ACCOUNTING CHOICE IN THE PRESENCE OF CONFLICTING INCENTIVES

by

Kerrie Woodhouse

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Abstract

This study explores the still largely unexamined impact of multiple and conflicting incentives on a manager's accounting choice as identified by Fields, Lys and Vincent (2001). Using a 2x2, between subjects, factorial design, two experiments were conducted using a sample of 116 Chief Financial Officers (hereinafter, CFOs) from a population of the top 700 companies listed on the Australian Stock Exchange. The study examines and tests hypotheses relating to incentives from each of the three classifications used by Fields et al. (2001): asset pricing, explicit contracting, and implicit contracting (the incentive to influence third parties such as customers, suppliers and employees). Insights were drawn from the disciplines of psychology and management to begin to form an understanding of this complex trade-off decision, and to assist in the development of hypotheses regarding this trade-off.

Contrary to expectations based on the volume of financial accounting evidence on the importance of the asset pricing incentive, managers chose to avoid a debt covenant violation rather than meet their asset pricing benchmark when these incentives were in direct conflict. Given a conflict between a performance pricing clause and an implicit contracting incentive to protect their firm's competitive position in imminent price negotiations, managers again prioritised the explicit contracting incentive.

The study also contributes important survey evidence on the attitudes and perceptions of Australian CFOs regarding performance measures reported to stakeholders and the importance of meeting their expectations. This survey partially replicates that of Graham,

Harvey and Rajgopal (2005)and as a consequence, offers an interesting comparison of the opinions of CFOs in Australia and the USA. Consistent with the counsel of Chan, Faff and Ramsay (2005), the survey results indicate that it may well be "imprudent to blindly extrapolate US findings to small market settings". Conditional analysis of the survey responses finds that the characteristics that differentiate the Australian market from the US market (for example firm size and materials industry membership) are associated with differences in opinion between the CFOs in each setting.

This study contributes primary evidence on the unexamined area of accounting choice under conflict. Such evidence is novel in that it is achieved with a lesser utilized methodology in response to the observation in Fields, et al. (2001) that research in accounting choice has exhausted certain techniques and would benefit from a fresh approach. Importantly, the theory developed in this thesis draws together insights from multiple disciplines to begin to develop a unified framework for the understanding and evaluation of choices made to satisfy multiple stakeholders. Further, the study contributes valuable insights on the attitudes of Australian CFOs towards performance measures and benchmarks and how these attitudes differ from those in the USA.

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Signed.....

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Chapter One: Introduction

1.1 Introduction

One of the fundamental questions in accounting research is whether accounting matters (Fields, Lys and Vincent 2001). Accordingly, the incentives and consequences of accounting choice made by managers have been considered for several decades.[1] However, while the existence of multiple motivations and incentives has been established, very few studies in the financial accounting literature contextualize and focus on more than one incentive. One of the criticisms of the extant accounting choice literature is that the focus on one incentive misses the more interesting questions of the trade-offs managers may make in the presence of conflicting incentives and interactions between such incentives (Fields et al., 2001).

This study aims to examine accounting choice by managers, not only in the presence of multiple incentives, but the choices made when these incentives are in conflict. Additionally, the literature on choice under conflict (e.g. Tversky and Shafir, 1992) as well as the management literature on stakeholder theory (e.g. Jawahar and McLaughlin, 2001; Mitchell et al., 1997) is used to posit potential reasons for these managerial choices. Accordingly, this study contributes to the scant research that considers multiple incentives such as Zmijewski and Hagerman (1981), who incorporate an integrated

[1] For a review of the relevant literature in the 1990s see Fields, Lys and Vincent (2001), for the 1980s see Bernard (1989) for prior see Holthausen & Leftwich (1983), and Lev and Ohlson (1982).

perspective in which the combined effects of multiple motivations influence the accounting choice. Jeter, Chaney and Daley (2008) consider the joint accounting choices that motivate adoption strategies in the case of two specific accounting standards. In a now much-cited survey, Graham, Harvey and Rajgopal (2005) (hereinafter, GHR) use primary data to examine where academic research and real world financial reporting policies are consistent and where they appear to differ, with rich results. While these studies recognise multiple incentives and suggest possible tensions between incentives, they do not explicitly examine the impact of conflicting incentives on accounting choice. Accordingly this study, to consider the impact of conflicting incentives on accounting choice, is timely.

Accounting choices in the presence of conflicting incentives are in fact a familiar, common occurrence. Many choices involve trade-off decisions where multiple objectives cannot be simultaneously satisfied. These choices range from the most fundamental decisions which pervade daily business operations, such as the trade-off of costs against benefits in operating decisions (for example the choice of suppliers, implementation of a new software system, or purchase of capital equipment) to the more technical accounting choices such as the trade-off between relevance and reliability in the preparation and presentation of financial statements[2]. The accounting choices examined in this study are those that will change the financial reports and consequently impact on the assessment of the firm by the users of those financial reports. Since the users rely on financial reports to allocate scarce resources, any financial manager must consider the impact an accounting choice will have on a user and his/her allocation decision.

[2] For an example of academic discussion on this point see Dye and Sridhar (2004)

Prior academic research[3] has identified user groups and their associated financial reporting incentives. Broadly, these users can be classified into three groups: capital market participants who give rise to asset pricing incentives, parties who engage with the firm under contract (such as debt holders and executive management) giving rise to explicit contracting incentives, and other non-investor stakeholders such as employees, suppliers and customers who create an implicit contracting incentive. Examples of asset pricing incentives include the tendency to avoid reporting a loss (Hayn, 1995), and to meet or beat earnings expectations (Bartov et al., 2002). Contracting incentives are explicit in written agreements such as debt covenants in lending agreements, which managers are likely to aim to avoid violating because of the associated costs (Chava and Roberts, 2008a). Implicit contracting incentives arise where managers recognise that the terms of trade that they may be able to negotiate with third parties depend on the strength of their reputation, which is supported by their financial position (Bowen et al., 1995). The presence of a third party may also create an incentive to reduce earnings, where reporting lower earnings avoids political scrutiny or provides the firm with a negotiating advantage (e.g.Hall and Stammerjohan, 1997, 2005). Where more than one of these incentives exists, there is the possibility of a tension between the incentives. For example, a firm in breach of a maximum leverage covenant might consider selling a highly leveraged division to rectify the breach. However this may mean the sacrifice of the division's earnings and make it difficult for the firm to achieve expected earnings. In this scenario, the manager may be forced to choose between satisfying the explicit contracting incentives by improving the covenanted leverage ratio, or satisfying the asset

[3] See Fields et al (2001) for a detailed review and references.

pricing incentives, by retaining the division to avoid reporting earnings that deviate from market expectations.

This study considers accounting choices made in the presence of multiple financial accounting incentives. Thus the fundamental research question is:

> What is the impact of conflicting financial accounting incentives on a manager's accounting choice?

More specifically, this study seeks to investigate two aspects of decisions made in the presence of multiple incentives. First, the study develops and test hypotheses in the examination of the following question:

- Which incentive will be prioritised by the manager in the presence of conflicting incentives?

Second, the study makes an exploratory examination of a further question:

- Why and how does a manager choose to prioritise satisfying one incentive over another?

1.2 Accounting Choice

The preparation of financial reports is governed by a comprehensive set of principle-based (as opposed to rule-based) accounting standards. Consequently, an element of discretion or professional judgment is still required to be exercised in the preparation and presentation of financial reports. A conclusion reached by many of the academic

commentators following the recent corporate collapses such as Enron, WorldCom, OneTel and HIH, is that this element of subjectivity is a very necessary part of the accounting process (e.g. Parfet, 2000). Arya, Glover and Sunder (2003) observe that accounting exhibits "a curious blend of rigidity and flexibility". Accounting regulators balance the rigidity of accounting rules which are comprehensive enough to ensure consistent, comparable, useful[4] information with the flexibility of a principle-based approach which allows greater applicability across firms, industries and time periods. Given the diversity of business enterprises and their dynamic nature, the development of an entirely prescriptive set of accounting standards seems unachievable. Thus, accounting choice likely remains because it is "impossible or infeasible to eliminate it" (Fields et al., 2001).

For the purposes of this study the definition of accounting choice is that described by Fields et al.(2001):

> "An accounting choice is any decision whose primary purpose is to influence (either in form or substance) the output of the accounting system in a particular way, including not only financial statements published in accordance with GAAP, but also tax returns and regulatory filings."

Accordingly, the implications of accounting choice to achieve a goal are consistent with the idea of earnings management. However, not all accounting choices involve earnings management and the term earnings management extends beyond accounting choice (Fields et al., 2001). The issue of intent is apparent in definitions of earnings management which are well established in the literature. For example:

[4] The Framework for the Preparation and Presentation of Financial Statements issued by the Australian Accounting Standards Board defines the 'usefulness' of financial reports in its discussion of the objectives of financial reporting.

> "... a *purposeful* intervention in the external financial reporting process, with the *intent* of obtaining some private gain (as opposed to, say, merely facilitating the neutral operation of the process)...." (Schipper, 1989, emphasis added)

In this study, the focus is not on the managers' opportunistic manipulations, but on the decision-making aspect of the accounting choice and the trade-off between the incentives motivating that choice. The management of earnings has been described as a continuum, from within GAAP choices that provide accurate and informative accounting information to possibly fraudulent manipulations that provide inaccurate and deceptive information (Merchant, 1987; Merchant and Rockness, 1994). The accounting choices of interest in this study are those where the use of accounting discretion is within the provisions of the accounting regulation and is therefore far removed from the choices that could potentially be viewed as fraudulent. Accounting regulation *requires* the use of judgment and discretion in the preparation of financial reports and it is the choices made in these circumstances, which the manager believes to be in the best interest of the firm, which this study seeks to explore.

For the purposes of this study, the term 'managers' refers to senior financial management and executives who may be employed under a variety of titles for example Chief Financial Officer (hereinafter CFO), Chief Accounting Officer, Finance Director, General Manager - Finance. This is consistent with the approach followed by GHR. Of the full population of managers that were contacted to participate in the study, 86% held the title of CFO. Hereinafter, the subjects in this study are referred to as CFOs.

1.3 Financial Accounting Incentives

Considerable accounting literature investigates the incentives behind the choices made by managers in the preparation and presentation of financial accounting information. Following Fields et al.(2001), these financial accounting incentives are classified into three categories: asset pricing motivations, contractual motivations and incentives to influence third parties. These authors explain that this classification is grounded in the theory of the economics of the firm (Modigliani and Miller, 1958). Using Modigliani & Miller (1958) conditions to derive a taxonomy, accounting choices are classified according to the purpose they serve or the problem that they overcome. This classification is consistent with the classifications of Watts and Zimmerman (1986) and Holthausen and Leftwich (1983). For simplicity, incentives to influence third parties are labelled 'implicit contracting' in this study, consistent with Burgstahler and Dichev (1997) and GHR. Each of these categories is discussed in chapter two.

1.4 Survey of Australian CFOs

In addition to examining accounting choices made in the presence of conflicting incentives, this thesis also offers survey evidence on the attitudes and perceptions of Australian CFOs towards performance measures reported externally and the importance of benchmarks. This survey provides rich context for developing an overall understanding of accounting choices in Australia and is a partial replication of the survey carried out by GHR in the United States of America (hereinafter, USA) in 2003. In the experiments,

evidence is gathered about the accounting choices made by these CFOs in the specific hypothetical scenarios described in the experimental cases. The survey provides evidence on the general attitudes of these CFOs towards meeting and missing earnings benchmarks, achieving smooth earnings paths and their opinions regarding which performance measures are the most important. Further, the survey evidence gives valuable insight on the similarities and differences in attitudes of CFOs in the two domiciles. The survey by GHR provided invaluable triangulation of the findings of archival research, and stimulated further avenues of enquiry in the areas of accounting choice, earnings management and voluntary disclosure. Since the vast majority of the archival research is carried out on US data and relates to the decisions of US CFOs, it is important to establish the validity of inferring the same behaviour in the Australian setting.

1.5 Motivation

The importance of understanding how managers make choices under conflict has been illustrated in recent literature. Asset pricing incentives can be so strong that managers are prepared to manipulate real activities (such as reducing discretionary expenditure, accelerating sales through discounts or more lenient credit, or overproducing inventory) in order to avoid reporting a loss (Roychowdhury, 2006). Where managers have made a choice to engage in real earnings management (such as the activities described above) there is a documented association with lower future earnings and cash flows and a decline in operating performance (Gunny, 2010). In other words, choices made in the presence of conflicting incentives have significant economic consequences. Examples of the immediate concerns of the share market include reporting positive current earnings,

or current earnings that achieve management and analysts' forecasts and do not deviate significantly from prior periods. In order to satisfy these concerns, managers may have to make choices that jeopardise the future earnings of the firm, such as reducing advertising spending, or extending more lenient credit. Evidence from Gunny (2010) and Roychowdhury (2006) suggest that managers may find themselves in situations where they have to trade off current and future earnings.

Evidence from GHR suggests that the phenomenon of these economic consequences of constrained choice that are apparent in the archival data are not an accidental outcome but rather a conscious decision. Such decisions appear to be contrary to our basic understanding of a rational decision-maker's value maximisation paradigms. One fifth of the executives surveyed by GHR would not pursue a project with a positive NPV with an associated drop in earnings, even when this drop in earnings means that the firm exactly meets the consensus forecast. Another of the scenarios indicates that many managers would reject a positive NPV project to avoid missing an earnings benchmark. These surprising findings illustrate the point that very little is currently understood about how and why financial decisions are made in the presence of conflicting incentives. The fact that the firms' responses were contrary to the expectations of value maximisation is an example of the limitations of our current positive models, in that they fail to adequately describe real financial reporting decision-making. The words of Einhorn and Hogarth (1981) are relevant "...to consider human judgment as suboptimal without discussions of the limitations of optimal models is naïve". Any advancement in the understanding of this decision process is therefore helpful to preparers, investors, lenders and standard setters.

1.6 Contribution

The findings of GHR indicate the possible tensions in the decision environment. These tensions mean that the choice to exercise accounting discretion may involve a trade-off between conflicting incentives. This study explores these choices under conflict, extending the work of GHR in the following ways:

- This study includes a consideration of multiple, simultaneous financial accounting incentives
- This study exploits experimental methodology to investigate the possible conflict that may be created in the attempt to satisfy multiple incentives.
- The manner in which participants resolve this conflict in the experimental setting will provide an indication of the dominance of one incentive over another[5].
- The distinctive properties of the incentives will also be examined in order to try to explain why one incentive dominates another.
- The responses of Australian CFOs to the same or similar questions offers an interesting comparison of the attitudes in Australia compared to the US, and importantly, conditional analysis of these responses provides an indication of the possible drivers of differences in opinions between domiciles.

[5] Graham et al (2005) provide a 'ranking' of multiple possible reasons to achieve an earnings benchmark by reporting the percentage of respondents who agree or strongly agree that that each particular incentive is a reason for meeting earnings benchmarks. This effectively provides a ranking of incentives to achieve a single desirable financial statement outcome (meeting an earnings benchmark), but it is possibly driven by the frequency with which each incentive is encountered by the respondents as opposed to the relative strength of the incentive which is investigated in this proposed study. A further difference is that Graham et al (2005)'s 'ranking' is limited to the context of meeting earnings benchmarks whereas this proposed study examines the broader scope of multiple financial statement outcomes i.e. meeting earnings benchmarks and meeting other key balance sheet ratios.

An important element of GAAP is the exercise of professional judgment and discretion, as our existing GAAP permits, or even requires, an accounting choice to be made in various situations. Since 'choice' is fundamental in the preparation and presentation of financial reports, an understanding of how preparers make such choices is an important issue to regulators, users and preparers of financial information. This study contributes insights from psychology and management to help understand and explain the decision-making behaviour of managers. While the financial accounting literature does not currently extend to developing a theory on the decision making of managers with regard to assisting stakeholders to allocate resources, insight can be gleaned from other disciplines. The psychology literature offers insight into the behavioural aspects of decision making under conflict. The management literature offers an insight into the relevant attributes of stakeholders and how a manager might evaluate and compare these attributes. An important contribution of this thesis is to begin to synthesise the critical elements of these theories where relevant to the specific financial reporting choice under examination. This consilience offers the potential for financial accounting research to evolve more swiftly by incorporating and building upon the relevant theories that have already been established in other disciplines. This study seeks to understand the decisions made by CFOs. As CFOs are managers, the management literature is clearly pertinent, and as they are people, the psychological aspects of their decisions should be incorporated too. It would seem economical and appropriate to unify the collective wisdom.

Of the three categories of financial accounting incentives considered in this study, the implicit contracting incentive is the least researched. By definition, the relationships in question are not articulated in a contract, as in the case of contracting incentives, nor is there an easily observable measure of their impact, such as the share price in the case of the asset pricing incentives. This presents obvious problems for the researcher. The very limited existing research tends to utilise proxies to identify firms with implicit contracting incentives which may be noisy[6]. This study contributes firstly, in that it adds to what is a small body of research in the area, and secondly, in that it utilises a less common research methodology in order to offer triangulation of existing findings and perhaps some fresh insights. In addition to triangulation, this use of the behavioural methodology allows for cleaner measurement of the impact of the variables by reducing the aforementioned noise created by using proxy variables.

An interesting comparison of the attitudes of managers towards externally reported performance measures and the importance of benchmarks in the USA and Australia is also offered by this study. This is important given that a significant amount of the evidence gathered by academic research is collected from US data. New research builds on and extends existing research and consequently it is of significant importance to have a clear understanding of where these findings may not carry into other settings and why this is so. Understanding the attitudes and perceptions of Australian CFOs is an helpful contribution to those academics and practitioners with an interest in the Australian

[6] For example, Bowen et al (1995) use the following independent variables to proxy for implicit contracting incentives. The production of durable products is used as a proxy for implicit claims relating to customers, and R&D expenses, scaled by firm size, are used to identify 'uniqueness' which is argued to be another indicator of the presence of implicit claims relating to customers. Cost of goods sold scaled by firm size is used to identify implicit claims relating to suppliers.

market. Perhaps even more useful, is the understanding of where there are differences in these attitudes and perceptions and what might be driving them. The analysis of the survey responses conditional on firm characteristics and CFO characteristics detailed in chapter 8 of this thesis aims to provide the basis for developing such an understanding.

The results reported in this study may be of interest from a practical as well as theoretical point of view. An improved understanding of how managers utilise the extent of professional judgment and discretion allowed by accounting regulation has implications for standard setters. Evidence on the impact of potential conflicting incentives on accounting choice, and the priorities of preparers may be useful for regulators when considering the appropriate amount of permissible discretion.

The majority of the research into accounting choice is conducted using archival data. This study contributes to the more scarce behavioural studies on accounting choice and consequently offers a triangulation of findings based on primary data with those established by the archival studies. Since the alternate methodologies have different strengths and weaknesses the use of both is complementary, contributing different insights to the general body of knowledge of accounting choice. An observation made of the existing, and predominantly archival, accounting choice research is that it has exhausted certain techniques and that fresh approaches should be explored (Fields et al., 2001).

1.7 Summary

This chapter has introduced the study with a brief discussion of accounting choice as examined in this thesis, and the financial accounting incentives that may arise in making accounting choices. The motivation for the study was described along with the contributions that the study aims to make to the extant body of research.

The remainder of this thesis is arranged as follows. Chapter two briefly reviews the relevant financial accounting literature, building the theoretical framework which underpins this study, and developing the financial accounting hypotheses. Chapter three reviews the literature on choice under conflict and develops the conflict hypotheses by incorporating insights from the fields of psychology and management. The exploratory interviews are described in chapter four, detailing the rationale behind conducting the interviews and findings from the discussions with the interview participants. Chapter five explains the research design and methodology. Chapter six comprises a brief discussion of the eye-tracking software that was used in the robustness testing of the research instrument in the piloting phase of the project. In chapter seven, the results of the experiments are discussed. Chapter eight details the responses of the CFOs to the survey section of the instrument, including a comparison with the similar survey conducted by GHR in the USA in 2003. Chapter nine offers a summary, limitations and conclusion of the study.

Chapter Two: Literature Review and Hypothesis Development – Financial Reporting

The previous chapter introduced the study and identified its contributions. This chapter reviews the research into the reporting incentives that may be present in the decision making environment, and thus exert an influence on an accounting choice. These incentives are classified into three groups, and this approach is broadly consistent with that of Fields et al. (2001). The three main groups are asset pricing, explicit contracting and implicit contracting. Following the survey of the literature on each group, this chapter includes the development of hypotheses regarding the likely behaviour of a manager in the presence of each reporting incentive. These hypotheses test incentives which are documented in the archival literature. While the tests of these hypotheses make the contribution of triangulating the archival findings with primary evidence, they serve an additional and critical purpose in this study. In order to examine the impact of multiple and in particular, conflicting incentives, it is necessary to first establish each of these incentives individually and test the impact of each incentive on the behaviour of the subjects. Only then is it possible to investigate the further and more novel issues relating to multiple, conflicting incentives which are detailed in chapter three.

2.1 Accounting Choice

In the previous chapter, the use of and discretion in making accounting choices was introduced as being a necessary part of the current accounting regime. Such choices fall in a continuum from accurate and informative to inaccurate and deceptive (Merchant, 1987). A long standing question in positive accounting research is whether the exercise of accounting discretion undertaken by managers is motivated by opportunistic behaviour or efficient contracting (Christie and Zimmerman, 1994; Watts and Zimmerman, 1978). A choice made by the manager that increases the aggregate wealth of all parties (including the manager), after contracting costs, is considered to be efficient (Christie and Zimmerman, 1994). A choice that increases the manager's wealth at the expense of another stakeholder, and does not increase aggregate net wealth is considered to be opportunism (Christie and Zimmerman, 1994). It has been observed by Fields et al. (2001) that much of the current research in this area assumes the presence of opportunism and interprets any association between accounting discretion and poor governance quality as evidence of opportunistic behaviour by managers. The implication is that accounting choices to manage earnings are not in the best interest of the firm, that they are not consistent with value maximisation. However, Bowen, et al. (2008) find no evidence of a negative association between the exercise of discretion and subsequent firm performance. Bowen et al. (2008) do find some evidence that accounting discretion is associated with future operating cash flows and future return on assets. Consistent with Subramanyam (1996) and Bartov, et al. (2002), this finding supports the notion that stakeholders may benefit from earnings management since the proper use of discretion

may signal that managers are competent and that future performance may be strong. Bowen, et al. (2008) note an important limitation of their study is the measurement error inherent in estimating accounting choice as opposed to empirically observing it. This research study minimises such a limitation by using experimental methodology to observe the use of discretion.

In this study, the focus is not on the managers' opportunistic manipulations, but on the decision-making aspect of the accounting choice and the trade-off between the incentives motivating that choice. The accounting choices of interest in this study are those where the use of accounting discretion is within the provisions of the accounting regulation and is therefore not an unethical manipulation. Accounting regulation *requires* the use of judgment and discretion in the preparation of financial reports and it is the choices made in these circumstances, which the manager believes to be in the best interest of the firm, which this study seeks to explore.

Accounting choices, for the purposes of this study, fall into two main categories: accruals management and real earnings management. Each of these is discussed in turn below. Accounting choice in this study encompasses a broad range of actions, including policy choices from allowable alternatives within the GAAP framework, as well as management of accruals where discretion is required to be exercised to determine the appropriate value. Examples include provisions such as the allowance for bad debts and provision for stock obsolescence, as well as other areas of discretion such as the timing of discretionary expenditures such as training or even research and development activity.

2.1.1 Accruals Management

Accrual management involves the exercise of discretion over within GAAP choices. As has already been indicated, much of the current research views accrual management as opportunistic, attempting to obscure or mask true performance (Dechow and Skinner, 2000). Corporate collapses such as Enron and WorldCom tend to support this viewpoint, and indicate that less choice and more regulation is desirable. However, the use of judgment is fundamental to accrual accounting and is the means by which earnings are more useful than cash flows (Dechow and Skinner, 2000). Arya, et al. (2003) conclude that the role of regulators should be to make earnings management "challenging but not impossible".

Within GAAP accounting choices that require a degree of judgment to be exercised by the manager appear to fall into two groups for the purpose of this study and are discussed in turn below. The first are those choices that cannot be prescribed by accounting standards because they are subject to a degree of uncertainty and/or require estimation. The second group of accounting choices that require judgment are those regarding accounting policy choice.

Choices subject to estimation and/or uncertainty

Much of the work on accrual management describes the accounting choices as "discretionary accruals" (Subramanyam, 1996; Louis and Robinson, 2005; Guay et al.,

1996) and typically views the choices as being related to the estimation of the appropriate timing of the recognition of uncertain future cash flows. For example, allowance for doubtful debts and provision for warranties require the manager to make some reasonable estimation of the likely cash flows that he or she anticipates based on past experience or some other reasonable basis. Further examples of the sort of accounting choices that fall into this group are those that involve estimation of the values of an asset or liability. Estimation of the fair values of non-current assets for impairment testing (Beatty and Weber, 2006) and estimation of the value of the pension fund liability (Parker and Sale, 2007) are common examples of situations that necessitate judgment and subjectivity on the part of the manager as their nature precludes prescription by accounting standards.

Accounting Policy Choices

Choices over accounting policies can either be choice over the first time application of a policy or a decision to change an accounting policy. Accounting standards currently offer a choice in some areas of more than one allowable alternative. For example the inventory standard (AASB102 Inventories) allows the choice of either FIFO or Weighted Average methods of valuing inventory. AASB 116 Property, Plant and Equipment allows the manager to elect either the cost or the revaluation model for certain non-current assets (Barlev et al., 2007).

Some of these accounting policy choices may seem fairly trivial such as the choice to depreciate non-current assets on the straight line basis or some other basis. The choice of

a depreciation rate is simply the allocation of the asset's value over its useful life and therefore may not at first glance appear to be likely to make a significant difference to current income, future income or even net assets on the balance sheet. However, an interesting study by Jackson (2008) shows that these choices have meaning to users, and that the consequent use of the information contained in the financial reports is utilised and directly impacts on the allocation decisions of users. Evidence from experiments by Jackson (2008) shows that managers of firms that use straight line depreciation are less likely to invest in a replacement asset than managers of firms that use the declining balance method of depreciation. Managers' perceptions of the utility already provided by the asset, as well as its future utility are influenced by the method of depreciation that has been applied to the asset. This study shows that investigating and understanding accounting choices is important. Accounting choices, even the seemingly trivial ones, can have significant economic consequences and demonstrate why accounting matters.

2.1.2 Real Earnings Management

Real earnings management involves the exercise of discretion over the operating activities of the firm. There is evidence indicating that managers manipulate real activities in order to avoid reporting annual losses (Roychowdhury, 2006). These activities include price discounts to increase sales, overproduction to report lower cost of goods sold and reduction of discretionary expenses to improve margins. A further example of real earnings management activity is the timing of long-lived and investment asset sales (Bartov, 1993; Gunny, 2010). Real earnings management to meet earnings benchmarks

(zero earnings and prior year earnings) is found to be positively associated with future performance (Gunny, 2010). These results are consistent with real earnings management being motivated by efficient contracting rather than opportunism, since positive future performance is likely beneficial to all parties rather than to the manager exclusively.

The CFOs surveyed by GHR expressed a preference for real actions as opposed to accrual management in order to achieve an earnings benchmark. They explained that their accrual based decisions were subject to greater scrutiny by outsiders such as auditors than real actions such as reducing discretionary spending or increasing marketing efforts such as advertising and discounting to boost sales near a period end. GHR's survey of CFOs was adapted and applied to analysts by (de Jong et al., 2009). These surveyed analysts objected to both real and accrual based earnings management but agreed with the CFOs in that both believe real actions to be less value destroying than accrual management in general.

This current preference for real as opposed to accrual based earnings management is apparent not only in the primary data from GHR and de Jong et al. (2009), but is also evident in the archival data following the recent increase in regulation. A substitution from accrual based to real earnings management post Sarbanes-Oxley has been documented (Cohen et al., 2008; Cohen and Zarowin, 2008). The trade-off between real and accrual based earnings management is predictable based on the cost of accrual based earnings management and the ability to use accrual manipulation (Cohen et al., 2008). Similarly, Wang and D'Souza (2006) find that managers decision to use real as

opposed to accrual based manipulation is influenced by the amount of accounting flexibility available.

2.2 Reporting Incentives

Considerable accounting literature investigates the incentives behind the choices made by managers in the preparation and presentation of financial accounting information. Following Fields et al.(2001), these reporting incentives are classified into three categories: asset pricing motivations, contractual motivations and incentives to influence third parties. This classification has its foundation in the theory of the economics of the firm (Modigliani and Miller, 1958). Accounting choices are classified according to the purpose they serve or the problem that they overcome. This classification is consistent with the classifications of Watts and Zimmerman (1986) and Holthausen and Leftwich (1983). For simplicity, incentives to influence third parties are labelled 'implicit contracting' in this study, consistent with (Burgstahler and Dichev, 1997) and GHR. Each of these categories is discussed in turn.

2.2.1 Asset Pricing Motivations

Accounting researchers have been studying the associations between stock prices or returns and financial reporting information since the seminal work of Ball and Brown (1968). They found the share price to be sensitive to accounting changes, with income-increasing (income-decreasing) accounting changes being associated with a positive

(negative) abnormal return, irrespective of the changes in cash flows. Based on the assumption that investors utilised accounting information as the sole source of information on the firm, early research examined this mechanistic relationship between accounting earnings and stock price (Ball, 1972; Kaplan and Roll, 1972). Since the capital market reacts to financial information, managers may be motivated to exercise their accounting discretion to influence the stock price. An alternate viewpoint is that under the efficient market hypothesis, investors have considerably more information available to them than just the financial statements and accordingly, any manipulation of accounting earnings would be futile as investors are fully informed (Fama, 1970). Since the 1990's there is growing evidence that the markets may be inefficient and that investors may not be rational (Dechow and Skinner, 2000). The use of accounting benchmarks in stock market valuation has increased substantially since the 1990's, and that this has been increased by the growth in equity-based executive compensation (Dechow and Skinner, 2000).

As earnings is a key indicator of the firm's performance, certain expectations have developed resulting in thresholds or benchmarks that managers feel compelled to meet. Firm managers believe that the dominant reasons for meeting or beating earnings benchmarks relate to stock prices (GHR). The extant literature reveals three such earnings benchmarks. Firstly, firms prefer to report positive profits and avoid reporting a loss (Hayn, 1995). Secondly, firms aim to sustain last year's performance. Past earnings distributions in the USA reveal a high incidence of small earnings increases and very few small earnings decreases (Burgstahler and Dichev, 1997). At face value, the absence of a normal distribution suggests the existence of managerial manipulation around the

benchmarks. However, there has been criticism of this finding since the sample selection method may have biased the results (Durtschi and Easton, 2009). An observation made by Durtschi and Easton (2009) is that evidence beyond the mere shape of an earnings distribution is needed to ascertain the presence or absence of earnings management. Thirdly, firms aim to meet analyst's forecasts (Degeorge et al., 1999). Of the executives surveyed by GHR, 65% or more agreed or strongly agreed that each of these earnings benchmarks were important when reporting a quarterly earnings number. When asked why the company would try to avoid missing a benchmark, 80.7 % of these executives agreed or strongly agreed that such a failure would create uncertainty about future prospects, and 60% agreed or strongly agreed that it would suggest the existence of previously unknown problems at the firm to outsiders.

The market also has a preference for earnings with a smooth, increasing trend, and prices firms whose earnings exhibit such a trend at a premium relative to other firms (Barth et al., 1999). More volatile earnings are less predictable, and for this higher risk, investors are likely to demand a premium. Information risk arising from lower earnings quality and poor disclosure is priced by both debt and equity stakeholders (Francis et al., 2005). Managers prefer a smooth earnings path because they believe it is perceived as less risky by investors and that it makes it easier for analysts/investors to predict future earnings (GHR). Evidence presented by Dichev and Tang (2008) shows that the opinion of these executives is well-founded. Earnings volatility is shown to be a reliable indicator of earnings persistence and predictability for up to five years ahead, and produce stronger results than those derived from other bases existing in the prior literature, namely accrual effect and extreme-earnings-mean-reversion effect.

Managers who issue earnings forecasts risk legal actions by investors and loss of reputation if they report actual earnings that deviate from their own forecasts (Kasznik, 1999). When the anticipated earnings turn out to be in excess of the previously forecast amount, managers have an incentive to smooth out the excess, by pushing some of the earnings into the future periods (DeFond and Park, 1997; Trueman and Titman, 1988). Kasznik (1999) finds no association between underestimated earnings and income-decreasing discretionary accruals. However, smooth earnings paths are found to contain more information for investors than volatile earnings paths (Tucker and Zarowin, 2006), and the managers surveyed by GHR confirm that they strive for smooth earnings paths. One manager stated that when an unexpected $400million profit on the sale of an investment was made, his firm purchased collars[7] to spread the gain over the next 10 quarters rather than report a large spike in earnings in the current quarter. This suggests that firms may be prepared to even incur transaction costs to achieve smooth earnings. In an examination of the use of the pension expense to manage earnings towards a steady stream, Parker and Sale (2007) find stronger support for smoothing behaviour (income-decreasing) than for income-increasing adjustments to achieve benchmark earnings.

The studies cited above are all in the USA where the capital market is large and highly regulated, analyst following is strong and financial reporting is quarterly, based on US GAAP. The institutional setting appears to have a bearing on specific benchmarks

[7] A collar is an option strategy that limits the range of possible positive or negative returns on an underlying share to a specific range (Hull 2005).

(Holland and Ramsay, 2003; Burgstahler et al., 2006). In Australia, the market is smaller, with a greater proportion of small firms, financial reporting occurs only twice a year rather than four times and the reports are based on Australian Accounting Standards. Holland and Ramsay (2003) find Australian firms exhibit the same propensity to avoid reporting a loss and to sustain prior period earnings, although the results are weaker than those in US studies.[8] This may suggest that the earnings distributions, earnings changes and the relative importance of earnings thresholds may differ across firms of different sizes (Holland and Ramsay, 2003).

2.2.2 Explicit Contracting Motivations

The firm has long been viewed as a nexus of contracts between resource providers (Coase, 1937). Under a contract, an agency relationship may be established in which one or more persons (the principal) engages another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent (Jensen and Meckling, 1976). Agency theory describes the agency problem which occurs when cooperating parties have differing goals and risk preferences (Eisenhardt, 1989).

In the case of a debt contract, agency problems describe a conflict between lender and borrower and the possibility of wealth transfers from lender to borrower post issue of the contract (Smith and Warner, 1979). Examples of such wealth transfers include asset

[8] No testing of the analyst consensus estimate benchmark was possible in Australia due to lack of reliable data

substitution and excessive dividend payments. Debt covenants are a mechanism by which the lender can protect his or her interests by restricting particular activities of the borrower or requiring certain actions to be taken by the borrower, as a condition of the lending agreement. Effectively, these covenants are additional benchmarks for the firm, and are often expressed in terms of accounting numbers and ratios.

Covenant violations are costly, as they may result in the borrower tightening control or increasing interest charges. Even when a covenant is waived, the lender is likely to exact fees and concessions in exchange for their leniency (Beneish and Press, 1993). The cost of violation has been estimated as being as much as 1.2 – 2% of the market value of equity (Beneish and Press, 1993). A more recent study by Dyreng (2009) also finds the cost of violation to be economically important. This study attempts to measure the cost of violation by observing the additional tax liability created by income-increasing earnings management aimed at avoiding covenant violation. Violation not only risks an increase in the finance costs, but also reduces the investment opportunity set, negatively impacting on shareholder wealth (Beneish and Press, 1995b). The capital market recognises closeness to covenants, resulting in a reduction in share price (Mohrman, 1993; Beneish and Press, 1995a). Thus, managers have strong incentives to consider the impact of accounting policy choice on debt covenants. Several studies have examined the influence of debt covenants on accounting policy choice, and found evidence supporting this hypothesis in a range of policy decisions over a number of decades (Daley and Vigeland, 1983; Sweeney, 1994; Dichev and Skinner, 2002).

Where a manager feels that the lender is unlikely to waive a covenant, this incentive to use accounting discretion to avoid violation is even greater (Chen and Wei, 1993). There is evidence to suggest that determinants of the lender's decision to waive includes the firm's financial characteristics, such as gearing level, probability of bankruptcy, and also the security offered on the debt (Chen and Wei, 1993). Additional insight into the lender's decision-making process regarding the inclusion of covenants is offered by an experimental study which finds the reputation of management is also taken into consideration by the lender (Mather, 1999a).

Covenant violations have been found to be relatively frequent (Dichev and Skinner, 2002), and some covenants appear to be more frequently violated than others. In a review of the literature (Smith, 1993) finds that the most frequently violated covenants, in order, are net worth, working capital, leverage, interest coverage and cash flow. Certain covenants are more popular in some countries than others. For example, dividend-restricting covenants are common in the USA, but less frequently used in Australia, possibly because of the differing corporate legislation regarding dividend payments in the two countries. In Australia, the most frequently used covenants are minimum interest cover ratios and maximum gearing ratios (Mather and Peirson, 2006).

Commentators on previous research have concluded that the evidence on whether debt covenants concerns motivate accounting choice is inconclusive (Fields et al., 2001). There are several reasons why extant research may underestimate the effects of debt contracting on accounting choice. Since debt contracts are private, the specific details are not known and critical provisions such as prohibition of changes to accounting

policies may not be taken into account by researchers (Mohrman, 1993, 1996). Further, more recent innovations in debt contracts, such as performance pricing may also be overlooked by the researcher (Beatty and Weber, 2003; Asquith et al., 2005). Performance pricing is a relatively new feature in lending agreements that is similar to a debt covenant in that it also explicitly links the reported numbers to the terms of the lending agreement. Performance pricing makes the interest charge on the loan a function of the borrower's current credit rating or of their financial ratios such as leverage or interest cover (Asquith et al., 2005). Consequently, the inclusion of performance pricing provisions in a lending agreement increases the importance of accounting information in debt contracts and potentially reduces the contracting costs of private debt (Asquith et al., 2005).

Asquith, et al. (2005) document that performance pricing provisions have been in use in the USA since as early as the 1970's. They explain that performance pricing provisions can be either interest-increasing or interest-decreasing. Interest-increasing performance pricing is designed to compensate lenders for deteriorations in the borrower's credit worthiness occurring prior to default. Borrowers receive a lower initial interest rate for granting a predetermined increase in compensation to the lender (greater interest) if the creditworthiness of the borrower deteriorates. The inclusion of such a clause in the lending agreement reduces both adverse selection[9] and moral hazard[10] costs. Interest-

[9] Adverse selection may occur when there is asymmetrical information between two parties of the contract, and is a recognised contracting problem in agency theory (Eishenhardt, 1989). In this case the two parties are the lender and the borrower, and Asquith et al. (2005) explain that adverse selection may occur as it is difficult for the lender to determine the borrower's risk ex ante. As a result, the lender may end up charging a higher interest rate than is justified ex poste. The implications are higher lending costs for the borrower and greater likelihood of incurring renegotiation costs for the lender.

decreasing performance pricing automatically reduces the interest rates on loans when a borrower's credit worthiness improves. The benefits including avoiding renegotiating costs associated with an improvement in performance and adverse selection costs attributable to asymmetric information at the inception of the loan. Asquith, et al. (2005) report a measurable economic advantage of the inclusion of performance pricing provision in debt contracts. They report that lenders offer borrowers an initial interest rate that averages 26 basis points lower when interest-increasing performance pricing provisions are included in the contract.

Using contract-specific data, Beatty and Weber (2003) report evidence that the accounting method choices are influenced by the provisions of their lending agreements. They find that voluntary accounting method changes are more likely to be income-increasing when the debt contracts allow such changes to affect contract calculations, and when these contracts include accounting-based performance pricing or dividend restrictions.

Since the link between accounting information and the lending agreement is more explicit in the case of performance pricing provisions, the inclusion of such provisions by the lender is found to be sensitive to the borrower's financial reporting quality (Costello and Wittenberg-Moerman, 2011). This study finds that poor financial reporting quality leads to a lower probability that the performance pricing provision is based on a financial statement ratio. Following an internal control weakness report by a borrower, the lender

[10] Moral hazard is another recognised contracting problem in agency theory (Eisenhardt, 1989) which describes the risk of a party not acting in good faith, and particularly when this party has incentives that are not aligned with those of the other contracting party.

decreases reliance on covenants and performance pricing relative to the period prior to the internal control weakness report (Costello and Wittenberg-Moerman, 2011). The material internal control weakness report is associated with higher interest rates, which these authors explain arise for two reasons. Firstly, the lender's reduced reliance on covenants is compensated by an increase in interest rate. Secondly, reduced reporting quality increases the uncertainty surrounding the borrower as well as the information asymmetry between borrower and lender, which also gives rise to increased interest rates.

The association between share price movements and financial statement variables has been widely examined as discussed in the previous section, but a more recent proposition is that it is the reporting demands of the debt market that shape important properties of financial statements (Ball et al., 2008b; Holthausen and Watts, 2001). The speed with which available information is incorporated into financial statements (timeliness of accounting recognition) is important to debt holders as reported financial variables affect various covenanted financial ratios. In addition to timeliness, conservatism is another important property of financial statements to debt holders, as it is considered to be one of the mechanisms by which lenders mitigate the downside risk that they bear in the debt contracting process (Watts and Zimmerman, 1986). Timely recognition of losses that result in the timely violation of covenants trigger the contractual rights of the lenders to veto decisions by management that would further diminish debt quality, such as risky new investments and capital market transactions (Ball et al., 2008b). Both debt and equity markets are likely to prefer timely financial reporting and loss recognition, all other things being equal, but Ball et al. (2008b) observe the

interesting distinction that the equity market is able to use and act on *all* available information, both financial and non-financial while the debt market's capacity to act is triggered only by the financial information, post issuance of the loan. Conservatism has been shown to benefit both lenders, through greater likelihood of violation, and borrowers, through lower interest rates (Zhang, 2008). Performance pricing, a recent innovation in some bank lending agreements, increases the importance of accounting information in debt contracts and potentially reduces contracting costs (Asquith et al., 2005). The inclusion of accounting-based covenants in debt contracts provide an obvious, explicit link between accounting information and debt contracts. Ball, et al. (2008a) developed a broader, more intuitive measure of the 'debt contracting value' (DCV) of accounting information while controlling for accounting based covenants. They find that the timeliness provided by accounting information is more important than the informativeness provided by credit ratings in syndicated loans. While their measure of DCV has been questioned (Beatty, 2008), the study serves to emphasise the point that the relationship between debt contracts and accounting information goes beyond the explicit inclusion of accounting-based covenants.

Contractual motivations for accounting choice extend beyond lending agreements. Management compensation contracts which include accounting based performance measures have also shown to influence accounting decisions. Since Healy (1985) this issue has been well examined, and Fields et al.(2001) provide a summary and references of research examining opportunistic management behaviour to maximise their own compensation. Surveyed CEOs view compensation incentives as being of lesser

importance perhaps because internal targets are often used for the purpose of calculating bonuses as opposed to the published accounts (GHR). Another possibility is that managers' personal incentives regarding compensation are actually a little more long-sighted than the current bonus, and that their concerns in this regard are more about their long-term careers and personal reputations, since at this highest level an executive's ultimate success or failure is linked to that of the firm (GHR). Of course, another possible explanation for these findings by GHR is that the surveyed CFOs may not have been entirely honest and simply given the researchers the answers that they believed would be deemed appropriate, or more socially acceptable. Such demand effects are a recognised limitation of some behavioural methodologies (Zizzo, 2010). For the purposes of this study, compensation motivations are excluded because of the inherent demand effects that may be associated with the research method.

2.2.3 Implicit Contracting Motivations

The objectives of financial reporting (SAC2) recognise that a broad range of users rely on financial reporting information. Aside from debt and equity holders discussed above, a range of third parties utilise financial reporting information and, as a consequence, managers may have incentives to manage reported numbers where disclosure policies potentially impact third parties. Two such third parties considered by extant research include tax and regulatory authorities, and this research is considered briefly later in this section. A less explored motivation arises from the implicit contracting arrangements firms have with external parties, or stakeholders.

The term stakeholders refers to groups of constituents who have a legitimate claim on the firm (Freeman, 1984) where that legitimacy is established through the existence of an exchange relationship (Hill and Jones, 1992). Stakeholder theory argues that managers should consider the interests of all stakeholders when making decisions (Jensen, 2001). This broad definition of stakeholders includes shareholders, managers, employees, customers, creditors, suppliers, local communities and the general public. Each of these individuals or groups offers something to the firm and has an explicit or implied expectation of what they expect in exchange. For example, customers supply the firm with revenues and in exchange they expect value for money, and on-going support of the purchased product whilst employees provide human capital, skills and time, expecting fair pay, working conditions and job security in exchange (Hill and Jones, 1992). A number of these stakeholders have already been considered. Specifically, shareholders are considered in the asset pricing section and stakeholders with explicit claims are covered in the contracting section. The remaining stakeholders are the ones with legitimate but implicit claims.

Implicit claims are characterised as being too nebulous and state contingent to reduce to written form at a reasonable cost (Cornell and Shapiro, 1987). For example, firms are able to continue sources of supply without new negotiations, or may employ people or provide goods and services without a contract (Holder et al., 1998). The uncertainty surrounding payoffs on implicit claims means that the value of the claims is sensitive to information about the firm's financial condition. In fact, implicit claims are more sensitive to changes in financial condition than explicit claims as the firm can default on

its implicit claims without being forced into bankruptcy (Cornell and Shapiro, 1987). A reduction in the firm's ability to honour implicit claims increases the risk to stakeholders, and therefore increases the total risk of the firm (Holder et al., 1998; Jensen, 1983). Since the market value of the firm depends on the price at which both explicit and implicit claims can be sold, it is important for managers to take account of the impact of information regarding the firm's financial condition on the price of implicit claims (Cornell and Shapiro, 1987). The financial condition of the firm is reflected in its financial statements, and hence the reporting decisions made by the firm have a direct bearing on these implicit contracts.

A significant majority of surveyed executives agreed that meeting earnings benchmarks helps the firm to assure customers and suppliers that the business is stable (GHR). One of the motivations for managing earnings is to enhance the reputation of the firm with stakeholders, as the terms of trade that a firm is able to negotiate with its stakeholders depends upon the strength of its reputation for fulfilling these implicit claims (Bowen et al., 1995). Four examples of such stakeholders are identified by Bowen et al. (1995): suppliers, customers, employees and short-term creditors. These stakeholders are likely to use reported financial information to assess the firm's reputation and its ability to fulfil its commitments. These stakeholders are also unlikely to adjust for any apparent accounting manipulations (Bowen et al., 1995). Accordingly, managers who consider the firm's reputation to be significant to its other stakeholders have an incentive to use their discretion when making accounting policy choices. Such managers tend to choose income-increasing accounting methods (Bowen et al., 1995). Burgstahler and Dichev (1997) suggest that earnings management to avoid earnings decreases and losses may

possibly be explained by the existence of other stakeholders with implicit claims. Bowen et al. (1995) offer anecdotal evidence from advertisements that show managers' belief that firm's financial image will influence stakeholders. For example, LaCie advertises that its hard drives are "backed by $400 million in assets. That means you can trust LaCie to provide a constant source of high quality machines and components."

Implicit claims are viewed as self-enforcing when the present value of the firm's gains from maintaining its reputation are greater than the present value of the gain from reneging on its promises (Bowen et al., 1995). It is possible that the customers and suppliers of some firms need more reassurance regarding the future and profitability of the firm (GHR). In a survey of CFOs, stakeholder motivation was found to be particularly important for firms that are small, those that are in the technology industry, dominated by insiders, young and not profitable (GHR). This is consistent with empirical evidence in a study of accounting policy choice, where older firms were found to be more likely than younger firms to capitalise R&D expenditure (Landry and Callimaci, 2003). This research suggests that younger firms have yet to establish their reputation for technical feasibility as well as the ability to translate balance sheet assets into future cash flows. Further insight is offered by an exploratory study of R&D firms by Entwistle (1999). In this study, interviewed executives explained that they opposed capitalisation of R&D expenditure for which they gave several reasons. One example of these reasons is that capitalisation creates a negative impression of the firm. Another is that capitalisation requires the management of future write downs and increases the difficulty in valuing assets. The executives also felt that users have a focus on cash and an expectation of losses now in exchange for profits in the future given the nature of the industry (Entwistle, 1999).

Information contained in the financial reports may also be used by the implicit claimholders in a manner that is harmful to the firm. Proprietary cost theory asserts that managers will voluntarily disclose relevant information to the market to reduce information asymmetry and the cost of capital (Dye, 1986; Verrecchia, 1983). However, proprietary costs arise from such disclosure. Not only are there costs associated with preparing, disseminating and auditing the information, but there are also costs associated with providing information that might compromise the firm's competitive position (Darrough and Stoughton, 1990; Wagenhofer, 1990). More recent evidence in the literature shows that such proprietary costs are determinants in voluntary segment disclosure decisions (Prencipe, 2004).

Tax–related accounting choice research reports evidence that firms make accounting choices to reduce taxes and thus improve cash flows (see Fields et al., 2001 for a summary and references). Fields et al.(2001) criticise much of the earlier research for the absence of reasonable alternative hypotheses, that is for considering tax incentives in isolation, but do find some studies that consider trade-offs of tax considerations and other incentives for example (Maydew, 1997; Maydew et al., 1999). Burgstahler, Hail et al.(2006) report more evidence of incentive to minimise reported earnings in private firms than public firms. They conclude that public firms are more likely to have greater upwards pressures on reported earnings relative to private firms. The greater information asymmetry between owners and managers in public firms is likely to encourage managers to maximise earnings more than is the case in private firms.

Research into the effect of regulation on accounting choice often centres on industry specific regulation (Fields et al., 2001) For example, following the 1984 chemical leak at Union Carbide, Bhopal, firms that had been less proactive in making voluntary environmental disclosures were found to be attempting to defend themselves from regulatory pressure (increased costs associated with additional industry safety requirements) with income-reducing earnings management (Patten and Trompeter, 2003). In a large scale study spanning 38 countries, (Bushman and Piotroski, 2006) find that firms in countries with high-quality judicial systems reflect bad news faster than those in low-quality systems. Firms in countries with high risk of asset expropriation and high state ownership tend to be less conservative[11] than those firms in countries with less political involvement in the economy. In common (civil) law countries, high state involvement in the economy leads firms to be less (more) conservative. This study illustrates the point that the regulatory influence exerted on financial reporting decision makers is particular to the specific legal and political environments in which the firm operates, rather than being one generic downwards pressure on earnings.

2.3 Hypotheses Development

2.3.1 Incentive Hypothesis: Asset Pricing

As established in section 2.2, managers of firms that participate in capital markets have incentives to meet earnings benchmarks. Typical benchmarks are prior year performance,

[11] Bushman and Piotroski (2006) measure 'conservatism' as slowing the recognition of good news and speeding the recognition of bad news.

and earnings forecasts which may be either analysts' estimates or management's own voluntarily disclosed forecasts. Phrased another way, managers have incentives to avoid earnings surprises, that is to avoid reporting results that deviate from market expectations (Skinner and Sloan, 2002). An important nuance emphasised by describing the objective as avoiding a 'surprise' is that an earnings surprise could be positive or negative, implying that asset pricing incentives could equally drive either income-increasing or income-decreasing choice.

One of the benchmarks to which the market has been well documented to respond is the analysts' forecasts (e.g. Abarbanell and Lehavy, 2003; Bartov and Cohen, 2007; Dhaliwal et al., 2004; Penman, 1980). In addition to analysts' forecasts there is also investigation of the market response to management's own earnings forecasts (e.g. see Hirst et al., 2008 for a review). In fact, a number of studies investigate the impact of management forecasts on the analyst forecast, indicating the importance of these management forecasts in the context of asset pricing (e.g. Libby et al., 2006; Cotter et al., 2006; Clement et al., 2003).

An underlying motivation of managers to issue an earnings forecast is the reduction of information asymmetry between these managers and the analysts as well as current and potential investors (Verrecchia, 2001). Using bid-ask spreads as a measure of information asymmetry, Coller and Yohn (1997) confirm that higher information asymmetry does appear to be an incentive to issue a management forecast. Moreover, their evidence indicates the influence of management forecasts as it documents a reduction in bid-ask spread post issue of the forecast. However, reduced information asymmetry can also be

associated with increased monitoring (Schleifer and Vishny, 1989). In such situations, managers may choose not to issue a forecast.

The decision to forecast has two possible implications described as bias and accuracy (Hirst et al., 2008). One implication arises prior to the actual release of the earnings forecast, where management has an incentive to bias the forecast. In other words, they have an incentive to strategically forecast toward a likely earnings outcome. Another possible implication arises after the issue of the forecast where management now have an incentive to strive to achieve their forecast, in order to provide evidence of the accuracy of their forecast. Forecasters are found to be more accurate over the shorter time horizon that the longer time horizon. For example, annual forecasts are found to be met 6% of the time by Kasznik (1999). In contrast, meeting quarterly forecasts is found to occur in 45% of cases studied by Chen (2004). Accuracy is less likely when the manager has less forecasting experience and less accounting flexibility (Chen, 2004).

Empirical evidence documents earnings management to increase reported earnings towards the level voluntarily forecast by management (Kasznik, 1999). Significant stock price declines have been shown to be associated with even small negative earnings surprises (Kinney et al., 2002). GHR's managers indicate many reasons for meeting earnings benchmarks, including building credibility with the stock market, and their own external reputation as well as maintaining or increasing the stock price, and reducing stock price volatility. Having issued a management earnings forecast, the manager has a strong incentive to try and meet this benchmark since the reputation for forecast accuracy has been shown to be valued by the market. The credibility of the forecast is

found to be much greater for firms with a track record of providing accurate forecasts (Williiams, 1996). Hence, the asset pricing incentive is to avoid an earnings surprise, that is to avoid reporting earnings that are either above or below the forecast earnings. In this study, the scenario given in the research instrument describes a situation in which the reported earnings may fall below the forecast. Although the asset pricing incentive could also arise in the case of reported earnings that are likely to fall above the forecast the final hypothesis is confined to the one direction relevant to the case scenario:

> **H1** Firms at risk of reporting earnings that are below their forecast are more likely to make an accounting choice to avoid an earnings surprise than firms that are not at risk of reporting earnings that are below their forecast.

2.3.2 Incentive Hypotheses: Explicit Contracting

The conflict that may arise between lenders and shareholders has been considered by academic researchers for several decades[12]. The costly contracting hypothesis put forward by Smith and Warner (1979) suggests that controlling the conflict between lender and shareholder may increase the value of the firm. The role of debt covenants in lending agreements is to attempt to alleviate and control these potential conflicts. Individual investors lending in public debt markets have less information available to them about borrower risk than private lenders, or their agents (Berlin and Mester, 1992). Accordingly, private lenders are able to tailor covenants for each specific borrower (Berlin

[12] See Fama and Miller (1972), Black (1976), Jensen and Meckling (1976) and Smith and Warner (1979) for early discussion of the conflict arising between lenders and shareholders in the pursuit of value maximisation for the firm.

and Mester, 1992). There is documented evidence of the use of more restrictive and less homogenous covenants by private lenders, relative to public lenders (Mather, 1999b). In addition to being able to offer more specifically tailored covenants, private lenders are also able to offer more renegotiation flexibility than public lenders (Berlin and Mester, 1992). In fact, private lenders may actually have an incentive to maintain a reputation for reasonableness regarding renegotiation, and more incentive than a public lender to grant a waiver (Mather, 1999a). Public lenders may not be expecting to extend further loans to the borrower in the future and therefore may perceive little gain in waiving a covenant violation. On the contrary, a private lender making regular loans may profit from a reputation for being appropriately, or constructively, flexible regarding covenant violations and renegotiation of terms (Sharpe, 1990). From this point onwards, unless otherwise specified 'debt' in this thesis refers to private debt.

The debt covenant hypothesis states that debt contracts which include covenants based on financial accounting numbers, give managers an incentive to use their accounting discretion to avoid covenant violation (Watts and Zimmerman, 1990, 1986). Several studies find evidence in support of this hypothesis. For example, a large sample study of the empirical distribution of covenant slack (the difference between the covenant threshold ratio and the actual ratio) shows statistically significant discontinuity around zero, indicating the likely efforts of managers to avoid covenant violation (Dichev and Skinner, 2002). Managers also appear to use abnormal accruals (DeFond and Jiambalvo, 1994), and make income-increasing accounting choices (Sweeney, 1994; Beatty and Weber, 2003) to avoid covenant violation. The incentive to avoid covenant violation is

stronger when the costs of default are higher (Smith and Warner, 1979; Holthausen and Leftwich, 1983), and when a waiver is less likely (Chen and Wei, 1993).

There is evidence that not only indicates, but actually quantifies some of the costs associated with violating a debt covenant, such as refinancing and restructuring costs, as well as increased lender control (Beneish and Press, 1993). Refinancing costs arise where lenders increase interest rates following a violation, and restructuring costs result from lender demands for partial or full payment. However, not all covenant violations have such severe consequences. Lenders have an alternative course of action when a borrower violates a covenant. Based on an assessment of the borrower's bankruptcy probability, as well as the maturity, size and security of debt, the lender may elect to waive the covenant violation (Chen and Wei, 1993). It is a unique feature of private debt that the possibility of negotiation exists. Renegotiation of the terms of a private debt agreement is found to be prevalent. In a sample of 1000 private debt agreements in the US, over 75% are found to be renegotiated prior to maturity (Roberts and Sufi, 2009). However, in this sample, covenant violations are found to be strong predictors of renegotiation outcomes that are unfavourable to the borrower (Roberts and Sufi, 2009).

Managers may attempt to renegotiate a loan where they foresee a potential covenant violation, and in order to avoid the violation(Roberts and Sufi, 2009). The general premise behind the inclusion of covenants in the debt agreement is the protection of the lender from wealth transfers by the mangers to other stakeholders. The covenant provides this protection by limiting the capacity of the managers and returning control rights to the lender in the event of a breach of the covenant (Chava and Roberts, 2008b).

The risk to the lender of wealth transfers is greatest at the inception of the loan where information asymmetry between the lender and the firm is greatest. As a consequence, covenants are found to be set very tightly at inception, frequently violated and often renegotiated (Garleanu and Zwiebel, 2009). In fact, the average covenant threshold is documented to be set only one standard deviation away from the level of the actual accounting ratio at inception (Chava and Roberts, 2008a). Consequently, during a typical quarter Chava and Roberts (2008) find that 15-20% of outstanding loans are in violation of their covenants. Conditional on violating a covenant, they find that a loan is delinquent 40% of the time. Since covenants are set so tightly at inception, violation often occurs rather quickly, within the first third of the life of the loan which often means that violation occurs in the first year of the loan (Chava and Roberts, 2008b).

A manager with private debt, who believes a waiver is likely may therefore have less incentive to make accounting choices that avoid the violation. However, since violation of a debt covenant triggers the lender's capacity to act, and increases the lender's power over the firm it would seem more likely than not that managers will make accounting choices to avoid such a situation.

Hence, the first explicit contracting hypothesis is:

> **H2a** Firms at risk of breaching a covenant are more likely to make an accounting choice to avoid covenant violation than firms that are not at risk of breaching a covenant.

Performance pricing is a relatively new feature in lending agreements that makes the interest charge a function of the borrower's financial ratios (Asquith et al., 2005). The interest rate in the lending agreement is not fixed over the term of the loan, but varies inversely with the changes in accounting measures of financial performance. Accordingly, this feature gives borrowers an additional incentive to make income-increasing accounting changes over and above the incentive that arises from the presence of a simple debt covenant.

One of the distinguishing characteristics of a performance pricing provision as opposed to a traditional covenant is that the consequences are certain. That is, the actions of the lender are predetermined in the case of a performance pricing provision, while the actions of the lender in response to the violation of a traditional covenant are uncertain. Using archival data, (Beatty and Weber, 2003) find evidence that borrowers are more likely to make income-increasing accounting changes as opposed to income-decreasing accounting changes if their lending agreements include accounting based performance pricing in addition to traditional covenants.

Performance pricing can take two forms: interest decreasing and interest increasing (Asquith et al., 2005). As these authors explain, each of these forms may assist in reducing the adverse selection and moral hazard problems that may arise when there is asymmetrical information between lender and borrower. With a more traditional lending agreement, when the information asymmetry reduces and credit risk reduces, renegotiation is only possible if the borrower is prepared to incur refinancing costs. The inclusion of interest decreasing performance pricing clauses may help to protect the

borrower from the mispricing of credit risk in this situation. Similarly, when a borrower's credit worthiness declines, the lender may be exposed to greater moral hazard risk without additional compensation. The inclusion of interest increasing performance pricing clauses may help to protect the lender in this situation.

As was established in the development of H2a above, the inclusion of specific accounting ratios in explicit debt contracts may give managers an incentive to manage earnings and other ratios when they fall close to the threshold levels articulated in the lending agreement. Since both traditional debt covenants and performance pricing clauses use accounting ratios, both may potentially create incentives that may impact on the accounting choices made by managers. Both forms of performance pricing, interest increasing and interest decreasing, may potentially influence the accounting choices made by managers. If the current level of the accounting based measure in an interest decreasing performance pricing clause is close to the stipulated threshold, managers may have an incentive to manage the level of this measure in order to achieve a reduction in interest charge. Equally, if the current level of the accounting based measure in an income-increasing performance pricing clause is close to the stipulated threshold, managers may have an incentive to avoid increasing their interest rate. A full examination of both forms of performance pricing is beyond the scope of this study. Accordingly, this investigation is limited only to the case of interest increasing performance pricing.

Hence, the second explicit contracting hypothesis is:

> **H2b** Firms at risk of activating an accounting based performance pricing clause in their lending agreement are more likely to make an accounting choice to avoid such activation than firms that are not at risk of activating an accounting based performance pricing clause.

2.3.3 Incentive Hypothesis: Implicit Contracting

Stakeholder theory argues that managers should consider the interests of all stakeholders when making decisions (Jensen, 2001). As explained in section 2.2, the stakeholders of relevance here are the non-investor stakeholders whose claims are implicit. Approached from the point of view of risk, these implicit claims are important as it is likely that they will rank below explicit claims, and are accordingly sensitive to changes in information about the financial condition of the firm (Cornell and Shapiro, 1987). Extant research provides evidence that implicit claims do influence financial decision making. Firms may alter their capital structures in order to lower the cost of covering the potential future cash outflows arising from implicit claims. Customers and suppliers (implicit contractors) may be unwilling to enter a business relationship with a highly leveraged firm as this reduces the firm's ability to invest in its reputation and deliver high quality products (Maksimovic and Titman, 1991). Consequently firms with implicit contracting incentives are associated with lower debt levels (Barton et al., 1989). Further, these lower debt levels appear to be a commitment mechanism which encourages customers and suppliers

to undertake relationship specific investments[13] (Kale and Shahrur, 2007). These findings illustrate the point that the existence of implicit contracting incentives influences the decision making processes of both firms. Consistent with this, earnings management by customers is found to influence the investment behaviour of the supplier and vice versa (Raman and Shahrur, 2008).

While the firm has an incentive to protect its competitive position, there is clearly a trade-off in terms of the perception of the firm by the other stakeholders. Examples of this trade-off are abundant in the political cost literature. During the Persian Gulf Crisis in 1990, oil companies were found to use accruals to reduce the earnings increases that resulted from increased product prices in order to reduce political sensitivity (Han and Wang, 1998). The conclusion drawn by these researchers is that being able to report the 'good news' to stakeholders such as those in the capital market, that earnings had increased was outweighed by the negative consequences of the associated political costs of such 'good' news during this time of crisis. Similarly, earnings management by mining companies in an effort to minimise the likelihood of the introduction of a new gold tax has also been documented (Monem, 2003). In both these examples the managers are choosing to trade-off the advantage of reporting lower earnings to one set of stakeholders against the wider reputation effects of reporting these reduced earnings to other stakeholders. In the two examples given above, reporting lower earnings is advantageous for the firm in its dealings with the regulatory authorities (the tax office in the case of the gold miners) and the wider public, as well as customers and suppliers, (in

[13] Relationship specific investments are those that support specific transactions between the firm and its stakeholders (Williamson, 1975). The assets are termed relationship specific because the value derived from their use is less than that within the relationship (Raman and Shahrur, 2008). Kale and Shahrur (2007) use R&D intensity as a measure of relationship specific investments.

the case of the oil companies). These stakeholders who are not connected to the firm by explicit contract, or by ownership (asset pricing) fall into the Fields et al. (2001) classification of 'other third parties' which in this study is labelled implicit contracting. While the influence of these implicit contracting incentives can undoubtedly be strong in some cases (as evidenced by the two aforementioned political cost studies) the firm may not always be in a position to trade off the wider reputation effects of the accounting choice to satisfy the implicit contracting incentive.

The intention to influence the behaviour of customers and suppliers can imply incentives for either income-increasing or income-decreasing accounting choices. Income-increasing accounting choices are likely when the firm is concerned with presenting itself as a reliable trading partner capable of fulfilling implicit claims when they fall due, and this would be amplified in a competitive market. However, the converse argument presents if the costs of disseminating proprietary information are high enough. As discussed in section 2.2.3 above, proprietary costs refer to the cost of disclosing sensitive information to third parties that has the potential to jeopardise the competitive position of the firm and/or its bargaining power in negotiations. Income-decreasing choices are likely when the firm has a competitive advantage to protect. While the incentives encompassed in the classification of implicit contracting as discussed above may potentially motivate either income-increasing or income-decreasing accounting choices, an investigation of both is beyond the scope of this study. Accordingly, the examination of implicit contracting in this study is limited to the case of proprietary costs that create an income-decreasing incentive. An exploration of the alternate possibilities is left for future research. Therefore, the implicit contracting hypothesis is:

H3 Firms with high proprietary costs are more likely to make an accounting choice to avoid compromising their competitive position than firms with low proprietary costs.

2.4 Summary

This chapter has surveyed the literature that identifies and investigates the reporting incentives that may be present in the decision environment. These reporting incentives are a function of the likely use of the information contained in the financial report by the relevant user groups. Accordingly, the incentives have been classified into three main groups. For each of these three groups, asset pricing, explicit contracting and implicit contracting, hypotheses have been developed to identify the likely response of managers to the presence of each reporting incentive. The next chapter reviews the relevant accounting literature on choice, and draws on some of the management and psychology literature in order to develop the hypotheses regarding accounting choices made in the presence of multiple and conflicting incentives.

Chapter Three: Literature Review and Hypothesis Development – Choice Under Conflict

The previous chapter reviewed the research into the reporting incentives that may be present in the decision making environment and exert an influence on an accounting choice. Three groups (asset pricing, explicit contracting and implicit contracting) were discussed and hypotheses regarding the likely behaviour of a manager in the presence of each reporting incentive were developed.

This chapter considers the complexity of the typical decision environment and the impact that this complexity can have on accounting choice. To this end, insight is drawn from fields other than financial accounting, such as psychology and management. In particular, this chapter considers the complexity arising from the presence of multiple user groups, and probes the issues that arise when a conflict situation occurs because the reporting incentives each motivate different choices.

This chapter is arranged as follows. Section 3.1 discusses the complexity in the decision environment and draws on the psychology literature to understand decision making behaviour and to introduce multi-attribute decision theory. Section 3.2 briefly discusses aspects of prospect theory relevant to the sort of choices examined in this study. Section 3.3 reviews stakeholder theory in the management discipline in order to understand the attributes of stakeholders and to develop a theory on how managers might draw a

conclusion about 'who and what really matters'. The chapter continues with the development of conflict hypotheses in section 3.4 to examine how managers will trade-off satisfying conflicting reporting incentives by applying stakeholder theory to the accounting choice. Final concluding remarks are offered in section 3.5.

3.1 Complexity in the Decision Environment

3.1.1The conflict framework

The conflict experienced by an individual when choosing between competing alternatives has long been examined by psychologists. This conflict arises from the individual's evaluation of the alternatives' relative strengths and weaknesses and it is on this basis that the psychology literature typically classifies conflicts within a conflict framework. When the evaluation of competing attributes of each alternative is primarily positive, and the conflict is between two desirable goals, the conflict is described as an 'approach-approach conflict'. Conversely, when the conflict is between two undesirable goals and is essentially an evaluation of negative attributes the conflict is described as an 'avoidance-avoidance conflict'(Lewin, 1951; Miller, 1944). Since approach-approach conflicts are characterised by attraction to the focal item, and choosing on the basis of merit, such a choice is relatively easy and psychologically pleasant. In contrast, avoidance-avoidance conflicts involve unattractive alternatives and are difficult, taking longer to resolve (Houston et al., 1991). Approach-avoidance conflicts arise when a decision outcome has

both positive and negative characteristics, for example an individual may fear something he or she also desires (Lewin, 1951).

Since approach-approach conflicts are essentially positive they are better oriented to the task of 'choosing', and conversely avoidance-avoidance conflicts are more oriented to 'rejecting' (Nagpal and Krishnamurthy, 2008). Choosing between two negative alternatives is harder and takes longer than rejecting one of these alternatives. Conversely it is more difficult to reject one of a pair of positive alternatives than it is to choose one. It is not only the degree of attraction or aversion that the decision-maker feels towards an attribute (valence), but the combination of the valence and the type of task that makes a choice more difficult and influences decision time (Nagpal and Krishnamurthy, 2008). The implication of this finding is that a decision-maker can potentially reduce decision time and difficulty by reframing his particular choice problem so that the task and valence combination are more compatible.

The conflict treatment condition in experiment one in this study, in which both of the two financial accounting incentives are present, can be described as an avoidance-avoidance conflict. The subject is required to make a choice that will result in the firm avoiding only one of two possible negative consequences. As an avoidance-avoidance conflict this will potentially be a more complex decision for the subject to make than is the case in experiment two. The conflict treatment condition in experiment two involves a choice between improving bargaining power in forthcoming negotiations and avoiding triggering a penalty interest rate clause in the lending agreement. As such, this conflict would be classed as an approach-avoidance conflict.

3.1.2 Intertemporal Choice

Berns, Laibson and Loewenstein (2007) define intertemporal choice as "a decision with consequences that play out over time". Given this definition, many accounting choices are in fact intertemporal choices. Since accrual accounting requires the allocation of revenues and expenses to the period in which they occur rather than the period in which the cash is paid or received, many accounting policies involve accounting entries that affect multiple time periods. At a fundamental level, the recognition of assets and liabilities on the balance sheet is an indication of the expectation of the flow of *future* economic benefits to and from the firm. The time perspective is therefore an important aspect of accounting and indeed of accounting choices but little research on accounting choice includes a consideration of this aspect. An interesting study that does consider the intertemporal implications of an accounting policy was conducted by Jackson (2008) in the USA. Managers in firms which apply straight line depreciation were found to be less likely to choose to replace a capital asset than managers in firms which apply an accelerated depreciation method, even though investing in the replacement asset was the economically efficient choice. Jackson (2008) finds that the different implications for future earnings that result from the application of the different depreciation methods alters the manager's decision. Further, the pattern of the depreciation charges that allocate the value of the asset across different time periods influence the manager's perspective of both the past utility, and the future utility of the asset. The psychological impact of financial information evidently varies with different accounting policies and this

in turn alters the decision made by the user of the information. A consideration of this psychological impact thus bears directly on the usefulness of accounting information.

In investigating decisions that involve a stream of payoffs over time, some interesting observations about how decision-makers trade-off current and future payoffs appear in the literature. The conventional wisdom of the basic discounted utility model assumes a constant discount rate over the time horizon. However this does not seem to be an adequate description of how people really discount future pay-offs. Discount rates appear to decline. For immediate pay-offs, or those in the very near future the discount rate is high, and then drops off quite sharply, that is people are very impatient with regard to short term time delays (Laibson, 1997). The conclusion drawn in the literature (O'Dongoghue and Rabin, 2003; Frederick, 2003) is that people are more patient for longer time horizons, accepting lower compensation for forgoing a current reward for a longer period. In econometric terms, the discount function flattens out more than the exponential discounted utility model predicts.

Another phenomenon evident in the literature about a sequence of pay-offs over time is a strong preference for improving sequences (Prelec and Loewenstein, 1993). An example of this preference has been shown in the labour market. Workers prefer salary contracts that present remuneration payments as an increasing sequence of pay-offs even when the alternative decreasing sequence of pay-offs has a higher net present value when discounted (Loewenstein and Sicherman, 1991; Hsee et al., 1991). Two explanations have been offered for this preference for small improving sequences. The first is based on anticipation and savouring effects. The basic premise is that people experience utility

from both the event itself and the knowledge of the impending event (Loewenstein, 2006). If the impending event is positive then the excitement and anticipation of the event creates a positive utility. Similarly a negative event creates dread, a negative utility. Subjects who knew they were going to get electric shocks preferred receiving the shocks sooner rather than later, and preferred stronger shocks sooner to lesser shocks later (Berns et al., 2006). The second explanation is consistent with prospect theory, and is simply that the first pay-off in the sequence serves as a reference point. Subsequent pay-offs in a declining sequence are thus losses, but in an ascending sequence they are gains.

The preference for improving sequences gives psychological support to the documented preference for smooth income paths (e.g.Graham et al., 2005). Similarly, the findings of Berns, et al. (2006) are helpful in understanding user and preparer acceptance of a 'big bath' in a poor year. When the outcome is going to be negative, the tendency is to prefer that this occurs as soon as possible. A large write-off in the current year is preferred to smaller write-offs spread over future periods.

3.1.3 Multi-attribute decision theory

In the absence of a comprehensive theory on choice, relevant research is drawn from a range of disciplines. Two traditions are apparent in this research: formal modelling is the approach that tends to be used by economists, management scientists and decision researchers, while the approach that characterises the fields of history and law is a reason-based approach (Shafir et al., 1993). Formal models of rational choice include

both normative models, such as expected utility theory (von Neumann and Morgenstern, 1947), and positive models, such as prospect theory (Kahneman and Tversky, 1979). These models are value-based, in that they associate a numerical value with each alternative and characterise choice by the maximisation of value. While this approach has the advantage of rigor and tractability, it is sometimes difficult to apply to more complex real-world decisions and may not adequately capture aspects of the deliberation process (Shafir et al., 1993). In contrast, the reason-based approach is more informal and is based on the identification of various reasons and arguments that influence decision, explaining the final choice in terms of the balance between those reasons for and against the available alternatives. This more intuitive approach provides a more natural way to understand the conflict that characterises decision-making, but bears the limitation of being qualitative and vague (Shafir et al., 1993). These authors suggest that the two approaches are not substitutes but are complementary, and that analysing the reasons behind some choices may generate new hypotheses for further research.

To illustrate the different perspectives offered by these two approaches, consider a simple choice made between two alternatives that are of equal value to the decision maker. Each alternative may have different strengths and weaknesses, but in this instance the assumption is that these advantages and disadvantages cancel each other out and the alternatives are therefore of equal value. Applying the more econometric, utility model approach, the prediction would be that each alternative is equally likely to be selected. The utility model approach allows a prediction to be made on the selection probability of each alternative (0.5) but it does not provide any insight on how the decision-maker will actually choose between the alternatives. Following the alternate,

reason-based approach, this choice theory suggests that the decision-maker will utilise choice mechanisms that are easy to explain and justify to others on the basis of a priority of ordering of aspects. (Tversky and Kahneman, 1972; Tversky, 1969). This means that the decision-maker will consider each aspect or dimension in order of priority and eliminate the inferior alternative.

The issue of the decision-maker's priority is pursued further by Slovic (1975) who finds that decision-makers select the alternative (from an equally valued pair) that is superior on the dimension that is most important to them. This deceptively simple premise is helpful in predicting a decision-maker's choice. When faced with two alternatives that both deliver the same value, the decision-maker still must have some mechanism by which to make a selection. Where the advantages and disadvantages of two alternatives cancel each other out, it is the alternative which is superior on the dimension or attribute that the decision-maker considers to be more important, that has a greater probability of selection.

The decision-maker's belief about what is more important and consequently his formation of priority, or preference is also an interesting question. Dissonance theory has been described by Massaro (1997) to be the key to linking motivational and cognitive elements of decision-making. According to dissonance theory, if a person holds two inconsistent beliefs he experiences dissonance, which, being psychologically uncomfortable, drives him to reduce it by changing either one or both beliefs to make them consonant (Festinger, 1957). Thus, these beliefs (which must influence the decision-maker's priorities) may in fact be considered part of the option set, and included

in the utility model (Akerlof and Dickens, 1982). This consideration of the economic consequences of cognitive dissonance and its application in economics and related fields is a good example of the observations made by commentators (Shafir et al., 1993; Einhorn and Hogarth, 1981; Hogarth, 1993) that the complementary views of different knowledge can combine usefully to contribute to the greater body of knowledge.

In the interest of this consilience, this chapter continues with an exploration of two avenues, from different fields of academic study that might inform our understanding of financial decision making. The first line of inquiry is into the field of psychology to identify where prospect theory might be useful to elucidate the conflict decision with its developed thinking on uncertainty. The second avenue explores an area of the management literature that examines stakeholder theory. This theory is relevant since the conflict decisions investigated in this study can be described as multi-attribute decisions. When making a choice, decision makers typically identify the attributes of each alternative and then use heuristics to evaluate the relative attributes of each alternative (Plous, 1993; Tversky and Shafir, 1992). An assessment of the relative attributes of stakeholders in financial decisions has yet to be established in the empirical financial accounting literature but is well advanced in the management discipline. The key ideas in the two streams of literature are used as the basis for developing the conflict hypothesis.

3.2 Prospect Theory

One of the fundamental limitations of utility theory is its inability to describe the behaviour of decision-makers in making choices under risk and uncertainty. Prospect theory was an important development in choice theory which proposed an alternate theory which addressed this limitation (Kahneman and Tversky, 1979). Of the important phenomena observed by Kahneman and Tversky (1979) and predicted by their prospect theory, two are most relevant to this study: the reflection effect and the certainty effect.

3.2.1 The Reflection Effect

Prospect theory replaces the notion of 'utility' in expected utility theory (von Neumann and Morgenstern, 1947) with 'value'. Value is assigned to gains and losses rather than to final assets. Whereas utility is usually defined in terms of net wealth, prospect theory defines value only in terms of deviations from a reference point, namely gains or losses (Plous, 1993). The value function for losses is different from the value function for gains, and is depicted by Kahneman and Tversky (1979) as an S-shaped hypothetical value function. The value function is convex and relatively steep in the loss domain and concave and not quite as steep in the gain domain. Accordingly, prospect theory predicts that the preferences of the decision maker will depend on how the choice is framed. Depending on the position of the reference point, a choice may be framed as a gain or a loss. If framed as a gain, the decision maker will be risk averse, and if framed as a loss, the decision maker will be risk seeking.

3.2.2 The Certainty Effect

The basis of the certainty effect is the Allais Paradox (Allais, 1953) which shows that decision makers violate the cancellation principle which is a fundamental principle of expected utility theory. According to the cancellation principle, a choice between two alternatives should depend only on how those two alternatives differ and not on any factor that is constant for both alternatives (Plous, 1993). In their examination of this phenomenon, Tversky and Kahneman (1979) find that the choice depends on the degree of certainty. They label this the 'certainty effect' in which "a reduction of the probability of an outcome by a constant factor has more impact when the outcome was initially certain than when it was merely probable" (Tversky and Kahneman, 1981). A simple example of the certainty effect is provided by the economist Richard Zeckhauser (1991), who observed that people are willing to pay more to remove the only bullet from a gun in Russian roulette than they would pay to remove one of four bullets. Although the probability of being shot is reduced by the same amount with the removal of a bullet in each case, people consider the difference between zero and one bullet to be more important than the difference between three and four bullets. Thus the certainty effect describes the tendency to overweight outcomes that are considered certain relative to outcomes which are only probable.

Applying prospect theory to an accounting choice would suggest that the certainty, or probability, of the consequences of the accounting choice will have an influence on the decision. When there is greater certainty that the firm will suffer negative consequences

as a result of a particular accounting choice, it is likely that the manager will try to avoid these negative consequences. When two stakeholders are present, and negative consequences of an accounting choice are attached to each stakeholder, the manager is likely to give priority to avoiding the more certain, or more probable, of these outcomes. In other words, the stakeholder who is more likely to cause a negative consequence for the firm will be the stakeholder that the manager will prioritise. Section 3.3 will draw on management literature to give a broad theoretical perspective on how a manager might prioritise stakeholders. In consonance with the taxonomy of this theory, the importance of the stakeholder from the perspective of the manager is described as salience.

3.3 Stakeholder Theory

More than two decades ago, Edward Freeman directed the attention of management researchers to 'The Principle of Who or What Really Counts' (Freeman, 1984). Since then a substantial body of literature on stakeholder theory has evolved and has been applied in a variety of disciplines such as finance, accounting, and marketing (Freeman et al., 2010). One of the themes in this now expansive body of literature (see Laplume et al. (2008) for a review) is stakeholder definition and salience. Freeman's classical definition of a stakeholder is "any group or individual who can affect or be affected by the achievement of the organisation's objectives" (Freeman, 1984). Variations on the definition of a stakeholder have since appeared in the literature. This is to be expected, particularly in light of the fact that a large strand of research in stakeholder theory looks to the identification of those stakeholders of the firm that are, or were in the past, less

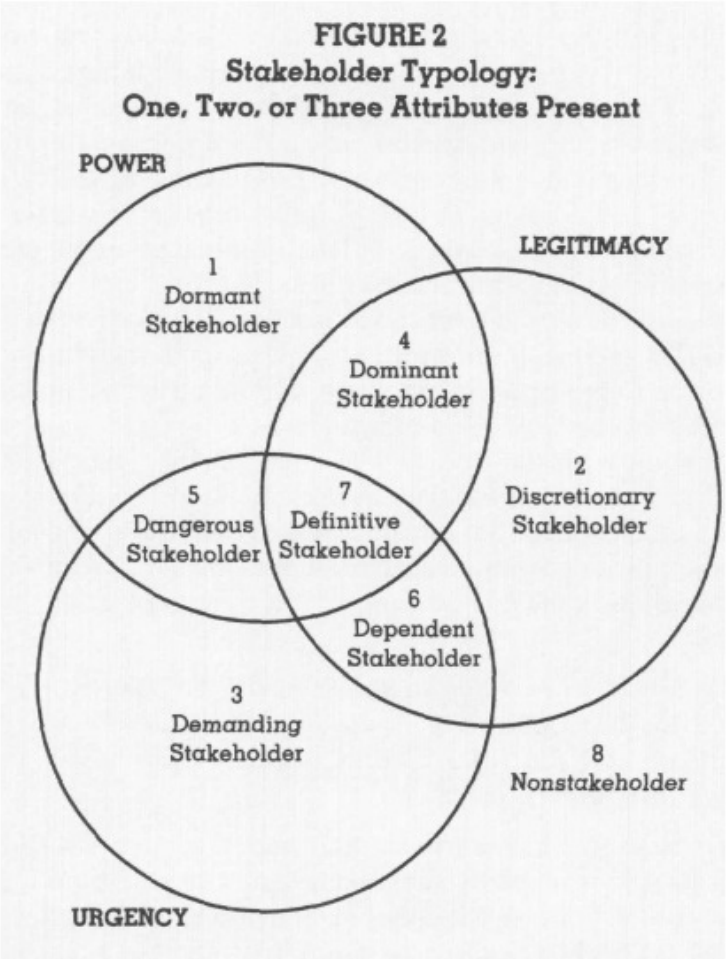
obvious or more controversial, such as communities (Dunham et al., 2006), God (Schwartz, 2006), and the environment (Driscoll and Starik, 2004).

However, for the purposes of this study, it is not the definition of a stakeholder that is of most interest, but the salience of the stakeholder. The user groups identified in the previous chapter (for example shareholders, lenders and customers) fall within Freeman's classical definition and within the later variations of this definition. The theory of stakeholder salience aims to explain to whom and to what managers are actually paying attention (Mitchell et al., 1997). As this theory explains how managers prioritise stakeholder relationships it provides a useful theoretical framework to understand how managers might trade off conflicting incentives in making accounting choices and is discussed in more detail in the following section.

3.3.1 Stakeholder Attributes

A dynamic model of stakeholder identification and salience was proposed by Mitchell et al. (1997). In the model, stakeholders are identified by their possession of one or more of three attributes: power, legitimacy and urgency. The model is depicted below in figure 3.1.

Figure 3.1 Stakeholder Typology from Mitchell, et al. (1997)



Power

> "Power may be tricky to define, but it is not difficult to recognize: [it is] the ability of those who possess power to bring about the outcomes they desire" (Salancik and Pfeffer, 1974)

Power has been categorised for the organisational setting as coercive, utilitarian or normative power (Etzioni, 1964). Coercive power is based on the physical resources of force, violence or restraint. Utilitarian power is based on material or financial resources, and normative power is based on symbolic resources, such as prestige or esteem as is the case with social power. To the extent that a party to a relationship has the ability to gain

access to coercive, utilitarian or normative means to impose its will in the relationship, it has power (Mitchell et al., 1997). Importantly, access to these means can be acquired as well as lost and accordingly, power is transitory and variable rather than static.

Legitimacy

Stakeholders that are socially accepted and anticipated by the mangers are deemed legitimate (Laplume et al., 2008). Mitchell et al. (1997) use the following definition of legitimacy, which they acknowledge is "imprecise and difficult to operationalize"

> "a generalized perception or assumption that the actions of an entity are desirable, proper or appropriate within some socially constructed system of norms, values, beliefs and definitions" (Suchman, 1995)

A further issue raised on the question of legitimacy is whether it is in fact distinct and separable from power. Together legitimacy and power combine to create authority (Weber, 1947). However, those with a legitimate claim, such as shareholders, may not always have the power to influence the firm, as is the case if, for example, those shareholders are minority shareholders

Urgency

A relationship or claim is considered to be urgent if it is both time sensitive and important or critical to the stakeholder (Mitchell et al., 1997). Thus, urgency is the degree to which stakeholder claims call for immediate attention. A point that is stressed is that time

sensitivity alone is insufficient to identify a claim as urgent. In the view of Mitchell et al. (1997) an important element of urgency is the degree to which the manager would consider the claim as important or critical to the firm.

3.3.2 Stakeholder Salience

Stakeholder salience is defined as the degree to which managers give priority for competing claims (Mitchell et al., 1997). This model is described as an additive one, where salience increases with the number of attributes that are associated with the stakeholder.

Salience = f(power, legitimacy, urgency)

Accordingly, and as is evident in the diagrammatic depiction of the model in Figure 3.1, the most salient stakeholders are the 'definitive' ones, that are both legitimate and powerful and have urgent claims. In this thesis, the experiments describe scenarios in which more than one definitive stakeholder is present. The model of stakeholder salience thus helps to explain why the reporting decision in the experimental task is a potential conflict. As an extension of this, the formal structure of this model might be helpful to explain how the trade-off decision may actually be made. A contribution of this study is therefore the application of the stakeholder salience model in a financial reporting setting. Not only does this inform financial accounting research but it probes the management definitions of some of the salience attributes and explores the ability of the model to be extended beyond identifying stakeholders in groups of increasing salience to identifying degrees of salience within the group of definitive (most salient) stakeholders.

In addition to being additive, the model is also described as dynamic, rather than static. It is dynamic for two reasons. Firstly, it depends on managers' perceptions of each attribute. Perceptions may vary over time resulting in variation in the salience of each stakeholder over time. Secondly, the attribute of urgency itself brings dynamism to the model. Since urgency includes the quality of time sensitivity, it conveys the possibility of variability over time. Time sensitivity must be considered in conjunction with the importance of the claim to the firm and the 'critical' nature of the claim (Mitchell et al., 1997). Consequently, it would appear that these qualities would be pivotal in the prioritisation of the competing claims. The theoretical framework as presented above has been well accepted (Parent and Deephouse, 2007). However, the definitions of these qualities of importance and criticality appear to be worthy of some refinement. This thesis aims to make a contribution in this area by examining these qualities in order to articulate them, begin to define them, and apply them in developing the conflict hypothesis for the current experiments.

3.4 Hypotheses Development

Sections 3.2 and 3.3 have summarised the key literature drawn from the relevant fields of research of management and psychology. The key ideas distilled from this body of work that form the basis from which to begin developing the hypotheses are summarised below:

- The salience of the stakeholder is positively related to the certainty of the consequence of not meeting the stakeholders' expectations.
- The manager will choose to satisfy the more salient stakeholder.
- Salience is a function of power, legitimacy and urgency

Since the basic model of stakeholder salience introduced in section 3.3.2 is intended to illustrate the basis for prioritising competing claims, it will be instructive in analysing the trade-off decision that the financial reporting manager is required to make in the experimental scenarios of this study. In order to identify which stakeholder is the more salient the attributes of each stakeholder must be evaluated. The reason that the stakeholders are in conflict is that they are all definitive stakeholders (that is they all possess each of the three attributes described in the additive model). To distinguish the more salient stakeholder it is important to identify the sources of differentiation between these attributes in each stakeholder. The stakeholders in question would appear to all be legitimate according to the definitions discussed in section 3.3.1. In fact, the stakeholders that are discussed in chapter two (shareholders, lenders, customers, suppliers) are all legitimate and there would not appear to be much discernible basis for differentiating relative degrees of legitimacy between them. The perceived power of each stakeholder may possibly vary. One approach to examining this issue would be to include questions designed to measure the subjects' perceptions of the power. However, to execute such an examination properly would require the inclusion of a significant number of additional questions of a more psychometric nature that is considered to be beyond the scope of this study, and an issue for future research. An alternative approach centres on the possibility that this perception of power will be influenced by the nature of the

relationship, or proximity, between the firm and the stakeholder. It will be argued that proximity is a factor of the urgency attribute. It would seem appropriate then to focus on urgency as the attribute that is most likely to differ between the stakeholders.

Mitchell, et al. (1997) refer to the Merriam Webster dictionary definition of urgency to identify its components. They conclude that a claim can only be considered urgent, which has synonyms such as compelling, driving and imperative, if it is both time sensitive and is 'important or critical' to the firm. In fact, these two adjectives are defined as the second condition of urgency (with time sensitivity being the first) as follows:

"… (2) criticality – the importance of the claim or the relationship to the stakeholder."

Mitchell, et al. (1997) illustrate this condition with four examples:

- *" Ownership – the stakeholder's possession of firm–specific assets, or those assets tied to a firm that cannot be used in a different way without loss of value (Hill & Jones, 1992, Williamson, 1985), making it very costly for the stakeholder to exit the relationship;*
- *Sentiment – as in the case of easily traded stock that is held by generations of owners within a family, regardless of the stock's performance;*
- *Expectation – the stakeholder's anticipation that the firm will continue providing it with something of great value (e.g. compensation and benefits in the case of employees); or*
- *Exposure – the importance the stakeholder attaches to that which is at risk in the relationship with the firm (Clarkson, 1994)"*

  (Mitchell, et al., 1997)

The stakeholder salience model has been widely accepted (Parent and Deephouse, 2007). However, Driscoll and Starik (2004) suggest that there is an omitted variable. They propose including the attribute of proximity to include not only those stakeholders with geographic proximity (for example where two firms share adjacent properties) but also where there is proximity in their ideas, approaches and actions (for example buyer-supplier relationships in a shared value chain). This taxonomy has intuitive appeal given its well defined use in fields of law and auditing. It would appear to be a word that succinctly describes the relationships in the examples of 'critical' relations given by Mitchell et al. (1997). Therefore, rather than an additional attribute , as proposed by Driscoll and Starik (2004) it would appear to be a refinement of the term 'critical' or at least a clearer descriptor of one of the qualities a stakeholder requires to be described as 'critical' to the firm. Perhaps it would be appropriate to consider whether in fact the second condition for urgency described by Mitchell, et al. (1997) is in fact two separate constructs consistent with their introductory discussion of this condition as "important or critical". Proximity would appear to be an apt label for "important" since it refers to the relationship between the firm and the stakeholder and provides information about why and in what way the relationship might be important to the firm.

If proximity is an appropriate substitute for "important" because it succinctly captures the ideas conveyed by the four examples given by Mitchell, et al. (1997), consideration must be given to defining "criticality". Consistent with the approach in Mitchell, et al. (1997), a sensible starting point is the dictionary definition. The Merriam Webster definition includes:

> ***"2 :*** *of, relating to, or being a turning point or specially important juncture:*
>
> ***a :*** *indicating or being the stage of a disease at which an abrupt change for better or worse may be anticipated with reasonable certainty…*
>
> ***…b :*** *relating to, indicating, or being a state in which or a measurement or point at which some quality, property, or phenomenon suffers a finite change or undergoes drastic alteration"*

There are two notable points in regard to this definition. Firstly, this use of the term 'critical' refers to a potentially life-threatening situation, that is it suggests that a claim may be critical if it relates to a turning point at which the survival of the firm is at risk. A possible example of such a situation is the potential loss of financing that may result from a covenant breach. Part b of this definition is also relevant since where a firm's survival is in threat, the going concern basis of reporting may no longer be considered appropriate. Therefore a claim that has the potential to trigger such a significant change to the financial reports is very well described by this definition of critical as being a point at which "some quality, property, or phenomenon suffers a finite change or undergoes drastic alteration". The second notable point is the use of the words "reasonable certainty" in part 2a) of the definition reproduced above. The importance of considering the probability or certainty of the firm suffering negative consequences as a result of the not meeting a stakeholders claim was identified in the psychology literature on prospect theory. Given this consistency it would seem appropriate to include certainty as an additional factor of the attribute of urgency. Accordingly, the attribute of urgency now appears to be a function of four factors.

Urgency = f(time sensitivity, criticality, proximity, certainty)

Since criticality captures the aspect of organisational survival, the work of Jawahar and McLaughlin (2001) is pertinent. They identify the limitation of the stakeholder salience

theory model as proposed by Mitchell, et al. (1997) of being able only to associate attributes with the salience of stakeholders and failing to be able to describe how competing stakeholders would be prioritised. They incorporate resource dependence theory (Pfeffer and Salancik, 1978), prospect theory (Kahneman and Tversky, 1979) and the organisational life cycle (Drazin and Kazanjian, 1990) in order to develop a descriptive stakeholder theory. A basic principle of resource dependence theory is that organisations will pay more attention to the demands of those stakeholders that control resources that are critical to their survival (Sheppard, 1995; Agle et al., 1999). The different levels of attention paid to stakeholders in relation to the extent to which they control resources critical to the organisation's survival manifests as the employment of different strategies. Following Clarkson (1995), these strategies are described as proaction, accommodation, reaction and defence. Proaction describes a strategy of very actively attempting to meet the needs of the stakeholder group and even includes anticipating their immediate concerns. Accommodation is similar in that the strategy is also to meet the needs of the stakeholder but in a less proactive manner. Defence is the strategy of doing the minimum legally required to satisfy the stakeholder and reaction is the more extreme case in which the needs of the stakeholder are not met[14]. Jawahar and McLaughlin (2001) apply prospect theory in order to posit when each of these strategies is most likely to be adopted. Prospect theory as described in earlier sections of this chapter includes the premise that decision makers are risk averse in the gain domain and risk seeking in the loss domain. When organisational survival is under threat the decision becomes framed in the loss domain, and in the absence of such a threat to survival the decision is framed in the gain domain (Jawahar and McLaughlin, 2001). The riskiest strategy is reaction,

[14] For a more detailed description of these strategies as described in the management literature see Wartick and Cochrane (1985) and Carroll (1979).

where the needs of the stakeholder are ignored and the firm bears the risk of failing to meet the claim. The least risky strategy is proaction, where satisfying the stakeholder is of prime importance. Accordingly, Jawahar and McLaughlin (2001) propose two theorems on the basis of resource dependence theory and prospect theory:

> "*Theorem 1: In the absence of threats to organizational survival, a gain frame will be adopted, and the organization will pursue a risk-averse strategy and actively address all stakeholders' issues.*
>
> *Theorem 2: In the presence of threats to organizational survival, a loss frame will be adopted, and the organization will pursue a risky strategy. The risky strategy will involve actively addressing issues of only those stakeholders who are relevant to the immediate loss threat while at the same time defending or denying any responsibility for issues of other stakeholders, taking, of course, the risk associated with such neglect."*

Incorporating these insights into the attribute of criticality in the expanded stakeholder salience model, these theorems imply that where the stakeholder claim is deemed to be critical, the manager will have to at least accommodate the claim, and will have to employ a defensive or even reactionary approach to other less critical stakeholders. In other words, the claim that threatens survival will be prioritised above any other, giving a direct relationship between salience and criticality.

Time sensitivity is defined by Mitchell, et al. (1997) as "the degree to which managerial delay in attending to the claim or relationship is unacceptable to the stakeholder". The

relationship between urgency and time sensitivity is thus a direct one: the more time sensitive the claim is, the more it will be considered urgent. Time sensitivity alone does not constitute urgency, other factors must be considered (Mitchell, et al., 1997).

Proximity describes the relationship between the firm and the stakeholder and their ability to exert an influence on one another. As such, proximity may in fact also impact on power. The relationship between urgency and proximity is an inverse one. Where a firm and its stakeholder are closely linked a mutual dependence develops. The ability to negotiate with each other will potentially reduce the likelihood of the firm being forced to meet the stakeholders claim. For example, if a borrowing firm is about to breach a covenant in their debt agreement, there is the possibility that they could negotiate a waiver with the lender. A mutual dependence exists between borrower and lender since the lender may not easily be able to substitute assets, and may incur considerable costs both financial and non-financial if they enforce the terms of the agreement. The lender may also have some trade-offs to consider since reputation effects in a competitive debt market may be non-trivial (Sharpe, 1990; Chen and Wei, 1993). Negotiating a waiver may in some cases provide a better solution for both lender and borrower. The ability to negotiate and the strength of the bargaining power that the firm has with the lender is a complex issue (see section 2.2.3 for full discussion) but is at least in part captured by the attribute 'proximity'. The salience of the stakeholder is negatively related to the mutual dependence (proximity) of the stakeholder. Proximity appears to convey information regarding how 'critical' or important a stakeholder is, in the urgency attribute, but it appears to also have an impact on the power attribute. There needs to be proximity between the firm and the stakeholder to establish a connection between the two parties.

However, where this connection or proximity is very close the mutual dependence increases (reduces) bargaining power for the stakeholder (firm). Thus greater proximity reduces the stakeholder's salience from the perspective of the manager.

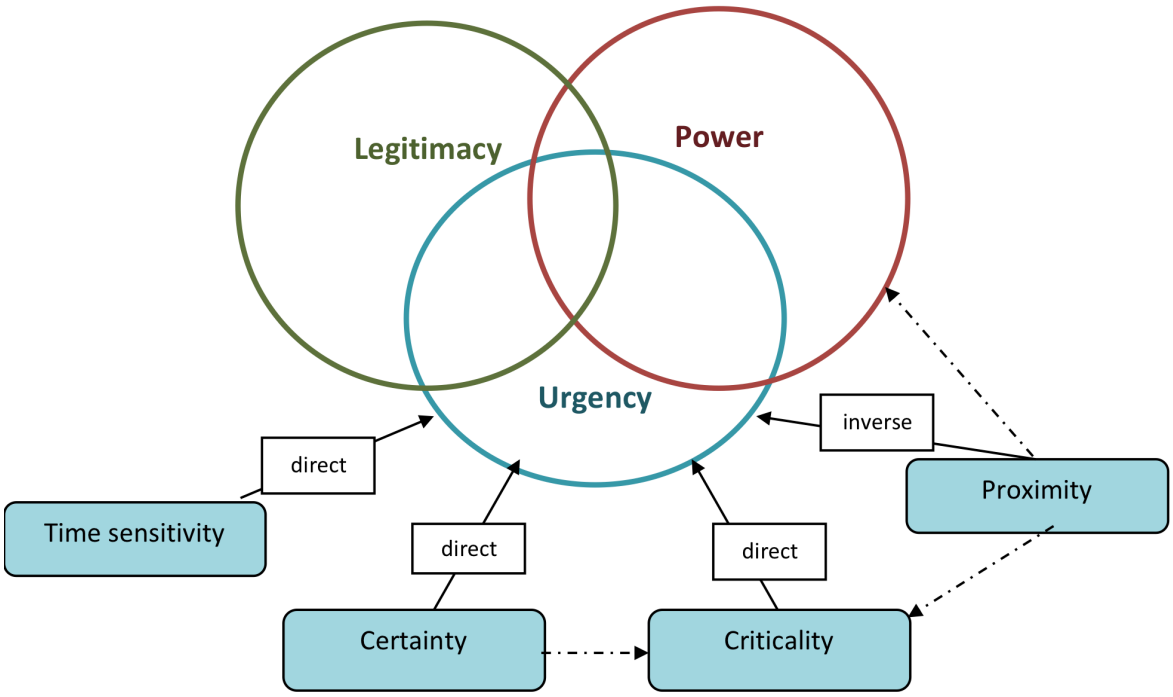
Proximity is a rich and complex factor. It goes beyond establishing a connection between the firm and the stakeholder, to describe the nature of this connection. Where proximity is greater, there is greater opportunity or likelihood of direct communication between the parties. Financial statements are a communication tool, intended to provide users (stakeholders) with information that is useful for their decision making purposes. If direct communication with the stakeholder is possible, the necessity to convey information about the firm through the medium of the financial statements is reduced. Where proximity is greater there is also greater likelihood of mutual dependence. Mutual dependence has a bearing on power, reducing the power of the stakeholder to enforce their claims if doing so is not in their mutual interest.

In this section, the theory of stakeholder salience has been applied to a conflict situation. The examination of who and what really matters has been extended to a trade off decision in order to more fully examine some of the drivers of a reporting choice in the presence of conflicting incentives. The key ideas developed in this section are summarised below:

- Where definitive stakeholders have competing claims, urgency is the attribute that is most likely to determine the more salient stakeholder.
- Urgency is a function of time sensitivity, certainty, proximity and criticality

- The relationship between urgency and each of its components is depicted diagrammatically in an expanded version of the stakeholder salience model in figure 3.2 below.

Figure 3.2 Urgency factors in the stakeholder salience model (Adapted from Mitchell et al.1997)



The experiments are designed to examine how managers prioritise claims from a pair of definitive stakeholders. Since the time and patience of the target subjects is not unlimited, only two pairs of stakeholders are examined in this study. Experiment one includes the lender and the capital market, while the stakeholders in experiment two are the lender and the key customer. In each case the application of stakeholder theory is instructive in developing a hypothesis that predicts the likely reporting choice made by the manager.

3.4.1 Asset pricing vs. Explicit Contracting

In the conflict between a potential covenant violation (explicit contracting) and not meeting an earnings forecast (asset pricing), all four components of the urgency attribute appear to be relevant. However, while these components offer a framework through which to evaluate the likely trade-off decision, the final choice made by the CFO is dependent on their individual perception of each component, and its relative importance in the composition of the urgency attribute. The discussion below is based on the most likely perceptions that the CFOs are expected to be formed based on the current academic literature[15].

Given a situation in which a covenant breach will occur in the current month if no adjustments are made to the financial statements, the lender would be considered to have a time sensitive claim. If the capital market were expecting the forecast earnings to be achieved in the next three months; they too would be considered to have a time sensitive claim. However, as the covenant breach could happen in the current period rather than the end of the period the lender has the more time sensitive claim. Given the expected relationships between time sensitivity, urgency and salience, the lender would be the more urgent stakeholder. However, according to the theory of stakeholder salience, time sensitivity alone does not constitute an urgent claim (Mitchell, et al., 1997).

[15] As explained earlier in this chapter the measurement of the CFOs' perceptions is beyond the scope of this study and an avenue for future research.

A consideration of the factors that comprise urgency provides a useful framework within which to examine the conflict decision but it does not provide an unequivocally clear indication of the likely behaviour of the CFOs. The factors of time sensitivity and criticality suggest that the lender would be given priority. Since the potential covenant breach occurs earlier in the time line, the lender would be prioritised if time sensitivity were the only factor. However, Mitchell et al.(1997) advise that time sensitivity alone does not constitute urgency, and as such can be considered as perhaps the least influential factor. The covenant breach could potentially be seen as the more critical since if a waiver is not negotiated and the lender demands repayment of the debt, the survival of the firm may be in jeopardy. In addition, a covenant violation would have to be disclosed to the market in which case there would be adverse consequences for the firm from another stakeholder – the shareholders. The seriousness or criticality of the lender's claim would appear to depend on their assessment of certainty and proximity. The views of the interviewed CFOs appear to be consistent with this line of reasoning[16].

Close proximity appears to exist between the lender and the firm. Proximity between the lender and the firm is greater than between the capital market and the firm as the lender is considerably more 'invested'. It is not simply the size of the investment, but the inability to easily substitute another asset for the firm debt that makes the lender more tightly bound to the firm than is likely to be the case for the shareholders. The lender's difficulty with substituting assets includes (but is not limited to) reputational costs that may arise from calling in the loan. Additionally, financial costs may be associated with this process. Along with transaction costs, the lender may not realise the full value of the

[16] Chapter 4 details these interviews and explains that the general view of these CFOs was that the lender was of paramount importance.

investment in the firm. In some cases, the lender may achieve a better outcome by renegotiating terms with the firm, rather than calling in the loan. Several factors may influence the lenders decision to waive a covenant[17] such as the size of the firms overall facility with the lender, their history of violations, their financial prospects, the economic climate. In the experimental scenario, the subject is therefore likely to view a waiver negotiation as a possibility. Since the firm is listed and the ownership likely to be varied the same cannot be said of the shareholders. The shareholders would have less proximity to the firm and therefore be the more salient stakeholder.

The factors of certainty and proximity suggest that a conflict between the lender and shareholders would be resolved by prioritising the shareholders. This is consistent with the volume of academic literature in the financial accounting discipline. While this direct conflict is not considered, the preponderance of evidence on benchmark beating depicts the asset pricing incentive as a particularly compelling one (see section 2.2.1). The capital market will be anticipating the earnings to be met and earnings misses are known to be swiftly priced in the capital market as discussed in chapter two. The likelihood of the share price suffering as a result of not meeting the earnings forecast is great. The lender's response to covenant violation is uncertain, and negotiation with the lender may be possible. A waiver might be a possible outcome of violation. On balance, the adverse consequences of missing the earnings forecast are more likely than the adverse consequences of breaching the covenant. The shareholders appear to be the more salient stakeholder. Accordingly, the final hypothesis for the conflict condition in experiment one is:

[17] see section 2.2.2 full discussion, particularly Chen (1993) and Mather (1999)

H4 Firms at risk of reporting earnings that are below their forecast earnings and at risk of breaching a covenant are more likely to make a choice to avoid an earnings surprise than to avoid a covenant violation.

3.4.2 Implicit Contracting vs. Explicit Contracting

Given a situation in which a firm has a performance pricing clause in their lending agreement which is activated by the level of the interest cover ratio, a choice to announce a restructure in the current period would have the impact of activating the clause and increasing the interest charge. In this hypothetical situation, if there were imminent price negotiations, the reduction in earnings as a result of the announcement of the restructure may have an advantageous impact on the negotiating power of the firm In such a situation, there is a conflict between implicit and explicit contracting incentives. Both the lender and the customer have a time sensitive claim arising in the current period. Announcing the restructure in the current period would result in triggering the penalty interest rate stipulated in the performance pricing clause. Price negotiations with the major customer are also imminent, and there seems to be little to differentiate the time sensitivity of the claims of these two stakeholders.

Proximity is also relevant to both stakeholders. The experimental scenario explains the close relationship between the firm and its major customer, and this is also evident from the fact that the prices are determined by negotiation between these parties. The relationship between the firm and its lender was examined in the discussion of

experiment one. This discussion established that the possibility of negotiating a waiver may be inferred by the subject. The performance pricing clause is not precisely the same as a covenant, nor is it as widely used being a recent lender innovation. It is possible that the subjects will perceive it as similar and therefore consider the possibility of being able to negotiate. When a covenant is violated, there is uncertainty as to the most likely action of the lender. The covenant acts as a mechanism to increase the lender's power over the firm when the lender's risk increases. The performance pricing clause stipulates in advance the course of action in the event of increased lender risk. In the case of a traditional covenant the lender's response to violation is not known and therefore includes the possibility of a full repayment demand. Such a consequence could potentially threaten the firm's survival and as such would be deemed critical. The outcome of triggering the performance pricing clause is known, and excludes this survival threat. The lender's claim is likely to be less critical when explicit contracts stipulate performance pricing clauses and more likely to be critical when such provisions are incorporated as traditional covenants. The impact of the price negotiations with the key customer has the potential to impact revenue significantly. The price negotiations determine the prices for multiple periods and the majority of the revenue is derived from this key customer. Accordingly, the criticality of this claim may be perceived as greater than that of the lender. In this scenario it would seem unlikely that managers perceive a threat to organisational survival. If that is the perception of the subjects then the first of the theorems[18] proposed by Jawahar and McLaughlin (2001) would apply, and the strategies applied by the manager would be to accommodate or proactively meet stakeholder needs. While these theorems appear to be instructive when one of the

[18] This theorem proposed that in the absence of threats to survival a gain frame would be adopted and all stakeholders needs would be actively addressed.

claims threatens survival (as in the first conflict described in section 3.4.1) it does not appear to describe the behaviour in circumstances when a manager must prioritise one of two competing claims where neither is perceived as a threat to survival. The ethos of their argument that the stakeholder that controls the comparatively more critical resource will be prioritised, may still hold. However, since the measurement of the perceptions of these attributes is beyond the scope of this study, such a premise cannot be tested here, and is left for future research.

The clearest point of differentiation therefore appears to be the certainty of the outcome. The most probable or certain outcome will be the one that is perceived by the manager as the most urgent. It would seem clear that in experiment two, it is the lender that is more certain to bring about the negative consequence. Of all the factors that comprise urgency, it is certainty that appears to provide the starkest differentiation between the stakeholders. As the lender has the more certain consequence, the lender is more urgent and therefore more salient. Accordingly, the final hypothesis is:

> **H5** Firms with high proprietary costs that are also at risk of activating an accounting based performance pricing clause in their lending agreement are more likely to choose to avoid such activation than to avoid compromising their competitive position.

3.5 Summary

This chapter has explored literature from the fields of management and psychology to gain insight on decision making under conflict. The key ideas drawn from the review of the literature on prospect theory and stakeholder salience theory formed the basis from which to develop the conflict hypotheses. These conflict hypotheses predict the behaviour of the subjects in the conflict treatment conditions of the two experiments in the research study. In the next chapter, the exploratory interviews that were conducted in the instrument development phase of the project are discussed.

Chapter Four: Exploratory Interviews

The previous chapter considered choice under conflict. It examined literature from the disciplines of management and psychology to obtain insight into how a financial manager might make an accounting choice, and to develop hypotheses regarding the accounting choices in this experimental study.

In this chapter, the exploratory interviews that were conducted at the beginning of the research project are discussed. These interviews were conducted to confirm the application of the theoretical framework and institutional details and to assist in the development of the research instruments. Information gathered during these interviews was useful in developing a more rounded perspective of the decision making process and the impact of financial reporting information on the users of financial reports. This chapter is organised as follows. Section 4.1 introduces the exploratory interviews in the context of this study. Section 4.2 details the methodology and process considerations while section 4.3 summarises the information collected during the interview process. Concluding remarks are offered in section 4.4.

4.1 Exploratory Interviews in Context

The main purpose of conducting some exploratory interviews in the early stages of this project was to inform theory with practical insights in order to develop appropriate scenarios for the experimental cases. Part C of the experimental instrument is a partial replication of the survey conducted by GHR of CFOs in the USA. Conducting preliminary interviews is consistent with the approach of GHR, and adds rich context and additional insights to the survey data. However, in the case of this study only a very small number of interviews were carried out given that the purpose of this part of the exercise was not to collect interview data to stand in its own right, but simply to inform the design of the experimental instruments.

4.2 Methodology

4.2.1 Semi-Structured interview questions

The first step taken in the exploratory interview process was to develop a set of semi – structured interview questions. These questions are included as Appendix 2. The questions were grouped into four broad categories. Each of the three categories of financial reporting incentive (capital market, lenders, other third parties) were discussed in turn. Finally the issue of trying to satisfy more than one of these groups simultaneously was discussed.

4.2.2 Ethics Clearance

An application was made to Monash University Human Research Ethics Committee (MUHREC) prior to conducting the exploratory interviews. Approval of the ethics clearance application was granted on 9 September 2009. A copy of the approval documentation is included as appendix 4.

4.2.3 Interview Subjects

The interview subjects needed to be able to give insight into the target subjects for the experiments. Therefore the interview subjects needed to be current or former senior financial executives of listed companies. However, there were additional constraints to selection. The subjects needed to be accessible and were consequently limited to contacts within the researchers' network.

Since most of the interview subjects were interstate or overseas, the majority of the interviews were telephone rather than face to face interviews. There are disadvantages to telephone interviews since they restrict communication, particularly non-verbal communication and therefore limit the scope of the researcher to develop a rapport with the interviewee (Dillman, 2000). However, a factor that mitigates this to a certain extent is that the interview subjects were from within existing networks and were therefore either directly or indirectly, through a colleague, connected to the interviewer. Once a potential interview subject was identified, contact was made by telephone or email to

schedule an interview at an appropriate time, at the subject's convenience. The interviews were recorded and notes were made both during and directly after the interview had taken place. Interviews were conducted as part of the iterative process of developing the instruments and all took place between October 2009 and July 2010.

In addition to interviewing the senior financial executive group, one interview was also conducted with a survey specialist from a large accounting firm. This interview is discussed in the next section, Section 4.3.1 below.

4.3 Interview Data

4.3.1 Survey Specialist

On 22 November 2009, a survey specialist was interviewed by telephone. The interview subject was the Corporate Affairs and Communications Manager of a Big Four Accounting firm. In this role the subject was responsible for conducting a survey of CFOs which had been reported in the financial press. The purpose of interviewing this subject was therefore to gain insights on how best to achieve a good response from our shared target demographic. The interview subject was very helpful and some important strategies that were likely key to the success of this project were developed as a result of this interview.

The survey conducted by the Big Four Accounting firm was designed to be as easy as possible to complete, and described to potential participants as a 'tick and flick' exercise. The subject reports that their entire survey took 8-10 minutes to complete and advised that the brevity of the exercise was critical. This was always an important consideration in

the study described in this thesis, since a balance needed to be achieved between acquiring as much data as possible (that is two experiments, plus a short survey in the one study) and making the task quick enough to complete that it did not discourage participation.

The subject offered some interesting insights into the rates of conversion of initial contacts into survey participants. Larger firms (in the top 100 of ASX listed firms) are the more difficult to engage in the research and many decline immediately on the grounds that there is a company policy not to participate in surveys. As a result only 25% of the initial contacts within the top 100 were converted to participants as compared with 50% of the firms that fall within the top 200-300 on the ASX. This point was helpful in designing the approach to the current study as a decision had to be taken regarding the most appropriate number of CFOs to approach. The discussion with this survey specialist confirmed the rationale of compiling a database for the mail out that extended to just beyond the 700th firm on the ASX listing by market capitalisation. The survey specialist remarked that the data collected from the larger firms was usually quite different from that collected from smaller firms. The findings of this study, as reported in chapter 8 are consistent with this observation.

Engaging CFOs to participate in this research was identified as a particular challenge in the very early stages of the project. Accordingly, enquiries were made of the survey specialist regarding her opinions with regard to the most effective incentives to offer, in order to encourage the target subjects to participate. In her case, the survey specialist believed that the most important factor was the personal connection. As a Big 4

accounting firm, the most likely respondents were those CFOs that were already clients. Another important incentive, she believed, was the opportunity for feedback about the CFOs peers. She suggested that the networking forum for this group was limited and any opportunity to benchmark their performance against the peer group was highly valued. Apparently, a similar survey is conducted by this Big 4 firm overseas, and has become so popular that it is now run quarterly. Rather than the subjects growing fatigued, they appear to be finding the continued feedback useful and as a result participation has gained some momentum, at least overseas, and the intention of the accounting firm is to replicate this situation in Australia. This insight reinforced the decision to include a survey in the current study, since it confirms that the gathered data would be likely to have value for the practitioners as well as the academic community. The survey specialist also talked about her experience with an earlier survey which was carried out in association with an industry body. This survey had a higher response rate than the survey without the support of such a body. This observation encouraged the decision in the current study, to approach the Institute of Chartered Accountants to lend their support, and in so doing, enhance the credibility of the current study.

4.3.2 Senior Financial Executives

The four CFOs that were interviewed ranged in age and experience. This range is entirely appropriate since in the Australian market there is considerable diversity of age and experience within the senior financial management of the top 700 firms (see table 7.1). Two of the interview subjects were over 50 years of age, with well over ten years of senior financial managerial experience. One of these subjects is in Australia and the other

is currently based in the USA. The other two subjects were in their thirties, with approximately 4 years of senior financial managerial experience each. Both of these younger subjects had experience working in Australia and overseas. At the time of being interviewed, one subject was, and is currently the CFO of an Australian listed firm, and the other was the CFO of a firm in the Middle East, but had previously had senior financial managerial experience in a large Australian listed firm. This CFO was also educated in the USA and was therefore in a position to provide an interesting perspective of similarities and differences in managerial behaviour in different domiciles. While the practices in the Middle East are not directly relevant to this study, the other experience of this CFO, outside of the Middle East, is relevant and the insights from a CFO with such broad experience offer rich context. The international senior financial executives were included in the interviews in this study because they were accessible and they could provide valuable insights into the behaviour of managers of listed firms that were very large, particularly in the context of the size of Australian firms. The senior financial executives of Australian firms are particularly difficult to engage in research, especially without a personal connection. The international senior financial executives interviewed were able to provide an alternative solution to gaining insight into the behaviour of large firms. In addition, since the study described in this thesis also incorporates a partial replication of GHR's survey in the USA and comparison of the results, discussions with CFOs from both Australia and overseas were useful in the consideration of the similarities and differences between the Australian market and those elsewhere, particularly the USA.

Capital Market

One of the most consistent impressions formed during the CFO interviews was the extent to which the subjects focus on transparency and full disclosure. The CFO in the USA described himself as "Mr Disclosure" and talked at length of how important he feels it is to 'do the right thing' when it comes to making an accounting choice. He believes that in the USA since 2000 this is now the general mind-set of most CFOs. He stressed the importance of the fullness of disclosure of important decisions and choices (his example was a favourable adjustment to the warranty provision which he ensured was completely explained in the 10-Q), particularly when they affect a benchmark. He reiterated the importance of considering the most appropriate accounting treatment in the circumstances and that the consequences on Wall Street should not factor into his decision.

One of the CFOs felt that most firms do not necessarily disclose a specific forecast anymore, or at best give a range, preferring to disclose profit 'drivers' to help analysts determine their own forecasts. This was echoed by another CFO who explained that guidance was given as broadly as possible, twice per year, leaving the analysts to build up their own forecasts. Managers are then obliged to clarify where the analysts' forecasts are materially different from their own. This CFO emphasised that part of his role is to "avoid overselling performance" when guiding the analysts to avoid the situation where expectations are raised too high, resulting in disappointment[19]. He also explained that one of his most critical communication tools was in fact the results presentation, given

[19] This is consistent with the views of the US CFOs interviewed by GHR.

that the full set of financial statements contains too excessive a level of detail to discuss. He explained that when guiding the analysts he aims for transparency but does not give a specific forecast earnings number. His example was from a listed energy firm who use a range of growth percentage to give analysts an indication of what to expect, that is "20% year on year EBITDA growth, weighted towards the second half of the year". The CFO felt that having given such an indication to the analysts, if earnings fell between 18% and 25% "everyone would be happy". He stressed the importance of establishing a track record "both internal and external". With a good track record, the CFO is better placed to explain a difficult or unusual situation. A defined process for doing so and the ability to easily articulate the assumptions and outcomes was viewed as essential. In addition, the CFO must be able to reconcile from forecast to outcome in order to establish and preserve his reporting reputation.

If earnings were to considerably beat the guided range or often beat the guided range, it would raise doubt about his forecasting ability. This CFO explains, "Beat your forecast once it's a good outcome, beat it twice and they question your forecasting ability". If earnings were likely to significantly beat the guided range then a review would be made to investigate if it would be appropriate to "take a more conservative view" and hence, "claw back some of the big beat" because "you never know what is around the corner". This CFO elaborated that reducing the big earnings beat would be more for the purposes of a "rainy day" than because of the analysts' expectations. He pointed out that these adjustments would not be significant, rather "a little bit of comfort". This sentiment was echoed by another CFO, who was very critical of a member of his staff who had once talked of "profit management adjustments". This CFO acknowledged that they would

have to “true up” estimates and provisions with newer information usually twice a year but was appalled at the suggestion by his staff member of opportunistic or blatant earnings management. He explained that in practice in a large multinational, there will be a number of “puts and takes” (for example impairments vs. extra profits in a particular division) but they are dealt with as a group, and that it would not be a case of deciding whether to book each and every item or not. On balance the summary of ‘puts and takes’ is accepted as long as it falls within a range (+-10%) above or below the expected earnings. In a similar vein, the CFO in the USA talked about “cookie jar reserves” being “a thing of the past”. He reports that prior to 2001, he would openly discuss his cookie jar reserves with the auditors. In those days, the auditors would be pleased if there was a $2m reserve ‘just in case’. However, in current times he explains that “cookie jarring” is seen as “taboo”, “a dirty word” in the USA.

Establishing a good reputation for the firm and the managers was a point that the CFOs understandably agree upon. One of the more mature CFOs spoke about the five to ten year life span that a CFO has with the firm and during which they are able to exercise power over the policies of the business. He believes that most CFOs will have this time horizon in mind and therefore take a longer term view. He explained that the continuous disclosure requirements in Australia also encourage this longer term view. When considering period end adjustments, CFOs are not thinking only of the current year’s reporting impact but also the impact on “the year after, and the one after that”. In his words, “pump-priming in one year at the expense of another” is something he simply would not do. The CFO in the USA believes that post GFC, the market may also be taking the longer term view becoming a “more forgiving one”. He believes that smoothing is

not expected or desired anymore and that the market is now more concerned about viability than simply meeting earnings expectations. He feels that while the stock price will "take a hit" for missing expectations, the market is looking for "longer term, bigger picture viability" so the price will recover quicker than perhaps it did in boom times, if the fundamentals are there.

Lenders

The CFOs who were interviewed spent considerable time discussing the lending relationship. An observation made after speaking to these CFOs is that while debt contracts are articulated into explicit contracts, they are conceived and administered by people. As a result, no examination of the influence of debt contracts is complete without a consideration of the context of individual relationships and cultures, both corporate and national. This point is best illustrated with an extreme example. The CFO from the Middle East explained that local business practices emphasise personal relationships. Most firms in the Middle East are family owned and corporate debt centres around the personal guarantee from the family. The lending agreements include traditional covenants and these are preserved although the lender is unlikely to enforce them. The CFO explained that the strength of the relationship between the banker and the guarantor is at the "core" of the decision to lend, and this personal relationship is considered more important than the specifics of the contract. While the situation in the Middle East is unlike that in Australia and the USA it does elucidate the possible influence that the relationship between lender and firm, or banker and manager can exert over the nature of explicit contracting incentives. The other interviewed CFOs, from Australia and

the USA, also discussed the impacts of the nature of the relationship between banker and firm. One CFO compared single lender debt to syndicated debt, explaining that the single lender debt was much easier to negotiate. Similarly, an established relationship provides more scope for negotiation than is the case with a new facility. Even the CFO from the Middle East contrasted the level of attention given to the debt covenants relating to a new facility that was established with a different bank relative to the previous long standing debt agreement. Aside from the duration of the relationship between the banker and the firm, another critical factor discussed by one of the CFOs is the size or extent of the relationship. He explained that his policy is that all day to day banking must be with the preferred bankers such that the banks total investment and commitment to the relationship is substantial. If the bank is generating significant business through the firm's day to day banking, they are more open to negotiate the terms of the associated loan facility.

One of the CFOs emphasised the role of communication. He spoke of the importance of talking frequently to key institutional investors and explained that he views the lenders in the same way. This constant discussion with key stakeholders was seen as instrumental in building credibility over time. In addition, in the event of a problem, the earlier the manager raises it with the lender the better the chance of satisfactorily resolving the issue. The CFO who made this point did go on to say how difficult it currently is to negotiate a waiver, and hence how important it was to open discussion on the matter as early as possible. This view echoed that of another who also prioritised early consultation with the lender in the event of a potential breach. However, this CFO said that the banks were currently very open to negotiating waivers given early warning. This

difference in perception about the likelihood of a waiver perhaps serves to further illustrate the differing tensions in lending relationships, specific to each firm, which as the CFOs have all explained are affected by multiple factors.

Another interesting point that was raised was that the lending relationship can make an important difference when changes occur in the business environment. The example given was of a listed energy firm that was highly leveraged and the lending agreements specified that the covenants were to use Australian GAAP. During the period in which all firms were required to convert to IFRS the managers of the energy firm had to negotiate with the lenders and agree on what would be considered a reasonable accounting treatment. Sound relationships and skilful negotiators can ease such transitions.

The seriousness with which the debt covenants were treated by all of the interviewed CFOs was quite striking. Even the CFO in the Middle East explained that the covenants were maintained and the reports submitted on time even though the lender did not enforce these provisions because of the presence of a guarantor. The CFOs all talked of the covenant monitoring systems their firms had in place where the firm had borrowings. They spoke of monthly lists of covenants and the current level of the covenanted ratios. It was also clear that there is usually proactive management of these ratios, with the intention of reducing the likelihood of ever being in a breach situation. If a risk of potential covenant breach is identified during the preparation of budgets and forecasts, the CFO will ensure that attempts are made to ameliorate the situation. The CFO explained that this might happen three months in advance of a potential covenant beach and attempts to avoid a covenant breach in the current reporting period would only be

likely in a firm that was approaching distress. A different CFO made a similar point and gave the example of a large dairy firm that was in this situation in Australia just prior to being taken over in 2004. As an interesting procedural point, one of the CFOs explained that most agreements contain a clause that offers 30 days to report a breach and another 30 days to rectify a breach. Information such as this is useful, since private debt agreements are not easily available to researchers and therefore details about contract clauses passed on by CFOs is a valuable contribution to our understanding of the mechanics of the explicit contract.

Covenanted accounting ratios that need to be improved are usually addressed by targeting underlying performance. An example given by one of the CFOs was cash flow driven initiatives such as improving days in accounts payable and collections from customers. Another CFO talked about reviewing the basis of accounting estimates. For example, the assumptions behind the provision for bad debts might be revisited, and changed from 90 days to 120days where this change is "reasonable and defendable". He explained that he has experienced different firm cultures where the tolerance for changes in assumption varies. He also stressed that such changes will not make large differences to the reported numbers, the exercise of discretion in this manner is only ever "tinkering at the edges." In his opinion these changes would be preferred over changing an accounting policy, which was viewed as a "last resort." Any such change would have to be disclosed in the financial statements and explained to the market in the interest of transparency.

Customers and Suppliers

The interviewed CFOs confirmed that customers and suppliers do make use of the financial reports of the firm. They also tended to all agree that relationships with customers and suppliers were built on trust and cultivated over long time periods. They advised that customers do ask for financial statements and large vendors require periodic financials too. One of the CFOs talked about a US vendor who asked for three years of financial statements. He explained that some suppliers asked for condensed financial statements and believed that they were usually interested in the assets and liabilities of the firm as well as the cash flow and earnings. While the CFOs all agreed that customers and suppliers requested financial statements they did not feel that these stakeholders were given much consideration when accounting choices were made, and not to the same extent as lenders and shareholders. Interestingly, the CFO in the Middle East who did not have the pressure of the capital market, and with less of a concern regarding the debt covenants given the presence of the guarantor, was the more inclined to indicate that the consequences of a decision for a vendor would be taken into consideration.

Some examples of the influence of a customer or supplier on the financial reporting decisions were offered by the CFOs. The CFO in the USA recalled an instance when his firm was granted the right of non-disclosure in the form 10-K report of the name of a key customer (from whom 10% of the firm's revenue was derived) for competitive reasons. Another CFO talked about a listed Australian packaging firm that had a glass plant which used gas in its manufacturing process. There was a ten to fifteen year contract with the gas supplier in which they stipulated that the firm's credit rating had to be above

investment grade. In the event of the firm's credit rating falling below investment grade they would increase the price of the gas, or require the firm to post a bond. This reflects the quite significant influence of a supplier since the gas supplier was requiring security despite the listed firm having total assets worth approximately $10 billion, of which the investment in the glass plant amounted to only $250 million.

Accounting choice and conflict

The use of professional judgment and discretion in accounting choice is a sensitive issue to discuss. Most of the CFOs went to great lengths to elaborate on the careful and well documented processes behind any accounting choice. A common consensus was that there were very few areas left that allowed or required a highly discretional choice. This view was expressed particularly strongly by the CFO from the USA who is bound by rule-based accounting standards. However, one example that they all tended to agree was still subject to discretion was goodwill impairment.

When asked about their most likely responses to potential covenant breaches or potential earnings benchmark misses, all the CFOs interviewed suggested initial measures that are described in the accounting literature as real earnings management techniques (e.g. Roychowdhury, 2006). The CFOs described initiatives such as reducing variable costs such as cutting bonuses, freezing headcounts, and looking for divisions which could be shut down as well as running promotions to boost revenue. One CFO was candid about the fact that delaying discretionary expenses would alter the reported earnings number. He gave the example of recruiting new staff towards the end of the reporting period

which has associated costs such as the recruitment agent's fees. He explained that "you would obviously choose to do that in July rather than June" if you are not quite reaching your targeted earnings for the June year end.

The CFOs gave examples of some of the choices that are made under conflict. All of them raised the trade-off between the long and short term in one form or another. In general they seemed to conclude that long term value was what they strived for but that this did have to be sacrificed in the short term in some situations. There are academic commentators who are very critical of this particular behaviour (e.g.Graham et al., 2006) but it would seem that perhaps it is naïve to expect that the ideal goal of long term value will always be able to be served above all others. Where a firm is financed by debt or by easily transferable equity shares, these stakeholders add an additional dimension of demand that the manager of the firm has no choice but to attempt to satisfy in order to maintain the finance. In this light, one could perhaps argue that it would be unwise for any CFO to prioritise long term goals at the expense of the short term needs of the finance providers since their continued support is a prerequisite for the firm to have a future in which to realise these long term goals. The CFO from the Middle East gave an enlightening example of this conundrum. He described a telecommunications firm based in the Middle East with a long term strategy to penetrate the North African telecom market which was dominated by European firms, predominantly Italian and French firms. In order to establish a presence in this marketplace, the firm made short term earnings sacrifices in the current period in order to achieve greater earnings in the future. The CFO observed that as a family owned firm rather than a listed one, this company was free to make such a sacrifice. To summarise this, in the absence of any constraints, the

overarching goal of the firm is to create long term value. The particular financing structure of the firm may however introduce constraints. These constraints then need to be evaluated by the manager as they arise. From the discussion with these CFOs it would appear that the prioritisation is consistent with the factors included in the attribute of urgency as described by Mitchell, et al. (1997): time sensitivity and criticality. The most time sensitive is dealt with first, that is a short term need is prioritised over a long term goal, provided it is a critical short term need. The definition of "critical" has yet to be articulated fully in the academic literature to the best of the writer's knowledge. It is a word that the CFOs tended to use fairly often themselves. For example, one of the Australian CFOs explained that debt covenants were "more critical when it was a question of survival" explaining that when the survival of the firm is in question "the profit takes a back seat". In other words the closer the firm came to distress the more important it was for effort to be focused on avoiding covenant violation. Another CFO similarly said "my job is keeping the lender happy", elaborating that the debt financing is more critical to the survival of the firm than meeting an earnings benchmark, in his view. He explained that if he had to choose between the breaching a covenant and missing an earnings benchmark expected by the shareholders, he would have to prioritise the lender. If the lender were to call in the loan, it would matter little that the earnings benchmark was achieved. In addition, a covenant breach would have to be disclosed to the market, given the continuous disclosure regime in Australia, and this would be viewed even more harshly than missing an earnings benchmark. In the view of this CFO, the lender would be more critical to the firm than the shareholder. Another CFO stated that public companies do not breach their covenants because they will have to disclose it to the market and then explain the impact to the analysts who will start asking questions

about the rest of the business. This is again consistent with the idea that a covenant breach has a greater impact on the firm than an earnings miss, suggesting that it is more critical or important to the firm.

Another example offered by a CFO was a conflict between current and future earnings in a technology firm in the USA. This firm was in a cost cutting phase and while it was looking for a dramatic reduction in cost, one area that would never be reduced was the research and development budget. For this firm, technology was critical, and so fundamental to the business that there were no circumstances in which they would reduce their substantial budget.

4.3.3 Key Findings of the Interviews

The purpose of conducting these interviews was to assist in the design of the research study and the development of the research instrument itself by gaining practical insights on the theoretical perspective. The key findings that resulted from the interviews are tabulated below with an indication of their impact on the study and the research instrument.

Key Finding	**Impact on study and/or research instrument**
Expression of less benchmark behaviour (asset pricing motivated behaviour) than expected based on the current academic literature	• Importance of including asset pricing incentive to offer interesting contemporary perspective • Suggested an interesting conflict

	between asset pricing and explicit contracting given the CFOs concern regarding the lender as discussed below
Importance of the lender in the view of the CFOs	• Importance of including the lender – to the extent that it was examined in both experiments • Included in conflict with asset pricing given the strength of that incentive as expressed in the literature
Importance of context with regard to the lender	Reinforced the value of conducting a behavioural examination in order to examine aspects of the lending relationship
CFOs talked about both real and accrual based earnings management styles	Incorporation of both techniques in the experimental scenarios
Discussion of the trade-off decision often centred on the effect on the firm – how 'critical' it was	Prompted further consideration of "criticality" in the model of stakeholder salience, which was instrumental in developing the hypothesis
Reported success rate of survey conducted with support of an industry body	Reinforced the decision to approach ICAA to support this study
Reported interest of CFOs in information regarding their peer group	Indicated an additional benefit of the survey section of the instrument was that it might be of interest to practitioners as well as academics and thus encourage participation

4.4 Summary

This chapter has detailed the exploratory interviews carried out in the instrument development phase. In addition to summarising the interviews, the rationale behind the use of interviews in this study has been featured. The methodology followed in conducting the exploratory interviews as a component of the development phase was discussed. In the next chapter, the methodology for the entire research study is detailed.

Chapter Five: Research Design and Methodology

The previous chapter described the exploratory interviews conducted in the instrument development phase of this study. This chapter details the methodology employed in the study, including the experimental design as well as the development and delivery of the case study instruments. Section 5.1 introduces the methodology and section 5.2 details the subject population for the study. The structure of the research instrument is detailed in section 5.3 with the finer details regarding the design of the experiment, construction of the scenarios and choice tasks and variable manipulations contained in Section 5.4. Section 5.5 considers the delivery of the experimental instruments. The results of the pilot study are summarised in section 5.6, and concluding remarks are offered in section 5.7.

5.1 Introduction

This research study employed a multiple phase approach. Having developed the theory and formed the hypotheses based on the literature review, the next phase of the project was to confirm theoretical understanding and gain practical insights by conducting exploratory interviews. Full details of this phase of the process are contained in Chapter four.

A multi-stage process was also employed in formulating the instruments. First, instruments used in other published research in related areas were used to establish the parameters and depth of information to be presented. Second, colleagues as well as practitioners were asked to comment on drafts of the instruments and these were presented at a workshop in order to get further feedback. Third, the endorsement of the Institute of Chartered Accountants in Australia was obtained, in order to lend credibility to the study with a view to encouraging participation. Fourth, ethics clearance was obtained. Finally, the refined instruments were pilot tested on a small sample of Australian and overseas financial managers. For robustness, the instrument was also pilot tested using Tobii eye tracker software to achieve a greater understanding of the users' experience with the instrument. Details of the Tobii testing phase of the pilot are contained in chapter 6.

In order to encourage participation, the instrument includes a partial replication of the survey by GHR, tailored to suit the Australian environment. It was thought that the results of this survey were likely to be of considerable interest to the subjects since it gathers the opinions of their peer group regarding some external reporting issues. Further details of this survey are given in section 5.3.2 below.

5.2 Subjects

The research instrument was administered by mail, to senior financial executives of Australian listed companies. The mailing list database was developed by collating the relevant details from publicly available information. A list of ASX listed firms sorted by

market capitalisation as at the end of February 2011 was obtained from the Aspect Huntley Fin Analysis database. The names and contact details of the senior financial executive at each firm was then obtained from the ASX website, as well as other relevant websites such as Reuters, Bloomberg and Yahoo Finance, as well as the listed companies own individual corporate websites. The final mailing list included 704 senior financial executives. The vast majority of these executives hold the title of Chief Financial Officer, but consistent with GHR, there is some variation in the title of the role played by the senior financial executive. Examples of some of these other titles are Company Secretary, General Manager Finance, and Finance Director.

5.3 Structure of the Research Instrument

The research instrument contains multiple parts. It includes two experiments, the partial replication of the GHR survey and demographics. A set of the full instruments is included as Appendix 1.

5.3.1 Experiments

Each instrument contained both experiments as Part A and Part B, with the order randomised. Each experiment is discussed in detail in section 5.4 below.

5.3.2 Survey

As indicated in chapter four, it was determined that Australian CFOs are believed to value any opportunity to acquire feedback regarding their peer group. Survey data from this group regarding attitudes and opinions towards reported performance measures and benchmarks would therefore be of particular interest. In order to encourage participation as well as provide valuable insights into Australian reporting behaviour, the instrument includes a partial replication of the survey by GHR, tailored to suit the Australian environment. The GHR survey has been replicated without modification wherever possible to facilitate comparison of the Australian and US results and to benefit from the rigorous testing of the survey instrument developed by GHR. In order to keep the instrument as brief as possible, the survey questions by GHR relating to voluntary disclosure have been omitted, as they are less relevant to this study. Minor changes have been made where necessary to suit the Australian environment, such as removing references to quarterly reporting which do not apply in Australia. A further modification was made to the numerical values in the answer scales. Similar to GHR, subjects in this study were still required to answer the questions based on a 5 point scale from 'Strongly Disagree' to 'Strongly Agree'. However, GHR assigned 'Strongly Disagree' a value of -2 and Strongly Agree was assigned a value of +2, while in this study the values on the scale are from 1 to 5. This change was made for two reasons. Firstly, the experiments in the earlier sections of the instrument use scales with values that are positive and commence from 1. Consistency throughout the instrument makes the response task easier by reducing unnecessary additional learning by the respondent (Dillman, 2000). Secondly, a number of studies (Tourangeau et al., 2007; Schwarz et al., 1998) have shown that assigning a

negative numerical label to the end point of the response scale can introduce bias by reducing the likelihood of the respondent selecting the option at the lower end of the scale. This is because respondents use a range of cues to interpret scales and the combination of the negative descriptor 'Strongly Disagree' with the negative numerical label is likely to make the respondent perceive the end point as more extreme (Tourangeau et al., 2007).

5.3.3 Demographics

The demographic data collected is largely the same as that in the GHR survey to facilitate comparison. The industry classifications were changed to GICS classifications to suit the Australian target population. Demographics collected by GHR that related to voluntary disclosure were omitted as the voluntary disclosure questions were not replicated in this survey. No identifying data was collected as the experiment and survey were entirely anonymous. Accordingly, summary reports of the aggregate responses were only distributed to the participants who supplied an email address in the provided box at the end of the instrument booklet. The cover letter reminded the participants that the survey was anonymous and explained that it was therefore necessary to provide this email address in order to obtain a summary report. A sample of the cover letter is contained in appendix 4.

5.4 Experimental Design

Two experiments were conducted. Experiment One was designed to test asset pricing incentives and explicit contracting incentives both individually, and in conflict with one

another. Experiment Two examined explicit contracting incentives and implicit contracting incentives. Again this examination was conducted for each individual incentive as well as the conflict between the incentives. Each subject was required to complete both experiments which meant that randomisation was necessary to minimise any order effects (Keppel et al., 1992). Randomising the order of the experiments along with the combination of treatment conditions presented to each participant resulted in 32 versions of the experimental instrument.

Both the experiments used a between subjects, two-variable factorial design. In each experiment, the two factors are reporting incentives which have the potential to motivate accounting choices that have opposite effects on earnings. Each factor has two levels and therefore the fully crossed design gives four possible treatment combinations. This facilitates the examination of the managers' choices in response to each financial accounting incentive (main effect test for each financial accounting hypothesis) as well as the examination of choices made by managers in the presence of multiple incentives (planned comparison contrast analysis for each conflict hypothesis). An advantage of this research design is that it facilitates proper examination of the conflict as it establishes the effect, if any, of each incentive on its own to better allow analysis of the conflict situation. Further testing is carried out to identify whether the mean responses of subjects in the conflict condition are different from the mean responses in the other conditions in order to examine the effect of conflicting incentives. Each experiment is discussed in more detail below.

Each experimental instrument was designed to present the CFO with as realistic a scenario as possible for the basis of a reporting decision. The instrument contained background information, a decision task, and manipulation check questions as described below.

5.4.1 Experiment One: Asset Pricing vs. Explicit Contracting

Background information

The firm was described as a diversified company in order to try and neutralise any associations or expectations the subject might have about the qualities and characteristics of financial information that are specific to a particular industry. The firm was described as being listed on the ASX in order to include asset pricing incentives. The subject is informed that the month end reports as at 31 March 2010 are being prepared, as well as a forecast for the full year (9 months of actual and 3 months of forecast data). The subject was also informed that the Financial Controller has suggested adopting the revaluation policy for buildings which are currently held at cost, as allowed by AASB 116. The impact on the financial statements of adopting the revaluation policy in the current period has been calculated by the Financial Controller based on an independent valuation. Choosing to revalue at the March month end will reduce the leverage ratio to 56% and bring PAT for the full year to $184m because of the additional depreciation. To control for the effect of bonus incentives, the case includes a statement indicating that any decision made on the treatment of buildings will have no impact on the bonus calculation. The case also included a statement that since the accounting standards permit both treatments for the subsequent measurement of property plant and

equipment, and since any change in policy would be fully disclosed, the auditors have no issue with this decision.

Decision Task and Response Scale

CFOs are required to complete the decision task by answering the question "Are you likely to adopt the revaluation model for buildings?" CFOs are asked to answer the question by selecting the appropriate number from the Likert scale from 1, labelled 'Definitely Not', to 10, labelled 'Definitely Revalue'. A Likert scale was preferred over a dichotomous choice since multiple choice formats have been argued to be more stable and reliable (Comrey, 1988) and facilitate greater analysis (Nunnally and Bernstein, 1994). However, an even number of alternatives were given on the response scale to exclude the possibility of avoiding making the decision. In practical situations, a CFO would have to make a binary choice in such a circumstance and avoiding making the decision would effectively mean choosing not to revalue. Adopting a neutral position is therefore not possible. Accordingly, an odd number of alternatives on the response scale would not be suitable for the task and a forced choice is appropriate. The optimal number of items on a response scale is a widely debated issue across many disciplines such as psychology, market research and education. For example, Cox (1980) concludes that two or three response alternatives are too few to transmit adequate information and that a scale using between five and nine alternatives is preferable. Scales with five and seven alternatives have been found to give comparable results (Dawes, 2008). The mean responses on the five and seven point scales have been found to be slightly higher that the mean responses on the ten point scales (Dawes, 2008). The choice of a ten point answer scale in this experiment is consistent with the approach taken in other behavioural research in the

accounting and auditing disciplines, such as (Jackson, 2008; Booth and Schulz, 2004; Agoglia et al., 2009).

Manipulation of Asset pricing variable – Management Forecast

The literature describes an array of benchmarks to which the market has been shown to respond, see Kothari (2001) for a review. Prior to the mid 1990's managers appear to have been most concerned about meeting prior year earnings and avoiding losses (Degeorge et al., 1999) . Since the mid 1990's managers appear to be concerned about meeting or beating analyst forecasts (Dechow et al., 2003; Brown and Caylor, 2005). In writing the scenario for the experiment it was important to be contemporaneous and therefore using a loss avoidance incentive or a prior period earnings benchmark was discounted as a possible option. Using an analyst forecast would risk reducing the relevance of the task to some of the subject population since not all Australian listed firms are closely followed by analysts.

Management forecasts have been shown to have information content and to influence share prices (Nagar et al., 2003; Penman, 1980). More recent research also shows some interesting relationships between management and analyst forecasts. Firms that are failing to meet analyst forecasts have been observed to temporarily cease disclosing their management forecasts, until they improve their ability to meet the analyst forecasts (Houston et al., 2010). In a similar vein, managers that regularly issue their own forecasts frequently meet or beat the analyst forecasts relative to managers that do not issue regular forecasts (Cheng et al., 2005). Since there are some documented relationships between management and analyst forecasts, the choice to focus this experiment on

management forecasts does not limit the relevance of the study to those with an interest in analyst forecasts.

In order to manipulate the asset pricing variable the task scenario stated that a management forecast had been issued. In the Beat Forecast condition the subject was told that the management forecast was $182m and in the Just Meet Forecast condition the subject was told that the management forecast was $192m. In both cases, the PAT was $192m if the cost model is utilised for the property plant and equipment and $184m if the revaluation model is adopted. Accordingly, if the CFOs in the Just Meet Forecast condition choose to revalue, they will alter their position from just meeting the forecast to missing the forecast.

Manipulation of Explicit contracting variable – Debt Covenant

In order to manipulate the explicit contracting variable the task included a covenant in the loan agreement that was based on accounting ratios. A critical point made in the literature on Australian covenants is that the use and tightness of covenants is very varied (Ramsay and Sidhu, 1998; Cotter, 1998). One of the issues faced by archival research investigating the impact of covenants is that proxies are necessary for the use and tightness of covenants. Given the diversity in constraints set by lenders these proxies will be noisy when generalised across all firms in the archival setting. The study in this thesis benefits from the greater internal validity resulting from the application of behavioural methodology. The control over the specificity of the debt covenant variable allows for

clearer measurement of the impact of debt covenants on the financial statements within the confines of the specific setting described in the experimental scenario.

A leverage covenant was selected because it is one of the most frequently utilised covenants in Australian loan agreements, and is most frequently measured as the ratio of total liabilities to total tangible assets (Cotter, 1998). In the No Breach condition, the covenant was set at 65% and in the About to Breach condition the covenant was set at 60%. Both of these percentages fall within the typical ranges described by Cotter (1998). In both cases, the firm's actual leverage ratio was 62.5%. Choosing to adopt the revaluation policy in the current year would bring the leverage ratio to 56%.

The four treatment conditions created by the fully crossed factorial design are depicted in the figure overleaf.

Figure 5.1: Experiment One- Asset Pricing (Management Forecast) vs. Explicit Contracting (Debt Covenant)

Legend:

Management Forecast - Just Meet :	CFOs in these conditions will just meet their management earnings forecast if no adjustments are made to the draft financial statements
Management Forecast - Beat :	CFOs in these conditions will beat their management earnings forecast if no adjustments are made to the draft financial statements
Debt Covenant – No Breach :	CFOs in these conditions are not at risk of breaching their covenant if no adjustments are made to the draft financial statements
Debt Covenant – Breach:	CFOs in these conditions are about to breach their covenant if no adjustments are made to the draft financial statements
Yes Condition:	Only the explicit contracting incentive (covenant breach) is present
No Condition:	Only the asset pricing incentive (forecast) is present
Conflict Condition:	Both explicit contracting and asset pricing incentives are present
Random Condition:	Neither explicit contracting nor asset pricing incentives is present

5.4.2 Experiment Two: Asset Pricing vs. Implicit Contracting

Background information

The task describes a firm that manufactures automotive components, called Ausparts Limited (hereinafter, Ausparts). The Australian automotive component industry was selected because one of the variables investigated in this experiment is implicit contracting. Implicit contracting incentives are likely to be high where there are close customer/supplier relationships (Raman and Shahrur, 2008). Where a dependency exists in a customer-supplier relationship there is evidence of an influence over the reported numbers (Banerjee et al., 2007). The Australian automotive industry was selected because of the prevalence of these dependent relationships.

The CFO is advised that it is the March month end and draft financial statements have been prepared for the nine months ended 31 March as well as a forecast of the full year results. These draft financial statements indicate an interest cover (EBIT to Interest) of 2.6, and ROE (NPAT/Equity) of 11%.

The choice task required of the CFO was to make a decision regarding the timing of a restructuring exercise. The CFO was informed that a restructuring plan that is in advanced planning stages but, as yet, no formal announcement has been made. In accordance with the accounting standards requirements in AASB 137, once the announcement is made formally, the provision for restructuring must be recognised in the financial statements. The impact of undertaking the restructuring exercise in the current reporting period

would be a reduction in the interest cover , taking the ratio to 2.4, and a reduction in ROE to 9%.

The CFO was advised that the auditors have confirmed the accounting treatment is appropriate and that the bonuses have already been finalised and would not be affected by the decision. These statements are included to reduce the impact of confounding variables that might influence decision making behaviour.

Decision Task and Response Scale

CFOs were required to complete the decision task by answering the question "What is the likelihood of your undertaking the restructuring exercise **in this financial year**?" CFOs were asked to answer the question by selecting the appropriate number from the Likert scale from 1, labelled 'Definitely wait and restructure next year', to 10, labelled 'Definitely announce and restructure this year'. As for Experiment 1, a 10 point Likert scale was used to measure the decision response, consistent with contemporaneous research in the accounting and auditing disciplines (see section 5.4.1 for further discussion and references). As with the decision task in Experiment One, a forced choice was appropriate.

Manipulation of Explicit Contracting Variable – Performance Pricing Provision

The CFO was advised that the firm has a loan agreement in order to include the effect of explicit contracting in Experiment Two. Experiment One examined a traditional covenant

as an explicit contracting incentive in a reporting decision. Experiment Two explores the more recent innovation by lenders, of including a provision that predetermines the actions of the lender in response to the firm failing to maintain the level of an accounting ratio required by the lender to keep lending risk to an acceptable minimum (Asquith et al., 2005). As performance pricing is a relatively new phenomenon, there is scant empirical documentation of typical provisions to draw on in designing the experimental case. However, four international lending agreements were examined to gain some understanding of a reasonable interest rates and provisions. The interest cover ratio used in the examined contracts was either 2.5 to 1 or 3 to 1. This is consistent with typical levels of interest cover covenants documented in Australian private loans of between 1.5 and 4 (Cotter, 1998).

In the Performance Pricing condition, the subject is advised that the loan requires that the interest cover ratio must not be less than 2.5. If the interest cover ratio does fall below 2.5, the interest rate will increase by 2%. This percentage is consistent with all of the examined lending agreements which charged an additional 2% in the event of an activation of this clause. In the No Performance Pricing condition the subject is simply told that there is a loan agreement with the bank and no details of the provisions of the agreement are given.

Manipulation of Implicit Contracting Variable – Supplier Negotiations

The second variable in Experiment Two is the presence of an implicit contracting incentive. While not linked by explicit contract, the trading relationships with customers

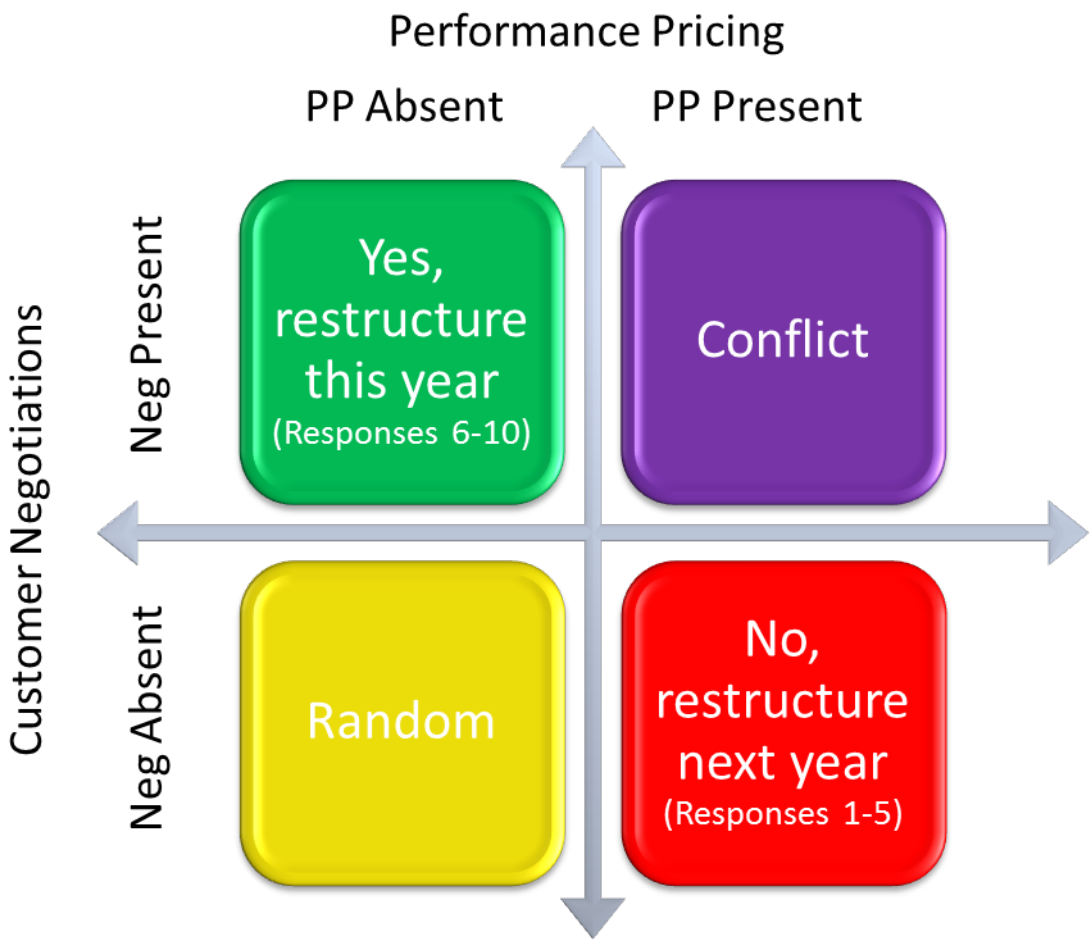
and suppliers exert an influence over the reporting decisions (Bowen et al., 1995). In this experiment, the relationship with Carz Limited allows for the examination of this incentive. The task described a close relationship with a large customer, Carz Limited (hereinafter, Carz), which is an automobile manufacturer. Ausparts supplies a unique rubber component to Carz and the revenue of Ausparts comes almost entirely from this relationship. As Ausparts has been the monopoly supplier of this particular part for many years and a mutually beneficial trading relationship has been established. The subject is made aware that given the interdependent relationship, Carz has always asked for biannual financial statements from Ausparts. Pricing is reviewed periodically and determined by negotiation between Ausparts and Carz.

In the 'Present' condition, the CFO was informed that the next price review will be in a few months' time. Given the difficulties that the automotive industry has been experiencing, determining the appropriate pricing structure is pivotal to both firms. The CFO was also advised that the ROE in the automotive component industry currently ranges between 9 and 12% and that Carz has already communicated their concern that they believe Ausparts' current prices might be too high.

In the 'Absent' condition, the subject is informed that pricing is reviewed periodically and determined by negotiation between Ausparts and Carz. The subject is told that the current pricing structure was agreed 3 months ago and will not be renegotiated for another 2 years.

The four treatment conditions arising from the fully crossed 2x2 factorial design are depicted in the figure overleaf.

Figure 5.2: Experiment Two- Explicit Contracting (Performance Pricing) vs. Implicit Contracting (Supplier Negotiations)



Legend:

Performance pricing –PP Absent :	CFOs in these conditions will ***not*** risk activating their performance pricing provision if they adjust the draft financial statements by booking the restructure
Performance pricing –PP Present:	CFOs in these conditions ***will*** risk activating their performance pricing provision if they adjust the draft financial statements by booking the restructure
Customer Negotiations –Absent :	CFOs in these conditions are told that prices are not to be negotiated for several years
Customer Negotiations – Present:	CFOs in these conditions are told that price negotiations are imminent
Yes Condition:	Only the implicit contracting incentive (customer negotiations) is present
No Condition:	Only the explicit contracting incentive (performance pricing) is present
Conflict Condition:	Both explicit and implicit contracting incentives are present
Random Condition:	Neither explicit nor implicit contracting incentives is present

5.5 Delivery of the Instrument

5.5.1 Exposure of the instrument

A significant amount of time was allocated to exposing the instruments. The early drafts of the experimental scenarios were presented at workshops at two universities, in addition to the PhD confirmation seminar at Monash University. Useful feedback was obtained from these academic audiences, to refine and improve the scenarios. In a separate exercise, the draft instrument was sent to senior academics in the Department of Accounting and Finance at Monash University who each provided their individual comments and suggestions.

Pilot testing was conducted in the December/January 2011 period. The pilot subjects were a mixture of CFOs or former CFOs and academics. The academics all had work experience outside of academia. The final pilot sample comprises fifteen subjects. Pilot testing was conducted in two distinct ways. Firstly, eleven subjects were given paper instruments, either by hand delivering them or by emailing the pdf file containing the instrument. The subjects who received their instruments by mail printed the pdf and scanned their completed versions to return by email.

The second part of the pilot study utilised Tobii eye tracking software, which offers further robustness testing of the instrument. The pdf files of the instrument were loaded into Tobii, and the final four participants viewed their instruments and completed the documents on the Tobii machines. The purpose of this exercise was to gain as great an

understanding of the users' experience with the survey document as possible, with a view to minimising the likelihood of non-responses. A detailed description of the Tobii testing is included in chapter 6.

Manipulation Check Questions

Following the choice task question, the CFO was presented with two additional questions which contain the manipulations checks, as discussed in sections 5.4.1 and 5.4.2 above. A bold dividing line and an information box were placed after the decision task, to divide the task from the manipulation check questions. The information box asked the CFO not to go back and amend their decision once they had made their choice. Instructions to the CFOs also included some explanatory information to introduce the manipulation checks. The information box tells the subject that there are different versions of the document to facilitate the research design. The CFO was told that in order to preserve the scientific validity of the research study two more basic questions needed to be asked. This information was included as a result of the feedback from the pilot participants who said that they were puzzled by these questions. There was a considerable risk that if the questions appeared too simplistic or tangential, that the subject might not complete the task and fail to return the questionnaire. As a result the manipulation check questions in the final instrument were intended simply to check whether the CFO was aware of the relevant ratio levels that related to his or her described scenario. The question was styled as a statement that the CFO was asked to complete by ticking the box beside their chosen alternative. The statement was phrased in exactly the same way as the information was given in the body of the case study. The two alternatives were given in a vertical list

format rather than horizontally for respondent ease and to minimise any selection bias (Dillman, 2000).

The various possible manipulation checks were considered and evaluated before the final version of the questions was written. Firstly, the possibility of including no manipulation check at all was considered. An example of an experiment that did not require a manipulation check is Anderson, et al. (1994) who explain that "since the timing manipulation was 'physically' implemented in the sequence of the case materials, no verification of this manipulation was made. In some cases, a manipulation check is unnecessary (Trotman, 1996), where the manipulation is evident from the task question and including a manipulation check question would simply be a replication. This seemed an important consideration for the experiments in this study since it was important to avoid asking apparently patronising or overly obvious questions to a busy and sophisticated subject population who are renowned for their lower propensity to respond to surveys.[20] Omitting the manipulation checks entirely from the experiments in this study was eliminated as an option because of the compromise on validity, and inappropriate given that the manipulations were not the sort that were entirely patent, nor were they a function of the order of information as in the Anderson, et. al.(1994) study.

A second possible style of manipulation check that was considered asked the CFOs a question that related very directly to the manipulation. For example, the explicit contracting conditions are "Breach" and "No Breach". An early draft of the manipulation

[20] Graham, Harvey and Puri (2009) report response rates as low as 6% in surveys of CFOs

check question simply asked whether they were in breach of the lending agreement or not, and required a Yes/No answer. However, this style of question was eliminated as it was too sensitising, and may have led the subjects' thinking. Asking a CFO if the firm is "in breach" is fairly emotive and may imply a degree of importance to the researcher of a particular consequence of an accounting ratio level. It is obviously critical to allow the subject to make their own assessments of the importance and consequences of the accounting ratio level, since this is the whole purpose of the experiment. Accordingly, the manipulation check was rewritten in a mechanistic style that simply checked whether they were aware of their particular ratio levels. There are two manipulation check questions in each of the two experiments giving a total of four manipulations in this study. Three of the four manipulations are mechanistically similar. They involve accounting ratios (leverage ratio, and interest cover) and accounting numbers (earnings) which differ between conditions. Therefore the rationale and final manipulation check question described above for the leverage ratio and the Breach/No Breach conditions applies equally to the earnings and the Meet/Just Beat conditions as well as the interest cover and the Performance Pricing - Present/Performance Pricing - Absent conditions.

The fourth manipulation is the implicit contracting variable. Unlike the first three manipulations which are simply the change of one number, this manipulation involves a substitute paragraph of information. The two conditions in this case are "Negotiations - Present" where there are imminent price negotiations between customer and supplier and "Negotiations - Absent" where the prices were recently reviewed and will not be revisited for another two years. An early iteration of the manipulation check for this variable asked the CFO whether, before making their decision on the restructuring

announcement, the ROE would have reduced their bargaining power in the price negotiations with the customer. The subject indicated their response by ticking the box to the left of their chosen alternative, 'Yes' or 'No'. This early version of the question failed because of the 'irrelevant information' (Schwarz, 1996). The logic of conversation is critical to the design of a research instrument since the communication between researcher and subject is constrained. In a face to face conversation communicators have the opportunity to ask questions to determine to determine each other's meaning, and identify the more relevant aspects of the information they exchanged. However, in the research setting, the subject is more likely to assume that all information provided is important, and must be used. The manipulation check question in both cases asks about negotiating power, regardless of whether the negotiations are imminent. This means that the question in the "Negotiations - Absent" condition violates the maxim of relevance (Schwarz, 1996; Levinson, 1983). In this condition, although there are no negotiations, subjects in the pilot study interpreted this question in the broader sense. They answered 'Yes', that ROE would reduce their bargaining power in both the "Negotiations - Present" and the "Negotiations - Absent" conditions. Since the relationship between supplier and customer was described in both conditions the CFOs inferred that this must be what the researcher was asking about as opposed to the implications of the current level of ROE. This manipulation question was therefore revised to focus more clearly on the forthcoming negotiations and to avoid violating the "rules of the communication game" (McCann and Higgins, 1992).

In summation, for both experiments all information was held constant across all conditions except for the manipulations. In experiment one, both manipulations involved

only the change of a number. In experiment two, the explicit contracting manipulation also involved only the change of a number. The implicit contracting manipulation, however, involved the replacement of a paragraph. In this case the manipulation includes both the timing of the negotiations as well as the additional detail regarding the determination of prices between customer and supplier.

5.5.2 Ethics Clearance

An application was made to Monash University Human Research Ethics Committee (MUHREC). This was a second application for ethics clearance as a successful application had already been made for the earlier phase of the research study of conducting exploratory interviews. MUHREC required that endorsement from the Institute of Chartered Accountants of Australia (ICAA) was obtained before granting ethics clearance. The endorsement from ICAA was necessary since it was with the support of this organisation that we intended to contact the target subjects, in order to encourage participation by lending credibility to the study. To this end, endorsement from ICAA was obtained on 12 October 2010. The cover letters and the instrument booklet itself were professionally printed with the ICAA logo. In addition these documents also bear the logos of the two universities who are involved by virtue of the affiliation of the supervisors of this thesis: Monash University and Latrobe University. The purpose of including these logos was to lend gravitas to the study in order to engender participation. MUHREC granted ethics clearance on 14 October 2010 and the approval letter is included as appendix 3.

5.5.3 Instrument delivery

The instrument was mailed to the CFOs on 4 March 2011. Since the delivery of the instrument was by mail, to the CFOs office, these experiments are non –controlled, field experiments rather than controlled, laboratory experiments (Kerlinger, 1973). A controlled experiment has the advantage of isolating the research to a physical situation to limit the possible impact of confounding variables (Kerlinger, 1973; Trotman, 1996). However, a non-controlled experiment offers the alternate – the decisions made by the CFO in his natural decision environment (ie his own office) may offer a closer approximation of the real world decisions by these CFOs (Levitt and List, 2007). Of course, a disadvantage of this method is that the researcher is not able to be certain that the CFO has actually completed the research instrument himself, or if the task was completed in a quiet location without interruption, for example. Both controlled and non-controlled experiments offer valuable strengths, and extant literature is strengthened by the use of both methods (Harrison and List, 2004; Levitt and List, 2007).

Each CFO received a cover letter, the explanatory statement, the instrument booklet and a reply paid envelope. Since the experiments were fully randomised at both an experiment level and a treatment condition level, each CFO was assigned to one of a possible 32 combinations. The CFOs were randomly assigned to these conditions. Careful records were maintained of each of the 32 sub- mailing lists in order to maintain control over the allocation of the CFOs to their respective conditions in the subsequent mailing. One month after the first mailing, the CFOs received a reminder letter (see appendix 7). The reminder letter also enclosed the explanatory statement and a second booklet with

reply paid envelope. Reminder letters were not sent to CFOs whose original letter had been returned to sender. Respondents that voluntarily disclosed an email address on the final page of the booklet were also not sent reminder letters provided that the identity of the respondent was obvious from the given email address.

A box was included on the bottom of the front cover of the booklet which contained a code indicating the treatment condition of the particular booklet, and provided a space for numbering the completed booklets on their return. This facilitated tracking and control over the responses. Any mail that was returned to sender was recorded in a separate list and these participants were removed from the database for any follow up mailings. As returned booklets were received they were numbered sequentially, with this number recorded in the box on the cover of the document as soon as it was opened. The numbered booklet was entered into a spreadsheet as soon as it was received and the date of receipt was recorded to facilitate analysis of early and late respondents. The participants responses in the booklets were entered into the spreadsheet as well as any additional notes written on the booklet, highlighting or apparent changes made by the participant. Once all the responses were received, the complete spreadsheet was loaded into SPSS for analysis.

5.6 Pilot Study

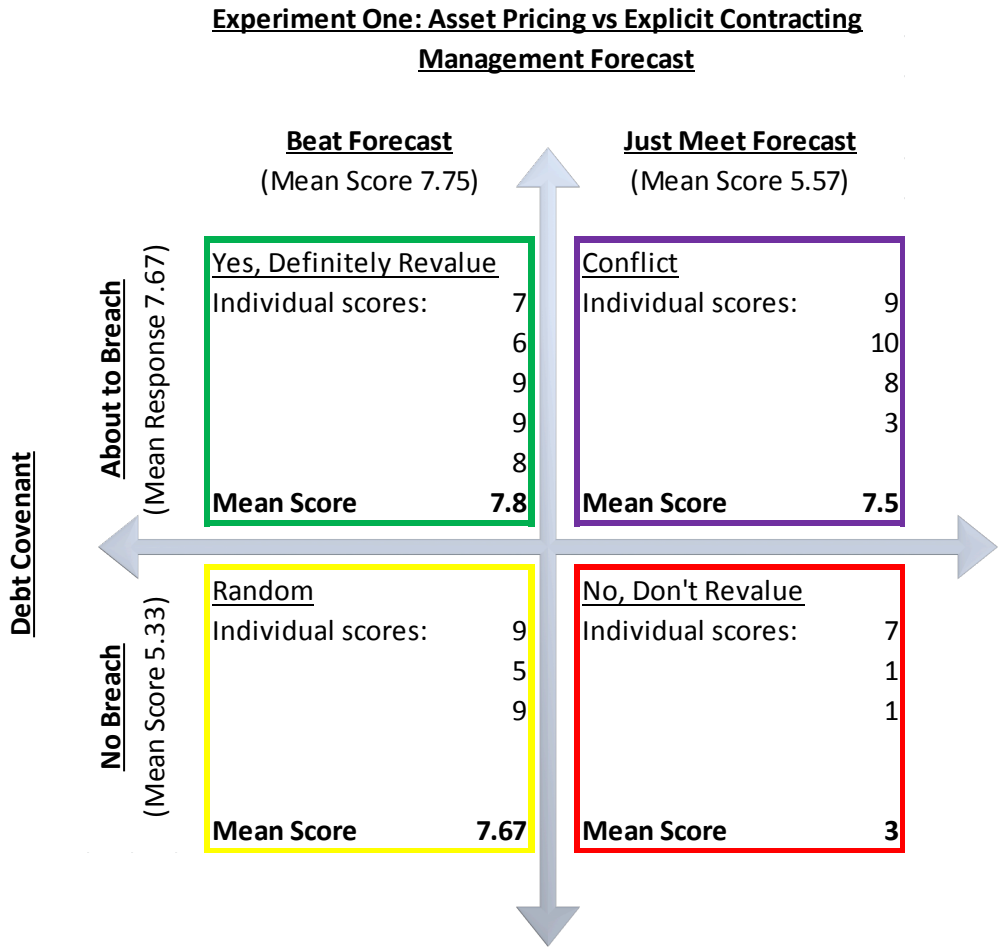
A pilot study was conducted with a total sample size of 15. Pilot subjects included 7 academics, all of whom have experience outside of academia. Two of these academics also sit on standard setting boards. The remaining 8 subjects were CFOs who all have

current or previous experience with a listed firm. They were disqualified from the main study either because they currently work for foreign rather than Australian listed firms, or because they are currently retired or working for non-listed firms. Four of the academics completed their research instruments using the Tobii eye tracking software as described in chapter 6. All of the subjects were allocated to the various treatment conditions on an ad hoc basis for example the Tobii participants were allocated to each of the four treatment conditions and not clustered in one cell.

5.6.1 Experiment One: Asset Pricing vs. Explicit Contracting

Experiment One crossed the asset pricing incentive created by a management earnings forecast with an explicit contracting incentive created by a leverage covenant in the firms lending agreement. The decision task asked the subjects whether they were likely to adopt the revaluation model for buildings and requested that they indicate their response by circling a number on the choice scale. This scale was from 1 – 'Definitely Not' to 10 – 'Definitely Revalue'. The responses of the pilot subjects are detailed in the figure overleaf.

Figure 5.3 Results of the Pilot Study for Experiment One



The responses of the pilot participants appear to be in the appropriate direction, indicating that the pilot subjects seem to have responded to the cues as anticipated. The pilot subjects that were told that they were about to breach their covenant gave a mean response of 7.67, which is above the mid point in the scale and indicates that they would be likely to revalue the assets and would then avoid the covenant breach. Subjects that were told that they were not in breach of their covenant gave a mean response of 5.33 which although just above the mid point is considerably lower than those in the 'Breach' conditions. Subjects in the two conditions in which the full year earnings were likely to just meet the management forecast were less likely to revalue (mean response of 5.57)

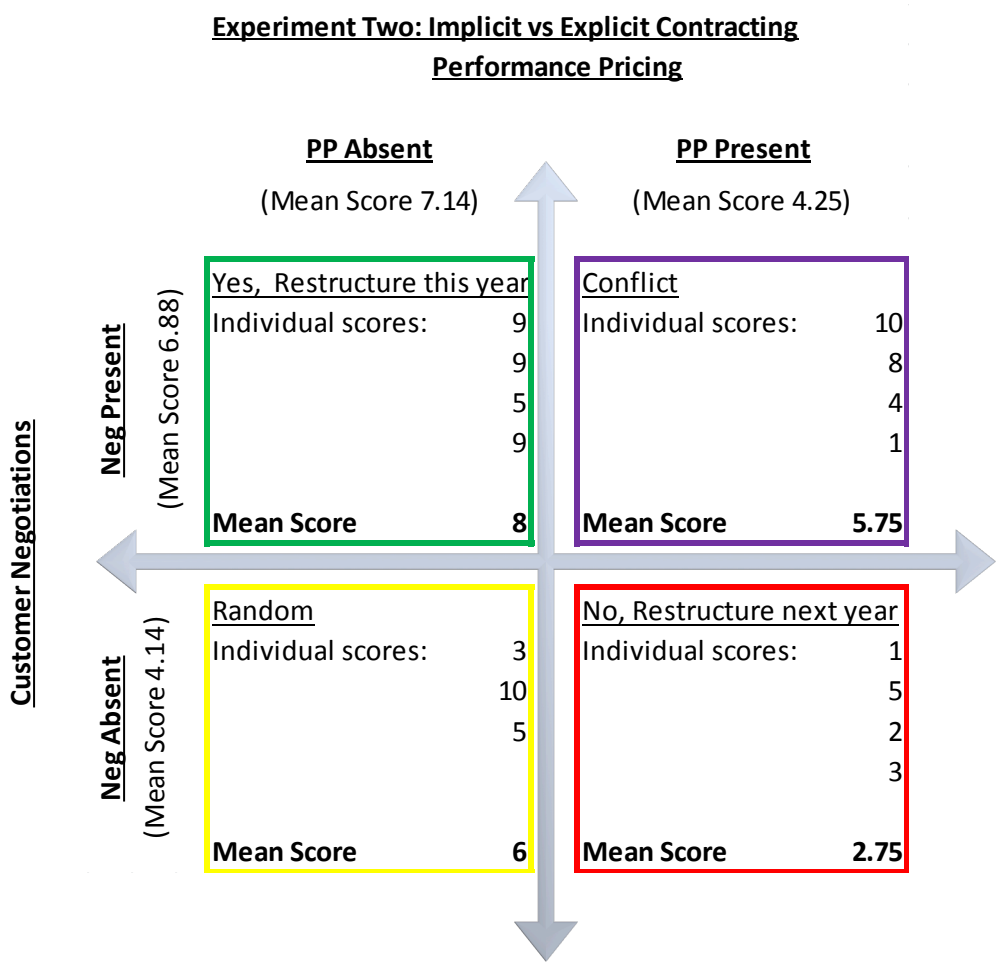
than those subjects who were told that they were going to beat the forecast (mean response of 7.75).

As expected, the cell means for the conditions with only one incentive present are a little more extreme than the overall means for each level of the manipulated variable as described above. Where the only incentive present in the treatment condition is the breach, the mean response is 7.8. Where the only incentive present in the treatment condition is the earnings forecast (Just Meet), the mean response is 3. This suggests that the subjects are reacting strongly to the earnings benchmark cue and are very unlikely to revalue in order to avoid an earnings surprise, when there is no opposing tension created by a potential covenant breach.

5.6.2 Experiment Two: Implicit vs. Explicit Contracting

Experiment Two crosses the implicit contracting incentive created by customer price negotiations with the explicit contracting incentive created by performance pricing provisions in the lending agreement. The choice scale was from 1 – Definitely wait until next year to 10- Definitely announce and restructure this year. The responses of the pilot participants to the second experiment are shown in the figure below.

Figure 5.4 Results of the Pilot Study for Experiment Two



Again the responses tend towards the expected ends of the choice scale, indicating that the subjects appear to be reacting to the appropriate cues in the case scenario. Pilot subjects who were told that customer price negotiations were imminent gave a mean response of 6.88, which is above the mid point in the choice scale indicating that they were likely to announce and restructure in the current year and reduce current ROE. This contrasts with the subjects for whom customer negotiations were absent who gave a mean response of 4.14, indicating that they were likely to wait until next year and therefore would not be reducing current ROE. Pilot subjects that were told that their interest cover ratio would fall below the performance pricing threshold if they were to

announce the restructuring (PP Present) gave a mean response of 4.25 indicating that they would not announce the restructure this year, and thus avoided the penalty interest. Conversely, those for whom the interest cover ratio was not brought below the performance pricing threshold by announcing and restructuring in the current period gave a mean response of 7.14. As was the case in experiment one, the treatment conditions in which only one incentive is present have more extreme responses than the overall mean calculated for each level of the manipulated variable. That is to say, subjects in the PP Present/Neg Absent condition gave a mean response of 2.75, indicating a strong response to the performance pricing cue that was not influenced by any opposing tension created by impending customer price negotiations. Similarly, those in the Neg Present/PP Absent treatment condition gave a mean response of 8, indicating a strong response to the customer negotiations in which reduced ROE would be a benefit, and without the complication of triggering the penalty interest in the performance pricing clause.

5.6.3 Manipulation Checks

As presented in the diagrams above, the pilot subjects' responses to the decision tasks in both experiments tended to suggest that the information in the scenarios was perceived as intended and the responses were, overall, as hypothesised. However, the responses to the manipulation check questions in the pilot study indicated considerable problems with these questions. As was detailed in chapter five, these manipulations were revised repeatedly during the pilot in an attempt to address these problems. The responses to the manipulation checks in the main study would suggest that this iterative revision did in fact resolve the issues as detailed in sections 7.3.1 and 7.4.1.

5.6.4 Survey

The pilot subjects also completed the survey section and demographics, and no particular instrument design or delivery problems were encountered. The results of the pilot survey are included in appendix 8.

5.7 Summary

This chapter has detailed the processes that were followed in conducting the study. This included the conception, design and delivery of the research instruments, as well as the design of the experiments themselves. In the next chapter, Tobii eye tracking software is introduced with a description of how and why it was utilised in the pilot phase of this study.

Chapter Six: Tobii Eye Tracking

The previous chapter described the methodology that was followed in this study. This chapter documents the use of the Tobii eye tracker in the pilot testing phase of the study. The chapter is organised as follows. In section 6.1 the Tobii eye tracker is briefly described. The rationale for using the system in the current study as well as the protocol that was followed during the Tobii pilot testing of this study is outlined in section 6.2. Excerpts of the output obtained from Tobii are included in section 6.3 with an explanation of their contribution to the study. The limitations of this phase of the testing are acknowledged in section 6.4 and concluding remarks are offered in section 6.5. In the next chapter, the results of the experiments are discussed with detailed analysis.

6.1 An introduction to the Tobii T120 eye tracking system

As part of the pilot testing of the research instrument, a small number of subjects completed the instrument on a computer screen using eye tracking technology which records and facilitates analysis of the subjects' eye movements while completing the task. The eye tracking technology that was utilised was the Tobii T120 eye tracker. Tobii is one of Sweden's fastest growing technology companies. The company was founded in 2001, born of a research project at the Royal Institute of Technology in Stockholm. At the time

of writing it is currently an organisation of 300 employees[21] and an award winning[22] world leader in eye tracking and control. As well as providing communication solutions for people with disabilities, Tobii provides eye tracking solutions to researchers in many and varied fields.

The Tobii T120 is a non-invasive device that records the subject's eye movement and fixations on the screen, as well as recording any mouse clicks made by the subject. A camera on the bottom of the computer monitor records these eye movements and tolerates a degree of movement by the subject. Accordingly, viewing a document while the Tobii eye tracking device records information about eye movement, feels no different from viewing a document on any other computer screen. The eye tracker is integrated in a 17 inch TFT[23] monitor as shown in figure 6.1 below. As is apparent from the image, it is not dissimilar in appearance to any other computer monitor, and the subject is likely to feel comfortable and become less aware of being 'watched' fairly quickly after commencing the task.

Since the eye tracking system allows for a generous degree of head movement, there is little distraction in the test environment which facilitates natural behaviour, and accordingly valid results. While completing the task on screen the subject is able to move their head within an area of approximately 30cm square. In fact, the Tobii eye tracking technology is tolerant enough of head movement that it has been utilised in studies on

[21] 300 employees as reported in Q2 of 2011
[22] Some of the awards won by Tobii in 2010 include SIME Grand Prize, Red Herring EMEA 100, Emerging101: Sweden's most successful enterprise. In 2009: Ahrens Rapid Growth ranking: Third place, Deloitte Rankings, Sweden Technology Fast 50: Ninth place Red Herring Global 100
IT company of the year
[23] TFT stands for Thin Film Transistor and is a variant of LCD (liquid crystal display) with improved image quality, commonly used in computer monitors, television sets, mobile phones, PDAs etc.

infants (e.g. Schietecatte et al., 2011) in the field of developmental psychology. Perhaps the more obvious uses of the eye tracker are in research fields such as psycholinguistics and reading, ophthalmology, neuroscience, human-computer interaction, as well as website and software usability. However, the eye tracker also facilitates research into advertising, package design and shopper behaviour, and even sports research as the eye tracker can also be fitted to a pair of glasses.

Figure 6.1 Tobii T120 integrated in a 17 inch TFT monitor

6.2 The Tobii Pilot : rationale and protocol

6.2.1 Rationale behind the use of Tobii in the pilot testing

A critical success factor of this study was the engagement of CFOs in the research. Since the approach was made by mail, it was particularly important to form a good understanding of the subject's experience of the material they received. For this same reason the possibility of contacting the subjects by email with a link to an online version of the instrument was also discounted. The volume of email exchanged is substantial and

the likelihood of an email approach being treated as spam or filtered out by an Executive Assistant was considered high. A professionally printed document received by mail was hoped to have a better chance of reaching the target subject and of making enough of an impression to entice the target subject to actually read it. Accordingly, their initial reaction to the research instrument booklet, its readability and ease of completion would be instrumental when forming the decision on whether or not to participate. The use of eye tracking software as part of the pilot testing provided a novel and informative method of robustness testing of the research instrument with this aim in mind.

Eye tracking is simply a data gathering technique to add to the researchers repertoire. It allows access to unique information about visual attention which may assist in revealing the cognitive workload, decision strategies and interests of the user. An important part of the use of eye tracking is the post-task interview with the subject. The eye tracker offers an improvement in the use of the think-aloud method which has its roots in psychological research (Ericsson and Simon, 1993). This methodology suffers two threats to validity (van Someren et al., 1994). Firstly, incompleteness due to synchronisation problems, which occurs because the normal task process needs to be slowed down to synchronise it with the verbalisation of this task. Verbalisation of the task can take longer than the task itself. If verbalisation of the task does not keep up with the speed of the task process, the subject's report of their process can be incomplete. Secondly, results may be invalidated because of working memory constraints. When the information process is verbal and complicated, verbalisation of the task costs the subject time and space in working memory, as verbalisation becomes a cognitive process of its own. Accordingly, the subject's report of the original process may be incomplete or disrupted.

In other research in the field of computing, this methodology is referred to as Concurrent Think Aloud (CTA). An alternative is Retrospective Think Aloud (RTA) which requires the subject to first complete the task and then to verbalise the process after completion. RTA has been preferred over CTA as it avoids these limitations and has consequently been widely used in computer usability studies (Guan et al., 2006). The most commonly used form of RTA uses visual reminders of the task to prompt retrospection (e.g. Capra, 2002) and is known as stimulated RTA (for example Capra 2002).

Guan, et al. (2006) test the validity of RTA by conducting an experiment that examines whether the verbal accounts of the subjects are an accurate reflection of what occurred during the task performance. In their experiment, eye tracking data is used as a method of validating the retrospective report of the task given by the subjects, as it is an accepted measure of user attention (Geiselman and Bellezza, 1977). They use eye tracking data as criterion data indicating what objects the subjects paid attention to, and in what order this was carried out. This is consistent with the "eye-mind hypothesis" which posits that where people look is an indication of to what they are paying attention (Goldberg and Wichansky, 2003; Williams, 2003). Guan et al. (2005) find a reasonably high volume of errors of omission, where the subject fails to report sections of the process. Eye tracking becomes a valuable method of filling in these gaps in the subject's report. Guan et al. (2005) also point out that since an element of RTA is the study of the subjects' behaviour rather than simply being an investigation of their areas of attention, eye tracking offers additional usability information about design issues that can be inferred from behaviour patterns. For example, they explain that when a user is seen to be moving repeatedly

back and forth between interface objects, this is indicative of a vague or ambiguous design. This point is particularly relevant to the use of Tobii in the pilot testing described in this thesis. The main purpose of utilising the eye tracker was to gain an understanding of the subjects experience of the research instrument. Therefore it was the layout, design and readability of the instrument that was the focus of the Tobii pilot testing rather than the broader use of RTA to understand the decision making carried out by the Tobii pilot subjects.

6.2.2 Protocol

A total of 15 subjects participated in the pilot study as described in chapter five. Of these 15 subjects, four completed their research tasks on screen and their responses were recording using the Tobii functionality, in addition to the recording of the specific eye tracking data.

Invitation to Tobii Pilot Subjects

The four Tobii pilot subjects were all academics with previous senior financial managerial experience in commerce and industry. As academics, these subjects were on campus and therefore easily able to access the behavioural research laboratory at Monash University where the Tobii eye trackers are located. While CFOs would have been preferable, it would be difficult to encourage CFOs to visit the campus laboratory in order to participate in the pilot study. Having been invited to participate in the Tobii pilot for this

study, an appointment was scheduled for each of the Tobii pilot subjects individually, at the Monash University Behavioural Laboratory, at their convenience.

Arrival and Calibration

On arrival at the laboratory, the Tobii subject was made comfortable and given a brief explanation about the eye tracker. Once the subject was ready to begin the task they were seated in front of the T120 monitor for calibration. The calibration process is quick and straight forward. It requires the subject to watch a red bouncing ball move around the screen while the eye tracker calibrates the individual's eye movement. The eye tracker is suitable for almost any subject, regardless of whether or not they wear glasses or contact lenses and can even cater to individuals with only one eye. The Tobii recording for each of the subjects was made under an anonymous code. As described in chapter five, none of these subjects received the same version of the instrument as another subject and the subjects were allocated to different treatment conditions on an ad hoc basis.

Execution of the task

Once calibration was successfully completed the subject was able to begin the task when they felt ready. In preparation for each subject, the pdf file of the research instrument had been uploaded as the stimulus in the Tobii software program, with some additional instruction sheets in front of the pdf file which gave instructions specific to the completion of the task on screen. These instructions explain how to use the cursor keys

to navigate through the document and that the task can be completed on screen by clicking the appropriate box. In the paper version, the subjects would simply tick the appropriate box. The pdf stimulus that appeared on the screen for the Tobii pilot subjects was an exact replica of the document that was received in paper form by the non Tobii pilot subjects. The Tobii pilot subjects were able to flick back and forth through the document by using the cursor keys in much the same way as the non Tobii pilot subjects would be able to do with the paper version. Each participant completed the task in their own time, and the eye tracker recorded both the eye movement data and the mouse clicks that indicate the responses to the decision tasks, manipulation checks and survey questions.

Post-task interview

Once the task was complete, the subject was invited to watch the replay and visualisations to facilitate discussion of their experience of the research instrument.

6.3 Tobii Data

With the aim of understanding the users experience of the research instrument and its usability, a series of specific questions were developed to be addressed in by the Tobii pilot phase. Each of these questions is discussed in turn below.

Does the Tobii subject take an excessive amount of time to complete the task indicating that it is an onerous demand on the subjects time?

Tobii eye tracker times the task duration accurately and can provide data on the length of time spent on each page. The non-Tobii pilot subjects reported that the task took between 10 and 20 minutes to complete. The Tobii recordings confirm that this report is a reliable approximation of the time spent on the task. The minimum time spent on a task by a subject was 11:04 minutes and the longest time spent on a task by a subject was 21:25 minutes. Since the cover letter included an estimate of the time the task was anticipated to take to complete, it was important to ensure that such an estimate was reasonable. It was also important that the task was not so onerous as to discourage participation in the study.

Does the Tobii subject pay attention to the logos on the front page, particularly the ICAA badge?

This was a particularly interesting question since endorsement of ICAA had been gained in order to be able to use the logo of this professional body to add to the credibility of the study. Unfortunately, while the front page of the document that bears the logos appeared without issue in the preview function of the test, this page was skipped in the live recording. It has not yet been determined why this occurred. Prior to the four Tobii pilot subjects completing the task, the stimulus was carefully tested. However, in the preview function there was no issue with the front page and in the test live recordings it was thought to be user error pressing the cursor button to turn the pages too quickly. In a study that relies more heavily on the Tobii data, this issue would have to be resolved, to

ensure that the data was complete and uncompromised. Like any research tool the eye tracker is not without complication or limitation.

Does the Tobii subject actually read the instruction sections?

Yes, participants appeared to read the instructions as is evident from the heat maps. Encouragingly, comparatively less time was spent reading these sections which is taken as an indication that the information is easy to follow. By comparison, the subjects tend to spend more time on the key sections of the case scenario that contain the choice task details for example. In the post test interview subjects reported that the focus on these areas was not an indication that the material was difficult to understand but the decision that had to be made based on that information was a difficult one. The figure below shows the heat map produced by the eye tracker indicating the attention of the Tobii subject to page 3 of the research instrument DCAY . The red areas indicate sections of the document that the subject spent the most time looking at with the yellow sections showing the areas that the subject spent less time on and green indicating the least amount of time. The small red and white badges indicate the subject's mouse clicks, evidencing their choices on the decision task and manipulation check questions.

Figure 6.2 Heat Map showing a Tobii subject's attention to page 3 of the research instrument DCAY

Does the Tobii subject go back to the text or decision task after reading the manipulation check?

Some subjects did in fact go back and read the text when they reached the manipulation check. They did not however change their response to the decision task. This is a good example of the sort of information that may not be achieved from the subject's RTA report. A subject may potentially not remember whether they did this, or may choose not to be honest with the researcher by admitting that they did not follow the instructions. The eye tracker faithfully reports the movement of the eyes indicating the order in which the subject attended to areas of the task material. A still image of this output can be produced with the software and is called a gaze plot, shown in Figure 6.3 below.

Since the stimulus is a full page of printed text, there is considerable eye movement. The longer the subject looks at the stimulus the more complex the gaze plot. Figure 6.4 below shows the gaze plot for a different subject, who chose to spend more time looking at this page than the subject whose gaze plot is shown in Figure 6.3..

Figure 6.3 Gaze plot of page 3 of research instrument DCAY

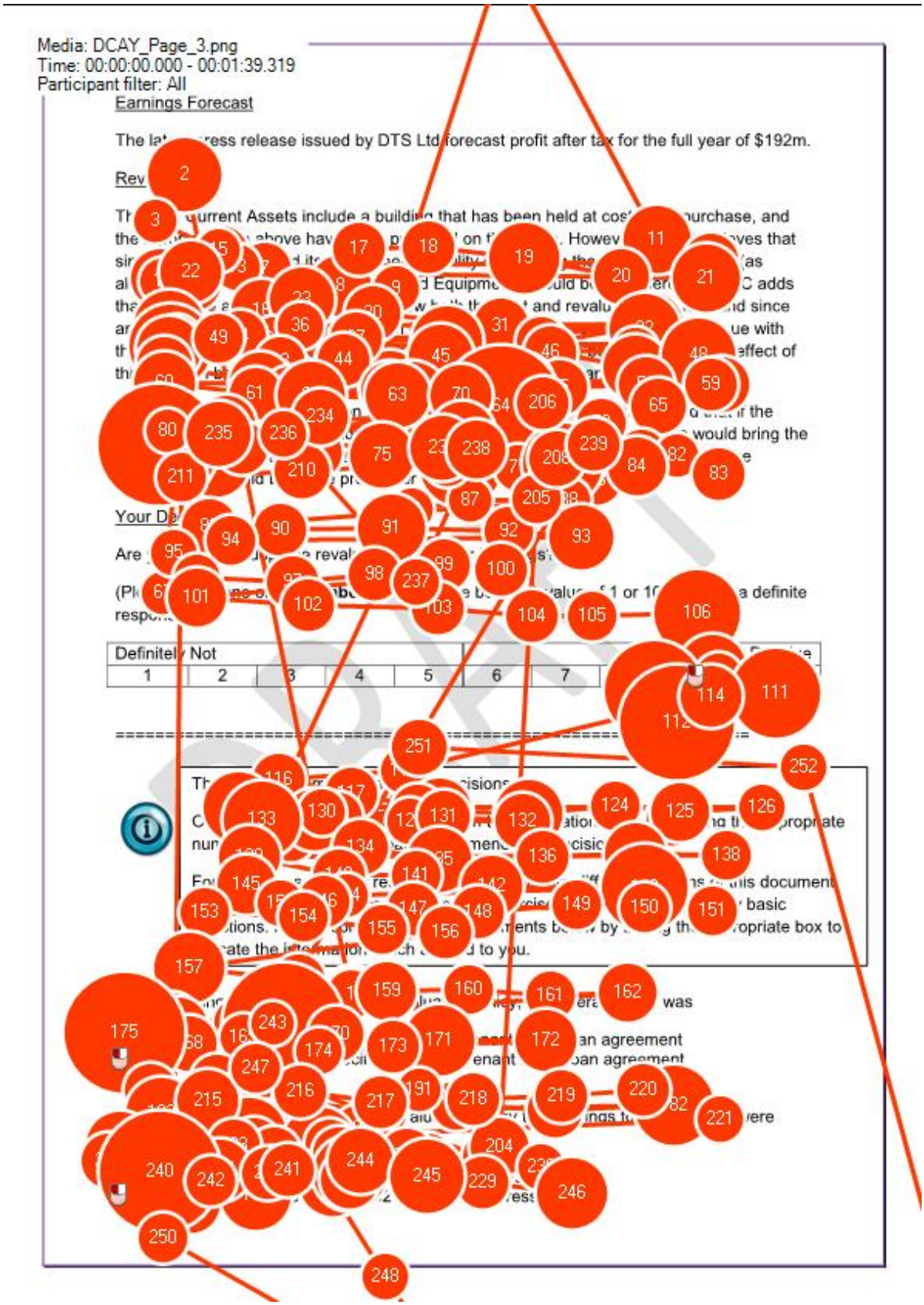
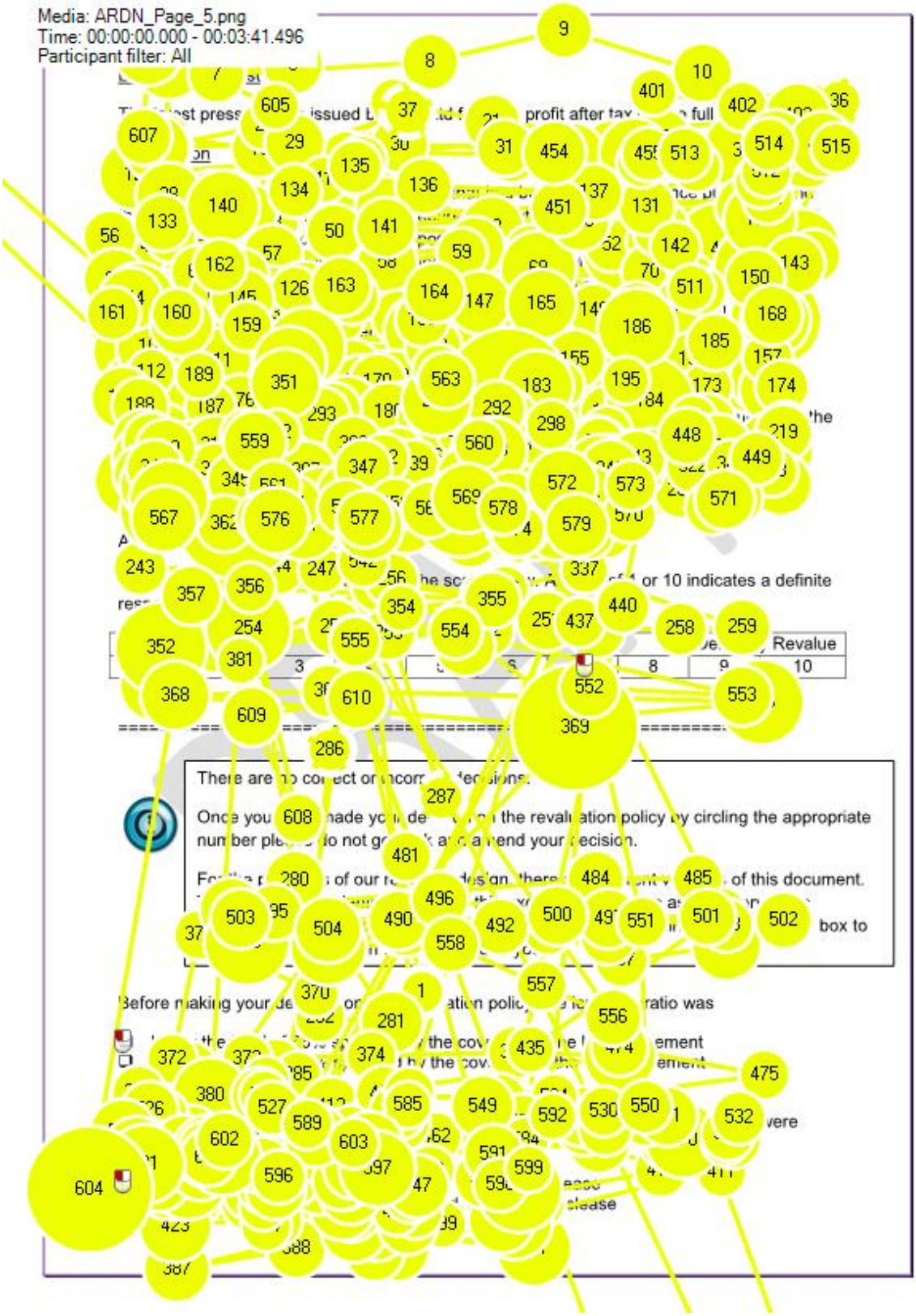


Figure 6.4 Gaze plot of page 5 of research instrument ARDN



The pages of the research instrument that are shown in figures 6.3 and 6.4 are comparable. This is the decision task page for the scenario in experiment one for the company called DTS Ltd. Since the subjects were in different treatment conditions and the parts of the instrument were randomised one subject is viewing this page as page 3 of the research instrument and the other is viewing it as page 5 of the research instrument. All of the information is identical except for the manipulated variables (leverage covenant percentage in the lending agreement and forecast earnings) which differ between the two pages. Note that in figure 6.4 the dots and path are yellow while in figure 6.3 they are red. Tobii allocates a different colour to each participant. Each dot is a fixation point. The size of each dot on the gaze plot represents the length of time for which the subject fixated on that particular area of the document. The number inside the dot represents the path of the fixation points. In Figure 6.3 the dot over the first manipulation check question is numbered 175, indicating that it was the 175th point of fixation on the page. In the top half of the page there are dots numbered greater than 175 indicating that the subject looked back to the earlier sections after having completed the manipulation check question.

Does the Tobii subject:

- *complete the second task quicker than the first?*
- *take longer to complete the conflict task than the other tasks?*

In general, the subjects took a similar amount of time to complete each of the two experimental tasks in the instrument. However as described above some subjects took twice as long to complete the whole instrument as other subjects. For example, the

subject that completed ARDN took 6.51 minutes to complete the first task and 5.96 minutes to complete the second task. The subject that completed the instrument DCAY took only 2.99 minutes to complete the first task and 2.28 minutes for the second task.

In the case of DCAY, since the first task was the conflict task it was anticipated to take a little longer than the second. In addition, the second task would be expected to potentially be a little quicker to complete since the subject has already completed another similar experimental task. For DCAY, the time taken to complete the second task was 24% less than the time to complete the first task. In the case of ARDN, the reduction in time from the first task to the second is only 8%. This is consistent with the psychology theory described in chapter 3 regarding avoidance–avoidance conflicts. The first task (experiment one) in the DCAY instrument is an avoidance-avoidance task where the subject is forced to choose between two negative alternatives: violating a covenant or missing an earnings forecast. The second task in DCAY (experiment two) is an approach-avoidance conflict in which there is only one negative alternative to avoid: activating the performance pricing clause. The second task is therefore psychologically more comfortable and thus easier for the subject to make, in the case of DCAY. In ARDN, neither of the tasks is a conflict task. Accordingly, there is no apparent reason for one of these tasks to be easier to make than the other. Prima facie, the 8% reduction in completion time for the second task in ARDN is consistent with the idea of a learning effect. Having completed one task, the subject is more comfortable with the document, and the process and probably feeling a little more confident which makes the second task

easier to complete[24]. In the case of DCAY, the greater reduction in completion time for the second task relative to ARDN is consistent with the conflict task being more difficult than the tasks in the other treatment conditions. Clearly, this analysis is highly speculative and limited by the very low number of subjects. However, measuring task complexity was not an aim of this study. Since this data is available for a part of the pilot testing it is positive that the behaviour of the subjects appears consistent with the some of the fundamental principles of choice under conflict as described in chapter 3, even if taken only as an anecdotal example.

Does the Tobii subject appear to easily understand the questions as observed the length of time it takes to read them?

In the replay, the subject can be observed reading through the document at their particular pace. Typically, after reading the critical sections of the scenario such as the details of the accounting numbers and covenant levels and the task section, the subject pauses fixating either on a particular number or nowhere in particular while they think about the decision. While it is evident that the subject typically looks back and forth between these critical areas, this appears to be more because they are assimilating the information and coming to a decision as opposed to not understanding the issue. This was confirmed by the reports in the post test interview.

Another point of interest is the gaze path (see Figure 6.3 and 6.4 for examples of the depiction of this gaze path in the Tobii output described as a 'gaze plot'), where having read the details of the financial statement extracts, once the subject reaches the

[24] The scenarios are entirely independent which limits the scope for a learning effect for the specific expert decision-making skill. The learning effect is more likely to be simply to do with the process of working with the research instrument and physically completing the task as opposed to expert decision skill.

information about the covenant levels they typically look directly back at the excerpts to compare this level with the current ratio. Effectively, this is an additional manipulation check since it evidences the subjects' awareness of the implications of the covenant.

One of the subjects spent considerable time on the final question in the survey section which asks about a hypothetical scenario. During the post test interview, while watching the replay he explained that this section had been the hardest to understand. The particular section of this question that had troubled the subject was a bracketed phrase which had been included for the purpose of making the question more appropriate for the Australian market. As a result of this discussion the wording of this phrase was revised to improve its understandability. This demonstrates the usefulness of stimulated RTA since it may not have been something the subject might have remembered to report without the visual reminder of the replay.

6.4 Limitations of the Tobii Testing

For the purposes of robustness testing of the instrument, one limitation is that the experience of the Tobii pilot subjects is not identical to that of the subjects in the main study as they receive the printed, paper version of the instrument. In addition, the Tobii pilot subjects were academics with prior commercial experience and it was therefore possible that they might be more attentive to the task than the CFO subjects. In addition, the knowledge that they were being recorded while completing the task may possibly have increased their diligence in completing the tasks relative to the CFO subjects.

Another limitation acknowledged earlier is the low number of subjects. Given the intention behind the use of the eye tracker and the fact that it was not going to be used as a data gathering tool in the main study, increasing the number of Tobii pilot subjects was considered to be of limited value.

6.5 Summary

While utilising eye tracking software was not strictly necessary in the pilot phase of this project, considerable benefits were achieved from the luxury of being able to access this sophisticated tool. An understanding of the subjects' interaction experiences with the research instrument was helpful in ensuring that the document was well laid out, clearly worded and contained sufficient but not excessive instructions. While it is not possible to clearly identify the exact cause of the sound response rate achieved in the main experiments, this level of due diligence at the pilot testing stage can only have been helpful.

Future research on the subject of this thesis could potentially make greater use of the eye tracking tool provided that it is possible to overcome the obstacle of being able to bring sufficient expert subjects to the eye trackers or vice versa. Utilising stimulated RTA to a greater extent than was the case in this study offers the possibility to gain a greater understanding of the decision making process, particularly in the conflict scenario and an opportunity to hear expert subjects describe how they evaluate the stakeholder attributes and determine which stakeholder to prioritise.

This chapter has detailed how and why the Tobii eye tracking system was used in the pilot phase of the study. In the next chapter, the results of the two main experiments are analysed and discussed.

Chapter Seven: Experiment Results

The previous chapter described how and why Tobii eye tracking technology was used in the pilot study. This chapter details the results of both experiments in this study. The chapter is organised as follows. Section 7.1 introduces the results data with an assessment of the representativeness of the response sample by analysis of the demographic and descriptive statistics of the subjects and their firms. Each of the experiments is then discussed in turn in sections 7.2 and 7.3. These sections each include a discussion of the manipulation checks, descriptive statistics and hypothesis testing. Concluding remarks are offered in section 7.4.

7.1 Introduction

The research instrument was administered by mail to 704 CFOs of Australian listed companies, as described in Chapter Five. Responses were received from 116 subjects, yielding a 16.4% response rate. Prior studies have reported difficulty in engaging the CEO/CFO group in research studies. An extreme example is the study by (Graham et al., 2011) in which response rates as low as 5% are reported. The response rate in this study compares favourably with that achieved by GHR of 10.4%.

7.1.1 Representativeness of the response sample population

Analysis of the descriptive data indicates that the voluntary response sample is fairly representative of the mailing list population on the measured dimensions: industry,

turnover, profitability and CFO gender as illustrated in the figures 7.1 to 7.4 below. The data on these dimensions for the full mailing list is taken from the Aspect Huntley FinAnalysis database. The data for the sample is taken from the demographic survey questions completed by the subjects at the conclusion of the research instrument.

The distribution of the firms across industry categories in the response sample is substantively similar to that of the firms in the full mailing list population. Every industry category is represented in the sample and the largest difference between mailing list and response sample is around 6%, and is in the two largest sectors in the Australian market, Materials and Financials.

Similarly, the full population and response sample are remarkably similar when compared by turnover. Figure 7.2 illustrates that the response sample includes firms from each turnover band, in very similar proportions to the full population. Figure 7.3 shows the comparable proportions of profit versus loss making firms in both the full population and the response sample, demonstrating the representativeness of the sample.

Figure 7.1 Industry Composition of the Mailing List Population and the Sample

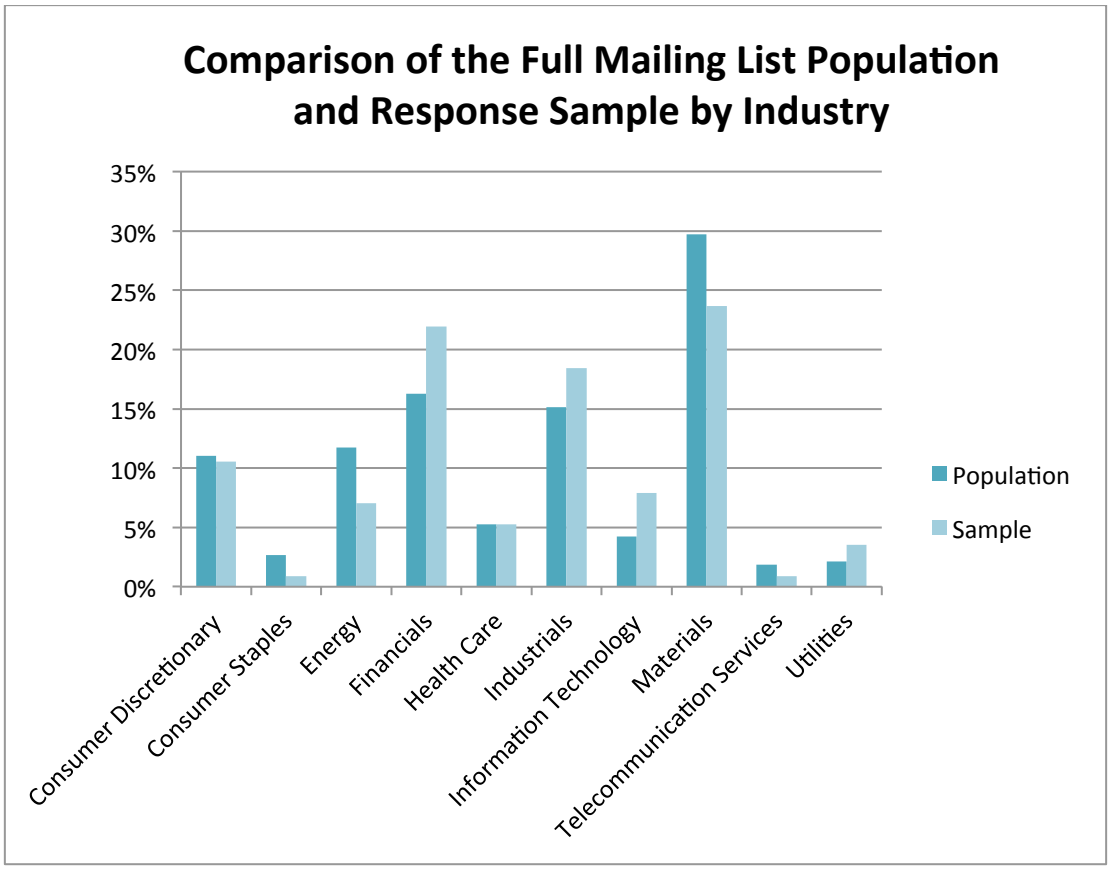


Figure 7.2 Turnover Composition of the Mailing List Population and the Sample

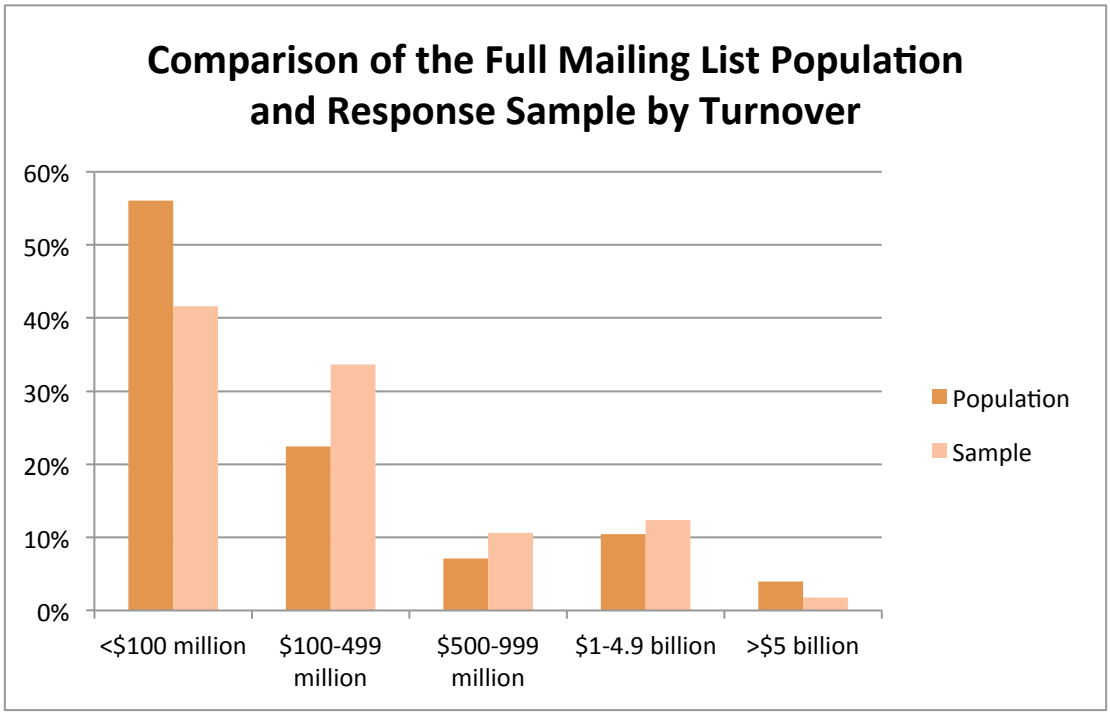


Figure 7.3 Profitability Composition of the Mailing List Population and the Sample

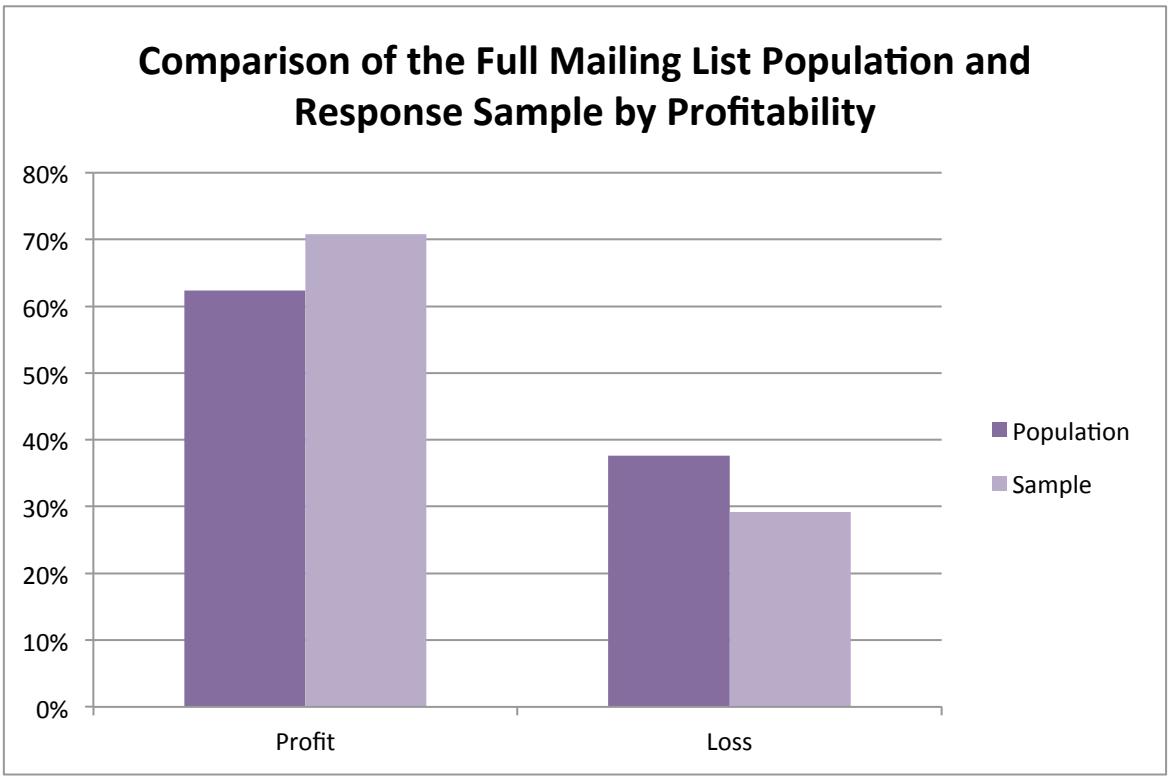


Figure 7.4 CFO Gender Composition of the Mailing List Population and the Sample

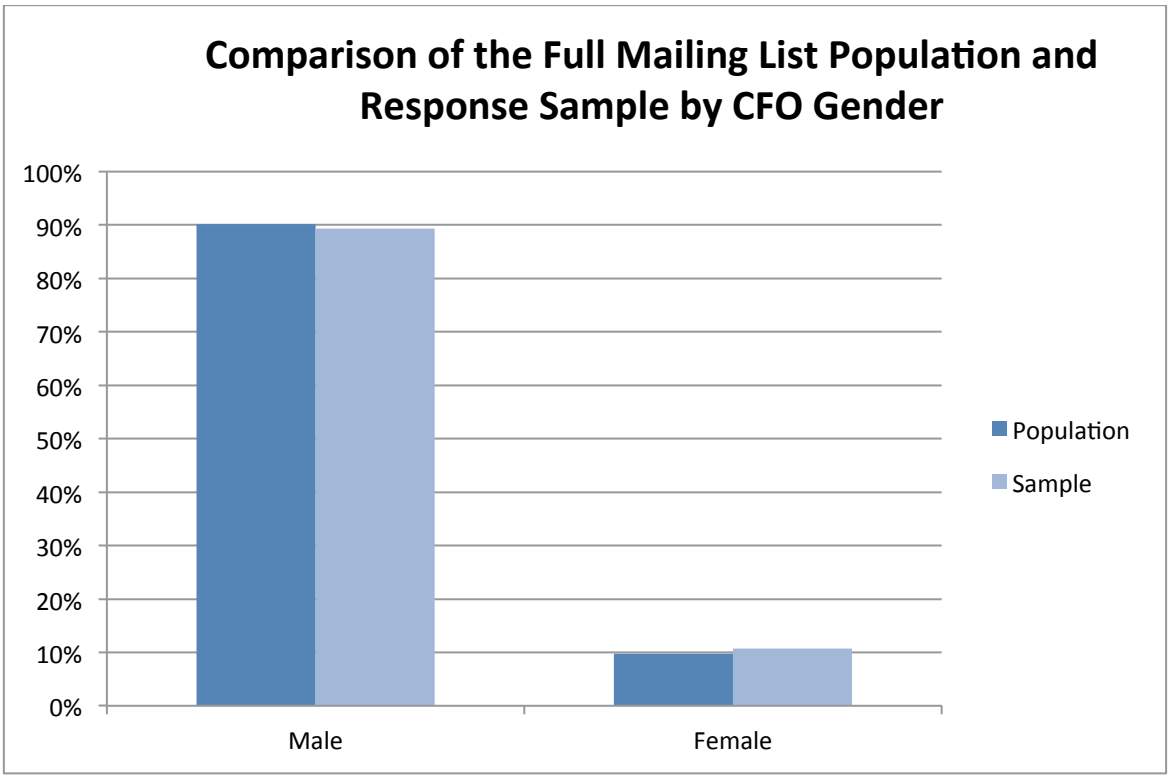


Figure 7.4 demonstrates the dramatic gender disparity in Australian CFOs. Only 10% of Australian firms in the mailing list population have a female CFO. The proportion of female respondents is also 10%, making gender one of the most representative dimensions in this study.

7.1.2 Sample Demographics

Additional demographic information was collected at the conclusion of the research instrument which is not available for the full mailing list population. Descriptive statistics of these dimensions are tabulated below (see Table 7.1). All subjects completed the information regarding the ownership and listing of their firms. For the remaining demographic variables, subjects omitted some of the questions as shown in the frequency tables below. Broadly, the sample comprises experienced CFOs, 84% of whom are over 39 years of age, and 76% of whom have over 10 years of experience. The overwhelming majority of the CFOs are tertiary educated (97%) with 23% of the subjects having a qualification higher than a bachelor's degree. The sample represents members of both the Institute of Chartered Accountants (65%) and CPA Australia (32.4%). The subjects are all employed by firms listed on the ASX, since this was a mailing list selection criterion, but 8% of the firms are also listed on a foreign exchange.

Table 7.1 Demographic Composition of the Response Sample

Panel A: Age	**<=39**	**40-49**	**50-59**	**>=60**	**Missing**			**Total**
Frequency	19	54	37	5	1			116
Percentage	16%	47%	32%	4%	1%			100%
Panel B: Senior Financial Management Experience	**<4 years**	**4-9 years**	**>=10 years**	**Missing**				**Total**
Frequency	8	20	86	2				116
Percentage	7%	17%	74%	2%				100%
Panel C: Professional Memberships	**CA**	**CPA**	**Other**	**CA and CPA**	**CA and Other**	**CPA and Other**	**Missing**	**Total**
Frequency	61	28	7	4	5	4	7	116
Percentage	53%	24%	6%	3%	4%	3%	6%	100%
Panel D: Highest Qualification	**Secondary Education**	**Bachelor's Degree**	**MBA**	**Non MBA Masters**	**>Masters**	**Missing**		**Total**
Frequency	4	82	14	4	8	4		116
Percentage	3%	71%	12%	3%	7%	3%		100%
Panel E: Firm Ownership and Listing	**Public/ASX only**	**Public/ASX & Foreign Listed**	**Missing**					**Total**
Frequency	107	9	0					116
Percentage	92%	8%	0%					100%

7.2 Experiment One

7.2.1 Manipulation Checks

Following the decision task, the subjects were asked to select which information applied to their particular scenario regarding each of the manipulated variables. This is described in detail in chapter five. Of the full sample of respondents, 114 subjects completed the decision task and manipulation check questions for experiment one. This manipulation appeared to be successful as 96.5% of the subjects answered the manipulation check question for the explicit contracting manipulation (covenant breach) appropriately. Similarly, 94.7% of the subjects gave the appropriate response to the manipulation check question for the asset pricing manipulation (earnings forecast). Dropping the responses of the subjects who gave inappropriate responses to the manipulation check questions from the sample produces similar results. The ANOVA tables produced from this reduced sample are included in appendix 9. This proportion of incorrect answers to the manipulation questions is comparable with other studies, for example Jamal and Tan (2010) who had 86 out of 90 subjects give the correct answer to one of their manipulation check questions (95.6%) and 85 out of 90 subjects give the correct answer to another of their manipulation checks (94.4%).

7.2.2 Descriptive Statistics for Experiment One

Cross tabulations

Cross tabulation reports were run in SPSS to assess whether there were any significant differences in the demographic variables across the four treatment groups. These reports are shown in appendix 10. This is an important question since the instrument was

administered by mail, and control over the number and characteristics of subjects responding in each treatment condition was not possible. For most of the variables, the cross tabulation reports indicate that there is no significant difference between the proportions in each category of the demographic variables across the treatment conditions. As a result, possible bias in any one particular treatment condition as a result of disproportionate demographic characteristics is reduced. However, for three of the variables (membership, industry and turnover) there was a difference in the distribution across treatment conditions. For these three variables, ANCOVA tests were conducted using the variables as covariates, with qualitatively similar results to the ANOVA tests. A detail of this analysis is included as appendix 10.

Descriptive Statistics

The descriptive statistics for experiment one are detailed in table 7.2 below. In the absence of any incentive (No Breach/Beat Forecast treatment condition), the subjects mean response to the likelihood of revaluation is 5.67, which is around the midpoint in the scale. When an earnings benchmark incentive is introduced in the form of avoiding missing the management earnings forecast the mean response is reduced to 3.93. That is, subjects in the No Breach/Just Meet condition, choose not to revalue and therefore avoid reducing future earnings with the greater depreciation write-offs. When the only incentive present is avoiding the covenant violation, that is the Breach/Beat treatment condition, the mean response to the revaluation decision is 7.19. These subjects are choosing to revalue in order to improve the leverage ratio. In the conflict treatment condition (Breach/Just Meet) subjects still choose to revalue since the mean of 6.25 is above the theoretical mid-point of the scale, but this mean is lower than in the absence

of the opposing tension created by the asset pricing incentive (avoiding missing the earnings forecast).

Table 7.2 Descriptive Statistics for Experiment One

Experiment One: Asset Pricing vs Explicit Contracting

Management Forecast

Debt Covenant	Beat Forecast (Mean 6.29; S.D. 2.795; N 51)	Just Meet Forecast (Mean 5.73; S.D. 2.728; N 63)
About to Breach (Mean 6.6; S.D. 2.419; N 57)	Yes, Definitely Revalue Mean 7.19 Standard Deviation 2.695 N 21	Conflict Mean 6.25 Standard Deviation 2.209 N 36
No Breach (Mean 4.84; S. D. 2.757; N 57)	Random Mean 5.67 Standard Deviation 2.733 N 30	No, Don't Revalue Mean 3.93 Standard Deviation 2.526 N 27

7.2.3 Hypothesis Testing

Financial Accounting Hypotheses

Experiment One was designed to test two financial accounting incentive hypotheses and one conflict hypothesis. Hypothesis H1 predicts that the subjects will choose to revalue in response to the explicit contracting incentive, selecting a value between 6 and 10 on the decision scale. As established in chapter two, managers of firms that participate in capital markets have incentives to meet earnings benchmarks, such as analysts' estimates or management's own voluntarily disclosed forecasts or avoid earnings surprises. Such benchmarks develop expectations in the capital market which the manager will wish to avoid significantly deviating from, when reporting their results (Kasznik, 1999). The managers surveyed by GHR cite many market related reasons for meeting earnings benchmarks, including building credibility with the stock market, and their own external reputation as well as maintaining or increasing the stock price, and reducing stock price volatility. The asset pricing incentive has been shown to be a particularly compelling one. Approximately 20% of the CFOs surveyed by GHR said that they would consider sacrificing long term value in order to avoid missing a short term earnings benchmark. The formal statement of the asset pricing hypothesis as given in chapter 2 is:

> **H1** Firms at risk of reporting earnings that are below their forecast are more likely to make an accounting choice to avoid an earnings surprise than firms that are not at risk of reporting earnings that are below their forecast.

Hypothesis H2a predicts that the subjects will choose not to revalue in response to the asset pricing incentive, selecting a value between 1 and 5 on the decision scale. Existing literature has established that the inclusion of accounting based covenants in lending

agreements give managers an incentive to use their accounting discretion to avoid covenant violation (Watts and Zimmerman, 1990, 1986; Dichev and Skinner, 2002). The incentive to avoid covenant violation is stronger when the costs of default are higher (Smith and Warner, 1979; Holthausen and Leftwich, 1983), and when a waiver is less likely (Chen and Wei, 1993). However, private debt contracts are frequently negotiated (Roberts and Sufi, 2009). Typically, covenants are set very tightly at inception of the loan and often relaxed but seldom tightened during the life of the loan (Garleanu and Zwiebel, 2009). Despite this unique feature of negotiability in private debt contracts, it is likely that the manager will take all steps to avoid violation where possible and see negotiation of a waiver as a last resort. Covenant violations are found to be a significant indicator of unfavourable outcomes of renegotiations of lending terms (Roberts and Sufi, 2009). The formal statement of the explicit contracting hypothesis replicated from chapter 2 is:

> **H2a** Firms at risk of breaching a covenant are more likely to make an accounting choice to avoid covenant violation than firms that are not at risk of breaching a covenant.

The ANOVA tests were run in SPSS in order to test for differences between groups (Tabachnick and Fidell, 2007). The results presented in Table 7.3 below show that the main effect for Forecast is statistically significant, $F(1,110) = 7.767$, $p = 0.01$ and has a medium effect size[25] (partial eta squared of 0.07). The assessment of the eta squared as a medium effect is based on Cohen's guidelines (Cohen, 1988). This supports H1, providing

[25]Eta squared is a measure of relationship, like a correlational coefficient, and analogous to R squared (Pallant, 2007). The guidelines proposed by Cohen (1988) for interpreting the value of eta squared in order to assess the effect size are:
eta of 0.01 – small effect
eta of 0.06 – medium effect
eta of 0.14 – large effect

evidence that subjects made an accounting choice to avoid an earnings surprise. There is also a statistically significant main effect for Breach F (1,110) = 16.0, p = 0.00, with a slightly larger effect size (partial eta squared of 0.13) than was found for Forecast. This supports H2a, providing evidence that managers make an accounting choice to avoid a covenant violation.

Table 7.3 Tests of Between-Subjects Effects for Experiment One

Dependent Variable: Revalue

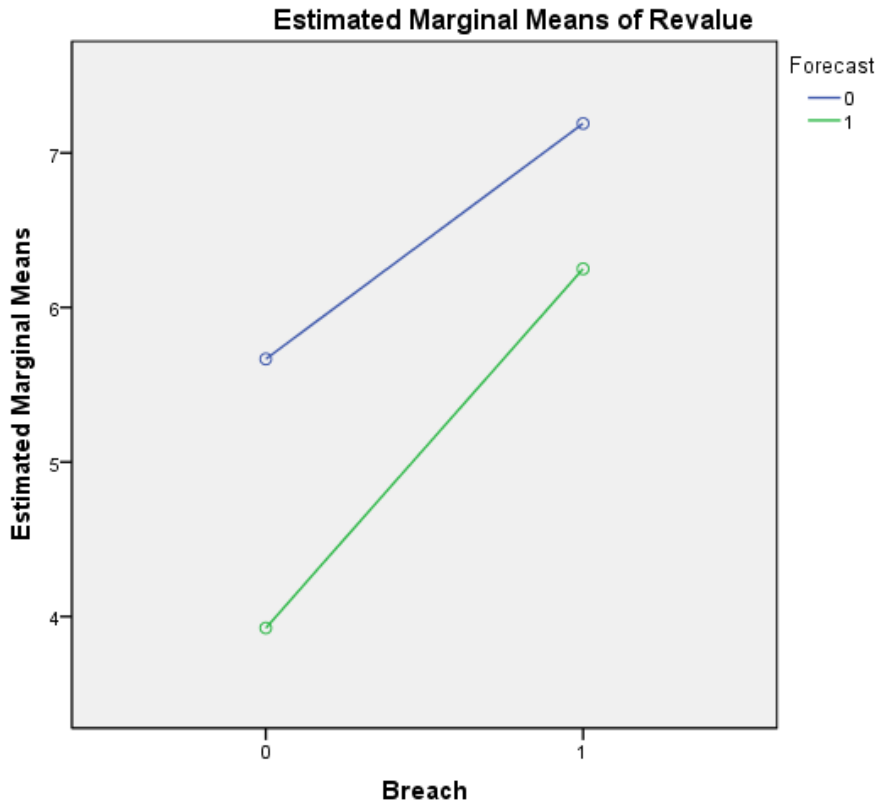
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	142.511[a]	3	47.504	7.481	.000	.169
Intercept	3639.517	1	3639.517	573.147	.000	.839
Breach	101.574	1	101.574	15.996	.000	.127
Forecast	49.318	1	49.318	7.767	.006	.066
Breach * Forecast	4.393	1	4.393	.692	.407	.006
Error	698.507	110	6.350			
Total	4570.000	114				
Corrected Total	841.018	113				

a. R Squared = .169 (Adjusted R Squared = .147)

Since there is no statistically significant interaction effect F (1,110) = 0.69, p = .41, the main effects can be safely interpreted as the levels of the earnings forecast do not appear to influence the response to the covenant breach. These results are also represented graphically in Figure 7.5.

Figure 7.5 Profile Plot of The Estimated Marginal Means of the Decision Task of Revalue

(from 1- Definitely Do not Revalue to 10- Definitely Revalue)



Conflict Hypothesis

In the presence of both incentives, the subjects are hypothesised to make a similar choice to those responding only to the asset pricing incentive (1-5 on the decision scale). The presence of the asset pricing incentive means that subjects are likely to choose to avoid the increase in depreciation that will result from the revaluation and reduce full year earnings relative to the manager's forecast. The presence of the asset pricing incentive means the subjects are likely to choose to revalue since the increase in asset base will improve the leverage ratio relative to the level stipulated in the debt covenant. Accordingly, the subjects in the conflict condition are required to choose between prioritising the lender or the capital market.

The theory developed in chapter 3 draws on stakeholder salience theory, predicting that managers will prioritise the more urgent stakeholder. The lender has the more time sensitive claim, but their proximity to the firm raises the potential for the manager to be able to negotiate a waiver of the debt covenant. The capital market is a diffuse group with whom no direct communication is possible, making them the less proximal stakeholder. In addition, there is a great likelihood that surprising the capital market with an earnings miss relative to management forecast will adversely impact the share price of the firm.

Another view expressed in the management literature is that the strategy of the managers regarding the prioritisation of claims is influenced by whether or not the managers believe the organisation's survival is under threat (Jawahar and McLaughlin, 2001). In chapter 3 of this thesis, the definition of criticality in the Mitchell, et al. (1997) stakeholder salience theory model was reconsidered. Criticality encompasses organisational survival and as such is consistent with the tenor of the organisational survival argument presented by Jawahar and McLaughlin (2001). Where the organisational survival is perceived as being under threat managers are posited to frame their decisions in the loss domain and accordingly apply a riskier strategy to meeting stakeholder claims (Jawahar and McLaughlin, 2001). The riskier strategies of defence and reaction involve not accommodating the needs of all the stakeholders. When survival is at stake, managers will choose to accommodate the stakeholder on whom the firm is more dependent, the stakeholder that controls the more critical resources. This is consistent with resource dependence theory (Sheppard, 1995).

As detailed in chapter 3, stakeholder salience theory predicts that the manager will prioritise the capital market on the basis of its lesser proximity, greater probability and more time sensitive claim. In making the decision task, the subjects in the conflict condition are therefore likely to find the debt contracting incentive to be overridden by the asset pricing incentive. Their choice behaviour is therefore predicted to be similar to that of the subjects in the No condition, in which only the asset pricing incentive is present.

The formal statement of this hypothesis developed in chapter three is reproduced below:

> **H4 Firms** at risk of reporting earnings that are below their forecast and at risk of breaching a covenant are more likely to make a choice to avoid an earnings surprise than to avoid a covenant violation.

The two way ANOVA testing was an appropriate method for testing the financial accounting hypotheses. This design provided tight control as only the manipulated variables differed between treatment conditions, with all other information held constant. However, in order to test the conflict hypothesis H4, comparisons must be made between individual treatment condition groups. Since the conflict hypothesis H4 predicts which groups are likely to have similar means and which groups are likely to have different means, it is appropriate to utilise planned comparisons to test this hypothesis (Pallant, 2007). In the interest of a thorough and robust comparison between these groups, two other methods are applied in addition to the planned comparisons. The first is an exploratory method of comparing these groups by conducting independent t tests of

pairs of treatment conditions. Secondly, post hoc comparisons are carried out. Post hoc comparisons are conducted because multiple comparisons are specified. Planned comparisons do not control for the increased risk of Type 1 errors of rejecting the null hypothesis when it is in fact true (Pallant, 2007). Post hoc tests offer greater protection against Type 1 errors (Pallant, 2007).

The results of the independent t tests are presented in table 7.4 below.

Table 7.4 Independent t-tests of the 'Yes' and 'No' groups

Group Statistics

	GP_One	N	Mean	Std. Deviation	Std. Error Mean
Revalue	Yes	21	7.19	2.695	.588
	No	27	3.93	2.526	.486

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Revalue	Equal variances assumed	.058	.811	4.314	46	.000	3.265

As established earlier, H4 predicts that the difference between the Conflict and No treatment conditions will not be statistically significant. Yes and No treatment conditions are expected to have statistically significantly different mean scores. The Yes condition contains only one incentive: the debt contracting incentive to revalue assets in order to avoid a leverage covenant violation. The No condition contains only the asset pricing incentive to avoid revaluing assets since the additional depreciation would depress future earnings relative to the forecast level. The independent t test in table 7.4 confirms that

there is a statistically significant difference between the scores in the Yes condition (M = 7.19, SD = 2.695) and the No condition (M = 3.93, SD = 2.526), t(46) = 4.31, p = 0.00.

In the conflict condition where both the forecast incentive and the breach incentive are present, the mean response is 6.25, indicating that the subjects prioritised avoiding the covenant violation, which is contrary to hypothesis H4. If H4 holds true, subjects in the conflict condition should behave differently from subjects in the Yes condition (About to Breach/Beat) and similarly to the subjects in the No Condition (No Breach/Just Meet). Independent t-tests of these groups are shown in tables 7.5 and 7.6 below.

Table 7.5 Independent t-tests of the 'Yes' and 'Conflict' groups

Group Statistics

	GP_One	N	Mean	Std. Deviation	Std. Error Mean
Revalue	Yes	21	7.19	2.695	.588
	Conflict	36	6.25	2.209	.368

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Revalue	Equal variances assumed	.094	.761	1.429	55	.159	.940

Table 7.6 Independent t-tests of the 'No' and 'Conflict' groups

Group Statistics

	GP_One	N	Mean	Std. Deviation	Std. Error Mean
Revalue	Conflict	36	6.25	2.209	.368
	No	27	3.93	2.526	.486

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Revalue	Equal variances assumed	.507	.479	3.886	61	.000	2.324

The revaluation decision made by subjects in the Yes condition (M = 7.19, SD = 2.695) is not significantly different from that made by the subjects in the Conflict condition (M = 6.25, SD = 2.21) as evidenced by the independent sample t-test $t(55) = 1.429$, $p = 0.16$ (table 7.5). The revaluation decision made by subjects in the No Condition (M = 3.93, SD = 2.53) is significantly different from the revaluation decision made by subjects in the Conflict Condition (M = 6.25, SD = 2.21). The independent samples t- test gives $t(61) = 3.89$, $p = 0$ (table 7.6).

Contrary to the expectations embodied in H4, managers prioritised the lender over the capital market. This behaviour appears to be consistent with tenet of Jawahar and McLaughlin (2001) and motivated by the aspect of criticality. The lender is a preferential creditor in the case of a liquidation, ranking above the shareholder. This line of thinking suggests that the lender controls the more critical resources of the firm. As indicated in chapter 3, a covenant violation would not be well received by shareholders. Under the

continuous disclosure regime, such an event would have to be disclosed to the market and would have an adverse effect on the share price.

The development of H4 is based on the importance of the relationship with the lender, and the negotiability of the lending agreement (proximity). The outcome of violation is uncertain, a waiver might be granted and accordingly it was posited that the managers would favour the more certain consequence by avoiding reporting an earnings surprise to the market. However, the power of the lender appears to have been underestimated. It is possible that this is influenced by the GFC. Since this economic crisis, the debt market has tightened, lenders are more cautious and accordingly managers are more defensive.[26] In more positive economic times, when lenders are prepared to take more risk and the credit market more competitive, it is possible that the CFOs might have been more comfortable with attempting to negotiate a waiver.

To further test hypothesis 4, planned comparisons in one way ANOVA are conducted. Planned comparisons are more sensitive than post hoc testing (Pallant, 2007). Again, H4 is rejected, as shown in table 7.7.

[26] This is consistent with the findings of the interviews reported in chapter four, and with anecdotal evidence from other informal discussions with a partner from a Big 4 accounting firm who confirmed the greater emphasis on the lender since the GFC. Lenders have become more stringent with breaches, renewals and renegotiations.

Table 7.7 One Way ANOVA contrasts - Experiment One

ANOVA

Revalue

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	142.511	3	47.504	7.481	.000
Within Groups	698.507	110	6.350		
Total	841.018	113			

Contrast Coefficients

Contrast	GP_One			
	Yes	Conflict	Random	No
1	1	0	0	-1
2	0	1	0	-1
3	1	-1	0	0
4	1	1	0	-2

Contrast Tests

		Contrast	Value of Contrast	Std. Error	t	df	Sig. (2-tailed)
Revalue	Assume equal variances	1	3.26	.733	4.453	110	.000
		2	2.32	.642	3.623	110	.000
		3	.94	.692	1.359	110	.177
		4	5.59	1.191	4.691	110	.000

Contrast 3 indicates that the mean scores for the dependent variable Revalue in the Conflict condition are not statistically significantly different from those in the Yes condition, $t(110) = 1.359$, $p = 0.18$. The contrast between the mean scores in the Conflict condition and those in the No condition indicates a significant difference in means, $t(110) = 3.623$, $p = 0$ (contrast 2). Contrast 1 confirms that there is a significant difference between Yes and No conditions, $t(110) = 4.453$, $p = 0$. Contrast 4 compares the Yes and Conflict conditions against the No condition, and finds a statistically significant difference, $t(110) = 4.691$, $p = 0$.

Since planned comparisons were made and reported above, post hoc comparisons are not required (Pallant, 2007). However, in the interest of completeness, these post-hoc comparisons were carried out using the Tukey's HSD (and variants to take into account the unequal cell sizes). The Tukey's HSD test indicated that the mean revaluation decision score of the subjects in the No treatment condition is significantly different from the mean revaluation decision score of subjects in both the Yes and the Conflict treatment conditions. The Gabriel and Hochberg tests yield similar results. A concern in running these tests is that the cell sizes are unequal. Gabriel's pairwise comparison is likely to be more powerful than Hochberg where the cell sizes are slightly unequal. Hochberg allows for greater difference between the cell sizes (Fields, 2009). However all the tests yield similar results, identifying the mean in the No condition as being significantly different from both the Yes and the Conflict conditions. The post hoc comparisons are reported in Table 7.8.

Table 7.8 Post Hoc Testing

Multiple Comparisons

Dependent Variable:Revalue

	(I) GP_One	(J) GP_One	Mean Difference (I-J)	Std. Error	Sig.
Tukey HSD	Yes	Conflict	.94	.692	.528
		Random	1.52	.717	.152
		No	3.26*	.733	.000
	Conflict	Yes	-.94	.692	.528
		Random	.58	.623	.785
		No	2.32*	.642	.002
	Random	Yes	-1.52	.717	.152
		Conflict	-.58	.623	.785
		No	1.74	.668	.051
	No	Yes	-3.26*	.733	.000
		Conflict	-2.32*	.642	.002
		Random	-1.74	.668	.051
Gabriel	Yes	Conflict	.94	.692	.674
		Random	1.52	.717	.191
		No	3.26*	.733	.000
	Conflict	Yes	-.94	.692	.674
		Random	.58	.623	.922
		No	2.32*	.642	.003
	Random	Yes	-1.52	.717	.191
		Conflict	-.58	.623	.922
		No	1.74	.668	.061
	No	Yes	-3.26*	.733	.000
		Conflict	-2.32*	.642	.003
		Random	-1.74	.668	.061
Hochberg	Yes	Conflict	.94	.692	.683
		Random	1.52	.717	.194
		No	3.26*	.733	.000
	Conflict	Yes	-.94	.692	.683
		Random	.58	.623	.923
		No	2.32*	.642	.003
	Random	Yes	-1.52	.717	.194
		Conflict	-.58	.623	.923
		No	1.74	.668	.061
	No	Yes	-3.26*	.733	.000
		Conflict	-2.32*	.642	.003
		Random	-1.74	.668	.061

To summarise, experiment one explored choices made in the presence of an asset pricing incentive and an explicit contracting incentive. The results of the 2 way ANOVA support the hypotheses H1 and H2a, which relate to each of these individual incentives. The conflict hypothesis H4 predicted that when forced to make a choice between meeting the forecast earnings (satisfying the asset pricing incentive) and avoiding a covenant violation (satisfying the explicit contracting incentive) the managers would prioritise the asset pricing incentive. The results of the tests of the conflict hypothesis in this

experiment find that the subjects behave in the opposite direction to that hypothesised. Consistent with resource dependence theory (Pfeffer and Salancik, 1978; Sheppard, 1995) managers prioritise the explicit contracting incentive choosing to avoid the covenant violation over avoiding the earnings surprise.

7.3 Experiment Two

7.3.1 Manipulation Checks

Following the decision task, the subjects were asked to select which information applied to their particular scenario regarding each of the manipulated variables. This is described in detail in chapter five. Of the full sample of respondents, 113 subjects completed the decision task and manipulation check questions for experiment two. Both of the manipulation check questions (performance pricing and price negotiations) in experiment two had a 98% success rate. Dropping the responses of the subjects who gave inappropriate responses to the manipulation check questions from the sample produces similar results. The ANOVA tables produced from this reduced sample show similar results and are included in appendix 11.

7.3.2 Descriptive Statistics for Experiment Two

Cross tabulation tests indicate that there are no significant differences between the means of the demographic variables between the four treatment conditions, with the exception of age and industry. These tables are included as appendix 12. Included in this

appendix are the ANCOVA results when age and industry are treated as covariates. These covariates are not significant.

The descriptive statistics for experiment two are detailed in table 7.9 below. In the absence of either incentive, subjects appear to choose to announce and restructure in the current year, as indicated by the mean in the random condition of 7.62. This would seem to be consistent with the principle of conservatism and the psychology theory that suggests we prefer to get bad news out of the way (Berns et al., 2006). Counter-intuitively, when there is an obvious incentive to announce and restructure in the current period, the mean response is similar but slightly lower at 7.11. In the presence of the performance pricing incentive, regardless of the price negotiations, the mean is 5.09, showing that the subjects are much less likely to announce the restructure in the current period than in the absence of the performance pricing incentive. However, the mean response is only below the theoretical mid-point if there are no imminent price negotiations, where the mean response in the PP Present/Neg Absent condition is 4.45.

Table 7.9 Descriptive Statistics for Experiment Two

Experiment Two: Implicit vs Explicit Contracting

Performance Pricing

Customer Negotiations	PP Absent (Mean 7.37; S.D. 2.05; N 56)	PP Present (Mean 5.09; S.D. 2.694; N 57)
Neg Present (Mean 6.42; S. D. 2.573; N 55)	Yes, Restructure this year Mean 7.11 Standard Deviation 2.025 N 27	Conflict Mean 5.75 Standard Deviation 2.888 N 28
Neg Absent (Mean 6.03; S. D. 2.727; N 58)	Random Mean 7.62 Standard Deviation 2.077 N 29	No, Restructure next year Mean 4.45 Standard Deviation 2.369 N 29

7.3.3 Tests of Hypotheses

Financial Accounting Hypotheses

Experiment Two was designed to test two financial accounting incentive hypotheses and one conflict hypothesis. According to financial accounting incentive hypothesis H2b, the subjects are predicted to choose *not* to announce and restructure in the current period in response to the explicit contracting incentive, selecting a value between 1 and 5 on the decision scale. The incorporation of a performance pricing clause in the lending agreement makes the interest charge a function of the borrower's financial ratios

(Asquith et al., 2005). Unlike a typical debt covenant, the consequence of violating the performance pricing clause is predetermined: the interest charge will increase. Using archival data, (Beatty and Weber, 2003) find evidence that borrowers are more likely to make income-increasing accounting changes as opposed to income-decreasing accounting changes if their lending agreements include accounting based performance pricing in addition to traditional covenants. Thus, the formal statement of H2b reproduced from chapter two is:

> **H2b** Firms at risk of activating an accounting based performance pricing clause in their lending agreement are more likely to make an accounting choice to avoid such activation than firms that are not at risk of activating an accounting based performance pricing clause.

The final financial accounting hypothesis predicts that the subjects will choose to announce and restructure in the current period in response to the implicit contracting incentive. Therefore these subjects are expected to select a value between 6 and 10 on the decision scale. Stakeholder theory argues that managers should consider the interests of all stakeholders when making decisions (Jensen, 2001). Extant research provides evidence that the implicit claims of non-investor stakeholders (for example customers and suppliers) do influence financial decision making. Earnings management by customers is found to influence the investment behaviour of the supplier and vice versa (Raman and Shahrur, 2008). The intention to influence the behaviour of customers and suppliers can imply incentives for either income-increasing or income-decreasing accounting choices. Income-increasing accounting choices are likely when the firm is concerned with presenting itself as a reliable trading partner capable of fulfilling implicit

claims when they fall due, and this would be amplified in a competitive market. However, the converse argument presents if the costs of disseminating proprietary information are high enough. Income-decreasing choices are likely when the firm has a competitive advantage to protect. Accordingly, the implicit contracting hypothesis is:

> **H3** Firms with high proprietary costs are more likely to make an accounting choice to avoid compromising their competitive position than firms with low proprietary costs.

The results of the ANOVA for Experiment Two is presented in table 7.10 below.

Table 7.10 Tests of Between-Subjects Effects for Experiment Two

Tests of Between-Subjects Effects

Dependent Variable:Restructure

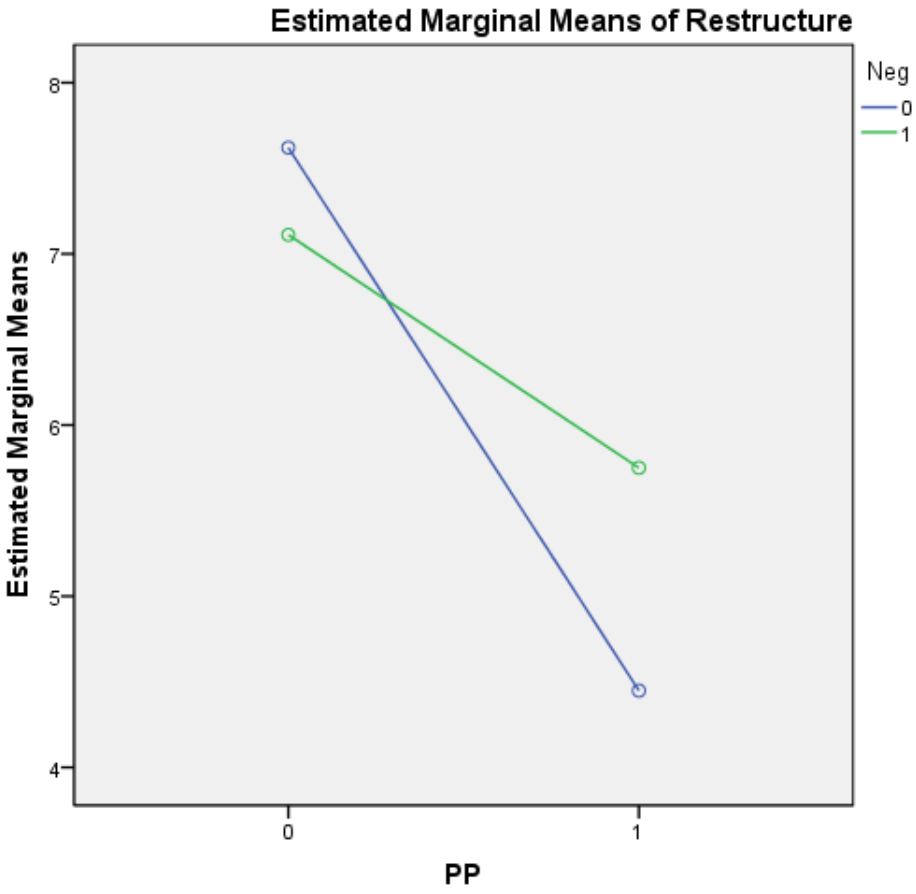
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	175.552[a]	3	58.517	10.458	.000	.224
Intercept	4385.567	1	4385.567	783.758	.000	.878
PP	145.028	1	145.028	25.918	.000	.192
Neg	4.428	1	4.428	.791	.376	.007
PP * Neg	23.151	1	23.151	4.137	.044	.037
Error	609.917	109	5.596			
Total	5159.000	113				
Corrected Total	785.469	112				

a. R Squared = .224 (Adjusted R Squared = .202)

The main effect for PP is statistically significant, F (1,109) = 25.92, p = 0, providing evidence in support of H2b with a large effect size (partial eta squared of 0.19). Subjects have responded to the presence of the explicit contracting incentive by making the accounting choice that delays reducing profit, and interest cover, in order to avoid the penalty interest. However, the implicit contracting hypothesis H3, is not supported since there is no statistically significant main effect for Neg F (1,109) = 0.79, p = 0.38. There is,

however, a statistically significant interaction effect F (1,109) = 4.14, p = .04. The interaction effect is shown in the graph below. In order to explore the nature of this interaction, contrast analysis is conducted in the Conflict Hypothesis paragraph below.

Figure 7.6 Profile Plot of The Estimated Marginal Means of the Decision Task of Restructure
(from 1- Definitely Wait Until Next Year, to 10- Definitely Announce and Restructure This Year)



Conflict Hypothesis

The conflict hypothesis predicted that the subjects in the conflict treatment condition would prioritise the lender and make the accounting choice that avoids the penalty interest rather than improving their bargaining position with the customer in the forthcoming negotiations, by reducing current earnings. In the presence of both

incentives, the subjects are hypothesised to make a similar choice to those responding only to the explicit contracting incentive (1-5 on the decision scale). Applying stakeholder theory to this choice requires an analysis of the urgency of each stakeholders claim, as detailed in chapter three. Announcing the restructure in the current period would result in triggering the penalty interest rate stipulated in the performance pricing clause. Price negotiations with the major customer are also imminent, and there seems to be little to differentiate the time sensitivity of the claims of these two stakeholders. Proposition 5 (proximity) is also relevant to both stakeholders. There is a high degree of proximity between the firm and its major customer, and this is also evident from the fact that the prices are determined by negotiation between these parties. As examined in experiment one, the relationship between the firm and its lender also involves a high degree of proximity. While performance pricing is not precisely the same as a covenant, nor as widely used, it is possible that the subjects will perceive it as similar and therefore consider the possibility of being able to negotiate. When a covenant is violated, there is uncertainty as to the most likely action of the lender. However, a performance pricing clause means a certain increase in interest rate. The clear point of differentiation therefore appears to be the certainty of the outcome. The hypothesis development in chapter three established that the most probable or certain outcome will be the one that is perceived by the manager as the most urgent. As the lender has the more probable consequence, the lender is likely more urgent and therefore more salient. The formal statement of this hypothesis reproduced from chapter three is:

H5 Firms with high proprietary costs that are also at risk of activating the accounting based performance pricing clause in their lending agreement are more likely to choose to avoid such activation than to avoid compromising their competitive position.

Consistent with the approach followed for experiment one, the conflict hypothesis in experiment two is conducted using three types of tests. A preliminary examination is made by conducting independent t tests, followed by the planned comparisons, and finally post hoc testing.

To test H5 the mean responses of the subjects in the Conflict condition are compared to those in the No condition, in which only the explicit contracting (performance pricing) incentive is present. Table 7.11 below presents the results of an independent samples t-test for these groups. There is no significant difference between the scores for the subjects in the Conflict condition (M = 5.75, SD = 2.89) and those in the No condition (M = 4.45, SD = 2.37); t(55) = 1.86, p = 0.07 (two-tailed). A finding of no significant difference between these groups is consistent with H5.

Table 7.11 Independent t-tests of the 'No' and 'Conflict' groups

Group Statistics

	Treatment Condition	N	Mean	Std. Deviation	Std. Error Mean
Restructure	Conflict	28	5.75	2.888	.546
	No	29	4.45	2.369	.440

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Restructure	Equal variances assumed	3.667	.061	1.863	55	.068	1.302

Similarly, consistent with H5, there is a significant difference between the responses of the subjects in the Yes condition (M = 7.11, SD = 2.03) and those in the Conflict (M = 5.75, SD = 2.89) condition; t(48.47) = 2.03, p = 0.48 (Table 7.12 below). As hypothesised, the subjects in the Conflict condition do not behave in the same manner as those in the Yes condition, indicating that they do not prioritise the implicit contracting incentive, but facilitate meeting the performance pricing clause in the lending agreement.

Table 7.12 Independent t-tests of the 'Yes' and 'Conflict' groups

Group Statistics

	GP_Two	N	Mean	Std. Deviation	Std. Error Mean
Restructure	Yes	27	7.11	2.025	.390
	Conflict	28	5.75	2.888	.546

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Restructure	Equal variances not assumed	7.805	.007	2.029	48.470	.048	1.361

A comparison of the Yes and Random conditions finds no significant difference as indicated in table 7.13 below. In the Yes condition, where only the implicit contracting incentive is present, subjects choose to announce and restructure in the current period

(M = 7.11, SD = 2.03). However, the response of the subjects in the random condition in the absence of either incentive, is similar (M = 7.62, SD = 2.08); t(54) = -0.93, p = 0.36 (two-tailed). This suggests that the expedient announcement of the restructure was the perceived as the 'right' thing to do by the subjects in the absence of a reason to delay the announcement. In other words, whilst the implicit contracting might be a reason for choosing to announce and restructure in the current period, it was not perceived as the only reason to do so. Accordingly, it is then not possible to disentangle the implicit contracting incentive impact from the impact of other incentives in this comparison.

Table 7.13 Independent t-tests of the 'Yes' and 'Random' groups

Group Statistics

	GP_Two	N	Mean	Std. Deviation	Std. Error Mean
Restructure	Yes	27	7.11	2.025	.390
	Random	29	7.62	2.077	.386

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Restructure	Equal variances assumed	.324	.572	-.928	54	.357	-.510

Table 7.14 below shows that, consistent with expectation, there is a significant difference between the mean scores of the Yes condition (M = 7.11, SD = 2.03) and the No condition (M = 4.45, SD = 2.37); t(53.63) = 4.53, p = 0. Of all the combinations of conditions the difference between the means of this pair is likely to be the most extreme. Each condition contains only one incentive and those incentives are in direct opposition with one another.

Table 7.14 Independent t-tests of the 'Yes' and 'No' groups

Group Statistics

	Treatment Condition	N	Mean	Std. Deviation	Std. Error Mean
Restructure	Yes	27	7.11	2.025	.390
	No	29	4.45	2.369	.440

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Restructure	Equal variances not assumed	.472	.495	4.530	53.626	.000	2.663

Planned comparisons of the treatment conditions confirm that the mean responses in the Yes and Random conditions are not statistically significant as shown in table 7.15. The results of these tests for the other remaining pairs of treatment conditions contradict the results of the earlier testing. The planned comparison tests suggest that the mean responses in all other pairs of treatment conditions (excluding Yes and Random) are statistically significantly different. This is contrary to the findings reported in earlier testing and suggests that the specific combinations of incentives in each of the three treatment conditions (Yes, No and Conflict) give rise to three different mean responses.

Table 7.15 One Way ANOVA contrasts '- Experiment Two

ANOVA

Restructure

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	175.552	3	58.517	10.458	.000
Within Groups	609.917	109	5.596		
Total	785.469	112			

Contrast Coefficients

Contrast	Yes	Conflict	Random	No
1	1	0	0	-1
2	0	1	0	-1
3	1	-1	0	0
4	1	0	-1	0
5	0	1	-1	0
6	0	0	1	-1

Contrast Tests

		Contrast	Value of Contrast	Std. Error	t	df	Sig. (2-tailed)
Restructure	Assume equal variances	1	2.66	.633	4.209	109	.000
		2	1.30	.627	2.077	109	.040
		3	1.36	.638	2.133	109	.035
		4	-.51	.633	-.806	109	.422
		5	-1.87	.627	-2.985	109	.004
		6	3.17	.621	5.107	109	.000

The planned comparisons are the most important tests of the conflict hypotheses in this study. The development of the conflict hypotheses indicates the specific comparisons that are of interest, on the basis of the relevant academic theories discussed in chapter three. Accordingly, the planned comparisons are the most appropriate, and most powerful test of these hypotheses (Ruxton and Beauchamp, 2008). However, these planned comparisons are less conservative than post hoc testing (Pallant, 2007). The greater conservatism of the post hoc testing comes at the cost of statistical power

(Ruxton and Beauchamp, 2008). In the interest of a thorough examination, post hoc tests were conducted and reported, although it is the planned comparisons that are of primary interest.

Post hoc testing also finds in support of H5. Since the cell sizes are unequal several tests are run to confirm the findings as was detailed in in section 7.2.3 above for experiment one. For each of these tests, Tukey's HSD, Hochberg and Gabriel, the mean scores of the Conflict and No conditions are found to have no statistically significant difference. These tests also indicate, however, that there is no statistically significant difference between Conflict and Yes. This contradiction of the results of the planned comparisons which found all of these pairs to be statistically significantly different is possibly explained simply by the power of the tests. Post hoc testing may not be sensitive enough to detect these differences between the mean responses in each group(Pallant, 2007).

To summarise, experiment two explored the choices made in the presence of both an implicit and an explicit contracting incentive. Analysis of the results of the hypothesis testing were complicated by a significant interaction effect. Evidence is found in support of the explicit contracting hypothesis H2b, but no statistically significant main effect was found to support H3, the implicit contracting hypothesis. However, there is still some evidence offered that suggests that the implicit contracting incentive does exert an influence over the choice made by the subjects. Planned comparisons indicate a statistically significant difference between each of the pair combinations of the treatment conditions of Yes, No and Conflict. This result suggests that the unique combinations of incentives in each of these three treatment conditions motivate three distinct

responses.[27]. Independent t tests find in support of the conflict hypothesis H5, that subjects choose to prioritise the lender and avoid an interest rate increase.

Table 7.16 Post Hoc Testing

Multiple Comparisons

Dependent Variable:Restructure

	(I)	(J)	Mean Difference (I-J)	Std. Error	Sig.
Tukey HSD	Yes	Conflict	1.36	.638	.149
		Random	-.51	.633	.852
		No	2.66*	.633	.000
	Conflict	Yes	-1.36	.638	.149
		Random	-1.87*	.627	.018
		No	1.30	.627	.167
	Random	Yes	.51	.633	.852
		Conflict	1.87*	.627	.018
		No	3.17*	.621	.000
	No	Yes	-2.66*	.633	.000
		Conflict	-1.30	.627	.167
		Random	-3.17*	.621	.000
Gabriel	Yes	Conflict	1.36	.638	.191
		Random	-.51	.633	.961
		No	2.66*	.633	.000
	Conflict	Yes	-1.36	.638	.191
		Random	-1.87*	.627	.021
		No	1.30	.627	.216
	Random	Yes	.51	.633	.961
		Conflict	1.87*	.627	.021
		No	3.17*	.621	.000
	No	Yes	-2.66*	.633	.000
		Conflict	-1.30	.627	.216
		Random	-3.17*	.621	.000
Hochberg	Yes	Conflict	1.36	.638	.191
		Random	-.51	.633	.961
		No	2.66*	.633	.000
	Conflict	Yes	-1.36	.638	.191
		Random	-1.87*	.627	.021
		No	1.30	.627	.216
	Random	Yes	.51	.633	.961
		Conflict	1.87*	.627	.021
		No	3.17*	.621	.000
	No	Yes	-2.66*	.633	.000
		Conflict	-1.30	.627	.216
		Random	-3.17*	.621	.000

[27] However planned comparisons carry a greater risk of Type 1 error while offering greater control of Type 2 error (Pallant, 2007)It is therefore possible that in fact no differences do actually exist between these groups.

7.5 Summary

This chapter has provided analysis of the subjects' responses to both the experiments in the research instrument, and reported the results of the hypotheses testing. In the next chapter, the results of the survey section of the research instrument are analysed, discussed and compared with the similar survey carried out in the USA in 2003 by GHR.

Chapter Eight: Survey Results

The previous chapter detailed the results of the two experiments. This chapter provides an analysis of the survey responses, and is organised as follows. Section 8.1 introduces the survey and puts it in context with the rest of the study. Each question in the survey is discussed in turn in sections 8.2 to 8.7. For each question, an analysis of the average response of all the Australian CFOs who participated in the study is provided as well as conditional analysis of these responses on both CFO and firm characteristics. A comparison with the responses of the original study conducted by GHR in the USA, is also included for each question. Section 8.8 offers a summary of the main findings and concluding thoughts.

8.1 Introduction

Each subject completed a brief survey at the conclusion of the research instrument booklet. The survey questions investigate the perceptions of the CFOs regarding performance measures and accounting choices. Collecting primary data on financial accounting incentives, benchmarks and performance measures from the CFOs is arguably a most useful contribution to the body of knowledge.[28] The vast majority of academic studies in financial accounting utilise historical data analysing correlations to test the developing theories. A strength of these studies is their external validity, but much can be learned by triangulating these results with those from studies with high internal validity (Fields et al., 2001). The limitation of low external validity means that the information

[28] The original survey carried out by GHR was awarded the best paper in the Journal of Accounting and Economics in 2005.

collected from the CFOs surveyed by GHR is specific to their time period (2003) and their domicile (USA). The incremental contribution made in this study by partially replicating the GHR survey is that it offers comparable information on two dimensions.

Firstly, the survey reported in this thesis and the survey reported by GHR were conducted in different time periods. The views of the CFOs interviewed and surveyed by GHR in 2003 reflect a more positive economic perspective, than those reported in this thesis in 2011. In 2003, in the aftermath of the recent corporate collapses of Enron and WorldCom, financial reporting was under more scrutiny and CFOs were very well aware of this. These factors influence the opinions and beliefs of the CFOs in the time period, for example the CFOs interviewed by GHR talk about there being no more 'cookie jar reserves'. In 2011 the economic outlook is considerably less positive. In the wake of the GFC attitudes can be expected to be different to those in 2003. For example, there appears to be greater sensitivity towards debt as detailed later in this section, and indeed as is evident from the surprising result from the participants in the conflict condition in experiment one (see chapter 7).

Secondly, the replication of this survey in a different domicile presents a further dimension for analysis. The institutional setting in Australia is considerably different from that of the USA (Chan et al., 2005). Chan, Faff et al. (2005) counsel that blindly extrapolating findings from studies in the USA may be unwise. The Australian market is much smaller and characterised by fewer firms that are of much smaller size than those in the USA, and is dominated by the mining sector (Brailsford and Faff, 1993). The extent of analyst following in Australia is considerably less, and diminishes dramatically below

the Top 300 firms by market capitalisation (Brown et al., 2007; Chan et al., 2006). It is important to understand and collect evidence on how the differences relating to domicile influence the perceptions and beliefs of CFOs in Australia. Comparison of the findings of the survey conducted by GHR and that of this study will provide valuable insight. However, in analysing any differences between the findings of the two studies it may be difficult to determine whether these differences are attributable to the time frame or the domicile, since both factors vary between the studies.

The survey is a partial replication of the survey carried out by GHR in 2003 on CFOs in the USA. Replicating the entire survey was not feasible as the subjects had already been asked to complete the two experiments and making the research instrument too long, and the task too onerous, would likely have discouraged participation. The questions that related to the central ideas in this study, are those which GHR group broadly under the heading of performance measures, and were included in the Australian survey, while the questions relating to voluntary disclosure were omitted. Consistent with the approach in GHR survey responses are also conditioned on demographic variables. However, in some cases the demographic variables that were collected differ slightly from those in GHR, either to better serve the specific objectives of this study, or to make it more relevant in the Australian context. For example, GHR collected CEO characteristics such as age, tenure and education, but the Australian study collected CFO characteristics. This is because the focus of this study is the accounting choices made by the CFO, and identifying any particular behaviours that are associated with individual characteristics of the decision maker would be a valuable contribution. A more detailed discussion of the

similarities and differences between the approach followed in this study and the USA study by GHR is contained in chapter five.

The survey data also provides a valuable opportunity to offer the respondents of the study feedback about their peers and the chance to benchmark themselves against the peer group. The analysed survey data is therefore a useful part of the executive summary report to be sent to the survey respondents who requested it, as a courtesy, in recognition of their valuable time. The survey in this study is comprised of the key performance measurement questions in GHR. The responses to each of these questions are analysed in turn below along with a comparison to the findings of the GHR survey.

8.2 Performance Measures

The first question in the survey asked CFOs to rank the three most important externally reported performance measures from a list of seven as detailed in table 8.1. The rankings are analysed in two ways. Firstly the number of respondents that award a number one (#1), number two (#2) or number three (#3) ranking is summarised. Secondly, the rankings are converted into points, where a #1 ranking is considered to be 3 points, a #2 ranking is considered 2 points and #3 ranking is equivalent to 1 point. The conversion of the rankings into points facilitates the calculation of the average number of points each respondent awarded to each performance metric[29]. A graphical representation of this comparison is offered in Figure 8.1 after further discussion of the tabulated results.

[29] This approach is consistent with that followed by GHR and facilitates comparison of the USA and Australian data.

Table 8.1 Responses to the survey question "Rank the three most important performance measures reported to outsiders"

Table 8.1 Panel A: Unconditional Averages

Rank the three most important performance measures reported to outsiders.	#1 Rankings	#2 Rankings	#3 Rankings	Total points	AUS Average points	USA Average Points
Cash flow from operations	31	36	21	186	1.6	1.1
Earnings	41	20	20	183	1.6	2.1
Economic Value Added (EVA)	2	8	6	28	0.2	0.1
Free cash flows	12	12	25	85	0.7	0.7
Pro forma earnings	12	7	5	55	0.5	0.5
Revenues	5	27	25	94	0.8	1.2
Other measure:	11	4	12	53	0.5	0.3

In table 8.1, Panel A indicates the number of respondents that gave each performance measure a #1, #2 or #3 ranking. For these rankings, points are assigned as follows: 3 points for a #1 ranking, 2 points for a #2 ranking and 1 point for a #3 ranking. The average ranking for each performance measure on this basis is reported in the penultimate column 'Aus Average Points'. The final column in this panel 'USA average points' reports the average points awarded by the CFOs surveyed by GHR in USA in 2003, in response to the same question.

Table 8.1 Panel B: Conditional Averages Based on CFO Characteristics

Rank the three most important performance measures reported to outsiders.	Average points	Age		Experience		Gender		Membership	
		Young	Mature	<10 years	10 years+	Female	Male	Non CA	CA
Cash flow from operations	1.6	1.5	1.9	1.7	1.6	1.8	1.6	1.8	1.5
Earnings	1.6	1.6	1.7	1.3	1.7	1.5	1.6	1.5	1.7
Economic Value Added (EVA)	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.4	0.2
Free cash flows	0.7	0.7	0.8	0.8	0.7	0.9	0.7	0.7	0.8
Pro forma earnings	0.5	0.6	0.3	0.5	0.5	0.3	0.5	0.5	0.5
Revenues	0.8	0.9	0.6	0.9	0.8	1.2	0.8	0.7	0.9
Other measure:	0.5	0.5	0.5	0.5	0.5	0.3	0.5	0.4	0.5

In Table 8.1, Panel B compares the average points awarded to the performance measures when the sample is split on various CFO characteristics: age, experience, gender and membership, as self-reported in the demographic section of the research instrument. The sample is split using the median for each category, unless a more appropriate split is evident, e.g. Gender. For Age, respondents are classified as Mature if they are 50 years old or more, and Young if they are less than 50. Experience refers to the number of years of senior financial management experience the respondent reports, and the median split is at the 10 year level. T tests were conducted on the responses in each of the characteristic groups, and ***, ** and * denote statistically significant differences across the groups at the 1%, 5% and 10% level respectively.

Table 8.1 Panel C: Conditional Averages Based on Firm Characteristics

Rank the three most important performance measures reported to outsiders.	Average points	Turnover			Profitability			Materials Industry			Financials Industry		
		Low	High		Loss	Profit		Materials	Other		Financials	Other	
Cash flow from operations	1.6	1.6	1.6		1.8	1.6		2.1	1.4	**	1.1	1.8	**
Earnings	1.6	1.5	1.9		1.5	1.7		0.8	2.0	***	1.6	1.6	
Economic Value Added (EVA)	0.2	0.2	0.2		0.1	0.3	**	0.3	0.2		0.5	0.2	*
Free cash flows	0.7	0.8	0.5	*	0.8	0.7		1.2	0.5	**	0.6	0.8	
Pro forma earnings	0.5	0.4	0.8	*	0.4	0.5		0.5	0.5		0.7	0.4	
Revenues	0.8	0.8	0.8		1.1	0.7	**	0.5	1.0	**	0.8	0.8	
Other measure:	0.5	0.5	0.2	**	0.4	0.5		0.6	0.4		0.7	0.4	

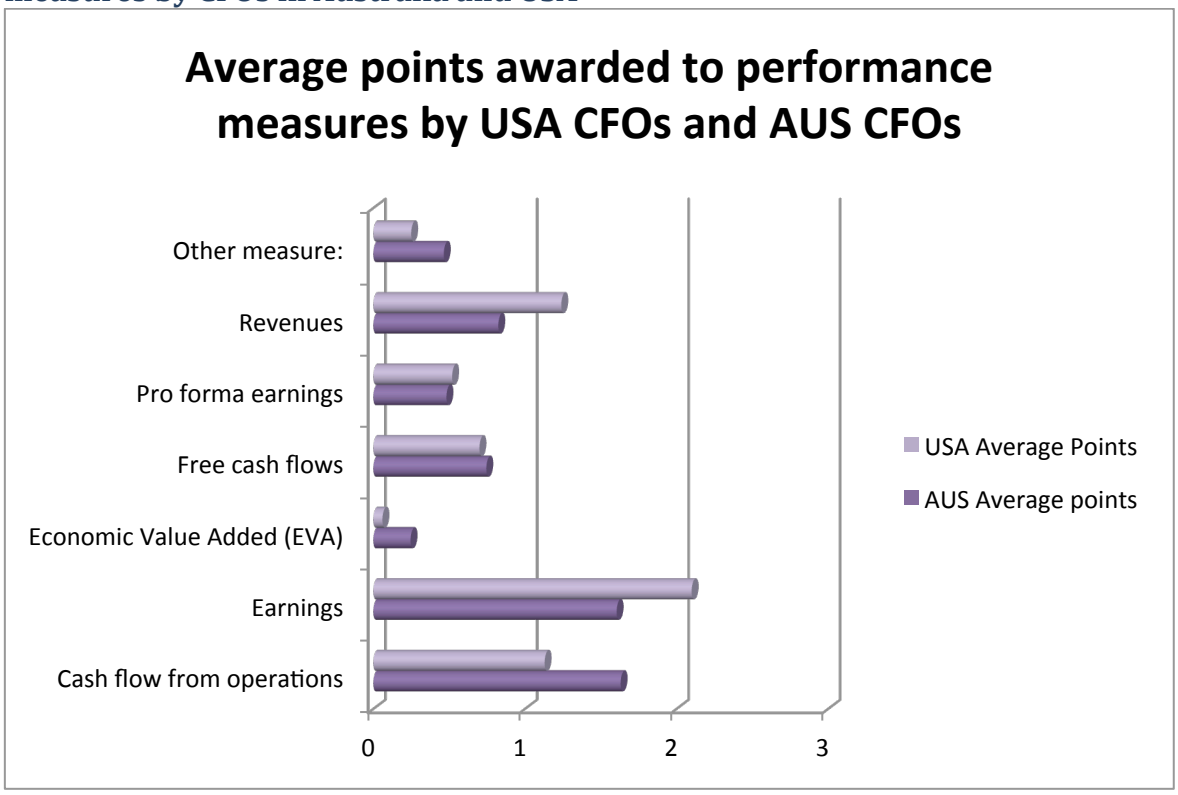
In Table 8.1 ,Panel C conditions the analysis of the average points awarded by the respondents to the performance measures on the firm characteristics. Turnover captures the size of the firm with firms classified as Low having a turnover below $500 million, and High turnover firms being those with turnovers of $500 million or greater. Profitability splits the sample firms into those that reported a loss in the prior period, and those that reported a profit in the prior period as disclosed by the CFO in the demographic section of the research instrument. The Materials Industry characteristic splits the sample into firms that reported themselves as being in the materials or energy industries in the demographics and labels these as 'Materials', classing all remaining firms as 'Other' industries. Similarly, the Financials Industry splits the firms into those that reported themselves as being in the Financials industry, classifying all other firms as 'Other'. T tests were conducted on the responses in each of the characteristic groups, and ***, ** and * denote statistically significant differences across the groups at the 1%, 5% and 10% level respectively.

Of the 114 Australian CFOs[30], 41 (36%) chose earnings as the number one ranked performance measure, while 31 (27%) chose cash flow from operations. On an average basis, earnings and cash flow from operations rank equally, as Australian CFOs awarded both these measures an average of 1.6 points. By comparison, the US CFOs surveyed by GHR exhibit considerably more of a preference for earnings over other performance metrics, awarding an average of 2.1 points to earnings and only 1.1 average points to cash flow from operations. In their analysis, GHR suggest two possible explanations for the dominance of earnings. Firstly that earnings have superior information content to cash flows from operations, as a result of the accrual component of earnings (e.g Dechow, 1994; Barth et al., 2001; Liu et al., 2002) and second that the managers might be myopically concerned with earnings. In the USA, firms are required to report quarterly earnings, whereas as in Australia reporting is mostly biannual. Therefore it is possible that the regulatory setting in the USA is at least in part responsible for encouraging this greater focus on earnings, and meeting earnings targets, since the quarterly earnings effectively means greater frequency of targets. In the absence of this requirement, in the Australian setting, earnings are not dramatically prioritised, but rank with cash flow from operations as one of the key performance metrics. In Australia, revenue appears to be a very popular lower order metric being ranked as #2 by 27 (24%) Australian CFOs, and #3 by 25 (22%) Australian CFOs. In the USA, revenue and cash flow appear to be fairly equally regarded as the second most important metric on an average basis. The US CFOs awarded an average of 1.1 points to cash flow from operations and 1.2 points to revenue. In Australia, revenue and free cash flows appear to be ranked fairly equally as the second

[30] The total number of completed booklets received from subjects in the research study was 116, but 2 respondents chose not to complete the survey section.

most important metric on an average basis. Australian CFOs award revenue an average of 0.8 points and free cash flows an average of 0.7 points.

Figure 8.1 Comparison of the average points awarded to performance measures by CFOs in Australia and USA



Both Australian and US CFOs appear to consider EVA to be the least important metric awarding the lowest number of average points in both cases. It would appear that practitioner views are consonant with those of academics in this case regarding the usefulness of the once popular EVA as a performance metric (Abdeen and Haight, 2002; Ismail, 2006; Palliam, 2006). However, while the average points awarded to EVA as a performance measure are very low, profit making firms appear to value this metric significantly more than loss makers, as reflected by the t tests results in panel C of table

8.1. Firms in the financial industry also value this metric significantly more than firms in other industries, and award an average of 0.5 points.

Conditional analysis is reported in panels B and C, in which the sample is split according to CFO characteristics and firm characteristics. The characteristics of the CFO are found to have no bearing on the perceived importance of the performance metrics. As panel B reports, there are no significant differences in the column proportion for any of the four characteristics. However, as panel C indicates the firm characteristics are considerably more informative regarding the relative importance of the performance metric. Small firms (characterised by turnover below $500 million) are statistically significantly more likely to value free cash flows as an important or very important performance measure. They are also statistically significantly more likely to utilise other performance measures not offered as choices in this question. It is possible that this is a further validation of the suggestion that Australian managers are less concerned about earnings and the capital market. The smaller firms that are likely to be less focused on the market than the larger firms make up a considerable portion of the Australian listed firms. The 'other' measures that were indicated by the respondents[31] are shown alphabetically in the table below. As is evident from this list several of the 'other' measures are relative to the unique materials industry. The table aims to represent faithfully the responses of the CFOs, therefore the abbreviations used by the CFOs have not been altered and have instead simply been reproduced verbatim.

[31] The list of possible performance measures in question 1 included a 7th item labelled 'Other measure:_____. This table records the performance measures volunteered by the respondents in this available space.

Table 8.2 Other Performance Measures as Reported by Australian CFOs

Other Performance Measures as Reported by Australian CFOs
cash npat
debt/equity
development expenditure
EBIT/Revenue
EBITDA
EPS
exploration and project development progress
exploration results and acquisitions
GP
Margin
Milestone Achievement
ore reserves/resources
performance against KPIs, not always financial based
production costs
share price
underlying profit
unit cash cost

Large firms in Australia are significantly more likely to value pro forma earnings as a performance metric than smaller firms. This seems reasonably intuitive since larger firms are more likely to report pro forma earnings in the first place as they are more closely followed and may feel greater need to explain their performance by reporting an non GAAP earnings metric. There is no significant difference when the sample is split for profit and loss makers, so we cannot infer that pro forma earnings are utilised to explain poorer performance. Loss making firms are significantly more likely to value revenue as a performance measure than profit making firms. While there was no significant difference between profit and loss makers for earnings, the priority given to revenue suggests that it takes on a more important role in the loss situation consistent with the idea that earnings are less informative when negative (Hayn, 1995).

Splitting the sample by industry to identify business with significantly different business models reveals some interesting differences. The material industry group in panel C which includes both materials and energy sector is characterised by intensive capital investment and delayed returns. The energy sector includes many companies that describe their typical business as exploration, which is a characteristic common to the mining industry. Materials industry firms report a dramatically lower preference for earnings as a performance metric favouring the two cash based metrics instead (cash flow from operations and free cash flows) relative to other industry firms. Materials firms are also significantly less likely to value revenue as a performance measure than other industry firms. This is again intuitive since exploration firms for example, can be expected to experience several years with zero revenue, and as a result, without positive earnings.

It is interesting to note that the very characteristics that distinguish the Australian market from the US market are the characteristics that drive the differences in perceptions about performance metrics. In the introduction section of this chapter, some of the key distinguishing characteristics were identified, such as smaller firm size, and mining dominance in the market. As is evident from panel C, these characteristics along with profitability drive significant differences in the value of performance metrics. When the sample responses are partitioned into two groups for each of these characteristics as described in table 8.1 Panel C, the results of the independent t tests show that the average response is conditional on each of these characteristics for many of the performance measures. This finding, when viewed in conjunction with the disparity in the average points awarded by Australian and US CFOs to the various performance metrics, confirms the sentiment expressed by Chan, Faff et al.(2005) that it is not always

appropriate to extrapolate the findings of large scale US data studies to the Australian setting. It also confirms that the Australian setting offers some unique settings for future research.

8.3 The Importance of Earnings Benchmarks

The second question in the survey section of the research instrument asked subjects to rate the importance of four earnings benchmarks on the scale of 1 - Not at all important to 5 - Very Important. While this question is based on a question posed by GHR in their survey of CFOs in the USA, the different reporting requirements in each country meant that the Australian version of the question needed to be adapted. Three of the four earnings benchmarks in the question posed by GHR focused on quarterly reporting. These were substituted for annual reporting benchmarks in the Australian survey. Both versions of the question are represented in table 8.3 overleaf.

In the study in the USA, GHR obtained a significant result for all four earnings benchmarks indicating the CFOs in the USA are very focused on meeting benchmarks. In stark contrast, Australian CFOs report that they are not particularly concerned with these benchmarks, consistent with their lesser focus on earnings as reported in the first question regarding performance metrics, relative to USA CFOs. The only benchmark that Australian CFOs describe as important or very important is the most basic: reporting a profit.

Table 8.3 Comparison of unconditional averages in Australia with those reported by GHR in USA in 2003 – importance of earnings benchmarks

Panel A: Unconditional Average in Australia

How important are the following earnings benchmarks to your company when you report the annual earnings number?	AUSTRALIA	
	Average Rating	H_0:average rating = 3
Previous financial year EPS	3.1	
Analyst consensus forecast of EPS for the current year	3.0	
Reporting a profit(i.e. EPS>0)	3.5	***
Management EPS for the current financial year	3.1	

In table 8.3, Panel A indicates the unconditional average response of CFOs in Australia who participated in the study to the question 'how important are the following earnings benchmarks to your company when you report the annual earnings number?'. Participants indicated their responses on a scale from 1 Not at all important to 5 Very important. Their mean response is reflected in the column labelled 'Average Rating'. The next column to the right reflects the t test of the null hypothesis that the mean response is significantly different from the neutral midpoint of the scale which is 3.

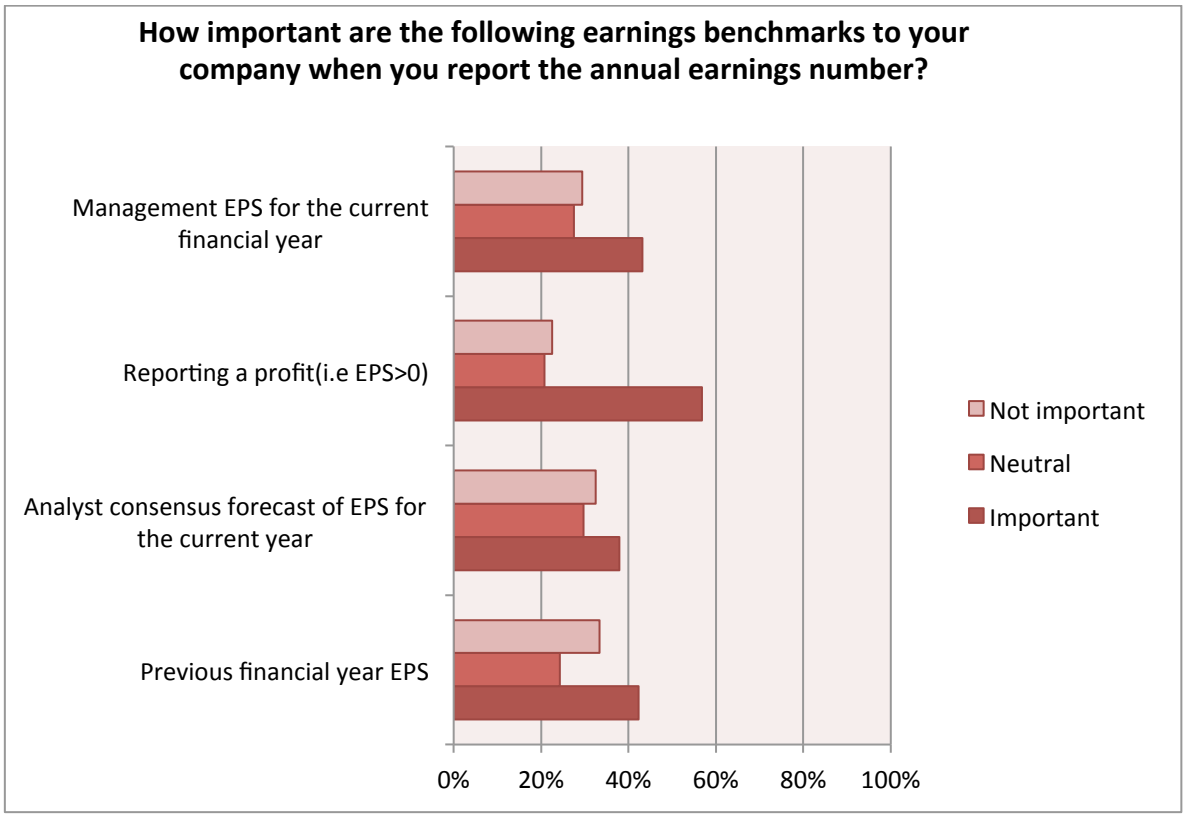
Panel B: Unconditional Average in USA

How important are the following earnings benchmarks to your company when you report the annual earnings number?	USA	
	Average Rating	H_0:average rating = 0
Same Quarter last year EPS	1.28	***
Analyst consensus forecast EPS current quarter	0.96	***
Reporting a profit(i.e. EPS>0)	0.84	***
Previous quarter EPS	0.49	***

In table 8.3 Panel B reports the unconditional average response of CFOs in USA as reported by GHR to the same question as described in Panel A. However, the benchmarks given in the question in USA are not identical to those in the question in Australia . A further point of difference is that the participants in the USA were asked to indicate their responses on a scale from -2 Not at all important to 2 Very important. The rationale behind renumbering the 5 point scale in the Australian study is described in detail in chapter 5. The midpoint of the scale in this case is thus 0 and the test of the null hypothesis that the mean response is significantly different from the neutral point of 0 is reproduced from GHR in the final column where *** denotes a significant result at the 5% level.

The Australian responses to this question of the importance of earnings benchmarks are depicted in Figure 8.2.

Figure 8.2 Responses of Australian CFOs on the Importance of Earnings Benchmarks



Further analysis of these responses, conditioned by both CFO characteristic and firm characteristic are given in Table 8.4 below.

Table 8.4 Responses to the survey question "How important are the following earnings benchmarks to your company when you report the annual earnings number"

Table 8.4 Panel A: Unconditional Analysis

How important are the following earnings benchmarks to your company when you report the annual earnings number?	% Important or Very Important	% Not Important or Not at all Important	Average Rating	H_0 :average rating = 3	t	df	Sig. (2-tailed)
Previous financial year EPS	40.9	33.9	3.1		.483	114	.630
Analyst consensus forecast of EPS for the current year	40.0	31.3	3.0		.276	114	.783
Reporting a profit(i.e. EPS>0)	57.4	21.7	3.5	***	4.331	114	.000
Management EPS for the current financial year	44.7	28.1	3.1		.948	113	.345

In table 8.4, Panel A indicates the percentage of respondents that believe the earnings benchmark is important or very important when reporting the annual earnings number. The 'Average Rating column reports the average response on the scale from 1 to 5 given by the respondents. The independent t-test of the null hypothesis that the rating is equal to 3 (neutral, neither important nor unimportant) is reported in the remaining columns of this panel.

Table 8.4 Panel B: Conditional Analysis by CFO Characteristic

How important are the following earnings benchmarks to your company when you report the annual earnings number?	% Important or Very Important	Age		Experience		Gender		Membership	
		Young	Mature	<10 years	10 years+	Female	Male	Non CA	CA
Previous financial year EPS	40.9	54.5%	56.7%	45.5%	58.7%	57.1%	55.8%	45.9%	61.2%
Analyst consensus forecast of EPS for the current year	40.0	56.6%	57.1%	61.9%	55.9%	66.7%	55.7%	44.1%	64.6%
Reporting a profit(i.e. EPS>0)	57.4	71.9%	72.7%	60.0%	75.7%	77.8%	72.2%	70.3%	70.3%
Management EPS for the current financial year	44.7	59.6%	66.7%	50.0%	65.6%	75.0%	62.5%	51.5%	68.0%

In Table 8.4, Panel B compares the percentage of respondents that believe the benchmark is important or very important when the sample is split on various CFO characteristics: age, experience, gender and membership, as self-reported in the demographic section of the research instrument. The sample is split using the median for each category, unless a more appropriate split is evident, e.g. Gender. For Age, respondents are classified as Mature if they are 50 years old or more, and Young if they are less than 50. Experience refers to the number of years of senior financial management experience the respondent reports, and the median split is at the 10 year level. The column proportions are compared in each of the characteristic groups, and * denotes a statistically significant difference across the groups at the 5% level.

Table 8.4 Panel C: Conditional Analysis by Firm Characteristic

How important are the following earnings benchmarks to your company when you report the annual earnings number?	% Important or Very Important	Turnover			Profitability		Materials Industry			Financials Industry		
		Low	High		Loss	Profit	Materials	Other		Financials	Other	
Previous financial year EPS	40.9	48.4%	76.2%	*	50.0%	56.1%	17.9%	72.4%	*	73.7%	49.3%	
Analyst consensus forecast of EPS for the current year	40.0	48.4%	84.2%	*	43.5%	60.3%	38.5%	64.3%	*	50.0%	57.6%	
Reporting a profit(i.e. EPS>0)	57.4	70.6%	81.0%		74.1%	71.4%	24.2%	75.8%	*	90.0%	67.6%	*
Management EPS for the current financial year	44.7	54.1%	85.7%	*	45.5%	66.7%	39.3%	72.7%	*	47.1%	65.2%	

In Table 8.4, Panel C conditions the analysis of the average points awarded by the respondents to the performance measures on the firm characteristics. Turnover captures the size of the firm with firms classified as Low having a turnover below $500 million, and High turnover firms being those with turnovers of $500 million or greater. Profitability splits the sample firms into those that reported a loss in the prior period, and those that reported a profit in the prior period as disclosed by the CFO in the demographic section of the research instrument. The Materials Industry characteristic splits the sample into firms that reported themselves as being in the materials or energy industries in the demographics and labels these as 'Materials', classing all remaining firms as 'Other' industries. Similarly, the Financials Industry splits the firms into those that reported themselves as being in the Financials industry, classifying all other firms as 'Other'. The column proportions are compared in each of the characteristic groups, and * denotes a statistically significant difference across the groups at the 5% level.

When the respondents who believe these benchmarks are important or very important are conditioned by CFO characteristic, no significant differences between the proportions of respondents in each sub group are achieved, as indicated in Panel B of table 8.4. Perceptions about the importance of benchmarks is then not a question of individual preference, but appears to be dependent on the characteristics of the firm, as shown in Panel C of the same table. Again it is the distinguishing characteristics of the Australian market that influence the perceived importance of earnings benchmarks. CFOs of larger firms are significantly more likely to describe previous financial year earnings per share, analyst consensus forecast of earnings per share for the current year and management earnings per share forecast for the current year as important or very important relative to CFOs of small firms. In other words, the perceptions of CFOs in larger Australian firms bear more similarity to those of CFOs in USA, than small firms or the average firm in Australia. This emphasises the dominance of small firms in the Australian market. In the materials industry, very small percentages of respondents (17.9% - 39.3%) found the earnings benchmarks to be important or very important. For all four benchmarks, respondents in the materials industry attached statistically significantly less importance to these earnings benchmarks than respondents in other industries. Nearly all respondents (90%) in the financial industry believed that it was important or very important to report a profit. It is possible that this reflects the importance of a financial institution to avoid any doubt about its financial health given the number of stakeholders that would potentially be effected in the event of the failure of a financial institution. Recent economic events demonstrated the major implications of a loss of stakeholder confidence in a large financial institution. The failure of the large bank Northern Rock PLC

in the United Kingdom (Shin, 2009) and Lehman Brothers in the USA dramatically impacted the welfare of many firms and individuals (Swedburg, 2010).

8.4 Meeting Earnings Benchmarks

Respondents were asked about potential reasons for meeting earnings benchmarks. On average, respondents in Australia agreed or strongly agreed that meeting earnings benchmarks helps to build credibility with the capital market and maintain or increase the stock price. They also agreed, on average, that meetings earnings benchmarks helped the external reputation of management as well as conveying future growth prospects to investors. These views appear broadly consistent[32] with those of the surveyed CFOs in the USA as reported by GHR and reflected in the comparison table 8.5 below. In Australia, respondents on average disagreed with the statements that meeting earnings benchmarks helped employees achieve bonuses and that it helped achieve or preserve a credit rating. On both these points Australian CFOs appear to hold different views from their counterparts in the USA. This is consistent with the contention that Australian employees have less 'at risk' components of remuneration than their US counterparts (Izan et al., 1998) and that remuneration structures differ in Australia and the USA (Matolcsy and Wright, 2007). Both Australian and USA CFOs appear united in their belief that meeting earnings benchmarks does not influence stock price volatility, as in both studies the average response is not statistically significantly different from the midpoint.

[32] Regarding conveying growth prospects to investors, the US CFOs average response was above the neutral point on the scale, but was not statistically significantly different from it.

Table 8.5 Comparison of unconditional averages in Australia with those reported by GHR in USA in 2003 – meeting earnings benchmarks

Meeting earnings benchmarks helps...	AUSTRALIA			USA		
	Average Rating	H_0:average rating = 3	Average Response	Average Rating	H_0:average rating = 0	Average Response
us build credibility with the capital market	4.02	***	Agree	1.17	***	Agree
our employees achieve bonuses	2.54	***	Disagree	1.06	***	Agree
us avoid violating debt covenants	2.86		Neutral	0.95	***	Agree
us achieve or preserve a desired credit rating	2.55	***	Disagree	0.9	***	Agree
us maintain or increase our stock price	3.69	***	Agree	0.74	***	Agree
the external reputation of our management team	3.69	***	Agree	0.5	***	Agree
us convey our future growth prospects to investors	3.72	***	Agree	0.06		Neutral
us maintain or reduce stock price volatility	3.09		Neutral	0.07		Neutral
us assure customers and suppliers that business is stable	2.97		Neutral	-0.28	***	Disagree

Table 8.5 provides the unconditional analysis of the responses to the question "Meeting earnings benchmarks helps…." which were indicated on a scale from 1 Strongly disagree to 5 Strongly Agree. The first three columns in the table relate to the survey carried out in Australia and the last three columns refer to the survey carried out in USA by GHR in 2003. The question asked in each case was identical but the 5 point response scales were differently numbered as described in chapter 5. In Australia the response scale was from 1 Strongly disagree to 5 Strongly agree, while in USA the scale used by GHR was numbered -2 Strongly disagree to +2 Strongly Agree. For each survey, the three columns report the average response to each statement, the t-test of the null hypothesis that the average rating is not different to 3 (neutral, neither agree nor disagree) and description of whether the average response is agreement, disagreement or not significant. This descriptive column is added for ease since the response scales were not identically numbered. Accordingly, the t test of the null hypothesis that the average response is not different from the neutral midpoint uses a value of 3 in Australia and a value of 0 in USA, and ***, ** and * denote a significant difference at the 1%, 5% and 10% levels respectively.

Figure 8.3 Responses to the survey question "Do these statements describe why your company tries to meet earnings benchmarks?"

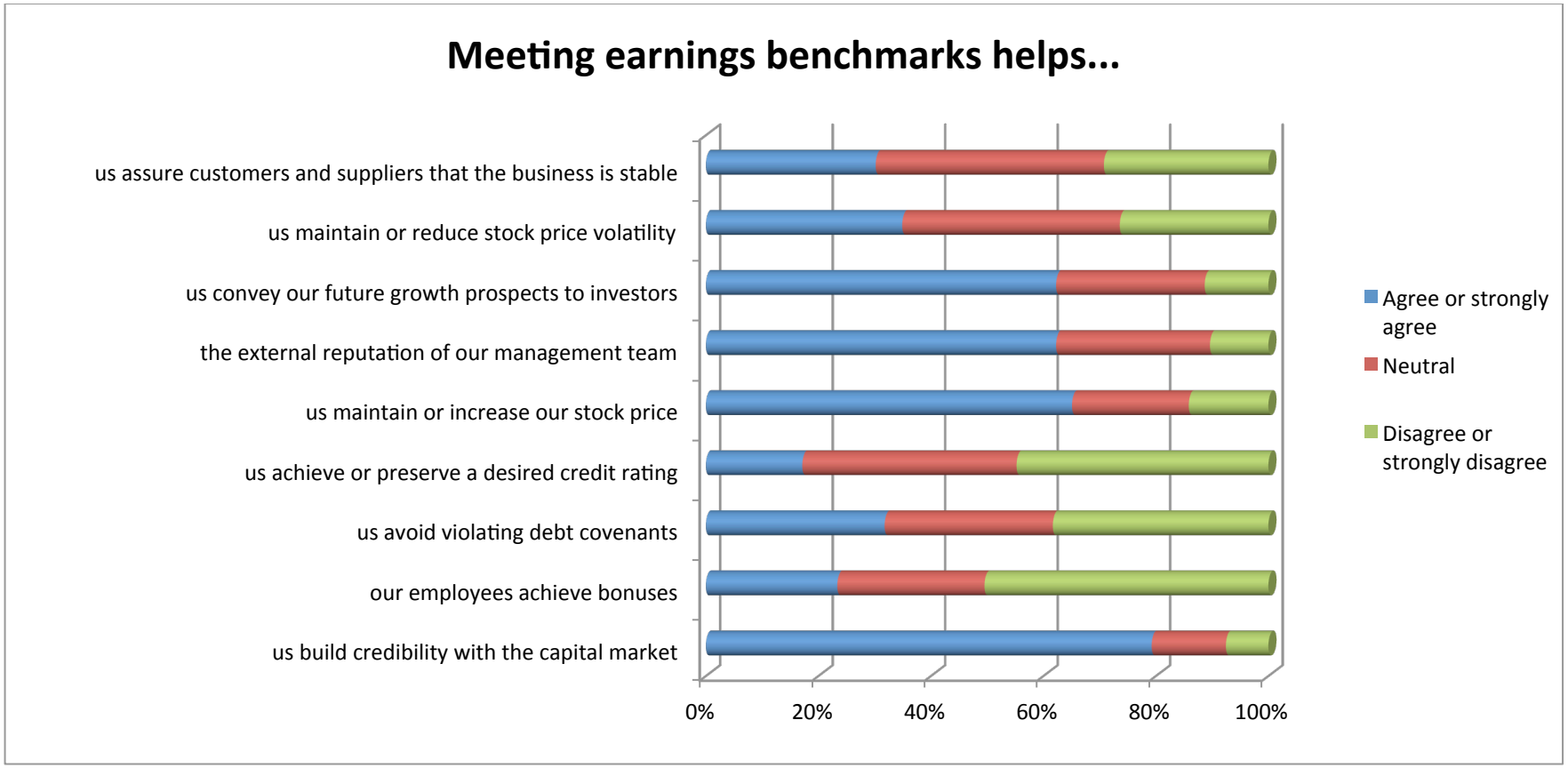


Table 8.6 Responses to the survey question "Meeting earnings benchmarks helps…"

Panel A: Unconditional Analysis **Meeting earnings benchmarks helps...**	% Agree or Strongly Agree	% Disagree or Strongly Disagree	Average Rating	H_0: Average rating = 3	t	df	Sig. (2-tailed)
us build credibility with the capital market	79.3	7.2	4.02	***	10.186	110	.000
our employees achieve bonuses	22.5	50.5	2.54	***	-4.267	110	.000
us avoid violating debt covenants	34.2	36.9	2.86		-1.127	110	.262
us achieve or preserve a desired credit rating	18.2	42.7	2.55	***	-4.292	109	.000
us maintain or increase our stock price	66.4	13.6	3.69	***	6.753	109	.000
the external reputation of our management team	63.6	10.0	3.69	***	7.437	109	.000
us convey our future growth prospects to investors	62.4	11.0	3.72	***	7.127	108	.000
us maintain or reduce stock price volatility	37.3	25.5	3.09		.936	109	.351
us assure customers and suppliers that the business is stable	30.0	28.2	2.97		-.265	109	.791

In table 8.6, Panel A provides the unconditional analysis of the responses to the question "Meeting earnings benchmarks helps…." which were indicated on a scale from 1 Strongly disagree to 5 Strongly Agree. The first two columns in the table indicate the percentage of responses that are on either side of the neutral midpoint of the scale, while the 'Average Rating' column reports the average response on the scale from 1 to 5 given by the respondents. The independent t-test of the null hypothesis that the rating is equal to 3 (neutral, neither agree nor disagree) is reported in the remaining columns of this panel.

Panel B: Conditional Analysis by CFO Characteristic Meeting earnings benchmarks helps...	% Agree or Strongly Agree	Age			Experience			Gender		Membership	
		Young	Mature		<10 years	10 years+		Female	Male	Non CA	CA
us build credibility with the capital market	79.3	90.3%	94.1%		84.0%	94.4%		88.9%	91.9%	87.9%	93.7%
our employees achieve bonuses	22.5	25.0%	41.4%		10.0%	37.7%	*	28.6%	30.6%	34.4%	28.6%
us avoid violating debt covenants	34.2	43.6%	58.3%		38.1%	52.6%		57.1%	47.2%	42.3%	50.9%
us achieve or preserve a desired credit rating	18.2	19.5%	46.2%	*	15.8%	36.2%		50.0%	29.0%	30.8%	29.3%
us maintain or increase our stock price	66.4	85.7%	78.1%		73.9%	86.2%		88.9%	81.8%	85.3%	81.5%
the external reputation of our management team	63.6	82.7%	93.1%		71.4%	91.7%	*	83.3%	86.3%	85.3%	87.2%
us convey our future growth prospects to investors	62.4	81.8%	92.0%		68.4%	90.2%	*	77.8%	87.0%	87.5%	83.3%
us maintain or reduce stock price volatility	37.3	60.0%	58.3%		63.2%	58.0%		66.7%	59.7%	72.0%	52.3%
us assure customers and suppliers that business stable	30.0	47.6%	59.1%		30.8%	56.9%		71.4%	48.2%	59.3%	45.9%

In Table 8.6, Panel B compares the percentage of respondents that agree or strongly agree with each statement when the sample is split on various CFO characteristics: age, experience, gender and membership, as self-reported in the demographic section of the research instrument. The sample is split using the median for each category, unless a more appropriate split is evident, e.g. Gender. For Age, respondents are classified as Mature if they are 50 years old or more, and Young if they are less than 50. Experience refers to the number of years of senior financial management experience the respondent reports, and the median split is at the 10 year level. The column proportions are compared in each of the characteristic groups, and * denotes a statistically significant difference across the groups at the 5% level.

Panel C: Conditional Analysis by Firm Characteristic	% Agree or Strongly Agree	Turnover			Profitability		Materials Industry		Financials Industry	
Meeting earnings benchmarks helps...		Low	High		Loss	Profit	Materials	Other	Financials	Other
us build credibility with the capital market	79.3	88.4%	100.0%		86.7%	93.8%	87.0%	93.2%	95.7%	90.4%
our employees achieve bonuses	22.5	25.4%	50.0%	*	29.2%	30.4%	16.0%	37.5%	31.8%	30.5%
us avoid violating debt covenants	34.2	41.4%	66.7%	*	50.0%	46.6%	41.7%	50.9%	35.7%	50.8%
us achieve or preserve a desired credit rating	18.2	20.8%	52.6%	*	28.6%	31.1%	41.2%	26.0%	23.1%	31.5%
us maintain or increase our stock price	66.4	84.8%	77.3%		84.0%	82.5%	78.3%	84.6%	90.5%	80.6%
the external reputation of our management team	63.6	84.7%	90.9%		82.8%	88.2%	79.2%	89.5%	88.2%	85.9%
us convey our future growth prospects to investors	62.4	82.0%	94.7%		87.5%	83.6%	73.9%	89.5%	88.9%	83.9%
us maintain or reduce stock price volatility	37.3	63.5%	47.1%		63.2%	59.2%	47.6%	64.6%	76.9%	55.4%
us assure customers and suppliers that business is stable	30.0	53.1%	46.7%		47.8%	55.0%	40.9%	57.1%	66.7%	48.1%

In Table 8.6, Panel C conditions the analysis of the average points awarded by the respondents to the performance measures on the firm characteristics. Turnover captures the size of the firm with firms classified as Low having a turnover below $500 million, and High turnover firms being those with turnovers of $500 million or greater. Profitability splits the sample firms into those that reported a loss in the prior period, and those that reported a profit in the prior period as disclosed by the CFO in the demographic section of the research instrument. The Materials Industry characteristic splits the sample into firms that reported themselves as being in the materials or energy industries in the demographics and labels these as 'Materials', classing all remaining firms as 'Other' industries. Similarly, the Financials Industry splits the firms into those that reported themselves as being in the Financials industry, classifying all other firms as 'Other'. The column proportions are compared in each of the characteristic groups, and * denotes a statistically significant difference across the groups at the 5% level.

An analysis conditioning the responses of the CFOs who agree or strongly agree with the statements on reasons for meeting earnings benchmarks is shown in Panel B of table 8.6. Unlike the preference for performance measures, which appears to be purely a function of firm characteristics, the benchmark behaviour does appear to be influenced by the characteristics of the CFO. Nearly half of the mature CFOs (over 50 years of age) were in agreement that meeting earnings benchmarks helped achieve or preserve a desired credit rating. A higher, but not statistically significant, proportion of CFOs with more than 10 years of experience agreed with this statement relative to the less experienced CFOs. The CFOs of large firms were also significantly more likely to agree with this statement than their peers in smaller firms. Taken together these results suggest that credit ratings are of most concern to larger firms, which tend to employ older and more experienced CFOs. Smaller firms, which in Australia form the majority of the market are unlikely to have credit ratings. Of all the measured CFO characteristics, experience appears to have the most impact on the attitudes of the CFOs towards achieving benchmarks. While overall there was very little support for the idea that meeting benchmarks helped employees achieve bonuses, 37.7% of the more experienced CFOs were in agreement with this idea, a significantly higher proportion than the less experienced CFOs, of whom only 10% agreed with this statement. A statistically significantly higher proportion of more experienced CFOs also agreed with the statements that meeting benchmarks helps the external reputation of the management team and helps convey future growth prospects to investors. Interestingly, as is evident from Panel C, there was no corresponding firm size effect. Appreciating these particular communicative qualities of meeting benchmarks would appear to be a wisdom learned over many years rather than primarily the focus of a large firm.

Of the measured firm characteristics indicated in Panel C, only size as reflected by high turnover, appears to influence the attitudes of the respondents to this question. Industry and profitability do not appear to have any significant effect on CFOs opinions. While there was little support overall for the idea that meeting earnings benchmarks helped employees achieve bonuses, 50% of the CFOs in large firms were in agreement with the statement.

8.5 Missing Earnings Benchmarks

When asked about the possible consequences of missing an earnings benchmark, there were only two statements with which Australian CFOs agreed on average, as shown in Table 8.7, and represented graphically in Figure 8.4. Of the 114 respondents, 42.3% agreed or strongly agreed that missing an earnings benchmark hurts because outsiders might think there are previously unknown problems at the firm. A greater proportion of these respondents, 64% agreed or strongly agreed that missing an earnings benchmark hurts because it creates uncertainty about the firm's future prospects (see Panel A of table 8.7).

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Table 8.7 Comparison of unconditional averages in Australia with those reported by GHR in USA in 2003 – missing earnings benchmarks

Missing an earnings benchmark hurts because...	AUSTRALIA			USA		
	Average Rating	H_0: Average rating = 3		Average Rating	H_0: Average rating = 0	
outsiders might think there are previously unknown problems at our firm	3.2	**	Agree	0.97	***	Agree
we have to spend a lot of time explaining why we missed, rather than focus on future prospects	2.9		Neutral	0.49	***	Agree
it increases the possibility of lawsuits	1.7	***	Disagree	0.48	***	Agree
outsiders might think that our firm lacks the flexibility to meet the benchmark	2.5	***	Disagree	0.07		Neutral
it leads to increased scrutiny of all aspects of our earnings releases	2.9		Neutral	-0.14	**	Disagree
it creates uncertainty about our future prospects	3.6	***	Agree	-0.2	***	Disagree

Table 8.7 provides the unconditional analysis of the responses to the question "Missing an earnings benchmarks hurts because…." which were indicated on a scale from 1 Strongly disagree to 5 Strongly Agree. The first three columns in the table relate to the survey carried out in Australia and the last three columns refer to the survey carried out in USA by GHR in 2003. The question asked in each case was identical but the 5 point response scales were differently numbered as described in chapter 5. In Australia the response scale was from 1 Strongly disagree to 5 Strongly agree, while in USA the scale used by GHR was numbered -2 Strongly disagree to +2 Strongly Agree. For each survey, the three columns report the average response to each statement, the t-test of the null hypothesis that the average rating is not different to 3 (neutral, neither agree nor disagree) and description of whether the average response is agreement, disagreement or not significant. This descriptive column is added for ease since the response scales were not identically numbered. Accordingly, the t test of the null hypothesis that the average response is not different from the neutral midpoint uses a value of 3 in Australia and a value of 0 in USA, and ***, ** and * denote a significant difference at the 1%, 5% and 10% levels respectively.

Figure 8.4 Responses to the survey question "Do these statements describe why your company tries to avoid missing an earnings benchmark?"

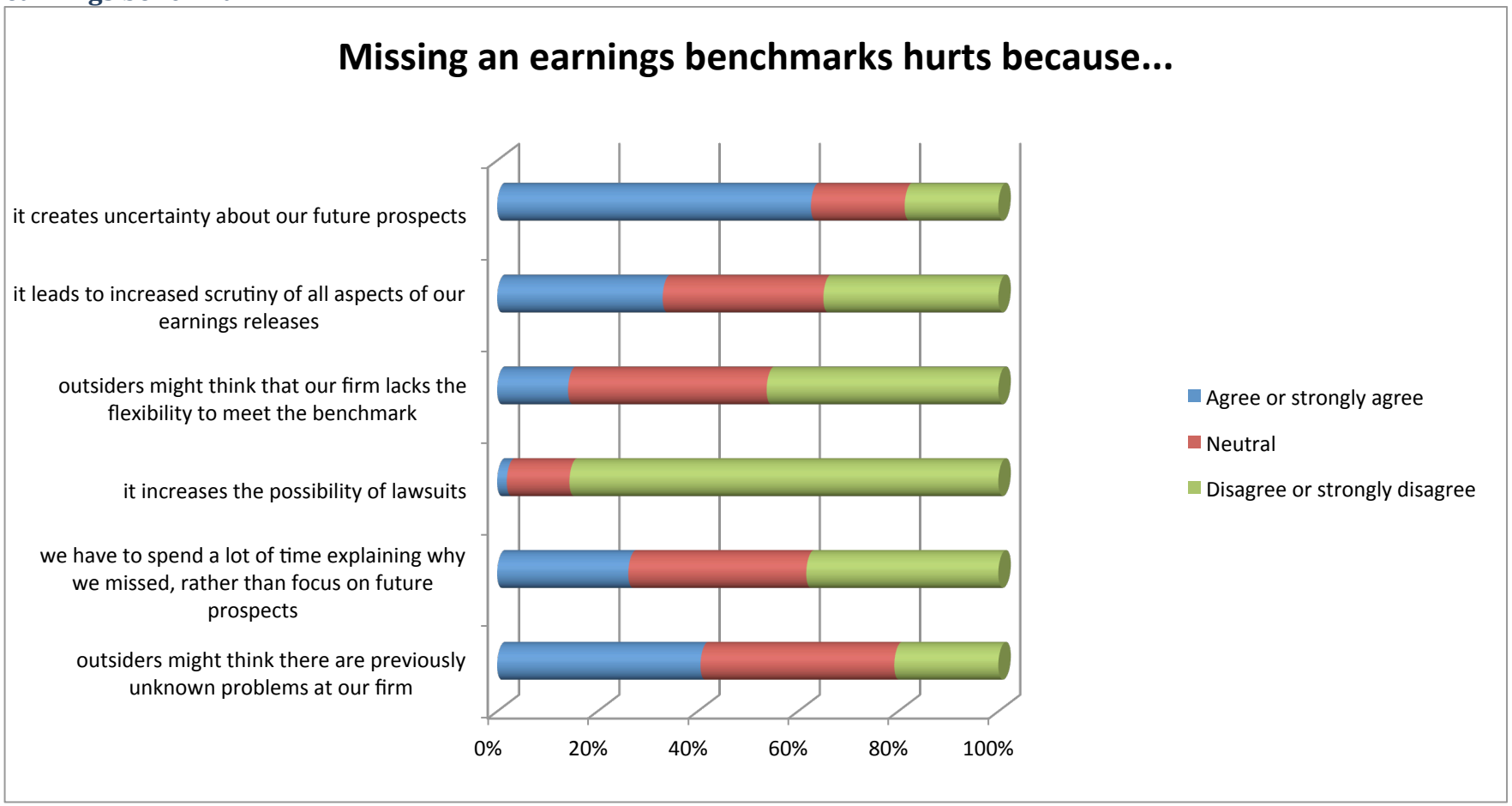


Table 8.8 Responses to the survey question "Missing an earnings benchmarks hurts because…"

Panel A: Unconditional Analysis

Missing an earnings benchmark hurts because...	% Agree or Strongly Agree	% Disagree or Strongly Disagree	Average Rating	H_0: average rating = 3	t	df	Sig. (2-tailed)
outsiders might think there are previously unknown problems at our firm	42.3	19.8	3.2	**	1.986	110	.050
we have to spend a lot of time explaining why we missed, rather than focus on future prospects	25.2	36.9	2.9		-1.507	110	.135
it increases the possibility of lawsuits	1.8	83.8	1.7	***	-16.482	110	.000
outsiders might think that our firm lacks the flexibility to meet the benchmark	14.4	45.9	2.5	***	-5.349	110	.000
it leads to increased scrutiny of all aspects of our earnings releases	35.1	33.3	2.9		-.762	110	.448
it creates uncertainty about our future prospects	64.0	18.0	3.6	***	5.364	110	.000

In table 8.8, Panel A provides the unconditional analysis of the responses to the question "Missing an earnings benchmarks hurts because…." which were indicated on a scale from 1 Strongly disagree to 5 Strongly Agree. The first two columns in the table indicate the percentage of responses that are on either side of the neutral midpoint of the scale, while the 'Average Rating' column reports the average response on the scale from 1 to 5 given by the respondents. The independent t-test of the null hypothesis that the rating is equal to 3 (neutral, neither agree nor disagree) is reported in the remaining columns of this panel.

Table 8.8 Panel B: Conditional Analysis by CFO Characteristic

Missing an earnings benchmark hurts because...	% Agree or Strongly Agree	Age		Experience			Gender		Membership		
		Young	Mature	<10 years	10 years+		Female	Male	Non CA	CA	
outsiders might think there are previously unknown problems at our firm	42.3	62.8%	76.9%	61.9%	70.8%		87.5%	66.1%	70.0%	66.7%	
we have to spend a lot of time explaining why we missed, rather than focus on future prospects	25.2	43.2%	33.3%	43.8%	39.2%		62.5%	37.3%	40.0%	41.0%	
it increases the possibility of lawsuits	1.8	1.7%	0.0%	0.0%	1.5%		0.0%	1.2%	2.9%	1.7%	
outsiders might think that our firm lacks the flexibility to meet the benchmark	14.4	26.7%	19.0%	16.7%	27.1%		50.0%	21.7%	40.0%	14.3%	*
it leads to increased scrutiny of all aspects of our earnings releases	35.1	49.0%	54.2%	34.8%	58.8%		66.7%	48.5%	62.9%	41.5%	
it creates uncertainty about our future prospects	64.0	77.2%	78.8%	58.3%	84.8%	*	88.9%	76.3%	79.4%	77.2%	

In Table 8.8, Panel B compares the percentage of respondents that agree or strongly agree with each statement when the sample is split on various CFO characteristics: age, experience, gender and membership, as self-reported in the demographic section of the research instrument. The sample is split using the median for each category, unless a more appropriate split is evident, egg Gender. For Age, respondents are classified as Mature if they are 50 years old or more, and Young if they are less than 50. Experience refers to the number of years of senior financial management experience the respondent reports, and the median split is at the 10 year level. The column proportions are compared in each of the characteristic groups, and * denotes a statistically significant difference across the groups at the 5% level.

Table 8.8 Panel C: Conditional Analysis by Firm Characteristic

Missing an earnings benchmark hurts because...	% Agree or Strongly Agree	Turnover		Profitability		Materials Industry		Financials Industry	
		Low	High	Loss	Profit	Materials	Other	Financials	Other
outsiders might think there are previously unknown problems at our firm	42.3	63.3%	80.0%	70.8%	65.9%	55.0%	73.5%	71.4%	67.3%
we have to spend a lot of time explaining why we missed, rather than focus on future prospects	25.2	38.8%	45.0%	40.0%	40.8%	38.1%	41.7%	40.0%	40.7%
it increases the possibility of lawsuits	1.8	2.9%	0.0%	0.0%	2.9%	4.3%	1.4%	0.0%	2.8%
outsiders might think that our firm lacks the flexibility to meet the benchmark	14.4	28.8%	6.7%	23.8%	24.4%	27.8%	22.4%	21.4%	24.5%
it leads to increased scrutiny of all aspects of our earnings releases	35.1	52.8%	47.8%	55.0%	49.1%	50.0%	51.8%	62.5%	48.3%
it creates uncertainty about our future prospects	64.0	78.8%	76.0%	27.1%	72.9%	68.0%	81.8%	90.0%	74.6%

In Table 8.8, Panel C conditions the analysis of the average points awarded by the respondents to the performance measures on the firm characteristics. Turnover captures the size of the firm with firms classified as Low having a turnover below $500 million, and High turnover firms being those with turnovers of $500 million or greater. Profitability splits the sample firms into those that reported a loss in the prior period, and those that reported a profit in the prior period as disclosed by the CFO in the demographic section of the research instrument. The Materials Industry characteristic splits the sample into firms that reported themselves as being in the materials or energy industries in the demographics and labels these as 'Materials', classing all remaining firms as 'Other' industries. Similarly, the Financials Industry splits the firms into those that reported themselves as being in the Financials industry, classifying all other firms as 'Other'. The column proportions are compared in each of the characteristic groups, and * denotes a statistically significant difference across the groups at the 5% level.

The respondents disagreed on average with the statement that missing earnings benchmarks hurts because outsiders might think the firm lacks the flexibility to meet earnings benchmarks. The respondents gave an average response of 2.5 as shown on table 8.7, and 45.9% disagreed or strongly disagreed with this statement (Table 8.8 Panel A). An overwhelming majority of respondents (83.8%) disagreed or strongly disagreed with the idea that missing earnings benchmarks hurts because it increases the possibility of lawsuits (Skinner, 1997, 1994), giving an average response of only 1.7. This finding suggests that there is negligible support for the litigation hypothesis in Australia. Conversely, the US CFOs did support this hypothesis, with an average response significantly above the midpoint in the scale (see table 8.7).

Overall, there is considerable disagreement between CFOs in Australia and the USA regarding the consequences of missing earnings benchmarks. In fact, the only point with which there is agreement from both groups of CFOs is that missing earnings benchmarks might lead outsiders to believe there are unknown problems at the firm. In addition to the stark contrast in opinion regarding the litigation hypothesis, CFOs in the two domiciles also have opposing views on whether or not missing earnings benchmarks creates uncertainty about our future prospects. In the USA, the CFOs disagreed with this statement, but Australian CFOs agree, giving an average response of 3.6. As shown in Panel A of table 8.8, 64% of the respondents agreed or strongly agreed with this statement. Panel B of table 8.8, conditions these responses on CFO characteristics and finds that 84.8% of the CFOs with 10 years or more experience agree or strongly agree. This is a significantly higher proportion of respondents in agreement than was the case for the less experienced CFOs (58.3%).

CFOs who are not members of the Institute of Chartered Accountants were more likely to agree with the statement that missing earnings benchmarks hurts because outsiders might think that the firm lacks the flexibility to meet the benchmark. Only 14.3% of the members of the Institute were in agreement with this statement while 40% of Non CA members agreed with the statement.

When the responses are conditioned on firm characteristics no statistically significant differences between the groups are found, as indicated by Panel C.

8.6 Smooth Earnings Paths

The penultimate question in the survey asked respondents why they preferred smooth earnings paths. In the original survey, GHR prefaced this question with a very simple question that asked whether the CFO preferred earnings that were either 'smooth' or 'bumpy'. As discussed in chapter five, this question was not repeated in the Australian version for several reasons. Firstly, GHR had had an overwhelming majority of respondents say that they preferred smooth earnings. Secondly, the question as presented posed a risk of sounding patronising, and too obvious. As this was towards the end of the research instrument and the task was already reasonably substantial it was important to take all steps to avoid the risk of losing participants. Consequently, the preliminary question to establish whether or not smooth earnings were indeed preferable was replaced with this sentence, placed at the end of the question.

"If you do not prefer smooth earnings, please proceed directly to question 5."

Unfortunately, while this sentence appeared in the version of the research instrument used in the pilot, it did not appear in the final version, as a result of human error[33]. This undermines the validity of the question, since an assumption is effectively made that the CFOs preference is for smooth earnings. There is a risk that respondents might have ticked the boxes for each statement about the reasons for preferring smooth earnings paths even if they actually do not prefer smooth earnings paths. Responses to this question must therefore be evaluated with this limitation in mind. Mitigating the effect of the limitation is the likelihood that the majority of respondents would in fact prefer smooth earnings based on the findings in GHR, and the candour of the respondents. Instead of answering the question in the spaces provided, six of the respondents wrote notes on their research instruments. One of these respondents simply explained that they didn't prefer smooth earnings. Another respondent explained that a smooth earnings path "may not always be the best way to increase shareholder value". The remaining four respondents had explained earlier in their survey section that they were exploration companies or development firms in a loss making situation. They omitted the question and the earlier benchmark questions explaining "it is hard to apply this to our firm" or that since they had no earnings this was not a relevant question for them. It seems likely then, that while the respondents were not explicitly instructed to do so, only those respondents that actually did prefer smooth earnings have answered this question. The tables 8.9 and 8.10 below summarise the responses of the respondents that did answer the question, omitting the six respondents described earlier. Figure 8.5 offers a graphical representation of these responses.

[33] Upon discovery of this issue in the printing, the printed research instruments were rigorously rechecked to ensure that this printing error was an isolated incident. No further issues were identified.

Table 8.9 Comparison of unconditional averages in Australia with those reported by GHR in USA in 2003 – smooth earnings paths

A smooth earnings path is preferred because it…	AUSTRALIA			USA		
	Average Rating	H_0 :Average rating = 3		Average Rating	H_0: Average rating = 0	
is perceived as less risky by investors	3.4	***	Agree	1.18	***	Agree
reduces the return that investors demand (i.e. smaller risk premium)	2.8	**	Disagree	0.99	***	Agree
conveys higher future growth prospects	2.9		Neutral	0.61	***	Agree
assures customers/suppliers that the business is stable	3.2	**	Agree	0.55	***	Agree
achieves or preserves a desired credit rating	2.5	***	Disagree	0.32	***	Agree
promotes a reputation for transparent and accurate reporting	3.2	*	Agree	0.42	***	Agree
makes it easier for analysts/investors to predict future earnings	3.5	***	Agree	0.21	***	Agree
increases bonus payments	2.1	***	Disagree	-0.05		Neutral
clarifies true economic performance	2.7	**	Disagree	-0.43	***	Disagree

Table 8.9 provides the unconditional analysis of the responses to the question "A smooth earnings path is preferred because…." which were indicated on a scale from 1 Strongly disagree to 5 Strongly Agree. The first three columns in the table relate to the survey carried out in Australia and the last three columns refer to the survey carried out in USA by GHR in 2003. The question asked in each case was identical but the 5 point response scales were differently numbered as described in chapter 5. In Australia the response scale was from 1 Strongly disagree to 5 Strongly agree, while in USA the scale used by GHR was numbered -2 Strongly disagree to +2 Strongly Agree. For each survey, the three columns report the average response to each statement, the t-test of the null hypothesis that the average rating is not different to 3 (neutral, neither agree nor disagree) and description of whether the average response is agreement, disagreement or not significant. This descriptive column is added for ease since the response scales were not identically numbered. Accordingly, the t test of the null hypothesis that the average response is not different from the neutral midpoint uses a value of 3 in Australia and a value of 0 in USA, and ***, ** and * denote a significant difference at the 1%, 5% and 10% levels respectively.

Figure 8.5 Responses to the survey question "Do the following factors contribute to your company preferring a smooth earnings path?"

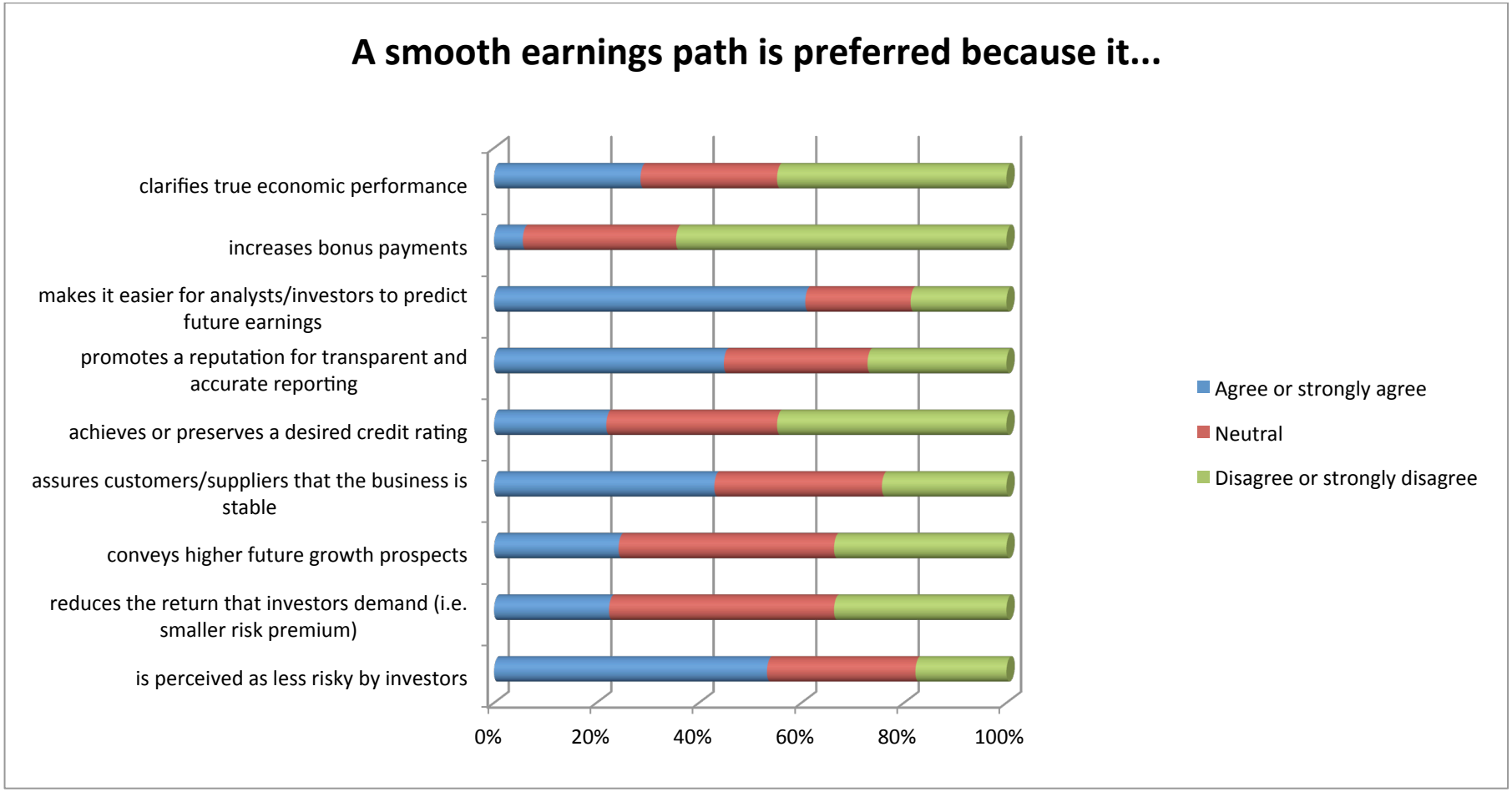


Table 8.10 Responses to the survey question "A smooth earnings path is preferred because…"

Table 8.10 Panel A: Unconditional Analysis

A smooth earnings path is preferred because it…	% Agree or Strongly Agree	% Disagree or Strongly Disagree	Average Rating	H_0:Average rating = 3	t	df	Sig. (2-tailed)
is perceived as less risky by investors	53.2	17.1	3.4	***	4.257	110	.000
reduces the return that investors demand (i.e. smaller risk premium)	23.4	32.4	2.8	**	-1.987	110	.049
conveys higher future growth prospects	27.0	32.4	2.9		-.912	110	.364
assures customers/suppliers that the business is stable	43.2	23.4	3.2	**	2.038	110	.044
achieves or preserves a desired credit rating	20.7	42.3	2.5	***	-4.208	110	.000
promotes a reputation for transparent and accurate reporting	45.0	26.1	3.2	*	1.909	110	.059
makes it easier for analysts/investors to predict future earnings	62.2	18.0	3.5	***	4.785	110	.000
increases bonus payments	5.4	64.0	2.1	***	-9.725	110	.000
clarifies true economic performance	27.5	43.1	2.7	**	-3.094	108	.003

In table 8.10, Panel A provides the unconditional analysis of the responses to the question "A smooth earnings path is preferred because…." which were indicated on a scale from 1 Strongly disagree to 5 Strongly Agree. The first two columns in the table indicate the percentage of responses that are on either side of the neutral midpoint of the scale, while the 'Average Rating' column reports the average response on the scale from 1 to 5 given by the respondents. The independent t-test of the null hypothesis that the rating is equal to 3 (neutral, neither agree nor disagree) is reported in the remaining columns of this panel.

Table 8.10 Panel B: Conditional Analysis by CFO Characteristic

A smooth earnings path is preferred because it…	% Agree or Strongly Agree	Age		Experience		Gender			Membership	
		Young	Mature	<10 years	10 years+	Female	Male		Non CA	CA
is perceived as less risky by investors	53.2	71.4%	82.1%	70.6%	76.7%	83.3%	75.4%		76.5%	75.0%
reduces the return that investors demand (i.e. smaller risk premium)	23.4	42.5%	42.9%	33.3%	46.7%	25.0%	44.6%		50.0%	37.5%
conveys higher future growth prospects	27.0	40.9%	52.4%	38.1%	47.7%	83.3%	40.4%	*	55.6%	38.5%
assures customers/suppliers that the business is stable	43.2	66.7%	60.0%	60.0%	66.0%	87.5%	60.9%		68.8%	61.9%
achieves or preserves a desired credit rating	20.7	29.4%	42.1%	20.0%	38.8%	50.0%	30.6%		42.3%	27.3%
promotes a reputation for transparent and accurate reporting	45.0	58.8%	70.4%	60.0%	65.4%	71.4%	61.4%		61.3%	64.6%
makes it easier for analysts/investors to predict future earnings	62.2	78.2%	76.5%	66.7%	80.9%	88.9%	75.6%		80.6%	75.9%
increases bonus payments	5.4	8.0%	7.4%	0.0%	10.9%	0.0%	8.5%		7.1%	8.2%
clarifies true economic performance	27.5	40.0%	36.4%	38.1%	40.0%	50.0%	38.0%		35.7%	40.8%

In Table 8.10, Panel B compares the percentage of respondents that agree or strongly agree with each statement when the sample is split on various CFO characteristics: age, experience, gender and membership, as self-reported in the demographic section of the research instrument. The sample is split using the median for each category, unless a more appropriate split is evident, e.g. Gender. For Age, respondents are classified as Mature if they are 50 years old or more, and Young if they are less than 50. Experience refers to the number of years of senior financial management experience the respondent reports, and the median split is at the 10 year level. The column proportions are compared in each of the characteristic groups, and * denotes a statistically significant difference across the groups at the 5% level.

Table 8.10 Panel C: Conditional Analysis by Firm Characteristic

A smooth earnings path is preferred because it…	% Agree or Strongly Agree	Turnover		Profitability		Materials Industry		Financials Industry	
		Low	High	Loss	Profit	Materials	Other	Financials	Other
is perceived as less risky by investors	53.2	75.4%	76.2%	71.4%	76.8%	69.6%	78.2%	68.8%	77.4%
reduces the return that investors demand (i.e. smaller risk premium)	23.4	39.6%	50.0%	50.0%	39.1%	33.3%	46.3%	46.7%	40.4%
conveys higher future growth prospects	27.0	47.1%	40.0%	50.0%	44.7%	47.8%	44.2%	30.0%	48.2%
assures customers/suppliers that the business is stable	43.2	68.3%	50.0%	78.3%	58.8%	65.0%	64.8%	61.1%	66.1%
achieves or preserves a desired credit rating	20.7	29.6%	43.8%	35.0%	32.7%	47.4%	27.5%	35.3%	32.1%
promotes a reputation for transparent and accurate reporting	45.0	63.6%	62.5%	62.5%	63.0%	57.1%	65.5%	44.4%	68.9%
makes it easier for analysts/investors to predict future earnings	62.2	76.2%	80.0%	67.9%	81.7%	72.7%	79.1%	73.7%	78.6%
increases bonus payments	5.4	8.8%	5.3%	13.6%	5.5%	8.7%	7.4%	0.0%	9.8%
clarifies true economic performance	27.5	43.3%	23.5%	41.7%	38.5%	37.5%	39.6%	31.3%	41.0%

In Table 8.10, Panel C conditions the analysis of the average points awarded by the respondents to the performance measures on the firm characteristics. Turnover captures the size of the firm with firms classified as Low having a turnover below $500 million, and High turnover firms being those with turnovers of $500 million or greater. Profitability splits the sample firms into those that reported a loss in the prior period, and those that reported a profit in the prior period as disclosed by the CFO in the demographic section of the research instrument. The Materials Industry characteristic splits the sample into firms that reported themselves as being in the materials or energy industries in the demographics and labels these as 'Materials', classing all remaining firms as 'Other' industries. Similarly, the Financials Industry splits the firms into those that reported themselves as being in the Financials industry, classifying all other firms as 'Other'. The column proportions are compared in each of the characteristic groups, and * denotes a statistically significant difference across the groups at the 5% level.

On average, the respondents agreed that smooth earnings paths were preferred because they were perceived as less risky by investors (see table 8.9). However, they did not agree that this smooth earnings path would reduce the return that investors demanded. This is contrary to the view expressed by the CFOs in the USA, who did believe that smooth earnings paths would reduce the investors' risk premium. Consistent with their opinions in earlier questions, Australian respondents did not believe that credit ratings and bonus payments were reasons for preferring smooth earnings paths. Neither the Australian nor the US respondents believed that smooth earnings paths clarified true economic performance.

Panel B of table 8.10 shows the responses conditioned by CFO characteristic. The only characteristic that appears to have an influence here is gender. Overall the response to the statement that smooth earnings conveyed higher future growth prospects was neutral, that is not statistically significantly different from the midpoint. Female CFOs were more likely to agree with this statement, 83.3% of them did, while only 40.4% of the male CFOs agreed or strongly agreed that this was the case. Conditioning the responses on firm characteristics as shown in Panel C indicates that size, profitability and industry do not influence opinion on reasons for preferring smooth earnings paths.

8.7 The Conflict between Value and Benchmarks

The final question in the survey section of the research instrument posed a hypothetical scenario to the respondents as follows:

> "Your company's cost of capital is 12%. Near the end of the financial year, a new opportunity arises with a substantial net present value. It offers a 16% internal rate of return and the same risk as the firm. The EPS benchmark is $1.90. (If your firm is followed by analysts this benchmark is their consensus estimate, and if not followed by analysts, it is the earnings benchmark that is most important to your firm.) What is the probability that your company will pursue this project in each of the following scenarios?"

The scenarios that followed showed the impact on EPS if the project was pursued or not pursued. In each case, the EPS is 10c higher when the project is not pursued, but since the project offers a substantial net present value, undertaking it creates long term value for the firm. The four scenarios give different levels of EPS that the respondent will presumably assess against the benchmark of $1.9 as given in the hypothetical situation stated above. The conflict is thus between meeting a current earnings benchmark and creating long term value for the firm. The responses of the Australian CFOs are presented in table 8.11 below.

Table 8.11 Responses of the Australian and USA CFOs to the question regarding the likelihood of pursuing a project

		Australia	USA
EPS if you do not pursue	EPS if you do pursue	Average probability[34] of pursuing the project (%)	Average probability of pursuing the project (%)
$2.00	$1.90	74	80
$1.90	$1.80	62	59
$1.80	$1.70	48	55
$1.40	$1.30	41	52

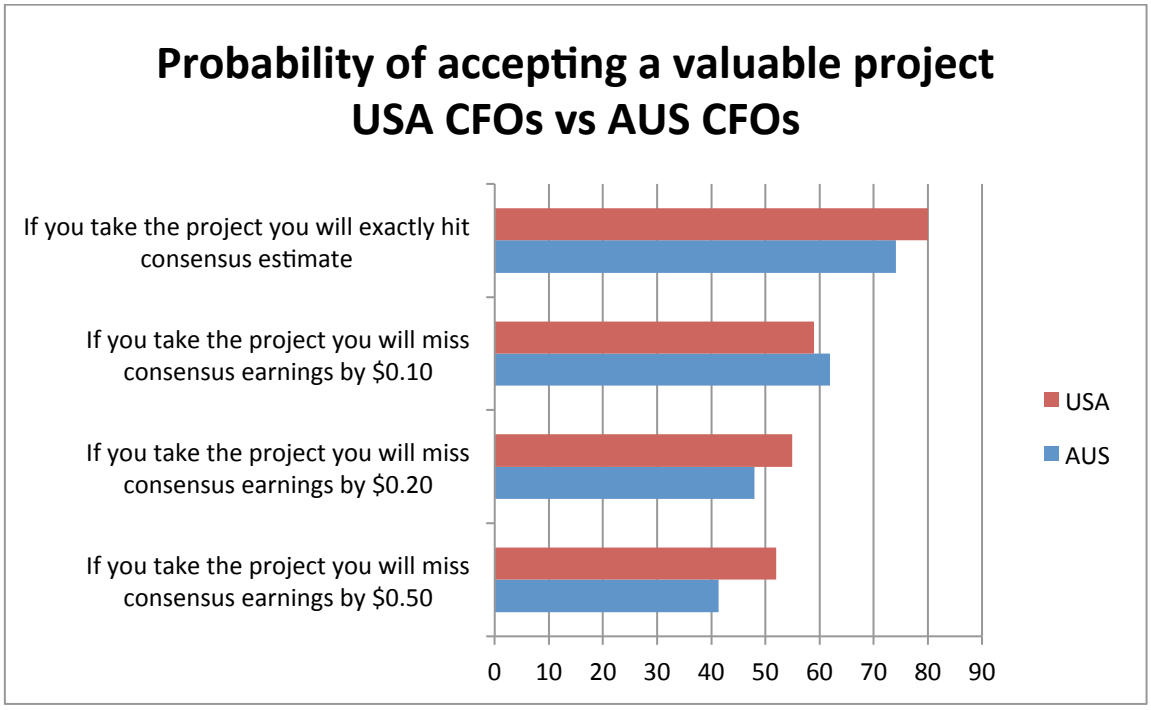
The respondents are most likely to accept the project when it does not affect the benchmark earnings. When the EPS will be exactly equal to the benchmark estimate if the project is accepted, the CFOs report that they are 74% likely to undertake the project. As the size of the earnings miss increases, the probability of accepting the project decreases. When undertaking the project means missing the earnings benchmark by 50c, the CFOs average probability of accepting the project is only 41%. As was the case in USA, the CFOs responses illustrate the conflict created when managers have to balance the operating and potentially value increasing needs of the firm with the reporting consequences.

These responses are not dissimilar to the responses of the CFOs in the USA as reported by GHR. The figure 8.6 below illustrates the responses of the CFOs in both surveys.

[34] Note that this is not a probability in the mathematical sense it is an average of the responses to the subjects' answers to a question asking how probable it is that the project will be pursued.

Figure 8.6 Responses to the hypothetical scenario:

"Your company's cost of capital is 12%. Near the end of the financial year, a new opportunity arises with a substantial net present value. It offers a 16% internal rate of return and the same risk as the firm. The EPS benchmark is $1.90. (If your firm is followed by analysts this benchmark is their consensus estimate, and if not followed by analysts, it is the earnings benchmark that is most important to your firm.) What is the probability that your company will pursue this project in each of the following scenarios?"



8.8 Summary

This chapter has provided analysis and discussion of the subjects' responses to the survey section of the research instrument. The results of the survey section of the research instrument are also compared with the similar study undertaken by GHR in the USA to offer insights into the similarities and differences between CFO and firm behaviour in different settings.

In the next and final chapter, the research study is summarised, limitations recognised and concluding thoughts offered along with suggestions for future research.

Chapter Nine : Conclusion

The previous chapter detailed the results of the survey section of the instrument including an analysis of these results and comparison with the similar study carried out in the USA in 2003. This chapter offers a summary of the thesis and concluding remarks. The chapter is organised as follows. Section 9.1 introduces this final chapter and section 9.2 provides a brief summary of the main findings. Limitations of the study are considered in section 9.3 along with the implications for future research in section 9.4. The final concluding remarks are offered in section 9.5.

9.1 Introduction

This study aims to investigate the unexplored issue of how the presence of multiple, conflicting reporting incentives affects a managers accounting choice. In particular, the issue of the CFOs priority in the presence of conflicting incentives is examined. By applying a lesser utilised methodology in the accounting choice literature, this study aims to contribute primary data to begin to close the significant gap identified in the literature by Fields et al. (2001). In addition to conducting two experiments using 116 Australian CFOs from the top 700 firms on the ASX by market capitalisation, this study also offers a partial replication of the survey carried out by GHR in 2003 in the USA. The survey data provides a useful comparison of the views of CFOs in Australia and the USA which is important since much evidence is gathered in the US setting and these ideas are extrapolated to other settings. The survey data in this study helps to identify more

precisely how differences in the Australian setting influence the perceptions and attitudes of Australian managers relative to those in the USA.

The results reported in this study have both theoretical and policy implications. An improved understanding of how managers utilise the extent of professional judgment and discretion allowed by accounting regulation has implications for standard setters. Evidence on the impact of potential conflicting incentives on accounting choice, and the priorities of preparers may be useful for regulators when considering the appropriate amount of permissible discretion.

9.2 Summary of Findings

9.2.1 The Experiments

Experiment one explored choices made in the presence of an asset pricing incentive and an explicit contracting incentive. The results of the two way ANOVA support the hypotheses H1 and H2a, which relate to the incentive to avoid missing an earnings forecast and the incentive to avoid violating a debt covenant. The conflict hypothesis H4 predicted that when forced to make a choice between meeting the forecast earnings (satisfying the asset pricing incentive) and avoiding a covenant violation (satisfying the explicit contracting incentive) the managers would prioritise the asset pricing incentive. The financial accounting literature has yet to examine the relative strength of these incentives but this hypothesis is consistent with the weight of evidence for each incentive in its own right. The incentive to meet the expectations of the capital market is widely demonstrated (e.g. Kasznik, 1999) and a compelling enough incentive to lead CFOs to

sacrifice long term value if necessary to avoid an earnings surprise (GHR). The incentive to avoid costly covenant violation is also well demonstrated in the literature (e.g. Beneish and Press, 1993). However the outcome of a violation is uncertain and a waiver might possibly be negotiated (Chen and Wei, 1993). Ignoring the process of decision making under conflict and simply evaluating the choice on the basis of the financial accounting evidence leads to the conclusion that the asset pricing incentive would be prioritised. However, the results of the one way ANOVA planned comparisons, post hoc testing and independent t tests all indicate evidence in the contrary direction to that of the hypothesis H4. The subjects in the conflict condition prioritised the explicit contracting incentive over the asset pricing incentive. This behaviour would appear to be consistent with resource dependence theory (Pfeffer and Salancik, 1978; Sheppard, 1995) and suggests that the managers perceive the lender to be the stakeholder in control of the more critical resource. In the presence of a threat to the survival of the organisation, and as posited by Jawahar and McLaughlin (2001), these managers apply the riskier strategy of accommodating the requirements of one stakeholder at the cost of another, consistent with prospect theory (Kahneman and Tversky, 1979).

Experiment two explored the choices made in the presence of both an implicit and an explicit contracting incentive. The results of the two way ANOVA indicated a significant interaction effect between these two incentives. This means that it may be difficult to interpret any main effects since the level of one incentive influences the strength of the other incentive (Keppel et al., 1992). However, there is a statistically significant main effect found for the explicit contracting incentive which in this experiment is the performance pricing clause in the lending agreement. No statistically significant main

effect was found for the implicit contracting incentive in this experiment. One potential explanation for this finding is that in the Random treatment condition, in which the implicit contracting incentive is absent and the explicit contracting incentive is also absent, the subjects appear to have perceived an incentive to choose to announce and restructure in the current period. It is possible that these subjects took this position because they believed that early disclosure was the 'right' thing to do in the absence of any other incentive and consistent with the principle of conservatism. While the mean response of the subjects in the Yes treatment condition (in which only the implicit contracting incentive is present) was in the hypothesised direction, it is not statistically significantly different from the mean response of the subjects in the Random condition (in which the implicit contracting incentive is absent). This means that in addition to the implicit contracting incentive which motivates a response above the mid point on the decision scale, there appears to be another incentive present which motivates a similar response. Accordingly it is not possible to isolate the influence of the implicit contracting incentive. Since this additional incentive (possibly conservatism, or the belief that earliest possible disclosure is the 'right' thing to do) is present in the Random condition it must also be present in the No condition in which implicit contracting incentive is also intended to be absent. The mean response in the No condition was below, but quite close to the mid point on the scale. This is consistent with the subjects deciding to satisfy the explicit contracting incentive (by choosing a point below the mid point) but tending towards the top of this range. Had this unintended additional incentive to announce early not been perceived it is likely that the mean response would have been even lower on the decision scale.

The significant interaction effect in experiment two suggests that the incentives do influence each other. Therefore although no main effect was found for the implicit contracting incentive it is still possible that this manipulated variable did still have some impact on the decision choices of the subjects. The planned comparisons in the one way ANOVA support this indication. These contrasts indicate a statistically significant difference between each of the pair combinations of the treatment conditions of Yes, No and Conflict. This result suggests that the unique combinations of incentives in each of these three treatment conditions motivate three distinct responses. Additional tests carried out on these groups give mixed results. It is possible that only the planned comparisons are powerful enough to detect the differences between the groups. Independent t tests find in support of the conflict hypothesis H5, that subjects choose to prioritise the lender and avoid an interest rate increase. Their mean response is not statistically significant different from those in the No condition in which only the explicit contracting incentive of the performance pricing clause is present. Post hoc testing finds no statistically significant differences between any of the pairs of treatment conditions of Yes, No and Conflict.

9.2.2 The Survey

In addition to the two experiments, the subjects participated in a brief survey which explored the perceptions of the subjects regarding performance measures reported to outsiders to the firm as well as investigating their attitudes towards benchmarks. The results of this survey offer the useful contribution of identifying particular characteristics of firms that influence the perceptions and beliefs of CFOs. These characteristics are the

very characteristics that distinguish the Australian market from its counterpart in the USA. This finding confirms the contention in Chan et al. (2007) that some of the theories developed and tested using US data may not apply to the Australian setting. Caution should be exercised in extrapolating US findings to other settings.

The survey finds that Australian CFOs use a wider range of performance metrics than CFOs in the USA where earnings appears to take precedence (GHR). In Australia earnings and cash flow from operations rank fairly equally as the prime performance metric. The preference for particular performance metrics appears to be driven by firm characteristics and not influenced by the characteristics of the individual CFO (such as age, gender, professional memberships). For example, only the CFOs from larger firms in the sample believed that it was important or very important to meet benchmarks such as analyst/management forecasts and prior year earnings. Smaller firms were less likely to believe that this was important. CFOs from firms in the materials industry were significantly less likely to agree that meeting any of the benchmarks was important, than firms in any other industry. Attitudes towards meeting and missing benchmarks do appear to be influenced by CFO characteristics. For example, the more experienced subjects were more likely to agree that meeting earnings benchmarks improved the credibility of the manager and maintained or improved his or her reporting reputation.

Consistent with the US CFOs surveyed by GHR, Australian CFOs admit that they would consider sacrificing long term value in order to avoid missing a short term earnings benchmark. This position was criticised strongly by Graham et al.(2006), but it illustrates the tensions inherent in the decision environment. Charged with the responsibility of the

financial management of the firm the CFO must needs trade off competing claims in order to ensure the survival of the firm. In positive economic times and from a strong financial position it may be possible to serve the ideal of long term value above all else. In the more likely situation of less than perfect financial health and prospects, the CFO like any manager, must carefully consider the salience of each stakeholder and their power over the firm's critical resources. Questions regarding choices made in the presence of these conflicting incentives are therefore well worthy of this and further research.

9.3 Limitations of the thesis

This study employs behavioural methodology. As such it is subject to the limitations that are inherent to this methodology. As with any experiment, there is a degree of artificiality to the scenarios. The case study aims to convey the essence of a situation and convey all the relevant facts. As the situation is hypothetical it is possible that the subject is not making a choice in a truly natural way and that the decisions that they might make in a real world situation may be different. In addition the subjects completed the task by mail, unsupervised by the researcher and each experiment is therefore open to the risks of a non-controlled experiment (Trotman, 1996). Possible risks include the potential for someone other than the intended subject to complete the instrument such as the CFOs assistant or a more junior financial officer. However, in mitigation, it would seem unlikely that a CFO who did not feel that the research was worth his own time would bother to delegate the task to a subordinate. It seems rather more likely that they would simply not respond. It is also possible that some response bias exists in the sample, where the

subjects that chose to participate are in some way different from the subjects that chose not to participate. All possible statistical avenues were explored in order to try and identify any bias (such as early versus late responders) and no particular bias was found. In general, the sample was found to be representative of the population on the measured demographics. The response rate of 16% is reasonable for the expert population (for example, GHR achieved a 10% response rate). However, while the response rate is less than 100% the possibility for some distinguishing characteristic in the responding sample exists, creating the potential for bias in the sample. Experiments are context specific and as such the generalisability of the findings to other settings is limited. This trade-off of external validity for greater internal validity is a recognised limitation of the experimental methodology (Keppel et al., 1992). In addition, experiments are time specific. The decisions made by the subjects may be influenced by the prevailing economic conditions. The results gathered in this study may also not be generalisable to other time periods. Repeating the experiments in different economic or political conditions may yield different results. The findings in this study should therefore be interpreted in this context.

This study draws on psychology and management research to develop theories surrounding the accounting choice made under conflict. However, this study did not attempt to measure the attributes of the stakeholders, or the perceptions of CFOs regarding these attributes. An analysis and discussion of the stakeholder salience attributes is used to understand and explain the decision making behaviour of the subjects. However, the measurement of the perceptions of these attributes is beyond the scope of this study, and is left for future research.

9.4 Implications for future research

Trade off decisions are prevalent in the field of financial accounting, but relatively unexplored. Accordingly, they offer a potentially rich setting for future research. While accountants routinely manage issues such as balancing costs with benefits, or trading off relevance and reliability, the decision making process of these issues tends not to be examined. Future research could benefit from reconsidering such issues and incorporating theories relating to the decision making aspects that have been developed in other research fields. Management scholars have developed an extensive framework to examine conflict decisions but it has yet to be applied to our specific managers: CFOs. While considerable work has been done a comprehensive theory that explains all or even most decisions has yet to be developed: we have much further to go. In this study, useful insights were gained by examining relevant aspects of stakeholder theory from the management discipline. While an established framework has been developed and contributes to our understanding of accounting choices in the presence of conflicting incentives, the extant stakeholder theories still do not yet fully describe or predict the these choices. Future research could extend the work in this thesis by incorporating measures of the subjects' perceptions of the stakeholder attributes to test the stakeholder salience model and its ability to explain accounting choices made under conflict. Applying this model and perhaps other similar models of decision making behaviour to other accounting choices would also extend the existing knowledge base and test these models more rigorously in the specific financial reporting context.

In the pilot phase of this study, additional robustness testing of the research instrument was achieved by utilising novel eye-tracking technology. Future research could extend the work in this thesis by applying this technology as a data gathering tool for the main study rather than simply utilising its capabilities for rigorous testing of the instrument in the design phase. By incorporating the eye tracking technologies and stimulated RTA methodology, future research could pursue greater understanding of the subject's actual decision making process. This would facilitate interesting perspectives on accounting choices under conflict and offer avenues such as understanding the development or refinement of the decision making process as a novice decision maker becomes an expert decision maker.

The second experiment in this study examined an implicit contracting incentive. While such incentives have been demonstrated to be compelling, the extant literature has typically only been able to identify examples that are heavily context specific and are often from the political costs literature. Examples includes the Australian gold miners in the 1980's who managed their earnings downwards in an attempt to avoid a new mining tax (Monem, 2003) and the oil and gas companies trying to avoid scrutiny in times of rising product prices by managing their earnings downwards during the Persian Gulf crisis (Han and Wang, 1998). Other interesting incentives exist with implicit contractors such as customers, suppliers, employees and competitors but these are often difficult to examine in the archival setting (Bowen et al., 1995; Raman and Shahrur, 2008). The approach in this study was to attempt to examine an implicit contractor from this group by utilising a behavioural methodology. The evidence gathered in this study was not as strong as anticipated since the random condition in which the implicit contracting incentive was

intended to be absent, and which was intended to contain no other particular incentive may not have been a clean condition. Subjects in this treatment condition all behaved similarly and as if responding to a perceived incentive. Accordingly it was not possible to identify a direct and unobscured impact of the implicit contracting incentive. However, the subjects' responses in this treatment condition were in the appropriate and anticipated direction. Future research could improve on the experimental scenario in order to better examine a similar implicit contracting incentive.

The financial accounting incentive hypotheses in this study were limited to one direction. However the financial accounting incentives in their broad sense can motivate choices in both directions. Future research could examine these alternate directions such as (but not limited to) income increasing performance pricing and income increasing proprietary costs.

The management discipline and the accounting research in the Corporate Social Responsibility area use the term 'stakeholders' when describing the relevant actors. The financial accounting regulation and research utilises the term 'users'. Users are critical to financial accountants since our entire *raison d'etre* is to provide these users with the necessary financial information to inform their decision making regarding the allocation of scarce resources. Since these users are so pivotal to financial reporting perhaps further research into their attributes and the implications of these attributes should be considered particularly since the complexity of current financial reporting is a topical issue. Future research could make a closer consideration of this taxonomy, and explore

the similarities and differences between stakeholders and users if the stakeholder theory from the management discipline is being applied to the financial accounting research.

9.5 Summary

This study was directed toward contributing evidence regarding the accounting choices made by CFOs in the presence of multiple and conflicting incentives. By gathering primary data from 116 Australian CFOs in the top 700 ASX-listed firms, this study has offered an insight on the current perceptions of Australian CFOs regarding the reported performance measures and their attitudes towards meeting and missing the benchmark expectations of the capital market. The results of the experiments contribute some evidence on the almost entirely unexamined issue of accounting choices made in the presence of conflicting incentives. These results offer an indication of the relative strengths of the reporting incentives. Drawing on insights from psychology and management, this study also offers the beginning of a framework for understanding accounting choice under conflict and offers some possible reasons for any hierarchy of reporting incentives.

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Appendix 1: Research Instrument

The research instrument comprises of four parts: parts A and B contain the two experiments, part C is the survey and part D is the demographics. The first two sections of the instrument were randomised to avoid any potential bias created by a learning effect. The first randomisation that was necessary was the order in which the subjects completed the two experiments. Half of the subjects received experiment one as the first experiment in part A and the other half of the subjects received experiment two as the first experiment in part A. Further randomisation was necessary with respect to the four treatment conditions in each experiment.

A four character code was used in the bottom corner of the research instrument cover page to assist in identifying the randomised versions of the instrument. The first two letters of the code describe part A of the instrument and the last two letters describe part B. Experiment one is denoted by the letter D being the first letter of the name of the company described in the experiment . Experiment two is denoted by the letter A, being the first letter of the name of the company described in experiment two. Each of the four treatment conditions is coded with the first letter of the name given to the treatment condition as described in chapters 5 and 7 of this thesis: Y - Yes, N - No, C - Conflict, and R - Random. Full randomisation resulted in 32 versions of the research instrument as depicted in the table below.

Table 1: Randomisation of the research instrument

Experiment order	Treatment conditions	Code
Part A: DTS, Part B: Ausparts	Conflict/Conflict	DCAC
	Conflict/Random	DCAR
	Conflict/Yes	DCAY
	Conflict/No	DCAN
	Random/Random	DRAR
	Random/Yes	DRAY
	Random/No	DRAN
	Yes/Yes	DYAY
	Yes/No	DYAN
	No/No	DNAN
	Random/Conflict	DRAC
	Yes/Conflict	DYAC
	No/Conflict	DNAC
	Yes/Random	DYAR
	No/Random	DNAR
	No/Yes	DNAY
Part A: Ausparts, Part B: DTS	Conflict/Conflict	ACDC
	Conflict/Random	ACDR
	Conflict/Yes	ACDY
	Conflict/No	ACDN
	Random/Random	ARDR
	Random/Yes	ARDY
	Random/No	ARDN
	Yes/Yes	AYDY
	Yes/No	AYDN
	No/No	ANDN
	Random/Conflict	ARDC
	Yes/Conflict	AYDC
	No/Conflict	ANDC
	Yes/Random	AYDR
	No/Random	ANDR
	No/Yes	ANDY

Four versions of the instrument are included in this appendix for illustrative purposes. In the remaining body of this appendix are copies of the following instruments: DYAY, ANDN, ARDR and DCAC. An additional version of the research instrument is included in the sleeve on the back cover of the thesis, to provide an example of the actual size and form of the printed instrument. No further versions are included since only four are required to

illustrate each possible treatment condition, the remaining 28 versions are simply rearrangements of the presentation order of the four treatment conditions in each of the two experiments.

Comparative analysis of financial reporting judgments

DYAY	

PART A: CASE STUDY - DTS LTD

Brief Instructions:

Please read the scenario described in the following case study. At the end of the case study you will be asked for the decision you would be most likely to make in this situation. There are also two statements to complete by checking the appropriate box, once you have made your decision.

Background

You are the Chief Financial Officer of DTS Limited which is an Australian diversified company having operations in building products, sugar, aluminium and property. The company is listed on the ASX. It is the March 20X0 month end and you are currently looking at the draft financial results for the 9 months to March as well as reviewing the likely position for the full year ending 30 June 20X0. The Financial Controller (FC) has prepared some preliminary reports for this purpose, extracts of which are shown below. The summarised performance and position for full year 20X0 forecast numbers (9 months actual plus three months of forecast) is as follows:

DTS Ltd

Full Year 20X0 Forecast (9 months actual + 3 months forecast)

Income Statement	**$m**
Turnover	3231.8
EBITDA	514.5
EBIT	364.3
Profit after tax	192.0

31 March 20X0
Leverage ratio:

Total Liabilities to Total Assets	62.50%

DTS Ltd
Full Year 20X0 Forecast

(9 months actual + 3 months forecast)

Balance Sheet	**$m**	**$m**
Current Assets	910.4	
Non Current Assets	2202.3	
TOTAL ASSETS		3112.7
Current Liabilities	902.3	
Non Current Liabilities	1043.2	
TOTAL LIABILITIES		1945.5
EQUITY		1167.2

Loan Agreement

DTS Ltd has a 3 year loan agreement with its bank. This is a relatively new relationship with the bank and a competitive rate, favourable to DTS Ltd, was negotiated when the loan was established. The loan agreement includes a maximum leverage covenant of 60%. The covenant defines leverage as total liabilities to total assets. Total liabilities and total assets are measured in accordance with the accounting policies prevailing in each reporting period as disclosed in the audited annual report.

Earnings Forecast

The latest press release issued by DTS Ltd forecast profit after tax for the full year of $182m.

Revaluation

The Non Current Assets include a building that has been held at cost since purchase, and the reports shown above have been prepared on that basis. However, the FC believes that since this asset has held its value, the possibility of adopting the revaluation model (as allowed by AASB 116 Property, Plant and Equipment) should be considered. The FC adds that since the accounting standards allow both the cost and revaluation models, and since any change would be fully disclosed in the reports, the auditors do not have an issue with this decision. The bonuses of senior management will also not be impacted by the effect of this decision because bonuses are based on EBITDA rather than profit after tax.

Based on a preliminary valuation by a reputable valuer, the FC has calculated that if the revaluation policy were to be adopted as at 31 March, the increase to assets would bring the leverage ratio to 56% and the additional depreciation for the remaining months of the financial year would bring the profit after tax to $184m for the full year.

Your Decision

Are you likely to adopt the revaluation model for buildings?

(Please circle one of the **numbers** on the scale below. A value of 1 or 10 indicates a definite response.)

Definitely Not									Definitely Revalue
1	2	3	4	5	6	7	8	9	10

==========

There are no correct or incorrect decisions.

Once you have made your decision on the revaluation policy by circling the appropriate number please do not go back and amend your decision.

For the purposes of our research design, there are different versions of this document. To preserve the scientific validity of this exercise we need to ask two very basic questions. Please complete the two statements below by ticking the appropriate box to indicate the information which applied to you.

1. Before making your decision on the revaluation policy, the leverage ratio was

- ❑ below the level of 65% specified by the covenant in the loan agreement, OR
- ❑ above the level of 60% specified by the covenant in the loan agreement

2. Before making your decision on the revaluation policy, the earnings for the full year were likely to be

- ❑ meeting the forecast of $192m issued in the press release, OR
- ❑ in excess of the forecast of $182m issued in the press release

PART C: SURVEY ON FINANCIAL REPORTING

Please answer all questions in terms of how your firm has operated for the last three years. All responses will be held in strict confidence.

1. Rank the three most important performance measures reported to outsiders. (Enter a "1", "2" and "3"; leave the others blank.)	
Cash flow from operations	
Earnings	
Economic Value Added (EVA)	
Free cash flows	
Pro forma earnings	
Revenues	
Other measure:	

2. How important are the following earnings benchmarks to your company when you report the annual earnings number?					
	Not at all Important				Very Important
	1	2	3	4	5
Previous financial year EPS					
Analyst consensus forecast of EPS for current financial year					
Reporting a profit (i.e., EPS>0)					
Management EPS forecast for the current financial year					

3a. Do these statements describe why your company tries to meet earnings benchmarks?					
	Strongly Disagree				Strongly Agree
Meeting earnings benchmarks helps...	1	2	3	4	5
us build credibility with the capital market					
our employees achieve bonuses					
us avoid violating debt covenants					
us achieve or preserve a desired credit rating					
us maintain or increase our stock price					
the external reputation of our management team					
us convey our future growth prospects to investors					
us maintain or reduce stock price volatility					
us assure customers and suppliers that the business is stable					

Other reasons:	

3b. Do these statements describe why your company tries to avoid missing an earnings benchmark?					
	Strongly Disagree				Strongly Agree
Missing an earnings benchmark hurts because...	1	2	3	4	5
outsiders might think there are previously unknown problems at our firm					
we have to spend a lot of time explaining why we missed, rather than focus on future prospects					
it increases the possibility of lawsuits					
outsiders might think that our firm lacks the flexibility to meet the benchmark					
it leads to increased scrutiny of all aspects of our earnings releases					
it creates uncertainty about our future prospects					

Other reasons:	

4. Do the following factors contribute to your company preferring a smooth earnings path?					
	Strongly Disagree				Strongly Agree
A smooth earnings path is preferred because it...	1	2	3	4	5
is perceived as less risky by investors					
reduces the return that investors demand (i.e. smaller risk premium)					
conveys higher future growth prospects					
assures customers/suppliers that the business is stable					
achieves or preserves a desired credit rating					
promotes a reputation for transparent and accurate reporting					
makes it easier for analysts/investors to predict future earnings					
increases bonus payments					
clarifies true economic performance					

Other reasons:	

5. <u>Hypothetical scenario</u>: Your company's cost of capital is 12%. Near the end of the financial year, a new opportunity arises with a substantial net present value. It offers a 16% internal rate of return and the same risk as the firm. The EPS benchmark is $1.90. (If your firm is followed by analysts this benchmark is their consensus estimate, and if not followed by analysts, it is the earnings benchmark that is most important to your firm.) What is the probability that your company will pursue this project in each of the following scenarios?

Actual EPS if you **do not pursue** the project	Actual EPS if you **pursue** the project	**The probability that the project will be pursued in this scenario is …** (check one box per row)					
		0%	20%	40%	60%	80%	100%
$2.00	$1.90						
$1.90	$1.80						
$1.80	$1.70						
$1.40	$1.30						

PART D: DEMOGRAPHICS

In this final section of the study we are looking for additional data to improve the analysis of the responses.

In each of the following categories, please tick the box that applies to you:

Your Age	Your Senior Financial Management Experience	Your Gender	Your Highest Qualification
❑ ≤ 39	❑ < 4 years	❑ Male	❑ Secondary Education
❑ 40-49	❑ 4-9 years	❑ Female	❑ Bachelor's Degree
❑ 50-59	❑ ≥ 10 years	**Memberships**	❑ MBA
❑ ≥ 60		❑ CA	❑ Non MBA masters
		❑ CPA	❑ > Master degree
		❑ Other	

In each of the following categories, please tick the box that best describes your company:

Industry	Turnover	Ownership & Listing
❑ Consumer Discretionary	❑ < $100 million	❑ Public/ASX only
❑ Consumer Staples	❑ $100 -499 million	❑ Public/Foreign Listed
❑ Energy	❑ $500 -999 million	❑ Public/ASX &Foreign
❑ Financials	❑ $1 -4.9 billion	❑ Private
❑ Healthcare	❑ >$5 billion	
❑ Industrials		**Last year your firm made**
❑ Information Technology		❑ a Profit
❑ Materials		❑ a Loss
❑ Telecommunications		
❑ Utilities		

Thank you for taking the time to participate in this research. Your participation is entirely anonymous and greatly valued. If you would like to receive a copy of the report of the main findings of this study, please enter an email address in the box below.

Please return your completed booklet in the enclosed reply paid envelope to:

Kerrie Woodhouse CA
Department of Accounting and Finance
Faculty of Business and Economics
Monash University
Wellington Road
Clayton
VIC 3800
Email: [redacted]

Thank you for your participation.

Chartered Accountants

NUMBER ONE IN NUMBERS

Comparative analysis of financial reporting judgments

MONASH University

LA TROBE UNIVERSITY

ANDN	

PART A: CASE STUDY – AUSPARTS LTD

Brief Instructions:

Please read the scenario described in the following case study. At the end of the case study you will be asked for the decision you would be most likely to make in this situation. There are also two statements to complete by checking the appropriate box, once you have made your decision.

Background

You are the Chief Financial Officer of Ausparts Ltd which is an Australian automotive component manufacturer. It is the March 20X0 month end and you are currently looking at the draft financial results for the 9 months to March as well as reviewing the likely position for the full year ending 30 June 20X0. Key indicators from the current full year forecast are as follows:

Interest Cover (EBIT/Interest) :	2.6	ROE (Profit After Tax/Equity):	11%

Loan Agreement

Ausparts Ltd has a long term loan agreement with the bank. The loan agreement contains a performance pricing provision under which the interest rate will increase by 2 per cent if the interest cover ratio falls below 2.5. The loan agreement also contains a maximum leverage covenant but Ausparts Ltd leverage ratio is well below the covenanted limit.

Key Customer

Ausparts Ltd.'s revenue comes almost entirely from the sale of a unique rubber component to Carz Ltd, a large car manufacturer. Ausparts Ltd has been a key supplier of this particular part for many years and a mutually beneficial trading relationship has been established. Given the interdependent relationship, Carz Ltd has always asked for biannual financial statements from Ausparts Ltd.

Pricing is reviewed periodically and determined by negotiation between Ausparts Ltd and Carz Ltd. The current pricing structure was recently agreed and will not be renegotiated for several years.

Restructuring Exercise

A restructuring exercise is in the advanced planning stages but has not yet been formally announced. The restructuring plan has been well developed and the only remaining issue is a question of timing. Once the restructure is formally announced, Ausparts Ltd will have to book a provision for restructuring, in accordance with AASB 137 Provisions, Contingent Liabilities and Contingent Assets. This has been confirmed by the auditors. If booked in the current period the impact will be:

Interest Cover (EBIT/Interest) :	2.4	ROE (Profit After Tax/Equity):	9%

Senior management bonuses have already been finalised for the current period and therefore the restructuring decision will have no impact on their bonuses.

Your Decision

What is the likelihood of your announcing the restructuring exercise in this financial year?

(Please circle one of the numbers on the scale below. A value of 1 or 10 indicates a definite response.)

Definitely wait until next year					Definitely announce & restructure this year				
1	2	3	4	5	6	7	8	9	10

==========

There are no correct or incorrect decisions.

Once you have made your decision on the restructuring by circling the appropriate number please do not go back and amend your decision.

For the purposes of our research design, there are different versions of this document. To preserve the scientific validity of this exercise we need to ask two very basic questions. Please complete the two statements below by ticking the appropriate box to indicate the information which applied to you.

1. Undertaking the restructuring would bring the current interest cover to 2.4 which was

- ❑ below the level of 2.5 described in the loan agreement, OR
- ❑ above the level of 2 described in the loan agreement

2. With regard to the key customer, Carz Ltd, the pricing structure was

- ❑ about to be reviewed in a few months time, subject to imminent negotiations, OR
- ❑ recently agreed and not to be renegotiated for several years

PART B: CASE STUDY - DTS LTD

Brief Instructions:

This scenario is independent of the first case study. Please read this second scenario and complete the decision question at the end by circling a number on the scale. There are also two check box style statements to complete once you have made your decision.

Background

You are the Chief Financial Officer of DTS Limited which is an Australian diversified company having operations in building products, sugar, aluminium and property. The company is listed on the ASX. It is the March 20X0 month end and you are currently looking at the draft financial results for the 9 months to March as well as reviewing the likely position for the full year ending 30 June 20X0. The Financial Controller (FC) has prepared some preliminary reports for this purpose, extracts of which are shown below. The summarised performance and position for full year 20X0 forecast numbers (9 months actual plus three months of forecast) is as follows:

DTS Ltd

Full Year 20X0 Forecast (9 months actual + 3 months forecast)

Income Statement	**$m**
Turnover	3231.8
EBITDA	514.5
EBIT	364.3
Profit after tax	192.0

31 March 20X0
Leverage ratio:

Total Liabilities to Total Assets	62.50%

DTS Ltd
Full Year 20X0 Forecast

(9 months actual + 3 months forecast)

Balance Sheet	**$m**	**$m**
Current Assets	910.4	
Non Current Assets	2202.3	
TOTAL ASSETS		3112.7
Current Liabilities	902.3	
Non Current Liabilities	1043.2	
TOTAL LIABILITIES		1945.5
EQUITY		1167.2

Loan Agreement

DTS Ltd has a 3 year loan agreement with its bank. This is a relatively new relationship with the bank and a competitive rate, favourable to DTS Ltd, was negotiated when the loan was established. The loan agreement includes a maximum leverage covenant of 65%. The covenant defines leverage as total liabilities to total assets. Total liabilities and total assets are measured in accordance with the accounting policies prevailing in each reporting period as disclosed in the audited annual report.

Earnings Forecast

The latest press release issued by DTS Ltd forecast profit after tax for the full year of $192m.

Revaluation

The Non Current Assets include a building that has been held at cost since purchase, and the reports shown above have been prepared on that basis. However, the FC believes that since this asset has held its value, the possibility of adopting the revaluation model (as allowed by AASB 116 Property, Plant and Equipment) should be considered. The FC adds that since the accounting standards allow both the cost and revaluation models, and since any change would be fully disclosed in the reports, the auditors do not have an issue with this decision. The bonuses of senior management will also not be impacted by the effect of this decision because bonuses are based on EBITDA rather than profit after tax.

Based on a preliminary valuation by a reputable valuer, the FC has calculated that if the revaluation policy were to be adopted as at 31 March, the increase to assets would bring the leverage ratio to 56% and the additional depreciation for the remaining months of the financial year would bring the profit after tax to $184m for the full year.

Your Decision

Are you likely to adopt the revaluation model for buildings?

(Please circle one of the **numbers** on the scale below. A value of 1 or 10 indicates a definite response.)

Definitely Not									Definitely Revalue
1	2	3	4	5	6	7	8	9	10

==========

There are no correct or incorrect decisions.

Once you have made your decision on the revaluation policy by circling the appropriate number please do not go back and amend your decision.

For the purposes of our research design, there are different versions of this document. To preserve the scientific validity of this exercise we need to ask two very basic questions. Please complete the two statements below by ticking the appropriate box to indicate the information which applied to you.

1. Before making your decision on the revaluation policy, the leverage ratio was

- ❑ below the level of 65% specified by the covenant in the loan agreement, OR
- ❑ above the level of 60% specified by the covenant in the loan agreement

2. Before making your decision on the revaluation policy, the earnings for the full year were likely to be

- ❑ meeting the forecast of $192m issued in the press release, OR
- ❑ in excess of the forecast of $182m issued in the press release

PART C: Survey on Financial Reporting

Please answer all questions in terms of how your firm has operated for the last three years. All responses will be held in strict confidence.

1. Rank the three most important performance measures reported to outsiders. (Enter a "1", "2" and "3"; leave the others blank.)	
Cash flow from operations	
Earnings	
Economic Value Added (EVA)	
Free cash flows	
Pro forma earnings	
Revenues	
Other measure:	

2. How important are the following earnings benchmarks to your company when you report the annual earnings number?					
	Not at all Important				Very Important
	1	2	3	4	5
Previous financial year EPS					
Analyst consensus forecast of EPS for current financial year					
Reporting a profit (i.e., EPS>0)					
Management EPS forecast for the current financial year					

3a. Do these statements describe why your company tries to meet earnings benchmarks?					
	Strongly Disagree				Strongly Agree
Meeting earnings benchmarks helps...	1	2	3	4	5
us build credibility with the capital market					
our employees achieve bonuses					
us avoid violating debt covenants					
us achieve or preserve a desired credit rating					
us maintain or increase our stock price					
the external reputation of our management team					
us convey our future growth prospects to investors					
us maintain or reduce stock price volatility					
us assure customers and suppliers that the business is stable					

Other reasons:	

3b. Do these statements describe why your company tries to avoid missing an earnings benchmark?					
	Strongly Disagree				Strongly Agree
Missing an earnings benchmark hurts because...	1	2	3	4	5
outsiders might think there are previously unknown problems at our firm					
we have to spend a lot of time explaining why we missed, rather than focus on future prospects					
it increases the possibility of lawsuits					
outsiders might think that our firm lacks the flexibility to meet the benchmark					
it leads to increased scrutiny of all aspects of our earnings releases					
it creates uncertainty about our future prospects					

Other reasons:	

4. Do the following factors contribute to your company preferring a smooth earnings path?					
	Strongly Disagree				Strongly Agree
A smooth earnings path is preferred because it...	1	2	3	4	5
is perceived as less risky by investors					
reduces the return that investors demand (i.e. smaller risk premium)					
conveys higher future growth prospects					
assures customers/suppliers that the business is stable					
achieves or preserves a desired credit rating					
promotes a reputation for transparent and accurate reporting					
makes it easier for analysts/investors to predict future earnings					
increases bonus payments					
clarifies true economic performance					

Other reasons:	

5. <u>Hypothetical scenario</u>: Your company's cost of capital is 12%. Near the end of the financial year, a new opportunity arises with a substantial net present value. It offers a 16% internal rate of return and the same risk as the firm. The EPS benchmark is $1.90. (If your firm is followed by analysts this benchmark is their consensus estimate, and if not followed by analysts, it is the earnings benchmark that is most important to your firm.) What is the probability that your company will pursue this project in each of the following scenarios?

Actual EPS if you **do not pursue** the project	Actual EPS if you **pursue** the project	**The probability that the project will be pursued in this scenario is …** (check one box per row)					
		0%	20%	40%	60%	80%	100%
$2.00	$1.90						
$1.90	$1.80						
$1.80	$1.70						
$1.40	$1.30						

PART D: DEMOGRAPHICS

In this final section of the study we are looking for additional data to improve the analysis of the responses.

In each of the following categories, please tick the box that applies to you:

Your Age	Your Senior Financial Management Experience	Your Gender	Your Highest Qualification
❑ ≤ 39 ❑ 40-49 ❑ 50-59 ❑ ≥ 60	❑ < 4 years ❑ 4-9 years ❑ ≥ 10 years	❑ Male ❑ Female **Memberships** ❑ CA ❑ CPA ❑ Other	❑ Secondary Education ❑ Bachelor's Degree ❑ MBA ❑ Non MBA masters ❑ > Master degree

In each of the following categories, please tick the box that best describes your company:

Industry	Turnover	Ownership & Listing
❑ Consumer Discretionary ❑ Consumer Staples ❑ Energy ❑ Financials ❑ Healthcare ❑ Industrials ❑ Information Technology ❑ Materials ❑ Telecommunications ❑ Utilities	❑ < $100 million ❑ $100 -499 million ❑ $500 -999 million ❑ $1 -4.9 billion ❑ >$5 billion	❑ Public/ASX only ❑ Public/Foreign Listed ❑ Public/ASX &Foreign ❑ Private **Last year your firm made** ❑ a Profit ❑ a Loss

Thank you for taking the time to participate in this research. Your participation is entirely anonymous and greatly valued. If you would like to receive a copy of the report of the main findings of this study, please enter an email address in the box below.

Please return your completed booklet in the enclosed reply paid envelope to:

Kerrie Woodhouse CA
Department of Accounting and Finance
Faculty of Business and Economics
Monash University
Wellington Road
Clayton
VIC 3800
Email: [redacted]

Thank you for your participation.

Chartered Accountants

NUMBER ONE IN NUMBERS

Comparative analysis of financial reporting judgments

MONASH University

LA TROBE UNIVERSITY

ARDR	

PART A: CASE STUDY – AUSPARTS LTD

Brief Instructions:

Please read the scenario described in the following case study. At the end of the case study you will be asked for the decision you would be most likely to make in this situation. There are also two statements to complete by checking the appropriate box, once you have made your decision.

Background

You are the Chief Financial Officer of Ausparts Ltd which is an Australian automotive component manufacturer. It is the March 20X0 month end and you are currently looking at the draft financial results for the 9 months to March as well as reviewing the likely position for the full year ending 30 June 20X0. Key indicators from the current full year forecast are as follows:

Interest Cover (EBIT/Interest) :	2.6	ROE (Profit After Tax/Equity):	11%

Loan Agreement

Ausparts Ltd has a long term loan agreement with the bank. The loan agreement contains a performance pricing provision under which the interest rate will increase by 2 per cent if the interest cover ratio falls below 2. The loan agreement also contains a maximum leverage covenant but Ausparts Ltd leverage ratio is well below the covenanted limit.

Key Customer

Ausparts Ltd.'s revenue comes almost entirely from the sale of a unique rubber component to Carz Ltd, a large car manufacturer. Ausparts Ltd has been a key supplier of this particular part for many years and a mutually beneficial trading relationship has been established. Given the interdependent relationship, Carz Ltd has always asked for biannual financial statements from Ausparts Ltd.

Pricing is reviewed periodically and determined by negotiation between Ausparts Ltd and Carz Ltd. The current pricing structure was recently agreed and will not be renegotiated for several years.

Restructuring Exercise

A restructuring exercise is in the advanced planning stages but has not yet been formally announced. The restructuring plan has been well developed and the only remaining issue is a question of timing. Once the restructure is formally announced, Ausparts Ltd will have to book a provision for restructuring, in accordance with AASB 137 Provisions, Contingent Liabilities and Contingent Assets. This has been confirmed by the auditors. If booked in the current period the impact will be:

Interest Cover (EBIT/Interest) :	2.4	ROE (Profit After Tax/Equity):	9%

Senior management bonuses have already been finalised for the current period and therefore the restructuring decision will have no impact on their bonuses.

Your Decision

What is the likelihood of your announcing the restructuring exercise in this financial year?

(Please circle one of the numbers on the scale below. A value of 1 or 10 indicates a definite response.)

Definitely wait until next year					Definitely announce & restructure this year				
1	2	3	4	5	6	7	8	9	10

==========

There are no correct or incorrect decisions.

Once you have made your decision on the restructuring by circling the appropriate number please do not go back and amend your decision.

For the purposes of our research design, there are different versions of this document. To preserve the scientific validity of this exercise we need to ask two very basic questions. Please complete the two statements below by ticking the appropriate box to indicate the information which applied to you.

1. Undertaking the restructuring would bring the current interest cover to 2.4 which was

- ❑ below the level of 2.5 described in the loan agreement, OR
- ❑ above the level of 2 described in the loan agreement

2. With regard to the key customer, Carz Ltd, the pricing structure was

- ❑ about to be reviewed in a few months time, subject to imminent negotiations, OR
- ❑ recently agreed and not to be renegotiated for several years

PART B: CASE STUDY - DTS LTD

Brief Instructions:

This scenario is independent of the first case study. Please read this second scenario and complete the decision question at the end by circling a number on the scale. There are also two check box style statements to complete once you have made your decision.

Background

You are the Chief Financial Officer of DTS Limited which is an Australian diversified company having operations in building products, sugar, aluminium and property. The company is listed on the ASX. It is the March 20X0 month end and you are currently looking at the draft financial results for the 9 months to March as well as reviewing the likely position for the full year ending 30 June 20X0. The Financial Controller (FC) has prepared some preliminary reports for this purpose, extracts of which are shown below. The summarised performance and position for full year 20X0 forecast numbers (9 months actual plus three months of forecast) is as follows:

DTS Ltd

Full Year 20X0 Forecast (9 months actual + 3 months forecast)

Income Statement	**$m**
Turnover	3231.8
EBITDA	514.5
EBIT	364.3
Profit after tax	192.0

31 March 20X0
Leverage ratio:

Total Liabilities to Total Assets	62.50%

DTS Ltd
Full Year 20X0 Forecast

(9 months actual + 3 months forecast)

Balance Sheet	**$m**	**$m**
Current Assets	910.4	
Non Current Assets	2202.3	
TOTAL ASSETS		3112.7
Current Liabilities	902.3	
Non Current Liabilities	1043.2	
TOTAL LIABILITIES		1945.5
EQUITY		1167.2

Loan Agreement

DTS Ltd has a 3 year loan agreement with its bank. This is a relatively new relationship with the bank and a competitive rate, favourable to DTS Ltd, was negotiated when the loan was established. The loan agreement includes a maximum leverage covenant of 65%. The covenant defines leverage as total liabilities to total assets. Total liabilities and total assets are measured in accordance with the accounting policies prevailing in each reporting period as disclosed in the audited annual report.

Earnings Forecast

The latest press release issued by DTS Ltd forecast profit after tax for the full year of $182m.

Revaluation

The Non Current Assets include a building that has been held at cost since purchase, and the reports shown above have been prepared on that basis. However, the FC believes that since this asset has held its value, the possibility of adopting the revaluation model (as allowed by AASB 116 Property, Plant and Equipment) should be considered. The FC adds that since the accounting standards allow both the cost and revaluation models, and since any change would be fully disclosed in the reports, the auditors do not have an issue with this decision. The bonuses of senior management will also not be impacted by the effect of this decision because bonuses are based on EBITDA rather than profit after tax.

Based on a preliminary valuation by a reputable valuer, the FC has calculated that if the revaluation policy were to be adopted as at 31 March, the increase to assets would bring the leverage ratio to 56% and the additional depreciation for the remaining months of the financial year would bring the profit after tax to $184m for the full year.

Your Decision

Are you likely to adopt the revaluation model for buildings?

(Please circle one of the **numbers** on the scale below. A value of 1 or 10 indicates a definite response.)

Definitely Not									Definitely Revalue
1	2	3	4	5	6	7	8	9	10

==========

There are no correct or incorrect decisions.

Once you have made your decision on the revaluation policy by circling the appropriate number please do not go back and amend your decision.

For the purposes of our research design, there are different versions of this document. To preserve the scientific validity of this exercise we need to ask two very basic questions. Please complete the two statements below by ticking the appropriate box to indicate the information which applied to you.

1. Before making your decision on the revaluation policy, the leverage ratio was

- ❑ below the level of 65% specified by the covenant in the loan agreement, OR
- ❑ above the level of 60% specified by the covenant in the loan agreement

2. Before making your decision on the revaluation policy, the earnings for the full year were likely to be

- ❑ meeting the forecast of $192m issued in the press release, OR
- ❑ in excess of the forecast of $182m issued in the press release

PART C: Survey on Financial Reporting

Please answer all questions in terms of how your firm has operated for the last three years. All responses will be held in strict confidence.

1. Rank the three most important performance measures reported to outsiders. (Enter a "1", "2" and "3"; leave the others blank.)	
Cash flow from operations	
Earnings	
Economic Value Added (EVA)	
Free cash flows	
Pro forma earnings	
Revenues	
Other measure:	

2. How important are the following earnings benchmarks to your company when you report the annual earnings number?	Not at all Important				Very Important
	1	2	3	4	5
Previous financial year EPS					
Analyst consensus forecast of EPS for current financial year					
Reporting a profit (i.e., EPS>0)					
Management EPS forecast for the current financial year					

3a. Do these statements describe why your company tries to meet earnings benchmarks?	Strongly Disagree				Strongly Agree
Meeting earnings benchmarks helps...	1	2	3	4	5
us build credibility with the capital market					
our employees achieve bonuses					
us avoid violating debt covenants					
us achieve or preserve a desired credit rating					
us maintain or increase our stock price					
the external reputation of our management team					
us convey our future growth prospects to investors					
us maintain or reduce stock price volatility					
us assure customers and suppliers that the business is stable					

Other reasons:	

3b. Do these statements describe why your company tries to avoid missing an earnings benchmark?					
	Strongly Disagree				Strongly Agree
Missing an earnings benchmark hurts because...	1	2	3	4	5
outsiders might think there are previously unknown problems at our firm					
we have to spend a lot of time explaining why we missed, rather than focus on future prospects					
it increases the possibility of lawsuits					
outsiders might think that our firm lacks the flexibility to meet the benchmark					
it leads to increased scrutiny of all aspects of our earnings releases					
it creates uncertainty about our future prospects					

Other reasons:	

4. Do the following factors contribute to your company preferring a smooth earnings path?					
	Strongly Disagree				Strongly Agree
A smooth earnings path is preferred because it...	1	2	3	4	5
is perceived as less risky by investors					
reduces the return that investors demand (i.e. smaller risk premium)					
conveys higher future growth prospects					
assures customers/suppliers that the business is stable					
achieves or preserves a desired credit rating					
promotes a reputation for transparent and accurate reporting					
makes it easier for analysts/investors to predict future earnings					
increases bonus payments					
clarifies true economic performance					

Other reasons:	

5. <u>Hypothetical scenario</u>: Your company's cost of capital is 12%. Near the end of the financial year, a new opportunity arises with a substantial net present value. It offers a 16% internal rate of return and the same risk as the firm. The EPS benchmark is $1.90. (If your firm is followed by analysts this benchmark is their consensus estimate, and if not followed by analysts, it is the earnings benchmark that is most important to your firm.) What is the probability that your company will pursue this project in each of the following scenarios?

Actual EPS if you **do not pursue** the project	Actual EPS if you **pursue** the project	**The probability that the project will be pursued in this scenario is …** (check one box per row)					
		0%	20%	40%	60%	80%	100%
$2.00	$1.90						
$1.90	$1.80						
$1.80	$1.70						
$1.40	$1.30						

PART D: DEMOGRAPHICS

In this final section of the study we are looking for additional data to improve the analysis of the responses.

In each of the following categories, please tick the box that applies to you:

Your Age	Your Senior Financial Management Experience	Your Gender	Your Highest Qualification
❑ ≤ 39 ❑ 40-49 ❑ 50-59 ❑ ≥ 60	❑ < 4 years ❑ 4-9 years ❑ ≥ 10 years	❑ Male ❑ Female **Memberships** ❑ CA ❑ CPA ❑ Other	❑ Secondary Education ❑ Bachelor's Degree ❑ MBA ❑ Non MBA masters ❑ > Master degree

In each of the following categories, please tick the box that best describes your company:

Industry	Turnover	Ownership & Listing
❑ Consumer Discretionary ❑ Consumer Staples ❑ Energy ❑ Financials ❑ Healthcare ❑ Industrials ❑ Information Technology ❑ Materials ❑ Telecommunications ❑ Utilities	❑ < $100 million ❑ $100 -499 million ❑ $500 -999 million ❑ $1 -4.9 billion ❑ >$5 billion	❑ Public/ASX only ❑ Public/Foreign Listed ❑ Public/ASX &Foreign ❑ Private **Last year your firm made** ❑ a Profit ❑ a Loss

Thank you for taking the time to participate in this research. Your participation is entirely anonymous and greatly valued. If you would like to receive a copy of the report of the main findings of this study, please enter an email address in the box below.

Please return your completed booklet in the enclosed reply paid envelope to:

Kerrie Woodhouse CA
Department of Accounting and Finance
Faculty of Business and Economics
Monash University
Wellington Road
Clayton
VIC 3800
Email: [redacted]

Thank you for your participation.

Chartered Accountants

NUMBER ONE IN NUMBERS

Comparative analysis of financial reporting judgments

MONASH University

LA TROBE UNIVERSITY

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PART A: CASE STUDY - DTS LTD

Brief Instructions:

Please read the scenario described in the following case study. At the end of the case study you will be asked for the decision you would be most likely to make in this situation. There are also two statements to complete by checking the appropriate box, once you have made your decision.

Background

You are the Chief Financial Officer of DTS Limited which is an Australian diversified company having operations in building products, sugar, aluminium and property. The company is listed on the ASX. It is the March 20X0 month end and you are currently looking at the draft financial results for the 9 months to March as well as reviewing the likely position for the full year ending 30 June 20X0. The Financial Controller (FC) has prepared some preliminary reports for this purpose, extracts of which are shown below. The summarised performance and position for full year 20X0 forecast numbers (9 months actual plus three months of forecast) is as follows:

DTS Ltd

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Income Statement	**$m**
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31 March 20X0
Leverage ratio:

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Full Year 20X0 Forecast

(9 months actual + 3 months forecast)

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Current Assets	910.4	
Non Current Assets	2202.3	
TOTAL ASSETS		3112.7
Current Liabilities	902.3	
Non Current Liabilities	1043.2	
TOTAL LIABILITIES		1945.5
EQUITY		1167.2

Loan Agreement

DTS Ltd has a 3 year loan agreement with its bank. This is a relatively new relationship with the bank and a competitive rate, favourable to DTS Ltd, was negotiated when the loan was established. The loan agreement includes a maximum leverage covenant of 60%. The covenant defines leverage as total liabilities to total assets. Total liabilities and total assets are measured in accordance with the accounting policies prevailing in each reporting period as disclosed in the audited annual report.

PART A: CASE STUDY - DTS LTD

Brief Instructions:

Please read the scenario described in the following case study. At the end of the case study you will be asked for the decision you would be most likely to make in this situation. There are also two statements to complete by checking the appropriate box, once you have made your decision.

Background

You are the Chief Financial Officer of DTS Limited which is an Australian diversified company having operations in building products, sugar, aluminium and property. The company is listed on the ASX. It is the March 20X0 month end and you are currently looking at the draft financial results for the 9 months to March as well as reviewing the likely position for the full year ending 30 June 20X0. The Financial Controller (FC) has prepared some preliminary reports for this purpose, extracts of which are shown below. The summarised performance and position for full year 20X0 forecast numbers (9 months actual plus three months of forecast) is as follows:

DTS Ltd

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31 March 20X0
Leverage ratio:

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DTS Ltd
Full Year 20X0 Forecast

(9 months actual + 3 months forecast)

Balance Sheet	**$m**	**$m**
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Loan Agreement

DTS Ltd has a 3 year loan agreement with its bank. This is a relatively new relationship with the bank and a competitive rate, favourable to DTS Ltd, was negotiated when the loan was established. The loan agreement includes a maximum leverage covenant of 60%. The covenant defines leverage as total liabilities to total assets. Total liabilities and total assets are measured in accordance with the accounting policies prevailing in each reporting period as disclosed in the audited annual report.

Earnings Forecast

The latest press release issued by DTS Ltd forecast profit after tax for the full year of $192m.

Revaluation

The Non Current Assets include a building that has been held at cost since purchase, and the reports shown above have been prepared on that basis. However, the FC believes that since this asset has held its value, the possibility of adopting the revaluation model (as allowed by AASB 116 Property, Plant and Equipment) should be considered. The FC adds that since the accounting standards allow both the cost and revaluation models, and since any change would be fully disclosed in the reports, the auditors do not have an issue with this decision. The bonuses of senior management will also not be impacted by the effect of this decision because bonuses are based on EBITDA rather than profit after tax.

Based on a preliminary valuation by a reputable valuer, the FC has calculated that if the revaluation policy were to be adopted as at 31 March, the increase to assets would bring the leverage ratio to 56% and the additional depreciation for the remaining months of the financial year would bring the profit after tax to $184m for the full year.

Your Decision

Are you likely to adopt the revaluation model for buildings?

(Please circle one of the **numbers** on the scale below. A value of 1 or 10 indicates a definite response.)

Definitely Not									Definitely Revalue
1	2	3	4	5	6	7	8	9	10

==========

There are no correct or incorrect decisions.

Once you have made your decision on the revaluation policy by circling the appropriate number please do not go back and amend your decision.

For the purposes of our research design, there are different versions of this document. To preserve the scientific validity of this exercise we need to ask two very basic questions. Please complete the two statements below by ticking the appropriate box to indicate the information which applied to you.

1. Before making your decision on the revaluation policy, the leverage ratio was

- ❑ below the level of 65% specified by the covenant in the loan agreement, OR
- ❑ above the level of 60% specified by the covenant in the loan agreement

2. Before making your decision on the revaluation policy, the earnings for the full year were likely to be

- ❑ meeting the forecast of $192m issued in the press release, OR
- ❑ in excess of the forecast of $182m issued in the press release

PART B: CASE STUDY – AUSPARTS LTD

Brief Instructions:

This scenario is independent of the first case study. Please read this second scenario and complete the decision question at the end by circling a number on the scale. There are also two check box style statements to complete once you have made your decision.

Background

You are the Chief Financial Officer of Ausparts Ltd which is an Australian automotive component manufacturer. It is the March 20X0 month end and you are currently looking at the draft financial results for the 9 months to March as well as reviewing the likely position for the full year ending 30 June 20X0. Key indicators from the current full year forecast are as follows:

Interest Cover (EBIT/Interest) :	2.6	ROE (Profit After Tax/Equity):	11%

Loan Agreement

Ausparts Ltd has a long term loan agreement with the bank. The loan agreement contains a performance pricing provision under which the interest rate will increase by 2 per cent if the interest cover ratio falls below 2.5. The loan agreement also contains a maximum leverage covenant but Ausparts Ltd leverage ratio is well below the covenanted limit.

Key Customer

Ausparts Ltd.'s revenue comes almost entirely from the sale of a unique rubber component to Carz Ltd, a large car manufacturer. Ausparts Ltd has been a key supplier of this particular part for many years and a mutually beneficial trading relationship has been established. Given the interdependent relationship, Carz Ltd has always asked for biannual financial statements from Ausparts Ltd.

Pricing is reviewed periodically and determined by negotiation between Ausparts Ltd and Carz Ltd. The next price review will be in a few months' time. Given the difficulties that the automotive industry has been experiencing, determining the appropriate pricing structure is pivotal to both firms. The ROE in the automotive component industry currently ranges between 9 and 12%. Carz Limited have already communicated their concern that they believe Ausparts Limited's current prices may be too high.

Restructuring Exercise

A restructuring exercise is in the advanced planning stages but has not yet been formally announced. The restructuring plan has been well developed and the only remaining issue is a question of timing. Once the restructure is formally announced, Ausparts Ltd will have to book a provision for restructuring, in accordance with AASB 137 Provisions, Contingent Liabilities and Contingent Assets. This has been confirmed by the auditors. If booked in the current period the impact will be:

Interest Cover (EBIT/Interest) :	2.4	ROE (Profit After Tax/Equity):	9%

Senior management bonuses have already been finalised for the current period and therefore the restructuring decision will have no impact on their bonuses.

Your Decision

What is the likelihood of your announcing the restructuring exercise in this financial year?

(Please circle one of the numbers on the scale below. A value of 1 or 10 indicates a definite response.)

Definitely wait until next year					Definitely announce & restructure this year				
1	2	3	4	5	6	7	8	9	10

==========

There are no correct or incorrect decisions.

Once you have made your decision on the restructuring by circling the appropriate number please do not go back and amend your decision.

For the purposes of our research design, there are different versions of this document. To preserve the scientific validity of this exercise we need to ask two very basic questions. Please complete the two statements below by ticking the appropriate box to indicate the information which applied to you.

1. Undertaking the restructuring would bring the current interest cover to 2.4 which was

- ❑ below the level of 2.5 described in the loan agreement, OR
- ❑ above the level of 2 described in the loan agreement

2. With regard to the key customer, Carz Ltd, the pricing structure was

- ❑ about to be reviewed in a few months time, subject to imminent negotiations, OR
- ❑ recently agreed and not to be renegotiated for several years

PART C: SURVEY ON FINANCIAL REPORTING

Please answer all questions in terms of how your firm has operated for the last three years. All responses will be held in strict confidence.

1. Rank the three most important performance measures reported to outsiders. (Enter a "1", "2" and "3"; leave the others blank.)	
Cash flow from operations	
Earnings	
Economic Value Added (EVA)	
Free cash flows	
Pro forma earnings	
Revenues	
Other measure:	

2. How important are the following earnings benchmarks to your company when you report the annual earnings number?	Not at all Important				Very Important
	1	2	3	4	5
Previous financial year EPS					
Analyst consensus forecast of EPS for current financial year					
Reporting a profit (i.e., EPS>0)					
Management EPS forecast for the current financial year					

3a. Do these statements describe why your company tries to meet earnings benchmarks?	Strongly Disagree				Strongly Agree
Meeting earnings benchmarks helps...	1	2	3	4	5
us build credibility with the capital market					
our employees achieve bonuses					
us avoid violating debt covenants					
us achieve or preserve a desired credit rating					
us maintain or increase our stock price					
the external reputation of our management team					
us convey our future growth prospects to investors					
us maintain or reduce stock price volatility					
us assure customers and suppliers that the business is stable					

Other reasons:	

3b. Do these statements describe why your company tries to avoid missing an earnings benchmark?					
	Strongly Disagree				Strongly Agree
Missing an earnings benchmark hurts because...	1	2	3	4	5
outsiders might think there are previously unknown problems at our firm					
we have to spend a lot of time explaining why we missed, rather than focus on future prospects					
it increases the possibility of lawsuits					
outsiders might think that our firm lacks the flexibility to meet the benchmark					
it leads to increased scrutiny of all aspects of our earnings releases					
it creates uncertainty about our future prospects					

Other reasons:	

4. Do the following factors contribute to your company preferring a smooth earnings path?					
	Strongly Disagree				Strongly Agree
A smooth earnings path is preferred because it...	1	2	3	4	5
is perceived as less risky by investors					
reduces the return that investors demand (i.e. smaller risk premium)					
conveys higher future growth prospects					
assures customers/suppliers that the business is stable					
achieves or preserves a desired credit rating					
promotes a reputation for transparent and accurate reporting					
makes it easier for analysts/investors to predict future earnings					
increases bonus payments					
clarifies true economic performance					

Other reasons:	

5. <u>Hypothetical scenario</u>: Your company's cost of capital is 12%. Near the end of the financial year, a new opportunity arises with a substantial net present value. It offers a 16% internal rate of return and the same risk as the firm. The EPS benchmark is $1.90. (If your firm is followed by analysts this benchmark is their consensus estimate, and if not followed by analysts, it is the earnings benchmark that is most important to your firm.) What is the probability that your company will pursue this project in each of the following scenarios?

Actual EPS if you **do not pursue** the project	Actual EPS if you **pursue** the project	**The probability that the project will be pursued in this scenario is …** (check one box per row)					
		0%	20%	40%	60%	80%	100%
$2.00	$1.90						
$1.90	$1.80						
$1.80	$1.70						
$1.40	$1.30						

PART D: DEMOGRAPHICS

In this final section of the study we are looking for additional data to improve the analysis of the responses.

In each of the following categories, please tick the box that applies to you:

Your Age	Your Senior Financial Management Experience	Your Gender	Your Highest Qualification
❑ ≤ 39 ❑ 40-49 ❑ 50-59 ❑ ≥ 60	❑ < 4 years ❑ 4-9 years ❑ ≥ 10 years	❑ Male ❑ Female **Memberships** ❑ CA ❑ CPA ❑ Other	❑ Secondary Education ❑ Bachelor's Degree ❑ MBA ❑ Non MBA masters ❑ > Master degree

In each of the following categories, please tick the box that best describes your company:

Industry	Turnover	Ownership & Listing
❑ Consumer Discretionary ❑ Consumer Staples ❑ Energy ❑ Financials ❑ Healthcare ❑ Industrials ❑ Information Technology ❑ Materials ❑ Telecommunications ❑ Utilities	❑ < $100 million ❑ $100 -499 million ❑ $500 -999 million ❑ $1 -4.9 billion ❑ >$5 billion	❑ Public/ASX only ❑ Public/Foreign Listed ❑ Public/ASX &Foreign ❑ Private **Last year your firm made** ❑ a Profit ❑ a Loss

Thank you for taking the time to participate in this research. Your participation is entirely anonymous and greatly valued. If you would like to receive a copy of the report of the main findings of this study, please enter an email address in the box below.

Please return your completed booklet in the enclosed reply paid envelope to:

Kerrie Woodhouse CA
Department of Accounting and Finance
Faculty of Business and Economics
Monash University
Wellington Road
Clayton
VIC 3800
Email: [redacted]

Thank you for your participation.

Appendix 2: Semi Structured Exploratory Interview Questions

Objectives of financial reporting – seeking to satisfy share market:

Which earnings benchmarks (such as prior year earnings, management forecasts and analyst forecasts) do you consider to be the most market sensitive?

Under what circumstances would you be prepared to miss an earnings benchmark that the market is expecting?

Is there a problem with beating any of these benchmarks?

How often and in what circumstances do you find that you are needing/wanting to make earnings-decreasing accounting choices?

How important is it to report 'smooth' earnings?

Objectives of financial reporting – seeking to satisfy lenders:

How important are bank debt covenants in making financial reporting decisions/accounting choices within GAAP?

What makes it easier to negotiate a waiver?

- syndicated debt vs. single lender
- new relationship with the bank vs. established relationship
- history of breaches or a potential first-time breach

Objectives of financial reporting – seeking to satisfy third parties, such as customers suppliers and employees:

Do you believe that your financial reports are an important source of information to third parties such as customers, suppliers and employees?

Can you think of situations in which it was preferable to show the firms performance in a less favourable light because of a third party (customer, supplier, labour union)?

Can you think of situations in which it was important to present the firm's performance in the best possible light because of a third party (customer, supplier, labour union)?

Accounting Choices and Conflicts

When making within GAAP choices, how concerned are you about the impact in the current year compared to the impact in future years?

In which areas of your financial reports do you find you are required to, or are able to utilize the most judgment and discretion?

How often do you find yourself having to try to trade-off meeting different objectives in making accounting choices? Do you have any examples of this?

Appendix 3: Ethics Clearance Approval – Exploratory Interviews

MONASH University

Monash University Human Research Ethics Committee (MUHREC)
Research Office

Human Ethics Certificate of Approval

Date:	**9 September 2009**
Project Number:	**CF09/1893 – 2009001077**
Project Title:	**Accounting choice in the presence of conflicting incentives - Exploratory Interviews**
Chief Investigator:	**Associate Professor Paul Mather**
Approved:	**From: 9 September 2009 To: 9 September 2014**

Terms of approval

1. The Chief investigator is responsible for ensuring that permission letters are obtained, if relevant, and a copy forwarded to MUHREC before any data collection can occur at the specified organisation. **Failure to provide permission letters to MUHREC before data collection commences is in breach of the National Statement on Ethical Conduct in Human Research and the Australian Code for the Responsible Conduct of Research**.
2. Approval is only valid whilst you hold a position at Monash University.
3. It is the responsibility of the Chief Investigator to ensure that all investigators are aware of the terms of approval and to ensure the project is conducted as approved by MUHREC.
4. You should notify MUHREC immediately of any serious or unexpected adverse effects on participants or unforeseen events affecting the ethical acceptability of the project.
5. The Explanatory Statement must be on Monash University letterhead and the Monash University complaints clause must contain your project number.
6. **Amendments to the approved project (including changes in personnel):** Requires the submission of a Request for Amendment form to MUHREC and must not begin without written approval from MUHREC. Substantial variations may require a new application.
7. **Future correspondence:** Please quote the project number and project title above in any further correspondence.
8. **Annual reports:** Continued approval of this project is dependent on the submission of an Annual Report. This is determined by the date of your letter of approval.
9. **Final report:** A Final Report should be provided at the conclusion of the project. MUHREC should be notified if the project is discontinued before the expected date of completion.
10. **Monitoring:** Projects may be subject to an audit or any other form of monitoring by MUHREC at any time.
11. **Retention and storage of data:** The Chief Investigator is responsible for the storage and retention of original data pertaining to a project for a minimum period of five years.

[redacted]

Professor Ben Canny
Chair, MUHREC

cc: Mrs Kerri Woodhouse

Postal – Monash University, Vic 3800, Australia
Building 3E, Room 111, Clayton Campus, Wellington Road, Clayton
Telephone +61 3 9905 5490 Facsimile +61 3 9905 3831
Email muhrec@adm.monash.edu.au www.monash.edu/research/ethics/human/index/html
ABN 12 377 614 012 CRICOS Provider #00008C

Appendix 4: Ethics Clearance Approval – Experiments

MONASH University

Monash University Human Research Ethics Committee (MUHREC)
Research Office

Human Ethics Certificate of Approval

Date:	**14 October 2010**
Project Number:	**CF10/2317 - 2010001319**
Project Title:	**Financial reporting judgements**
Chief Investigator:	**Prof Axel Schulz**
Approved:	**From: 14 October 2010 To: 14 October 2015**

Terms of approval

1. The Chief investigator is responsible for ensuring that permission letters are obtained, if relevant, and a copy forwarded to MUHREC before any data collection can occur at the specified organisation. **Failure to provide permission letters to MUHREC before data collection commences is in breach of the National Statement on Ethical Conduct in Human Research and the Australian Code for the Responsible Conduct of Research**.
2. Approval is only valid whilst you hold a position at Monash University.
3. It is the responsibility of the Chief Investigator to ensure that all investigators are aware of the terms of approval and to ensure the project is conducted as approved by MUHREC.
4. You should notify MUHREC immediately of any serious or unexpected adverse effects on participants or unforeseen events affecting the ethical acceptability of the project.
5. The Explanatory Statement must be on Monash University letterhead and the Monash University complaints clause must contain your project number.
6. **Amendments to the approved project (including changes in personnel):** Requires the submission of a Request for Amendment form to MUHREC and must not begin without written approval from MUHREC. Substantial variations may require a new application.
7. **Future correspondence:** Please quote the project number and project title above in any further correspondence.
8. **Annual reports:** Continued approval of this project is dependent on the submission of an Annual Report. This is determined by the date of your letter of approval.
9. **Final report:** A Final Report should be provided at the conclusion of the project. MUHREC should be notified if the project is discontinued before the expected date of completion.
10. **Monitoring:** Projects may be subject to an audit or any other form of monitoring by MUHREC at any time.
11. **Retention and storage of data:** The Chief Investigator is responsible for the storage and retention of original data pertaining to a project for a minimum period of five years.

[redacted]

Professor Ben Canny
Chair, MUHREC

cc: Mrs Kerrie Woodhouse, Prof Paul Mather

Postal – Monash University, Vic 3800, Australia
Building 3E, Room 111, Clayton Campus, Wellington Road, Clayton
Telephone +61 3 9905 5490 Facsimile +61 3 9905 3831
Email muhrec@adm.monash.edu.au www.monash.edu/research/ethics/human/index/html
ABN 12 377 614 012 CRICOS Provider #00008C

Appendix 5: Cover Letter

Label Name

Address

4 March 2011

Dear Letter Name

Comparative Analysis of Financial Reporting Judgments

I am writing to invite you to participate in a research study that I am conducting from Monash University, with the support of the Institute of Chartered Accountants in Australia.

The study explores the financial reporting judgements of the senior financial executives of Australian companies. As a key member of this demographic, I would value your participation, which involves completing the attached booklet and should take approximately 15 minutes. All questions are posed in a check box or 'circle the appropriate answer' style. Further details about the study are contained in the enclosed explanatory statement.

A report summarising the decisions and opinions of your peer group will be available to participants at the conclusion of the study. Since all responses are anonymous, please be sure to provide an email address in the box at the end of the booklet, if you would like to be provided with a copy of this report.

I appreciate the constraints on your time and express my gratitude in advance, for taking a few moments to participate in this research.

Yours sincerely

Kerrie Woodhouse

Encl: Booklet with reply paid envelope
Explanatory Statement

Appendix 6: Explanatory Statement

MONASH University

7 March 2011

Explanatory Statement – Senior Financial Executives

Comparative Analysis of Financial Reporting Judgments

This information sheet is for you to keep.

My name is Kerrie Woodhouse and I am conducting a research project in the Department of Accounting and Finance at Monash University. I am working with Professor Axel Schulz of Monash University and Professor Paul Mather of Latrobe University. We plan to submit the findings of this study for academic and professional publication.

The aim of this study is to investigate the financial reporting judgments of senior financial executives, and to inform theory with practical insights. The findings of this study may therefore have implications for users of financial reports as well as standard setters. Accordingly, we are contacting financial senior financial executives who may be able to assist in our research. You are part of a sample of key financial executives of Australian listed companies that we are approaching to participate in this study. Your contact details were obtained from the Australian Stock Exchange and other similar public information. Being in this study is voluntary and you are under no obligation to consent to participation.

Your participation involves the completion of the attached document which will take approximately 15 minutes to complete. All questions are posed in a check box or 'circle the appropriate answer' style. The document contains two small case studies which are unrelated and concludes with a series of short questions which explore the opinions of financial executives on reporting issues. An aggregated report of the anonymous responses of your peer group will be available to respondents, at the conclusion of the study.

Your participation in this study is entirely anonymous as no information is being collected that could identify you or your firm. The responses to all questions will be aggregated and any inclusion of this information in the reports and publications will be on a collective rather than an individual basis. All information gathered is considered strictly confidential. Storage of the data collected will adhere to the University regulations and kept on University premises in a locked cupboard/filing cabinet for 5 years.

Department of Accounting and Finance
Faculty of Business and Economics
Postal - Monash Univesity, VIC 3800, Australia
Building 11E, Clayton Campus, Wellington Road, Clayton
Telephone +61 3 9905 2389 Facsimile +61 3 9905 5475
www.buseco.monash.edu.au/depts/aaf/index.php
ABN 12 377 614 012 CRICOS Provider #00008C

MONASH University

A report on the aggregate responses of will be made available to all respondents. To request a copy of this report, please contact Kerrie Woodhouse by email [redacted] or telephone [redacted].

If you would like to contact the **researchers** about any aspect of this study, please contact the Chief Investigator:	If you have a **complaint** concerning the manner in which this research **CF09/1893: 2009001077** is being conducted, please contact:
Professor Axel Schulz **Department of Accounting and Finance** **Faculty of Business and Economics** **Building 11** **Monash University** **VIC 3800** **Tel** +[redacted] **Fax** +[redacted] **Email:** [redacted]	Executive Officer, Human Research Ethics Monash University Human Research Ethics Committee (MUHREC) Building 3e Room 111 Research Office Monash University VIC 3800 Tel: +61 3 9905 2052 Fax: +61 3 9905 3831 Email: muhrec@monash.edu

Thank you

Kerrie Woodhouse

Department of Accounting and Finance
Faculty of Business and Economics
Postal - Monash Univesity, VIC 3800, Australia
Building 11E, Clayton Campus, Wellington Road, Clayton
Telephone +61 3 9905 2389 Facsimile +61 3 9905 5475
www.buseco.monash.edu.au/depts/aaf/index.php
ABN 12 377 614 012 CRICOS Provider #00008C

Appendix 7: Reminder Letter

Label Name
Address

4 April 2011

Dear Letter Name

Comparative Analysis of Financial Reporting Judgments – A Reminder

About a month ago, I invited you to participate in a research study that I am conducting from Monash University, with the support of the Institute of Chartered Accountants in Australia.

I appreciate that you may not have had the opportunity to complete the questionnaire yet, but I would be very grateful if you could spare the time to return the completed document by 30 April 2011. I am sending you a second copy of the document in case the previous one was misplaced. If you have already returned the survey, please accept my sincere thanks and ignore this letter.

A report summarising the decisions and opinions of your peer group will be available to participants at the conclusion of the study. Since all responses are anonymous, please be sure to provide an email address in the box at the end of the booklet, if you would like to be provided with a copy of this report.

I appreciate the constraints on your time and express my gratitude in advance, for taking a few moments to contribute your views.

Yours sincerely

Kerrie Woodhouse

Encl: Booklet with reply paid envelope
Explanatory Statement

Appendix 8: Pilot Survey Results

The responses of the pilot subjects to the survey questions are tabulated below. In a few isolated cases, some of the pilot subjects omitted parts of the questions. Questions 1 and 5 in the table below show that less than 15 subjects responded to the question, but the remaining questions report the full sample of 15.

Table A: Responses to Question 1 of Part C of the Experimental Instrument

1. Rank the three most important performance measures reported to outsiders. (Enter a "1", "2" and "3"; leave the others blank.)

Rank the three most important performance measures reported to outsiders	**Ranked #1**		**Ranked #2**		**Ranked #3**	
	Frequency	**Percentage**	**Frequency**	**Percentage**	**Frequency**	**Percentage**
Cash flow from operations	2	22%	4	44%	3	33%
Earnings	9	75%	3	25%	0	0%
Economic Value Added (EVA)	0	0%	0	0%	0	0%
Free cash flows	2	50%	2	50%	0	0%
Pro forma earnings	0	0%	1	50%	1	50%
Revenues	1	8%	3	23%	9	69%
Other measure:	0	0%	0	0%	0	0%

Table B: Responses to Question 2 of Part C of the Experimental Instrument

2. How important are the following earnings benchmarks to your company when you report the annual earnings number?

	Important or Very important		Neutral		Not important or Not at All Important		Total	
	Freq.	Percent.	Freq.	Percent.	Freq.	Percent.	Freq.	Percent.
Previous financial year EPS	11	73%	4	27%	0	0%	15	100%
Analyst consensus forecast of EPS for the current year	12	80%	2	13%	1	7%	15	100%
Reporting a profit(i.e. EPS>0)	12	80%	2	13%	1	7%	15	100%
Management EPS for the current financial year	12	80%	3	20%	0	0%	15	100%

Table C: Responses to Question 3a of Part C of the Experimental Instrument

3a. Do these statements describe why your company tries to meet earnings benchmarks?

Meeting earnings benchmarks helps…	Agree or Strongly Agree		Neutral		Disagree or Strongly Disagree		Total	
	Freq.	Percent.	Freq.	Percent.	Freq.	Percent.	Freq.	Percent.
us build credibility with the capital market	14	93%	1	7%	0	0%	15	100%
our employees achieve bonuses	6	40%	8	53%	1	7%	15	100%
us avoid violating debt covenants	8	53%	5	33%	2	13%	15	100%
us achieve or preserve a desired credit rating	10	67%	3	20%	2	13%	15	100%
us maintain or increase our stock price	11	73%	4	27%	0	0%	15	100%
the external reputation of our management team	12	80%	3	20%	0	0%	15	100%
us convey our future growth prospects to investors	11	73%	3	20%	1	7%	15	100%
us maintain or reduce stock price volatility	8	53%	5	33%	2	13%	15	100%
us assure customers and suppliers the business is stable	9	60%	5	33%	1	7%	15	100%

Table D: Responses to Question 3b of Part C of the Experimental Instrument

3b. Do these statements describe why your company tries to avoid missing an earnings benchmark?

Missing an earnings benchmark hurts because...	Agree or Strongly Agree		Neutral		Disagree or Strongly Disagree		Total	
	Freq.	Percent.	Freq.	Percent.	Freq.	Percent.	Freq.	Percent.
outsiders might think there are previously unknown problems at our firm	9	60%	5	33%	1	7%	15	100%
we have to spend a lot of time explaining why we missed, rather than focus on future prospects	8	53%	5	33%	2	13%	15	100%
it increases the possibility of lawsuits	1	7%	2	13%	12	80%	15	100%
outsiders might think that our firm lacks the flexibility to meet the benchmark	5	33%	4	27%	6	40%	15	100%
it leads to increased scrutiny of all aspects of our earnings releases	6	40%	6	40%	3	20%	15	100%
it creates uncertainty about our future prospects	13	87%	1	7%	1	7%	15	100%

Table E: Responses to Question 4 of Part C of the Experimental Instrument

4. Do the following factors contribute to your company preferring a smooth earnings path? (If you do not prefer a smooth earnings path, please proceed directly to Question. 5)

A smooth earnings path is preferred because it...	Agree or Strongly Agree		Neutral		Disagree or Strongly Disagree		Total	
	Freq.	Percent.	Freq.	Percent.	Freq.	Percent.	Freq.	Percent.
is perceived as less risky by investors	14	93%	1	7%	0	0%	15	100%
reduces the return that investors demand (i.e. smaller risk premium)	5	33%	7	47%	3	20%	15	100%
conveys higher future growth prospects	6	40%	5	33%	4	27%	15	100%
assures customers/suppliers that the business is stable	9	60%	6	40%	0	0%	15	100%
achieves or preserves a desired credit rating	8	53%	7	47%	0	0%	15	100%
promotes a reputation for transparent and accurate reporting	8	53%	4	27%	3	20%	15	100%
makes it easier for analysts/investors to predict future earnings	10	67%	3	20%	2	13%	15	100%
increases bonus payments	2	13%	9	60%	4	27%	15	100%
clarifies true economic performance	2	13%	8	53%	5	33%	15	100%

Table E: Responses to Question 5 of Part C of the Experimental Instrument

5. Hypothetical scenario: Your company's cost of capital is 12%. Near the end of the financial year, a new opportunity arises that offers a 16% internal rate of return and the same risk as the firm. The EPS benchmark that is relevant to your firm (e.g. your forecast or the analyst consensus estimate) is $1.90. What is the probability that your company will pursue this project in each of the following scenarios?

Probability of accepting a valuable project	**0%**		**20%**		**40%**		**60%**		**80%**		**100%**		**Total**	
	Freq.	**Percent.**	**Freq.**	**Percent.**	**Freq.**	**Percent.**	**Freq.**	**Percent.**	**Freq.**	**Percent.**	**Freq.**	**Percent.**	**Freq.**	**Percent.**
If you take the project you will exactly hit consensus estimate	1	7%	2	14%	2	14%	1	7%	3	21%	5	36%	14	100%
If you take the project you will miss consensus earnings by $0.10	2	14%	1	7%	2	14%	6	43%	1	7%	2	14%	14	100%
If you take the project you will miss consensus earnings by $0.20	2	14%	4	29%	2	14%	2	14%	2	14%	2	14%	14	100%
If you take the project you will miss consensus earnings by $0.50	3	23%	2	15%	1	8%	3	23%	3	23%	1	8%	13	100%

Appendix 9: ANOVA tables from the reduced sample (omitting unsuccessful manipulations) Experiment One

In experiment one, the manipulated variables are the Debt Covenant (Breach) and the earnings forecast (Forecast). Subjects were asked to complete manipulation check questions at the conclusion of the task in respect of each of these variables. Below is the ANOVA table based on only those respondents that provided the appropriate answers to these questions. The reduced sample size is based on a sample of 106 respondents as opposed to the 114 respondents reported in chapter 7 where the analysis was performed on both successful and unsuccessful manipulations. The results are unchanged.

Table 1: ANOVA – Experiment One (excluding the unsuccessful manipulations)

Tests of Between-Subjects Effects

Dependent Variable: Revalue

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	142.539[a]	3	47.513	7.799	.000	.187
Intercept	3422.456	1	3422.456	561.785	.000	.846
Breach	98.018	1	98.018	16.089	.000	.136
Forecast	44.699	1	44.699	7.337	.008	.067
Breach * Forecast	4.092	1	4.092	.672	.414	.007
Error	621.395	102	6.092			
Total	4217.000	106				
Corrected Total	763.934	105				

Appendix 10: Cross Tabulations for Experiment One

Tables 1 to 8 in this appendix show the count of respondents in various demographic categories across the four treatment groups in order to identify potential covariates as discussed in chapter 7. The demographic variables of membership, industry and turnover are identified as having a slightly disproportionate representation across treatment groups. These variables are included separately as covariates and the resulting ANOVA tables are included as tables 9 to 11 below. These results are substantively similar to those reported in chapter 7. Membership and industry are not significant but turnover is with $F((1,107) = 4.26$, $p = 0.04$. The ANOVA table including all three variables as covariates is shown in table 12. Again, the results are substantively similar to those reported in chapter 7, and turnover is significant with $F(1,98) = 4.69$, $p = 0.03$.

The Pearson Correlation Matrix is shown in table 13 and indicates that the three variables, membership, industry and turnover have no statistically significant correlation with each other. Turnover is however correlated with Revalue (the decision task dependent variable in experiment one). The correlation is a small and negative, $r =-0.221$, $n = 112$, $p = 0.02$ (two-tailed). This indicates that the size of the firm has some influence on the decisions undertaken by managers. The larger the firm the less likely the manager is to adopt the revaluation model.

Table 1: Cross tabulation of Response Time for the Four Treatment Groups

		Yes	Conflict	Random	No	
Response time	Early	12_a	22_a	22_a	16_a	72
	Late	10_a	14_a	8_a	12_a	44
Total		22	36	30	28	116

Each subscript letter denotes a subset of treatment conditions whose column proportions do not differ significantly from each other at the .05 level.

Table 2: Cross tabulation of Age for the Four Treatment Groups

		Yes	Conflict	Random	No	
Age	<=39	3_a	6_a	5_a	5_a	19
	40-49	10_a	15_a	17_a	12_a	54
	50-59	8_a	13_a	7_a	9_a	37
	>=60	1_a	2_a	1_a	1_a	5
Total		22	36	30	27	115

Each subscript letter denotes a subset of treatment conditions whose column proportions do not differ significantly from each other at the .05 level.

Table 3: Cross tabulation of Experience for the Four Treatment Groups

		Yes	Conflict	Random	No	
Experience	<4 years	4_a	2_a	1_a	1_a	8
	4-9 years	1_a	6_a	7_a	6_a	20
	>=10 years	17_a	28_a	21_a	20_a	86
Total		22	36	29	27	114

Each subscript letter denotes a subset of treatment conditions whose column proportions do not differ significantly from each other at the .05 level.

Table 4: Cross tabulation of Gender for the Four Treatment Groups

		Yes	Conflict	Random	No	
Gender	Male	19_a	32_a	25_a	25_a	101
	Female	3_a	3_a	4_a	2_a	12
Total		22	35	29	27	113

Each subscript letter denotes a subset of treatment conditions whose column proportions do not differ significantly from each other at the .05 level.

Table 5: Cross tabulation of Memberships for the Four Treatment Groups

		Yes	Conflict	Random	No	
Memberships	CA	10_a	18_a	17_a	16_a	61
	CPA	8_a	$9_{a, b}$	$8_{a, b}$	3_b	28
	Other	3_a	2_a	1_a	1_a	7
	CA and CPA	0_a	2_a	1_a	1_a	4
	CA and Other	0_a	2_a	1_a	2_a	5
	CPA and Other	0_a	2_a	1_a	1_a	4
Total		21	35	29	24	109

Each subscript letter denotes a subset of treatment conditions whose column proportions do not differ significantly from each other at the .05 level.

Table 6: Cross tabulation of Highest Qualifications for the Four Treatment Groups

		Yes	Conflict	Random	No	
Qualification	Secondary Education	2_a	2_a	0_a	0_a	4
	Bachelors Degree	15_a	22_a	22_a	23_a	82
	MBA	2_a	4_a	5_a	3_a	14
	Non MBA Masters	1_a	2_a	0_a	1_a	4
	>Masters	2_a	4_a	2_a	0_a	8
Total		22	34	29	27	112

Each subscript letter denotes a subset of treatment conditions whose column proportions do not differ significantly from each other at the .05 level.

Table 7: Cross tabulation of Industry for the Four Treatment Groups

		Yes	Conflict	Random	No	
Industry	Consumer Discretionary	4_a	3_a	3_a	2_a	12
	Consumer Staples	1_a	0_a	1_a	0_a	2
	Energy	0_a	3_a	2_a	3_a	8
	Financials	5_a	8_a	6_a	6_a	25
	Healthcare	2_a	0_a	3_a	1_a	6
	Industrials	2_a	8_a	8_a	3_a	21
	Information Technology	$1_{a, b}$	$3_{a, b}$	0_b	5_a	9
	Materials	7_a	9_a	6_a	5_a	27
	Telecommunications	0_a	1_a	0_a	0_a	1
	Utilities	0_a	1_a	1_a	2_a	4
Total		22	36	30	27	115

Each subscript letter denotes a subset of treatment conditions whose column proportions do not differ significantly from each other at the .05 level.

Table 7: Cross tabulation of Turnover for the Four Treatment Groups

		Yes	Conflict	Random	No	
Turnover	<$100 million	10_a	15_a	14_a	8_a	47
	$100-499 million	8_a	12_a	7_a	11_a	38
	$500-999 million	2_a	6_a	1_a	4_a	13
	$1-4.9 billion	$1_{a, b}$	2_b	7_a	$4_{a, b}$	14
	$5 billion	1_a	0_a	1_a	0_a	2
Total		22	35	30	27	114

Each subscript letter denotes a subset of treatment conditions whose column proportions do not differ significantly from each other at the .05 level.

Table 8: Cross tabulation of Listing for the Four Treatment Groups

		Yes	Conflict	Random	No	
Listing	Public/ASX only	21_a	33_a	27_a	26_a	107
	Public/ASX & Foreign Listed	1_a	3_a	3_a	2_a	9
Total		22	36	30	28	116

Each subscript letter denotes a subset of treatment conditions whose column proportions do not differ significantly from each other at the .05 level.

Table 8: Cross tabulation of Profitability for the Four Treatment Groups

		Yes	Conflict	Random	No	
Prior Year	Profit	15_a	21_a	23_a	21_a	80
	Loss	7_a	15_a	7_a	5_a	34
Total		22	36	30	26	114

Each subscript letter denotes a subset of treatment conditions whose column proportions do not differ significantly from each other at the .05 level.

Table 9: ANCOVA – covariate Memberships

Tests of Between-Subjects Effects

Dependent Variable:Revalue

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	184.899[a]	4	46.225	7.538	.000	.226
Intercept	952.350	1	952.350	155.302	.000	.601
Memberships	16.413	1	16.413	2.677	.105	.025
Breach	121.166	1	121.166	19.759	.000	.161
Forecast	57.949	1	57.949	9.450	.003	.084
Breach * Forecast	8.348	1	8.348	1.361	.246	.013
Error	631.619	103	6.132			
Total	4330.000	108				
Corrected Total	816.519	107				

Table 10: ANCOVA – covariate Industry

Tests of Between-Subjects Effects

Dependent Variable:Revalue

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	154.901[a]	4	38.725	6.143	.000	.185
Intercept	639.973	1	639.973	101.513	.000	.485
Industry	.401	1	.401	.064	.801	.001
Breach	108.641	1	108.641	17.233	.000	.138
Forecast	52.929	1	52.929	8.396	.005	.072
Breach * Forecast	6.313	1	6.313	1.001	.319	.009
Error	680.869	108	6.304			
Total	4506.000	113				
Corrected Total	835.770	112				

Table 11: ANCOVA – covariate Turnover

Tests of Between-Subjects Effects

Dependent Variable: Revalue

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	171.875[a]	4	42.969	6.907	.000	.205
Intercept	1119.583	1	1119.583	179.977	.000	.627
Turnover	26.485	1	26.485	4.258	.041	.038
Breach	90.809	1	90.809	14.598	.000	.120
Forecast	47.419	1	47.419	7.623	.007	.067
Breach * Forecast	5.433	1	5.433	.873	.352	.008
Error	665.616	107	6.221			
Total	4529.000	112				
Corrected Total	837.491	111				

Table 12: ANCOVA – all three covariates Membership, Industry and Turnover

Tests of Between-Subjects Effects

Dependent Variable: Revalue

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	225.860[a]	6	37.643	6.339	.000	.280
Intercept	326.078	1	326.078	54.908	.000	.359
Memberships	5.781	1	5.781	.973	.326	.010
Industry	.463	1	.463	.078	.781	.001
Turnover	27.823	1	27.823	4.685	.033	.046
Breach	117.492	1	117.492	19.784	.000	.168
Forecast	58.527	1	58.527	9.855	.002	.091
Breach * Forecast	14.087	1	14.087	2.372	.127	.024
Error	581.988	98	5.939			
Total	4225.000	105				
Corrected Total	807.848	104				

Table 13: Pearson's Correlation

		Revalue	Age	Experience	Gender	Memberships	Qualification	Industry	Turnover
Revalue	Pearson Correlation	1	.127	-.034	-.079	.139	.046	-.048	-.221*
	Sig. (2-tailed)		.179	.721	.413	.151	.634	.615	.019
	N	114	113	112	111	108	110	113	112
Age	Pearson Correlation	.127	1	.499**	-.183	.031	-.035	-.001	.064
	Sig. (2-tailed)	.179		.000	.053	.745	.713	.995	.500
	N	113	115	114	113	109	112	114	113
Experience	Pearson Correlation	-.034	.499**	1	-.329**	-.065	.087	-.037	.059
	Sig. (2-tailed)	.721	.000		.000	.505	.362	.698	.537
	N	112	114	114	112	108	111	113	112
Gender	Pearson Correlation	-.079	-.183	-.329**	1	.037	.093	-.046	-.140
	Sig. (2-tailed)	.413	.053	.000		.704	.330	.632	.141
	N	111	113	112	113	108	111	112	111
Memberships	Pearson Correlation	.139	.031	-.065	.037	1	.080	-.071	-.103
	Sig. (2-tailed)	.151	.745	.505	.704		.411	.463	.290
	N	108	109	108	108	109	108	108	107
Qualification	Pearson Correlation	.046	-.035	.087	.093	.080	1	-.035	-.147
	Sig. (2-tailed)	.634	.713	.362	.330	.411		.716	.125
	N	110	112	111	111	108	112	111	110
Industry	Pearson Correlation	-.048	-.001	-.037	-.046	-.071	-.035	1	-.095
	Sig. (2-tailed)	.615	.995	.698	.632	.463	.716		.317
	N	113	114	113	112	108	111	115	113
Turnover	Pearson Correlation	-.221*	.064	.059	-.140	-.103	-.147	-.095	1
	Sig. (2-tailed)	.019	.500	.537	.141	.290	.125	.317	
	N	112	113	112	111	107	110	113	114

*. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed).

Appendix 11: ANOVA tables from the reduced sample (omitting unsuccessful manipulations) Experiment Two

In experiment two, the manipulated variables are Customer Negotiations (Neg) and Performance pricing (PP). Subjects were asked to complete manipulation check questions at the conclusion of the task in respect of each of these variables. Below is the ANOVA table based on only those respondents that provided the appropriate answers to these questions. The reduced sample size is based on a sample of 109 respondents as opposed to the 113 respondents reported in chapter 7 where the analysis was performed on both successful and unsuccessful manipulations. The results are substantively similar. There is a significant main effect for PP, F (1,105) = 22.38, p = 0, while the main effect for Neg is not significant, F (1,105) = 2.98, p = 0.47. The interaction effect is significant, but only as a one-tailed test, F (1,105) = 20.31, p = 0.03.

Table 1: ANOVA – Experiment one (excluding the unsuccessful manipulations)

Tests of Between-Subjects Effects

Dependent Variable:Restructure

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	149.531[a]	3	49.844	8.844	.000	.202
Intercept	4225.083	1	4225.083	749.716	.000	.877
PP	126.099	1	126.099	22.375	.000	.176
Neg	2.978	1	2.978	.528	.469	.005
PP * Neg	20.309	1	20.309	3.604	.060	.033
Error	591.735	105	5.636			
Total	4971.000	109				
Corrected Total	741.266	108				

a. R Squared = .202 (Adjusted R Squared = .179)

Appendix 12: Cross Tabulations for Experiment Two

Tables 1 to 8 in this appendix show the count of respondents in various demographic categories across the four treatment groups in order to identify potential covariates as discussed in chapter 7. The demographic variables of age and industry are identified as having a slightly disproportionate representation across treatment groups. These variables are included separately as covariates and the resulting ANOVA tables are included as tables 9 and 10 below. The results of these tests are substantively similar to those reported in chapter 7, and neither age nor industry is statistically significant at the 5% level as covariates.

Table 1: Cross tabulation of Response Time for the Four Treatment Groups

		Yes	Conflict	Random	No	
Response time	Early	16_a	18_a	22_a	16_a	72
	Late	12_a	10_a	8_a	14_a	44
Total		28	28	30	30	116

Each subscript letter denotes a subset of treatment conditions whose column proportions do not differ significantly from each other at the .05 level.

Table 2: Cross tabulation of Age for the Four Treatment Groups

		Yes	Conflict	Random	No	
Age	<=39	$5_{a, b}$	2_b	8_a	$4_{a, b}$	19
	40-49	$13_{a, b}$	16_b	9_a	$16_{a, b}$	54
	50-59	7_a	10_a	10_a	10_a	37
	>=60	3_a	0_a	2_a	0_a	5
Total		28	28	29	30	115

Each subscript letter denotes a subset of treatment conditions whose column proportions do not differ significantly from each other at the .05 level.

Table 3: Cross tabulation of Experience for the Four Treatment Groups

		Yes	Conflict	Random	No	
Experience	<4 years	$3_{a, b}$	$1_{a, b}$	4_{b}	0_{a}	8
	4-9 years	7_{a}	4_{a}	2_{a}	7_{a}	20
	>=10 years	18_{a}	23_{a}	23_{a}	22_{a}	86
Total		28	28	29	29	114

Each subscript letter denotes a subset of treatment conditions whose column proportions do not differ significantly from each other at the .05 level.

Table 4: Cross tabulation of Gender for the Four Treatment Groups

		Yes	Conflict	Random	No	
Gender	Male	25_{a}	24_{a}	25_{a}	27_{a}	101
	Female	2_{a}	4_{a}	4_{a}	2_{a}	12
Total		27	28	29	29	113

Each subscript letter denotes a subset of treatment conditions whose column proportions do not differ significantly from each other at the .05 level.

Table 5: Cross tabulation of Memberships for the Four Treatment Groups

		Yes	Conflict	Random	No	
Memberships	CA	15_{a}	13_{a}	17_{a}	16_{a}	61
	CPA	5_{a}	8_{a}	6_{a}	9_{a}	28
	Other	3_{a}	2_{a}	1_{a}	1_{a}	7
	CA and CPA	0_{a}	0_{a}	2_{a}	2_{a}	4
	CA and Other	1_{a}	3_{a}	0_{a}	1_{a}	5
	CPA and Other	2_{a}	1_{a}	1_{a}	0_{a}	4
Total		26	27	27	29	109

Each subscript letter denotes a subset of treatment conditions whose column proportions do not differ significantly from each other at the .05 level.

Table 6: Cross tabulation of Highest Qualifications for the Four Treatment Groups

		Yes	Conflict	Random	No	
Qualification	Secondary Education	2_{a}	1_{a}	1_{a}	0_{a}	4
	Bachelors Degree	19_{a}	21_{a}	20_{a}	22_{a}	82
	MBA	3_{a}	3_{a}	3_{a}	5_{a}	14
	Non MBA Masters	1_{a}	1_{a}	1_{a}	1_{a}	4
	>Masters	2_{a}	2_{a}	2_{a}	2_{a}	8
Total		27	28	27	30	112

Each subscript letter denotes a subset of treatment conditions whose column proportions do not differ significantly from each other at the .05 level.

Table 7: Cross tabulation of Industry for the Four Treatment Groups

		Yes	Conflict	Random	No	
Industry	Consumer Discretionary	4_a	4_a	2_a	2_a	12
	Consumer Staples	1_a	1_a	0_a	0_a	2
	Energy	0_a	3_a	3_a	2_a	8
	Financials	4_a	6_a	5_a	10_a	25
	Healthcare	1_a	1_a	1_a	3_a	6
	Industrials	8_a	2_b	$6_{a, b}$	$5_{a, b}$	21
	Information Technology	2_a	1_a	3_a	3_a	9
	Materials	6_a	7_a	9_a	5_a	27
	Telecommunications	0_a	1_a	0_a	0_a	1
	Utilities	2_a	2_a	0_a	0_a	4
Total		28	28	29	30	115

Each subscript letter denotes a subset of treatment conditions whose column proportions do not differ significantly from each other at the .05 level.

Table 7: Cross tabulation of Turnover for the Four Treatment Groups

		Yes	Conflict	Random	No	
Turnover	<$100 million	12_a	13_a	14_a	8_a	47
	$100-499 million	8_a	7_a	12_a	11_a	38
	$500-999 million	3_a	4_a	1_a	5_a	13
	$1-4.9 billion	4_a	4_a	1_a	5_a	14
	$5 billion	0_a	0_a	1_a	1_a	2
Total		27	28	29	30	114

Each subscript letter denotes a subset of treatment conditions whose column proportions do not differ significantly from each other at the .05 level.

Table 8: Cross tabulation of Listing for the Four Treatment Groups

		Yes	Conflict	Random	No	
Listing	Public/ASX only	27_a	27_a	28_a	25_a	107
	Public/ASX & Foreign Listed	1_a	1_a	2_a	5_a	9
Total		28	28	30	30	116

Each subscript letter denotes a subset of treatment conditions whose column proportions do not differ significantly from each other at the .05 level.

Table 8: Cross tabulation of Profitability for the Four Treatment Groups

		Yes	Conflict	Random	No	
Prior Year	Profit	19_a	19_a	20_a	22_a	80
	Loss	8_a	8_a	10_a	8_a	34
Total		27	27	30	30	114

Each subscript letter denotes a subset of treatment conditions whose column proportions do not differ significantly from each other at the .05 level.

Table 9: ANCOVA – covariate Age

Tests of Between-Subjects Effects

Dependent Variable:Restructure

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	178.587[a]	4	44.647	7.872	.000	.227
Intercept	434.763	1	434.763	76.660	.000	.417
Age	.363	1	.363	.064	.801	.001
PP	147.376	1	147.376	25.986	.000	.195
Neg	3.576	1	3.576	.631	.429	.006
PP * Neg	24.573	1	24.573	4.333	.040	.039
Error	606.833	107	5.671			
Total	5123.000	112				
Corrected Total	785.420	111				

a. R Squared = .227 (Adjusted R Squared = .198)

Table 10: ANCOVA – covariate Industry

Tests of Between-Subjects Effects

Dependent Variable:Restructure

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	172.948[a]	4	43.237	7.593	.000	.221
Intercept	752.411	1	752.411	132.126	.000	.553
Industry	.439	1	.439	.077	.782	.001
PP	143.269	1	143.269	25.159	.000	.190
Neg	4.578	1	4.578	.804	.372	.007
PP * Neg	22.787	1	22.787	4.002	.048	.036
Error	609.329	107	5.695			
Total	5095.000	112				
Corrected Total	782.277	111				

a. R Squared = .221 (Adjusted R Squared = .192)

Table 11: ANCOVA – both covariates, Age and Industry

Tests of Between-Subjects Effects

Dependent Variable:Restructure

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	175.804[a]	5	35.161	6.088	.000	.225
Intercept	297.408	1	297.408	51.495	.000	.329
Age	.332	1	.332	.057	.811	.001
Industry	.331	1	.331	.057	.811	.001
PP	145.636	1	145.636	25.216	.000	.194
Neg	3.681	1	3.681	.637	.426	.006
PP * Neg	24.208	1	24.208	4.192	.043	.038
Error	606.430	105	5.776			
Total	5059.000	111				
Corrected Total	782.234	110				

a. R Squared = .225 (Adjusted R Squared = .188)