on the practicability and the potential application problem of the new revenue recognition model on the long term contracts that construction companies that normally deal with. Almost all of the respondents commented that the boards should further clarify how the concept of control would be applied to sales of services and work-in-progress. The boards were asked to differentiate and clearly prescribe how the control concept would be applied to a sale involving a continuous transfer of service over a period of time.

> We believe the current language in the ED does not provide sufficient guidance with respect to when continuous transfer of control exists. We believe the boards should provide indicators of contractual relationships that are evidence in a continuous transfer of control model. (ED I-CL 114)

> The proposed standard demonstrates this principle for goods, but additional indicators are needed to understand when control transfers in arrangements beyond those involving tangible products. Judgment will be required to determine when control transfers in these situations.... we suggest amending Para 31 to state explicitly that the indicators should be assessed in their entirety and it is unlikely that meeting only one factor will be sufficient. (ED I-CL 190)

> A transfer of a completed asset and a continuous transfer may have different indicators and thus those indicators should be specified for both cases respectively. (ED I-CL 349)

In addition to comments on the unclear definition of control and its application to the transfer of services, there were concerns that the concept of control was too theoretical and focused on the legal rather than the economic aspects of transactions (Brady et al., 2010). The replacement of the concept of "risks and rewards" might lead to a focus on "form over substance" that could result in unfaithful presentation of financial statements:

> Extant IAS 18 refers to the concept of "risks and rewards" and "control". We are concerned that attaching less importance to risks and rewards may result in a legalistic approach. In general, we believe that the economic aspects always need to be given appropriate consideration. (ED I-CL 58)

> While there is no one perfect indicator of control, the proposed standard would be improved if it included risks and rewards as one among several indicators to help assess when the transfer of control of a good or service has taken place. We suggest that risks and rewards be included as one of the indicators of control. (ED I-CL 533)

2.4.3.3 Control in the second Exposure Draft

Paragraph BC87 of the Basis for Conclusions indicated that most of the comments submitted were concerned that the concept of control was not clearly defined and prescribed (IFRS, 2011a). To further clarify the general principle of the concept, more descriptions were introduced in the second ED. The application of the concept of control was also further divided into control involving performance obligations "at a point in time" or "across a period of time" in order to account for one-off contracts or contracts across a certain time period.

The descriptions of control were developed based on the definition of asset in the conceptual frameworks, and were included to further explain the circumstances under which an entity could consider that the benefits from an asset had been obtained. It was hoped that their inclusion would enhance the clarity of the concept and, hence, assist

preparers better when the standard came into practice. The list of descriptions that were added to Paragraph 32 include (IFRS, 2011b):

> The benefits of an asset are the potential cash flows that can be obtained directly or indirectly in many ways, such as by:
>
> (a) using the asset to produce goods or provide services (including public services);
>
> (b) using the asset to enhance the value of other assets;
>
> (c) using the asset to settle liabilities or reduce expenses;
>
> (d) selling or exchanging the asset;
>
> (e) pledging the asset to secure a loan; and
>
> (f) holding the asset.

In addition, the indicators of transfer of control were also slightly revised. In responding to public objections to the exclusion of "risks and rewards" from the concept of control, the boards reintroduced them as one of the indicators of control. This action received positive feedback:

> We believe the "risk and reward" indicator set forth in paragraph 37 is important to the determination of transfer of control.... In our view, if companies do not include the risk and rewards concept when determining control, it could lead to inappropriate up-front revenue recognition making it difficult to analyse a company's economic risks. (ED II-CL 275)

To address the public's request for the inclusion of guidance in determining how control is considered passed when there are performance obligations that are to be

satisfied across a period of time, new paragraphs were added. Paragraph 35 of the second ED further prescribed the criteria to be used in determining the satisfaction of a performance obligation across a period of time, and the application of the concept of control to such obligations:

> An entity transfers control of a good or service over time and, hence, satisfies a performance obligation and recognises revenue over time if at least one of the following two criteria is met:
>
> (a) the entity's performance creates or enhances an asset (for example, work in progress) that the customer controls as the asset is created or enhanced; or
>
> (b) the entity's performance does not create an asset with an alternative use to the entity and at least one of the following criteria is met:
>
> (i) the customer simultaneously receives and consumes the benefits of the entity's performance as the entity performs;
>
> (ii) another entity would not need to substantially re-perform the work the entity has completed to date if that other entity was to fulfil the remaining obligation to the customer; or
>
> (iii) the entity has a right to payment for performance completed to date and it expects to fulfil the contract as promised. (IFRS, 2011b, p. 26)

The concept of alternative use was explained in Paragraph 36 of the second ED:

> When evaluating whether an asset has an alternative use to the entity, an entity shall consider at contract inception the effects of contractual and practical limitations on the entity's ability to readily direct the promised asset to another

customer. A promised asset would not have an alternative use to an entity if the entity is unable, either contractually or practically, to readily direct the asset to another customer (IFRS, 2011b, p. 27).

Figure 2.4 (below) summarises the development of the concept of control in the second Exposure Draft.

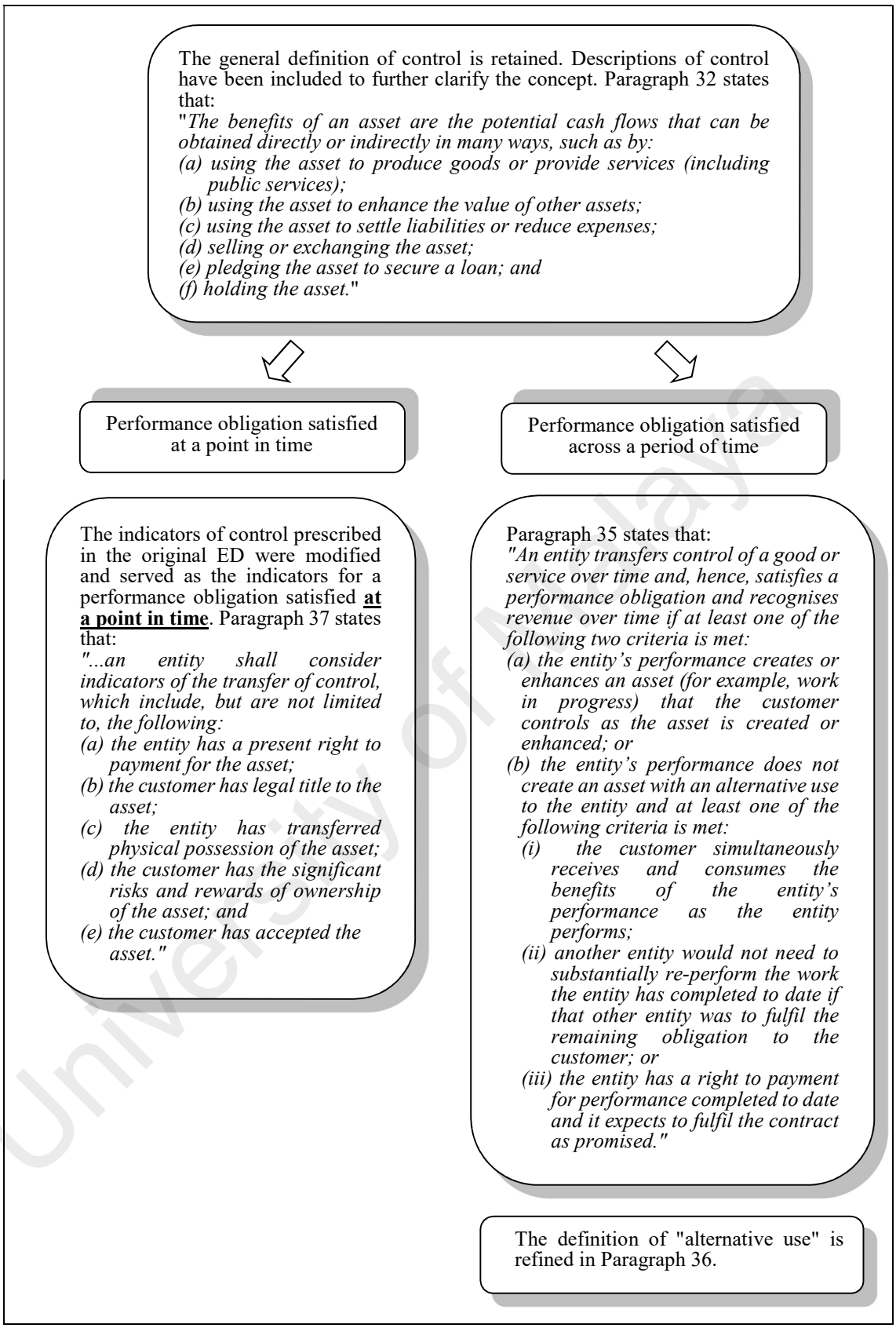


Figure 2.4: Concept of Control in the Second Exposure Draft Issued in 2011

The inclusion of the prescription regarding the transfer of control over time could be seen as a response to the overwhelming number of comments received from the construction industry in response to the first ED. While the inclusion of the prescription

seemed to have resolved the issues of companies in that sector, many of the comment letters submitted in response to the second ED expressed the view that the prescription regarding the transfer of control over time is too complex, and might create practical difficulty to other industries other than the construction industry. Concern was also raised from industries such as telecommunication, IT and software, financial services and media and entertainment, on the application of the control concept to the service industry which normally involved long term transfer of services. Public, especially preparers demanded for clarification on the application of the control concept on long term service contract.

> We believe that the proposed definition of performance obligations that are transferred over time is generally appropriate and is a significant improvement from the 2010 ED. However, the revised ED continues to provide insufficient guidance to ensure consistent application for certain services. (ED II-CL 40)

> We agree in principle with the proposed guidance in para 35 and 36 of the ED on when a performance obligation is satisfied over a period of time. However, these paragraphs only once refer to the provision of services and as such it is not entirely clear how this guidance should be applied to a service contract extending over a period of time. (ED II-CL 258)

In addition, concerns were raised about the vague link between Paragraph 35 and the concept of control. The boards were urged to look into the matter to promote the consistent application of the concept of control:

> The Boards should clarify the requirements in paragraph 35 (b) and link them more closely to the overall transfer of control concept. We believe that this would enhance the operationality of the final standard and improve the consistency with which entities determine which performance obligations are satisfied over

> time.....While we understand that the Boards have conducted outreach to some industries, we believe it is of great importance to ensure that the model is operational across a broad range of transactions and jurisdictions. We suggest the Boards conduct outreach in various jurisdictions and industries (e.g., real estate, contract manufacturers, software, and service providers) to specifically test the application of the proposed requirement in paragraph 35(b) against different fact patterns that may exist in different countries to ensure conclusions are consistent with the economics of the transactions. (ED II-CL 64)

On the other hand, while many of the comment letters welcomed the inclusion of this prescription, concerns were raised as to the appropriateness of the way such paragraphs were drafted. In addition, concerns were raised about the inconsistency between the newly added prescriptions on the transfer of control across a period of time, and other prescribed indicators of control. There were also concerns about possible inconsistency between the proposed prescriptions and those of other IFRSs:

> We have some comments on how paragraph 35(b)(iii) has been drafted. With some clarification the paragraph does appear capable of being applied in practice. But as currently articulated it has the appearance of being a rule rather than a principle, which may not be ideal. (ED II-CL 344)

> We agree with the principle that revenue should be recognised over time as an entity satisfies each performance obligation. However, we have concerns that the recognition guidance in paragraphs 35 is not clearly linked to the notion of control as described in paragraph 32. (ED II-CL 259)

> It is inconsistent with the guidance in paragraph 37b, which states that retention of legal title solely as a protective right does not preclude a customer from obtaining

control of an asset. It is also inconsistent with the consolidation guidance in IFRS 10 and ASC 810, which requires that investor-protective rights do not result in control over an investee. (ED II-CL 33)

2.4.3.4 Control in IFRS 15

The final version of IFRS 15 did not see many changes introduced, compared to the second ED. The boards retained the prescription on the transfer of control at a point of time. However, taking into account the comments received in response to the second ED, the final standard introduced slight changes to the prescription on the transfer of control over a period of time. Compared with the prescription in the second ED, the one in the final standard is linked better with the broad definition of control provided in Paragraph 31 of the standard. While the rest of the document remained relatively unchanged from the second ED, Paragraph 35 included a new criterion (*"*the customer simultaneously receives and consumes the benefits provided by the entity's performance as the entity") to be used in considering when a performance obligation could be considered satisfied over time. (IFRS, 2014, p. 18).

As well, the criterion of "whether alternative use exists" was replaced with a more general principle. This move is believed to be a response to comments suggesting that the prescription on "whether alternative use exists" was too prescriptive. In addition, the boards revised Paragraph 36 to clarify the concept of "alternative use." The paragraph defines alternative use as follows:

> An asset created by an entity's performance does not have an alternative use to an entity if the entity is either restricted contractually from readily directing the asset for another use during the creation or enhancement of that asset or limited practically from readily directing the asset in its completed state for another use. The assessment of whether an asset has an alternative use to the entity is made at

contract inception. After contract inception, an entity shall not update the assessment of the alternative use of an asset unless the parties to the contract approve a contract modification that substantively changes the performance obligation (IFRS, 2014, p. 18).

To provide a better view of the final version of the concept of control, Figure 2.5 summarises the changes to the prescriptions pertaining to the concept of control contained in IFRS 15 issued in 2014.

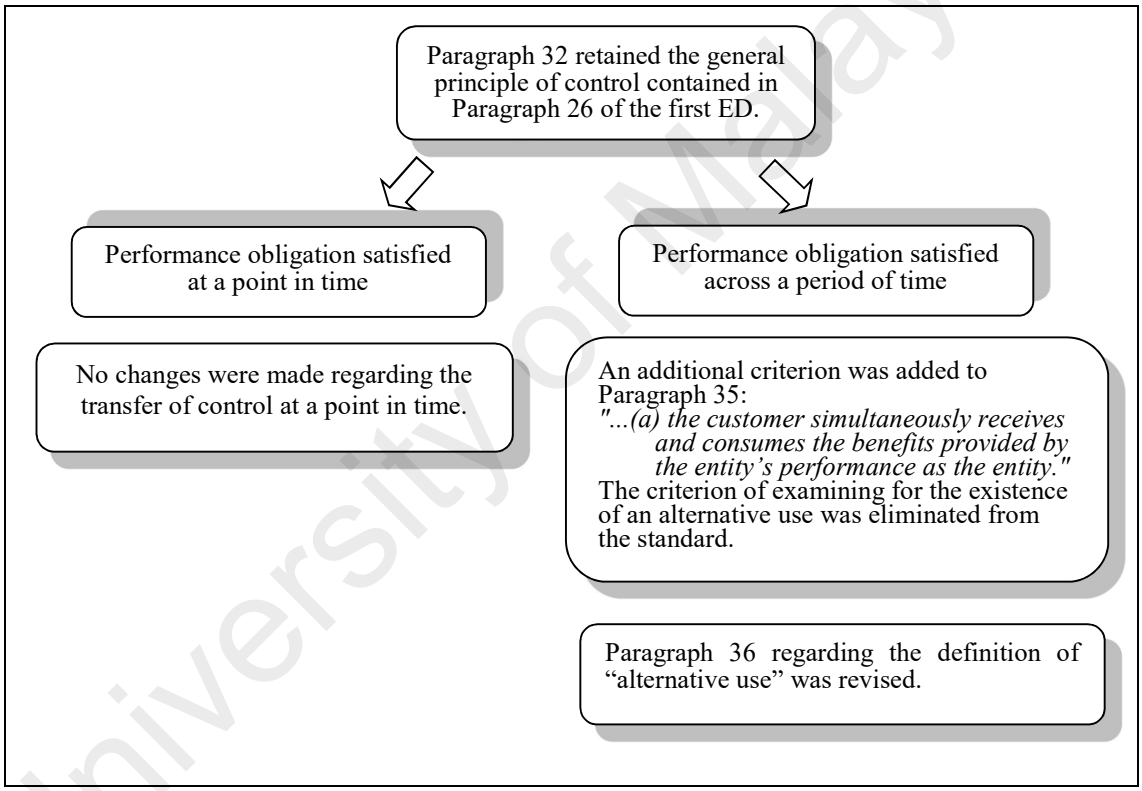
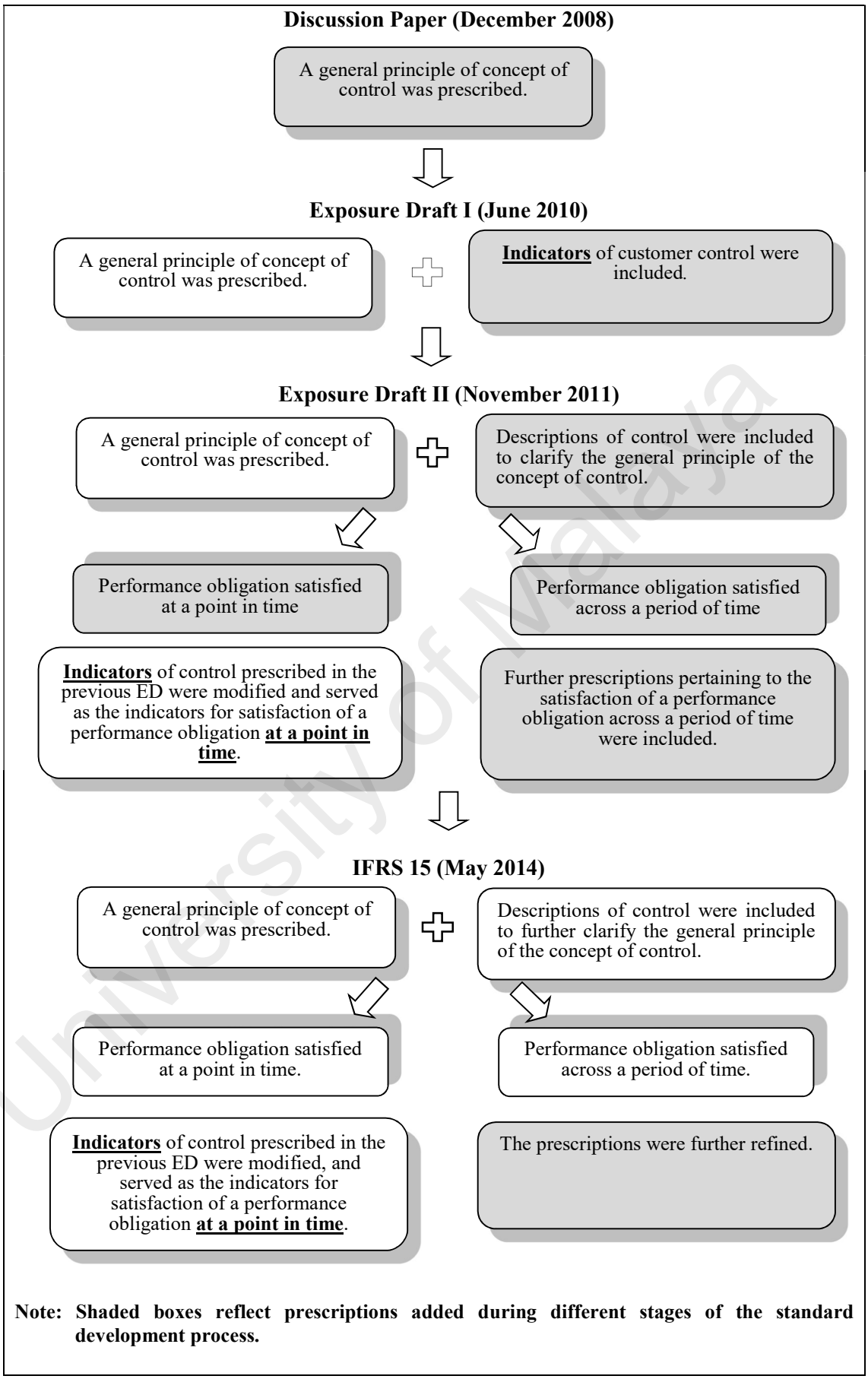


Figure 2.5: Concept of Control in the Final Standard Issued in 2014

2.4.4 Potential Issues with Indicators in Principle-Based Standards

In responding to public feedback on the standard during its development, the boards enhanced the broad definition of control, and included indicators in the first ED to clarify the concept and assist managers when the final standard was put into practise. Despite these efforts, the public felt that they were not adequate to clarify the concept of control. They also felt that the concept might not be able to cope with the increasing complexity of business transactions faced by diverse businesses in various industries. As a result, it

is not surprising that the indicators of control were revised in the second ED. Descriptions of control were included to clarify the concept, and separate paragraphs on the transfer of control across both a period of time and a point in time were added to the standard. This was to ensure that the standard would be free from ambiguity during its application, and robust enough to serve as a "one size fits all" model. Figure 2.6 (below) provides an overview of the development of the concept of control throughout the standard development period.



Note: Shaded boxes reflect prescriptions added during different stages of the standard development process.

Figure 2.6: Development of the Concept of Control

From the figure above, the standard goes beyond just describing the principle of control. The boards introduced indicators for users to examine whether control has passed to a customer both at a point in time, and across a period of time. The inclusion of such indicators to supplement the broad definition of the concept of control received extreme reactions from the public. At one end, it was acknowledged that the inclusion of indicators could potentially clarify the concept, enhance consistency when it comes to practise, and reduce the level of ambiguity in the new revenue standard. This would prevent IFRS 15 from being issued as a principle-only standard. At the other end, there were concerns that the increased level of guidance did not align with the nature of a principle-based accounting standard. The inclusion of detailed bright-line and comprehensive prescriptions could tarnish the aim of the boards to develop a principle-based accounting standard. It might also result in a "hybrid standard" that is close to a rule-based standard (Hepp & Brady, 2011). Concerns included:

> We question whether a proposed standard supplemented by up to 50 pages of mandatory application guidance is indeed a principles-based standard. (ED I- CL 332)

> This and the detailed nature of the guidance lead us to conclude that the present principle-based IAS 18 is to be replaced by a standard based on a rule-based approach. We question the extent of this guidance and how the IASB, considering this approach, will deal with new revenue recognition issues as they are identified. (ED I- CL 940)

Deloitte (2014, p. 1) shared the same concern. In the “Heads Up” letter published by Deloitte Australia Assurance and Advisory, the company states:

> The Standard introduces far more prescriptive and detailed implementation guidance than was included in IAS 18, IAS 11 and the related Interpretations; these matters will require consideration by the majority of entities.

In addition, concerns were raised that the inclusion of too many indicators might encourage managers to use them as a checklist. The inclusion of indicators might reduce the room for the exercise of professional judgment and, hence, shift this new revenue recognition standard toward the side of rule-based accounting standards. This could then void the main objective of the boards in issuing a principle-based, "one size fits all" revenue recognition model. Additional comment letters argued:

> We are concerned that para 31 could be read literally to require that at least two of the four criteria be satisfied in order for control to be transferred. This latter interpretation produces a formulaic "bright line" test that seems inappropriate to an otherwise principles-based and judgment-driven standard. (ED I- CL 114)

> There is a danger that readers of the standard, as currently drafted, may focus exclusively on the indicators, using them almost as a checklist. This would be inappropriate, particularly as indicators other than the four listed will often be relevant. (ED I- CL 614)

Confirming the argument in ED I-CL 614, prior studies have evidenced the potential implications of introducing indicators in a standard. Garratt (2007) argued that checklists in financial reporting might result in a "ticking-the-boxes" practice that introduces unethical reporting behaviour. These compliance-fixated and ticking-the-boxes practices were argued to be the main contributor to the collapse of Enron, which spawned the biggest bankruptcy case in the US. While the inclusion of indicators might be helpful in the decision making process (Bonner, 2007), and Pounder (2013) argued that checklists

in financial reporting are inappropriate when tasks require a higher level of judgment. As a result, a checklist-based code would be ineffective in preventing aggressive financial reporting behaviour amongst unethical mangers (Ahmad & Salleh, 2008; Kay, 2009). This might then create a "safe harbour" for intended parties to defend aggressive financial reporting decisions.

While it does not examine the impact of indicators, another important inference to the inclusion of indicators in an accounting standard can be drawn from the feature-matching model by Tversky (1977). Originating in the field of psychology, the model highlights the tendency of individuals to give more weight to similar facts, and less weight to distinct facts. The study concluded that matching and giving greater emphasis to similar features will, without individual awareness, result in biased judgment.

Employing the feature-matching model in the financial reporting context, Clor-Proell and Nelson (2007) examined the impact of the inclusion of implementation guidance in accounting standards on managers' financial reporting judgment via affirmative or counter examples. The study concluded that managers tend to match the similar facts of a transaction with affirmative rather than counter examples. The study further asserted that, given the latitude in accounting standards and the presence of examples in guiding reporting decisions, this bias in judgment might contribute to more aggressive financial reporting behaviour by managers.

Extending the Clor-Proell and Nelson (2007) study, Capps, Koonce, and White (2014) examined whether the inclusion of fact-weighting guidance in an accounting standard reduces managers' bias in interpreting the examples associated with the standard. Fact-weighting guidance was defined in the study as "where an accounting standard indicates the relative importance of particular facts to the appropriate accounting for a transaction" (p. 1). With a 3 x 2 between-subject experimental research approach, the study concluded

that fact-weighting guidance is only useful in de-biasing example facts that are similar to the accounting transactions in hand, but not accounting transactions that are different from the example facts provided. There was a tendency for managers to constantly overweigh and match transactions with similar facts or treatment provided in the example attached to the standard.

The experimental study by Mazza et al. (2011), however, provided a different view. The study examined whether the inclusion of benchmarks in an accounting standard would restrict managers' aggressive reporting behaviour. The study was conducted after the move by the boards to adopt fair-value accounting in measuring financial assets. In the context of the absence of an active market for a financial asset, entities are required to exercise professional judgment in determining the value of the asset. The study suggested that benchmarks should be included to guide the decisions of preparers in such a context. The study concluded that the inclusion of benchmarks is useful in clarifying ambiguity that might exist when the standard was released and put into practise. The benchmarks would also be effective in constraining preparers' aggressive financial reporting behaviour. In the absence of benchmarks, and given the freedom to exercise professional judgment, preparers with hidden agendas might take the opportunity provided to be more aggressive with their financial reporting.

Taken together, the inconclusive findings of previous studies make it difficult to tell whether the action by the boards to include lists of indicators pertaining to the concept of control will lead to more aggressive financial reporting behaviour by preparers. At one end, the indicators might clarify the concept of control and avoid the release of a principle-only standard that might promote aggressive financial reporting behaviour. At the other, the indicators might increase the level of guidance and, hence, the chances that preparers would use them as a checklist and engage in opportunistic reporting decisions.

2.5 Gaps in the Literature

As discussed in the previous section, the inclusion of indicators in a principle-based standard might promote aggressive financial reporting. Capps et al. (2014) and Clor-Proell and Nelson (2007) concluded that the inclusion of indicators in an accounting standard might create situations where preparers will unconsciously match accounting transactions with the indicators provided, resulting in the reporting of the form of the transactions rather than the substance. With that, the move by the boards to include indicators in IFRS 15 might introduce the risk of abuse by preparers with certain agendas. Conformance with the indicators might create a "safe harbour" for parties to defend themselves against claims of aggressive financial reporting decisions (Donelson et al., 2012; Fornaro & Huang, 2012; Schipper, 2003). Indicators might also facilitate opportunities for parties to structure transactions that are aligned with a desired reporting outcome (Degeorge et al., 1999; Jamal & Tan, 2010; Kang & Lin, 2011; Psaros & Trotman, 2004). On the other hand, instead of promoting opportunism, the indicators might clarify newly introduced complex accounting concepts and, hence, ease the pain of constituents during the standard transition and application process (Mazza et al., 2011).

However, the issue of the inclusion of indicators in principle-based standards, and its impact on financial reporting decision making, has not received attention from researchers in the field. A review of the literature in this field of study has found that principle-based and rule-based standards are different in two respects: in the level of precision of the standard, and in the number of bright-line tests prescribed by the standard (Agoglia et al., 2011; SEC, 2003). As a result, most of the studies that have examined the impact of standard precision on aggressive financial reporting have emphasised the impact of the inclusion or exclusion of bright-line tests or specific thresholds in the standard. Using standards covering leases, Jamal and Tan (2010) examined whether the inclusion of specified probability thresholds (bright-line tests) affected preparers'

financial reporting aggressiveness. Similarly, Agoglia et al. (2011) also focused on the impact of the specification of bright-line tests in the standard, on managers' aggressive financial reporting.

Psaros and Trotman (2004), however, investigated the impact of rule-based and principle-based standards on aggressive reporting, based on a consolidation standard. The study examined the distinction between the two standards in terms of the inclusion of probability thresholds, a list of factors to be considered in the rule-based standard, and their impact on decision making involving consolidations. As specified by the study, if any one of the factors were to be met, the entity would be consolidated. Likewise, while not focusing on rule-based versus principle-based standards, Cuccia et al. (1995) examined whether replacing a tax standard's vague disclosure threshold with a stringent numerical one would mitigate tax managers' aggressive reporting decisions. Hoffman and Patton (2002), on the other hand, examined the inclusion of vague versus specific measurement expressions prescribed in the standard, and how these would affect the diversification of interpretations, and financial reporting decision making.

In the end, prior studies have focused attention on the inclusion of bright-line tests or the choice of measurement wording in the standard. While inferences can be drawn from the cited studies on the inclusion of indicators in a principle-based standard, however, the indicators provided in IFRS 15 do not serve as bright-line tests or thresholds to be met. Paragraph 38 of the standard states "an entity shall consider indicators of the transfer of control, which include, but *are not limited to*" the list prescribed. Unlike Cuccia et al. (1995) and Psaros and Trotman (2004), fulfilling one of the indictors provided does not imply that control has passed and that revenue can be recognised. Entities are encouraged to ensure that they adhere to recording the substance of transactions rather than matching

them with listed indicators. With that, it is doubtful that the findings of prior studies can be generalised to this identified research issue.

A closer review of the literature in this field identified that Mazza et al. (2011) and Mala and Chand (2014) as similar studies that have examined the impact of the increased precision of the principle-based standard on accountants' judgment. Their emphasis, however, was not on the inclusion of indicators. Mazza et al. (2011) focused on the presence of benchmarks in the standard, and their impact on preparers' reporting decisions. The study examined the application of the fair value accounting standard in the context of the complete absence of market benchmarks to guide the application of the standard. Such high uncertainty might cause preparers to act cautiously, and the presence of benchmarks would definitely make a difference in their reporting decision making.

Mala and Chand (2014), on the other hand, employed IAS 17 *Leases* to examine the impact of the inclusion of illustrative examples on preparers' reporting decisions. The study concluded that the inclusion of illustrative examples in the standard improved accountants' financial reporting accuracy, especially when dealing with complex transactions. However, it can be argued that IAS 17 has been in practice for some time and the accountants might have been very familiar with the standard. As a result, the validity of the results could have been affected by the factors of experience or familiarity (Ashton, 1990). In addition, according to the study's case scenario, a judgment was considered accurate when the lease in a transaction was treated as an operating lease. Classifying a lease as an operating lease, however, tends to be associated with aggressive financial reporting (Agoglia et al., 2011; Jamal & Tan, 2010). Hence, the accuracy of the accountants' judgments might have been affected by an intention to engage in aggressive financial reporting.

Again, given the limitations and the dissimilarity in focus between the two studies and the current research issue, it is arguable as to whether inferences can be drawn to provide an answer to the identified research issue. Unless some relevant study has been conducted, the impact of a principle-only standard that includes indicators on managers' financial reporting aggressiveness, remains unknown. This is an interesting research gap for researchers, as it may provide the boards with useful insight into the impact of including indicators in a principle-based standard. In addition, the move of the boards to review most of the current accounting standards warrants an examination of the inclusion versus exclusion of indicators in a principle-based standard, and their influence on managers' financial reporting decision making.

2.6 Chapter Summary

Different levels of precision in an accounting standard will have different impacts on financial reporting aggressiveness. At one end, the inclusion of too much guidance in the form of bright-lines promotes aggressive financial reporting and poor financial reporting quality. At the other, too little guidance can impair judgment accuracy and reduce the usefulness of financial information to stakeholders (Mala & Chand, 2014; SEC, 2003). It is therefore, important to ensure a balance between level of clarity and room for the exercise of professional judgment.

A review of the extant literature has found that the focus of most of the prior studies has been on the impact of rule-based and principle-based standards on financial reporting aggressiveness. However, given public concern with IFRS 15 and the potential for the standard to be used by managers to support and legitimise questionable reporting decisions, investigation of the inclusion of indicators in a principle-based standard is needed to clarify their impact on financial reporting decision making. This research gap

needs to be closed in order to provide the boards with information and considerations that may be useful during their process of revisiting most of the current accounting standards.

Even though differences in standard precision will, arguably, result in different impacts on financial reporting aggressiveness, Libby et al. (2002) advocated that it is important for researchers to incorporate the element of incentives when examining the impact of an accounting standard. Given that incentives play an important role in financial reporting decision making (Cuccia et al., 1995; Nelson, 2003), the next chapter will provide an overview of common types of incentives, and how they might moderate decision making during the financial reporting process.

CHAPTER 3:

LITERATURE REVIEW – INCENTIVES (MOTIVATION) AND AGGRESSIVE REPORTING

3.1 Introduction

Incentives are pervasive in the financial reporting process. Libby et al. (2002) argued that financial accounting researchers should take the interaction between *individual* and *environmental* characteristics into consideration when conducting research on financial reporting. Two of the most important *individual characteristics* are the knowledge and motivations of financial statement preparers and users. The presence of both characteristics will influence the financial reporting decisions of preparers and auditors and, hence, their intention to use financial accounting as a tool to achieve their intended goal by reporting aggressively. Key *environmental characteristics,* on the other hand, are comprised of governing regulations, financial markets, and strategic interaction between financial statement preparers and users. Focusing on both individual and environmental characteristics/incentives allows researchers to draw better inferences from how variations within these characteristics alter an individual's reporting behaviour.

To draw a more complete picture, financial accounting researchers should take into account the interactive effect of types of accounting standards and incentives affecting financial reporting decision making (Libby et al., 2002).

Taking the argument from prior literature on incentives, the current study argues that incentives are another form of motivations, as the presence of incentives will create motivations for managers to report aggressively. With that, the terms “incentive(s)” and “motivation(s)” will be used interchangeably in the following discussions. This chapter reviews the extant literature on the influence of incentives (or motivations) on financial reporting aggressiveness. The remainder of the chapter is organised as follows. Section

3.2 provides a discussion on Motivated Reasoning Theory (MRT), a theory that underpins the main arguments of the study. This is followed by Section 3.3, which presents an overview of the types of incentives that will potentially influence financial reporting decision making. The influence of the incentives of revenue trend and credit rating downgrades on revenue management are then discussed in Section 3.4 and 3.5, respectively. The interactive effects amongst the three constructs of standard precision, revenue trend, and credit rating downgrades, and their integration with MRT, are deliberated in Section 3.6. Section 3.7 concludes the chapter.

3.2 Overview of Motivated Reasoning Theory (MRT)

The influence of motives or goals on human reasoning has been the interest for psychology researchers and been widely examined. Motivated reasoning theory (hereafter, MRT) suggests that motivation will play a deciding role for an individual to engage in a particular action. Motivated by these motivations, the person will rationalise the action and hence seek for clues or instances that reaffirm the preferred action (Kang & Lin, 2011; Kunda, 1990; Kunda & Sinclair, 1999). Given that accounting standards tend to be used by intended parties to justify reporting decisions, and that the main objective of this study is to examine the effect of different levels of accounting standard precision on managers' revenue management intention, and how such intention will be moderated by the presence of incentives, MRT is the most suitable theory for this study.

There are two main components of MRT: motivation, and desired outcome. *Motivation* is defined as "any wish, desire or outcome that concerns the outcome of a given reasoning task" (Kunda, 1990, p. 480). As such, motivation will result in bias in the cognitive processes of information processing, rationale construction, and evaluation of decisions. This bias will make a difference to a person's behaviour and the quality of the decision making process (Kunda, 1987; Kunda, 1990).

As for *desired outcome*, Kunda (1990, p. 480) argued that "the motivated reasoning phenomena under review fall into two major categories: those in which the motive is to arrive at an accurate conclusion…and those in which the motive is to arrive at a particular, directional conclusion." Hence, it is noted that one can be driven by an "accuracy goal" or a "directional goal" and the presence of a clear target or goal will motivate people to achieve it. The stronger the goal, the more motivated one will be (Pyszczynski & Greenberg, 1987).

When pursuing an accuracy goal, a person is motivated to be accurate and, hence, more efforts are spent on issue-related reasoning, careful examination of relevant information, and deep information processing using more complex rules. However, a person motivated by a directional goal will tend to convince himself/herself and others that he/she is rational and will provide justification for a desired conclusion. Although the person tries to be objective and rational, their objectivity is just a form of "illusion of objectivity" over the decision made, as the decision will always be biased (Pyszczynski & Greenberg, 1987). A directional goal will then influence how one will look for and interpret available information.

Driven by this bias, a person will then be biased in information searching. One will be spontaneously searching for, and emphasis will be given to, instances or subsets of information that are consistent with the desired goal. As such, instances that are inconsistent with the goal will tend to be labelled as irrelevant. In the attempt to be seen as objective, the one will use the goal-driven information in the process of reasoning and drawing conclusions. The information gathered might then be creatively interpreted and rationalised in a manner that supports the desired conclusion to form an illusion of objectivity (Kang & Lin, 2011; Kunda, 1990; Pyszczynski & Greenberg, 1987). By constructing reasonable and justifiable reasoning to support a decision, a person will try

to convince himself/herself and others that their decision was logically and objectively made. However, when the decision receives strong confrontation or arguments from related parties, one will be forced to accept and acknowledge the undesired decision (Petty & Cacioppo, 1979).

Taken together, Kunda (1990, p. 493) provides the central argument of MRT that "when one wants to draw a particular conclusion, one feels obligated to construct a justification for that conclusion that would be plausible to a dispassionate observer. In doing so, one accesses only a biased subset of the relevant beliefs and rule." Hence, to summarise, the presence of a directional goal will motivate one's information searching process, and the ability to attain the goal will depend both on whether a seemingly reasonable justification can be formed from the information gathered, and whether the decision reached will be questioned by related parties.

3.2.1 Motivated Reasoning Theory in Prior Studies

The theory of Motivated Reasoning has been widely used in the accounting studies. Originated from the field of psychology, this theory has then been borrowed as a lens in explaining various accounting issues examined by the accounting scholars. The MRT theory fits well in the accounting context because accounting is a psychology process involved human decision making.

Applying the MRT theory in the auditing research, Kadous, Kennedy, and Peecher (2003) examined the effect of quality assessment and directional goal commitment on auditors' acceptance of client-preferred accounting methods. Result of the study suggested that quality assessment by auditors has a negative association with the acceptance of client's preferred method when auditors are committed to their directional goal than those who do not make a quality assessment. In order to beat the increased standard for acceptability, auditors with commitment to directional goals will utilise the

ambiguity of the quality of various method when making quality assessment. Auditors will then tend to agree with the client-preferred method. Similarly, study by Peecher, Piercey, Rich, and Tubbs (2010) concluded that supervisors with directional goal will insert bias in subordinates' judgment and hence result in a client-preferred decision. This will then result in a lower audit quality.

Applying MRT in the context of accounting standard interpretation, study by Kang and Lin (2011) and Piercey (2009) attested that parties with intended goal will tend to interpret the ambiguity in the accounting standard in a bias manner that favours the directional goal.

Focusing on how directional goal affects investors financial information processing, Hales (2007) concluded that investors paid more weightage to the information which suggests a gain on the investment and tended to disagree with information which suggests a loss on the investment.

3.3 Types of Incentives

As discussed in the earlier section, the inclusion of the factor of incentives is important in examining their effects on constituents' financial reporting aggressiveness. Hence, research on the impact of incentives on financial reporting decisions has long received the attention of researchers.

Watts and Zimmerman (1978) documented the influence of motivation on financial reporting aggressiveness. Extending the study by Jensen and Meckling (1976), and using Positive Accounting Theory as their theoretical platform, their study identified that, in general, there are three main categories of incentives. These are bonus plan or compensation incentives, debt covenant incentives, and political cost incentives. Motivated by personal interest, preparers report aggressively in order to gain higher

compensation, to avoid violating debt covenants with funding agencies, or to avoid gaining the political attention of regulating parties. Confirming the prior literature, Bowen, Davis, and Rajgopal (2002) summarised that leverage (debt covenant incentives), bonus plan (compensation incentives), taxes and firm size (political cost incentives), are some of the most common incentives affecting the financial reporting aggressiveness of preparers.

In a field-based survey with auditors, Nelson et al. (2002) provided an overview of the types of incentives that motivate preparers to engage in earnings management. Consistent with Watts and Zimmerman (1978), they concluded that stock market incentives, contracting and cash flows incentives, and debt incentives, were some of the most common incentives. Stock market incentives are incentives related to meeting analysts' expectations, attaining a better stock price, or impending or new IPO/SEO issuances. Contracting and cash flow incentives (or economic incentives), however, relate to executive compensation, bonuses, or meeting board expectations. Debt related incentives consist of meeting debt covenant obligations, maintaining access to credit, or maintaining leverage and bond ratings.

Similar findings were also reported by subsequent studies in this strand of research. As evidenced, incentives can come from the expectations of outsiders (such as financial analysts or shareholders), capital market impact enticements, preparers' personal agendas, or the institutional or regulatory environment (Bowen et al., 2002; Healy & Wahlen, 1999; Libby et al., 2002; Nelson et al., 2002; Ronen et al., 2006; Stanley & Sharma, 2011; Xian, Chen, & Moldousupova, 2011).

Taken as a whole, managers will be facing three different types of incentives during the financial reporting cycle: capital market incentives, managerial compensation

incentives, and contracting incentives. These incentives will be discussed in turn in the coming sections.

3.3.1 Capital Market Incentives

Most prior studies focused on how market expectations influence managers' reporting aggressiveness. Their specific focus was on the reported earnings of companies, as stakeholders tend to judge the performance of companies based on their ability to meet expected earnings targets (Pinello, 2008), and reward companies that consistently meet earnings forecasts (Healy & Wahlen, 1999). Markets, on the other hand, tends to punish companies that fail to meet expected earnings targets. As a result, failure to meet expected earnings targets conveys a negative message to outsiders and will have negative implications on the company (Degeorge et al., 1999). This will then serve as a form of pressure on managers to ensure that company performance is up to market expectations (Lopez & Rees, 2002).

Prior studies evidenced that companies will always have a tendency to report aggressively to maintain healthy reported figures and to meet market forecasts (Burgstahler & Dichev, 1997; Lopez & Rees, 2002; Myers, Myers, & Skinner, 2007). Degeorge et al. (1999) further reported that companies pay great attention to market thresholds, hence, these thresholds have a direct association with the level of aggressiveness of preparers. The findings are supported by Gunny (2010), whose study concluded that when a company's earnings have fallen below the expected market benchmark, the company will be more likely to report aggressively in order to meet the benchmark. In addition, Das, Shroff, and Zhang (2009) asserted that aggressive reporting activities among companies are more likely to take place around the period when their earnings shortfall or excess is about to be disclosed to the public.

3.3.2 Managers' Compensation Incentives

Another strand of studies examined how compensation offered to managers affects managers' financial reporting decision. Managers are compensated not just based on their salary, but the entire remuneration package comes with other form of perks such as bonuses, stock option, and equity stock (Lord & Saito, 2010). These compensation incentives can be divided into short term or long term incentives and each will have different impact on preparers' behaviour (Holthausen, Larcker, & Sloan, 1995; Indjejikian & Nanda, 2002; Ronen, Tzur, & Yaari, 2006). Amongst all, stock option remains the most commonly used proxy for managers' compensation (Armstrong et al., 2010).

Prior studies have examined how various types of incentives such as stock option and restricted stock and managers' bonuses will have an impact on managers' risk taking and financial reporting behaviour (Efendi, Srivastava, & Swanson, 2007; Holthausen et al., 1995; Indjejikian & Nanda, 2002; Jackson, Lopez, & Reitenga, 2008; Ronen et al., 2006; Valle & Pavlik, 2009; Wowak & Hambrick, 2010; Xian, Chen, & Moldousupova, 2011). In general, most of the prior studies evidenced that short term incentives tend to promote more opportunistic actions as the interest of managers and shareholders are not aligned. This is because shot term incentives such as bonuses tend to serve as a tool in management controlling system, linking managers' actions to the management objectives (O'Connor, 2002). Management objectives might not be set in the best interest of the shareholders, and hence, linking short term bonuses with those management objectives might facilitate opportunistic actions by management since they have the control on the types of objectives to be set (Kerin, 2003). Furthermore, managers will be tempted to opt for short term rewards which are less uncertain and readily available to them rather than considering for the long term consequences that opportunistic actions will bring (Keren & Roelofsma, 1995; Kerin, 2003). Long term compensation incentives however, are

helpful to align the interest of managers with the shareholders (Ronen et al., 2006). When managers are also part of the company's shareholders, any opportunistic actions taken that will affect the company in the long run will also at the end, erode the managers' personal benefits. Hence, managers will exercise more caution before undertaking any opportunistic actions.

3.3.3 Contracting Incentives

Contracting and regulatory incentives will also have potential influence on managers' financial reporting decision. While contracting incentives are mostly associated with the lenders or financial institutions, regulatory incentives is referred to the incentives arising from the set of accounting standard prescribed.

Companies with good track performance record will be able to borrow at a lower cost, this has then created motivation to preparers to ensure that a better figures are reported and hence engage in aggressive financial reporting decision (Nelson et al., 2002). DeFond and Jiambalvo (1994) concluded that managers engage in accrual management when the company performance is below expectation and running at the risks of violating the debt covenant. When the companies have a contract with the bankers on maintaining a desired debt covenant, the intention not to breach the covenant set will motivate managers to ensure that the reported figures are within range. Owing to the fact that failing to meet the covenant level agreed will result in higher borrowing costs, earlier loan repayment, or restrictions on firm's activities (Beneish & Press, 1993; Stanley & Sharma, 2011), these negative consequences will motivate manager to avoid violating the contract with the bank. Managers will then be motivated to report aggressively. This intention will be even stronger when there is a tight convenient or when company performance is not up to expectation and near to violating the covenant set (Dichev & Skinner, 2002; Efendi et al., 2007; Sweeney, 1994).

While managers will be facing different incentives along the financial reporting process, amongst all, capital market incentives provide the strongest incentives for managers to report aggressively (Nelson et al., 2002). Given that a company's financial reports signal important information such as financial health or operating growth and expansion to outsiders (who rely on the figures in the reports to make evaluation and investment decisions), companies projecting a good performance record in their financial statements will be rewarded by the capital market. These rewards will have a positive implication on subsequent compensation and contracting packages that the managers may enter into. It is argued, then, that managers will need to ensure that stakeholders are impressed with the figures in the company's financial reports; they will explore avenues to portray a healthy and desirable picture to outsiders and, hence, will report aggressively. This study, then, focuses specifically on the impact of capital market incentives on financial reporting aggressiveness.

3.4 Revenue Trend: Incentive to Revenue Management

As discussed earlier, economic and market incentives are the main motivators for managers to report aggressively. While prior literature emphasises reported earnings, the following discussion argues that it is important to examine the literature on how intended reported revenue figures affect managers' financial reporting behaviour and, specifically, revenue management intention.

According to the technical summary accompanying IAS 18, revenue is defined as:

> Gross inflow of economic benefits during the period arising in the course of the ordinary activities of an entity when those inflows result in increases in equity, other than those relating to contribution from equity participants. (IFRS, 2012, p. 1)

Revenue can arise from the sale of goods, the rendering of services, or interest, royalties or dividend yields from the assets of a business entity. Revenue shall be recognised when it is probable that there will be an inflow of future economic benefits to the entity and these benefits can be reliably measured (IFRS, 2012).

3.4.1 Importance of Revenue to Market Constituents

Even though there is evidence that revenue is an important measurement of company performance, a review of the capital market research revealed a large body of study focusing on company reported earnings. The studies in this field can be divided into the strands of: the importance of earnings (Degeorge et al., 1999; Gunny, 2010; Mendenhall, 2002; Pfarrer, Pollock, & Rindova, 2010; Pinello, 2008; Richardson, Sloan, Soliman, & Tuna, 2005); the information content of earnings (Attia, 2011; Ball & Brown, 1968; Beaver, 1968; Degeorge et al., 1999; Fairfield & Sweeney, 1996; Frederickson & Miller, 2004; Gunny, 2010; Hayn, 1995; Koonce & Lipe, 2010; Landsman & Maydew, 2002; Swaminathan & Weintrop, 1991); the impact of earnings surprises (Brown, 2001; Dowen, 1996; Kama, 2009; Matsumoto, 2002; Pfarrer et al., 2010; Pinello, 2008; Skinner & Sloan, 2002); the effect of beating earnings forecasts (Ashton & Cianci, 2007; Baginski, Hassell, & Wieland, 2011; Baik & Jiang, 2006; Bartov et al., 2002; Beyer, 2008; L. D. Brown & Caylor, 2005; Kasznik & McNichols, 2002; Lopez & Rees, 2002; Rees & Sivaramakrishnan, 2007); and company earnings management activities (Abdel-Khalik, 2007; Altamuro et al., 2005; Baker et al., 2009; Barua, Legoria, & Moffitt, 2006; Burgstahler & Dichev, 1997; Burgstahler & Eames, 2003; Callen, Robb, & Segal, 2008; Chen et al., 2007; Das, Kyonghee, & Patro, 2011; Das et al., 2009; Goel & Thakor, 2003; Gunny, 2010; McVay, 2006). This overwhelming focus on earnings is due to the fact that earnings aggregate information associated with the material revenue and expenses of a certain period and, hence, provide a summary of the important economics events affecting a company over that period. This information provides a quick review of a company's

overall performance and, thus, is heavily relied on by investors and financial analysts (Jegadeesh & Livnat, 2006).

While earnings was once the focus of researchers, recent research has started to shift the focus to other components of earnings, and the importance of those components in influencing the decision making processes of the users of financial information (Chandra & Ro, 2008; Ertimur et al., 2003; Jegadeesh & Livnat, 2006; Lipe, 1986; Swaminathan & Weintrop, 1991). Due to concerns about the accrual components of earnings, there are questions as to the reliability and relevance of earnings. It is argued that difficulties arise in comparing earnings across firms because managers can manipulate the variety of methods used to calculate accrual items to attain desirable reported earnings (Brealey & Myers, 2003; Treynor, 1972; Wilson, 1986).

In addition, focusing solely on earnings does not provide a complete summary of accounting information, as some of the information is lost when its components are aggregated into earnings (Treynor, 1972). This assertion is further confirmed by Fairfield and Sweeney (1996), who found that the predictive content of earnings increased when reported earnings was disaggregated into the components of gross margin, selling, general and administrative expenses, depreciation expense, interest expense and minority income, non-operating income and income taxes, special items, and extraordinary items and discontinued operations. Compared with reported earnings alone, this segregation of the components of earnings improved the profitability forecasts by an additional year. As a result, their study provides further evidence that a focus on reported earnings alone might not provide comprehensive enough information to evaluate the performance of a company.

There are many indicators that convey information on a company's performance health. One of the most important items reported in an entity's statement of

comprehensive income is revenue. Revenue is an important indicator that signals information on a company's overall performance for the past financial period. It is also an important piece of information used by constituents to evaluate a company's performance and growth (Davis, 2002). As argued by Chandra and Ro (2008), revenue provides better information content compared with other components of earnings, due to its persistence and homogenous nature. The information content of revenue was found to remain consistent over time, while the information content of earnings was found to diminish over time. As a result, the greater information content in earnings revenue provides a better understanding of the persistence of earnings surprises, and market reaction to drifts in stock price during and after earnings announcements (Fairfield & Sweeney, 1996; Gu, Jain, & Ramnath, 2006). Given the fact that reported revenue figures are the most persistent and predictable measure of performance (Barton et al., 2010), reported revenue not only provides a better basis of valuation in evaluating firm value, it also provides a better summary of firm performance and is a better predictor of an entity's future operating profit, earnings persistence, company growth, and financial health (Chandra & Ro, 2008; Fairfield & Sweeney, 1996; Ghosh et al., 2005; Hangstefer, 2000; Jegadeesh & Livnat, 2006; Kama, 2009; Zhang, 2005).

Prior studies have documented the importance of revenue to investors, and how investors rely on information about revenue in making evaluation and investment decisions. Kama (2009) concluded that revenue provides a useful summary of the performance of a company. This view is further shared by Wilson (1986), whose study found that investors use both the information of earnings and revenue released by a firm as an input in forecasting its future performance. Similarly, the study by Rees and Sivaramakrishnan (2007) cited Apple Inc., one of the largest consumer electronics companies in the US, as an example of how markets punish companies when they fail to meet their revenue forecasts. On 8 October 2005, Apple announced its fourth quarter

earnings of $0.52 per share, a figure that greatly exceeded the initial forecast of $0.37 per share. However, the company's actual reported revenue fell short of its forecast by $60 million. Even with positive, actual earnings, the company's share price plunged by nearly 11 percent on the same day of the announcement of earnings. From this example, it can be clearly seen that the market places more importance on reported revenue rather than on earnings alone. Consistently, Kama (2009) provided evidence that market reaction to revenue surprises is higher than to earnings surprises. Hence, investors place high value on companies with better revenue growth, and such companies are normally associated with a higher percentage of firm value and stronger post-earnings-announcement drift.

Similarly, further evidence was provided by studies that examined the reported revenue of Internet-based companies. Ignatius (2000) asserted that reported revenue is important for newly established Internet-based companies. With the uncertainty that Internet-based companies face, investors will value companies with better reported revenue and are more willing to invest in companies with higher reported revenue. In addition, market participants give heavier weight to revenue surprises than earnings surprises when evaluating the performance of Internet-based companies, if the companies fail to report positive earnings (Bagnoli, Kallapur, & Watts, 2001; Demers & Lev, 2001).

Besides investors, analysts also rely heavily on revenue information and incorporate it in the process of forecasting. The study by Jegadeesh and Livnat (2006) found that analysts will revise their earnings forecast when a firm reports a revenue surprise, although such information is incorporated on a delayed basis. Rees and Sivaramakrishnan (2007) documented similar findings. Their study argued that financial analysts pay equal attention to whether a company meets its earnings and revenue forecasts before revising their forecast. In a case where both revenue and earnings forecasts are met, analysts will issue a better forecast.

In addition, information on revenue serves as an important valuation input for credit rating agencies in determining company credit ratings. While most of the focus is on a company's reported earnings, Kaske (2014) documented that Standard and Poor's revised credit ratings downward when companies reported an undesirable revenue figure.

Given that fact that revenue is getting more attention from market players, the next section provides an argument for how reported revenue challenges the traditional underpinning view that earnings is the single and most important source of information valued by stakeholders.

3.4.2 The Importance of Prior Reported Revenue and Its Trend

In evaluating a company's performance indicators, a performance measure that portrays a persistent trend is perceived as desirable by investors, as they expect a steady trend to recur in the future (Francis et al., 2004). In addition, persistence is also associated with sustainability, as investors view highly persistent performance indicators as sustainable, permanent, less transitory (Schipper & Vincent, 2003), and being able to consistently contribute to a company's future performance growth (Lipe, 1990). Similarly, Koonce and Lipe (2010) reported that users judge the information from both performance evaluation benchmarks (i.e., reported earnings and meeting prior forecasts) to be useful only when they are reported in a consistent manner over time. Hence, it is important for companies to ensure that the reported revenue figures portray a healthy and desirable trend expected by the public. With that, a performance measure that is persistent tends to be viewed as less risky and uncertain by investors, and can increase the future predictability of a company's performance (Barton et al., 2010; Francis et al., 2004; Hangstefer, 2000).

As a result, even though reported revenue is currently important for market players in evaluation and investment decision making, it is argued that market participants will also

take into account the company's past performance record and predictions of future performance (beside yearly revenue figures), in evaluating the performance of a company (Callen et al., 2008). This is supported by Trueman, Wong, and Zhang (2000), who asserted that historical reported revenue has a greater predictive power for analysts' forecasts amongst Internet-based companies and that there is a positive association between historical revenue growth and abnormal returns. In addition, where there is no analyst forecast coverage, historical reported revenue information will be important for forecasting purposes. Hence, according to Turner (2001), besides revenue growth, revenue trend is next in importance to investors in assessing the company's past performance and future prospects. With that, it is important for companies to emphasise maintaining consistent revenue growth on (Hangstefer, 2000).

Review of the literature in this strand suggests that most studies have focused on the stability of earnings (Barth, Elliott, & Finn, 1999; Cao & Narayanamoorthy, 2012; Du & Budescu, 2007; Klement, 2011; Koonce & Lipe, 2010; Myers, Myers, & Skinner, 2007), and that there are a limited number of studies that have examined the impact of the stability of revenue on a company and how it is valued by market players. Given that revenue is a function of earnings (Caylor, 2010), inferences are drawn from the earnings stability literature in arguing the importance of prior reported revenue and revenue trend to the stakeholders.

Prior studies revealed that earnings volatility tends to receive negative reaction from stakeholders (Bottazzi, Devetag, & Pancotto, 2011; Busch, Christensen, & Nielsen, 2011; Dichev & Tang, 2008). Financial statement users evaluate information from earnings to be useful only when it has a consistent trend (Barth et al., 1999; Klement, 2011; Koonce & Lipe, 2010). A consistent reported earnings trend will also bring: higher abnormal returns to the company (Myers et al., 2007); higher price earnings multiplies (Barth et al.,

1999); higher post-earnings announcement drift (Cao & Narayanamoorthy, 2012); better analysts' stock price judgment (Hirst & Hopkins, 1998); higher market value for a firm (Barnes, 2001); and improved forecast accuracy and investor confidence (Du & Budescu, 2007). A stable reported earnings trend over time is important for a company, as volatility in earnings implies a negative message to stakeholders and, hence, will impair their perception of the company (Koonce & Lipe, 2010). Stability of earnings therefore weighs heavily on investors' investment decision making (Klement, 2011).

Considering the importance that market players place on the stability of a performance measure, the fact that reported revenue is getting more attention from the public, and drawing inferences from earnings persistence and stability literature, it is argued that an unhealthy reported revenue trend of a company will result in negative market reaction to it. Volatility in the reported revenue will be ranked and rated negatively by stakeholders, and investors might be less willing to invest in a company with an unstable performance record. It is therefore argued that the intention to maintain a persistent and increasing revenue pattern might motivate managers to engage in revenue management.

3.4.3 Revenue Trend and Revenue Management

As argued earlier, persistence and growth are considered important attributes by market players. Companies will be rewarded with related positive market rewards, such as lower cost of capital, lower equity cost, better analyst forecasts, higher firm value, better growth, or better predictability of future performance (Barton et al., 2010; Bowen et al., 2002; Francis et al., 2004; Ghosh et al., 2005; Hangstefer, 2000; Plummer & Mest, 2001; Trueman et al., 2000). With that, any reported figures that fall short of users' expectations will be interpreted as a bad sign, and the company will be labelled negatively in the eyes of users. This will result in negative repercussions for the company. Managers will, hence, face continuous pressure to ensure that reported revenue projects a desirable

trend. Nelson et al. (2002) further evidenced that managers will consider motivation factors such as intention to achieve a certain income level, smoothing, or maintaining a trend of growth and improving future income figures, when making financial reporting decisions. Hence, revenue management is expected to occur when the reported revenue for a period does not meet a desired trend or threshold.

Another strand of literature examined the impact of persistent losses on revenue management. This strand of study started by examining the impact of persistent losses at Internet-based companies, and their revenue management intention. Owing to the fact that Internet-based companies are relatively young in nature, most operate at a loss (Bowen et al., 2002). In addition, as they operate in a rapidly changing environment, historical financial information gets obsolete fast and is less useful in evaluating firm performance. As a result, market participants will shift their focus from reported earnings to revenue (Davis, 2002; Demers & Lev, 2001; Trueman et al., 2000). As reported revenue conveys important information to outsiders, managers will be motivated to engage in revenue management, since it is the easiest and cheapest way to influence the perception of outsiders regarding the value of firms (Davis, 2002).

Callen et al. (2008) extended the strand of literature by extending the argument to all loss-making companies. The study argued that traditional evaluation models, such as cash flow and residual earnings, are less reliable due insufficient evidence provided by the two pieces of information across a certain period of time. As a result, the next benchmark for evaluating a company's performance will be its reported revenue. Market participants will then evaluate the performance of a company based on the level and growth of its reported revenue. This will motivate the managers to engage in revenue management in order to maintain greater market capitalisation.

However, other studies provide a contrasting view. Companies with a consistent decreasing revenue pattern will portray a negative image to outsiders. Reported financial information implies that the company is not financially healthy and, in response, market players might withdraw positive market incentives from it (Barua et al., 2006; Hayn, 1995; Matsumoto, 2002). In such a case, managers might not be interested to engage in revenue management due to a lack of market rewards. In addition, Ashton and Cianci (2007) argued that market players will discount such negative information and give a more favourable review, even though the company's performance is undesirable. Similarly, managers might not be motivated to engage in revenue management.

Further supporting this view, DeAngelo, DeAngelo, and Skinner (1994) asserted that managers in financially distressed companies might have a lower intention to manage revenue, as they might be entering contract (re)negotiations with external parties such as creditors, unions, government agencies, or management. Managers might prefer to not project better revenue during such periods. Ashton and Cianci (2007), on the other hand, argued that analysts tend to discount the negative information that a performance indicator conveys. Companies still receive favourable forecasts from analysts even with a negative earnings trend. Hence, this might further reduce managers' intention to engage in revenue management. Even though the study focused on earnings trend, similar inferences can arguably be drawn and applied to revenue trend.

Similarly, with exception to the discussion above that focused on financially distressed firms and revenue management, studies on other reported revenue patterns and revenue management are limited. As such, inferences are drawn from the reported earnings trend literature. The studies by Burgstahler and Dichev (1997), Lopez and Rees (2002), and Myers et al. (2007) evidenced that companies will always have a tendency to maintain and report a consistently increasing earnings trend that exceeds expected forecasts. Thus,

it can be concluded that maintaining an upward revenue trend is important for companies to ensure its long-term survival in the capital market. This increasing expectation then serves as a form of pressure on managers to ensure that the reported revenue pattern is within public expectations (Lopez & Rees, 2002). In addition, companies that are performing well receive less monitoring from related parties. This might then motivate managers to take the advantage and adopt aggressive financial reporting policies. Hence, the lower the level of monitoring, the higher the level of opportunism at firms (Ahn & Choi, 2009). This is confirmed by Stanley and Sharma (2011), who found that firms' misreporting intention is lower when transactions are material and the chance of being detected is high.

Drawing from these inferences, it is argued that a reported revenue pattern can be upward, downward or volatile and managers will experience a different level of pressure with each pattern. Whenever the trend is not projecting in an increasing trend, managers will have the pressure to "correct" the reported revenue pattern to the intended upward pattern.

3.4.4 What is Lacking in This Strand of Literature?

Incentives are a contributing factor to managers' aggressive reporting. As noted from the previous discussion, most prior studies were focused on the market incentive of reported earnings and earnings persistence, and their contribution to managers' opportunism. Even though there are some studies related to reported revenue, a scrutinisation of the literature revealed only handful of studies within three distinct strands of revenue studies, namely: how information on revenue is used and valued by stakeholders, the impact of reporting revenue surprises, and how revenue can be managed.

Although the studies contain comments from analysts and accountants that different income statement components provide different information content that is useful in

making evaluation and investment decisions, their focus was still on reported earnings figures. Not much attention was paid to firms' reported revenue (Ertimur et al., 2003; Fairfield & Sweeney, 1996). Given the evidence on the positive association between share returns and revenue announcements, it is argued that meeting expected revenue figures provides further motivations for managers to manage reported revenue in order to meet the expectations of outsiders and shape a good perception of the company in the eyes of market participants (Davis, 2002). However, not much focus was given to this in the pool of literature and the lack of interest in the subject by researchers could be contributing to the weak empirical findings on the importance of revenue to the capital market (Swaminathan & Weintrop, 1991).

In addition, in seeing the reactions of market players to earnings persistence, there is a lack of studies on how revenue surprises from prior and current financial periods affect the financial reporting decision making of preparers. Prior studies have also evidenced that market participants, besides valuing current reported revenue, focus on a company's healthy and persistent revenue trend. As a result, it is argued that on top of current reported revenue, the intention to maintain a healthy revenue pattern will also serve as an incentive for managers to engage in revenue management. This strand of study, however, has received less interest from researchers. While some might argue that inferences can be drawn from the earnings persistence literature, such inferences are not backed up by related statistical evidence to prove the assertions and arguments formed. It is therefore argued that further studies are required to investigate and tie these three strands of literature together.

In addition, all of the studies on revenue mentioned above used the archival method, a research method that suffers from noisy construct measurement and statistical technique bias (Bonner, 2007; Libby et al., 2002). While some studies have been conducted

experimentally to examine the impact of earnings persistence (Bottazzi et al., 2011; Du & Budescu, 2007; Koonce & Lipe, 2010), it is noted that the focus was not on reported revenue. Hence, even though the findings of these studies can provide useful insights into the potential impact of revenue persistence, the actual effects will remain unknown until the causality is statistically tested.

Finally, prior studies have focused on the impact of revenue information on financial statement users, rather than on preparers. This reveals an important gap in the revenue literature as financial statements are drafted by preparers with the main purpose of conveying the company's operating information to the public. In a nutshell, the impact of how revenue trend affect preparers' financial reporting decisions is an important issue that is worth further investigation.

3.5 Credit Rating: A Further Revenue Management Incentive

According to Demirtas and Cornaggia (2013, p. 137), a credit rating "…reflects a rating agency's opinion, as of a specific date, of the creditworthiness of a particular company, security, or obligation…" Credit rating signals important information on the ability of the rated company to meet its financial obligations and the expected risks of default, which are important to protect lenders from post-lending credit risks (Demirtas & Cornaggia, 2013). Credit ratings represent the opinion of professionally trained parties after examining information made available by the rated entities and other accessible sources such as economic and business environment conditions (Standard & Poor's, 2012a). Given the fact that a credit rating signals important information on the overall financial health of a company, it is argued that managers will place great emphasis on the credit rating level of their company. Hence, credit rating serves as another important incentive that can affect managers' financial reporting decision making.

3.5.1 Credit Rating Scales and Definitions

Any business entity wanting to issue public debt is required to be rated (Duff & Einig, 2009b). An entity will be rated along a scale that provides an effective means of conveying its creditworthiness and credit quality (Standard & Poor's, 2012a). The credit rating scale might be different from one credit rating agency to another, and a credit rating will be assigned to both the entity that issued the debt and to the different types of debt issued. The study however, focuses on the credit rating of the rated entities (or the debt issuers) due to the fact that credit rating associated with debt issuer (the company) serves as an important reference benchmark in evaluating the company's performance and position relative to others in the same peer group (Standard & Poor's, 2006b). Hence, it is argued that the rating related to the issuer (the company) will have greater impact on the company (Kenjegaliev, Duygun, & Mamedshakhova, 2016). With that, the credit rating of the rated entities are discussed in turn below.

3.5.1.1 By Standard & Poor's

The world famous credit rating agency of Standard & Poor's (hereafter, S&P) uses the scale of 'AAA', 'BB' or 'CC' to communicate a rated entity's credit risk with respect to its long term debt. The category of 'AAA' represents the strongest level of creditworthiness, while 'C' and 'D' mark the weakest. In each category, there are different notch levels that indicate the level of the rated company within the category. For example, the category of 'AAA' is divided into three notch levels: 'AAA' (the highest notch level in the category of 'AAA'), 'AA', and 'A'. The ratings within the categories of 'AA' to C might also be modified with a '+' or '-' sign in order to show the stand of the rated entity within the major rating categories. Figure 3.1 (below) summarises the corporate credit rating scale maintained by S&P for issuers of long term debt.

Table 3.1: Credit Rating Categories and Definitions for Issuers of Long Term Debt

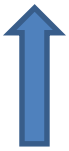
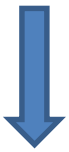
	Category	Definition
 Investment Grade	AAA	Extremely strong capacity to meet financial commitments. Highest rating.
	AA	Very strong capacity to meet financial commitments.
	A	Strong capacity to meet financial commitments, but somewhat susceptible to adverse economic conditions and changes in circumstances.
	BBB	Adequate capacity to meet financial commitments, but more subject to adverse economic conditions.
	BBB-	Considered lowest investment grade by market participants.
Speculative Grade 	BB+	Considered highest speculative grade by market participants.
	BB	Less vulnerable in the near-term but faces major ongoing uncertainties to adverse business, financial and economic conditions.
	B	More vulnerable to adverse business, financial and economic conditions but currently has the capacity to meet financial commitments.
	CCC	Currently vulnerable and dependent on favourable business, financial, and economic conditions to meet financial commitments.
	CC	Currently highly vulnerable.
	CR	Under regulatory supervision owing to its financial condition.
	SD/ D	Default in payment of financial commitments.
	NR	Not rated
*Ratings from 'AA' to 'CCC' may be modified by the addition of a plus (+) or minus (-) sign to show relative standing within the major rating categories.		

*Table adapted from Standard & Poor's (2012a).

As for issuers of short term debt, S&P maintains the categories of 'A' (which is divided into the levels of A-1, A-2, and A-3), 'B', 'C', 'R', and 'SD and D'. The category of 'A' is the highest category and, hence, conveys the information that a rated entity has a strong capacity to meet its obligations. The category of 'SD and D' is the lowest category and represents the highest risk of default. A quick review of the related categories and their definitions is provided in Table 3.2 (below).

Table 3.2: Credit Rating Categories and Definitions for Issuers of Short Term Debt

Category	Definition
A-1	Strong capacity to meet financial commitments.
A-2	Satisfactory capacity to meet financial commitments. Susceptible to the adverse effects of changes in circumstances and economic conditions.
A-3	Adequate capacity to meet financial obligations. Adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity to meet financial commitments.
B	Vulnerable and has significant speculative characteristics. Currently has the capacity to meet financial commitments but faces major ongoing uncertainties that could lead to inadequate capacity to meet financial commitments.
C	Vulnerable to non-payment and is dependent upon favourable business, financial, and economic conditions to meet financial commitments.
R	Under regulatory supervision owing to its financial condition. During the period of regulatory supervision, the regulators may have the power to favour one class of obligations over others, or to pay some obligations and not others.
SD and D	Has failed to pay one or more of its financial obligations when it/they came due.
NR	Not rated.

*Table adapted from (Standard & Poor's, 2012b).

3.5.1.2 The case of Malaysia: RAM Holdings and MARC

There are two main credit rating agencies in Malaysia: RAM Holdings Berhad (formerly known as Rating Agency Malaysia Berhad), and Malaysian Rating Corporation Berhad (MARC). The rating scale used by the two agencies for issuers of long term debt is similar to the one used by S&P. The highest category is 'AAA' and the lowest category is 'C'. While the broad rating categories are similar between the two, they are different in terms of the notch levels under each rating category. RAM Holdings applies three different notch levels, namely, 1, 2 and 3 in each rating category from AA to C. A notch level of 1 (or subscript 1) indicates that an entity is ranked at the higher end of the rating category, while 3 indicates the lower end (RAM, 2015). MARC, however, applies plus '+' and minus '-' signs to show the relative standing of an entity within the major rating categories (MARC, 2012).

As for the rating scale for issuers of short term debt, the ratings categories of RAM Holdings are also similar to those of S&P, with the only difference being the prefix and the levels of categories. RAM Holdings maintains five main categories, ranging from P1

(highest) to D (lowest) (RAM, 2015). MARC, however, is silent over ratings of issuers of short term debt (MARC, 2012). The rating categories and definitions of each of the Malaysian rating agencies is presented in Table 3.3 and 3.4 (below).

Table 3.3: Corporate Credit Rating Categories and Definitions (RAM Holdings Berhad)

Ratings Categories for Issuers of Long-Term Debt	
Category	**Definition**
AAA	An entity rated AAA has a superior capacity to meet its financial obligations. This is the highest long-term CCR assigned by RAM.
AA	An entity rated AA has a strong capacity to meet its financial obligations. The entity is resilient against adverse changes in circumstances, economic conditions, and/or operating environments.
A	An entity rated A has an adequate capacity to meet its financial obligations. The entity is more susceptible to adverse changes in circumstances, economic conditions, and/or operating environments than those in higher-rated categories.
BBB	An entity rated BBB has a moderate capacity to meet its financial obligations. The entity is more likely to be weakened by adverse changes in circumstances, economic conditions, and/or operating environments than those in higher-rated categories. This is the lowest investment-grade category.
BB	An entity rated BB has a weak capacity to meet its financial obligations. The entity is highly vulnerable to adverse changes in circumstances, economic conditions, and/or operating environments.
B	An entity rated B has a very weak capacity to meet its financial obligations. The entity has a limited ability to withstand adverse changes in circumstances, economic conditions, and/or operating environments.
C	An entity rated C has a high likelihood of defaulting on its financial obligations. The entity is highly dependent on favourable changes in circumstances, economic conditions, and/or operating environments, the lack of which would likely result in it defaulting on its financial obligations.
D	An entity rated D is currently in default on either all or a substantial portion of its financial obligations, whether or not a default has been formally declared. The D rating may also reflect the filing of bankruptcy and/or other actions pertaining to the entity that could jeopardise the payment of financial obligations.
* For long-term ratings, RAM applies subscripts 1, 2 or 3 in each rating category from AA to C. The subscript 1 indicates that the entity ranks at the higher end of its generic rating category; the subscript 2 indicates a mid-ranking; and the subscript 3 indicates that the entity ranks at the lower end of its generic rating category.	

Table 3.3 continued: Corporate Credit Rating Categories and Definitions (RAM Holdings Berhad)

Ratings Categories for Issuers of Short-Term Debt	
Category	**Definition**
P1	An entity rated P1 has a strong capacity to meet its short-term financial obligations. This is the highest short-term CCR assigned by RAM.
P2	An entity rated P2 has an adequate capacity to meet its short-term financial obligations. The entity is more susceptible to the effects of deteriorating circumstances than those in the highest-rated category.
P3	An entity rated P3 has a moderate capacity to meet its short-term financial obligations. The entity is more likely to be weakened by the effects of deteriorating circumstances than those in higher-rated categories. This is the lowest investment-grade category.
NP	An entity rated NP has a doubtful capacity to meet its short-term financial obligations. The entity faces major uncertainties that could compromise its capacity to pay its financial obligations.
D	An entity rated D is currently in default on either all or a substantial portion of its financial obligations, whether or not a default has been formally declared. The D rating may also reflect the filing of bankruptcy and/or other actions pertaining to the entity that could jeopardise the payment of financial obligations.

Table 3.4: Corporate Credit Rating Categories and Definitions (Malaysian Rating Corporation Berhad)

Category	Definition
Investment Grade	
AAA	Corporates rated AAA are viewed as exceptionally strong. Typically, they are entities with strong financial fundamentals, an above-average competitive position, and operate in a stable environment.
AA	Corporates rated AA are viewed as very strong. Typically, they are entities with good financial fundamentals and have no readily apparent weaknesses. Their overall risk profile, while low, is not quite as favourable as corporates in the highest rating category.
A	Corporates rated A are viewed as strong, but are somewhat more susceptible to adverse changes in circumstances and economic conditions than corporates in higher-rated categories.
BBB	Corporates rated BBB are sound and normally exhibit adequate capacity to meet obligations. However, adverse changes in circumstances and economic conditions are more likely to lead to a weakened financial capacity.
Non-Investment Grade	
BB	Corporates rated BB are questionable with some obvious weaknesses in their financial fundamentals and/or operating environment. While these corporates currently possess the capacity to meet their financial obligations, their financial capacity is vulnerable to adverse changes in circumstances and economic conditions.
B	Corporates rated B have marked weaknesses in their financial fundamentals and/or operating environment. These corporates have limited capacity to withstand adverse changes in circumstances and economic conditions.
C	Corporates rated C are very weak. The continued capacity of these corporates to meet their financial obligations is poor and highly dependent on favourable circumstances and economic conditions.
D	Corporates rated D are inferior. These corporates require periodic external support, without which their continued viability is in doubt. The rating indicates that a default may have already occurred or there is a high likelihood of default.
* Ratings from AA to B may be modified by a plus (+) or minus (-) suffix to show an entity's relative standing within the major rating categories.	

3.5.2 Importance of Credit Ratings to Market Constituents

Credit rating affects a company in several ways. First, even though a company's credit rating conveys information on its ability to meet its financial obligations, Kisgen (2006) argued that credit rating provides more information than that. Credit rating agencies may be experts in information gathering and screening and act as "information screening agents." Given that credit rating agencies have the right to request and be provided with access to information other than that made publicly available by the rated entity (Duff & Einig, 2009a; Millon & Thakor, 1985), it would be more accurate to argue that credit rating signals the standing of a rated entity relative to other firms in the same category, instead of signalling its creditworthiness. This then provides important information to outsiders about how a business entity performs relative to other companies within the same field (Kisgen, 2006). Market players such as individual or institutional investors might then use this information to evaluate debt issuers and manage their investment portfolios (Standard & Poor's, 2012a), possibly affecting their evaluation and investment decision making (Cheng & Subramanyam, 2008; Duff & Einig, 2009b; Hand et al., 1992; Iannotta et al., 2013).

In addition, given the fact that debt financing is one of the most common methods used by companies to raise capital, and credit rating communicates information on the ability of the entity to meet its financial obligations, credit rating will have a direct impact on a company's ability to raise capital. As a result, different credit rating levels are associated with discrete costs, such as changes in bond coupon rate, risks in losing a contract, or the requirement to repurchase bonds (Kisgen, 2006). The lower the rating, the higher the interest rate a company needs to pay to raise capital and compensate for a higher risk of default. This might then affect the firm's overall value. As a result, lowering the cost of capital is essential in order to enhance the value of the firm for shareholders. One way a company can reduce the cost of capital is by attaining a higher credit rating level so that

the default risk associated with the company by market players is perceived to be lower (Kim & Gu, 2004; Van Horne, 1998).

The potential costs involved in raising capital will also affect a company's capital structure. Generally, a company with a better credit rating will be able to raise funds at a lower cost (Frost, 2007). Hence, where the credit rating of a company is near to a change in category or notch level, the company will tend to issue less debt. The act of reducing debt issuance is even more significant when the credit rating of a company receives a downward revision to speculative grade classification (Graham & Harvey, 2001; Kisgen, 2006, 2009), as many institutional investors will refrain from investing in or holding speculative grade debt. In addition, a credit rating that is not at a favourable level might affect a company's bond covenant clauses (Demirtas & Cornaggia, 2013).

Since credit rating conveys important messages about a rated entity's standing in the market and the potential risks associated with that entity itself, market players will place great importance on this information and, hence, will act accordingly in the event of credit rating changes.

Even though with the above argument, some prior studies argued that there is a delay between credit rating revision by the rating agencies and when such information is announced to the market (Alsakka & ap Gwilym, 2010; Baker & Mansi, 2002; Gibson, Hall, & Tavlas, 2014; Gropp & Richards, 2001; Kenjegaliev et al., 2016; Schumacher, 2014). Such delayed was also argued to be the main contributing factor to the series of accounting scandals happened in year 2002 (Berenson, 2001; Duff & Einig, 2009a; White, 2010). Despite the fact, prior studies have documented the evidence on the information content of credit rating and market reactions after credit rating announcements.

While Elayan, Hsu, and Meyer (2003) found that New Zealand's stock market tended to react to both positive and negative rating information, it was noticed that market responses were generally focused more on negative credit rating information than positive information. While positive rating information will not normally result in much market response, negative rating announcements, however, are normally accompanied by negative market reaction. As argued by the prior studies, when there is a downward revision of a company's credit rating, the market will react negatively and the company will suffer from: negative excess stock or bond returns[7] (Dichev & Piotroski, 2001; Holthausen & Leftwich, 1986; Wansley, Glascock, & Clauretie, 1992); a fall in stock price (Hand et al., 1992); negative forecast revisions and equity returns (Ederington & Goh, 1998); uncertainty in future firm value (Odders-White & Ready, 2006); abnormal stock price movements (Griffin & Sanvicente, 1982); a lower market yield to maturity (Ederington, Yawitz, & Roberts, 1987; Hull, Predescu, & White, 2004; Norden & Weber, 2004); declines in actual and forecast earnings (Ederington & Goh, 1998); the imposition of stringent covenants (Frost, 2007); and higher borrowing costs (Graham & Harvey, 2001; Kisgen, 2006).

The potential negative market consequences for a company with a credit rating downgrade it might then affect investors' investment decisions. A negative credit rating information announcement will result in changes in the affected entity's trading volume (Avramov et al., 2009; Chae, 2005; Parnes, 2008). An affected company might then experience lower investment or the withdrawal of capital by investors (Shah, 2008), which might then have a negative impact on the company in the long run.

[7] Excess stock returns are defined in the study as "stock prediction errors calculated from a market model" (Hand et al., 1992, p. 740).

In addition to the above mentioned market reaction, any changes in a company's credit rating level will also result in a different level of monitoring by a rating agency, since its reputation and the perceived value of the information it provides might suffer if it fails to produce accurate ratings (Mathis, McAndrews, & Rochet, 2009). With that, rating agencies will devote more attention and monitoring to companies that are expected to experience a change in rating (Shah, 2008). In addition, companies that are expected to receive a downward revision of their credit rating might receive pressure from the agency involved to take action to improve the rating (Boot, Milbourn, & Schmeits, 2006).

Ederington and Goh (1998) asserted that the greater the market reaction resulting from a credit rating change, the greater the effort a rating agency will devote to monitoring such change. As a result, given that fact that markets will react negatively to a downgrade, rating agencies will put greater effort into monitoring the performance of companies that are near to a category downgrade. This is to ensure that the rating information provided will be accurate and timely and reflect the latest changes associated with the rated entity (Alissa et al., 2013).

In addition, a company credit rating signals information on its credit risk. As discussed earlier, credit rating level is directly implicated to possible violations of debt covenants in contracts, as well as borrowing costs incurred (Frost, 2007; Graham & Harvey, 2001; Kisgen, 2006; Standard & Poor's, 2012a). With that, banks will devote greater monitoring to ensure that an entity will not default on its loan payments in the event that its credit rating receives a downward revision (Mester, Nakamura, & Renault, 2007).

As a result, with the information content that a credit rating provides, it is noted that market players give their attention to a company's rating information. Since a credit rating downgrade will have negative implications, it is not surprising to note that relevant parties will give greater attention to entities that experience such a revision. Affected companies

will then be under great pressure to ensure that the rating will be revised upward in the future. Corrective means and avenues may then be initiated to restore the rating to a desirable level (Alissa et al., 2013; Jung et al., 2013; Kim, Kim, & Song, 2012; Kliger & Sarig, 2000; Kuang & Qin, 2013).

3.5.3 Revenue and Credit Rating Changes

A credit rating changes over time and might be subject to broad category or notch level changes. By referring to Table 3.3 and 3.4 (above), broad category changes involve a shift from one category to another (i.e., from A to BBB), while notch level changes involve a shift in rating within a broad credit rating category (i.e., from AA1 to AA2) (Kisgen, 2009). Before deciding on the credit rating level, the rating agency will gather the required information that served as the input for attesting the entity's credit rating level. Effort and time will be spent on interviewing the staff of the rated entity, observing the rated entity's organisation environment, evaluating the entity's management team and corporate business model and analysing the rated entity's track performance records through its reported financial reports (Duff & Einig, 2009; Standard & Poor's, 2006b).

Factors contributing to such changes might result from overall changes in the business environment, or from specific incidents affecting a specific industry or business entity (Amato & Furfine, 2004; Jones, Johnstone, & Wilson, 2015; Standard & Poor's, 2012a). While macro level factors such as economic and political conditions might contribute to credit rating changes, this study focuses on micro level or company-specific factors, as the business and financial profile of a rated entity serves as the basis for rating analysis (Standard & Poor's, 2006a). Hence, factors taken into account under a company's business profile include country risk, industry factors, company position and profitability, and peer group comparisons. As for a company's financial profile, factors such as accounting, governance/risk tolerance/financial policies, cash flow adequacy, capital

structure/asset protection, and liquidity are taken into account in assessing the financial risk of a rated entity (Standard & Poor's, 2006a).

Even though there are many other micro level factors that could create a change in credit rating level, Standard & Poor's (2006a, p. 16) indicated that "profit potential is a critical determinant of credit protection. A company that generates higher operating margins and returns on capital has a greater ability to generate equity capital internally, attract capital externally and withstand business adversity." With that, the focus of this section is on a company's reported earnings and revenue figures (a function of earnings), and how its performance might lead to a credit rating revision.

As discussed earlier, earnings is the main financial input in evaluating a company's financial performance. Given that earnings implies the overall financial health and profit potential of a company, and that the profitability of a company signals important information about its business risks, profitability (which is derived from reported earnings figures) is one of the most common inputs used to determine a company's credit rating level (Standard & Poor's, 2006a, 2006b).

While currently reported financial ratios are a crucial input, it is important to ensure that the trend of the ratio is given equal attention. Despite a company's ability to generate cash, rating agencies will consider a company that lacks growth potential as having weak financial performance (Standard & Poor's, 2006b). With that, the stability of performance track records serves as another factor that will affect a company's credit rating level, as the stability will have a direct impact on how market players perceive the risks associated with the company (Beaver, Kettler, & Myron, 1970). The perception of higher risk will affect a company's debt-related costs and, hence, its credit rating (Francis, LaFond, Olsson, & Schipper, 2005; Kim & Gu, 2004; Van Horne, 1998). As a result, when a good performance record is seen as temporary rather than persistent, rating agencies will be

conservative and reluctant to revise a company's credit rating upward (Amato & Furfine, 2004). This view is confirmed by Gentry, Whitford, and Newbold (1988), and Belkaoui (1980), who found an inverse association between earnings instability and credit rating level.

Even though reported earnings and its stability can affect a company's credit rating, it is argued that attention should also be focused on reported revenue and its trend. As discussed earlier, revenue is an important benchmark of a company's financial performance and provides greater information content compared with other components of earnings. As such, it may have an impact on a company's credit rating. In addition, as reported revenue trend is also an important indicator of a company's overall financial health, it is argued that it will have a direct impact on many financial performance evaluation ratings, including credit ratings.

Market and empirical evidence confirms the claim of an association between revenue trend and credit rating level. The study by Kim and Gu (2004) provides evidence of the importance of reported revenue to hotels and casinos. Findings from the study revealed that long term profitability is an important determinant of a company's credit rating. As a result, companies will engage in revenue management and profit optimisation (rather than focus on liquidity and financial management) to maintain a favourable rating.

In addition, famous credit rating agencies such as Standard and Poor's and Moody's have also taken the reported revenue of a rated entity into account before making credit rating changes. The ability to meet projected revenue forecasts, expected revenue growth, and the stability of revenue growth are a few of the factors that will affect a rated entity's credit rating (Kaske, 2014; Moody's, 2012, 2015). In addition, Standard and Poor's indicates that an increase or decrease in projected revenue might lead to changes in a credit rating (Standard & Poor's, 2012a). As a result, while earnings is traditionally one

of the important determinants of a credit rating, the fact that reported revenue has also gained importance in the rating process should not be ignored.

3.5.4 Impact of Credit Rating on Financial Reporting Aggressiveness

Most of the prior studies in the strand of credit rating research have focused on the impact of credit rating to affected companies, and on the potential market reaction to credit rating changes.

Even though their study was not focused on the impact of credit ratings on the financial reporting decisions of managers, Nelson et al. (2002) identified stock market, contracting and cash, and debt related incentives as the top three incentives that motivate preparers to engage in opportunistic financial reporting behaviour. In addition, credit rating indicates the credit risk of a rated entity and credit risk default will have a direct association with the possibility of corporate debt default and bankruptcy. It is therefore argued that managers will be motivated to maintain a desirable credit rating through aggressive financial reporting (Altman & Saunders, 1997, 2001; Altman & Suggitt, 2000). However, there has been limited focus on how credit rating changes affect the judgment and decision making of managers. The impact of credit ratings has only recently started to get the attention of researchers. Owing to this novelty, only a limited number of studies have examined this issue; the related studies will be discussed in turn in the coming paragraphs.

Jung et al. (2013) and Ali and Zhang (2008) examined whether a company's credit rating level will affect managers' long term earnings-smoothing activities. The focus of the studies was on whether the credit rating of the company was at the top or bottom notch level of a broad rating category (e.g., AA+ or AA-). The results of the studies indicated that companies that are at the "plus" notch level manage earnings to a greater extent than companies at the middle or "minus" notch level. In addition, when a company has a

chance to achieve a credit rating upgrade, managers will be more aggressive in engaging in earnings management activities. With that, the results of the studies indicate that managers can inflate earnings in order to portray a favourable performance record to rating agencies and, hence, influence their rating decisions.

Extending the study by Jung et al. (2013), Alissa et al. (2013) investigated the impact of expected credit rating level on earnings management decisions. The study concluded that managers engage in opportunistic financial reporting in order to influence the perception of rating agencies towards the company and attain a desirable credit rating. When the credit rating falls short of a desired level, managers will become involved in income increasing earnings management activities in order to receive a future upgrade. On the other hand, when a credit rating is above an expected level, managers will employ an income decreasing earnings management approach in order to obtain a credit rating downgrade.

Demirtas and Cornaggia (2013), on the other hand, investigated the association between a company's initial credit rating and earnings management. The study argued that there is a need to investigate the managers' reaction to new rating versus initial rating. Owing to the stickiness of credit rating, initial credit rating will always as the benchmark for future debts issues. After initial rating, the rating agencies will not revise the rating in a promptly manner. Any performance changes might be considered temporary. With that, a company will have to ensure that its initial credit rating is within a desirable level in the year in which it is obtained. Managers are then argued, will be more aggressive in financial reporting when they are in the midst of obtaining initial rather than subsequent credit rating. Using archival data, the study's empirical findings provided evidence that managers tend to engage in greater earnings management during the initial credit rating year in order to ensure that a favourable credit rating can be obtained.

Focusing on the impact of expected credit rating changes and types of earnings management activities, the study by Kim et al. (2012) concluded that when a company is near to a credit rating upgrade, managers tend to engage in real activities rather than discretionary accruals earnings management to influence the perception of rating agencies toward the company. Real activities earnings management is defined in the study as "real activity earnings manipulation affects cash flow directly such as increase sales through sales discounts and more lenient credit terms, overproduce in order to hide cost of production in inventory and ultimately to lower cost of goods sold, and reduce discretionary expenses such as R&D expenditures in order to avoid reporting a loss" (pg.2). Even though this real activity management will facilitate the meeting of the current earnings threshold, it will affect the company growth in the long run.

Taken together, the studies discussed above indicate that the intention to attain a desirable credit rating level will motivate managers to engage in opportunistic financial reporting behaviour, and that such a rating could be achieved by portraying a record of favourable performance. The results of the studies attested the association where managers can influence the credit rating by engaging in aggressive financial reporting behaviour such as earnings management. Managers with intended agenda can then use the latitude in the accounting standard to achieve their desired goal. However, in the event that monitoring by external parties is high, managers will take more caution before engaging in any opportunistic behaviour in order to minimise potential risks faced by their company (Alissa et al., 2013; Duff & Einig, 2009a; Hanlon, Hoopes, & Shroff, 2014; Hoopes, Mescall, & Pittman, 2012; Jung et al., 2013).

3.5.5 What is Lacking in This Strand of Literature?

As discussed earlier, a company's credit rating contains significant information to aid market players in their evaluation and investment decision making (Kisgen, 2006).

Companies with less favourable credit ratings will then be punished by the market. The fact that a favourable credit rating will lead to positive market rewards then serves as an incentive for managers to ensure that the credit rating of their company is at a desirable level (Demirtas & Cornaggia, 2013).

Since a company's financial statements serve as the main source of information for rating agencies to gauge the financial condition and performance of an entity, the reported figures in the statements serve as the most direct means by which a company can alter the view of rating agencies (Standard & Poor's, 2006a). As result, a company can influence its credit rating through the projection of a favourable track record of performance. Managers might also use the discretion provided by an accounting standard to achieve a favourable credit rating. However, a review of prior studies in the credit rating literature revealed that most were focused on the effect of stock market and contracting incentives on managers' financial reporting decisions. The association between credit rating and managers' financial reporting behaviour has not received much attention from researchers until this decade, but there is still a lack of empirical studies in this strand of research.

A review of the studies conducted in this area indicates that most of them examined the association between credit rating levels and earnings management. Since Standard & Poor's and Moody's announce credit rating revisions due to undesirable reported revenue (Kaske, 2014; Moody's, 2012, 2015), it is argued that managers will also give their attention to reported revenue, in addition to reported earnings figures. A review of prior studies indicated that none of them has examined the link between reported revenue and credit rating downgrades on managers' reporting decisions. In addition, because rating agencies place great importance on the stability of a performance indicator, managers will need to ensure that the reported revenue pattern is favourable. Since most of the studies in this strand of research did not put an emphasis on reported revenue, the association

between revenue pattern and managers' financial reporting decisions serves as a research gap that needs to be closed.

Furthermore, most of the prior studies that examined the impact of credit rating on managers' reporting decisions focused on the context of a company's credit rating being near to a category change. Focus was on the impact of an initial credit rating (Demirtas & Cornaggia, 2013), the expected credit rating level (Alissa et al., 2013), and credit ratings near category changes (Ali & Zhang, 2008; Jung et al., 2013; Kim et al., 2012), on earnings management. Although credit rating changes might involve a category or notch level change, none of the prior studies looked into how the different types of credit rating downgrades affected managers' revenue management intention. Different levels of credit rating downgrades might bring different levels of market reaction and monitoring by related parties, creating different levels of motivation for managers. This might then affect the level of managers' aggressive revenue management. As a result, there is a research gap where the impact of different levels of credit rating changes on managers' revenue management intention warrants a closer examination.

Finally, it has been noted that a company's credit rating and its reported performance record share a unique relationship. While on one side a company's reported earnings will affect its credit rating (Standard & Poor's, 2006b), the company can manage reported earnings in order to attain a desirable credit rating (Alissa et al., 2013; Demirtas & Cornaggia, 2013; Jung et al., 2013). As argued earlier, this two-way relationship is believed to be extendable to the reported revenue figures over time. Hence, in the event that a company experiences a credit rating downgrade and is reporting an undesirable revenue pattern, the downgrade might serve as a motivator or moderator of managers' financial reporting behaviour. This interaction between reported revenue pattern and credit rating changes on managers' accounting reporting decisions has not, however,

received any attention from researchers in this strand of study. This is an interesting gap, then, that requires the attention of researchers.

3.6 Incentives (Motivations), Accounting Standard Precision, and Motivated Reasoning Theory

As provided in the discussion earlier, a more precise standard gives managers better power to negotiate and managers will be more likely to engage in transaction structuring and be involved in aggressive reporting. Auditors will then make fewer attempts to in requesting for adjustments. On the other hand, managers will be less likely to engage in transaction structuring when dealing with an imprecise standard, but will still use the latitude in the standard to engage in aggressive reporting. Auditors will then have to make frequent attempts to request the adjustment of transactions. As a result, a balance of prescription and the exercise of professional judgment in an accounting standard will facilitate effective monitoring by watchdogs. It is therefore important for accounting standard setters to insert a sufficient level of guidance into their standards (Nelson et al., 2002).

However, in examining the impact of different types of standards on judgment and decision making, Libby et al. (2002) argued that it is important for financial accounting researchers to take into account the interactive effect of types of accounting standards, and incentives, on managers' financial reporting decision making. Drawing inferences solely from the types of standards and ignoring other potential influencing factors might result in biased empirical results (Hail et al., 2010). While managers can take advantage of the requirement in accounting standards to exercise their judgment, a standard's latitude alone will not promote opportunistic reporting behaviour (Psaros, 2007). The presence of incentives will, however, determine how a standard should be interpreted (Van Beest, 2009). This, coupled with external factors such as a firm's poor reporting

quality or managerial incentives, will motivate preparers to take advantage of the latitude in accounting standards (Nelson, 2003). Preparers might be consciously or unconsciously influenced by the incentives during the financial reporting decision making process and, hence, align reporting decisions with their preferred interests (Cuccia et al., 1995; Libby & Lipe, 1992). Hence, without considering the presence of incentives, it would be premature to tie types of accounting standards to opportunistic financial reporting behaviour (Cuccia et al., 1995). Libby et al. (2002) therefore called on financial accounting researchers to take into account the impact of regulatory changes and incentives when examining the issue of managers' financial reporting aggressiveness.

With that, the presence of incentives will have different impacts on the financial reporting decisions made under the different levels of standard precision. Managers' intentions will then drive the financial reporting decisions that are made. These intentions, either true and fair or driven by private motives, will have a different impact on the outcome of financial reporting decisions (Fields, Lys, & Vincent, 2001).

The empirical findings of the study by Hoffman and Patton (2002) reported that increasing the level of precision will not lead to greater bias in financial reporting decisions. However, incentives play an important role in influencing financial reporting decisions when reporting under a more precise standard. This finding is affirmed by Kang and Lin (2011) and Psaros and Trotman (2004), who provided evidence that the financial reporting decisions of preparers appeared to be influenced by their motivations rather than by the precision of the accounting standard. Preparers who report under a rule-based standard tend to be relatively more aggressive compared with preparers reporting under a principle-based standard.

Van Beest (2009), provided a similar view: when incentives that will favour the managers' position are present, neither rule-based nor principle-based standards will be

effective in constraining preparers' opportunistic financial reporting decisions. Managers will interpret the latitude in the accounting standard in a manner that justifies their intended position and the standard can then serve as a defending tool when there are disputes over a financial reporting decision (Libby et al., 2002; Nelson, 2003; Van Beest, 2009).

As discussed earlier, researchers have concluded that motivation (or incentive) serves as the main stimulus affecting human cognition and influencing the decision making process. Motivation will drive one's actions in order to achieve a desired outcome (Ashton & Cianci, 2007; Kang & Lin, 2011; Libby et al., 2002; Libby & Lipe, 1992; Van Beest, 2009). As a result, and taking into account the impact of motivation and the latitude provided in the different levels of precision in an accounting standard on managers' financial reporting decision making which might result in different interpretations by the goal driven managers, Motivated Reasoning Theory was found to be a suitable theory to underpin the study's theoretical framework and the development of its hypotheses compared with other psychological cognitive theories on decision making. MRT posits that people will be motivated by an intended goal and, hence, will search for evidence that can justify a decision aligned with goal in order to minimise disputes with other related parties over the decision made (Kunda, 1990). As a result, by integrating MRT with the argument of the study, it is argued that the manner in which managers will interpret an accounting standard depends on the presence of motivation to do so, and whether reasonable and convincing justifications can be formed.

As argued earlier, market players give attention to a company's reported revenue pattern over a period of time (Francis et al., 2004; Hangstefer, 2000; Trueman et al., 2000; Turner, 2001). Companies with a good revenue pattern will tend to receive better market rewards, such as better firm evaluations, higher growth predictions and lower costs of

debt and equity (Delen, Kuzey, & Uyar, 2013; Ertimur et al., 2003; Jegadeesh & Livnat, 2006; Kama, 2009; Rees & Sivaramakrishnan, 2007; Sweeney, 1994). These potential market rewards will then provide managers with a motivation to ensure than reported revenue is within public expectations. In the event that the reported pattern falls short of the predicted pattern, managers will be motivated to ensure that the pattern is "corrected" via revenue management so that it portrays a satisfactory pattern to outsiders.

Furthermore, reported revenue is an input for many other performance benchmarks of a company. As noted, there is a unique relationship between a company's revenue trend and its credit rating. While reported revenue can have an impact on the credit rating level of a company (Kaske, 2014; Moody's, 2012, 2015), managers can also manage reported revenue to portray a good performance record to outsider and, hence, attain the desired credit rating level (Ali & Zhang, 2008; Alissa et al., 2013; Demirtas & Cornaggia, 2013; Jung et al., 2013; Kim et al., 2012; Shah, 2008). It is therefore argued that while a credit rating downgrade alone might create motivation for managers to engage in revenue management, in the event that reported revenue is not within expectations and the company experiences a credit rating downgrade, the downgrade may serve as a greater motivation and hence, moderate managers' revenue management intention.

With that, even though a company's prior reported revenue pattern will have an impact on its credit rating level, a downward revision of the rating might result in further negative market reaction and motivate managers to engage in revenue management. Managers may be motivated to ensure a desirable reported revenue pattern so that the credit rating could be restored to an intended level (Alissa et al., 2013; Jung et al., 2013). A credit rating can receive either a notch or category downgrade, and it is argued that a category downgrade will result in more negative market reaction than a notch downgrade. As a result, the pressure on managers to maintain higher revenue will be greater in the event of category

downgrades than notch downgrades. However, this motivation might be affected by a high level of monitoring by relevant parties such as credit rating agencies, banks or financial institutions, or professional investors. Companies that are performing well will tend to receive less monitoring (Alissa et al., 2013; Jung et al., 2013; Mester et al., 2007), hence, the company might be monitored more by relevant parties in the case of a category downgrade than in the case of a notch downgrade. A higher level of monitoring by outsiders might increase the chance that a manager's revenue management actions will be revealed and result in more serious negative consequences, such as a further downward credit rating revision (Alissa et al., 2013; Jung et al., 2013). This might then lower the motivation of managers to engage in revenue management. However, the lower level of monitoring in response to a notch downgrade and this might provide greater motivation for intended managers to engage in revenue management.

Since an accounting standard can be used to defend and legitimise a reporting decision, the latitude in the standard can be interpreted by managers in a manner that favours an intended decision. When managers are motivated to recognise higher revenue, their intention is attainable when they can rationalise such an act and construct a reasonable and convincing justification to offer to related parties regarding the decision made. With that, the presence of an accounting standard provides valid grounds for managers and eases the process of constructing a seemingly reasonable and objective justification using the latitude provided in the standard. The accounting standard will then serve as a tool to assist managers to achieve their intention; managers will interpret and apply the standard in a manner that will facilitate revenue management action and provide legitimate grounds for doing so (Jamal & Tan, 2010; Libby et al., 2002; Van Beest, 2009). As a result, the boards' decision to introduce more indicators in a principle-based standard is expected to affect how managers interpret accounting pronouncements and lead to

differences in interpretation and financial reporting outcomes. While a standard that is too rigid might facilitate opportunism, a vague standard will also do the same.

Taking the earlier arguments together, given a standard with different levels of precision, the presence of incentives will moderate managers' revenue management intention. The company's reported revenue pattern and credit rating downgrades will serve as motivation for managers to engage in revenue management. A credit rating downgrade will create pressure on managers to ensure that the rating can be revised to a desirable one. This pressure will be higher when the company is reporting an undesirable revenue trend and experiencing a downward revision of its credit rating. The intention to engage in revenue management will be even stronger when reporting under an accounting standard that will support the decision made. Such intention is even stronger when the latitude in the accounting standard provides room for managers to engage in revenue management.

3.7 Chapter Summary

This chapter provided an overview of the literature related to incentives (motivations) for aggressive reporting. The potential gaps in the different related pool of studies were identified, and the related theory that forms the backbone of the issues identified was also discussed.

While the importance of earnings and issues related to earnings management have received much attention from researchers, the information content of earnings might not be as useful as claimed. With evidence that market players focus on other components of earnings, such as reported revenue, the persistence of a performance indicator is always one of the main attributes of concern of market players. It is therefore important to bridge these two arguments and investigate further how reported revenue patterns affect managers' revenue management intention. This will then serve as an interesting research

question regarding how reported revenue trend will moderate managers' revenue management intention.

On the other hand, adding to the emerging literature on the association of credit rating and managers' opportunism, it was identified that only a limited number studies have examined the impact of different levels of credit rating downgrades on managers' revenue management intention. With the two-way relationship between credit rating and revenue trend reported, this has then served as another research gap which warrants the needs to examine the issue further.

In a nut shell, following the discussion from Chapter 2, accounting standards always serve as tools to defend and legitimise a reporting decision, and different levels of precision in a standard will affect managers differently with respect to justifying a reporting decision. The presence of a specific reporting agenda, coupled with incentives, will further moderate managers' financial reporting aggressiveness. The discussion and the research gap identified from these two literature review chapters provided important information to identify potential research questions useful for the development of the study's theoretical framework and the formation of its hypotheses. Detailed discussions on the study's theoretical framework and hypotheses will be provided in the coming chapter.

CHAPTER 4:

RESEARCH FRAMEWORK AND METHODOLOGY

4.1 Introduction

The main objectives of this chapter are to provide an overview of the study model, and to develop the hypotheses related to the issues identified in earlier chapters. The chapter will also discuss the study's methodology, research methods, research design and procedures, data collection processes, sample characteristics and selection, and statistical analysis techniques.

4.2 Epistemology, Ontology and Methodology

The main objective of conducting research is to explore and understand various social phenomena. Different researchers will have different perceptions of the world and, hence, the manner in which research should be conducted. In conducting a social science research, it is important for researcher to consider the epistemology, ontology and methodology features because they will have a direct implication on how a research inquiry will be carried out (Popkewitz, Tabachnick, & Zeichner, 1979).

Epistemological consideration centred on the issues of what is considered an acceptable knowledge in a specific discipline. Ontology, on the other hand, concerns on the perceptions on the social entities. It raises the question whether the social constructs were objectively or subjectively built up (Bryman & Bell, 2011). Researchers' view on epistemological (theory of knowledge) and ontological (beliefs about the nature of human or social reality) will guide the manner in which the knowledge will be gained (methodology) (Tuli, 2011).

Given the different views and interpretations of social reality, different paradigms have evolved to categorise the different beliefs that guide investigation or research (Krauss, 2005). The three paradigms used in research include the positivist, interpretivist, and

critical research paradigms (Chua, 1986). Each paradigm incorporates its own unique epistemological and ontological assumptions and beliefs, and hence, will have a different impact on the methodology employed in a study (Tubey, Rotich, & Bengat, 2015).

The positivist paradigm places emphasis on the investigation of reality. This paradigm assumes that reality exists independently and is not affected by thought, language and social practices, and that it will not change under any manner of observation (Krauss, 2005). Research is conducted in a value-free and objective manner, and knowledge is used to describe social reality. Owing to the belief of objectivity, positivists can remain independent of the phenomena being observed (Healy & Perry, 2000). There is a clear distinction between theory and research, and the purpose of conducting research is to test the theories and development of laws (Bryman & Bell, 2011). Through deductive reasoning, which starts with a theoretical framework for the collection of empirical evidence using quantitative methods, positivist studies focus on the generation and testing of hypotheses in order to provide explanations of the laws being assessed (Krauss, 2005). Positivist studies employ an objective approach to investigate various social phenomena, using research methods that commonly include questionnaire surveys, longitudinal and/or cross-sectional data analysis, and experiments.

Unlike positivism, which believes that all people share the same meaning systems, interpretivism acknowledges the differences between people and their reality or objectives (Bryman & Bell, 2011). The interpretivist researcher argues that people experience social and physical reality in different ways and that a person's perceptions will have an impact on how they perceive the world. Social and cultural norms will then have a direct implication on how reality is constructed. As such, reality is constructed under great human influence (Mutch, 2005). Under the interpretivist paradigm, research is conducted to understand the phenomena rather than generalising based on all of society

(Farzanfar, 2005). Thus, in order to examine the social world, the research procedures employed should be able to reflect the differences that exist (Mutch, 2005), with qualitative methodology commonly used to understand the issues arising. The methods commonly used under this research paradigm include in-depth interviews, focus group discussions, and on the spot observation (Tubey et al., 2015).

Critical research aims to create changes and produce a better world. Chua (1986) argued that, under this paradigm, humans have confined potential that restricts the full emergence of their inner capabilities. As well, empirical reality is characterised by objective and real relations that are transformed and reproduced through subjective interpretation. Reality is, hence, a virtual perception under social and cultural influences and has multiple layers (Healy & Perry, 2000; Trauth & Jessup, 2000). These social and cultural phenomena will also have an impact on knowledge formation (Guba & Lincoln, 1994). Given that humans have a limited capability to change the world, the main objective of research under this paradigm is to uncover the myths and reveal the hidden meanings of virtual reality in order to crystallise changes and transform the world (Krauss, 2005; Trauth & Jessup, 2000). Common research methods used under this paradigm include ethnographic and historical studies that can be conducted using either qualitative or quantitative methods (Healy & Perry, 2000).

From this discussion, it can be concluded that the study does not fit into either the interpretivist or critical paradigm. The positivist paradigm appears the most suitable for meeting the study's objective and is therefore employed in the study. As a result, the study's philosophical position is predominantly positivist.

4.3 Theoretical Model

With the aim of extending and contributing to the literature on revenue management and accounting standard formation, the main objective of this study is to examine the

effect of different levels of accounting standard precision on managers' revenue management intentions, and how the intentions are moderated by the incentives of different reported revenue trends and credit rating downgrades. Motivated Reasoning Theory underpins the study's framework, which is shown in Figure 4.1 (below).

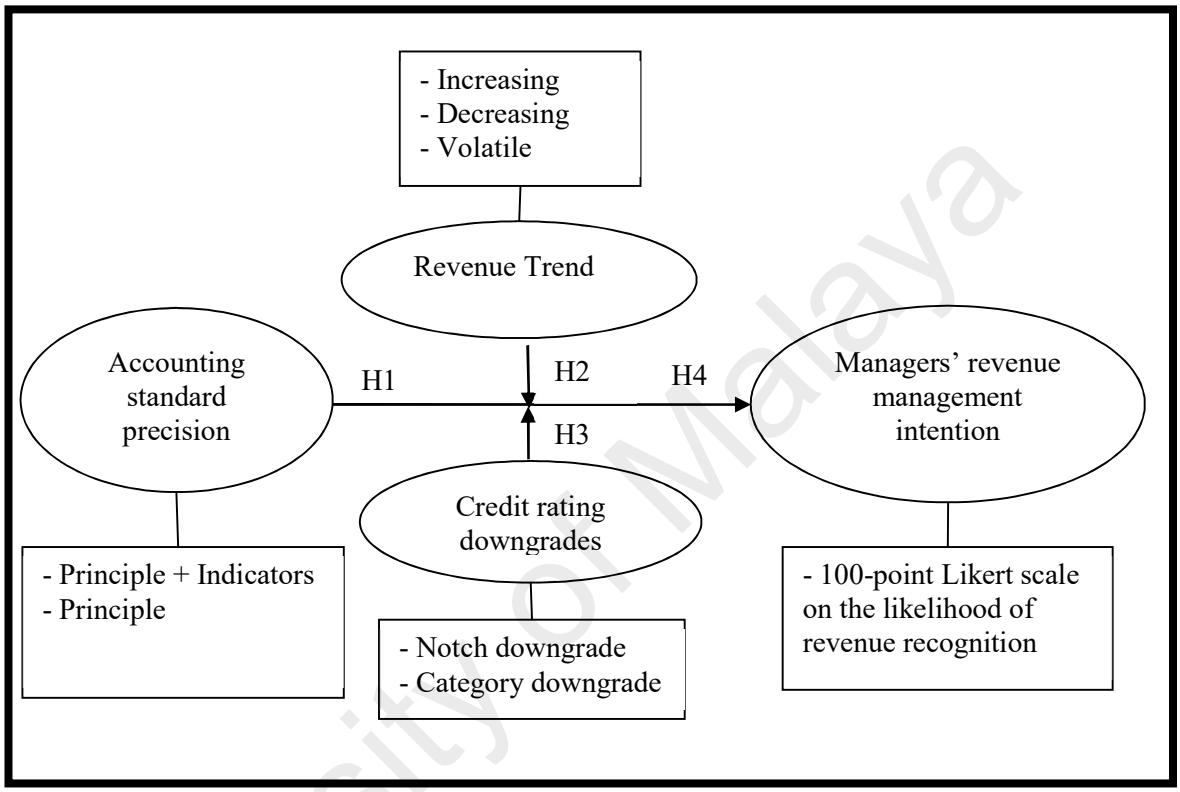


Figure 4.1: Theoretical Framework of the Study

In accordance with the relevant factors identified in prior chapters, the study's research design consists of the manipulation of two incentive constructs, namely: revenue trend and credit rating downgrades. The revenue trend variable was identified through the revenue literature and is measured by the trend of increasing, decreasing and volatile revenue. Credit rating downgrades serves as the second incentive construct and was identified through the emerging literature on the association between credit rating and managers' financial reporting decisions. The construct is measured by category or notch credit rating downgrades. The construct of level of accounting standard precision was identified through public concern expressed during the development of IFRS 15 over the

increasing level of precision seen as the standard was being developed. The construct is measured by a more precise (Principle+Indicators) or less precise (Principle) standard.

4.4 Hypotheses Development

In this section, the hypotheses regarding the causal relationships between the manipulated independent variables and the dependent variables are predicted. This refers to the influence of accounting standard precision and incentives (motivations) on revenue management intention. Motivated Reasoning Theory (MRT) underpins the development of this study's hypotheses.

4.4.1 Level of Accounting Standard Precision and Revenue Management Intention

Accounting standards can be used to defend and justify a reporting decision when there is dispute over it (Arjoon, 2006; Brown & Wright, 2008; Gibbins et al., 2001; Jamal & Tan, 2010; Kang & Lin, 2011; Nelson, 2003; Ronen et al., 2006; Sanders, 2001; Van Beest, 2009; Wang, 2010). Given that managers reporting under accounting standards with different levels of precision tend to portray different reporting behaviour, it is important to ensure that the level of precision in a standard will not facilitate opportunism.

Prior studies have documented that detailed bright-lines prescribed by standards served as "safe harbours" to managers involved in defending and justifying their reporting decisions, even though such decisions might not have been in the best interest of the stakeholders (Donelson et al., 2012; Fornaro & Huang, 2012; Schipper, 2003). This could facilitate the opportunistic action of managers. Rule-based accounting standards, hence, have always been associated with a higher level of manipulation intention by managers (Cameran et al., 2014; Chen et al., 2007; Juslin & Olsson, 2004; Lin et al., 2012).

On the other hand, a principle-based standard (less precise standard) that leaves room for judgment and focuses on substance-over-form reporting is generally associated with

less aggressive financial reporting behaviour. There are arguments, however, that a principle-based standard that provides insufficient prescriptions to guide financial reporting decision making opens the door to manipulation. An ambiguous principle-based accounting standard will motivate managers to use the latitude provided to engage in manipulative action (Brochet et al., 2013; Brown & Wright, 2008; Fornaro & Huang, 2012; Gibbins et al., 2001; Hackenbrack & Nelson, 1996; Nelson, 2003; Ronen et al., 2006; Sanders, 2001; Trompeter, 1994; Wang, 2010).

A review of prior studies revealed no conclusive findings between accounting standard precision and financial reporting behaviour. Despite the inconclusive findings, according to MRT, motivation will affect a person's information searching and reasoning process. Individual will seek for and rationalise evidences that are aligned with their preferred decision outcome and try to form a reasonable justification in convincing the external party over the rationale of the preferred outcome. As a result, in the event that motivations (or incentives) to engage in revenue management exist, managers will be motivated to interpret the latitude in the accounting standard in the manner that supports the desired reporting outcome. Such latitude will also be employed by managers to defend and legitimise disputable financial reporting decisions. Given the presence of incentives to report a desirable revenue pattern to outsiders, detailed bright-lines or ambiguity in the accounting standard opens doors for diverse interpretations and serve as a solid defending tool to managers in convincing the relevant parties on a reporting decision made. With that, aligned with argument in MRT, the presence of motivation and ease to form a reasonable justification are two essential conditions to motivate managers to act aggressively.

Drawing inference from IFRS 15. The boards have included a list of indicators to assist managers in applying the concept of control in a better way. It is argued on the one hand

that the inclusion of indicators clarifies and reduces the ambiguity of the concept of control and might prevent IFRS 15 to be issued as a set of principle-only standard. On the other hand, the inclusion of indicators might shift the standard to one that is more rule-based, despite its initial development as a principle-based one. Such inclusion might set a low threshold for financial reporting decisions, as the indicators provided in the standard could be viewed by managers as additional criteria for making judgments, or could serve as thresholds for decisions. Clor-Proell and Nelson (2007) argued that when comparing similarity, humans have a tendency to overemphasize similarity or underemphasize dissimilarity. Hence, aligned with the MRT, it is argued that the motivation to achieve an intended goal will motivate managers to "overly" match the given indicators in a standard against an entity's accounting transactions. Given the fact that managers will need to form a solid reasoning over the decision made, manager that are motivated by the intended financial reporting goal might use the indicators as a checklist in forming solid grounds for justifying an intended reporting outcome. On the other hand, it can also be argued that inclusion of checklist might reduce the ambiguity in the new accounting concept and diminish the ease for managers in the reasoning formation that support their opportunism. However, as argued earlier, the presence of incentives (or motivation) and the ability to form a persuasive justification over the desired outcome are two essential conditions for managers to engage in revenue management. Without the presence of incentives, this study hence, predicts, that different levels of accounting standard precision, namely, Principle (less precise) or Principle+Indicators (more precise) will not motivate managers to engage in revenue management. The first hypothesis is then posited as:

H1: *Different levels of accounting standard precision will not affect managers' intention to engage in revenue management differently.*

4.4.2 Level of Accounting Standard Precision, and the Moderating Effect of Revenue Trend, on Revenue Management Intention

While a company's reported earnings was ranked as one of the most important valuation inputs, the focus has now shifted to other components of earnings (Jegadeesh & Livnat, 2006). It is now argued that, compared with reported earnings figures, other components of earnings such as revenue, gross margin, and income before interest and taxes, provide greater incremental information about future earnings and cash flows, excess returns, or even firm profitability (Chandra & Ro, 2008; Ertimur et al., 2003; Fairfield & Sweeney, 1996; Lipe, 1986; Swaminathan & Weintrop, 1991). This is further supported by Chandra and Ro (2008), who argued that revenue is more homogenous and persistent compared with other components of earnings. Revenue provides useful information on future earnings and cash flows, and this information is lost when it is aggregated into reported earnings. Outweighing reported earnings, revenue has begun to serve as an important input in financial decision making by investors and financial analysts (Ertimur et al., 2003; Jegadeesh & Livnat, 2006; Wilson, 1986).

Even though yearly reported revenue figures are the ones that receive public attention, it is equally important for companies to ensure that revenue is maintained at a persistent, healthy level over the long term. Francis et al. (2004) argued that the desirable features of performance measures include accrual quality, persistence, predictability, smoothness, value relevance, timeliness, and conservatism. Specifically, they argued that any changes in the attributes of accrual quality, persistence, or smoothness will have a significant impact on a company's cost of equity capital. This argument was shared by Ghosh et al. (2005), who found that companies that reported sustained increases in both revenue and earnings tended to be valued more by investors. They also recorded higher quality

earnings and a larger earnings response coefficient[8]. As a result, it is argued that a performance measure that portrays a persistent trend will be ranked useful by investors, who will tend to label the company as less risky and less uncertain.

Given that there is only a handful of literature on revenue trends, this study predicts the impact of revenue trends on financial reporting decisions based on earnings trend literature. As argued earlier, companies with consistent earnings trends are valued more highly by investors and financial analysts. Prior studies evidenced that companies manage unrealised earnings to avoid reporting volatile earnings, as volatile earnings tend to be ranked and rated negatively by stakeholders (Altamuro et al., 2005; Barua et al., 2006; Beneda, 2013; Das et al., 2009; Hirst, 2006; Hirst & Hopkins, 1998; Jegadeesh & Livnat, 2006; Koonce & Lipe, 2010; Lee et al., 2006; Maines & McDaniel, 2000; Marquardt & Wiedman, 2004; Matsumoto, 2002; Penman & Zhang, 2002; Richardson et al., 2005). Owing to this negative perception, investors will be less willing to invest in a company with an unstable earnings pattern. Motivated by the intention to maintain a good perception in the eyes of market players, managers will engage in smoothening reported earnings (Goel & Thakor, 2003). Companies with a decreasing earnings trend, however, receive more favourable forecasts by analysts, who tend to discount this negative information (Ashton & Cianci, 2007). This will then reduce the intention and motivation for managers to report aggressively. In addition, managers at less profitable companies have a lower market incentive than profitable companies to engage in aggressive reporting behaviour (Barua et al., 2006; Hayn, 1995; Matsumoto, 2002).

As a result of the evidence that revenue provides greater information than other components of earnings, investor focus has slowly shifted to figures other than a

[8] The earnings response coefficient measures the association between equity return and earnings surprises. A higher earnings response coefficient is always more favourable (Campbell, 2011).

company's reported earnings, with market players holding a negative perception of companies that report an unhealthy revenue trend. Thus, the market incentive that consistent revenue will bring may motivate managers to manage revenue by recognising higher revenue in order to report a steady revenue trend.

Companies may experience an increasing, decreasing or volatile revenue trend. It is argued that different trends in reported revenue will create different pressures for managers, and motivate them differently to maintain a pattern expected by the public. However, according to MRT, the motivation arising from reporting a favourable revenue trend and the ability of managers to reasonably justify reporting higher revenue will affect their intention to interpret the accounting standard in a manner that facilitate revenue management. Since an accounting standard can be used to defend a reporting decision, and managers reporting under accounting standards with different levels of precision tend to portray different reporting behaviour (Arjoon, 2006; Brown & Wright, 2008; Gibbins et al., 2001; Jamal & Tan, 2010; Kang & Lin, 2011; Nelson, 2003; Ronen et al., 2006; Sanders, 2001; Van Beest, 2009; Wang, 2010), the presence of motivation to report a desirable revenue trend will have an impact on how managers will interpret the latitude in the accounting standard. This study, hence, predicts that different levels of precision in an accounting standard will have an impact on managers' intention to engage in revenue management, and that this intention is moderated by different revenue trends. Thus, the second hypothesis predicts that:

H2: *Under different levels of accounting standard precision, managers' intention to engage in revenue management will be moderated differently by different reported revenue trends.*

4.4.3 Level of Accounting Standard Precision, and the Moderating Effect of Credit Rating Downgrades, on Revenue Management Intention

Credit rating is an important benchmark with respect to a company's financial performance and health. It is also well accepted by market players as an indicator for assessing the credit risk of a company when considering financial investment decisions (Cheng & Subramanyam, 2008; Hand et al., 1992; Iannotta et al., 2013; Kisgen, 2006; Standard & Poor's, 2012a). A company may experience an upgrade or downgrade of its credit rating, and this can take the form of "notch" (e.g., from AA1 to AA2) or "category" (e.g., from AA3 to A1) changes. While there are few issues when a credit rating is upgraded, prior studies have shown that stock markets react negatively to a credit rating downgrade (Afik, Feinstein, & Galil, 2014; Elayan et al., 2003; Griffin & Sanvicente, 1982; Holthausen & Leftwich, 1986; Hull et al., 2004; Shah, 2008; Wansley et al., 1992). Negative market reaction might then have a direct effect on a company's value, stock or bond returns, stock price movements, analysts' forecasts, and costs of borrowing (Avramov et al., 2009; Chae, 2005; Dichev & Piotroski, 2001; Ederington & Goh, 1998; Frost, 2007; Graham & Harvey, 2001; Griffin & Sanvicente, 1982; Hand et al., 1992; Holthausen & Leftwich, 1986; Kisgen, 2006; Odders-White & Ready, 2006; Parnes, 2008; Shah, 2008). In addition, negative impacts associated with credit rating downgrades might then incentivise and motivate managers to maintain a favourable credit rating by maintaining a good performance record (Ali & Zhang, 2008; Alissa et al., 2013; Demirtas & Cornaggia, 2013; Jung et al., 2013; Kim et al., 2012).

When a company experiences a change to its credit rating, credit rating agencies will pay more attention in monitoring the subsequent financial performance of the company (Alissa et al., 2013; Jung et al., 2013). Comparatively, a category downgrade will bring greater negative market reaction compared with a notch downgrade (Ederington & Goh, 1998; Shah, 2008). As a result, a company experiencing a category downgrade might

receive greater monitoring by credit rating agencies than if it had received a notch downgrade. This additional monitoring might then increase the chance that relevant parties will uncover revenue management action by managers that could result in more negative repercussions for the company. This has the potential to decrease the motivation for managers to engage in revenue management (Alissa et al., 2013; Hanlon et al., 2014; Hoopes et al., 2012; Jung et al., 2013).

Given that accounting standards can be used to defend and legitimise reporting decisions, different types of credit rating downgrades will serve as a motivation which might moderate managers' revenue management intention differently under different levels of standard precision. According to MRT, with the need to form a reasonable and justifiable reason to support the intention to recognise higher revenue, an accounting standard can serve as a tool to defend and legitimate a reporting decision to the relevant parties (Arjoon, 2006; Jamal & Tan, 2010; Kang & Lin, 2011; Nelson, 2003; Van Beest, 2009). Managers with a specific agenda in mind will choose to interpret the latitude in an accounting standard in a way that justifies their actions. Different levels of standard precision might influence managers' reasoning processes differently and, hence, ease the justification formation process in a different manner. The intention to manage earnings will be moderated further when the company experiences a credit rating downgrade.

According to MRT, managers' revenue management intention might be motivated differently based on the presence of the incentive of credit rating downgrades, and on the ease of forming a reasonable justification for a decision based on the different levels of precision in an accounting standard. When experiencing a category downgrade, the potential negative market reaction is higher. This will then result in higher external monitoring by relevant parties and increase the possibility where the reporting decision will be questioned by the monitoring parties. Managers might then have a lower intention

to report aggressively. It is therefore predicted that, under different levels of standard precision, managers' revenue management intention will be higher in the event of a notch downgrade than a category downgrade. Hence, it is hypothesised that:

H3: *Under different levels of accounting standard precision, managers' intention to engage in revenue management will be higher when companies experience a notch downgrade than when there is a category downgrade.*

4.4.4 Level of Accounting Standard Precision, and the Moderating Effect of Revenue Trend and Credit Rating Downgrades, on Revenue Management Intention

According to MRT, an accounting standard can serve as a tool to defend and legitimate a reporting decision to relevant parties (Arjoon, 2006; Jamal & Tan, 2010; Kang & Lin, 2011; Nelson, 2003; Van Beest, 2009). Managers with a specific agenda in mind (presence of motivation) will choose to interpret the latitude in the accounting standard in a way that justifies their action. Different levels of standard precision might facilitate managers' reasoning processes differently and, hence, ease the justification formation process in a different manner.

The intention to report aggressively might be further moderated by the presence of the incentives of revenue trend and credit rating downgrades. Different reported revenue trends will provide managers with different levels of pressure to maintain a healthy and desirable trend that meets public expectations. The intention to maintain a desirable trend will further be moderated by a credit rating downgrade, as the company's credit rating might be restored when reported revenue projects healthy and stable growth (Ali & Zhang, 2008; Alissa et al., 2013; Demirtas & Cornaggia, 2013; Jung et al., 2013; Kim et al., 2012). Credit rating agencies consider many criteria in determining a company's credit rating, and one of the most important indicators is a company's reported revenue. Credit rating agencies will take a company's reported revenue into account before revising

the firm's credit rating (Kaske, 2014; Moody's, 2012, 2015). Hence, the impact of a credit rating on a company is a two-way relationship. While earnings volatility influences a company's credit rating (Standard & Poor's, 2006b), managers also exercise discretion to smoothen earnings in order to obtain or maintain a better credit rating (Alissa et al., 2013; Demirtas & Cornaggia, 2013; Jung et al., 2013).

In addition to reported earnings, credit rating agencies have also started to focus on a company's reported revenue, and its trend across a period of time (Kaske, 2014; Moody's, 2012, 2015). With that, and drawing inferences from the reported earnings literature, it is argued that reported revenue patterns will have an impact on a company's credit rating, as reporting a favourable revenue trend will bring many positive market rewards (Altamuro et al., 2005; Callen et al., 2008; Chandra & Ro, 2008; Huefner & Largay III, 2008; Jegadeesh & Livnat, 2006; Kama, 2009). In the event that a company experiences a credit rating downgrade, it will serve as strong motivation for managers to report aggressively in order to ensure that a healthy revenue trend can be portrayed. Portraying a healthy trend will not only improve the perception of market players towards the company (Jung et al., 2013; Shah, 2008), it will also increase the chances of restoring the company's credit rating to a desirable level (Alissa et al., 2013; Jung et al., 2013; Kim et al., 2012).

However, as discussed earlier, managers will be constrained from engaging in aggressive financial reporting behaviour when there is a category downgrade because monitoring from outsiders might be higher compared with a notch downgrade. As credit rating agencies would engage in greater monitoring of a company when its rating has been downgraded, managers might exercise caution when considering engaging in revenue management; once detected, such activity would bring unintended negative repercussions, such as an additional credit rating revision (Alissa et al., 2013; Jung et al.,

2013). As well, financial decisions that do not represent the economic substance of transactions might bring scrutiny from other professional financial statement users. This will also provide managers with less motivation to engage in revenue management. Notch downgrades, however, receive less monitoring by external parties, providing managers with more motivation to engage in revenue management.

The interaction of revenue trend and credit rating downgrades will result in different levels of motivation for managers to engage in revenue management. In the context where a revenue trend is within public expectations, a credit rating downgrade might provide managers with less motivation to engage in revenue management. In comparison, despite a favourable revenue pattern, managers' motivation to engage in revenue management when faced with a notch downgrade may be higher than when faced with a category downgrade. On the other hand, when the reported revenue pattern is not desirable, managers will be motivated to correct the trend through revenue management (Callen et al., 2008; Davis, 2002). The motivation to engage in revenue management will be even higher in response to a notch downgrade than a category downgrade.

In addition, aligned with the argument in MRT, the presence of incentives, the ease of forming a reasonable justification from the accounting standard to manage earnings, and the motivation to recognise higher revenue from the incentives, might jointly affect managers' revenue management intention. With that, the study's final hypothesis predicts that:

H4: *Under different levels of accounting standard precision, reported revenue trends, and credit rating downgrades will moderate managers' intention to engage in revenue management differently.*

4.5 Research Method

The experimental research method (quantitative method) was used to investigate the issues identified and test the hypotheses formed. This method was adopted because IFRS 15 is a new standard that will only be effective from 1 January 2018 (IFRS, 2015a) and there is no relevant data available to address the study's hypotheses. As a result, the experimental method would be able to provide ex-ante data and provide insightful information regarding the problem being investigated. It served as a powerful tool to examine the potential implications of IFRS 15.

In addition, unlike prior archival studies that were subject to data selection, design and measurement bias, the experimental method allowed for the establishment of a clean and strong causality among/between the variables examined (Bonner, 2007; Libby et al. 2002). The experimental method provides a good vehicle for researchers to control and establish the settings where the experiment is taking place. The method allows researchers to disassociate the interrelated factors that co-exist in the natural environment, and hence, provide convincing evidence of the causal relationship among the issues examined (Libby & Seybert, 2009; Ng & Tan, 2007).

As well, since accounting is a process executed by humans, the psychological forces that contribute to individual behaviour can be well explained by their relevant and proper manipulation in experimental research (Hirshleifer & Teoh, 2009). With that, the behavioural effect of the accounting issue can be clearly examined (Maines & Wahlen, 2006).

4.6 Research Design

This study employed a 2x3x2 between-subjects design, with accounting standard prescription (principle, principle with indicators), revenue trend (increasing, decreasing

and volatile), and credit rating downgrades (category or notch) as the independent variables.

4.6.1 Manipulation of Level of Accounting Standard Precision

The manipulation of the level of accounting standard precision varied the level of precision of the accounting standard (IFRS 15) with respect to the hypothetical company. Level of accounting standard precision is included as an independent variable in the study. It was identified from an analysis of the comment letters on the proposed revenue recognition standard that were received by the boards. This variable was manipulated by the inclusion or non-inclusion of indicators with the principle pertaining to the accounting standard.

In the case of a more detailed standard, participants were given an excerpt from IFRS 15 that prescribed the concept of control, together with a list of indicators that further prescribed when control is considered transferred to customers. In the less detailed standard, the same excerpt was provided, but without the inclusion of the indicators.

4.6.2 Manipulation of Revenue Trend

Manipulation of revenue trend varied according to whether the hypothetical company's reported revenue had increased, decreased, or was volatile during the financial reporting period of 2010 to 2013. A line graph summarising the reported revenue of the hypothetical company across the stated period was included in the case study. As for the financial reporting year of 2013, participants were required to determine the extent to which the transaction mentioned in the case study should be included on top of the reported revenue figure provided in the line graph.

4.6.3 Manipulation of Credit Rating Downgrades

Manipulation of credit rating downgrades varied the type of downgrade the hypothetical company experienced. In the case of a category downgrade, participants were told that the hypothetical company's credit rating had been downgraded by a category (i.e., from the category of AA3 to A1), and that the company's management was not happy with it as the company planned to issue new bonds in the coming year. In the case of a notch downgrade, participants were told the same, except that the company's credit rating had been downgraded by a notch (i.e., from AA1 to AA2). Such rating system was chosen with reference to the rating system by RAM Holding, a Malaysian rating agency summarised in Table 3.3.

4.7 Instrument Development

Owing to the nature of the experimental research, no prior research instrument was available to be adapted to examine the issue identified. Hence, a new research instrument has to be developed. The process of developing the research instrument was a tedious process and consumed substantial amount of time with rounds of amendment. With that, the instrument development and the validation process will be discussed in a separate chapter that follows.

4.8 Research Procedure

The hypothetical case scenario was developed with referenced to the IT industry. The case materials contained some basic background information related to Advanced Technology Berhad (ATB), a hypothetical public listed company on Bursa Malaysia that operates in the IT industry. As the study is a 2x3x2 factorial design study, it gives rise to a total of 12 manipulated cases. These 12 cases were randomly assigned to the respondents of the study. Each respondent will get a combination of the different scenario of revenue trend, credit rating downgrades and standard precision. Respondents were told

that company's auditor had raised a concern over the proper treatment of a contract entered into by the company on 3 August 2013. Respondents were required to assume the role of the company's Chief Financial Officer (CFO) and provide a financial reporting decision based on the disputed contract.

Respondents were provided with the details of the contract. The contract amount was RM 17 million and was signed with a customer to develop a warehouse management system. The scope of the contract involved the provision of hardware (RM 5.1 million), software customisation and development (RM 6.8 million), implementation services (RM 3.4 million) and support and maintenance services (RM 1.7 million). A deposit of RM 3.8 million had been received from the customer.

Software development and deployment was split into three phases and was expected to be undertaken over a period of six months. The software was to be deployed at the end of each phase, with the completion of one phase being a prerequisite to moving to the next phase.

Focus was on the hardware that ATB had sourced on behalf of the client, based on the specifications of the warehouse management system. It was mentioned that the hardware had been procured from a third-party vendor and was a standard model but procured based on the customer's system requirements and specifications. ATB entered into a separate contract with the vendor and arranged for the hardware to be shipped directly to the customer's site where it would be kept idle until the software was fully developed. Title to the hardware was passed to ATB upon shipment. Upon delivery, the vendor was only responsible for any manufacturing defects in the hardware. ATB had discretion over what it charged customers for the hardware procured. At end of 2013, development of the software for the first phase was reaching the final stage, and the final product was expected to be deployed after the New Year holiday.

Respondents were then given a line chart that summarised ATB's reported revenue from 2010 to 2013 (by either the trend of increasing, decreasing or volatile, depending on the case they had been assigned). However, the 2013 reported figure did not take RM17 million into account. Respondents were also informed that ATB's credit rating had been downgraded (by either a notch or category, depending on the case they had been assigned) and that the manager was not happy with this as the company had planned to issue new bonds in the coming year.

Respondents were then informed that according to IFRS 15, the performance obligations related to the software development and the hardware were to be treated as two distinct obligations. ATB had determined that control of the software had not been passed to the client and, hence, no revenue could be recognised. The company, however, could not reach an agreement with the external auditor on whether control of the hardware had been passed and, hence, whether the revenue from the hardware could be recognised.

The hypothetical case was designed this way because the objective of the study was to examine the presence of incentives on revenue management intention, under different levels of accounting standard precision. As discussed earlier, the main objective of the study was to examine the impact of different levels of standard precision on managers' financial reporting decision making. While indicators might help to clarify the concept of control proposed in IFRS 15, there is also the risk that they may be used as a checklist and open doors for manipulation by managers. The boards provided five indicators in IFRS 15 to help preparers determine whether control is passed and whether revenue can be recognised. The indicators include:

1. the entity has a present right to payment for the asset;
2. the customer has legal title to the asset;
3. the entity has transferred physical possession of the asset;

4. the customer has the significant risks and rewards of ownership of the asset; and
5. the customer has accepted the asset.

From the information provided about the procured hardware provided to the customer, the transaction met three of the five indicators, namely, indicators (1), (3) and (4). This created a disputable situation. This was done for two reason. First, it enabled an examination of whether the inclusion of indicators would increase the likelihood of their use by intended managers as a checklist and, hence, promote manipulation by managers. Second, it could help to determine whether the principle of the concept of control was sufficient to guide managers in making financial reporting decisions about ambiguous transactions when the indicators are left out from the standard. This would provide useful evidence to answer the question of how different levels of accounting standard precision affect managers' revenue management intention.

As discussed earlier, the dependent variable of the study related to how much revenue should be recognised from the hardware procured. As the substance of the transaction implied that control of the hardware had not been passed, no revenue could be recognised. The recognition of revenue in spite of this might have implied that the manager intended to manage revenue. To measure this, participants were asked to rate the extent to which revenue from the hardware should be recognised using a 100-point Likert scale. A rating closer to 0 indicated that revenue management intention was lower, whereas a rating closer to 100 indicated otherwise.

4.9 Target Participants

A target of at least 120 respondents consisting of managerial level accountants at public listed companies in Malaysia was required for the study sample. As the study is a 2x3x2 factorial design, there will be a total of 12 manipulated cases. The number of 120 respondents is derived by requiring at least a minimum of 10 respondents in each cases

(Weathington, Cunningham, & Pittenger, 2010). Although a larger sample size is desired, with the amount of effort and cost incurred during the data collection process increasing, the sample is always kept small in experiment study. While it might be relatively easier for a one-way factorial design to obtain a larger sample size, increasing the sample size, especially in a three-way factorial design, is a challenging issue (Weathington et al., 2010). In prior experimental research such as Tan and Kao (1999), a study with a three-way factorial design, it has also employed an even smaller sample size (n=105).

Focus was on accountants at the managerial level instead of junior accountants as the case scenarios required the participants to assume the role of CFO and make a financial reporting decision. Juniors accountants were excluded from the sample of the study as they might not been involved in the financial reporting decision making process. Their decision made might then introduced bias and affect the accuracy of the data collected. Accountants at managerial however, have no such problem since they would be experienced as well as involved heavily in the company's financial reporting decisions.

4.10 Data Collection Processes

Half-day briefing seminars were organised to gather the targeted participants and administer the instrument. Five seminars centred on the implications of IFRS 15 were conducted. Out of the five, two were conducted specifically with two public listed companies in Malaysia, while the remaining three seminars were open to the public and were conducted at a private university (UNITAR) in Malaysia. The training provided to the two PLCs and the one jointly organised with Malaysian Institute of Accountants (MIA) were conducted by two academics who had been actively following the IFRS 15 standard development. On the other hand, the two trainings held at UNITAR were conducted by one of the partner of a Big Four audit firm who was the chairman of the MIA IFRS 15 development project in Malaysia.

Each seminar was divided into three sections, and began with an introduction to and overview of IFRS 15. Major differences between the old and new revenue models were highlighted. Emphasis was put on the switch from "risks and rewards" in the old model to the "concept of control" in the new one. It should be noted that a significant mind shift from IAS 18 to IFRS 15 was needed in order to create the necessary awareness of the switch among the participants before administering the research instrument.

Participants were requested to complete the research instrument immediately after the briefing session. Before starting, they were provided with a step by step explanation of the procedures involved in completing the instrument. This was done to ensure that proper research procedures were followed (a copy of the instructions provided to participants during the briefing is included in Appendix 2). Overall, participants took an average of 30 to 40 minutes to complete the instrument, and the length of time remained almost the same across all five seminars.

4.10.1 Debriefing

A debriefing session was conducted after all the participants had completed and submitted the instrument. During the debriefing, participants were informed of the study's background and main objective. The manipulated constructs and the rationale of including them were also explained to the participants. A copy of the content of the debriefing session is included in the Appendices.

The seminar resumed after the debriefing, and included a detailed sharing session on the implications of IFRS 15. The seminar ended after this session. It must be noted that even though five different seminars were conducted to collect the required data, the content of each of the seminars before instrument administration was identical. Content of the sharing sessions held after the debriefing session, however, was slightly different

due to differences in the participants and their opinions. Changes were made to ensure that the content was tailored to suit the needs of the participants in each seminar.

4.11 Total Sample of the Study

Out of a total of 213 instruments collected, 85 were rejected, either because the respondents were not part of the intended target participants, or because the instrument returned was incomplete. This provided 128 usable samples. A summary of the samples collected from each of the sessions is summarised in Table 4.1 (below).

Table 4.1: Study Sample

Briefing Seminar	Date	Usable Sample	Rejected Sample
1st Training with a PLC (A)	26th Aug 2014	15	21
1st & 2nd Seminar at UNITAR	26th Sept & 20th Oct 2014	27	10
2nd Training with a PLC (B)	20th Jan 2015	39	9
Joint Seminar with MIA	27th Jan 2015	47	45
Total		**128**	**85**

Note: PLC = public listed company; UNITAR = UNITAR University; MIA = Malaysian Institute of Accountants

The high sample rejection rate from the first training with a PLC was due to the fact that most of the participants were junior accountants, a group of participants which was not the target participants of the study. In order to avoid having high rejection rate from the subsequent trainings, it was made clear in the advertising brochure that the training was targeted to accountants at managerial level when marketing the subsequent trainings. Such move was useful in reducing the rejection rate of the subsequent trainings. However, even though the specification on the targeted participants were made in the brochure of the training jointly organised with MIA, it failed to reduce the sample rejection rate. It was believe due to the fact that the participants of the trainings will be given 2 CPE hours upon attending the training. This had then resulted in overwhelming response from the accountants and a high number of them were not the intended target participants of the study.

A one-way ANOVA was performed to examine the mean differences of the responses gathered over the five training sessions that were conducted over different time periods. The statistical results suggest that there were no mean differences amongst the responses gathered over these training sessions[9].

4.12 Method of Analysis

Due to the fact that all of the study's independent variables were categorical variables and the dependent variable was a continuous variable, the analysis of variance (ANOVA) was the most suitable method of analysis. Since the study involved a 2x3x2 factorial design, a three-way ANOVA was conducted.

4.13 Chapter Summary

The first part of the chapter provided an overview of the research model and hypotheses developed for the study, while the second part discussed the study's research methods. In order to meet the study's research objectives, the study employed the experimental research method. The final study sample consisted of research instruments completed by 128 managerial level accountants. The next chapter discusses the research instrument development and validation process.

[9] With a reported F-value of 0.6457 and a p-value of 0.63513 ($p > 0.05$), the one-way robust ANOVA result indicated that there were no mean differences between the data collected over the five training sessions conducted.

CHAPTER 5:

RESEARCH INSTRUMENT DEVELOPMENT

5.1 Introduction

This chapter provides an overview of the instrument development and validation process. Section 5.2 discusses the instrument development process. This is followed by Section 5.3 where the justifications on the inclusion of the relevant questions in the instrument are discussed. Instrument validation process through pilot test is summarised in Section 5.4. Section 5.5 concludes the chapter.

5.2 Instrument Development

As discussed earlier, the experimental method was used to conduct the study, and the data required were collected using a research instrument. Owing to the nature of experimental research, every study will be unique in terms of the context and constructs that are manipulated. As such, no prior research instrument was available to be adapted to examine the research issues identified. The research instrument, which included a hypothetical case scenario, was developed by referring to those used in the studies by Agoglia et al. (2011), Jamal and Tan (2010), Maines and McDaniel (2000), Koonce and Lipe (2010), Clor-Proell and Nelson (2007), Clor-Proell, Proell, and Warfield (2010), and Libby and Brown (2011).

A copy of the research instrument can be found in Appendix 1. The instrument consisted of four sections. Along with general instructions for completing the instrument, the first section provided a case scenario centred on a hypothetical company facing revenue recognition issues. This was followed by Section A, consisting of questions pertaining to respondent decisions regarding the case. Section B consisted of extended questions related to those in Section A. Section C included questions to capture respondents' demographic information.

The hypothetical case scenario was developed from a review of documentation related to IFRS 15 and issued by the boards during the standard development process. In addition, practical handbooks issued by Big Four and non-Big Four audit firms were reviewed. Accounting journals and magazines were also referenced. Examples and illustrations pertaining to the standard were reviewed in order to identify a suitable case scenario. The potential implications of IFRS 15 on different business sectors were also identified and reviewed. The study focused on the IT and software industry because it is one of the top three industries that will be significantly affected the standard (KPMG, 2014; PWC, 2014b). In addition, the IT and software industry is more general in nature and does not require industry-related technical knowledge to deal with accounting issues.

Equipped with basic information gathered from published examples in related documentation, an interview was arranged with an experienced sales manager in the IT and software industry to understand the sector's nature and business practises. Relevant data and information necessary to develop the case study were obtained from the interview. Follow up calls were made to clarify specific practical issues during the case development process.

After the completion of the case study, appointments were set with industry experts to review the case. The review focused on the case's practical aspects. Two separate reviews were completed by partners in two different Big Four audit firms in Malaysia. The hypothetical case was then amended according to the constructive comments provided by the industry experts.

The research instrument was then sent to an experimental researcher in the field of financial accounting and auditing for a review of its settings and design. The review process took six months to complete, and involved six rounds of amendments, including one after the first pilot test. This was to ensure that the instrument's settings and design

were well equipped to answer the research objective and questions. Some of the issues discussed during the review included the type of measurement used for the questions, the suitability of the questions included in the instrument, presentation of the information in the case study, and the suitability of the settings and manipulations included in the instrument. The amendments made during the reviewing process by the experimental research will be discussed in the coming sections.

5.2.1 First Round of Instrument Amendment

The first version of the instrument was similar to the final version attached in Appendix 1, except with the following:

First, a section of research background was provided. Participants were informed that the study was conducted in response to the new revenue recognition standard developed by the boards.

Second, instead of rating the extent of revenue recognition on a 9-point Likert scale, participants were required to provide a figure on how much revenue to be recognised pertaining to the case scenario. With the fact that no revenue should be recognised from the transaction, any figures above "zero" would indicate the intention of managers to manage revenue. This would result in a dichotomous dependent variable.

Third, a separate section of "additional information" section was included right after the case scenarios. The additional information provided were:

- ATB's sales budget for the year 2013 budgeted that the sales figure be increased by 10% to the previous financial year's figure.
- ATB has a debt covenant with the bank to maintain the gearing ratio to be not more than 1.20X. The gearing ratio to date is 1.21 (with Total liability= RM 47.57

million and Total Equity = RM 39.43 million; the transaction in the hypothetical case was not included in the calculation of the gearing ratio mentioned).

Fourth, instead of line chart, the construct of revenue trend was manipulated through the inclusion of a statement of comprehensive income over the financial year of 2010 to 2013.

Fifth, in addition to the opinion question on the importance of reported revenue trend, there was a section on the participants' opinion on the importance of the current period reported revenue.

Sixth, more questions were included pertaining to the participants' opinion on IFRS 15. Question such as participants' level of familiarity with the standard, the level of clarity of the control concept, whether the standard allows the exercise of professional judgment, and whether the standard is considered rule- or principle-based standard were included.

After the first review, the experimental researcher raised the concern that the section of research background was too detailed. Besides, the additional information on potential debt covenant violation should be taken out from the case scenarios. This was because the manipulation was bias towards promoting revenue management and could lead to bias result by the participants. The opinion questions on the importance of current reported revenue and new revenue recognition standard shall also be streamlined as the questions asked were way too detailed to the participants. The researcher had also requested for the "right" answer for the dependent variable.

5.2.2 Second Round of Instrument Amendment

Amendments were made according to the concern raised by the experimental researcher. The second version of the instrument was then sent over to the researcher for another review.

Concerns were raised on the inclusion of the additional information on the targeted sale budget figures. As the design of the study was already huge, inclusion of such might result in a complex experimental design. In addition, the manner in which the dependent variable was measured had also been questions. It was argued by the experimental researcher that a dichotomous dependent variable might result in an insensitive construct which would not be useful when come to data analysis.

In addition, concerns were also raised on the amount of details included in the background of the study and the total number of the questions on the participants' opinion on the new revenue recognition standard. Justification on the manipulation of revenue trend was also requested.

5.2.3 Third Round of Instrument Amendment

The third round of review did not introduce much changes to the instrument. However, concern was still focused on the measurement of the dependent variable and the setting of the variable of revenue trend and the manner in which it was manipulated. Discussion on the best manner to overcome such concern was carried out.

In addition, after consideration, the research background section was excluded from the study. This is to ensure that participants were not provided with too much background information which might then, introduce bias when administering the instrument.

5.2.4 Fourth and Fifth Round of Instrument Amendment

Similar with the last review, the fourth and fifth round of review did not introduce much changes to the instrument. However, discussions were continued on the best measurement for the dependent variable. Besides, concern on inclusion of various opinion question pertaining to the new revenue standard had again been raised by the experimental researcher.

5.2.5 Sixth Round of Instrument Amendment

After rounds of discussion, a 9-point Likert scale was used to measure the dependent variable of the revenue management intention by the managers. The final version of the instrument was now ready for pilot test to attest for its validation. A summary of the issues arose along the instrument reviewing process is summarised in Table 5.1 (below).

Table 5.1: Issues Arose from the Instrument Development Process

Round of Review	Concern Raised/ Suggested Amendments	Responses/ Amendments Made
First	1. The research background provided was too detailed. 2. Inclusion of the information on the company potential debt covenant violation might result in bias answer provided by the participants. The manipulation was bias towards promoting revenue management. 3. The "right" answer of the dependent variable was requested. 4. What was the purpose to include the opinion question on the importance of currently reported revenue figures? 5. What was the purpose to ask so many questions pertaining to the new revenue standard?	1. Details on research background was shorten. 2. Information on potential debt covenant violation was excluded. 3. The justification for the "right" answer was provided. 4. The questions on the importance of currently reported revenue figures were excluded. 5. The questions on the new revenue recognition standard were retained and justification were provided.
Second	1. Why the information on targeted sales budget was provided? 2. Research background provided should be further reduced. 3. Concern on the measurement used in measuring the dependent variable. 4. Why revenue trend was manipulated in increasing, decreasing and volatile?	1. Provided justification to retain the information. 2. The section of research background was further modified. 3. No amendment was made but discussion was continued on deciding a better measurement for the dependent variable. 4. Justification on why revenue trend was manipulated in such was provided.
Third	1. Concern on the measurement used in measuring the dependent variable. 2. Concern on the justification on the manipulation of revenue trend and its setting.	1. No amendment was done but discussion was continued on deciding a better measurement for the dependent variable. 2. Justification was provided. 3. Section of research background was taken off from the instrument.

Table 5.1 continued: Issues Arose from the Instrument Development Process

Round of Review	Concern Raised/ Suggested Amendments	Responses/ Amendments Made
Fourth	1. Concern on the measurement used in measuring the dependent variable. 2. Concern on the inclusion of various opinion question pertaining to the new revenue standard.	1. No amendment was done but discussion was continued on deciding a better measurement for the dependent variable. 2. Opinion questions pertaining to the new revenue standard were streamlined. 3. The placement of the statement of comprehensive income was shifted and presented before the case scenario.
Fifth	1. Concern on the measurement used in measuring the dependent variable. 2. Concern on the inclusion of various opinion question pertaining to the new revenue standard.	1. No amendment was done but discussion was continued on deciding a better measurement for the dependent variable. 2. Opinion questions pertaining to the new revenue standard were streamlined.
Sixth	1. Concern on the measurement used in measuring the dependent variable.	1. 9-point Likert scale was used to measure the revenue management intention.

5.3 Questions in the Instrument and Justification of Inclusion

This section discusses the rationale behind the inclusion of each of the research questions in the instrument. To facilitate the discussion, reference will be made to the different sections of the instrument attached in Appendix 1.

As noted, the instrument consisted of four sections. It began with the general instructions to complete the instrument and a case scenario. This was followed by Section A, consisting questions pertaining to respondent decision regarding the case. Section B consisted of extended questions related to Section A. Section C included respondents' demographic questions. As the explanation and justification on why and how the case scenario was developed has been discussed in the earlier chapter, this section focuses on the justification on the inclusion of the related questions in Section A and B. The relevant discussion is summarised in Table 5.2 (below).

Table 5.2: Questions in the Instrument and Justification of Inclusion

	Section A
Question 1a	To act as a control question which cross-checks whether participants' understand the control concept prescribed in IFRS 15. The answer should have a positive association with the answer provided in Question 1b. Any negative association with the answer provided in Question 1b will be treated as an error and the instrument will be rejected.
Question 1b	To measure the dependent variable of the study: extent of revenue management intention by managers.
Question 1c	To act as verification question on the answer provided in Question 1a and 1b in the case of rejection.
Question 1d	To act as verification question for Question 1a and 1b.
	Section B
Question 1a	Manipulation check question for the construct of revenue trend.
Question 1b	To examine participants' view on the importance of revenue trend to the financial statement users and company. Result from this questions will serve as additional justification to the argument of the study that revenue trend is important to the company and will motivate managers to report aggressively.
Question 2a	Manipulation check question for the construct of credit rating downgrades.
Question 2b	To examine participants' view on the importance of credit rating to the company. Result from this questions will serve as additional justification to the argument of the study that credit rating is important to the company and will motivate managers to report aggressively.
Question 3a	Manipulation check question for the construct of accounting standard precision.
Question 3b Question 3c Question 3d	To examine the participants opinion on IFRS 15. However, the statistical result of these questions were excluded from the current thesis. This is because inclusion of the result will disturb the flow of the discussion since the main research issue of the study centred on the inclusion of indicators in a principle-based standard rather than IFRS 15 alone.

It is noticed that a 9-point Likert scale was used in measuring Question 1d in Section A, and Question 1b, 2b, 3b, 3c and 3d in Section B. Likert scale was used because its

administering is easier for the participants (Malhotra & Peterson, 2009). A 9-point scale was chosen over the normal 5-point scale because it will be able to capture the opinion of the participants in a more accurate manner (Irvine et al., 2006). In addition, the odd number of 9-point will not result in the possibility of neutral point (Colman, Claire, & Preston, 1997).

5.4 Pilot Tests

Pilot test is important in research that based on self-completion research instrument. It will not only ensure that the questions included in the instrument are well operated, it will also be helpful to attest whether the research instrument is functioning well as a whole (Bryman & Bell, 2011). As for the study, three pilot tests were carried out to validate the instrument that was developed. Owing to the fact that the main target respondents of the study was managerial level accountants, the first pilot test was scheduled with ten auditors which were selected based on convenience purpose. They are senior auditor from different small to medium audit firms. Auditors were selected as the participants of the pilot over the intended target participants of accountants at managerial level in order to avoid disturbing the actual population sample that was already small in number. Individual appointments were set up with the auditors, and instructions were provided to them before the pilot test was conducted. After completing the instrument, participants were interviewed to clear up any ambiguity, and to collect their suggestions for improving the instrument. This pilot test was, however, halted after the seventh respondent. A problem was found in the instrument's settings, as respondents failed to identify the company's revenue trend in the case study. The error was confirmed after verification of the manipulation check question and interviews with the respondents. Almost all of the respondents answered the manipulation question incorrectly; and mentioned that the trend was not obvious to them during their review of the attached Statement of Comprehensive Income.

Amendments were then made to the presentation and manipulation of the revenue trend construct. Instead of presenting it in the form of a Statement of Comprehensive Income, it was replaced with a line chart that summarised the company's total reported revenue over four financial years. This amendment, arguably, provided respondents with a clearer picture of the reported revenue trend. After making the necessary amendment, a second pilot test was conducted with another ten auditors from different small to medium scale audit firms, who were again selected based on convenience purpose. Similarly, an interview was also conducted to each auditors after the experiment to identify areas for improving the instrument. The interview and results from the manipulation check questions revealed that participants were aware of the manipulation and settings of the variables examined. However, participants commented that even though they were aware of the two incentive variables in the study, they were focused on complying with the new revenue recognition standard. This was believed to be due to target participants' job training. Auditors are trained to attest that the financial statement prepared by the clients is complied with the prescribed accounting standards and is presented in a true and fair view manner. With this job training, it is hence argued that while administering the instrument, focus will be given to the compliance of the accounting standard rather than reporting a desired financial performance.

To confirm this assertion, a third pilot test was conducted with ten practising accountants selected based on convenience purpose. The interviews after the test with each practising accountants confirmed the claim that the lack of attention paid to the two incentive variables by the auditors during the second pilot test was due to their training. Participants claimed that they did take the two incentives (revenue trend and credit rating downgrades) into account when it came to financial reporting decision making, and that their focus was on all three manipulated variables, rather than on standard compliance as in the second pilot test.

5.5 Chapter Summary

This chapter provided a summary on the instrument development process by the study. The instrument of the study been through six rounds of amendments and three rounds of validation process (through pilot tests) before reaching the final version. The next chapter presents and discusses the results and findings from the research.

CHAPTER 6:

DATA ANALYSIS AND DISCUSSION OF FINDINGS

6.1 Introduction

The main objective of this chapter is to present the study's statistical results and findings. A descriptive analysis of the demographic data of the participants and their views on revenue trends, credit ratings, and IFRS 15, is provided in the first section of this chapter. The chapter continues with a discussion of the study's parametric assumption checking, and statistical findings from the robust three-way ANOVA conducted on the data. An overall discussion of the study's findings is then presented before concluding the chapter.

6.2 Descriptive Statistics

6.2.1 Respondent Case Assignments and Demographic Data

Table 6.1 (below) summarises the total number of respondents that were assigned each type of case. Of the usable samples, 41 managers were assigned cases with an increasing revenue trend, while 45 and 42 managers were assigned cases with decreasing and volatile revenue trends, respectively. A total of 61 managers were randomly assigned cases with category downgrades, while 67 managers were randomly assigned cases with notch downgrades. As for accounting standard level of precision, 61 managers were randomly assigned cases involving a principle-only standard, while 67 managers were assigned cases involving a principle with indicators standard.

Table 6.1: Respondent Case Assignments

Revenue Trend	Level of Precision (n)				Overall (n)
	Principle		Principle + Indicators		
	Category Downgrades	Notch Downgrades	Category Downgrades	Notch Downgrades	
Increasing	9	10	10	12	41
Decreasing	11	10	13	11	45
Volatile	9	12	9	12	42
Overall	29	32	32	35	128

Table 6.2 (below) provides an overview of the participants' demographic data. The sample consisted of 51.6% male and 48.4% female accountants. Most of the accountants (79.7%) were from local companies, and almost half of the companies (49.2%) recorded an annual turnover of more than RM 200 million. In addition, study respondents were experienced managerial level accountants, with a mean of 14.75 years of experience. The accountants either held a managerial post (91.3%), or were senior account executives (8.7%) involved in financial reporting decision making.

Table 6.2: Participants' Demographic Data

	Frequency	Percentage
Gender		
Male	66	51.6%
Female	62	48.4%
Years of Experience		
Mean	14.75	
Min	3	
Max	39	
Standard deviation	6.384	
Variance	40.753	
Current Position		
Vice President/Director/CFO	25	19.7%
General Manager / Financial Controller	30	23.6%
HOD/ Manager / Senior Accountant/ Accountant	61	48.0%
Senior Executive / Account Executive	11	8.7%
Company Origin		
Local	102	79.7%
International	26	20.3%
Company Turnover		
Less than RM10 million	12	9.4%
RM 10 million to RM 50 million	18	14.1%
RM 51 million to RM 100 million	14	10.9%
RM 101 million to RM 150 million	8	6.3%
RM 151 million to RM 200 million	9	7.0%
RM 201 million and above	63	49.2%

6.2.2 Managers' Views on the Importance of Revenue Trend and Credit Rating

Managers' views on the importance of a healthy revenue trend and its impact on the company and financial statement users were collected. Table 6.3 (below) shows that

managers perceive reported revenue trend as being important to financial statement users in evaluating and making investment decisions (overall mean score of 7.28 on a 9-point scale). To be more specific, a company's reported revenue trend is important for financial statement users in predicting and assessing a company's future growth and financial health (mean = 7.41 each)

Comparatively, with a mean of 6.97, managers perceived that reported revenue trend will have relatively less impact on a company. Reported revenue trend will have the greatest impact on a company's share price valuation (mean = 7.38) and credit rating (mean = 7.37), but will have less influence on the company's cost of equity capital and cost of debt (mean = 6.46 each).

With respect to credit rating, Table 6.4 (below) summarises the impact and importance of credit rating to a company. Malaysian managers feel that credit rating will have a direct impact on the company's cost of debt (mean = 7.43) and will affect investors' investment decision making (mean = 7.45). Credit rating will, however, have less of an impact in determining a company's competitiveness (mean = 6.73). In general, with a mean of 7.17, managers perceive credit rating as being important to the company.

Table 6.3: Managers' Views on the Impact of Revenue Trend

Impact and Importance of Revenue Trend	Mean
On Financial Statement Users	
Estimating Share Investment Return	7.33
Assessing Company's Riskiness & Uncertainty	7.18
Predicting Company's Future Growth	7.41
Assessing Company's Financial Health	7.41
Assessing Company's Competitiveness	7.06
Predicting Future Earnings Growth Persistence	7.13
Financial Forecasting	7.40
Investment Decision Making	7.32
Overall	**7.28**
On the Company	
Share Price Valuation	7.38
Share Rating	7.34
Credit Rating	7.37
Market Share	6.85
Cost of Equity Capital	6.46
Cost of Debt	6.46
Analyst Following	6.85
Overall	**6.97**

Table 6.4: Managers' Views on the Impact of Credit Rating

Impact and Importance of Credit Rating on the Company	Mean
Cost of Debt	7.43
Analyst Following	7.11
Investors' Investment Decision Making	7.45
Evaluation of Company's Future Performance	7.27
Assessing Company's Competitiveness	6.73
Likelihood of Debt Covenant Violation	7.11
Company's Operating, Financing, and Investing Decision Making	7.20
Overall	**7.17**

6.3 Parametric Tests

As indicated at the end of Chapter 4, the main data analysis method used in the study was the test of Analysis of Variance (ANOVA). Before proceeding to apply the test, it was important to ensure that all the ANOVA assumptions were fulfilled.

6.3.1 Assumption Check

According to Tabachnick and Fidell (2007), four assumptions apply to an ANOVA. These are: normality of sampling distribution of means, independence of errors, homogeneity of variables, and the absence of outliers. Each of the assumptions will be discussed in turn in the following section.

Owing to the fact that the study contained one categorical independent variable (Level of Standard Precision) and two categorical moderating variables (Revenue Trend and Credit Rating Downgrades), the checking of the fulfilment of the assumptions for these variables was not required (Field, 2013; Tabachnick & Fidell, 2012). However, the study's dependent variable (DV), Revenue Recognition Intention, was a continuous variable. As a result, the sections below discuss the check of assumptions for this DV.

6.3.1.1 Normality of sampling distribution of means

According to Field (2013), when the predictor is a categorical variable, normality checking is examined by plotting the frequency distribution of the continuous dependent variable against each category of the predictor variable.

A histogram of the DV shows a U-shaped distribution for the data for each standard precision category. This is opposed to the normal bell-shaped distribution and therefore violates the normality assumption. This is further supported by the Z-scores derived[10] and

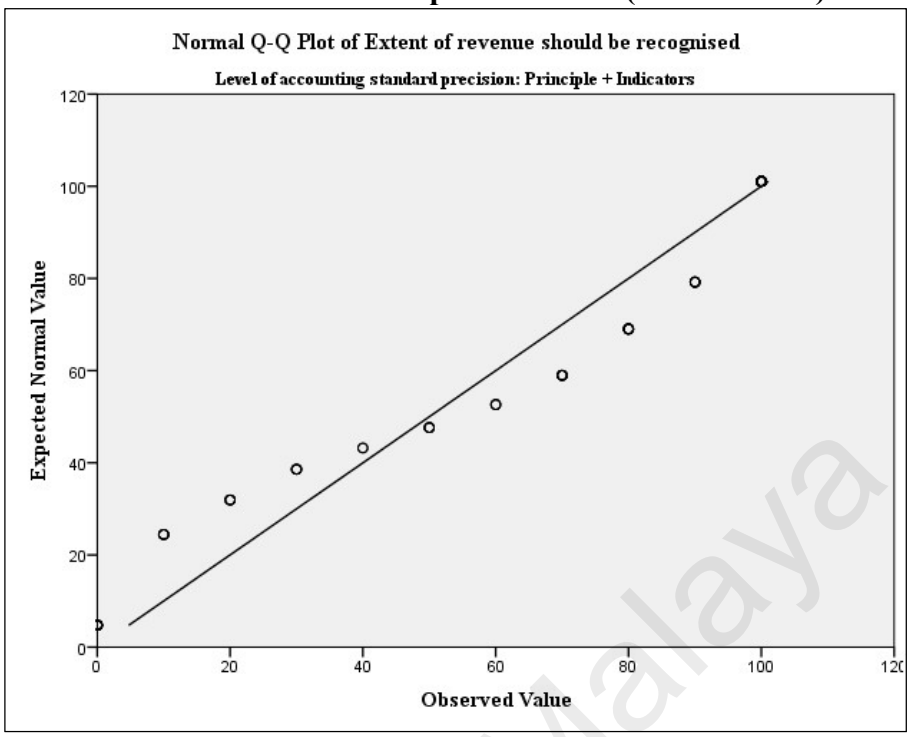
[10] Z score is derived by dividing kurtosis / skewness with its reported standard errors, where $Z\ skewness = \frac{S-0}{SE\ Skewness}$ or $Z\ kurtosis = \frac{K-0}{SE\ Kurtosis}$ (Field, 2013; Hair, 2010; Tabachnick & Fidell, 2012).

summarised in Table 6.5 (below). An absolute value within the range of +/- 1.96 indicates that the data are normally distributed at a 5% level of significance ($p < .05$). Even though the Z-score for skewness is within the range, kurtosis for both categories of standard precision is not normally distributed (with $Z_{kurtosis}$ of 2.412 and 2.497 respectively). This non-normal distribution is further supported by the inverted S-shaped normal q-plot presented in Figure 6.1 (below).

Table 6.5: Z-scores for Each Category of the Standard Precision

	Skewness	Std Error	Z-score (skewness)	Kurtosis	Std Error	Z-score (kurtosis)
Principle	-.393	.306	1.284	-1.457	.604	2.412
Principle+Indicators	-.332	.293	1.133	-1.443	.578	2.497

Level of Precision: Principle+Indicator (More Precise)



Level of Precision: Principle (Less Precise)

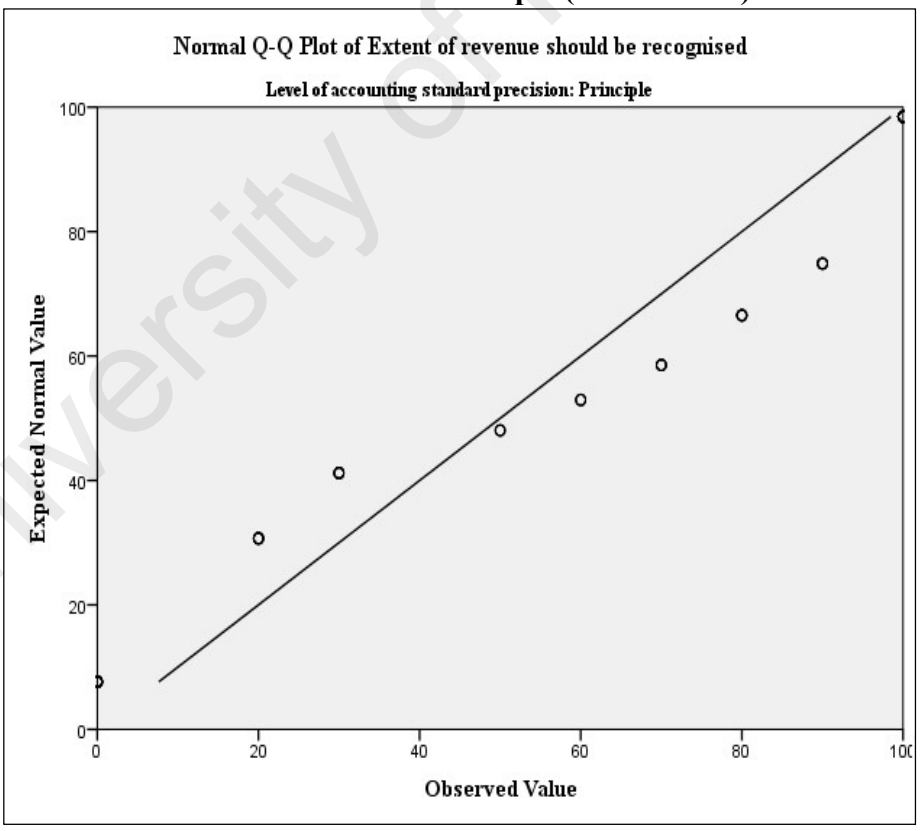


Figure 6.1: Frequency Distribution and Normal Q-Q Plot of the Categorical Predictor of Standard Precision

6.3.1.2 Independence of errors

The assumption of independence of errors assumes that the size of errors in one case is not related to the errors in other cases (Tabachnick & Fidell, 2007). This assumption can be tested using the Durbin-Watson test, and the test values will vary between 0 and 4. Values that are less than 1 or greater than 3 indicate that the assumption might have been violated (Field, 2013). According to the test statistics reported in Table 6.6 (below), the reported values are all within the range of 1 to 3, indicating that the independence of errors assumption is met.

Table 6.6: Durbin-Watson Test Results

Standard Precision	Model	Durbin-WatsonTest
Precise	(Constant) Revenue Trend Credit Rating Downgrades Revenue Trend X Credit Rating Downgrades	2.154
Less Precise	(Constant) Revenue Trend Credit Rating Downgrades Revenue Trend X Credit Rating Downgrades	2.213

Note: Dependent Variable = Extent of Revenue That Should Be Recognised

6.3.1.3 Homogeneity of variances

Under this assumption, the variance of the residual terms is required to be constant at each level of the predictor variables. The results of the application of Levene's test presented in Table 6.7 (below) report a p-value greater than .05, indicating that there is no heteroscedasticity problem.

Table 6.7: Levene's Test of the Equality of Error Variances

F	df1	df2	Sig
1.049	11	116	0.409

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.
Design: Intercept + REVTREND + CR + STD + REVTREND * CR + REVTREND * STD + CR * STD + REVTREND * CR * STD.

6.3.1.4 Absence of outliers

According to Tabachnick and Fidell (2007, p. 89), an outlier "is a score that is unusually far from the mean of its own group and apparently disconnected from the rest of the scores in the group." Outliers might affect the statistical significance of the test and could affect the generalisability of the findings.

The presence of the outliers can be examined using a boxplot (Field, 2013). Since the dependent variable was measured according to a 100-point scale, all responses are expected to be within the range and there should be no outliers. This assertion is further confirmed by Figure 6.2 (below), showing that all the responses are within the range and, hence, that no outliers were present.

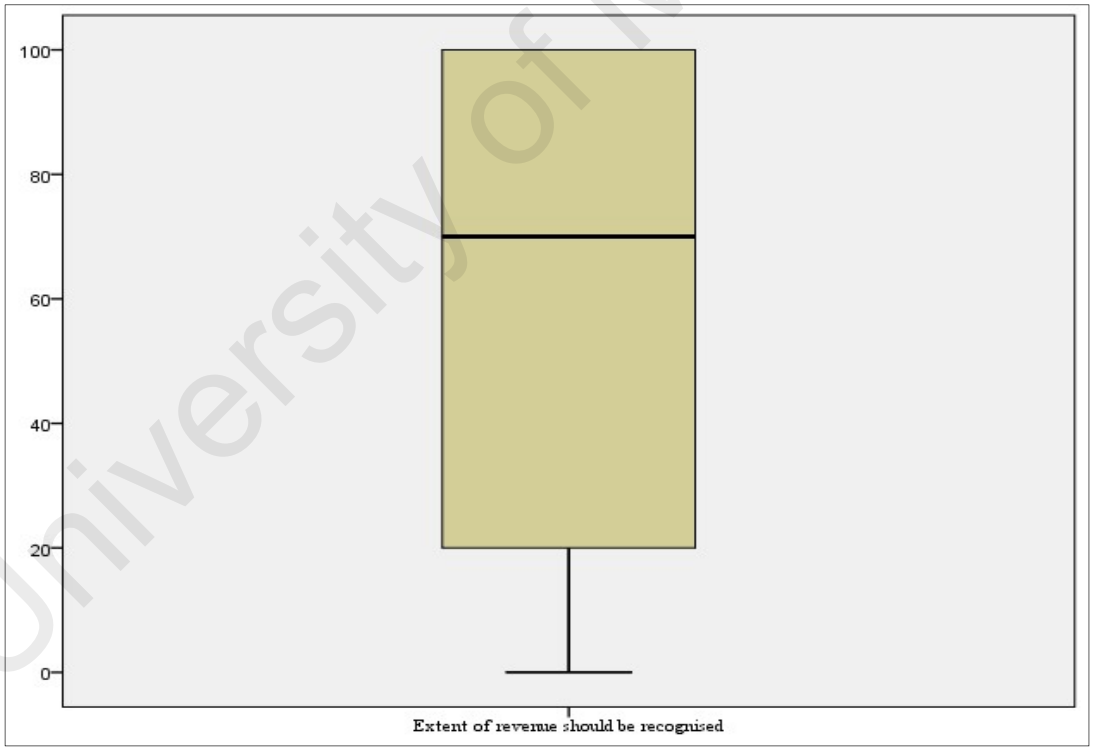


Figure 6.2: Boxplot of the Study's Dependent Variable

6.3.2 Remedies for Violation of the Assumptions

According to the assumption checking presented above, the normality assumption appears to have been violated. As a result, the generalisability of the study's results is questionable.

In general, the violation of the normality assumption will suggest the use of non-parametric test. Non-parametric test however, was found to be unable to cater for the needs and the design of the study. Given the fact that the study is a 2x3x2 between-subject design, none of the parametric tests are able to provide suitable analysis on the data gathered (Field, 2013). As a result, parametric test of ANOVA remained as the most suitable statistical test to the study.

Transformation of data serves as the most common method to deal with violations of any of the mentioned statistical assumptions. Common transformation methods are logarithmic, square root, and reciprocal transformation (Field, 2013; Mayers, 2013; Tabachnick & Fidell, 2012, 2013). Table 5.8 (below) shows the Z-score after applying each of the transformation methods. Despite applying these methods, the data for revenue management intention were still not within the acceptable range of normality, as the Z-score for either kurtosis or skewness was not within the acceptable range of +/- 1.96. It is therefore concluded that common transformation methods failed to correct the normality problem of the revenue management intention data.

Table 6.8: Z-Score After the Application of Common Transformation Methods

Transformation Method	**Logarithmic (log)**	**Square Root($\sqrt{X+1}$)**	**Reciprocal ($\frac{1}{(X+1)}$)**
Kurtosis	0.314	-0.617	1.101
Std Error	0.425	0.425	0.415
|Z-Score|	0.730	1.452	***2.653***
Skewness	-1.377	-0.904	1.752
Std Error	0.214	0.214	0.214
|Z-Score|	***6.435***	***4.224***	***8.187***

Besides the mentioned common transformation methods, the violation of normality assumption can also be corrected using trimmed means, m-estimators, or bootstrapping in order to obtain a robust statistical result (Field, 2013; Wilcox, 2012). With the fact that the statistical test of ANOVA in SPSS cannot address the problem of the violation of the normality assumption, this study has then, employed the statistical software of R in performing the statistical test of Robust ANOVA. Robust ANOVA in R uses the trimmed means method (the only method offered in R) in addressing the problem of the violation of normality assumption. With that, unless otherwise mentioned, the ANOVA result presented below was obtained using the trimmed means method in the "R" statistical software application (Field, 2013).

6.4 Manipulation Check

For the level of precision manipulation check question, participants were asked to recall whether any indicators related to the concept of control had been provided in the excerpt of the accounting standard they had been given. Nine participants did not manage to answer this manipulation check question correctly. The manipulation check question related to revenue trend required participants to identify the trend of the company's reported revenue that was summarised in the line chart attached to the research instrument. Seven participants did not manage to identify the trend correctly. As a check of credit rating manipulation, participants were required to identify the type of credit rating downgrade that the company had experienced. Four participants answered the question incorrectly. A robust ANOVA was performed by excluding the responses of the participants who answered the manipulation questions incorrectly, and the same results were obtained. Table 6.9 (below) summarised the incorrect manipulation questions by the participants in the different manipulated scenarios.

Table 6.9: Incorrect Manipulation Questions in Different Manipulated Scenarios

Incorrect Manipulation Question (By construct)	Level of Precision	
	Principle+Indicators	Principle
Revenue Trend	5	2
Credit Rating Downgrades	4	0
Standard Precision	4	5

6.5 Hypothesis Testing

The main objective of the study was to examine whether, given different levels of accounting standard precision, the presence of the incentives of different reported revenue trend and credit rating downgrades would moderate managers' revenue management intention. A robust ANOVA was performed to test the study's hypotheses, and the related statistical results are presented in Table 6.10 (below)[11].

Table 6.10: Results of a Robust Three-way ANOVA Regarding Revenue Management Intention

Panel A: Means Comparison (Revenue Management Intention-over a 100-point scale)

Standard Precision	Revenue Trend			Credit Rating Downgrades		Overall
	Increasing	Decreasing	Volatile	Notch	Category	
Principle	74.74	51.43	53.33	66.56	51.38	59.34
Principle+ Indicators	48.64	60.00	61.90	57.71	55.94	56.87
Overall	60.73	56.00	57.62	61.94	53.77	

Panel B: Robust Three-way ANOVA

Source of Variance	df	F	p-value
Standard Precision	1	0.03	0.870
Revenue Trend	2	0.68	0.730
Credit Rating Downgrades	1	1.77	0.189
Standard Precision X Revenue Trend	2	7.80	0.031**
Standard Precision X Credit Rating Downgrades	1	0.76	0.386
Revenue Trend X Credit Rating Downgrades	2	0.19	0.188
Standard Precision X Revenue Trend X Credit Rating Downgrades	2	6.57	0.051*

* Significant at the 10% level
** Significant at the 5% level

[11] Similar statistical result was reported when performing the test of robust multiple regression. Statistical result under robust multiple regression indicated that the interaction between standard precision and revenue trend is significant (p=0.038, b=-51.728). Additionally, the three way interaction among standard precision, revenue trend, and credit rating downgrades is also significant (p=0.04, b=33.721).

6.5.1 Level of Accounting Standard Precision and Revenue Management Intention

The study's first hypothesis examined the impact of different levels of standard precision, namely Principle (less precise) and Principle+Indicators (more precise) on managers' revenue management intention. In the event of a dispute between managers and auditors over an accounting treatment, an accounting standard can be used as a tool to defend and justify a financial reporting decision. In accordance with MRT, without the presence of incentives, different latitudes in the accounting standard will not have an impact on how managers will rationalise and justify an intended reporting decision. The first hypothesis was:

H1: *Different levels of accounting standard precision will not affect managers' intention to engage in revenue management differently.*

As noticed in Table 6.10, Panel B (above), the empirical results support Hypothesis H1, as the reported p-value is more that 0.05 ($p = 0.870$, $F = 0.03$,). Hence, it can be concluded that different levels of standard precision alone will not have much influence on managers' revenue management intention.

The empirical results confirm the argument that without the presence of incentives, the level of accounting standard precision alone does not contribute to managers' revenue management intention. Consistent with the prediction, the manner in which managers interpret an accounting standard is driven by the types of incentives or motivations they face. Prior literature documented that incentives or motivations play a pervasive role in managers' opportunism and the manner in which an accounting standard will be interpreted (Armstrong et al., 2010; Cuccia et al., 1995; Gibbins et al., 2001; Libby et al., 2002; Libby & Seybert, 2009; McEwen et al., 2008; Nelson, 2003; Psaros & Trotman, 2004; Van Beest, 2009). The extent of managers' aggressiveness has a positive association with the types of incentives they face. The stronger the incentive, the stronger

the motivation for managers to interpret the latitude given in a standard in an aggressive manner (Libby et al., 2002; Van Beest, 2009). Intended managers will then be motivated to use the latitude in a standard to justify a reporting decision and persuade relevant parties to accept it (Brown & Wright, 2008; Gibbins et al., 2001; Jamal & Tan, 2010; Nelson, 2003; Ronen et al., 2006; Sanders, 2001; Wang, 2010). In the end, with the fact that the influence of incentives is pervasive, without the presence of motivations or incentives, managers will be less motivated to interpret the accounting standard in an aggressively manner. An accounting standard will only act as a financial reporting tool rather than a manipulative one (Kang & Lin, 2011).

6.5.2 Level of Accounting Standard Precision, and the Moderating Effect of Revenue Trend, on Revenue Management Intention

As argued earlier, different levels of precision in an accounting standard will have a different impact on managers' financial reporting aggressiveness. The presence of the incentive of different reported revenue trends will create different pressures and motivations for managers to engage in revenue management. According to MRT, with the motivation of obtaining an intended reporting result, managers can justify a financial reporting decision based on the latitude provided by the accounting standard. As a result, the second hypothesis intended to examine the moderating effect of different reported revenue trends on managers' revenue management intention, under different levels of standard precision. This second hypothesis posited that:

H2: *Under different levels of accounting standard precision, managers' intention to engage in revenue management will be moderated differently by different reported revenue trends.*

The results of a robust three-way ANOVA presented in Table 6.10, Panel B (above) show an interaction between revenue trend and level of accounting standard precision.

The p-value of the test was 0.031 (F = 7.80), significant at the 5% level. As a result, Hypothesis H2 is supported.

The findings were aligned with the prediction of the study that revenue is important to a company and it gives a greater incremental information content compared with the reported earnings (Chandra & Ro, 2008; Ertimur et al., 2003; Fairfield & Sweeney, 1996; Lipe, 1986; Swaminathan & Weintrop, 1991). In addition, with the argument that stakeholders place a higher value on performance measures that portray a persistent trend (Beneda, 2013; Koonce & Lipe, 2010; Penman & Zhang, 2002; Richardson, 2003), an unhealthy revenue trend poses a risk to a company in the near future and managers will be under pressure when the reported trend does not meet public expectations (Bottazzi et al., 2011; Busch et al., 2011; Francis et al., 2004; Hangstefer, 2000). This pressure might motivate managers to take action to project a healthy revenue pattern.

The presence of motivations or incentives will affect the way that a standard is interpreted by managers. The desire to maintain a healthy reported revenue pattern might motivate managers to ensure that the reported revenue over the period has achieved a desirable pattern. With this intended reporting agenda in mind, the latitude in the accounting standard might motivate managers to report the transaction in a manner that is aligned with the desired reporting outcome. However, with the need to justify a reporting decision and convince stakeholders of its merit, and without an accounting standard to justify and legitimise reporting decisions, managers are constrained from reporting aggressive decisions (Arjoon, 2006; Jamal & Tan, 2010; Kang & Lin, 2011; Nelson, 2003; Van Beest, 2009). A reporting decision without valid reasoning increases the risk of it being questioned by relevant monitoring parties such as auditors, bankers, and even regulatory bodies. This might further dampen the perception of the company in the eyes of the public.

A further analysis of the interaction effect presented in Table 6.11 (below) indicated that when a company is having an increasing revenue trend, it will moderate managers' intention to engage in revenue management ($p < 0.05$, $F = 5.52$). It can be seen from Table 6.10, Panel A (above) that such intention is greater when the company is required to report under a less precise standard (mean = 74.74, versus 48.64).

Table 6.11: Results of a Robust One-way ANOVA for Revenue Management Intention Under Different Revenue Trends

Panel A: Robust One-way ANOVA			
Source of Variance	**df**	**F**	**p-value**
Revenue Trend = Increasing			
Standard Precision	1	5.52	0.029**
Revenue Trend = Decreasing			
Standard Precision	1	0.69	0.417
Revenue Trend = Volatile			
Standard Precision	1	1.60	0.219

6.5.2.1 Increasing revenue trend and revenue management intention

The statistical results presented in Table 6.11, reveal that a manager's decision to manage revenue will be affected when the company is reporting an upward revenue trend under different levels of standard precision.

Inferring from the statistical findings, it is argued that managers at companies reporting an increasing revenue trend give high priority to reporting and maintaining a healthy trend. This will have an impact on the manner in which managers will interpret the latitude in the accounting standard and engage in revenue management. This finding is consistent with the findings of prior studies: that capital markets tend to reward companies with a healthy and steady performance trend with higher stock returns, higher market share, or better evaluations by analysts or investors (Altamuro et al., 2005; Callen et al., 2008; Chandra & Ro, 2008; Huefner & Largay III, 2008; Jegadeesh & Livnat, 2006;

Kama, 2009). These potential market benefits will then motivate managers to ensure that the performance indicators of reported revenue are within public expectations.

The means comparison in Table 6.10, Panel A, revealed that managers are more aggressive when reporting under a more general standard (without indicators) (mean = 74.74) compared with a precise standard (with indicators) (mean = 48.64). This finding implied that excluding indicators from the standard will make the concept highly ambiguous and difficult to apply when the standard comes into practise. As well, this finding affirms that of Mala and Chand (2014) and SEC (2003), that preparers' judgment accuracy will be affected when a principle-based standard is less precise. Hence, an ambiguous standard opens doors for judgment abuse, which managers may use to rationalise and legitimise a desired reporting outcome (Fornaro & Huang, 2012).

Besides, it is interesting to note from Table 6.10, Panel A (above) that amongst all, the relative ranking of the revenue management intention is highest when reporting under a less precise standard and reporting an increasing revenue pattern (mean=74.74). Similarly, amongst all, the revenue management intention is lowest when reporting under a more precise standard and reporting an increasing revenue pattern (mean=48.64). Statistical result indicated presented in Table 6.11 (above) indicated that managers' revenue management intention was driven by less precise set of standard. This can be due to the fact that a more precise set of standard serves as an effective tool in constraining managers' revenue management intention. The result further implied that ambiguity in the less precise standard opens room for opportunism.

Even though aggressive financial reporting behaviour might be uncovered by monitoring parties such as analysts, auditors, or bankers (Alissa et al., 2013; Jung et al., 2013), given the fact that market players tend to pay less attention to monitoring companies with good track records (Ahn & Choi, 2009; Demirtas & Cornaggia, 2013;

Stanley & Sharma, 2011), managers might be motivated to take higher risks and continue to report aggressively. Aligned with this argument, it is noted that even though a general standard increases the risk that a financial reporting decision will be questioned by external parties (Donelson et al., 2012; Kessler & McClellan, 1996; Schipper, 2003; Sennetti et al., 2011), the ambiguity in the standard can be used to defend and argue for an intended reporting outcome. Taking into account the decreased monitoring by external parties, and the ability to defend a reporting decision under a less precise standard, managers at companies with an increasing revenue pattern are still willing to take higher risks and engage in revenue management.

6.5.2.2. Decreasing revenue trend and revenue management intention

The results in Table 6.11, show that when a company is experiencing a decreasing revenue pattern, managers have no intention of managing revenue under different levels of standard precision.

These findings contradict those of prior studies, which indicated that managers at companies reporting financial losses will have the intention to manage revenue (Callen et al., 2008; Davis, 2002). However, this inconsistency in the findings might be due to the fact that prior studies focused on companies that had experienced persistent losses. This is different from the focus of the present study, which is on decreasing reported revenue trends instead of on losses.

These findings, however, confirm the assertion of prior studies that managers of less profitable companies have a lower market incentive than those of profitable companies to engage in opportunism. When a company's performance is not up to public expectations, the company loses potential rewards from the capital market (Altamuro et al., 2005; Barua et al., 2006; Beneda, 2013; Das et al., 2009; Hirst, 2006; Hirst & Hopkins, 1998; Jegadeesh & Livnat, 2006; Koonce & Lipe, 2010; Lee et al., 2006; Maines &

McDaniel, 2000; Marquardt & Wiedman, 2004; Matsumoto, 2002; Penman & Zhang, 2002; Richardson et al., 2005). In the absence of such rewards, managers' intention to engage in revenue management might be lower.

In addition, aligned with DeAngelo et al. (1994), financially distressed firms might have concerns about renegotiating contracts with external parties such as creditors, unions, government agencies, or management. Managers might then prefer not to engage in aggressive financial reporting. On the other hand, Ashton and Cianci (2007) argued that analysts tend to discount the negative information associated with performance indicators. Despite reporting a negative earnings trend, a company might still receive more favourable forecasts from analysts. This might further dampen the desire of managers to take high risks and engage in revenue management.

6.5.2.3 Volatile revenue trend and revenue management intention

Empirical evidence provided in Table 6.11, indicates that a volatile revenue trend will not have an impact on managers' revenue management intention under different levels of standard precision.

This finding is aligned with the argument in prior studies that the attribute of persistence is one of the important attributes that market players will pay attention to (Francis et al., 2004; Lipe, 1990; Schipper & Vincent, 2003). When reporting a volatile revenue pattern, a company might project a negative signal to stakeholders that it is not performing well (Koonce & Lipe, 2010). By losing the persistence in its reported revenue pattern, the company might already have suffered from market penalties such as lower market valuation, lower analysts' forecasts, lower or abnormal returns, or lower share price predictability (Barnes, 2001; Du & Budescu, 2007; Hirst & Hopkins, 1998; Myers et al., 2007). The company might then lose its investment attractiveness and confidence in the eyes of stakeholders (Du & Budescu, 2007; Ghosh et al., 2005; Klement, 2011).

Given that the company has already suffered from these negative reactions, a manager might be less inclined to report aggressively.

In addition, companies with unstable financial performance might attract increased scrutinisation and monitoring by market watchdogs (Demirtas & Cornaggia, 2013). This might then explain the low intention of managers to employ the latitude in the accounting standard and engage in aggressive reporting; once such an act is uncovered, it might bring more negative repercussions to the company, including loss of reputation, fines, or a higher risk of litigation (Altamuro et al., 2005; Callen, Livnat, & Segal, 2006; Das et al., 2011; Desai, Hogan, & Wilkins, 2006; Levitt, 1998; Palmrose, Anderson, & Scholz, 2004). As the potential risks of aggressive reporting outweigh its benefits, managers might have less of an intention to involve themselves in revenue management.

6.5.3 Level of Accounting Standard Precision, and the Moderating Effect of Credit Rating Downgrade, on Revenue Management Intention

Under different levels of standard precision, the presence of the incentive of credit rating downgrade will moderate managers' revenue management intention differently. While the study does not predict the relationship between levels of precision and revenue management intention, it is argued that managers' intention to manage revenue will be greater when there is a notch downgrade. The third hypothesis of the study posited that:

H3: *Under different levels of accounting standard precision, managers' intention to engage in revenue management will be higher when companies experience a notch downgrade than when there is a category downgrade.*

The results presented in Table 6.10, Panel B (above) reveal that the two-way interaction between level of standard precision and credit rating downgrade is not

significant, as the reported p-value exceeds 0.05 (p = 0.386, F = 0.76,). The empirical result, hence, fails to support Hypothesis H3.

This finding contradicts those of prior studies that concluded that credit rating contributed to managers' aggressive financial reporting (Ali & Zhang, 2008; Alissa et al., 2013; Demirtas & Cornaggia, 2013; Jung et al., 2013; Kim et al., 2012; Kuang & Qin, 2013). The contradictory finding could be attributed to the fact that prior studies that examined the impact of credit rating changes and aggressive reporting are mostly archival studies. These studies controlled for many other performance indicators such as company size, profitability, operating risk, growth option, accruals, return on assets, leverage ratio (Alissa et al., 2013; Jung et al., 2013; Demirtas & Cornaggia, 2013; Kuang & Qin, 2013) in examining the impact of credit rating changes on aggressive reporting. Hence, this argument is aligned with the fact that managers perceived credit rating as just one of the many financial indicators that stakeholders can refer to when evaluating the performance of their company. As such, a downgrade of the company's credit rating might be compensated for by other good and healthy performance measures such as steady revenue and earnings trends, a progressive growth rate, or expansion of market share (Standard & Poor's, 2012a). While credit rating is most useful and relevant for measuring the credit default risk of a company, stakeholders will also consider other factors in the process of making a financial investment decision. These include the performance of the company relative to its competitors in the market, the company's overall economic and market performance, and the company's growth stability and health (Alissa et al., 2013; Standard & Poor's, 2012a). Hence, the insignificant result with respect to the moderating effect of credit rating downgrades on revenue management supports the claim and further implies that the incentive of a downward revision of credit rating alone does not serve as a strong motivator for managers to interpret an accounting standard in a manner that supports their opportunism.

6.5.4 Level of Accounting Standard Precision, and the Moderating Effect of Revenue Trend and Credit Rating Downgrades, on Revenue Management Intention

According to MRT, the pressure to maintain a desired revenue trend might motivate mangers to engage in revenue management. This intention might be greater when the company experiences a credit rating downgrade. Latitude in the accounting standard can then serve as a tool for managers to justify and legitimise their financial reporting objectives. Following the same argument discussed earlier, the study's final hypothesis was interested in examining the effects of the interaction of different levels of standard precision, revenue trend, and credit rating downgrades on managers' revenue management intention. The last hypothesis predicted that:

H4: *Under different levels of accounting standard precision, reported revenue trends, and credit rating downgrades will moderate managers' intention to engage in revenue management differently.*

The results from Table 6.10, Panel B (above) reveal a three-way interaction amongst level of accounting standard precision, revenue trend, and credit rating downgrade. The reported p-value for the three-way interaction is 0.051 (F = 6.57), which is significant at the 10% level. A significant three-way interaction should be carefully interpreted and followed by tests of two-way interactions at each level of the third independent variable. This is discussed in the next section.

6.5.5 Further Analysis: Robust Two-Way ANOVA, Means Comparison, and Interaction Graph

When the highest order interaction is significant, the interpretation of low order significant interactions might be misleading. Attention is given to interpreting the highest significant interaction rather than the main effects (Field, 2013). In addition, according to

(Tabachnick & Fidell, 2007), a significant three-way interaction needs to be followed by a two-way ANOVA at each level of the third independent variable.

With that, Table 6.12 (below) summarises the statistical results of a robust two-way ANOVA for each level of standard precision. After a two-way ANOVA, in the event that a significant main effect contains not more than two levels, methods such as simple effects analysis, means comparison, or interaction graph interpretation can be carried out to break down the interaction effects in order to investigate the mean differences between groups (Field, 2013; Tabachnick & Fidell, 2007).

Table 6.12: Results of a Robust Two-Way ANOVA for Revenue Management Intention

Panel A: Means Comparison (Revenue Management Intention-over a 100-point scale)

Std Precision	Revenue Trend						Overall
	Increasing		Decreasing		Volatile		
	Notch	Category	Notch	Category	Notch	Category	
Principle	79.00	70.00	44.00	58.18	75.00	24.44	59.34
P+ Indicators	56.67	39.00	59.09	60.77	57.50	67.78	56.87
Overall	66.82	53.68	51.90	59.58	66.25	46.11	

Panel B: Two-way Robust ANOVA for Different Levels of Standard Precision

Source of Variance	df	F	p-value
Standard = Principle (Less Precise)			
Revenue Trend	2	8.2391	0.037**
Credit Rating Downgrading	1	2.6706	0.117
Revenue Trend X Credit Rating Downgrades	2	9.5344	0.024**
Standard = Principle+Indicators (More Precise)			
Revenue Trend	2	1.6484	0.461
Credit Rating Downgrading	1	0.0960	0.759
Revenue Trend X Credit Rating Downgrading	2	1.3322	0.533

Panel C: Interaction Effect Analysis

Source of variance	df	F	p-value
Principle X Increasing Revenue Trend			
Credit Rating	1	0.5784	0.468
Principle X Decreasing Revenue Trend			
Credit Rating	1	1.7667	0.409
Principle X Volatile Revenue Trend			
Credit Rating	1	15.6099	0.002**

** Significant at the 5% level.
* Significant at the 10% level.

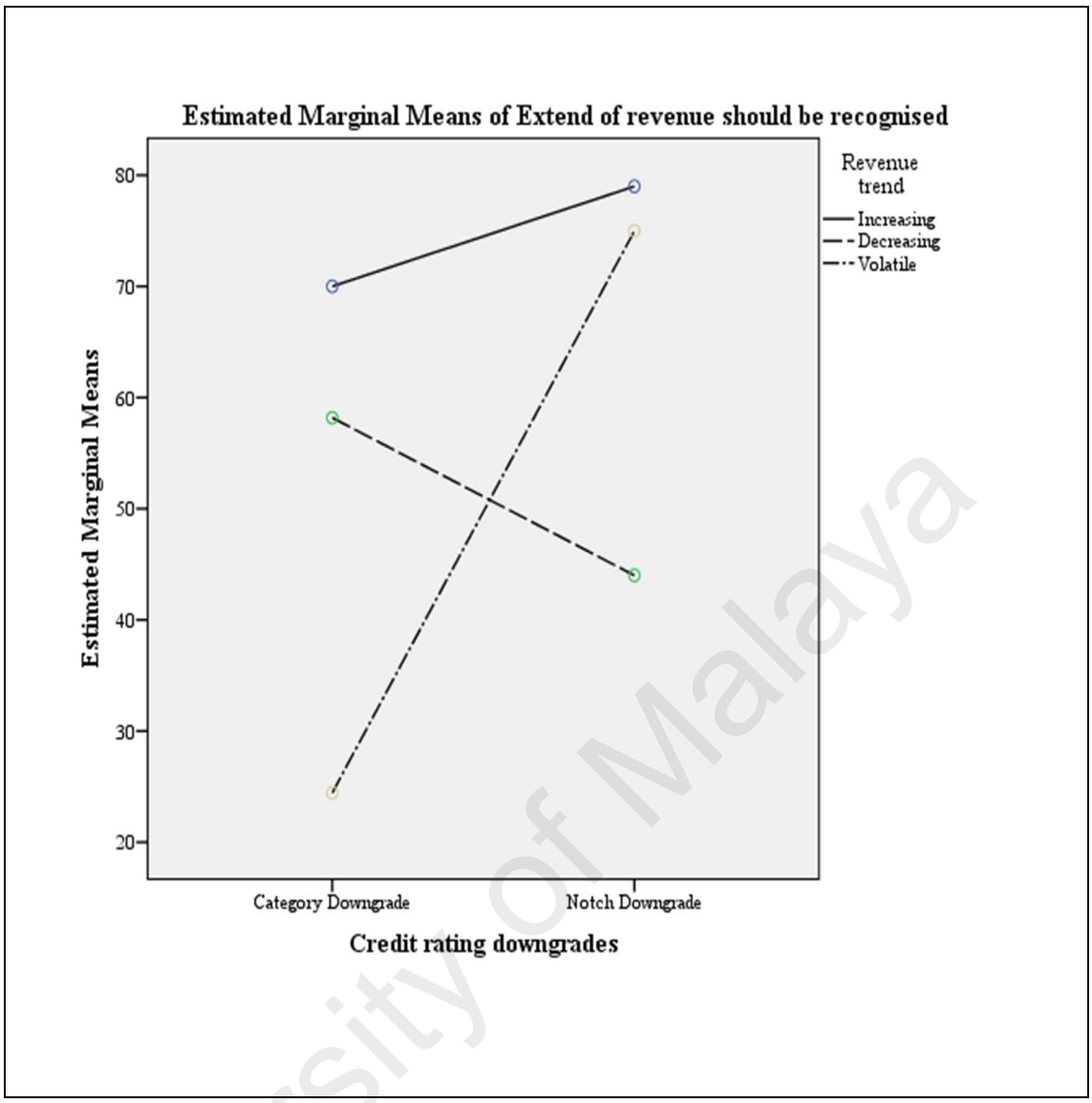


Figure 6.3: Interaction Graph for a Less Precise Standard

The results of a robust three-way ANOVA presented in Table 6.12 (above) supported the fourth hypothesis. As discussed in the previous section, credit rating downgrades alone are not a strong enough motivator for managers to report aggressively. However, taking into consideration a company's reported revenue pattern and a downward shift in its credit rating, such a combination may provide significant motivation for managers to take aggressive corrective action to show improved performance to restore public confidence in the company. Given that an accounting standard can be used to defend and rationalise a desired reporting outcome (Jamal & Tan, 2010), the intention to report a desirable company performance record will moderate the manner in which an accounting standard will be interpreted.

6.5.5.1 Effect of incentives under a less precise accounting standard (Principle)

It is noticed from Table 6.12, Panel A (above) that when managers are required to report under a less precise standard, revenue trend and credit rating downgrades will be a company's main concerns, and these will moderate managers' intention to engage in revenue management ($p = 0.024$, $F = 9.5344$,). Table 6.12, Panel C (above) and the interaction graph presented in Figure 5.3 (above) indicate that revenue management intention will be moderated by credit rating downgrades when a company reports a volatile revenue trend. Revenue management intention will be higher when a company reports a volatile revenue trend and experiences a notch downgrade. These incentives will not, however, moderate managers' aggressive reporting when the company is experiencing an increasing or decreasing revenue trend and a credit rating downgrade.

The findings of the examination of Hypothesis H2 indicate that while the presence of a volatile revenue trend alone is not a strong enough motivation for managers to engage in revenue management, they are not true when the trend is combined with the presence of a credit rating downgrade. The empirical results revealed that managers place great importance on maintaining a healthy revenue trend and a desirable credit rating when the company is experiencing a volatile revenue trend, as the construct of credit rating downgrades and the interaction between credit rating downgrades and standard precision are significant. Hence, the reported revenue pattern – specifically, a volatile trend – and a credit rating downgrade will moderate managers' revenue management intention.

This finding confirms the claim that incentives or motivations play a pervasive role in managers' opportunism and the manner in which an accounting standard will be interpreted (Armstrong et al., 2010; Cuccia et al., 1995; Gibbins et al., 2001; Libby et al., 2002; Libby & Seybert, 2009; McEwen et al., 2008; Nelson, 2003; Psaros & Trotman, 2004; Van Beest, 2009). The extent of managers' aggressiveness is positively associated

with the types of incentives they face. The stronger the incentive, the stronger the motivation for managers to interpret the latitude given in a standard in an aggressive manner (Libby et al., 2002; Van Beest, 2009).

As argued earlier, revenue trend plays a part in determining a company's credit rating. A healthy and persistent revenue pattern might result in a better credit rating (Kaske, 2014; Standard&Poor's, 2012a). A volatile revenue pattern, however, might be seen as risky by stakeholders, and the company might suffer from negative market reaction as a result (Barnes, 2001; Du & Budescu, 2007; Hirst & Hopkins, 1998; Klement, 2011; Myers et al., 2007). For example, market players might then label the company as "high risk" and be reluctant to invest in it. To avoid this kind of negative market reaction, managers will take action to correct the revenue trend condition. Maintaining a healthy and persistent revenue pattern will not only increase the chance of restoring the credit rating to a desirable level (Alissa et al., 2013; Jung et al., 2013; Kim et al., 2012), but the company will also be able to enjoy market rewards such as a lower cost of capital and debt (Afik et al., 2014; Elayan et al., 2003; Graham & Harvey, 2001; Griffin & Sanvicente, 1982; Holthausen & Leftwich, 1986; Hull et al., 2004; Kisgen, 2006; Shah, 2008; Wansley et al., 1992). The pressure to ensure that reported revenue meets public expectations (Bottazzi et al., 2011; Busch et al., 2011; Francis et al., 2004; Hangstefer, 2000) will motivate managers to take means to project a healthy revenue pattern.

Such pressure is even greater when the company experiences a credit rating downgrade, as performance indicators such as reported revenue pattern or earnings persistence will tend to serve as determiners of the company's credit rating. A downward revision of a credit rating accompanied by a revenue trend that is below public expectations will project a very negative image to outsiders (Jung et al., 2013; Shah, 2008). To avoid negative repercussions for the company, managers will take preventive

action to preclude the company's credit rating from falling below a desired level. They will also take remedial action to restore the situation (Ali & Zhang, 2008; Alissa et al., 2013; Jung et al., 2013; Kim et al., 2012). Managers might be motivated to focus more on the revenue pattern with the hope that the credit rating will soon be restored by the credit rating agency (Alissa et al., 2013). Driven by such an intention, managers will be motivated to interpret the accounting standard in a manner that legitimises the decision to recognise higher revenue and maintain a stable reported revenue pattern.

However, the extent of aggressive financial reporting will be driven by the level of the credit rating downgrade. The interactive graph presented in Figure 6.3, shows that managers' level of aggressiveness will be highest when the company is reporting a volatile revenue trend and experiencing a notch downgrade. Also, as indicated in Table 6.12 (above), Panel A, managers' revenue management intention is lower in the cases of category downgrades (mean = 24.44) compared with notch downgrades (mean = 75.0). This finding is attributed to the fact that, even though managers might be motivated to take remedial action over the bad situation, their level of aggressiveness will be constrained by the potential monitoring of other market players, as well as the potential negative repercussions resulting from such action (Alissa et al., 2013; Hanlon et al., 2014; Hoopes et al., 2012; Jung et al., 2013). Given that credit rating agencies are professional and tend to have access to companies' private information, there is a strong chance that the agencies will detect opportunistic activities (Jorion, Liu, & Shi, 2005). Once detected, the company might be penalised, and its credit rating might receive another downgrade (Jorion et al., 2005; Jung et al., 2013).

In addition to credit rating agencies, parties such as bankers will also closely monitor a company's credit rating (Mester et al., 2007). Since a company's credit rating is associated with its credit risk, a lower credit rating might imply a higher risk of default.

A downward revision of a credit rating might then result in greater monitoring by banks (Demirtas & Cornaggia, 2013). As well, a category downgrade might also alert the public that the company is not operating well, resulting in more monitoring by market players (Jung et al., 2013). Owing to this high monitoring, managers will be constrained from engaging in aggressive financial reporting behaviour and will exercise caution when considering engaging in revenue management (Alissa et al., 2013; Hanlon et al., 2014; Hoopes et al., 2012; Jung et al., 2013). This confirms the finding that when reporting a volatile revenue trend, managers will be more aggressive in response to a notch downgrade, compared with a category downgrade.

These findings also agree with the argument that motivations will guide managers' information searching and rationalising processes. Motivated by the objective of projecting healthy performance, managers with this intended reporting goal will rationalise the latitude provided in the accounting standard to justify the desired reporting outcome. Serving as a tool that will help managers to rationalise and justify their intended financial reporting decisions, the accounting standard will then be interpreted in a way that will justify managers' decisions. Similarly, in line with the argument earlier that a general standard might not provide sufficient guidance when it comes into practise, the ambiguity will provide a good avenue for aggressive reporting (SEC, 2003; Sunder, 2009). In the event that an aggressive reporting decision is questioned by the public, the ambiguity could be twisted by the intended managers and provide good grounds for them to defend their decision (Cameran et al., 2014; Fornaro & Huang, 2012; Hackenbrack & Nelson, 1996; Hronsky & Houghton, 2001; Trompeter, 1994).

6.5.5.2 Effect of incentives under a more precise (Principle+Indicators) accounting standard

According to the results in Table 6.12, Panel B (above), when managers are required to report under a more precise standard, neither of the incentives of revenue trend and credit rating downgrade will influence managers' revenue management intention, as none of the reported p-values exceeded 0.05. Hence, the result implied that indicators included in a principle-based standard will constrain managers' aggressive financial reporting behaviour even in the presence of the incentives of revenue trend and credit rating downgrades.

As discussed earlier, this finding contradicts the argument that a more rigid standard will promote managers' opportunism. However, this contradiction could be due to the fact that most prior studies examined the impact of rule-based and principle-based standards on financial reporting decision making, while this study examined the effect of different levels of precision in a principle-based standard. It is therefore argued that instead of considering the impact of rule-based versus principle-based standards, a distinction needs to be made between principle-based and principle-only accounting standards. A principle-based standard provides sufficient guidance to assist managers with the financial reporting process. Although the standard leaves room for the exercise of professional judgment, the prescriptions will not be so vague as to promote the abuse of judgment. On the other hand, the imprecise principle-only standard provides minimum guidelines and leaves the rest to managers' judgment, which creates room for opportunism (SEC, 2003).

As a result, exclusion of indicators from a newly introduced complex accounting concept might result in a principle-only standard that provides insufficient guidance to managers to deal with complex accounting transactions. This, hence, increases the

possibility of abuse of professional judgment by intended managers. This is supported by Mala and Chand (2014), who found that increasing the level of precision of a principle-based standard by including illustrative examples was useful in assisting managers to deal with complex financial transactions. This helped to increase managers' judgment accuracy. Hence, the boards' decision to add a list of indicators to the principle of control was a useful move. An accounting standard that is free from ambiguity will not only be important in guiding managers through the financial accounting process and in enhancing the comparability of financial statements, it will also be helpful in constraining managers' opportunistic behaviour (Brochet et al., 2013; Fornaro & Huang, 2012; Hackenbrack & Nelson, 1996; Nelson, 2003; Trompeter, 1994).

6.5.5.3 Relative ranking for the means of revenue management intention by managers

It is noticed from Table 6.12, Panel A (above) that the mean of revenue management intention by managers when reporting under a less precise set of standard ranged from 24.44 (volatile/ category) to 79.00 (increasing/ notch). Even though the gap between these two means is big, it supported the argument of the study that company with increasing revenue pattern and notch downgrade will receive less monitoring from the external parties compared with company with volatile revenue pattern and category downgrade. With less external monitoring, chances where such opportunism will be uncovered is lower (Alissa et al., 2013; Hanlon et al., 2014; Hoopes et al., 2012; Jung et al., 2013). Managers will then, be more aggressive in interpreting the ambiguity in the less precise standard and reported a higher revenue.

In addition, another big difference in mean is noticed under the context of company with increasing revenue pattern. It can be identified from Table 6.12 (above), Panel A that when experiencing a category downgrade, company with increasing revenue pattern

will be more aggressive in revenue management when reporting under a less precise set of standard (mean=70.00) compared with a more precise set of standard (mean=39.00). Again, this findings reaffirmed the above discussion that exclusion of indicators from the newly introduced accounting concept will result in a set of highly ambiguity in the standard. Managers with motivation to engage in revenue management will then employ the ambiguity in the standard to defend for the aggressive financial reporting decision (Brochet et al., 2013; Brown & Wright, 2008; Fornaro & Huang, 2012; Wang, 2010). With that, the findings suggest that inclusion of indicators in a principle-based standard will preclude managers from taking advantage on the latitude provided in the standard.

6.6 Summary of Findings

Four hypotheses were examined in the study. Out of the four hypothesis, three hypotheses are supported. This section summarises the results of the testing of the hypotheses discussed earlier in Section 6.5.

The first hypothesis (H1) examined the impact of different levels of standard precision on managers' revenue management intention. The hypothesis predicted that managers' revenue management intention will not be different when the level of standard precision is different. The empirical results provided evidence to support this hypothesis.

The second hypothesis (H2) examined the moderating effect of revenue trend on managers' revenue management intention. It was predicted that, under different levels of standard precision, different reported revenue trends would moderate managers' revenue management intention differently. The results from a robust ANOVA provided evidence to support this hypothesis.

The third hypothesis (H3) examined the moderating effect of credit rating downgrade on managers' revenue management intention in the context of different levels of standard precision. The empirical findings from the study did not support this hypothesis.

The last hypothesis (H4) investigated the interactive effect of level of standard precision, revenue trend, and credit rating downgrade on managers' revenue management intention. The results from a robust ANOVA provided evidence to support this hypothesis. Table 6.13 (below) provides a quick glance at the results from the hypothesis testing.

Table 6.13: Summary of the Hypothesis Test Results

Hypothesis	Supported
H1: *Different levels of accounting standard precision will not affect managers' intention to engage in revenue management differently.*	Yes
H2: *Under different levels of accounting standard precision, managers' intention to engage in revenue management will be moderated differently by different reported revenue trends.*	Yes
H3: *Under different levels of accounting standard precision, managers' intention to engage in revenue management will be higher when companies experience a notch downgrade than when there is a category downgrade.*	No
H4: *Under different levels of accounting standard precision, reported revenue trends, and credit rating downgrades will moderate managers' intention to engage in revenue management differently.*	Yes

Following up from the significant three-way interaction, when the two-way ANOVA was performed at different levels of standard precision, it was noticed that a more precise standard (Principle+Indicators) can constrain managers' revenue management intention, as none of the variables or interactions of variables were reported to be significant. On

the other hand, when reporting under a less precise standard (Principle), the two-way interaction between revenue trend and credit rating was significant at the 5% level. This indicates that the presence of the incentives of revenue trend and credit rating downgrades will moderate managers' revenue management intention. Further analysis of the interaction effect revealed that managers will be more aggressive in revenue management when the company reports a volatile revenue trend and experiences a notch downgrade.

6.7 Chapter Summary

This chapter examined the moderating impact of different revenue trends and credit rating downgrades, under different levels of accounting standard precision, on managers' revenue management intention. An overview of the respondents' demographic data and their views on prior reported revenue trends and credit ratings are also provided. Various analyses of variance (ANOVAs) were conducted in order to provide statistical evidence to test the study's hypotheses.

The study's findings revealed that the statistical results provide evidence to support three out of the four hypotheses tested. As such, the findings indicate that standard precision level, revenue trend, or credit rating downgrade alone will not motivate managers to report aggressively. Generally, the findings indicate that a more precise standard (Principle+Indicators) is effective in constraining managers' revenue management intention. Reported revenue trend and credit rating downgrade will, however, moderate managers' revenue management intention when they are required to report under a less precise accounting standard (Principle). A more detailed discussion of the study's findings will be presented in the next chapter.

CHAPTER 7:

CONCLUSION AND RECOMMENDATIONS

7.1 Introduction

This chapter summarises the study's main findings, discusses the study's potential contributions, and provides recommendations for future research. Section 7.2 provides a recap of the study. It is followed by Section 7.3 where the main statistical findings are summarised and discussed in the context of the study's research objectives. The theoretical, practical, and methodological contributions of the study are then presented in turn in Section 7.4. Section 7.5 presents the study's limitations, and provides suggestions for future studies. Section 7.6 concludes the study.

7.2 Recapitulation of the Study

Inspired by the revenue recognition project jointly initiated by the Financial Accounting Standards Board (FASB), and the International Accounting Standards Board (IASB), the main objective of this study was to examine the joint effect of revenue trend, credit rating downgrades and different levels of standard precision on managers' revenue management intention. As discussed in Chapter 1, the study contains three main research questions and four research objectives. These questions are tested through the four hypotheses formed in Chapter 4. Table 7.1 (below) provides a summary of this information.

Table 7.1: Summary of the Study's Research Questions, Research Objectives and Hypotheses

Research Questions (RQ)	Research Objectives (RO)	Hypothesis Tested	Result
1. Do different levels of accounting standard precision affect managers' financial reporting decisions?	**1.** To examine the impact of different levels of accounting standard precision on managers' revenue management intentions.	**H1:** Different levels of accounting standard precision will not affect managers' intention to engage in revenue management differently.	Supported
2. Do managers' financial reporting decisions differ with the presence of the incentives of revenue trends and credit rating downgrades?	**2.** To examine the moderating effect of revenue trends on managers' revenue management intentions.	**H2:** Under different levels of accounting standard precision, managers' intention to engage in revenue management will be moderated differently by different reported revenue trends.	Supported
	3. To examine the moderating effect of credit rating downgrades on managers' revenue management intentions.	**H3:** Under different levels of accounting standard precision, managers' intention to engage in revenue management will be higher when companies experience a notch downgrade than when there is a category downgrade.	Not Supported
3. Do managers' financial reporting decisions differ based on the interaction between different levels of accounting standard precision, revenue trends, and credit rating downgrades?	**4.** To examine the impact of different levels of accounting standard precision on managers' revenue management intentions in the presence of an interaction between the incentives of revenue trends and credit rating downgrades.	**H4:** Under different levels of accounting standard precision, reported revenue trends, and credit rating downgrades will moderate managers' intention to engage in revenue management differently.	Supported

Since the issues related to the inclusion of indicators in a principle-based accounting standard were drawn from IFRS 15 and the standard will only be effective from 1 January 2018 onwards, no data were readily available to facilitate the examination of the issues identified. Hence, in order to meet the research objectives, the experimental method was employed to examine the hypotheses formed and to provide evidence regarding the research problems identified.

The study sample consisted of 128 experienced managerial level accountants. The data for the study were gathered through five IFRS 15 briefing seminars conducted in Malaysia. The ANOVA statistical method was used to analyse the data and provide evidence regarding the issues examined. A summary of the study's main findings will be provided in the remaining sections of this chapter.

7.3 Summary and Discussion of the Findings

To facilitate the interpretation and discussion of the study's findings, the findings will be discussed in the context of the study's four research objectives. Each of the objectives will be discussed in turn in the coming sections.

7.3.1 RO 1: To Examine the Impact of Different Levels of Accounting Standard Precision on Managers' Revenue Management Intentions

The results of a robust three-way ANOVA showed that different levels of standard precision alone will not make a difference in managers' financial reporting decision making. This finding is consistent with the prediction that incentives play an important role in managers' financial reporting decision making. In the absence of motivation or incentives, managers will not be inclined to take high risks and report aggressively. In such cases, an accounting standard will be used as a financial reporting tool rather than a manipulative one.

7.3.2. RO 2: To Examine the Moderating Effect of Revenue Trends on Managers' Revenue Management Intentions

The study's empirical findings suggest that under different levels of standard precision, the presence of the incentive of revenue trend will moderate the manner in which managers interpret an accounting standard and engage in aggressive financial reporting. Analysis revealed that, for companies with an increasing revenue trend, maintaining a desirable trend is important, and managers will be motivated to ensure the extension of such a trend. Although revenue management might expose a manager to consequences once it is uncovered, capital markets tend to devote less attention to monitoring companies that are performing well. With less monitoring, ambiguity in an accounting standard might provide managers with a good opportunity to report aggressively. This explains why revenue management intention is higher when a company is required to report under a less precise set of accounting standard, one without indicators.

On the other hand, even with incentives, managers of companies with a decreasing revenue trend were found to have the least motivation to engage in revenue management. This might be because the company's performance had already fallen below market expectations and the managers had missed the chance to enjoy rewards from the market. In addition, poorly performing companies might have entered into the (re)negotiation of contracts with creditors or regulators. As a result, managers are less willing to take high risks and engage in revenue management.

Similarly, a volatile revenue trend will not motivate managers to report aggressively under different levels of standard precision. This might be attributed to the fact that when a company loses persistent performance, market players will tend to label it as risky, resulting in lower investment attractiveness. The company might also suffer from other negative market reactions, such as lower share return, lower financial performance

predictability, and lower analysts' forecasts. Such negative reactions might then reduce managers' intention to take higher risks and report aggressively. In addition, relevant parties might monitor a company more when its performance is not up to expectations. This higher level of external monitoring might also reduce managers' revenue management intention, as once such management is revealed, the company would face more severe consequences.

7.3.3 RO 3: To Examine the Moderating Effect of Credit Rating Downgrades on Managers' Revenue Management Intentions

As discussed in Section 6.3.2.2, the statistical evidence failed to support the claim that credit rating downgrades will moderate managers' revenue management intention. This indicates that credit rating downgrades alone will not motivate managers to engage in revenue management. Such findings could be attributed to managers not focusing on credit rating levels, since other financial indicators might be able to compensate for the effects of credit rating downgrades. Instead, managers might be focused on maintaining other good performance indicators to ensure the overall financial health of their company.

7.3.4 RO 4: To Examine the Impact of Different Levels of Accounting Standard Precision on Managers' Revenue Management Intentions in the Presence of an Interaction Between the Incentives of Revenue Trends and Credit Rating Downgrades

Recapping the discussion in Section 6.3.3, the results from the robust three-way ANOVA revealed an interaction among levels of standard precision, revenue trend, and credit rating downgrades. The empirical results from a follow up two-way ANOVA at different levels of standard precision indicated that, in general, the inclusion of indicators in a principle-based standard will clarify complex accounting concepts and close the door to the manipulation of revenue reporting. Hence, the boards' decision to introduce

indicators in the principle-based standard has precluded the standard from being issued as a principle-only standard that does not provide sufficient guidance to deal with complex accounting concepts. Intended managers could have used the vagueness of a principle-only standard to justify intended reporting outcomes.

As the ambiguity in a standard tends to promote aggressive reporting, the extent of aggressiveness will be moderated by the presence of the incentives of revenue trend and credit rating downgrades. As noted, maintaining a desired revenue trend is important to companies reporting a volatile revenue trend and experiencing a notch downgrade. Compared to companies with other revenue patterns, companies with a volatile revenue trend put greater emphasis on their credit rating. A volatile revenue trend, together with a credit rating category downgrade, can be viewed as a "double shot" of bad performance in the eyes of the public. To prevent subsequent negative market reaction, managers will make efforts to ensure that at least the reported revenue trend is within public expectations, in the hope that the credit rating might be revised in the near future. To achieve this objective, managers are willing to take risks and be more aggressive in revenue management. Even though both a volatile revenue pattern and a notch downgrade will still result in monitoring by outsiders, the level of monitoring will be relatively lower compared with category downgrade. Managers will then interpret the accounting standard in an aggressive manner. They do this by taking advantage of the vagueness in the standard, as this provides them with good grounds for rationalising and justifying a financial reporting decision. Higher revenue will then be recognised when managers report under a less precise (without indicators) standard.

7.3.5 Discussion of the Overall Findings

Considering the results for Hypotheses H1 to H4 as a whole, it is argued that the study's findings are in accordance with the prediction that the presence of motivation will

result in bias during the information searching and rationalising processes (Kang & Lin, 2011; Kunda, 1990). An accounting standard can then be employed by intended parties to achieve a specific reporting agenda. The level of aggressiveness in reporting is determined by the types of incentives that a company is facing, as well as a manager's ability to report aggressively under the standard. Accounting standards tend to be used as tools to justify and defend intended reporting outcomes, while the presence of incentives is the main factor that determines the manner in which an accounting standard will be interpreted by managers intending to engage in aggressive financial reporting behaviour. The intention will be higher when their company is not performing well (Armstrong et al., 2010; Gibbins et al., 2001; Libby & Seybert, 2009; McEwen et al., 2008; Nelson, 2003; Psaros & Trotman, 2004; Van Beest, 2009). The stronger the motivation, the more aggressive mangers will be in managing revenue.

The presence of incentives might motivate managers to engage in aggressive financial reporting. Their decision to do so, and the extent to which an incentive will drive aggressive behaviour, depends on whether the incentive will favour opportunism. However, such opportunistic intention is constrained in the absence of an accounting standard that could be used by preparers to argue and defend a financial reporting decision (Gibbins et al., 2001; Jamal & Tan, 2010; Nelson, 2003; Ronen et al., 2006; Sanders, 2001). As a result, without the presence of incentives, an accounting standard will serve only as a financial reporting tool. Hence, it will not motivate managers to report aggressively. On the other hand, without an accounting standard that can legitimise a reporting decision, managers' intention to engage in aggressive reporting will be lower. It is argued that the presence of incentives and the latitude in the accounting standard are essential for managers to report aggressively. This is supported by the claim of (Libby et al., 2002, p. 782) that "holding constant amount of flexibility, changes in incentives move disclosure (reporting decision) in the direction favoured by those incentives. Holding

incentives constant, increasing flexibility increases the degree to which incentives affect decisions."

Hence, desperate managers will also look for ways and act in ways that favour a specific reporting agenda. As argued by prior studies, while vagueness in the standard might increase the negotiating power of an agenda-driven party in defending an aggressive reporting decision, a rigid accounting standard strengthens the position of the party involved in transaction structuring (Gibbins et al., 2001; Libby & Seybert, 2009; Nelson, 2003; Tan & Jamal, 2006; Van Beest, 2009). A balance of clarity of guidance and the exercise of professional judgment is therefore important to ensure that the accounting standard will act as an effective safeguarding tool. This assertion has been affirmed by the study's findings that the inclusion of indicators in a principle-based standard will not only clarify the newly proposed accounting concept, it will also be useful in constraining managers' aggressive financial reporting behaviour. Taken together, the findings imply that the boards' decision to include a list of indicators in the principle-based standard was a wise one.

7.4 Contributions of the Study

Revenue management is the main reason for financial statement adjustments; once detected, it may have a significant negative impact on the market. From the perspective of companies, it might dampen their market share or expose them to other unintended negative repercussions. From the perspective of market players, besides the loss of capital invested, revenue management might result in the loss of public confidence in the capital market and the accounting profession. By examining this issue, this study provides useful insight to various constituents. The potential contribution of the study is discussed from the theoretical, practical and methodological perspectives, which are presented in turn in the coming sections.

7.4.1 Theoretical Contributions

This study contributes to the existing literature on the subject in the following ways. First, it extends the literature in the strand of accounting standard guidance and financial reporting behaviour. Most prior studies focused on comparing the impact of principle-based standards against rule-based standards with respect to judgment and decision making (Agoglia et al., 2011; Bennett et al., 2006; Collins et al., 2012; Jamal & Tan, 2010; Kang & Lin, 2011; Mergenthaler, 2009; Psaros, 2007; Van Beest, 2009). While Mala and Chand (2014) conducted a similar experimental study by examining the impact of additional guidance in principle-based standards on managers, this study extends the literature by examining the impact of different levels of prescriptions and the inclusion of indicators within a principle-based standard, on managers' reporting decisions.

Second, as managers are responsible for the preparation of financial statements, it is important to examine how their financial reporting decisions are influenced by incentives and the accounting standard under which they are required to report. Although the literature on the impact of accounting standard types and incentives on judgment and decision making is expanding, the focus is mostly for the benefit of tax practitioners and auditors rather than other constituents (Psaros, 2007; Psaros & Trotman, 2004). Even though the decision making process might be the same in tax, financial reporting, and auditing settings, it is worth noting that fundamental differences exist in the related professional responsibilities and penalty structures (Cuccia et al., 1995). As a result, it is doubtful whether the findings from those studies can be generalised across other settings.

Third, this study is believed to be one of a limited number of studies that provide evidence of the importance of different levels of accounting standard precision, revenue trend, and credit rating downgrades, to a company. It also provides evidence of how these

factors jointly affect managers' financial reporting decisions. This study's findings provide useful evidence that extends the literature in the strand of revenue management.

Fourth, this study also extends the literature in the strand of incentives and revenue management. While most of the prior studies in this strand of research have focused on the importance of reported revenue (Berger, 2003; Chandra & Ro, 2008; Ertimur et al., 2003; Fu & Chen, 2013; Ghosh et al., 2005; Han & Wild, 1991; Hangstefer, 2000; Jegadeesh & Livnat, 2006; Kama, 2009; Rees & Sivaramakrishnan, 2007; Swaminathan & Weintrop, 1991), a careful examination of the literature suggests that market players also place great importance on the persistence of performance measures (Barth et al., 1999; Burgstahler & Eames, 2003; Francis et al., 2004). However, no studies have examined how reported revenue patterns over periods affect managers' reporting decisions. This study extends the pool of literature by bridging the two strands of studies.

Finally, the findings also contribute to the newly expanding literature on credit rating and managers' financial reporting decision making. Only a handful of studies have looked into this issue, with their focus on: changes of credit rating at the outer notch (i.e., one level to the next credit rating category) (Jung et al., 2013); a credit rating that is a level below or above the company's expectations (Alissa et al., 2013); and initial credit rating level (Demirtas & Cornaggia, 2013). The current study is different from these previous ones in that it examines the impact of different levels of credit rating downgrades on managers' revenue management intention. As a result, its findings can provide a more complete view of the impact of credit rating downgrades on financial reporting decision making.

7.4.2 Practical Contributions

The study's empirical findings are useful from a practical perspective, and both standard setters and industry watchdogs (regulators, investors, or auditors) will benefit from them.

7.4.2.1 Standard setters

First, the findings of the study provide useful evidence with respect to disputes over the boards' decision to include indicators in IFRS 15 to clarify the concept of control. The findings evidenced that, in general, the inclusion of indicators in a principle-based standard will constrain managers' aggressive financial reporting decision making. Hence, when introducing new accounting concepts, the boards' decision to include indicators will not only assist managers to understand and apply them across different businesses and industries, it will also be useful to constrain manipulation and abuse of judgment when the standard is put into practise. With that, the boards can disregard public concern that the inclusion of indicators in a principle-based standard will shift it towards a rule-based standard and increase the possibility that it would be used as checklist.

Despite this, the boards should evaluate the inclusion of more guidance pertaining to newly introduced accounting concepts with caution. When implementing new concepts, the introduction of more guidance might be a better choice to familiarise users with it. However, a rigid accounting standard will not only increase the risk of overconfidence and bias in decision making, it will also open the door to justifiable manipulation. Given this problem of the "double-edged sword," the boards should attempt to strike a balance regarding the level of guidance that should be included in an accounting standard (Nelson, 2003). A balanced level of guidance and the exercise of professional judgment are important to ensuring that the standard will be neither too ambiguous as to open the door

to the abuse of judgment, nor too rigid and providing legal grounds for transaction structuring and manipulation (Arjoon, 2006; Bennett et al., 2006; Collins et al., 2012).

Second, given the fact that IASB is re-examining current reporting standards and has plans to replace many of them, many new accounting concepts are expected to be introduced. The findings of this study provide the boards with a lens to focus on issues pertaining to how much guidance should be included in a newly introduced accounting concept and, specifically, on decisions regarding the inclusion of indicators with the general accounting principle. To eliminate ambiguity and insecurity over new concepts, it is common for the public to lobby for the inclusion of more guidance in a standard. The boards should carefully consider the pros and cons associated with the inclusion of more guidance; while a rigid standard might ease the noise from the public in the short term, it might be followed by unintended long term consequences. To deal with public uncertainty and insecurity, more roadshows or training should be planned to provide information to the public during the standard transition period.

Finally, while the findings generally concluded that a general or ambiguous standard promotes opportunism, desperate managers under great pressure to maintain a good financial performance image might be willing to take risks even if they are required to report under a properly drafted standard. As managers' level of aggressiveness in their financial reporting decision making is determined by the presence of incentives or motivations (Libby et al., 2002), standard setters are urged to give serious thought to promoting higher ethical standards amongst young accountants, in collaboration with various parties such as professional accounting bodies and educators. While a properly drafted standard might play a constraining role, imparting good ethical values amongst future accountants is a better solution. It is essential for accountants to realise their responsibilities to the profession and to society, the ethical dilemmas they may face along

their career path, and the importance of upholding ethical values in the performance of their work.

7.4.2.2 Industry watchdogs

Opportunistic action such as revenue management has to be dealt with in a careful manner, as it is a double-edged sword. On one hand, it brings positive market reactions from investors and analysts. At the same time, however, it comes with negative repercussions to the company and erodes market players' confidence in the capital market if it is engaged in excessively (Chen, 2010; Stanley & Sharma, 2011). As a result, market watchdogs keep a continuous eye on this activity. A thorough understanding of the activity is therefore important to facilitate monitoring and safeguarding activities. Results of the study are therefore useful to various industry watchdogs such as regulators, investors, analysts, auditors, and financial institutions.

First, while earnings management is always the main focus of industry watchdogs (Ahn & Choi, 2009; Das et al., 2011; Desai et al., 2006; S. Goel, 2012; Latif & Yi, 2012; Libby & Seybert, 2009), equal attention should be paid to the revenue management activities of managers. Gauging from the findings, greater monitoring by industry watchdogs is needed when a company is reporting an increasing and volatile revenue trend. While companies with a volatile revenue trend tend to receive greater monitoring, it is argued that similar attention might also need to be paid to companies that are performing well. It is a similar case with credit rating downgrades: even though a notch credit rating downgrade (regardless of level) results in relatively less impact to companies, industry watchdogs are urged to pay attention when evaluating their performance. Close monitoring is needed to provide better safeguards to stakeholders by ensuring that desperate managers will not engage in opportunistic reporting behaviour.

Second, the results are important to investors when monitoring the behaviour of managers. Knowledge of how various performance indicators might trigger revenue management action can be useful when companies draft remuneration and compensation contracts with their managers. Careful consideration should be given to the terms and conditions offered to ensure that they will not provide managers with further motivation to report aggressively. Proper monitoring is important to safeguard market players' confidence in capital markets. Accounting scandals resulting from opportunistic reporting behaviour will not only tarnish investor confidence in capital markets, they will also result in negative repercussions for the accounting profession (Carnegie & O'Connell, 2012; Danos & Measelle, 1990; Strier, 2006).

7.4.3 Methodological Contributions

The study makes three important methodological contributions. First, examining the issues experimentally has contributed methodologically to the literature on financial reporting decisions and incentives, as most prior studies have examined the issues using the archival method, a method subject to data selection, design, and measurement bias (Bonner, 1999; Libby et al., 2002). These problems can, however, be overcome using the experimental method, under which the causality amongst the constructs can be cleanly examined.

Second, prior archival studies in revenue management literature failed to incorporate the effects of behaviour (Callen et al., 2008; Rees & Sivaramakrishnan, 2007). Given that accounting is an activity involving decision making by humans, ignoring the behavioural aspect might result in biased findings (Bonner, 1999; Bonner, 2007; Libby et al., 2002). Considering behavioural impacts can provide a more complete answer as to how and why managers are involved in revenue management. The experimental method allows for the establishment of a strong causality among/between the constructs examined, and the

behavioural effects on the accounting issue can also be incorporated and examined (Maines & Wahlen, 2006).

Finally, prior archival studies examined audited financial statements to detect the opportunistic behaviour of managers. Since audited financial statements are the outcome and joint product of auditors and managers, the extent of each party's contribution to the revenue management decision is difficult to examine (Libby et al., 2002; Nelson et al., 2002). The present study examines managers' revenue management intention through a case study approach. Rather than examining audited financial statements, the revenue management intention of managers is captured through the actual financial reporting decisions made.

7.5 Study Limitations and Suggestions for Future Research

This study is not without its limitations. Participants were given an excerpt of IFRS 15 and were required to make a financial reporting decision based on the excerpt. IFRS 15 had just been introduced by the boards during the period when the data were collected. Managers might not be familiar with the newly introduced standard and this lack of familiarity with IFRS 15 might have had an impact on the financial reporting decisions made during the study. In addition, managers' decisions might have been governed subconsciously by knowledge of the revenue recognition standard that is currently in practise. Different reporting decisions might be made when managers acquire the necessary training and knowledge related to the new revenue recognition model. Given that knowledge will have an impact on judgment and decision making, future studies might consider controlling for the different levels of knowledge of IFRS 15 possessed by preparers. Future studies might also consider ensuring that respondents have undergone sufficient training and possess a sufficient level of knowledge of IFRS 15 before examining the issues.

When introducing a new pronouncement, it is common for the boards to attach separate decision aids, such as illustrative examples, to assist in the application of the standard. The use of decision aids and their influence on judgment and decision making has been widely examined in previous studies. This study, however, did not take decision aids into account. As a result, future studies might consider examining if and how decision aids influence decision making, and whether the aids are useful in mitigating managerial opportunism.

Standard setters might also be interested in the differences in judgment between the new and current revenue standards. Future studies can then consider repeating the study using different accounting standards. Findings from such studies will be useful to standard setters in determining whether IFRS 15 overcomes the shortfalls in the current revenue recognition standard, and the extent to which the new standard constrains aggressive financial reporting behaviour amongst preparers.

In addition, the current study only examined the moderating effect of the incentives of revenue trend and credit rating downgrades. Future studies might consider the impact of different levels of credit rating upgrades on managers' decision making. The causality between credit rating upgrades and downgrades on judgment and decision making can also be compared and examined. Furthermore, the interaction effect between credit rating upgrades or downgrades and other performance measures is also worth further scrutinisation.

Finally, this study only examined judgment and decision making in the context of managers. Future studies can consider extending the study to other groups of stakeholders, such as junior accountants, auditors, or tax practitioners. Repeating the study using different stakeholders with different job scopes and interests will provide interesting results.

Even with these limitations, this study acts as a reference for future researchers interested in examining the issues related to other forthcoming proposed accounting standards. Additional studies are welcomed in this strand of research in order to provide important feedback to standard setters interested in drafting better accounting standards.

7.6 Conclusion

This chapter provided an overview of the study's main empirical findings, its main contributions and limitations, and suggestions for future studies to build on this work. As discussed in an earlier section, all four of the study's research objectives were successfully examined.

The involvement of companies in revenue management is not something new. Past studies have focused on the potential benefits, negative implications, and the contributing forces of revenue management; revenue management intention will be even stronger when other related incentives are present. Taking into account the fact that financial reporting decisions have to be in accordance with the prescriptions given in the accounting standard, by manipulating different levels of accounting standard precision, this study examined how unethical activity can be moderated by the incentives of revenue trend and credit rating downgrades. With a focus on the potential research gaps arising from the levels of prescription in the accounting standard and factors contributing to revenue management (revenue trend and credit rating downgrades), this study extends the current literature on revenue management and the associated debates on the level of guidance to be included in an accounting standard.

The study's empirical results suggest that the extent to which managers will engage in revenue management depends largely on the presence of incentives. However, even with incentives, a properly drafted accounting standard can be effective in constraining such intention. In a nutshell, the findings of this study confirm the assertions in this strand of

research that the manner in which managers interpret the latitude in an accounting standard to legitimise a reporting decision is driven by the motivations and incentives that they are facing. In the absence of motivation and incentives, it is less likely that managers will interpret the standard in an aggressive manner. Even though managers hold the view that revenue trend and credit rating are important benchmarks of a company's financial performance – and these will serve as strong motivators for them to engage in aggressive financial reporting – they lack solid grounds to defend their reporting decisions when the accounting standard is unable to be used as a tool to justify those decisions.

While the boards' have argued that a principle-based accounting standard can constrain aggressive financial reporting behaviour, and efforts have been made to promote the implementation of a less detailed standard, the findings of this study argue that the boards need to ensure that the amount of prescription in the standard is sufficient to mitigate vagueness. Insufficient guidance will not only result in diversification in practise, it will also open doors for intended managers to utilise the vagueness to engage in aggressive financial reporting. On the other hand, too much guidance will also open doors for manipulation. Given that the boards are revisiting most of the current accounting standards, it is important to ensure that any newly proposed standards strike a balance between the level of prescription, and the exercise of professional judgment. Such a move will not only constrain opportunism, it will also enhance the quality of financial reporting and the efficiency of the capital market in general.

LIST OF PUBLICATIONS AND PAPERS PRESENTED

(Papers published in journals and presented at conferences as a result of this study)

Professional Journals

Lim, Y. Z., Devi, S. S., & Mahzan, N. (2015). Perception of auditors and preparers on IFRS 15: Evidence from Malaysia. *Advanced Science Letters, 21*(6), 1781-1785. (ISI/Scopus-Cited Publication).

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Conference Proceedings

Lim, Y. Z., Devi, S. S., & Mahzan, N. (2015). *The concept of control in IFRS 15 – Revenue from Contracts with Customers: Understanding its implications.* Proceedings from the Asia-Pacific Conference on International Accounting Issues (APC), November 1-4, 2015, Gold Coast, Australia.

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