School of Accounting

The Impact of CEO Remuneration on Disclosures of Non-GAAP Financial Measures

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Declaration

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgement has been made. This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

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Signed by

MD Nahidul Islam

29 September 2015.

List of works related to this study

1. ‘The Impact of CEO Remuneration on Disclosures of Non-GAAP Information of Australian companies’ October 2–3, 2014, the Curtin Business School Higher Degree by Research Students’ Colloquium Presentation, Curtin University.

   Note: The presentation is based on the pilot study of this research and included results related to 36 observations to analyse 3 independent variables.

2. ‘The Impact of CEO Remuneration on Disclosures of Non-GAAP Information of Australian Mining Companies’ May 2014, a case study with data analysis as a requirement of the unit: Advanced Quantitative Research Method for this degree.

3. **‘**The influence of CEOs Compensation on Disclosures of Non-GAAP Financial Information and the Value Relevance of Non-GAAP Financial Information to the Capital Market’ November 2013, a research proposal developed as a requirement of the unit: Introduction to Research for this degree.

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List of Acronyms

A$ (AUD)	Currency in Australian dollar.
AASB	Australian Accounting Standards Board.
AGAAP	Australian Generally Accepted Accounting Principles.
AICD	Australian Institute of Company Directors.
A-IFRS	Australian equivalents to International Financial Reporting Standards.
ASIC	Australian Securities and Investments Commission.
ASSETS	Total assets.
ASX	Australian Stock Exchange.
ASX300	The S&P/ASX 300 index is a market-capitalisation weighted and float-adjusted stock market index of Australian stocks listed on the ASX from Standard & Poor's.
BADDEBT	Excluded bad and doubtful debts related items when non-GAAP financial measures have been disclosed.
BASE	Fixed salary component of remuneration structure of CEOs.
CEO	Chief Executive Officer.
CESR	The Committee of European Securities Regulators.
D&A	Excluded depreciation & amortization expense items when non-GAAP financial measures have been disclosed.
DEBTRET	Excluded early debt retirement expenses when non-GAAP financial measures have been disclosed.
EBIT	Earnings before interest and tax.
EBITDA	Earnings before interest, tax, depreciation and amortization.
EBITDAR	Earnings before interest, tax, depreciation, amortisation & rent.
EBITDAX	Earnings before interest, tax, depreciation, depletion, exploration and impairment.
EFRAG	The European Financial Reporting Advisory Group.
EPS	Earnings per share.
EVA	Economic value added.
FASB	Financial Accounting Standards Board.
Finsia	Financial Services Institute of Australasia.
FTE	Full-time employees.
FUA	Funds under administration.
FY	Fiscal year.
GAAP	Generally Accepted Accounting Principles.
GROWTH	Price to book value.
I/B/E/S	The Institutional Brokers' Estimate System is a service founded by the New York brokerage firm Lynch, Jones & Ryan and Technimetrics, Inc.
IASB	International Accounting Standards Board.
IFRS	International Financial Reporting Standards.
IMPAIR	Excluded impairment expenses when non-GAAP financial measures have been disclosed.

INTAN	Total intangibles to total assets.
INTER	Excluded interest related expense items when non-GAAP financial measures have been disclosed.
IPO	Initial Public Offering.
LEVERAGE	Total liabilities to total equity.
LTI	Long-term incentive component of remuneration structure of CEOs.
M&A	Excluded merger & acquisition related costs when non-GAAP financial measures have been disclosed.
MARKETCAP	Market capitalization.
NGFM	Non-GAAP Financial Measure.
NPAT	Net profit after taxes.
NRI	Non-recurring items.
OTH	Non-GAAP financial measures in other sections of preliminary final report.
OTX	Excluded other items which are not included in the rest of the categories when non-GAAP financial measures have been disclosed.
PDS	Product Disclosure Statements.
R&D	Research & development.
RAM	Disclosures of non-GAAP financial measures in results for announcement to the market.
RECON	Reconciliation between NGFM and GAAP measures when NGFM has been disclosed.
Regulation G	Regulation issued by US-SEC to ensure transparent disclosures and reconciliation between GAAP earnings and non-GAAP earnings.
Regulation S-X	The Rules of US Securities and Exchange Commission to regulate annual report of companies.
RESTRUC	Excluded restructuring charges when non-GAAP financial measures have been disclosed.
RETRO	Excluded the retrospective impact changes when non-GAAP financial measures have been disclosed.
RG	Regulatory Guide.
RG 230	Regulatory Guide 230 is a guidance issued by ASIC on the use of financial information that do not comply with GAAP.
ROACE	Return on Average Capital Employed.
ROI	Return on Investment.
S&P/ASX 50	The S&P/ASX 50 Index is a stock market index of Australian stocks listed on the ASX from Standard & Poor's.
SIRCA	Securities Industry Research Centre of Asia Pacific.
SOA	Excluded losses on sales of assets when non-GAAP financial measures have been disclosed.
SOX	The Sarbanes-Oxley Act.
STD_ROE	Prior three-year standard deviation of return on equity.
STI	Short-term incentive component of remuneration structure of CEOs.
STOCKCOMP	Excluded stock-based compensation costs when non-GAAP

	financial measures have been disclosed.
TAX	Excluded tax related expense items when non-GAAP financial measures have been disclosed measured.
US$ (USD)	Currency in US dollar.
US-SEC	United States Securities and Exchange Commission.

Abstract

This study examines the relationship between the components of Chief Executive Officers (CEOs) remuneration: base salary, Short-term Incentive (STI), and Long-term Incentive (LTI) and three types of decision to disclose Non-GAAP Financial Measures (NGFMs). This empirical study hand-collects data for non-GAAP financial measures from the preliminary final reports of S&P/ASX50 companies for 2010–2012. The first research objective is to examine the relationship between the components of CEOs remuneration and the decision to disclosure NGFMs in the section 'results for announcement to the market' as well as in the 'other sections' of preliminary final reports. The second objective is to examine the relationship between the components of CEOs remuneration and the decision to exclude expense items when NGFMs have been disclosed. Finally this study examines the relationship between the components of CEOs remuneration and the decision to provide reconciliation between NGFMs and GAAP measures when NGFMs have been disclosed.

Methodologically, a significant strength of this study is that it overcomes methodological limitations in prior studies which relied on keyword search strings to identify non-GAAP information to collect. Firstly this study investigates the preliminary final report and measures the three types of decisions regarding non-GAAP financial measures. Secondly, using logistic regression, this study examines the relationship between these decisions and components of CEOs' remuneration structure by incorporating all the components, i.e., base salary, STI, and LTI into the research framework.

This study contributes to the literature of non-GAAP information disclosure and remuneration of CEOs by analyzing the direct relationship between the decisions to disclose non-GAAP financial measures and components of CEOs remuneration. In contrast to prior studies, this study incorporates all components into the research framework to decompose the individual effect of components to understand comprehensive insights into disclosures of non-GAAP financial measures. In addition, this study provides empirical evidence from Australian context that is different from the United States and major European countries. Findings show that the decision to disclose NGFMs in 'results for announcement to the market' of

preliminary final reports is significantly negatively related to base salary component of CEOs remuneration. However, the decision to disclose NGFMs in 'other sections' of preliminary reports is statistically positively related to base salary of CEOs. This study also substantiates that short-term incentives are negatively related to the decision to disclose NGFMs in 'other sections'.

Furthermore, the results demonstrate that CEOs' remuneration and the decision to exclude recurring expense items as well as non-recurring expense items have statistically significant relationship either positive or negative depending upon the expense items and remuneration components. Evidence shows that only base salary and LTI have significantly influenced the decision to exclude recurring expense items such as depreciation and amortization (positively related to base salary), tax-related items (negatively related to LTI), and interest-related expense items (negatively related to base salary and LTI). These results imply that CEOs are more likely to be opportunistic by excluding recurring expense items when incentives at risk (LTI) are less and base salary is the largest in the remuneration structure. Thus, when the proportion of LTI is larger for CEOs the LTI appears to be an incentive to reduce opportunistic disclosures related to recurring expenses. These results support the doctrine of agency theory and positive accounting theory which explain that managers' goal alignment through an appropriate balanced incentive plan will motivate agent, CEOs to act in the interest of their principal—shareholders.

On the other hand, short-term incentives have positive significant influence on the decision to exclude non-recurring expense items such as merger and acquisition expenses, and loss on sales of assets. These results imply that CEOs are opportunistic to exclude non-frequent expense items to gain from the short-term incentives. Evidence shows that only the decision to exclude impairment charges is significantly influenced by the base salary (negatively related) and LTI (positively related). These two components are significant in reverse way, i.e., base is negatively and LTI is positively related to the decision to exclude the items. Thus it implies the necessity of an optimum amount of base salary and LTI in the remuneration structure to balance CEOs' motivation for exclusions of a particular type of expense item when disclosing non-GAAP information.

Finally, this study shows that the decision to provide reconciliation between NGFMs and GAAP measures is positively significant with base salary and short-term incentives of CEOs'-remuneration. This evidence indicates the positive consequences of prevailing remuneration structure of CEOs in Australia and the reformation efforts from regulatory bodies. This is because companies are providing more reconciliation between NGFMs and GAAP measures while CEOs are receiving more base salary than the incentives at risk (LTI).

Keywords: Australian Securities Exchange (ASX), Australia, CEO, Non-GAAP (Generally Accepted Accounting Principle), Non-recurring expense, Preliminary Final Report, Recurring-expense, Reconciliation, Remuneration.

Chapter One: Introduction

1.1 Overview

Every company has a responsibility to provide performance-information to its stakeholders. Accounting standards are converging internationally because a common set of accounting standards is required for global harmonization of reporting (Barth 2008). International reporting standards require organizations to present financial information according to the International Financial Reporting Standards (IFRS) set out by the International Accounting Standards Board (IASB). In keeping with the harmonization of accounting standards, the US Financial Accounting Standards Board (FASB) has been working with the IASB to converge US Generally Accepted Accounting Principles (GAAP) to IFRS under the Norwalk Agreement since 2002 (Alfredson 2003). Likewise, in 2005, the Australian Accounting Standards Board (AASB) adopted the A-IFRS (Australian equivalents to IFRS) for reporting periods starting on or after 1 January 2005.

In addition to regulated financial reporting, disclosing supplementary financial information has continuously been a voluntary option for executives. Empirical study confirms that the evolution of presenting supplementary non-GAAP financial information started since the 1980s (Bradshaw and Sloan 2002). Non-GAAP refers to alternative measures of presenting underlying performance-information that do not comply with the standards of Generally Accepted Accounting Principles (GAAP). To determine non-GAAP figures, company executives make decisions to include (or exclude) recurring or non-recurring items and, thus, they disclose the company's underlying performance to stakeholders (Bhattacharya et al. 2003; Bradshaw and Sloan 2002; Brown and Sivakumar 2003). However, non-GAAP disclosures may mislead investors when managers present information opportunistically to manipulate investors' perceptions (Bowen, Davis and Matsumoto 2005a; Lougee and Marquardt 2004).

Evidence from contemporary remuneration studies suggest that development of comprehensive perception regarding components of executive remuneration is important (Devers et al. 2007). To understand recent development of executive remuneration across various academic disciplines, Devers et al. (2007) have

categorized the prior studies in relation to executive remuneration into two broad categories: i) analysis of pay-performance relationships; and ii) analysis of pay-behaviour relationships.

To further specify the relationships, Devers et al. (2007) have classified both types of relationship into one more level. This expanded categorization considers both variables in each category in two approaches. Consequently, the analysis of pay-performance relationship includes: i) impact of 'performance' on 'pay'; and ii) impact of 'pay' on 'performance'. Similarly, they have categorized the pay-behaviours relationship into two groups: i) impact of 'executive actions' on 'pay'; and ii) impact of 'pay' on 'executive actions'. As a result, they have developed a unifying research agenda for executive remuneration.Devers et al. (2007) state that individual components of executive remuneration are more important to study than total remuneration because analyzing individual component reveals comprehensive insight than what might be perceived by analyzing total remuneration. This supports recent concerns about inadequacy of prior empirical studies that need further exploration by considering individual components of remuneration structure. Furthermore, they assert that researchers should not focus on theorization about aggregated remuneration since this may increase measurement problems and, hence, they should emphasize on analysis of individual components of remuneration structure. For example, analyzing executives' risk preference to individual components of remuneration is a valid investigation compared to the measurement problems arise in comparison to an aggregated measure of remuneration. Therefore, this study examines whether executives recognize and undertake actions (disclosure of performance measures) in diverse ways because of the individual reward component included in the remuneration structure.

The ascertained assumption in agency theory suggests that pay influences behaviours that subsequently influence performance. This means that behavioural actions play an essential role to influence performance. For this reason, in agency theory context, examination of the direct relationship between pay and performance is certainly far away to assess goal alignment of a company because pay-performance is not a direct relationship (Devers et al. 2007). Moreover, McGahan and Porter (1997) and Yermack (1997) substantiate that performance of companies is a combination of

external factors as well as actions undertaken by executives. In addition, Tosi et al. (2000) establish that the direct examination of pay-performance has been reported to lead to ambiguous results to some extent. These phenomena have provided opportunities for a recent research stream to investigate the direct relationship of pay-behaviour rather than pay-performance and, thus, to assess the goal alignment of managers with other stakeholders in an agency theory context (Devers et al. 2007). In view of that, this study examines the influence of CEOs remuneration on the voluntary disclosures of non-GAAP financial measures. This permits to investigate comprehensive insights into how components influence the relationship. Furthermore, the proportion of components is an important factor to influence CEOs' actions because some components are at risk (STI-Short-term Incentive and LTI-Long-term Incentive) while others are fixed (base salary). Consequently, CEOs' decision to disclose non-GAAP financial measures may not be stimulated in isolation, merely considering one component of the remuneration structure; instead, they may respond in various ways, keeping in mind the amount of other components in the structure.

In contrast, it is possible to examine a relationship by considering a single component (base/STI/LTI); but it may not present a comprehensive understanding of CEOs' actions. It is mainly because of the absence of other components that may interact with the outcomes.

1.2 Motivations of the study

CEO remuneration is the focus of scholarly literature, business communities, and regulatory consideration and is the subject of extensive disagreement (Giannetti 2011; Core, Holthausen and Larcker 1999). Literature on executive remuneration reveals a number of aspects regarding CEO remuneration. Prior studies demonstrate that CEOs determine the agenda and information given to the board; boards of directors are ineffective in setting proper levels of remuneration for CEOs when outside directors basically are appointed by the CEO; boards typically depend on remuneration experts appointed by the CEO, which may lead to an optimized remuneration package for the CEO rather than the optimum amount for the company (Jensen 1993; Core, Holthausen and Larcker 1999). This evidence provides sources

of motivation for this study to examine the influence of remuneration of CEOs rather than that of boards on disclosures of non-GAAP metrics.

The remuneration package of chief executive officers (CEOs) in Australia is different from the United States and major European countries (Australian Government Productivity Commission 2009). The Productivity Commission in Australia undertook an extensive inquiry into remuneration of executives and directors in 2009. This inquiry report asserted that comparisons of executive remunerations across countries is complicated not only by the way remuneration packages are structured, but also by other factors, including company size, market capitalization, tax system, etc. The findings of the inquiry suggest total remuneration of CEOs in Australia is less than half compared to the United States and significantly lower than major European countries. Findings also indicate the proportions of components in CEOs' remuneration structure are fundamentally different; however, the base salary component is still the biggest in the remuneration structure. For example, the inquiry report states that the proportion of components (base: STI: LTI) in the remuneration structure of CEOs for ASX300 companies was 59:30:11 in 2003–04 and 50:25:25 in 2008–09. These data suggest that the trend of base salary is decreasing over time while LTIs are increasing considerably. The findings of the study by Matolcsy and Wright (2007) suggest that one-third of companies in Australia offer cash and the rest belong to an equity group. Moreover, the study by Shields, O'Donnell, and O'Brien (2003) showed the cash or fixed component was higher for the larger companies and the executive positions in Australia.

1.3 Research objectives

The main focus of this study is to examine the relationship between the decisions of disclosures of non-GAAP financial measures and components of remuneration of CEOs. Accordingly, this empirical study answers the following research question:

- *How do the components (base salary, STI, LTI) of remuneration structure of CEOs influence various types of decisions regarding disclosures of non-GAAP financial measures in Australia?*

In relation to the research question, this study attempts to achieve the following research objectives:

1. Examine the relationship between the components (base, STI and LTI) of remuneration structure of CEOs and the decision of disclosures of non-GAAP financial measures in the section 'results for announcement to the market' and in the 'other sections' of preliminary final reports.
2. Examine the relationship between the components (base, STI and LTI) of remuneration structure of CEOs and the decision to exclude expense items when non-GAAP financial measures have been disclosed.
3. Examine the relationship between the components (base, STI and LTI) of remuneration structure of CEOs and the decision to provide reconciliation between non-GAAP financial measures and GAAP measure when non-GAAP financial measures have been disclosed.

In view of these research objectives, firstly this study investigates the preliminary final report and measures the three types of decisions regarding non-GAAP financial measures. In doing so, this study assigns a code, either '1' or '0', to each type of decision. If a company has disclosed non-GAAP financial measures in results for announcement to the market it was assigned the code '1' and '0', otherwise. In a similar way, the coding has been assigned to the decision of disclosures of non-GAAP financial measures in the other sections of preliminary final reports; to the decision to exclude expense (recurring and non-recurring) items when non-GAAP financial measures have been disclosed and to the decision to provide reconciliation between non-GAAP financial measures and GAAP measure when non-GAAP financial measures have been disclosed.

Secondly, using logistic regression, this study examines the relationship between these decisions and components of CEOs' remuneration structure by incorporating all the components, i.e., base salary, STI, and LTI into the research framework.

1.4 Research significance

This empirical research is important because it contributes to the literature of non-GAAP disclosure by measuring the direct relationship between the decisions to

disclose non-GAAP financial measures and components of remuneration of CEOs. Moreover, in contrast to prior studies of non-GAAP financial measures, this study maintains the conception of remuneration structure by incorporating all components into the research framework. Consequently, it extends the non-GAAP literature by examining the proposition that executives recognize and undertake actions in various ways regarding individual reward components (Devers et al. 2007).

In addition, this study is important because it examines the remuneration structure of chief executive officers (CEOs) in an Australian context which differs from that of the United States and major European countries. Thus, it contributes to non-GAAP literature by providing empirical evidence from a different context.

Furthermore, in relation to the methodology of non-GAAP data collection, this study is significant because it examines the source documents of non-GAAP financial measures by reading and subsequently hand-collecting the data. In contrast to prior studies except Marques' (2006), this study does not rely on proxies for non-GAAP measures provided by commercial database, nor does it rely on keyword search strings to identify instances for non-GAAP financial measures. To overcome the disadvantages of these approaches, this study has collected data for non-GAAP financial measures using the same methodology as Marques (2006).

Moreover, this study is important in assessing policy implications of regulatory bodies because it provides a number of empirical outcomes regarding the disclosures of non-GAAP financial measures and remuneration of CEOs. A number of aspects of Regulatory guide 230 (disclosing non-IFRS financial information), one of the recent undertakings by the Australian Securities and Investments Commission (ASIC) can be assessed from the results of this study. Finally, empirical evidence from this study helps to understand motivations for making about non-GAAP disclosures and the influence of remuneration of CEOs.

1.5 Research framework

This study considers three types of decision regarding disclosures of non-GAAP financial measure (NGFM) and thereby measures the relationship between components of CEOs' remuneration structure and each type of decision. In analyzing

the relationships, this study also considers the other relevant factors within the research framework. Remuneration structure of CEOs comprises base salary, short-term incentives (STI), and long-term incentives (LTI). This study maintains the conception of structure by incorporating all components into the research framework. The foremost reason is not to disregard the formation of structure and considers only a few components or aggregates all components to investigate the relationships. As a result, this study incorporates all components of remuneration structure into the research framework to assess the relationship. Accordingly, these relationships have been examined by the following common equation:

$$Y = f(\text{components of remuneration of CEOs} + \text{other factors of companies})$$

Here the dependent variable is Y, the decision regarding disclosures of NGFM, while the independent variables are the components of remuneration structure of CEOs and the other factors are control variables associated with companies.

Firstly, this study measures the relationship between the decision to disclose NGFM in the section 'results for announcement to the market' of preliminary final reports and the components of remuneration of CEOs. Here, this study has termed this section 'Results for Announcement to the Market' (RAM). Additionally, this study considers the other sections of the preliminary final report to examine the relationships because RAM is a mandatorily identified title that include key information while other sections of the preliminary final report have no such mandatory heading requirement. Marques (2006) and Isidro and Marques (2013) have examined non-GAAP financial measures disclosure decisions in earnings announcements by considering the indicator variable as either '1' or '0'. These models have demonstrated that if a company has disclosed non-GAAP financial measures in the earnings announcements it has been measured by the indicator variable '1' and '0' otherwise.

Secondly, in measuring decisions to exclude expense items when NGFM have been disclosed, the literature shows scholars have considered whether expense items have been excluded. If expense items have been excluded when disclosing NGFM, this has been measured by assigning the indicator variable '1' or '0' otherwise (Brown et al. 2012; Black and Christensen 2009; Black et al. 2012; Isidro and Marques 2013).

Based on this evidence, this study examines the relationship between the decision to exclude expense items when NGFM has been disclosed and the component of remuneration of CEOs.

Thirdly, literature on non-GAAP metrics suggests that researchers have measured the decision to provide reconciliation between NGFM and GAAP measures in cases where NGFM have been disclosed, by assigning the indicator variable. If a reconciliation has been provided where NGFM have been disclosed, it has been assigned the code '1' or '0' otherwise (Isidro and Marques 2013; Marques 2010). Based on this evidence, this study investigates the relationship between the decision to provide reconciliation between NGFM and GAAP measures and the components of remuneration of CEOs.

1.6 Structure of the research

This thesis consists of five chapters including Chapter One: Introduction. The remaining four chapters are presented as follows:

Chapter Two presents the literature review and hypothesis development of this empirical research. The literature section includes the overview of non-GAAP literature; sources of non-GAAP financial measures; non-GAAP terminologies; altruistic and opportunistic perspectives of non-GAAP disclosures; regulators' perspectives of non-GAAP disclosures; pay-performance versus pay-behaviours relationships; addressing criticisms of inadequacy of research and remuneration structure of CEOs. The hypothesis development section includes broadly three types of hypotheses based on the research objectives.

Chapter Three presents the methodology of this study and describes the reasoning behind the approaches. In doing so, the chapter proceeds by describing the decisions regarding disclosures of non-GAAP financial measures; rationalization of database selection and sample collection; data collection; measuring dependent variables; definitions of independent variables; translation of presentation currency; discussion about statutory and actual remuneration; control variables; variable transformation; and research framework for analyses.

Chapter Four presents the results of this empirical study. The chapter presents an overview of the results including the descriptive results of the variables; results related to the non-GAAP terminology; results related to the hand-collected data for three types of decisions; results related to components of remuneration of CEOs; summary statistics; Pearson correlation matrix; and results related to the logistic regression of the hypotheses.

Chapter Five presents the discussion and conclusion of results of this study, related to remuneration of CEOs and non-GAAP financial measures; decisions to disclose non-GAAP financial measures; limitations; and concluding remarks.

Chapter Two: Literature Review and Hypothesis Development

2.1 Introduction

This chapter presents the literature review and hypothesis development of this empirical research. The literature section, the first part of this chapter, includes the overview of non-GAAP literature; sources of non-GAAP financial measures; non-GAAP terminologies; altruistic and opportunistic perspectives of non-GAAP disclosures; regulators' perspectives of non-GAAP disclosures; pay-performance versus pay-behaviours relationships; addressing criticisms of inadequacy of research and remuneration structure of CEOs. The second part of this chapter includes broadly three types of hypotheses based on the research objectives.

2.2 Non-GAAP literature overview

A number of terms have traditionally been used by companies to describe non-GAAP financial information. This study presents a number of new terminologies that have been used by the companies to report non-GAAP financial information, such as non-IFRS financial measures, non-statutory profit, one-off adjustment, non-recurring items (NRI), and underlying effective tax rate. Although the practice of using various non-GAAP metrics differs among industries and country context, a number of common nomenclatures have been documented to report underlying performance of companies. For example, a number of empirical studies in the context of the USA, have substantiated that 'pro forma' is the most popular term to disclose non-GAAP metrics (Bhattacharya et al. 2003; Lougee and Marquardt 2004). However, Isidro and Marques (2013) have studied the European context and provided evidence that variants of Earnings Before Interest, Tax, Depreciation and Amortization (EBITDA) have been used to disclose non-GAAP metrics. Moreover, Cameron, Percy, and Clarke (2012), and Sek and Taylor (2011) in Australia, have investigated non-GAAP disclosure practices and confirmed that a number of terminologies have been used in disclosures of non-GAAP metrics. The list of non-GAAP terminologies disclosed by the most relevant recent studies is presented in Appendix: Table A.2.1.

This study acknowledges the intended meaning of 'pro forma' information that implies outcomes of transactions already executed or to be executed in future to provide better understanding for stakeholders provided by regulators such as the Securities and Exchange Commission (SEC) in the USA, and the Australian Securities and Investments Commission (ASIC).

ASIC, the regulator in Australia's corporate markets and financial services has defined pro forma in the Regulatory guide 230 (RG 230) as:

> *'Pro forma financial information is non-IFRS financial information that is intended to show the effects of proposed or completed transactions for illustrative purposes. It is often used in transaction documents, such as prospectuses, Product Disclosure Statements (PDSs), scheme of arrangement documents and takeover documents'.*

Also, the Securities and Exchange Commission in the USA stipulates in Article 11 of Regulation S-X that the objective of the preparation requirements of pro-forma financial information is:

> *'Pro forma financial information should provide investors with information about the continuing impact of a particular transaction by showing how it might have affected historical financial statements if the transaction had been consummated at an earlier time. Such statements should assist investors in analysing the future prospects of the registrant because they illustrate the possible scope of the change in the registrant's historical financial position and results of operations caused by the transaction'.*

2.2.1 Various sources of non-GAAP financial measures

The literature on non-GAAP measures around the world suggests that the most common practice of disclosing non-GAAP metrics is profit announcements to the market. For example, Bhattacharya et al. (2003), Black et al. (2012), Black and Christensen (2009), Lougee and Marquardt (2004), and Marques (2006) have investigated earnings announcements' press releases to investigate non-GAAP measures in the US context. In their study Bhattacharya et al. (2003) assessed the

relative informativeness and performance of pro forma earnings and GAAP operating earnings by analysing actual pro forma press releases. They have demonstrated that pro forma earnings are more informative than GAAP operating earnings. Black et al. (2012) have analyzed investors' perception regarding pro forma earnings following the regulation changes to impose Sarbanes-Oxley Act of 2002. In that study, they have articulated that investors pay more attention to pro forma earnings disclosures following the changes of the regulation. Moreover, Black and Christensen (2009) have investigated managers' use of pro forma adjustments to meet strategic earnings target and demonstrated that various types of earnings adjustments that affect the difference between pro forma earnings and GAAP earnings. Similarly, Isidro and Marques (2013) have investigated earnings announcements press releases in a European context to measure the effects of compensation of board of directors on non-GAAP disclosures. They have demonstrated that remuneration linked to market performance has higher probability of disclosure of non-GAAP numbers in the earnings' press release. Additionally, in a case study reporting non-GAAP earnings by four Australian banks, Sek and Taylor (2011) analyzed full-year profit announcements. However, the literature demonstrates that various sections of annual reports include non-GAAP information, for example, in an Australian context, Cameron, Percy, and Clarke (2012) investigated non-GAAP earnings measures in the annual report of the largest 50 Australian listed non-mining companies, substantiating that the narrative sections of the annual report are the common sections presenting non-GAAP earnings measures.

In Australia, companies disclose results for announcement to the market in a preliminary final report and this is considered the primary announcement of the company's annual result. This preliminary final report is extensive and, thus, provides a useful source of non-GAAP financial measures. This reasoning is substantiated by the prior empirical studies in the Australian context. For example, Beekes and Brown (2006) examined Australian companies to determine whether better governed companies provide more informative disclosures and specified that the preliminary final report is considered the primary announcement of a company's annual result as well as being extensive compared to other country perspectives.

According to RG 230, ASIC specifies the main types of documents in which non-GAAP financial information is commonly disclosed. These general types of documents include market announcements as well as notes to the financial statements, directors' reports, presentations and briefings to investors and analysts (Australian Securities and Investments Commission 2011, December). According to the ASX listing rule 4.3A, listed companies are required to submit appendix 4E, (the preliminary final report) as a corporate announcement of annual results. Furthermore, RG 230 stipulates that preliminary final report presents much information about the performance of companies and a section must be identified with the heading 'results for announcement to the market' to disclose company's key information. This key information includes revenue related information, after tax profit (loss) related information, dividend related information, and a brief explanation of the information included.

In addition to the section 'results for announcement to the market' preliminary final report includes other sections. These other sections include a number of statements (comprehensive income, financial position, cash flows, retained earnings or changes in equity) with necessary notes; other details (the reporting period and the previous corresponding period, individual and total dividend, dividend or distribution reinvestment, control over entities, associates and joint venture); net tangible assets per security; any other significant information for investors; accounting standards for foreign companies; and a commentary on the results for the period.

Consistent with prior research, as well as guidelines provided by the regulatory body, this study considered investigating 'results for announcement to the market' as well as other sections, apart from the results for announcement to the market, to obtain a broad understanding about the disclosures of non-GAAP financial measures.

2.2.2 Varieties of non-GAAP terminologies

Extant literatures suggest non-GAAP terminologies differ from industry to industry. A number of keywords are more likely to be industry-specific because these keywords have been reported to disclose various types of non-GAAP information in a particular industry. For example, Sek and Taylor (2011) analyzed the reporting of non-GAAP earnings by Australian banks and confirm the term 'cash earnings' is the

most popular terminology disclosed by the banks. In another study, Cameron, Percy, and Clarke (2012) examined Australian non-mining companies and confirmed the most frequently disclosed non-GAAP terminologies include variants of EBIT i.e., Earnings Before Interest and Tax (EBIT) and Earnings Before Interest, Tax, Depreciation and Amortization (EBITDA). Nevertheless, prior studies Black and Christensen (2009), Black et al. (2012), Cameron, Percy, and Clarke (2012), Entwistle, Feltham, and Mbagwu (2006), Isidro and Marques (2013), Lougee and Marquardt (2004), Marques (2006), Sek and Taylor (2011) and Wallace (2002) also substantiate a number of common terminologies, for example, EBIT/EBITDA; adjusted EBIT/EBITDA; adjusted net income; normalized earnings; underlying earnings; and cash earnings. The complete list of non-GAAP terminologies found by those studies is presented in Appendix: Table A.2.1. Although a variety of terminologies have been used among countries and industries, this study has used the term 'non-GAAP' throughout.

Empirical research shows the existence of a number of non-GAAP variants, such as income measure, cash flow measures, and ratios. Marques (2006) examined a broad perspective of non-GAAP measures to understand other motivations apart from earning. In addition, this empirical study substantiates three categories of non-GAAP financial measures: i) income measures, ii) income from operations or some EBITDA measures and, 3) non-GAAP cash or cash flow measures. Similarly, Sek and Taylor (2011) report various types of non-GAAP ratios and non-GAAP performance measures, for example, economic value added and economic profit apart from earnings measures. These suggest non-GAAP information not only includes income measures, but also other measures.

Moreover, initiatives of regulatory bodies may lead to use of a particular terminology to disclose non-GAAP information. For example, in 2011, ASIC published RG 230 where the terminology 'non-IFRS' has been used to describe financial information that does not comply with GAAP principles. This initiative may have regulated the practice of disclosing non-GAAP metrics by using the particular terminology 'non-IFRS'. In this study, to be consistent with the majority of research in the area, the term non-GAAP will be used throughout.

2.2.3 Altruistic and opportunistic perspective of non-GAAP disclosures

Literature on non-GAAP financial measures demonstrates that the co-existence of altruistic and opportunistic motivations for disclosures of non-GAAP measures (reference). The necessity of disclosing non-GAAP information is to provide underlying performance of companies. This perspective of providing valuable information is also allowed by regulatory bodies (Australian Securities and Investments Commission 2011, December).

Weil (2001) asserted that disclosures of non-GAAP measurements provide insights into underlying performance that is deemed relevant to stakeholders in the future. Findings from a number of studies suggest that the foremost objective in disclosing non-GAAP information is to inform external users about the core functioning of companies; hence, managers disclose non-GAAP information in conjunction with GAAP measurements (Bhattacharya et al. 2003; Bradshaw and Sloan 2002; Brown and Sivakumar 2003). In similar reasoning, regulators allow disclosing non-GAAP information as long as it represents a true and fair view of information. These evidences imply the altruistic perspective of disclosures of non-GAAP information.

In analyzing earnings informativeness and strategic disclosure of non-GAAP earnings, Lougee and Marquardt (2004) showed that investors found non-GAAP earnings information to be more informative when value relevance of GAAP earnings is inadequate. Moreover, stakeholders of non-GAAP information emphasize non-GAAP earnings more when GAAP earnings are distorting or less informative. Moreover, it likely misrepresents the core performance of a company in a volatile industry, for example, high-technology companies that usually have intangible book values. In addition, these studies confirm that GAAP earnings do not portray the underlying performance of companies that carry forward losses from prior fiscal years (Bowen, Davis and Matsumoto 2005a; Lev and Zarowin 1999; Francis and Schipper 1999). Moreover, changes in accounting standards may initiate GAAP-based measurements to be volatile, for instance, inclusion of unrealized gains and losses in the income definition of GAAP causes inconsistent measurements. These changes in accounting standards from time to time cause volatility in reporting (Sek

and Taylor 2011). As a result, managers rely on non-GAAP metrics to convey underlying performance to stakeholders.

Further studies in non-GAAP reporting demonstrate an increasing dependence by various stakeholders, including managers, security analysts, investors, and the press (Bradshaw and Sloan 2002). The study by Andersson and Hellman (2007) asserts that users of non-GAAP information are in a strong position in terms of higher profit forecasting than those who have only GAAP information. In a similar study, Diamond and Verrecchia (1991) confirm that voluntary disclosures mitigate information asymmetry to provide a comparatively higher level of assurance of fair value transaction, thus, reducing the risk undertaking capability of investors. Also, Albring, Cabán-García, and Reck (2010) documented that the values of equity market and explicitly disclosed non-GAAP earnings are associated comprehensively with greater informativeness to stakeholders.

Other than the altruistic perspective to non-GAAP disclosures they may be used by managers to mislead investors when managers disclose information favourably to manipulate investors' perceptions (Bowen, Davis and Matsumoto 2005a; Lougee and Marquardt 2004; Elshafie, Yen and Yu 2010; Cameron, Percy and Clarke 2012; Doyle, Lundholm and Soliman 2003). Moreover, prior studies substantiate that most non-GAAP information is reported to meet or beat the analysts' forecasts by excluding loss items to attain strategic targets (Bhattacharya et al. 2004; Black and Christensen 2009; Bhattacharya et al. 2003). Also, the literature on non-GAAP reporting provides evidence that management of those companies disclosing non-GAAP metrics more insistently, have either a lower level of discretion to manipulate earnings, or are unable to reach performance benchmarks (Elshafie, Yen and Yu 2010) although Elshafie, Yen, and Yu (2010) assert a comparatively smaller amount of discretionary accruals have a reduced amount of variance between the value relevance of GAAP and non-GAAP earnings.

Also, in analyzing the market reaction, Marques (2006) found that investors do not consider all the adjustments of GAAP numbers as one-off items. Moreover, the study also confirmed that the market reacts positively to analysts' adjustments but investors are either less reactive to the non-GAAP adjustments made by the companies, or do not react to those adjustments.

Furthermore, aggressiveness of non-GAAP reporting is another aspect in considering the vale relevance. This area of work is examined by few scholars and they came up with new insights of non-GAAP information disclosure. The literature says when managers are unable to reach the benchmarks of performance they are more aggressive in non-GAAP reporting. Moreover, there is an association between earning management and aggressiveness of non-GAAP disclosure. If managers have lower level of discretion to manipulate earning they involve themselves in more aggressive disclosure of non-GAAP information. In addition, we find another relationship between discretionary accruals and informativeness of non-GAAP disclosure. When managers use aggressive exclusion in non-GAAP reporting, investors discount the information which is a bit contrary of value relevance of non-GAAP information. In this regards, the exclusion of recurring items are considered aggressive disclosure of non-GAAP information (Black and Christensen 2009;Black et al. 2012; Elshafie, Yen, and Yu 2010).

2.2.4 Regulators' perspective of non-GAAP disclosures

Standard setters continue to focus on concerns surrounding the reliability of management practices following a number of large corporate scandals, for example, Enron and Tyco in the US at the beginning of the 21st century (Ghoshal 2005). In December 2001, with the possibility of using non-GAAP disclosures to mislead investors, the US Securities and Exchange Commission issued a 'warning' for investors about the likely risks of using non-GAAP earnings (Black et al. 2012). Moreover, in July 2002, the United States federal government enacted 'The Sarbanes-Oxley Act' (SOX) to ensure mandatory certification of accuracy of financial information by individuals in top management positions, to enhance the independence of outside auditors, and to increase oversight roles of directors (Black et al. 2012; Entwistle, Feltham and Mbagwu 2006). Studies substantiate that the regulations have improved the average quality of non-GAAP earnings disclosures and have changed investors' perceptions of non-GAAP earnings disclosures in the post-SOX period (Black et al. 2012).

Following the SOX Act, the US-SEC issued Regulation G in 2003 to ensure transparent disclosures and reconciliation between GAAP earnings and non-GAAP

earnings (Black et al. 2012; Jennings and Marques 2011). The study conducted by Entwistle, Feltham, and Mbagwu (2006) confirmed that potentially misleading non-GAAP disclosures were 1% in the post-SOX period compared to 10% in the pre-SOX period. Thus, regulators' initiatives are effective and necessary to restore investors' confidence in non-GAAP disclosures.

Financial institutions around the world continue to introduce reforms to ensure the credibility of non-GAAP disclosures. For example, in October 2005, the Committee of European Securities Regulators (CESR) issued recommendations for European-listed companies to disclose non-GAAP information in an appropriate and useful way for decision making by investors. In addition, in 2009, the European Financial Reporting Advisory Group (EFRAG) raised concerns regarding the discretionary use of non-GAAP financial information. This report acknowledged that 'personal preference' may be involved in disclosing non-GAAP information (Isidro and Marques 2013). However, the study confirmed that companies do not follow the recommendations of CESR to disclose non-GAAP information perhaps because of a lack of enforcement power of the regulator (Isidro and Marques 2013).

During the same period of 2005, ASIC introduced a consultation paper outlining guidelines for the disclosure of non-GAAP information. Moreover, Australia and New Zealand's professionals in financial service institutes Financial Services Institute of Australasia (FINSIA) and Australian Institute of Company Directors (AICD) issued particular guidelines in 2009 to ensure non-GAAP reporting in a transparent and consistent manner (Cameron, Percy and Clarke 2012; Sek and Taylor 2011).

In 2011, subsequent to the consultation paper and draft guidelines, ASIC published Regulatory Guide 230 (RG 230) that provides guidance on the use of financial information in financial reports where such information is presented without complying with accounting standards (Australian Securities and Investments Commission 2011, December). These initiatives by regulatory institutions and professionals indicate the continuous regulatory improvements and transformations in voluntary disclosures of non-GAAP information to ensure information supply in a symmetric fashion for the best interests of investors.

2.2.5 Pay-performance versus pay-behaviours relationships

Evidence from contemporary remuneration studies suggest that development of comprehensive perception regarding components of executive remuneration is important (Devers et al. 2007). To understand recent development of executive remuneration across various academic disciplines, Devers et al. (2007) have categorized the prior studies in relation to executive remuneration into two broad categories: i) analysis of pay-performance relationships; and ii) analysis of pay-behaviour relationships.

To further specify the relationships, Devers et al. (2007) have classified both types of relationship into one more level. This expanded categorization considers both variables in each category in two approaches. Consequently, the analysis of pay-performance relationship includes: i) impact of 'performance' on 'pay'; and ii) impact of 'pay' on 'performance'. Similarly, they have categorized the pay-behaviours relationship into two groups: i) impact of 'executive actions' on 'pay'; and ii) impact of 'pay' on 'executive actions'. As a result, they have developed a unifying research agenda for executive remuneration.

Devers et al. (2007) state that individual components of executive remuneration are more important to study than total remuneration because analyzing individual component reveals comprehensive insight than what might be perceived by analyzing total remuneration. This supports recent concerns about inadequacy of prior empirical studies that need further exploration by considering individual components of remuneration structure. Furthermore, they assert that researchers should not focus on theorization about aggregated remuneration since this may increase measurement problems and, hence, they should emphasize on analysis of individual components of remuneration structure. For example, analyzing executives' risk preference to individual components of remuneration is a valid investigation compared to the measurement problems arise in comparison to an aggregated measure of remuneration. Therefore, this study examines whether executives recognize and undertake actions (disclosure of performance measures) in diverse ways because of the individual reward component included in the remuneration structure.

In differentiating “pay-behaviour” from “pay-performance” this study focuses on the fundamental understanding of the agency theory that ensures the goal alignment of managers with stakeholders. The ascertained assumption in agency theory suggests that pay influences behaviours that subsequently influence performance. This denotes that behavioural actions play an essential role to influence performance. For this reason, in agency theory context, pay-performance is not a direct relationship and hence examination of pay-performance without considering the behavioural aspects is certainly far away in light of the goal alignment of a company (Devers et al. 2007). Moreover, McGahan and Porter (1997) and Yermack (1997) substantiate that performance of companies is a combination of external factors as well as actions undertaken by executives. In addition, Tosi et al. (2000) establish that the direct examination of pay-performance has been reported to lead to ambiguous results to some extent. These phenomena have provided opportunities for a recent research stream to investigate the direct relationship of pay-behaviour rather than pay-performance and, thus, to assess the goal alignment of managers with other stakeholders in an agency theory context (Devers et al. 2007). Since this study follows the principle of agency theory that ensures the best interest of stakeholders it examines the influence of CEOs remuneration (pay) on the voluntary disclosures of non-GAAP financial measures (behaviour). This pay-behaviour ground allows investigating comprehensive insights into how remuneration components influence the relationship. Furthermore, the proportion of components is an important factor to influence CEOs’ behavioural actions because some components are at risk (STI and LTI) while others are fixed (base salary). Consequently, CEOs’ decision to disclose non-GAAP financial measures may not be stimulated in isolation, merely considering one component of the remuneration structure; instead, they may respond in various ways, keeping in mind the amount of other components in the structure. In contrast, it is possible to examine a relationship by considering a single component (fixed/STI/LTI); but it may not present a comprehensive understanding of CEOs’ actions. It is mainly because of the absence of other components that may interact with the outcomes.

2.2.6 Remuneration structure of CEOs

Remuneration structure of CEOs comprises of base salary, short-term and long-term incentives. This study incorporates all components of remuneration structure into the research framework to assess the relationship. This determines comprehensive insights into how components influence the relationship. Although it is possible to examine a relationship by considering a single component (STI or LTI) it may not present the comprehensive understanding of CEOs' actions because this type of analysis does not incorporate the all components that may interact with the outcomes.

2.3 First hypothesis development

In analyzing incentive pay in relation to goal alignment of both executives (agents) and shareholders (principals), research (Nagar, Nanda and Wysocki 2003) confirms the positive relationship between CEOs' incentives and information disclosures. However, the literature on non-GAAP disclosure confirms the probability of opportunistic use of voluntarily disclosed non-GAAP information when incentives are rewarded based on performance outcomes (Isidro and Marques 2013). Also, the report of the productivity commission confirms that STI usually relates to company financial performance, business strategic implementation or organizational health and safety outcomes, in a timespan of one year, while LTI is associated with broader market performance hurdles, for example, total shareholder return (Australian Government Productivity Commission 2009).

Prior literature substantiates that short-term incentives tend to be maximized by executives in incentive-based remuneration structures by emphasizing short-term value creation (Guidry, J Leone and Rock 1999). Moreover, empirical research on incentive-based payment confirms that executives are motivated by incentives to manipulate earnings and, thus, they gain equity-based reward when stock prices are overstated (Bergstresser and Philippon 2006). Consequently, opportunistic behaviour of executives renounces quality of voluntary disclosures of non-GAAP information (Holthausen, Larcker and Sloan 1995).

Prior studies demonstrate that companies do use non-GAAP disclosures to convey a more promising impression of performance outcomes (Black and Christensen 2009;

Bowen, Davis and Matsumoto 2005b; Doyle, Lundholm and Soliman 2003). Accordingly, this study examines CEOs' opportunistic motivation by examining short-term incentives in relation to decisions to disclose non-GAAP financial measures and hypothesizes as follows:

Hypothesis 1A: *The decision to disclose non-GAAP financial measures in results for announcement to the market is more likely when short-term incentive (STI) in the remuneration structure of CEOs is significantly related to the decision.*

Empirical evidence of incentive based pay in executive remuneration structures underpins agency theory to align the interest of the principal-agent (Mehran 1995). Moreover, in studying the long-term trend in executive remuneration, study reveals a fundamental change in the structure of executive pay wherein long-term incentive payments have turned into a bigger part of remuneration (Frydman and Saks 2010). Also the Productivity Commission in Australia undertook an inquiry into remuneration of executives and directors. This reported the increase of long-term incentives in the total remuneration structure that includes three components: base salary, short-term incentives, and long-term incentives (Australian Government Productivity Commission 2009).

Australian Government Productivity Commission (2009) affirms that companies estimate accounting value of long-term incentives at the date they are granted and disclose those estimated values in remuneration reports. However, these accounting values of long-term incentives may differ significantly from the actual value at the date they are vested. Also, companies do not disclose the realized value of long-term incentives granted in previous years and do not provide adequate information for value estimation of long-term incentives. Despite this, if such information was provided, there is still no precise technique to value equity based incentives. Among the most frequently adopted valuation techniques, including the Black-Scholes model, the binomial option pricing model/binomial lattice modelling, and Monte Carlo simulations, no distinct method is advocated in the accounting standards frameworks for calculating fair values. Accordingly, this study considers dollar value of long-term incentives reported for CEOs in examining the impact on disclosures of non-GAAP financial measures and hypothesizes as follows:

Hypothesis 1B: *The decision to disclose non-GAAP financial measures in results for announcement to the market is less likely when long-term incentive in the remuneration structure of CEOs is significantly related to the decision.*

In analyzing the relationship between the base salary component and the decision to disclose non-GAAP financial measures, this study considers the altruistic point of view of non-GAAP information. The most important reason is that base salary is substantially higher than the STI and LTI components of remuneration structures. Thus, the decision to disclose non-GAAP financial measures may not have the same influence when base salary is less than STI and LTI in the remuneration structure. Moreover, this study assumes that as long as CEOs are receiving the biggest proportion of remuneration in a fixed form, they are less likely to be motivated to disclose non-GAAP financial measures in the section which is mandatorily identified with the key results of companies. Given that base salary is substantial compared to STI and LTI, this study hypothesizes the relationship between the decision to disclose non-GAAP financial information and the base salary component of remuneration of CEOs as follows:

Hypothesis 1C: *The decision to disclose non-GAAP financial measures in results for announcement to the market is less likely when base salary in the remuneration structure of CEOs is significantly related to the decision.*

In analyzing the relationship between non-GAAP disclosures and compensation, Isidro and Marques (2013) have substantiated that non-GAAP disclosures can be identified in various parts of the disclosure. Moreover, Bowen, Davis, and Matsumoto (2005a) have analyzed the emphasis on non-GAAP earnings in the earnings press release. Similarly, Elliott (2006) has measured the non-GAAP emphasis and suggested the emphasis of non-GAAP measures differs in different locations of the announcement. Further evidence demonstrates that location of non-GAAP disclosures implies their prominence.

In view of this, other sections of the preliminary final report have been investigated to analyze further insights into how decisions to disclose are influenced by the

components of remuneration structure. Since other sections do not include any mandatorily identified section, such as results for announcement to the market, this study assumes components of remuneration influence disclosure decisions differently. Thus, this study develops a further set of hypotheses considering the relationship between the decision to disclose non-GAAP financial measures and components of the remuneration structure of CEOs, in the opposite direction as follows:

Hypothesis 1D: *The decision to disclose non-GAAP financial measures in other sections of the preliminary final report is less likely when short-term incentive in the remuneration structure of CEOs is significantly related to the decision.*

Hypothesis 1E: *The decision to disclose non-GAAP financial measures in other sections of the preliminary final report is more likely when long-term incentive in the remuneration structure of CEOs is significantly related to the decision.*

Hypothesis 1F: *The decision to disclose non-GAAP financial measures in other sections of the preliminary final report is more likely when base salary in the remuneration structure of CEOs is significantly related to the decision.*

2.4 Second hypothesis development

Literature in non-GAAP metrics disclosures has documented that companies exclude a variety of expense items when non-GAAP financial measures have been disclosed. These exclusions of expense items include below-the-line items, non-recurring expense items, and recurring expense items (Black and Christensen 2009; Bhattacharya et al. 2003; Isidro and Marques 2013; Marques 2006; Sek and Taylor 2011). This study summarizes the excluded expense items from the most relevant recent studies in Table 2.1.

A number of prior studies examine the types of exclusions made by companies when making adjustments to GAAP figures. Prior studies also substantiate that certain types of adjustments are consistent with GAAP measures, for example, earnings before and after discontinued operations, extraordinary items, and retroactive application of accounting changes (Marques 2006). A number of empirical studies

have considered these exclusions as below-the-line items since they are always transitory in nature (Black and Christensen 2009; Bhattacharya et al. 2003).

Table 2.1: Recurring, non-recurring and below-the-line expense items from the extant literature

Author (Year)	Description of exclusions and/or adjustments	Below-the-line/ Recurring/ Non-recurring
Marques (2006); Black and Christensen (2009);Bhattacharya et al. (2003)	Earnings before and after discontinued operations	Below-the-line
	Extraordinary items	Below-the-line
	Retroactive application of accounting changes	Below-the-line
Black and Christensen (2009)	Restructuring charges	Infrequent/Non-recurring
	Gains and losses on sales of assets	Infrequent/Non-recurring
	Merger and acquisition related costs	Infrequent/Non-recurring
	Early debt retirement	Infrequent/Non-recurring
	Stock related expenses (preferred stock conversion and IPO expenses)	Infrequent/Non-recurring
Bhattacharya et al. (2003)	Research & development (R&D) costs and write-offs of purchased in-process R&D costs	Infrequent/Non-recurring
Sek and Taylor (2011)	Charge to provide for bad and doubtful debts-economic cycle	Infrequent/Non-recurring
	Impairment expenses	Infrequent/Non-recurring
(Black and Christensen (2009); Isidro and Marques 2013)	Research and development (R&D) costs and write-offs of purchased in-process R&D	Recurring
	Depreciation and amortization costs	Recurring
	Stock-based compensation costs	Recurring
	Tax-related items	Recurring
	Interest-related items	Recurring
	Adjustments to arrive at funds from operations	Recurring

Moreover, disclosures of non-GAAP measures demonstrate that companies assert they are portraying core performance to investors by removing non-core (transitory) items from GAAP financial measures (Marques 2006). Thus, the study by Black et al. (2012) argues that exclusion of one-off items may be reasonable to represent core

performance of companies, however, a number of companies exclude recurring operating expense items opportunistically. A further study by Black and Christensen (2009) and Black et al. (2012) substantiate that disclosure of manager-adjusted non-GAAP earnings in press releases has attracted extensive attention in recent times. In particular, companies are excluding recurring items to meet strategic targets. Moreover, Isidro and Marques (2013) documented that performance based compensation influences adjustments of recurring items more frequently than others.

In analyzing excluded expense items, Black and Christensen (2009) categorized several types of adjustments as 'infrequent' items, justifiable because of their one-time/non-recurring nature. For example, restructuring charges, gains and losses on sales of assets, merger and acquisition related costs, early debt retirement, and stock related expenses (preferred stock conversion and Initial Public Offering (IPO) expenses). In addition, this study categorizes the research and development (R&D) costs and write-offs of purchased in-process R&D, depreciation and amortization costs, stock-based compensation costs, tax-related items, interest-related items, and adjustments, to arrive at funds from operations as 'recurring' items. Similarly, Isidro and Marques (2013) measured the adjustments of R&D expenses, depreciation expenses, stock-based compensation items, and tax-related values as recurring adjustments.

However, Bhattacharya et al. (2003) confirmed that adjustments of research and development (R&D) costs and write-offs of purchased in-process R&D costs are incrementally informative to indicate more value relevance to investors and are thereby considered one-time exclusions the same as other transitory exclusions.

Moreover, the case study conducted by Sek and Taylor (2011) confirmed adjustments for gains and losses from the fair value movements in hedges to protect against foreign exchange movements has become more frequent in Australia. Also, a number of adjustments are unique to companies and to circumstances and so are reported as one-off items, such as bad and doubtful debts-economic cycle and impairment expenses following the global downturn in 2008. Likewise, another study in the Australian context documented that the most common adjustments are gains/losses on disposal of assets, business restructuring costs, depreciation/amortization, and impairment losses (Cameron, Percy and Clarke 2012).

This study takes into account the influence of short-term incentives, long-term incentives, and base salary in relation to decisions to exclude expense items when non-GAAP financial measures have been disclosed. Accordingly, this study investigates what are the exclusions of expense items when non-GAAP financial measures have been disclosed, then considers each type of exclusion of expense item in the research framework to examine the relationship between the decision to exclude expense items and the components of remuneration structure of CEOs. Thus, this study develops the following hypothesis:

Hypothesis 2: *The decision to exclude expense items is more likely when components (base, STI and LTI) of remuneration structure of CEOs are significantly related to the decision.*

Hypothesis 2 has been considered the common hypothesis for excluded expense items because the actual number and categories (recurring and non-recurring) of the excluded expense items are not known until the investigation of excluded expense is finished. To investigate the relationship, the actual number of logistic regression equation will be developed in the methodology section based on the actual number and categories of excluded expense items.

2.5 Third hypothesis development

Finally, this study examines the influence of short-term incentives, long-term incentives, and base salary on the decision to provide reconciliation between non-GAAP and GAAP metrics when using non-GAAP financial measures. Schkade and Kleinmuntz (1994) have documented that the mere presence of information in disclosures is not sufficient to understand the details of the information provided. Also, the level of difficulties in processing that information depends on the information presentation approach. As a result, the influence of the same information differs depending on the way that piece of information is presented.

Literature on non-GAAP disclosure confirms that reconciliation information is crucial to stakeholders as an additional source of information. For example, Kolev, Marquardt, and McVay (2008) affirm that directly comparable GAAP and non-GAAP figures are important for decision making. In Regulation G, reconciliation is a

requirement that may enhance analysts' capability to explain core earnings of companies. In another study, Andersson and Hellman (2007) document that it is likely for analysts to use reconciliation to understand more details related to non-GAAP reporting. Moreover, Johnson and Schwartz (2005) demonstrated that it is impractical for analysts, researchers, or investors to completely reconcile firms' reported non-GAAP earnings with GAAP earnings in the absence of detailed information about these non-GAAP adjustments.

In addition, the literature also documented that transparent reconciliations between non-GAAP earnings and GAAP earnings can reduce the possibility of misinterpretation and, as a result, these are particularly useful to small and unsophisticated investors (Young 2014). However, Elliott (2006) asserts the availability of a parallel reconciliation between GAAP and non-GAAP figures likely mitigates amateur investors' dependence on the non-GAAP disclosure but analysts' reliance is likely unchanged.

Further evidence reveals that disclosures of reconciliation between non-GAAP and GAAP figures can reduce the effects of prominence of non-GAAP metrics in earnings announcements (Elliott 2006). Also, Marques (2010) examined the information content of disclosures in reconciling non-GAAP to GAAP and other financial statements by analyzing quarterly earnings press releases. The findings from the study confirm that investors consider GAAP income statement value irrelevant if necessary information is presented in the form of reconciliation, in non-GAAP income statement and in balance sheet. However, Allee et al. (2007) compared less-sophisticated and more-sophisticated investors to investigate how they deal with and explain non-GAAP earnings information. Evidence from that study also suggests that presence of reconciliation does not prominently intensify investors' reliance on management-provided non-GAAP numbers.

Moreover, research has demonstrated that companies disclose reconciliation information in several ways. For example, in analyzing the effect of non-GAAP and GAAP metrics on investors, Marques (2010) grouped reconciliation information into seven categories: 1) side-by-side reconciliation; 2) reconciliation from GAAP to non-GAAP Earnings per Share (EPS); 3) reconciliation from GAAP to non-GAAP net income; 4) reconciliation from other non-GAAP measures to GAAP measure; 5)

written explanation of nature and amount of adjustments (aggregated basis); 6) written explanation of nature and amount of adjustments (per share basis); and 7) written explanation of nature of adjustments. Therefore, reconciliation information can be disclosed in a number of ways as reported by company management. However, Elliott (2006) considered only one category of side-by-side reconciliation to examine the effects of pro forma emphasis and reconciliations in earnings announcements on investors. Moreover, Allee et al. (2007) mentioned that companies use a number of different formats in providing reconciliation and coded various forms of reconciliation used by the companies as: 1) any type of reconciliation, or 2) side-by-side reconciliation.

This study investigates whether companies have provided any reconciliation between NGFM and GAAP metrics and examines whether a company has disclosed reconciliation when non-GAAP financial measures have been disclosed. In examining reconciliation, this study has regarded the calculation as reconciliation where non-GAAP items are adjusted with a profit amount that includes either GAAP profit or non-GAAP profit. As long as non-GAAP items are reconciled with GAAP-profit and/or non-GAAP profit, this indicates these non-GAAP items have consequences for these profit amounts.

Moreover, Frederickson and Miller (2004) examined the effects of non-GAAP earnings disclosures on analysts' and non-professional investors' equity valuation judgments. In addition, this study documents that explicit reconciliations between non-GAAP and GAAP earnings signifies remarkable transparency of disclosed information. In examining the valuation impact of reconciliation between non-GAAP earnings and GAAP earnings, Zhang and Zheng (2011) measured reconciliation quality and substantiated that low reconciliation quality is associated with mispricing, but high reconciliation quality is not. In addition, this study provides evidence of no mispricing related to non-GAAP earnings in the post-Regulation G period because Regulation G incorporates the requirement for reconciliation in non-GAAP disclosures. In analyzing the effects of compensation on non-GAAP disclosures, Isidro and Marques (2013) assert that investors can understand and, thus, consider reconciliation on the valuation process. Consequently, when companies are

opportunistically motivated, they do not provide reconciliation information in earnings announcements' disclosures.

In summarizing the discussion, prior research demonstrates that reconciliation information between GAAP and non-GAAP figures is important for investors. Also, absence of reconciliation of information is considered as opportunistic motivator of the management.

In contrast, ongoing regulatory improvements and reforms in voluntary disclosures of non-GAAP information are in place to ensure information supply in a symmetric fashion in the best interests of investors. Following the SOX Act, the US Securities and Exchange Commission issued Regulation G in 2003 to ensure transparent disclosures and reconciliation between GAAP earnings and non-GAAP earnings (Black et al. 2012; Jennings and Marques 2011). Entwistle, Feltham and Mbagwu 2006 confirm 1% of non-GAAP disclosures in the post-SOX period were potentially misleading compared to 10% in the pre-SOX period. Thus, the endeavours of regulators were effective and necessary to increase investors' confidence in the non-GAAP disclosures.

During the same period of 2005, ASIC introduced a consultation paper outlining guidelines for the disclosure of non-GAAP information. In 2011, subsequent to the consultation paper and draft guidelines, ASIC published Regulatory Guide 230 that provides guidance on the use of financial information in financial reports where such information is presented without complying with accounting standards (Australian Securities and Investments Commission 2011, December). In RG230, ASIC states that companies are required to provide reconciliation between non-GAAP and GAAP financial information including explanation. Moreover Cameron, Percy, and Clarke (2012) confirm that most companies provided reconciliation either in full or in part providing sufficient information for stakeholders.

In conjunction with the regulatory improvements, the nature of the remuneration structure of CEOs in Australia provides support to suggest that companies are taking an altruistic point of view to provide reconciliation between non-GAAP and GAAP information. Consequently, this study hypothesizes the relationship between the

decision to provide reconciliation between non-GAAP and GAAP measures and components of remuneration structure of CEOs as follows:

Hypothesis 3A: *The decision to provide reconciliation between non-GAAP financial measures and GAAP measures is more likely when base salary in remuneration structure of CEOs is significantly related to the decision.*

Hypothesis 3B: *The decision to provide reconciliation between non-GAAP financial measures and GAAP measures is more likely when short-term incentive in remuneration structure of CEOs is significantly related to the decision.*

Hypothesis 3C: *The decision to provide reconciliation between non-GAAP financial measures and GAAP measures is more likely when long-term incentive in remuneration structure of CEOs is significantly related to the decision.*

2.6 Conclusion

This chapter has discussed the previous studies in the area of non-GAAP financial measures and CEO remuneration and thus related the theoretical framework of this empirical study. In addition, this chapter has developed the hypothesis of this study by providing the grounds of those hypotheses from the previous studies. The following chapter proceeds as methodology of this study.

Chapter Three: Methodology

3.1 Methodology Overview

The focus of this empirical study is to examine the relationship between individual components of the remuneration structure of CEOs and decisions to disclose non-GAAP financial measures (NGFM). Therefore, this study considers three types of decision made by company management regarding disclosures of NGFM and thereby measures the relationship between components of remuneration structure of CEOs and each type of decision. Accordingly, these relationships have been examined by the following common equation:

$$Y = f(\text{components of remuneration of CEOs} + \text{other factors of companies}) \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (1)$$

Here, the dependent variable is Y, the decision made by management of the companies regarding disclosures of NGFM, and the independent variables are the components of remuneration structure of CEOs. The other factors are control variables associated with companies.

3.2 Measurement of the decisions regarding non-GAAP financial disclosures

The literature on non-GAAP financial measures disclosure suggests a number of proxies have been used to measure decisions regarding NGFM disclosures. Based on previous studies, this study has considered three types of decision regarding disclosures of NGFM to examine the relationship between the decisions regarding disclosures of NGFM and components of remuneration structure of CEOs.

Firstly, this study measures the relationship between the decision to disclose NGFM in the section 'results for announcement to the market' of preliminary final reports and the components of remuneration of CEOs. Here, this study has termed this section 'Results for Announcement to the Market' (RAM). Additionally, this study considers the other sections of the preliminary final report to examine the relationships because RAM is a mandatorily identified title that include key

information while other sections of the preliminary final report have no such mandatory heading requirement. Marques (2006) and Isidro and Marques (2013) have examined non-GAAP financial measures disclosure decisions in earnings announcements by considering the indicator variable as either '1' or '0'. These models have demonstrated that if a company has disclosed non-GAAP financial measures in the earnings announcements it has been measured by the indicator variable '1' and '0' otherwise.

Secondly, the literature on non-GAAP metrics disclosures has documented that companies exclude a number of expense items when NGFMs have been disclosed. These exclusions of expense items include: below-the-line items, non-recurring expense items, and recurring expense items (Bhattacharya et al. 2003; Black and Christensen 2009; Isidro and Marques 2013; Marques 2006; Sek and Taylor 2011). This study summarizes the excluded expense items from the most relevant recent studies and presents them in Appendix: Table A.3.3. If expense items have been excluded when disclosing NGFM, this has been measured by assigning the indicator variable '1' or '0' otherwise (Brown et al. 2012; Black and Christensen 2009; Black et al. 2012; Isidro and Marques 2013). Based on this evidence, this study examines the relationship between the decision to exclude expense items when NGFM has been disclosed and the component of remuneration of CEOs.

When a company has excluded the expense items, provided that NGFM has been disclosed, the company has been assigned the code '1' and '0' otherwise. Thus, the decision of excluding expense items is the related indicator variable which is either '1' or '0'.

In the first phase, this study records all excluded expenses items found in the cases where NGFM has been disclosed by reading the preliminary final report for every fiscal year of each company to determine total types of excluded expense items found. In the second phase, coding has been assigned to each company for the type of excluded expense item found for that particular company.

This example should help understand the coding phases. It is assumed that the investigation of the entire sample confirms ten types of expense items have been excluded by all sample companies provided they have disclosed NGFM.

Furthermore, it is assumed that company APA has excluded two types of expense items while it has disclosed NGFM. As a result, company APA has been assigned the code '1' for both types of excluded expense items and the code '0' has been assigned to the remaining eight types of excluded expense items.

Thirdly, literature on non-GAAP metrics suggests that researchers have measured the decision to provide reconciliation between NGFM and GAAP measures in cases where NGFM have been disclosed, by assigning the indicator variable. If a reconciliation has been provided where NGFM have been disclosed, it has been assigned the code '1' or '0' otherwise (Isidro and Marques 2013; Marques 2010). This study investigates whether the companies have provided any reconciliation between NGFM and GAAP metrics. In view of this, the study examines whether a company has disclosed reconciliation when a NGFM has been disclosed. In examining reconciliation, this study regards the phenomenon as reconciliation when non-GAAP items are adjusted with profit amount, whether it is GAAP profit or non-GAAP profit. As long as the non-GAAP items are reconciled with GAAP-profit and/or non-GAAP profit, this indicates these non-GAAP items have implications for these profit amounts. This study has defined these cases as RECON (reconciliation between NGFM and GAAP measures when NGFM has been disclosed). When a company has provided the reconciliation it has been assigned the code '1' or '0' otherwise. Thus, the indicator variable for the decision to provide reconciliation between non-GAAP financial measures and GAAP measures is either '1' or '0'.

3.3 Rationalization of database selection and sample collection procedure: non-GAAP financial measures

Marques (2006) highlighted methodological approaches undertaken during prior research on non-GAAP disclosures and points out two fundamental methodological aspects. One group of researchers have examined non-GAAP measures by selecting commercial databases as a proxy for non-GAAP measures. For example, Bradshaw and Sloan (2002), Brown and Sivakumar (2003), Cohen, Hann, and Ogneva (2007), Collins, Li, and Xie (2009), and Doyle, Lundholm, and Soliman (2003) have considered the I/B/E/S database as a proxy for non-GAAP metrics. Selecting a proxy for non-GAAP metrics means that a database includes non-GAAP information for all

companies regardless of whether any such disclosure has been made by companies and, for this reason, all companies have reported non-GAAP disclosures.

Marques (2006) stated a second group of researchers have used key words search strings to identify instances of non-GAAP disclosures and hand-collected those identified data. For example, Bhattacharya et al. (2003), Black and Christensen (2009)m and Black et al. (2012) have collected non-GAAP financial measures from press releases by searching key words to identify the occurrences of non-GAAP metrics. Likewise, Lougee and Marquardt (2004) have collected samples by searching key words from wire service reports in the Lexis-Nexis Academic Universe database to collect non-GAAP earnings information.

Similar to Marques (2006), this study disagrees with the approach that considers proxy data for non-GAAP disclosures. Moreover, in agreement with Marques (2006), this study opposes the use of keywords search strings to identify instances for non-GAAP financial measures and subsequently to collect those data. The most important reason is that the proxy for non-GAAP disclosures considers all companies disclose non-GAAP metrics regardless of whether any such disclosure is made by companies. For this reason, this study has considered the methodology of reading each RAM for the entire sample to identify which specific company has disclosed non-GAAP financial measures and hand-collect these data. Moreover, this study agrees with the affirmation by Marques (2006) that the same company may change terminology to report its non-GAAP metrics. As such, this study does not undertake the methodology of keyword search strings to identify non-GAAP financial measures. Thus, this study contributes to extend the literature on non-GAAP disclosure by investigating the preliminary final report by reading and hand-collecting the data without relying on proxies for non-GAAP disclosures and keyword search strings.

To hand-collect non-GAAP financial measures, this study has considered the measures consistent with GAAP measures. This approach is substantiated by previous research, for example, Marques (2006) considered measures in line with the definition of accounting standards, excluding financial measures consistent with GAAP and considering the remaining measures non-GAAP financial measures. Marques (2006) also considered four measures consistent with GAAP measures to determine non-GAAP financial measures: I) earnings before or after discontinued

operations; II) extraordinary items; III) retroactive application of accounting changes; and IV) operating income. In line with Marques, this study has taken into account those four measures and, thus, only hand-collected the non-GAAP financial measures.

3.4 Data collection

Dependent variables

This study has hand-collected data by reading the preliminary final reports obtained from the DatAnalysis Premium (Morningstar) database for S&P/ASX 50 companies for the fiscal years 2010–2012. The S&P/ASX 50 includes the large cap universe for the Australian equity market, and is comprised of the 50 largest stocks by float-adjusted market capitalization to represent approximately 63 percent of Australian equity market capitalization.

A total 166 reports comprised of 148 preliminary final reports and 18 annual reports have been read to collect data regarding non-GAAP financial measures, exclusion of expense items, and reconciliation of non-GAAP measures. Thus, these 166 reports are the source documents for data related to the dependent variables of this study.

During the fiscal years 2010 to 2012, a number of companies' ASX tickers changed. The seven companies that changed ASX tickers during the time period of this study are AGL, NVN, DXS, SYD, AZJ, WFD, and SCG with their previous tickers AGK, CFX, DRT, MAP, QRN, WDC and WRT respectively.

Supplementary Data Source

In the investigation of preliminary final reports, this study identified eight companies that mentioned the non-GAAP information should be read in conjunction with the company's annual report but these companies did not accompany the annual report with preliminary final reports. As a result, this study has collected the annual report separately from the database and subsequently examined these additional documents. These annual reports have been considered as other sections. Table 3.1 presents the list of eight companies for which additional annual reports were collected.

Table 3.1: Annual reports have been collected for the related companies and fiscal years

No	Company	FYs	Number of FYs
1	ASX	2010; 2011; 2012	3
2	FMG	2010; 2011	2
3	GMG	2010; 2011	2
4	GPT	2011; 2012	2
5	SGP	2011; 2012	2
6	SYD	2010; 2011	2
7	TOL	2010; 2011	2
8	WPL	2010; 2011; 2012	3
		Total number of FYs	18

Exclusions of observations and determination of total size of observations

In the process of non-GAAP financial measures' data collection, a number of fiscal years (FY) have been excluded. FY 2010 for Westfield Retail Trust, ASX code WRT recently changed to SCG, was excluded because listing of the company took place on 13 December 2010. As a result, no data were available for FY 2010 for WRT. Another FY 2010 for Aurizon Holdings ltd, ASX code AZJ, previous code QRN, was excluded because AZJ did not become a listed company until November 2010. Prior to this, yearly financial reports were not required externally and so are not available. Consequently, the total number of non-GAAP information has been reduced to 148 FY, shown in Table 3.2.

Table 3.2: Calculation of total observations for non-GAAP information

No of company	50
Fiscal year (2010, 2011 and 2012)	3
Observation size(50x3)	150
Exclusion[1]	2
Final observations size for three fiscal years (150-2)	**148**

Data collection: independent variables

This study has collected CEOs' remuneration data from the Securities Industry Research Centre of Asia Pacific (SIRCA) database for S&P/ASX50 companies for

[1] Aurizon Holdings ltd, ASX code AZJ and the previous code QRN) year 2010 is not available on the database as well as on the company website. Aurizon, formerly QR National, formerly Queensland Rail, did not become a listed company until November 2010.Prior to this, yearly financial reports were not required to be made externally and so they are not available. Westfield Retail Trust, ASX code WRT recently changed to SCG) year 2010 is not included because of the listing of the company took place on 13th December 2010. This is only less than a month time in the year 2010. As a result, no data is available for the fiscal year 2010 for this company.

fiscal years 2010 to 2012. Moreover, hand-collected data from the annual reports were obtained from the Connect 4 database for the companies missing from the SIRCA database.

Non-coverage of SIRCA Database

The 'corporate governance database coverage' in SIRCA has explained the coverage status of the database. A number of companies were excluded because they were out of the scope of the database. Moreover, the coverage document has articulated the basis of exclusions that include the company/year is a fund, trust, a structure issuing stapled securities, a foreign exempt company as defined by ASX, delisted, under administration, suspension, receivership or liquidation. Consequently, the SIRCA database included 112 observations presented in Appendix: Table A.3.1.

Missing and excluded observations: CEO-remuneration

In the process of collecting remuneration data for CEOs, the FY 2010 for AZJ was excluded because the sample company was listed at the end of fiscal year 2010[2]. Moreover, two companies (CFX and WRT) in the sample were excluded because they are trusts. Merhebi et al. (2006) confirm that trusts usually do not have CEOs in their management.

Hand-collected data: CEO-remuneration

After collecting 112 observations from the SIRCA database and considering seven missing observations, the remaining 31 observations included 11 companies. To collect CEOs' remuneration data for these 31 observations, annual reports of the 11 companies for fiscal years 2010–2012 were obtained from the 'Connect 4' database. After examining the relevant sections of these annual reports, the required remuneration data were hand-collected. Thus, the calculation of total observations is presented in Table 3.3.

[2] Aurizon, formerly QR National, formerly Queensland Rail, did not become a listed company until November 2010. Prior to this, yearly financial reports were not required to be made externally and so they are not available.

Table 3.3: Calculation of observations for remuneration data for CEOs

Description	No of observations
No of sample companies	50
No of fiscal years: 2010; 2011 and 2012	3
Total observations (50x3)	150
No of excluded and missing observations (6+1)	7
No of final observations (150-7)	*143*
No of observations collected from SIRCA database	112
No of observations hand-collected (143-112)	31
No of observations collected (112+31)	*143*

Co-CEOs

In the process of hand-collecting data for the 31 observations not covered by the SIRCA database, this study found three companies had more than one CEO position in their management structure. Accordingly, the individual remuneration amount for each CEO was collected then the amounts were aggregated to obtain the total remuneration for CEOs for these three companies (MGR, SGP, and WDC). The details of the CEO position and number of CEOs are presented in Appendix: Table A.3.2.

Data collection: control variables

The control variables were collected from the DatAnalysis Premium (Morningstar) database and S&P Capital IQ database for fiscal years 2010 to 2012. Intangible assets were collected from S&P Capital IQ and the rest of the control variables (variability of profitability, leverage, growth, assets and market capitalization) from DatAnalysis Premium.

Data analysis statistical software

This study analyzed statistical measures by using the statistical software package Stata SE 11.1.

3.5 The independent variables: components of remuneration structure of (chief executive officer) CEOs

In the research framework of this study, components of the remuneration structure of chief executive officers (CEOs) are the independent variables. This study considers the individual components of remuneration structure of CEOs to examine the relationship between the components of the remuneration structure and decisions regarding disclosures of NGFM. Devers et al. (2007) assert that individual elements of executive remuneration reveal more comprehensive insight than might be usually perceived by analyzing the total remuneration. Thus, it supports recent criticisms of studies' inadequacy whereby research requires expansion to include individual elements of executive remuneration structure. To address this issue, this study examines the impact of individual components of remuneration on various decisions regarding disclosures of NGFM. To analyze how the individual component of remuneration influences the disclosure decisions of NGFM, this study has considered all three components of remuneration structure. These components of remuneration structure of CEOs are: base salary (BASE), short-term incentives (STI), and long-term-incentives (LTI).

3.6 Definition of independent variables

In the SIRCA database the items included in remuneration structure are explained in the corporate governance data dictionary. In that document, total remuneration, excluding long-term compensation, is presented as a summation of nine items: 1) base salary; 2) cash bonus; 3) short-term compensation including other short-term compensations not included by other fields; 4) committee fees that are the amount paid for a member of a board subcommittee; 5) directors fees for attending directors' meetings; 6) final pay-out for termination or lump sum retirement payments; 7) superannuation, which is the contribution during the year; 8) non-pecuniary benefits that are non-monetary; and 9) other compensation, which is the compensation amount that has not been captured by other fields.

This study excluded five items from the above nine items because these are not relevant to this study. The excluded items are: 1) committee fees; 2) directors' fees; 3) final pay-out; 4) non-pecuniary benefits; and 5) other compensation. As a result,

this study considered four items from the database to analyze base salary and short-term incentives. This study has defined the base salary component (BASE) as the summation of base salary and superannuation, and short-term incentives (STI) as the summation of cash bonus and other short-term compensation not incorporated by other items.

Similarly, the corporate governance data dictionary document in the SIRCA database has defined the total remuneration, including long-term compensation, as the sum of the twelve items. These twelve items comprise three items reported for long-term compensation and the nine items already explained for base salary and short-term incentives. From the three items reported for long-term compensation in the database, two items were not relevant to this study and, thus, were excluded: 1) long service leave, the amount accrued during the year for long service leave; and 2) other long-term compensation, the amount reported as other long-term compensation where most of the components cannot be identified. Consequently, this study has considered long-term compensation as LTI (long-term incentives). Instead, long-term compensation includes various types of equities used by the companies to allocate long-term compensation for their CEOs. These equities include options, options and equity, ordinary equity, performance rights, and others.

3.7 Translation of presentation currency other than Australian dollar

This study found nine companies with a presentation currency in US$ rather than A$. Since the SIRCA database did not provide the remuneration amount of those companies in A$, this study has converted those US$ remuneration amounts into A$ amounts. This translation of US$ remuneration amount was intended to maintain uniformity across study samples.

In converting the US$ remuneration amount for CEOs to A$, this study has considered the actual exchange rate used by the particular company rather than applying a common exchange rate for all companies.

While converting US$ remuneration to A$, the same base currency and quoted currency are used, because some companies reported the exchange rate as A$1 to

US$ (AUD/USD) and others have reported the exchange rate as US$1 to A$ (USD/AUD). To maintain similarity in converting the US$ remuneration amount to A$, this study has followed the base and quoted currency as A$1 to US$ (AUD/USD). Consequently, the exchange rates reported as US$1 to A$ (USD/AUD) are recalculated as A$1 to US$ (AUD/USD) to convert the US$ remuneration amount to A$ amount. The calculation in converting US$ remuneration amount to A$ amount is presented in Appendix: Table A.3.4.

Only one sample (WDC) reported one of its joint-CEOs' remuneration in US$ and the other CEOs remuneration in A$. In this case, the US$ remuneration amount was converted to A$ amount and the two individual amounts have been aggregated to obtain the total remuneration amount for the company in A$. The calculation of remuneration from US$ to AU$ is presented in Appendix: Table A.3.5.

3.8 Statutory remuneration versus actual remuneration

The values of statutory remuneration are measured according to the accounting standards and statutory requirements. In accordance with the statutory obligations, companies disclose the details of their remuneration structure, including the components of remuneration, in their remuneration report. The Australian Accounting Standards Board (AASB) has adopted AASB 2 'Share-based Payment' that is equivalent to International Financial Reporting Standards 2 (IFRS 2). This accounting standard (AASB 2) is in effect for annual reporting periods beginning on or after 1 January 2005.

In contrast, actual total remuneration is the actual amount received in the current year and usually differs from the values of statutory remuneration. One of the most important reasons is, as stated by share-based payment standards, that companies are obliged to disclose fair value of equity granted. This fair value is calculated using a valuation technique provided no market price is available. Afterwards, this amount is progressively expensed over the relevant vesting period, irrespective of the value (if any) received by the executive in the long run. Generally, the relevant performance period varies among companies depending on company remuneration policies. Moreover, actual remuneration includes deferred STI and retention, which were granted in previous years and vested in the current year. As a result, some

components (at least LTI) of actual remuneration do not represent the current year's granted remuneration amount.

Based on these facts, this study has considered the statutory remuneration amount for CEOs to investigate the relationship with the current year's disclosures of non-GAAP financial measures. Accordingly, statutory remunerations for CEOs have been collected from the database and annual reports that include base salary, STI, and LTI.

3.9 Control variable

This study has considered a number of factors of companies that may impact on measuring the relationship between the remuneration of CEOs and the NGFM.

Prior studies suggest that companies' information environment is associated with company size. For example, Atiase (1985), Beekes and Brown (2006), and Shores (1990) have considered company size in analyzing earnings disclosures. Moreover, the study of Black and Christensen (2009) argues that difference in firm size should be controlled by incorporating the total assets in measuring opportunism of non-GAAP disclosure. Accordingly, this study controls the size of companies by considering ASSETS, which is the natural log value of total assets. Thus, the control variable ASSETS has been incorporated in the research framework to examine the relationship associated with the decision to disclose NGFM in RAM, the decision to disclose NGFM in OTH, and the decision to provide reconciliations.

Isidro and Marques (2013) have examined the exclusion of expense items in non-GAAP disclosures and controlled company size by considering market capitalization. Accordingly, this study considers the natural log value of market capitalization, MARKETCAP, to control company size in examining the exclusion of expense items in decisions to disclose NGFM.

Empirical evidence suggests that high growth companies are more likely to provide voluntary non-GAAP disclosures (Lougee and Marquardt 2004). The studies of Tasker (1998) and Lougee and Marquardt (2004) measure firms' growth by using the market-to-book ratio. Accordingly, this study controls growth rate of companies by

considering market price to book value. Thus, the control variable GROWTH has been incorporated into the research framework to examine the relationships.

Empirical study also provides evidence that highly leveraged companies are more likely to provide disclosures of NGFM (Lougee and Marquardt 2004). Moreover, Marques (2006) has measured company leverage, dividing total liabilities by total equity, in examining NGFM frequencies and usefulness. Accordingly, this study controls the firm leverage level in measuring NGFM disclosure decisions by incorporating the control variable LEVERAGE, defined as total liabilities divided by total equity.

Prior studies by Isidro and Marques (2013), Lougee and Marquardt (2004), and Marques (2006) affirm the association between company profit variability and NGFM disclosures. To measure profit variability, empirical studies have considered the profit variability of companies by calculating the standard deviation of prior fiscal years' return on equity. Accordingly, this study controls profit variability by calculating the standard deviations of return on equity for the prior three years, thus, the related control variable is STD_ROE.

Empirical study also suggests that the intensity of a company's intangible assets is related to disclosure of non-GAAP financial measures. For example, Marques (2006), Lougee and Marquardt (2004), and Isidro and Marques (2013) have examined the intensity of intangible assets with NGFM. Following previous empirical studies, the intensity of intangible assets has also been considered in this study. The variable INTAN has been defined as total intangible assets divided by total assets to control the intensity of companies' intangible assets.

Variable transformation

Analysis of large numbers for a particular variable creates difficulty in interpretation of results. To avoid large numbers in the results, researchers have followed the typical convention of using the natural logarithm value of a particular variable. In this study, a number of variables have been transformed to a natural log value to present the analysis and interpretations in a simplified manner. In transforming natural log, zero values have been replaced by one, and then the natural log value has been calculated to obtain a zero value of the variable. For any negative value, the

natural log has been calculated considering the positive value and then a negative sign has been assigned to avoid missing values. In view of this, this study has calculated the natural log value of base salary, STI, LTI, total assets, and market capitalization.

3.10 Summary of operationalization of dependent variables, independent variables and control variables

The Table 3.4 summarizes the variables have been analyzed in this study. The dependent variables which are related to the first type of decision to disclose NGFM in preliminary final report are RAM and OTH. The dependent variables which are related to the second type of decision to exclude expense items when NGFMs have been disclosed are exploratory in nature in this study. In the first phase, this study has investigated what are the actual expense items have been excluded by the companies and in the second phase it has investigated which companies have excluded those expense items. Until this phase of investigation has been accomplished the list of actual excluded expense items are not revealed so as the dependent variables which are related to the second type of decision to exclude expense items when NGFMs have been disclosed. From these two phases of investigation of the excluded expense items, this study has substantiated that there are four types of recurring expenses excluded by companies when NGFMs have been disclosed in preliminary final reports. These four recurring expense items are: 1) depreciation and amortization, 2) tax related items, 3) interest related expense items, and 4) stock-based compensation costs and accordingly this study considered the variables are as D&A, TAX, INTER and STOCKCOMP respectively. Furthermore, this study has substantiated seven types of non-recurring expenses excluded by companies when NGFMs have been disclosed in preliminary final reports. These seven non-recurring expense items are: 1) losses on sales of assets, 2) merger and acquisition related costs, 3) impairment expenses, 4) restructuring charges, 5) early debt retirement expenses, 6) bad and doubtful debts related items, and 7) other items not included in the rest of the categories and thus this study has conceptualized the variables are as SOA, M&A, IMPAIR, RESTRUC, DEBTRET, BADDEBT and OTX respectively. The dependent variables which are related to the third type of decision to provide reconciliation between NGFM and GAAP measures (RECON).

The independent variables of this study include the three components that comprises of remuneration of CEO are BASE, STI and LTI. Based on the prior studies, this study has also considered six control variables which have been explained and justified in the previous section "control variables" are as follows: INTAN, STD_ROE, LEVERAGE, GROWTH, ASSETS and MARKETCAP.

Table 3.4: The list of variable definitions, sources and database

No	Variable definitions	Source	Database
A.	***Dependent variables: the decision to disclose non-GAAP financial measures (NGFM):*** 1. Decision to disclose NGFM in preliminary final report: I. Decision to disclose NGFM in results for announcement to the market of preliminary final report ***(RAM)*** II. Decision to disclose NGFM in other sections of preliminary final report ***(OTH)*** 2. Decision to exclude expense items when NGFMs have been disclosed: i. Decision to exclude depreciation & amortization expense items when NGFMs have been disclosed ***(D&A)*** ii. Decision to exclude tax related expense items when NGFMs have been disclosed ***(TAX)*** iii. Decision to exclude interest related expense items when NGFMs have been disclosed ***(INTER)*** iv. Decision to exclude stock-based compensation costs when NGFMs have been disclosed ***(STOCKCOMP)*** v. Decision to exclude losses on sales of assets when NGFMs have been disclosed ***(SOA)*** vi. Decision to exclude merger and acquisition related costs when NGFMs have been disclosed ***(M&A)*** vii. Decision to exclude impairment expenses when NGFMs have been disclosed ***(IMPAIR)*** viii. Decision to exclude restructuring charges when NGFMs have been disclosed ***(RESTRUC)*** ix. Decision to exclude early debt retirement expenses when NGFMs have been disclosed ***(DEBTRET)*** x. Decision to exclude bad and doubtful	Hand-collected from Preliminary financial report; Annual report(where applicable)	DatAnalysis Morningstar

	debts related items when NGFMs have been disclosed ***(BADDEBT)***		
	xi. Decision to exclude other items when NGFMs have been disclosed ***(OTX)***		
	3. Decision to provide reconciliation between NGFM and GAAP measures ***(RECON)***		
B.	***Independent variables: Components of remuneration structure of CEO:***	Database; Hand-collected from annual report	SIRCA; Connect4
	i. Natural log value of Base salary of CEOs ***(BASE)***		
	i. Natural log value of Short-term incentives of CEOs **(STI)**		
	i. Natural log value of Long-term incentives of CEOs **(LTI)**		
C.	***Control Variables:***		
	i. Intensity of intangibles (Total intangibles/Total Assets) defined as ***INTAN***	Calculated	Capital IQ; DatAnalysis Morningstar
	ii. Variability of profitability (past three years' standard deviation of return on equity) defined as ***STD_ROE***	Calculated	DatAnalysis Morningstar
	iii. Leverage (Total Liabilities/Total Equity) defined as ***LEVERAGE***	Calculated	DatAnalysis Morningstar
	iv. Growth (Price/Book value) defined as ***GROWTH***	Database	DatAnalysis Morningstar
	v. Size of companies (natural log value of Total Assets) defined as ***ASSETS***	Transformed	DatAnalysis Morningstar
	vi. Size of companies (natural log value of Market capitalization) defined as ***MARKETCAP***	Transformed	DatAnalysis Morningstar

3.11 Analyzing the relationship between the decision to disclose NGFM and components of remuneration structure of CEOs

To investigate the relationship between the first type of decision regarding non-GAAP financial measures (NGFM) and components of CEOs' remuneration structure, this study develops the research framework in two ways. The first analyzes the relationship when the disclosure is in a mandatory identified results section (results for announcement to the market) of the preliminary final report. The second analyzes the relationship when disclosure is made in other sections of the preliminary final report.

Accordingly, hypotheses 1A, 1B, and 1C have been developed to examine the first aspect of NGFM disclosure decisions. Hypothesis 1A states that the decision to disclose NGFM in results for announcement to the market is more likely when short-term incentive (STI) of CEOs is significant in the remuneration structure; hypothesis 1B states that the decision to disclose NGFM in results for announcement to the market is less likely when long-term incentive (LTI) of CEOs is significant in the remuneration structure; and hypothesis 1C states that the decision to disclose NGFM in results for announcement to the market is less likely when base salary of CEOs is significant in the remuneration structure. To analyze logistic regression on these three hypotheses, equation 2 has been developed based on the basic model (equation 1) of this study as follows:

$$RAM = \alpha_0 + \alpha_1 BASE + \alpha_2 STI + \alpha_3 LTI + \alpha_4 GROWTH + \alpha_5 STD\_ROE + \alpha_6 LEVERAGE + \alpha_7 ASSETS + \alpha_8 INTAN + \varepsilon \ldots (2)$$

Here,

RAM=	Decision to disclose non-GAAP financial measures in results for announcement to the market measured by assigning code '1' when NGFMs have been disclosed and '0' otherwise.
BASE=	Natural log value of base salary of CEOs.
STI=	Natural log value of short-term incentives of CEOs.
LTI=	Natural log value of long-term incentives of CEOs.
GROWTH=	Price to book value to measure growth of companies.
STD_ROE=	Previous three-year standard deviation of return on equity to measure variability of companies' profitability.
LEVERAGE=	Total liabilities to total equity to measure leverage of companies.
ASSETS=	Natural log value of total assets to consider the size of companies.
INTAN=	Total intangibles to total assets to measure intensity of intangibles of companies.

This logistic regression model examines the dependent variable, which is the decision to disclose non-GAAP financial measures in results for announcement to the market (RAM) in relation to the components of remuneration structure of CEOs and the related control variables. Here, the independent variables are natural log value of base salary (BASE), natural log value of short-term incentives (STI), and natural log value of long-term incentives (LTI). The other company factors include a number of control variables: price to book value to control growth of companies (GROWTH); previous three-year standard deviation of return on equity to control variability of companies' profitability (STD_ROE); total liabilities to total equity to control leverage of companies (LEVERAGE); natural log value of total assets to control the

size of companies (ASSETS; and proportion of total intangibles to total assets to control intensity of companies' intangibles (INTAN).

Likewise, hypotheses 1D, 1E, and 1F have been developed to examine the second aspect of NGFM disclosure decisions. Hypothesis 1D states that the decision to disclose NGFM in other sections of the preliminary final report is less likely when short-term incentive (STI) of CEOs is significant in the remuneration structure; hypothesis 1E states that the decision to disclose NGFM in other sections of the preliminary final report is more likely when long-term incentive (LTI) of CEOs is significant in the remuneration structure; and hypothesis 1F states that the decision to disclose NGFM in other sections of the preliminary final report is more likely when base salary of CEOs is significant in the remuneration structure. To analyze logistic regression on these three hypotheses, equation 3 has been developed based on the common model (equation 1) of this study as follows:

$$OTH = \alpha_0 + \alpha_1 BASE + \alpha_2 STI + \alpha_3 LTI + \alpha_4 GROWTH + \alpha_5 STD\_ROE + \alpha_6 LEVERAGE + \alpha_7 ASSETS + \alpha_8 INTAN + \varepsilon \ldots (3)$$

Here,

OTH=	Decision to disclose non-GAAP financial measures in other sections of preliminary final report measured by assigning code '1' when NGFMs have been disclosed and '0' otherwise.
BASE=	Natural log value of base salary of CEOs.
STI=	Natural log value of short-term incentives of CEOs.
LTI=	Natural log value of long-term incentives of CEOs.
GROWTH=	Price to book value to measure growth of companies.
STD_ROE=	Previous three-year standard deviation of return on equity to measure variability of companies' profitability.
LEVERAGE=	Total liabilities to total equity to measure leverage of companies.
ASSETS=	Natural log value of total assets to consider the size of companies.
INTAN=	Total intangibles to total assets to measure intensity of intangibles of companies.

This logistic regression model examines the dependent variable, which is the decision to disclose non-GAAP financial measures in other sections of the preliminary final report, measured by assigning code '1' when NGFMs have been disclosed and '0' otherwise (OTH) in relation to the components of remuneration structure of CEOs and other factors of companies. Here, the independent variables are natural log value of base salary (BASE), natural log value of short-term incentives (STI), and natural log value of long-term incentives (LTI). The other

factors of company include a number of control variables: price to book value to control growth of companies (GROWTH); previous three-year standard deviation of return on equity to control variability of companies' profitability (STD_ROE); total liabilities to total equity to control leverage of companies (LEVERAGE); natural log value of total assets to consider the size of companies (ASSETS); and proportion of total intangibles to total assets to measure intensity of intangibles of companies (INTAN).

3.12 Analyzing the relationship between the decision to exclude expense items when NGFM has been disclosed and the components of remuneration structure of CEOs

This study investigates the relationship between the second type of decision regarding non-GAAP financial measures and components of remuneration structure of CEOs. After finalizing the coding for the decision to exclude expense items, this study substantiates four types of recurring expenses excluded by companies when NGFMs have been disclosed in preliminary final reports. These four recurring expense items are: 1) depreciation and amortization, 2) tax related items, 3) interest related expense items, and 4) stock-based compensation costs. This study also substantiates seven types of non-recurring expenses excluded by companies when NGFMs have been disclosed in preliminary final reports: 1) losses on sales of assets, 2) merger and acquisition related costs, 3) impairment expenses, 4) restructuring charges, 5) early debt retirement expenses, 6) bad and doubtful debts related items, and 7) other items not included in the rest of the categories. This study does not consider below-the-line exclusions items since they are one-off in nature.

Firstly, this study analyzes the relationship between recurring expense items and the components of remuneration structure of CEOs when NGFMs have been disclosed in preliminary final reports. Secondly, this study analyzes the relationship between non-recurring expense items and the components of remuneration structure of CEOs when NGFMs have been disclosed in preliminary final reports.

Based on hypothesis 2, this study has developed the four equations for each type of recurring expense item that has been revealed in this study. In order to analyze

logistic regression this study has developed these equations based on the common research model (equation 1) as follows:

$$D\&A = \alpha_0 + \alpha_1 BASE + \alpha_2 STI + \alpha_3 LTI + \alpha_4 GROWTH + \alpha_5 STD\_ROE + \alpha_6 LEVERAGE + \alpha_7 MARKETCAP + \varepsilon \ldots (4)$$

$$TAX = \alpha_0 + \alpha_1 BASE + \alpha_2 STI + \alpha_3 LTI + \alpha_4 GROWTH + \alpha_5 STD\_ROE + \alpha_6 LEVERAGE + \alpha_7 MARKETCAP + \varepsilon \ldots (5)$$

$$INTER = \alpha_0 + \alpha_1 BASE + \alpha_2 STI + \alpha_3 LTI + \alpha_4 GROWTH + \alpha_5 STD\_ROE + \alpha_6 LEVERAGE + \alpha_7 MARKETCAP + \varepsilon \ldots (6)$$

$$STOCKCOMP = \alpha_0 + \alpha_1 BASE + \alpha_2 STI + \alpha_3 LTI + \alpha_4 GROWTH + \alpha_5 STD\_ROE + \alpha_6 LEVERAGE + \alpha_7 MARKETCAP + \varepsilon \ldots (7)$$

Here,

D&A=	Decision to exclude depreciation & amortization expense items when non-GAAP financial measures have been disclosed measured by assigning code '1' when companies have excluded and '0' otherwise.
TAX=	Decision to exclude tax related expense items when non-GAAP financial measures have been disclosed measured by assigning code '1' when companies have excluded and '0' otherwise.
INTER=	Decision to exclude interest related expense items when non-GAAP financial measures have been disclosed measured by assigning code '1' when companies have excluded and '0' otherwise.
STOCKCOMP=	Decision to exclude stock-based compensation costs when non-GAAP financial measures have been disclosed measured by assigning code '1' when companies have excluded and '0' otherwise.
BASE=	Natural log value of base salary of CEOs.
STI=	Natural log value of short-term incentives of CEOs.
LTI=	Natural log value of long-term incentives of CEOs.
GROWTH=	Price to book value to measure growth of companies.
STD_ROE=	Previous three-year standard deviation of return on equity to measure variability of companies' profitability.
LEVERAGE=	Total liabilities to total equity to measure leverage of companies.
MARKETCAP=	Natural log value of market capitalization to consider the size of companies.

Equation 4 examines the dependent variable D&A, the decision to exclude depreciation and amortization expense items when non-GAAP financial measures have been disclosed, in relation to the components of remuneration structure of CEOs and other factors of companies. The variable D&A has been measured by assigning code '1' when companies have excluded that item and '0' otherwise.

Equation 5 examines the dependent variable TAX, the decision to exclude tax related expense items when non-GAAP financial measures have been disclosed, in relation to the components of remuneration structure of CEO and other factors of companies. The variable TAX has been measured by assigning code '1' when companies have excluded that item and '0' otherwise.

Equation 6 examines the dependent variable INTER, the decision to exclude interest related expense items, when non-GAAP financial measures have been disclosed, in relation to the components of remuneration structure of CEO and other factors of companies. The variable INTER has been measured by assigning code '1' when companies have excluded that item and '0' otherwise.

Equation 7 examines the dependent variable STOCKCOMP, the decision to exclude stock-based compensation costs when non-GAAP financial measures have been disclosed, in relation to the components of remuneration structure of CEO and other factors of companies. The variable STOCKCOMP has been measured by assigning code '1' when companies have excluded that item and '0' otherwise.

For equations 4 to 7, the independent variables are natural log value of base salary (BASE), natural log value of short-term incentives (STI), and natural log value of long-term incentives (LTI). The other company factors include a number of control variables: price to book value to control growth of companies (GROWTH); previous three-year standard deviation of return on equity to control variability of companies' profitability (STD_ROE); total liabilities to total equity to control leverage of companies (LEVERAGE); and natural log value of market capitalization to control the size of companies (MARKETCAP).

Similarly, based on hypothesis 2, this study has developed seven equations for each type of non-recurring expense item that has been revealed in this study. In order to analyze logistic regression this study has developed these equations based on the common research model (equation 1) as follows:

$$\boldsymbol{SOA} = \alpha_0 + \alpha_1 \boldsymbol{BASE} + \alpha_2 \boldsymbol{STI} + \alpha_3 \boldsymbol{LTI} + \alpha_4 \boldsymbol{GROWTH} + \alpha_5 \boldsymbol{STD\_ROE} + \alpha_6 \boldsymbol{LEVERAGE} + \alpha_7 \boldsymbol{MARKETCAP} + \varepsilon \ldots (8)$$

$$M\ \&\ A = \alpha_0 + \alpha_1 BASE + \alpha_2 STI + \alpha_3 LTI + \alpha_4 GROWTH + \alpha_5 STD\_ROE + \alpha_6 LEVERAGE + \alpha_7 MARKETCAP + \varepsilon \ldots (9)$$

$$IMPAIR = \alpha_0 + \alpha_1 BASE + \alpha_2 STI + \alpha_3 LTI + \alpha_4 GROWTH + \alpha_5 STD\_ROE + \alpha_6 LEVERAGE + \alpha_7 MARKETCAP + \varepsilon \ldots (10)$$

$$RESTRUC = \alpha_0 + \alpha_1 BASE + \alpha_2 STI + \alpha_3 LTI + \alpha_4 GROWTH + \alpha_5 STD\_ROE + \alpha_6 LEVERAGE + \alpha_7 MARKETCAP + \varepsilon \ldots (11)$$

$$DEBTRET = \alpha_0 + \alpha_1 BASE + \alpha_2 STI + \alpha_3 LTI + \alpha_4 GROWTH + \alpha_5 STD\_ROE + \alpha_6 LEVERAGE + \alpha_7 MARKETCAP + \varepsilon \ldots (12)$$

$$BADDEBT = \alpha_0 + \alpha_1 BASE + \alpha_2 STI + \alpha_3 LTI + \alpha_4 GROWTH + \alpha_5 STD\_ROE + \alpha_6 LEVERAGE + \alpha_7 MARKETCAP + \varepsilon \ldots (13)$$

$$OTX = \alpha_0 + \alpha_1 BASE + \alpha_2 STI + \alpha_3 LTI + \alpha_4 GROWTH + \alpha_5 STD\_ROE + \alpha_6 LEVERAGE + \alpha_7 MARKETCAP + \varepsilon \ldots (14)$$

Here,

SOA= Decision to exclude losses on sales of assets when non-GAAP financial measures have been disclosed measured by assigning code ‘1’ when companies have excluded and ‘0’ otherwise.

M&A= Decision to exclude merger & acquisition related costs when non-GAAP financial measures have been disclosed measured by assigning code ‘1’ when companies have excluded and ‘0’ otherwise.

IMPAIR= Decision to exclude impairment expenses when non-GAAP financial measures have been disclosed measured by assigning code ‘1’ when companies have excluded and ‘0’ otherwise.

RESTRUC= Decision to exclude restructuring charges when non-GAAP financial measures have been disclosed measured by assigning code ‘1’ when companies have excluded and ‘0’ otherwise.

DEBTRET= Decision to exclude early debt retirement expenses when non-GAAP financial measures have been disclosed measured by assigning code ‘1’ when companies have excluded and ‘0’ otherwise.

BADDEBT= Decision to exclude bad and doubtful debts related items when non-GAAP financial measures have been disclosed measured by assigning code ‘1’ when companies have excluded and ‘0’

otherwise.

OTX= Decision to exclude other items which are not included in the rest of the categories when non-GAAP financial measures have been disclosed measured by assigning code '1' when companies have excluded and '0' otherwise.

BASE= Natural log value of base salary of CEOs.

STI= Natural log value of short-term incentives of CEOs.

LTI= Natural log value of long-term incentives of CEOs.

GROWTH= Price to book value to measure growth of companies.

STD_ROE= Previous three-year standard deviation of return on equity to measure variability of companies' profitability.

LEVERAGE= Total liabilities to total equity to measure leverage of companies.

MARKETCAP= Natural log value of market capitalization to consider the size of companies.

Equation 8 examines the dependent variable SOA, the decision to exclude losses on sales of assets when non-GAAP financial measures have been disclosed, in relation to the components of remuneration structure of CEO and other factors of companies. The variable SOA has been measured by assigning code '1' when companies have excluded that item and '0' otherwise.

Equation 9 examines the dependent variable M&A, the decision to exclude merger and acquisition related costs when non-GAAP financial measures have been disclosed, in relation to the components of remuneration structure of CEO and other factors of companies. The variable M&A has been measured by assigning code '1' when companies have excluded that item and '0' otherwise.

Equation 10 examines the dependent variable IMPAIR, the decision to exclude impairment expenses when non-GAAP financial measures have been disclosed, in relation to the components of remuneration structure of CEO and other factors of companies. The variable IMPAIR has been measured by assigning code '1' when companies have excluded that item and '0' otherwise.

Equation 11 examines the dependent variable RESTRUC, the decision to exclude restructuring charges when non-GAAP financial measures have been disclosed, in relation to the components of remuneration structure of CEO and other factors of companies. The variable RESTRUC has been measured by assigning code '1' when companies have excluded that item and '0' otherwise.

Equation 12 examines the dependent variable DEBTRET, the decision to exclude early debt retirement expenses when non-GAAP financial measures have been disclosed, in relation to the components of remuneration structure of CEO and other factors of companies. The variable DEBTRET has been measured by assigning code '1' when companies have excluded that item and '0' otherwise.

Equation 13 examines the dependent variable BADDEBT, the decision to exclude bad and doubtful debts related items when non-GAAP financial measures have been disclosed, in relation to the components of remuneration structure of CEO and other factors of companies. The variable BADDEBT has been measured by assigning code '1' when companies have excluded that item and '0' otherwise.

Equation 14 examines the dependent variable OTX, the decision to exclude other items which are not included in the rest of the categories when non-GAAP financial measures have been disclosed, in relation to the components of remuneration structure of CEO and other factors of companies. The variable OTX has been measured by assigning code '1' when companies have excluded that item and '0' otherwise.

For equations 8 to 14, the independent variables are natural log value of base salary (BASE), natural log value of short-term incentives (STI), and natural log value of long-term incentives (LTI). The other company factors include control variables: price to book value to control growth of companies (GROWTH); previous three-year standard deviation of return on equity to control variability of companies' profitability (STD_ROE); total liabilities to total equity to control leverage of companies (LEVERAGE); and natural log value of market capitalization to control the size of companies (MARKETCAP).

3.13 Analyzing the relationship between the decision to provide reconciliation between NGFM and GAAP measures

In order to investigate the third type of decision regarding non-GAAP financial measures (NGFM), this study examines the relationship between decision to provide reconciliation between NGFM and GAAP measures when NGFMs have been disclosed and components of remuneration of CEOs.

Accordingly, hypotheses 3A, 3B, and 3C have been developed to examine the decision to provide reconciliation between non-GAAP and GAAP measures in relation to individual components of remuneration of CEOs.

Hypothesis 3A states that a decision to provide reconciliation between non-GAAP financial measures and GAAP measures when NGFMs have been disclosed is more likely when the base component of remuneration of CEOs is significantly associated with the decision.

Hypothesis 3B states that the decision to provide reconciliation between non-GAAP financial measures and GAAP measures when NGFMs have been disclosed is more likely when the STI component of remuneration of CEOs is significantly associated with the decision.

Hypothesis 3C states that the decision to provide reconciliation between non-GAAP financial measures and GAAP measures when NGFMs have been disclosed is more likely when the LTI component of remuneration of CEOs is significantly associated with the decision. In order to analyze logistic regression on these three hypotheses, equation 15 has been developed based on the common model (equation 1) of this study as follows:

$$RECON = \alpha_0 + \alpha_1 BASE + \alpha_2 STI + \alpha_3 LTI + \alpha_4 GROWTH + \alpha_5 STD\_ROE + \alpha_6 LEVERAGE + \alpha_7 ASSETS + \alpha_8 INTANT + \varepsilon \ldots (15)$$

Here,

RECON=	Decision to provide reconciliation between non-GAAP financial measures and GAAP measures when non-GAAP financial measures have been disclosed by the companies and it has been measured by assigning code '1' when companies have provided reconciliation and '0' otherwise.
BASE=	Natural log value of base salary of CEOs.
STI=	Natural log value of short-term incentives of CEOs.
LTI=	Natural log value of long-term incentives of CEOs.
GROWTH=	Price to book value to measure growth of companies.
STD_ROE=	Previous three-year standard deviation of return on equity to measure variability of companies' profitability.
LEVERAGE=	Total liabilities to total equity to measure leverage of companies.
ASSETS=	Natural log value of total assets to consider the size of companies.
INTAN=	Total intangibles to total assets to measure intensity of intangibles of companies.

The logistic regression model examines the dependent variable that is the decision to provide reconciliation between non-GAAP financial measures and GAAP measures when non-GAAP financial measures have been disclosed (RECON) in relation to the components of remuneration structure of CEOs and other factors of companies. Here, the independent variables are natural log value of base salary (BASE), natural log value of short-term incentives (STI), and natural log value of long-term incentives (LTI). The other company factors include control variables: price to book value to control growth of companies (GROWTH); previous three-year standard deviation of return on equity to control variability of companies' profitability (STD_ROE); total liabilities to total equity to control leverage of companies (LEVERAGE); natural log value of total assets to control the size of companies (ASSETS); and proportion of total intangibles to total assets to control intensity of intangibles of companies (INTAN).

3.14 Conclusion

This chapter of methodology has explained the method that has been adopted based on the previous studies in this area. Also this chapter has included the types of decision regarding non-GAAP financial measures and the measurement of those decisions. Moreover, this chapter explained how the relationships between dependent variables and independent variables have been established including the control variables to incorporate their effect on the relationships. Furthermore, this chapter has stated the source of data collection and the process involved in hand-collecting data by explaining various aspects of data collection sources, limitations of sources and how the limitations have been addressed. Also this chapter has explained the variables included in the analysis and their conceptualization in the research framework. The following chapter 'Results' presents the details of the outcome of this investigation.

Chapter Four: Results

4.1 Overview

In this chapter, the results are presented in two parts. The first includes the descriptive results in relation to the dependent variables and the independent variables. The second presents the results of the relationships between those variables.

The first part of this chapter is sub-divided into the following sections to present the descriptive results of this study:

I. Demonstrating the terminologies of non-GAAP financial measures.
II. Demonstrating the terminologies of non-GAAP financial measures in prior studies.
III. Demonstrating the results related to whether companies have disclosed non-GAAP financial measures in the results for announcement to the market and other sections of preliminary final reports.
IV. Demonstrating disclosures of NGFMs in results for announcement to the market.
V. Demonstrating further insights of NGFMs.
VI. Demonstrating the results of measuring the excluded expense items in disclosing non-GAAP financial measures.
VII. Demonstrating the results of measuring whether companies have provided reconciliation between non-GAAP financial measures and GAAP measures.
VIII. Demonstrating the results of individual components of remuneration of CEOs.
IX. Summary statistics.
X. Pearson correlation matrix.

The second part of this chapter presents the results of measuring the relationship between the three types of decisions regarding the disclosures of non-GAAP financial measures and components of remuneration of CEOs. In relation to the first type of decision, this study developed equations 2 and 3. In relation to the second type of decision, equations 4 to 14 have been developed and, finally, in relation to

the third type of decision, equation 15 has been developed. Accordingly, these equations analyze the hypotheses developed to measure the relationships.

4.2 Terminologies of non-GAAP financial measures

This study substantiates that a number of new terminologies of non-GAAP financial measures have been reported by the companies over the period 2010–2012. For instance, non-IFRS financial measures, non-statutory profit, profit from operations as assessed by directors, one-off adjustments, non-recurring items (NRI), and underlying effective tax rate, have been reported to disclose non-GAAP financial metrics. This study compiles all the terminologies of non-GAAP financial measures disclosed by the companies for each fiscal year (2010–2012) separately in Appendix: Tables A.4.1 to A.4.3.

Results from this study reveal that companies have excluded not only a wide-variety of items to report a particular type of non-GAAP measure, but also have used a particular terminology to report a variety of financial measures. In relation to the reporting of a particular type of non-GAAP measure, a number of companies have excluded a few items whereas other companies have excluded a few additional items to report that particular type of measure. Consequently, these additional excluded items lead to variants of terminology to disclose that particular type of measure. For example, a number of companies have reported the terminology EBITDA to disclose 'earnings before', which is one type of non-GAAP measure. In other cases, companies have reported the terminology Earnings Before Interest, Tax, Depreciation, Amortization and Rent (EBITDAR) to disclose 'earnings before' by excluding one additional item. Similarly, a number of companies have reported the terminology Earnings Before Interest, Tax, Depreciation, Depletion, Exploration, and Impairment (EBITDAX) by excluding a few other items to report 'earnings before'. These examples indicate that terminology of reporting 'earnings before' relies on the items excluded by the companies and, thus, it leads to variants of terminology like EBITDA, EBITDAR, EBITDAX to disclose the particular measure of 'earnings before'.

This study also confirms that usage of a particular terminology, together with various financial measures, leads to a variety of non-GAAP terminologies. Consequently,

terminologies have been developed based on that particular terminology. For example, the particular terminology ‘underlying’ has been reported together with a number of measures such as return on equity, return on capital, operating expense, tax, free cash flow, margin, earnings, and net profit. Consequently, a variety of non-GAAP terminologies have been developed based on the terminology ‘underlying’, such as, ‘underlying profit’, ‘underlying return on equity’, ‘underlying return on capital’, ‘underlying operating expense’, ‘underlying free cash flow’, and ‘underlying effective tax rate’.

4.3 Summary of terminologies of non-GAAP measures in the literature

To understand the insights on non-GAAP terminologies examined by prior studies, this study summarizes non-GAAP terminologies from the most relevant recent empirical research. These studies include: Bhattacharya et al. (2003), Black et al. (2012), Black and Christensen (2009), Cameron, Percy, and Clarke (2012), Entwistle, Feltham, and Mbagwu (2006), Isidro and Marques (2013), Lougee and Marquardt (2004), Marques (2006), Sek and Taylor (2011) and Wallace (2002). Table 4.1 presents the non-GAAP terminologies from the most relevant recent studies.

Examination of prior terminologies suggests that although terminologies differ among studies some terminologies are common. Findings from this study confirm there are seven common terminologies in previous studies: i) adjusted EBIT, ii) adjusted EBITDA, iii) adjusted net income, iv) EBIT, v) EBITDA, vi) normalized earnings, and vii) underlying earnings.

Table 4.1: The list of non-GAAP terminologies substantiated by the most relevant recent empirical studies

Author (Year)	Context	Terminology Found in the Study
Isidro and Marques (2013)	Europe	EBIT; adjusted EBIT; EBITDA; adjusted EBITDA.
(Black et al. 2012)	USA	Original search keywords: Pro forma; pro-forma; proforma. Expanded search string: Earnings excluding; net income excluding; adjusted net income; adjusted loss; cash earnings; earnings before; free cash flow; normalized EPS; normalized earnings; recurring earnings; distributable cash flow; GAAP one-time adjusted; GAAP adjusted; cash loss.
Cameron, Percy and Clarke (2012)	Australia	Variants of EBIT or EBITDA; NPAT excluding; underlying earnings; normalized earnings
Sek and Taylor (2011)	Australia	Profit: cash earnings/profit after tax; cash profit before provisions; operating profit after tax excluding significant transactions; profit after tax excluding significant/non-core items; underlying profit after tax; cash earnings excluding conduit costs; cash basis revenue growth; core earnings. Ratio: cash earnings per share; cash earnings per share ex HK sale; underlying earnings per share; earnings per share excluding goodwill; cash return on equity; underlying return on equity; underlying cash earnings to average ordinary equity; cash earnings on average full time employees (FTE); cash dividend payout ratio; underlying cash dividend payout ratio; cash dividend cover; cash expenses-to-income; underlying expenses-to-income; cash earnings on average assets; cash expenses to funds under administration (FUA); underlying expenses to FUA; cash expenses to average in-force premiums; underlying expenses to average in-force premiums. Other non-GAAP performance measures: Economic value added (EVA); economic profit.
Black and Christensen (2009)	USA	Original search keywords: Pro forma; pro-forma; proforma. Expanded search string: Earnings excluding; net income excluding; adjusted net income; adjusted loss; cash earnings; earnings before; free cash flow; normalized EPS; normalized earnings; recurring earnings; distributable cash flow; GAAP one-time adjusted; GAAP adjusted; cash loss.

(Continued on next page)

Table 4.1 (continued)

Entwistle, Feltham and Mbagwu (2006)	USA	EPS excluding various items; ongoing earnings; underlying earnings; adjusted net income; core EPS.
Marques (2006)	USA	Non-GAAP earnings and other disclosures: Non-GAAP income measures; non-GAAP operating earnings or EBIT_DA (EBIT; EBITDA; adjusted EBIT; adjusted EBITDA); non-GAAP cash flow or cash earnings. Non-GAAP earnings per share: Non-GAAP earnings from continuing operations, per share; non-GAAP operating earnings, per share; non-GAAP cash earnings, per share; non-GAAP cash flow, per share. Non-GAAP aggregated disclosures: Non-GAAP net income; non-GAAP income from continuing operations; non-GAAP operating income; non-GAAP cash earnings; non-GAAP cash flow; EBIT_DA.
Lougee and Marquardt (2004)	USA	Pro forms earnings; pro forma net income; pro forma net loss; adjusted earnings; adjusted net income; adjusted loss.
(Bhattacharya et al. 2003)	USA	Pro forma; pro-forma; proforma.
Wallace (2002)	USA	Earnings excluding; net income excluding; adjusted net income; adjusted loss; cash earnings; earnings before; free cash flow; normalized EPS; normalized earnings; recurring earnings; distributable cash flow; GAAP one-time adjusted; GAAP adjusted; cash loss.

4.4 Results of hand-collected data: measuring decisions to disclose NGFM (non-GAAP financial measures) in the results for announcement to the market and in other sections of preliminary final reports

The first dependent variable of this study measures the relationship between the decision to disclose non-GAAP financial measures in 'Results for Announcement to the Market' (RAM) of preliminary final reports and the components of remuneration structure of CEOs. With a view to investigating the second dependent variable, this study examines companies that have disclosed non-GAAP financial measures in other sections (OTH) of preliminary final reports and measures the relationship with components of remuneration structure of CEOs.

Table 4.2 summarizes the number of companies that have disclosed non-GAAP financial measures in RAM and OTH of preliminary final reports. The sum of percentages for each fiscal year for two sources of non-GAAP financial measures

equals more than 100% because most of the companies have disclosed non-GAAP financial measures in more than one source. The coding of whether companies have disclosed non-GAAP financial measures in RAM and OTH for FY2010–2012 is also presented in Appendix: Table A.4.4.

Table 4.2: Percentage of companies disclosing non-GAAP financial measures in RAM & OTH for FY2010–2012

Source of non-GAAP Financial measures	Percentage of companies disclosing non-GAAP financial measures			3 Year Average (FY2010–2012)
	2010	2011	2012	
RAM	67%	56%	52%	58%
OTH	85%	86%	88%	86%

The results demonstrate that the number of companies that have disclosed non-GAAP financial measures in results for announcement to the market decreased over the period FY2010–FY2012 (see Figure 4.1). Evidence from this study demonstrates that, on average, 58% of companies (see Table 4.2) disclosed non-GAAP financial measures in RAM; however, a major decline of 11% (67%–56%), occurred in FY2011 compared to FY2010. Results of paired t-test in Table 4.3 confirms statistically significant (t=2.3378; p=0.0237) decrease of number of companies that have disclosed NGFMs in results for announcement to the market in FY2011. This decreasing trend continued in FY2012 with a further 4% (56%–52%) reduction compared to FY2011. As a result, over the period FY2010–FY2012, the number of companies has declined significantly (t=2.2050; p=0.0324) by 15% (67%–52%). This evidence indicates the likely outcomes from the initiative adopted by ASIC in 2011 to implement RG 230 that outlines the use of non-GAAP financial measures. However, paired t-test (see Table 4.3) does not confirm any statistically significant change for the variable OTH that measures the number of companies that have disclosed NGFMs in other sections although the results from the Table 4.2 shows the increment over the period (85% in FY2010, 86% in FY2011 and 88% in FY2012).

Table 4.3: Paired t-test for RAM & OTH

Variable	Mean (First FY in each Panel)	Mean (Second FY in each Panel)	t-value	p-value
Panel A: FY2010–FY2011				
RAM	0.6667	0.5625	2.3378	0.0237**
OTH	0.8542	0.8542	0.0000	1
Panel B: FY2011–FY2012				
RAM	0.56	0.54	0.4436	0.6593
OTH	0.86	1.1769	-1.1360	0.2615
Panel C: FY2010–FY2012				
RAM	0.6667	0.5417	2.2050	0.0324**
OTH	0.8542	1.1842	-1.1302	0.2641

Note: ** indicates significance level at 5%

The finding from this study substantiates that the number of companies that disclosed non-GAAP financial measures in OTH marginally increased over the time period FY2010–FY2012 (see Figure 4.1). On average, 86% of companies disclosed non-GAAP financial measures in OTH while the yearly percentages are 85%, 86%, and 88% for FY2010, FY2011, and FY2012, respectively (see Table 4.2). These results suggest that the number of companies that disclosed non-GAAP financial measures in other sections apart from RAM in preliminary final reports increased gradually over the period.

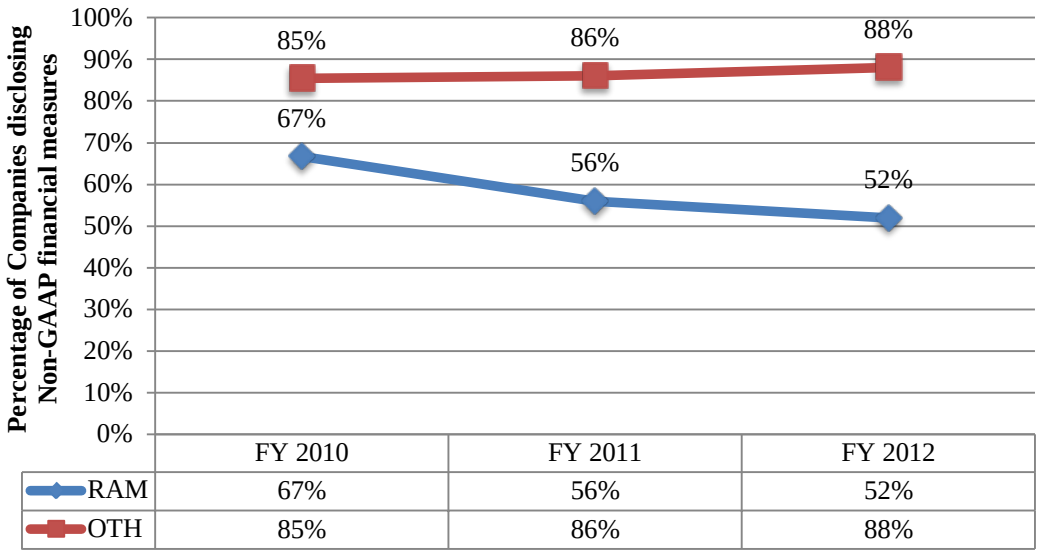

Figure 4.1: The line chart presents the trend of disclosing non-GAAP financial measures in two sections: RAM (Results for Announcement to the Market) and OTH (other sections that include financial statements & notes were applicable in preliminary final report) over the period FY2010–2012 for S&P/ASX50 companies.

4.5 Results of hand-collected data: the excluded expense items in disclosures of NGFMs

This study has examined the excluded expense items when companies have disclosed non-GAAP financial measures. This study has documented all excluded expense items, provided that companies have disclosed NGFM for every fiscal year, to ascertain all types of excluded expense items, categorized based on three categories. Once the types of expense items were finalized, coding was assigned for each type of expense for every company.

Findings from this study demonstrate that twelve types of expense items were excluded by the companies when they disclosed NGFM. These twelve types of expense items are: i) retroactive application of accounting changes (RETRO); ii) restructuring charges (RESTRUC); iii) losses on sales of assets (SOA); iv) merger and acquisition related costs (M&A); v) early debt retirement (DEBTRET); vi) charges for bad and doubtful debt (BADDEBT); vii) impairment expenses (IMPAIR); viii) depreciation and amortization costs (D&A); ix) stock-based compensation costs (STOCKCOMP); x) tax-related costs (TAX); xi) interest-related costs (INTER), and xii) other expense items (OTX). These twelve types of expense items were further categorized into three categories: i) below-the-line items; ii) non-recurring expense items; and iii) recurring expense items. These results are presented in Table 4.4 including the number of companies for each fiscal year.

Table 4.4: Types of expense items excluded by companies when NGFMs have been disclosed

No	Excluded expense items	Category	No of companies excluded expense items			3–Year Total
			FY2010	FY2011	FY2012	FY2010–FY2012
1	RETRO	Below-the-line	1	1	0	2
2	RESTRUC	Non-recurring	13	15	13	41
3	SOA	Non-recurring	2	5	4	11
4	M&A	Non-recurring	6	12	9	27
5	DEBTRET	Non-recurring	1	0	0	1
6	BADDEBT	Non-recurring	1	1	1	3
7	IMPAIR	Non-recurring	12	13	23	48
8	OTX	Non-recurring	29	28	32	89
9	D&A	Recurring	12	10	11	33
10	STOCKCOMP	Recurring	1	0	1	2
11	TAX	Recurring	17	20	18	55
12	INTER	Recurring	13	14	13	40

Below-the-line expense items

Findings from this study substantiate that below-the-line expense items have not been excluded by the companies to a large extent when they have disclosed NGFM. Only one company has excluded the retrospective impact changes (RETRO) in FY2010 and FY2011.

Non-recurring expense items

Analysis of the excluded expense items confirms seven types of non-recurring expense items were excluded by the companies when non-GAAP financial measures were disclosed during FY2010–2012. These seven types of excluded non-recurring expense items are: i) restructuring charges (RESTRUC); ii) gains and losses on sales of assets (SOA); iii) merger and acquisition related costs (MA&A); iv) early debt retirement expense (DEBTRET); v) charges for bad and doubtful debt (BADDEBT); vi) impairment expenses (IMPAIR); and vii) other expense items (OTX).

Table 4.4 shows that all non-recurring expense items were excluded in every fiscal year, except DEBTRET, which was excluded only in FY2010. The analysis also demonstrates that the most frequently excluded non-recurring expense item was other expense items (OTX) followed by impairment expenses (IMPAIR). Results of paired t-test in Table 4.5 show impairment expense (IMPAIR) has increased significantly (t= -2.3333; p=0.0238) to a large extent, by 20% in FY2012 from 26% in FY2011. Consequently, the number of companies that excluded impairment expenses has a significantly (t= -2.8605; p=0.0063) increased over the period FY2010–FY2012.

The third most frequent non-recurring excluded expense item was restructuring charges (RESTRUC), which were consistently excluded by the companies in each fiscal year, followed by the merger and acquisition related cost (M&A) and losses on sales of assets (SOA). Indeed, the exclusion of merger and acquisition related cost fluctuates over the fiscal year where twice as many companies excluded M&A in FY2011 than in FY2010; however, it declined by approximately 33% in the following FY2012 (see Figure 4.2). The analysis of paired t-test substantiates that the

increase of number of companies that excluded M&A was statistically significant with t-value of -1.9521 and p-value of 0.0569.

Furthermore, this study provides evidence in relation to a number of excluded expense items that cannot be included specifically in a particular type of expense because of their uniqueness. Consequently, these expense items have been categorized as other expense items (OTX). Consistent with prior empirical studies of Bhattacharya et al. (2003) and Black and Christensen (2009) these other expense items have been categorized as non-recurring expenses. Results demonstrate 60% companies excluded other types of expense items in FY2010. This trend has decreased by 4% in FY2011; however it has increased by 8% in FY2012.

Evidence from this investigation suggests that these other expense items are diverse in nature and do not appear across all companies. Results from this study confirm the most commonly excluded other expense item is 'losses from economic hedging arising from fair value movements of financial instruments', followed by 'losses arising from foreign exchange movements'. This study presents the complete list of other expense items in Appendix: Tables A.4.5 to A.4.7 for FY2010–2012.

Table 4.5: Paired t-test for non-recurring expense items

Variable	Mean (First FY in each Panel)	Mean (Second FY in each Panel)	t-value	p-value
Panel A: FY2010–FY2011				
RESTRUC	0.2708	0.2917	-0.3746	0.7097
SOA	0.0625	0.0833	-0.4435	0.6595
M&A	0.125	0.25	-1.9521	0.0569*
DEBTRET	0.0208	0	1	0.3224
BADDEBT	0	0	No result	No result
IMPAIR	0.25	0.2708	-0.3302	0.7427
OTX	0.6042	0.5417	0.8293	0.4111
Panel B: FY2011–FY2012				
RESTRUC	0.3	0.26	0.5735	0.5690
SOA	0.1	0.08	0.3747	0.7095
M&A	0.24	0.18	0.9029	0.3710
DEBTRET	0	0	No result	No result
BADDEBT	0	0	No result	No result
IMPAIR	0.26	0.46	-2.3333	0.0238**
OTX	056	0.64	-1.1586	0.2522
Panel C: FY2010–FY2012				
RESTRUC	0.2708	0.2708	0.0000	1
SOA	0.0625	0.0625	0.0000	1
M&A	0.125	0.1875	-1.1374	0.2612
DEBTRET	0.0208	0	1	0.3224
BADDEBT	0	0	No result	No result
IMPAIR	0.25	0.4792	-2.8605	0.0063***
OTX	0.6042	0.625	-0.2557	0.7993

*indicates significance level at 10%
**indicates significance level at 5%
***indicates significance level at 1%

This study demonstrated that a number of other expense items were disclosed by using common terms. For example, ‘changes’ in fair value of financial instrument, fair value ‘movements’ of derivatives, and ‘impact of’ hedge restructure and close out. The mere use of these common terms such as ‘impact of’, ‘changes’, and ‘movements’, do confirm whether any loss item is included in the total calculation. The confirmation of included loss or expense item is required because any loss amount can be offset by gain amount and, thus, the ultimate result could be positive. To emphasize this point—just considering the positive value and common terms does not necessarily discover whether an expense or loss item was disclosed. As a result, it is important to investigate the individual items to determine whether any expense or loss item is included in the total calculation and disclosed simply by using common terms such as ‘impact of’, ‘changes’, and ‘movements’.

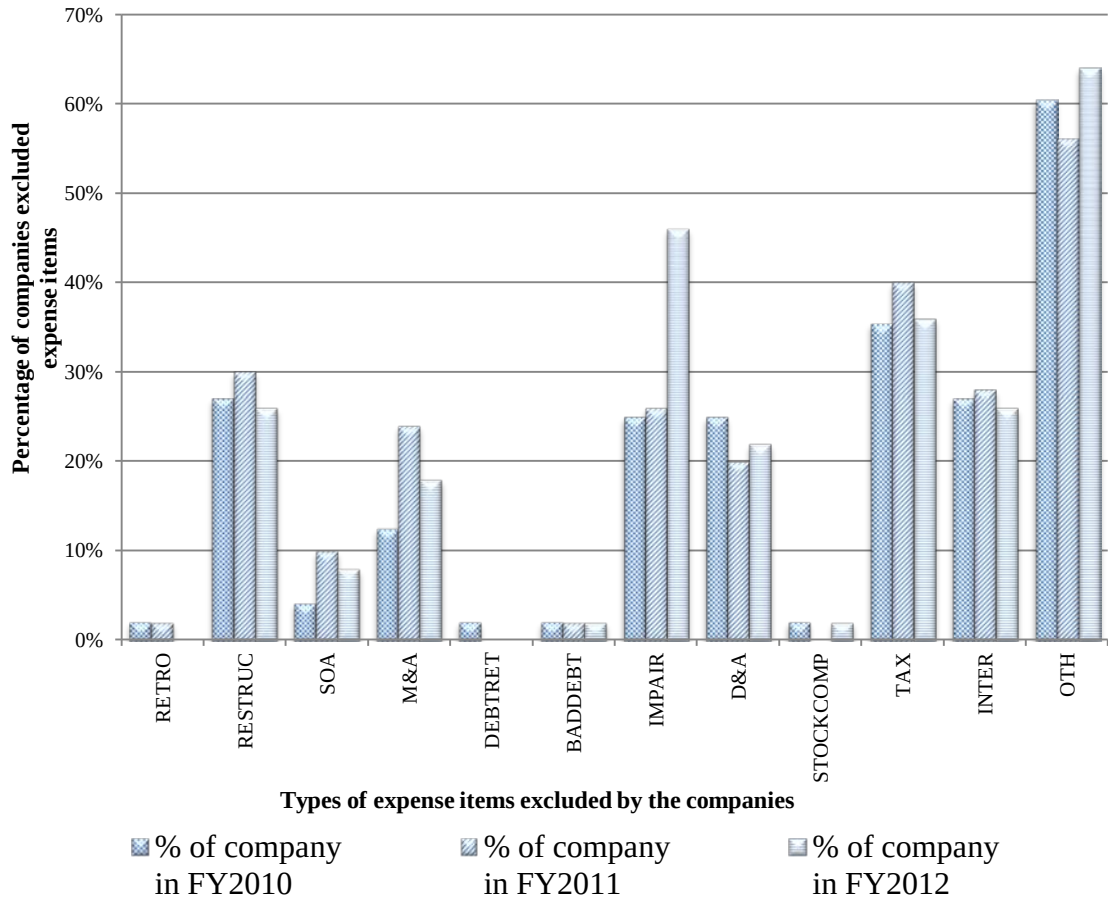

Figure 4.2: The bar chart presents the individual expense item excluded by companies in proportion to total number of company for FY2010–FY2012.

Recurring expense items

The results show that four types of recurring expense items were excluded when non-GAAP financial measures were disclosed by the companies over FY2010–2012. These four type of recurring expense items are: i) depreciation and amortization expenses (D&A); ii) stock based compensation expenses (STOCKCOMP); iii) tax related expenses (TAX); and iv) interest-related expenses (INTER). This indicates that not all recurring expense items were excluded in every fiscal year. Of these four recurring expense items, three items (D&A, TAX, and INTER) were excluded in each fiscal year while STOCKCOMP was excluded only in FY2010 and FY2012. Results shows that tax related expense items (TAX) were excluded most, followed by the interest related expense (INTER), and depreciation and amortization expenses (D&A).

4.6 Results of hand-collected data: whether companies have provided reconciliation between NGFMs and GAAP measures

This study has examined whether reconciliation between non-GAAP financial measures and GAAP measures has been provided when companies have disclosed non-GAAP financial measures. This study presents the coding results of the companies that have provided reconciliation in Appendix: Table A.4.8.

In examining reconciliation, this study has taken into account the calculation as reconciliation where non-GAAP items are adjusted with a profit amount. As long as the non-GAAP items are reconciled with GAAP-profit and/or non-GAAP profit, these non-GAAP items have implications for these profit amounts. This study substantiates that, on average, 79% companies provided reconciliation when they disclosed non-GAAP financial measures in RAM or OTH (see Table 4.6). The evidence suggests a mixed trend of providing reconciliation since it has increased from 77% in FY2010 to 80% in FY2011 and continued at 80% in FY2012.

Table 4.6: Percentage of companies provided reconciliation when non-GAAP financial measures have been disclosed

Description	FY2010	FY2011	FY2012	3–Year Average
Reconciliation	77%	80%	80%	79%
List of items	19%	18%	18%	18%
Neither	4%	2%	2%	3%

Findings from this study also suggest that some companies do not reconcile non-GAAP items with profit amount; rather, they place the items under a common heading, for example, significant items, specific items, and individual material items. Results from the investigation substantiate that, on average, 18% of companies do not reconcile non-GAAP items with profit amount; however, they do disclose the items (Table 4.6). This suggests the number of companies that disclose only items rather than directly reconcile with profit amount is decreasing.

Further evidence from this study suggests a few companies neither reconcile non-GAAP items with profit amount nor disclose the items in a list. These companies described those items in various sections of the report. However, this trend decreased from 4% in FY2010 to 2% in FY2011 and FY2012. As a whole, the number of

companies that provided reconciliation has increased when non-GAAP financial measures were disclosed. These results are presented in Figure 4.3.

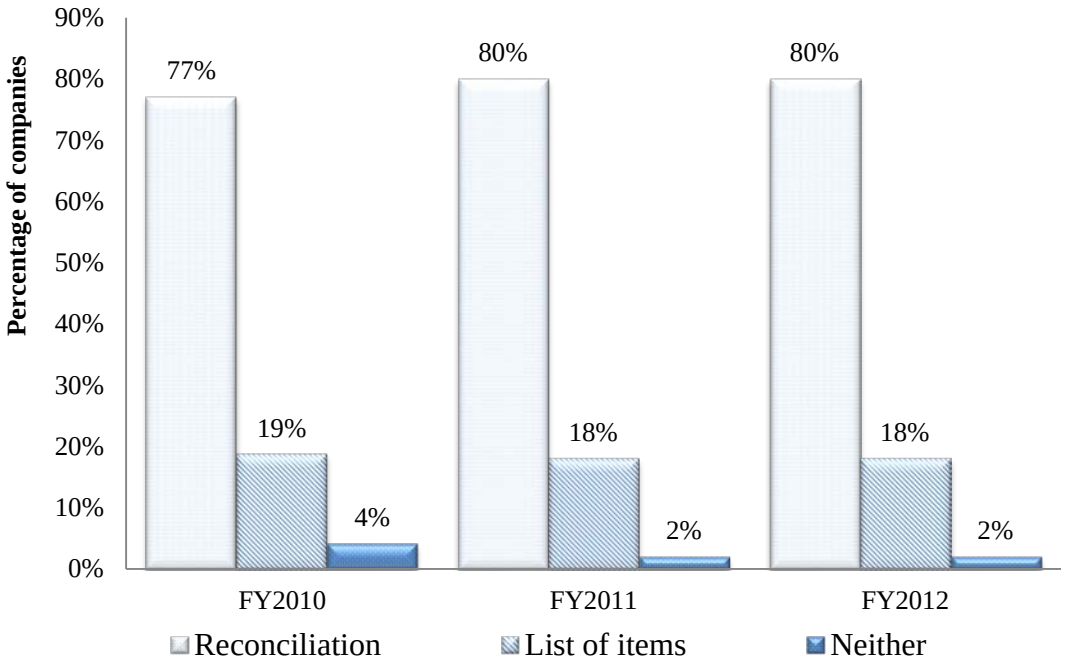

Figure 4.3: The bar chart presents the percentage of companies provided reconciliations, list of item & neither of them when non-GAAP financial measures have been disclosed in FY2010–2012.

4.7 Components of remuneration structure of CEOs

The results from this study demonstrate that the remuneration structure of CEOs in Australia, on average, comprises approximately 41.31% of base salary, 29.76% of LTI components, and 28.93% of STI components over the period FY2010–FY2012 (see Figure 4.4). Furthermore, this study substantiates a major interchange among the individual components of the remuneration structure of CEOs in Australia where the total remuneration has not been changed significantly. Results of paired t-test in Table 4.7 shows that base salary component (BASE) has increased significantly (t= -2.2434; p=0.0297) in FY2011. Moreover, short-term incentives (STI) has declined significantly (t=2.2611; p=0.0284) in FY2012 as well as over it has decreased significantly (t=2.3797; p=0.0215) over the period FY2010–FY2012.

The mean values of 14.3975, 14.4522, and 14.4841 from the paired t-test (Table: 4.7) imply that the base salary component of CEOs' remuneration is the largest over the period FY2010–FY2012 as compared to STI and LTI.

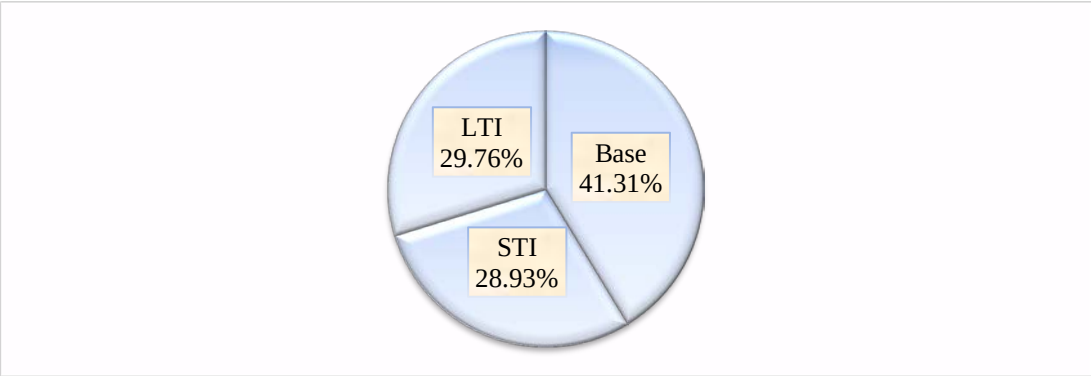

Figure 4.4: The pie chart presents the proportion of individual components of remuneration of CEOs in Australia in FY2010–2012.

The outcomes from this analysis also suggest that the significantly diminishing STI component is attributed to the increase of the BASE and LTI components, while the base component has increased significantly for CEOs in Australia.

Table 4.7: Paired t-test for BASE, STI and LTI

Variable	Mean (First FY in each Panel)	Mean (Second FY in each Panel)	t-value	p-value
Panel A: FY2010–FY2011				
BASE	14.3975	14.4584	-2.2434	0.0297**
STI	13.8810	13.5623	0.6257	0.5346
LTI	12.7610	12.6585	0.1558	0.8769
Total(BASE+STI+LTI)	15.3929	15.38	0.2747	0.7847
Panel B: FY2011–FY2012				
BASE	14.4522	14.4813	-0.3964	0.6936
STI	13.5780	11.9874	2.2611	0.0284**
LTI	12.6267	13.3709	-1.2461	0.2190
Total(BASE+STI+LTI)	15.3743	15.4202	-0.5650	0.5748
Panel C: FY2010–FY2012				
BASE	14.3975	14.4841	-1.2236	0.2273
STI	13.8810	11.9394	2.3797	0.0215**
LTI	12.7305	13.3560	-0.9023	0.3717
Total(BASE+STI+LTI)	15.3929	15.42223	-0.3049	0.7618

** indicates significance level at 5%

The average individual component of the remuneration structure shows the extent to which individual components in proportion to total remuneration changes over the period FY2010–2012. In view of this, this study calculated the proportion of each component in relation to total remuneration (base, STI, and LTI) for every company over the period FY2010–FY2012. Afterwards, the average of these proportions for each component was determined for all companies. Furthermore, this study estimated the three-year average (FY2010–FY2012) to measure the overall percentage for individual components. This calculation shows the average trends in base salary,

STI, and LTI components over the period. Table 4.8 sets out the average of the individual components in proportion to total remuneration over the period FY2010–FY2012.

Table 4.8: Average of each component in proportion to total remuneration of CEOs for FY2010–2012 for all companies

Remuneration Component	Average of individual component in proportion to total remuneration			3 Year Average (FY2010–2012)
	FY2010	FY2011	FY2012	
Base	40.67%	41.43%	41.82%	41.31%
STI	31.14%	30.69%	24.97%	28.93%
LTI	28.19%	27.88%	33.21%	29.76%
Total	100%	100%	100%	100%

Figure 4.5 shows the average of base, STI, and LTI components in proportion to total remuneration of CEOs for FY2010–FY2012.

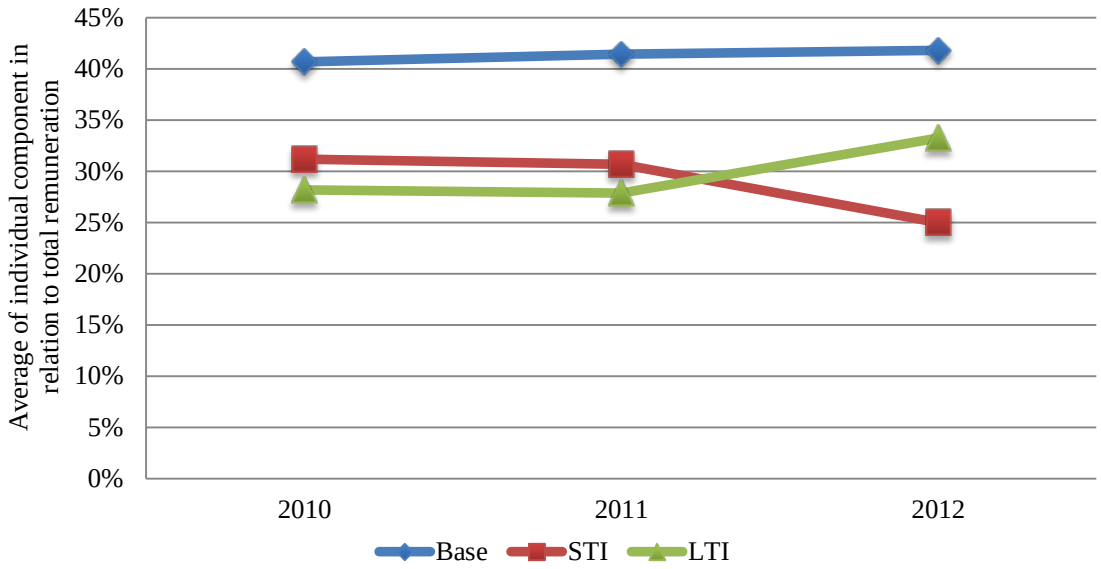

Figure 4.5: The average trend of individual component (base, STI and LTI) in proportion to total remuneration of CEOs during FY2010–FY2012.

Base salary component

This study confirms that the average base component of CEOs' total remuneration had positive growth over the period 2010–2012. Indeed, the increasing pattern of average base salary of CEOs compared to total remuneration rose gradually over the period. Consequently, the upward net effect of the base component resulted in this being 1.15% higher (41.82%–40.67%) in FY2012 than in FY2010. The average base remuneration for FY2010, FY2011, and FY2012 was 40.67%, 41.43%, and 41.82%, respectively and the three-year average was 41.31%. As a result, over the period

2010–2012, on average, CEOs received 41.31% of their total remuneration in the form of base salary.

STI component

In analyzing the STI component of CEOs remuneration, this study substantiates that STI decreased over the period 2010–2012. In particular, in FY2012, the STI component of CEO remuneration declined substantially (t=2.2611; p=0.0284) by 5.72% from FY2011. The average STI in relation to total remuneration of CEOs for FY2010, FY2011, and FY2012 was 31.14%, 30.69%, and 24.97%, respectively, with a three-year average of 28.93%. Although the three-year average of STI is 28.93%, the net effect of the decreasing trend in STI resulted in this being 6.17% (31.14%–24.97%) substantially (t=2.3797; p=0.0215) less in FY2012 compared to FY2010. This evidence indicates that CEOs received less STI over the period FY2010–2012. The declining trend of STI in FY2012 was by 5.72% from FY2011, whereas in FY2011 STI had decreased only by 0.45% compared to FY2010 (see Table 4.5). These results substantiate that, with a diminishing trend, CEOs received, on average, 28.93% of their total remuneration in terms of STI, while the decline was aggravated in FY2012. This reduction of 5.72% in STI has been attributed to BASE and LTI because the base salary and LTI component increased in FY2012. This implies that the STI component is becoming smaller in relation to the total remuneration of CEOs.

LTI component

Over the period FY2010–FY2012, this study demonstrates that, on average, the LTI component of CEO remuneration increased from 28.19% to 33.21%, with a slight decline in FY2011 (see Figure 4.5). In FY2012, the LTI component increased by 5.72% while the base component had an increment of 0.39%. This indicates a major interchange has been taken place between components of total remuneration. Furthermore, this study confirms that the average LTI with regard to total remuneration of CEOs for FY2010, FY2011, and FY2012 was 28.19%, 27.88%, and 33.31%, respectively, with the three-year average being 29.76%. As a result, over the period 2010–2012, on average, CEOs received 29.76% of their total remuneration in the form of LTI.

4.8 Summary statistics

Table 4.10 presents the descriptive statistics for the variables examined in the Pearson correlation matrix and logistic regression models in this study. In Table 4.9, Panel A describes nine dependent variables that are indicative variables, Panel B describes three independent variables that are continuous variables, and Panel C describes six control variables that are also continuous. In each panel, column 1 presents the variable descriptions and column 2 presents the number of observations of the related variable. However, the total number of observations across the logistic regression models (Tables 4.11 to Table 4.14) is 142, which is less than the number of observations shown in Table 4.9. This is mainly because of the nine missing and excluded observations across the variables. These missing observations are from the four companies (AZJ, ASX, NVN, and SCG) that did not have all the required information for the variables in this study. Two (AZJ and SCG) were listed in ASX at the very end of fiscal year 2010, resulting in the absence of the required data for the dependent variables. As a result, the number of observations for each dependent variable is 148.

In collecting independent variables' data, two companies (NVN and SCG) were excluded from the category of trusts across the three fiscal years; for AZJ, no information was found for fiscal year 2010, with ASX only being listed at the very end of fiscal year 2010. Base, STI, and LTI variables resulted in 143 observations. In relation to the control variables, for similar reasons, two observations were missing for the variable GROWTH and one observation was missing for the variable ASSETS. In calculating the past three years' standard deviation of ROE, five observations were missing; one observation was missing for LEVERAGE and one for calculating intensity of intangible assets (INTAN).

Column 3 in Panel A of Table 4.9 describes the mean value of the variables across the observations to indicate the average proportion of companies that took the decision to disclose non-GAAP financial measures, decisions to exclude expense items when non-GAAP financial measures were disclosed, and decisions to provide reconciliation between non-GAAP financial measures and GAAP measures when non-GAAP financial measures were disclosed.

In addition, the summary statistics confirm that fewer companies (mean value 0.58) took the decision to disclose non-GAAP financial measures in the mandatorily identified section (RAM) of the preliminary final report than in the non-mandatorily identified other sections (OTH with mean value 0.87) in the preliminary final report. Likewise, 79% of companies (mean value 0.79) provided reconciliations when non-GAAP financial measures were disclosed. The mean value of 0.37 suggests that tax related expense items were the most frequently excluded expense items when non-GAAP financial measures were disclosed.

Similarly, Panel B of Table 4.9 shows that the base component is the highest (mean value 14.45) portion compared to the other two components (STI mean value 13.14 and LTI mean value 12.95) of CEOs' remuneration structure and Panel C provides the average of various company measurements.

Table 4.9: Summary statistics of variables

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A: Dependent variables								
					----------	Quantiles	----------	
Variable	N	Mean	S.D.	Min	.25	Mdn	.75	Max
Non-GAAP disclosures in RAM	148	0.58	0.50	0.00	0.00	1	1.00	1.00
Non-GAAP disclosures in OTH	148	0.87	0.34	0.00	1.00	1	1.00	1.00
Exclusion of depreciation & amortization	148	0.22	0.42	0.00	0.00	0	0.00	1.00
Exclusion of tax related expenses	148	0.37	0.48	0.00	0.00	0	1.00	1.00
Exclusion of interest related expenses	148	0.27	0.45	0.00	0.00	0	1.00	1.00
Exclusion of losses on sales of assets	148	0.07	0.26	0.00	0.00	0	0.00	1.00
Exclusion of merger & acquisition related cost	148	0.18	0.39	0.00	0.00	0	0.00	1.00
Exclusion of impairment expenses	148	0.32	0.47	0.00	0.00	0	1.00	1.00
Providing reconciliations	148	0.79	0.41	0.00	1.00	1	1.00	1.00
Panel B: Independent variables								
					----------	Quantiles	----------	
Variable	N	Mean	S.D.	Min	.25	Mdn	.75	Max
Ln value of base remuneration of CEOs	143	14.45	0.53	11.61	14.23	14.52	14.73	15.42
Ln value of STI of CEOs	143	13.14	3.73	0.00	13.78	14.22	14.56	15.80
Ln value of LTI of CEOs	143	12.95	4.44	-12.16	13.35	14.23	14.84	16.03
Panel C: Control variables								
					----------	Quantiles	----------	
Variable	N	Mean	S.D.	Min	.25	Mdn	.75	Max
Growth (price to book value)	148	2.05	3.39	-24.51	1.14	1.64	2.81	27.63
ROE (three-year standard deviation of ROE)	145	0.07	0.18	0.00	0.01	0.03	0.06	1.15
Leverage (total liabilities to total equity)	149	3.02	5.43	-19.48	0.64	1.12	2.35	28.77
Natural Log value of total assets	149	23.55	1.49	21.36	22.57	23.03	24.31	27.36
Intangibles (total intangibles to total assets)	149	0.17	0.21	0.00	0.01	0.11	0.25	0.83
Natural log value of Market Cap	150	22.95	2.15	0.00	22.36	22.84	23.61	26.17

Numbers 1–9 in the second row denote the column number of the table.

Column 4 of each panel shows the standard deviation, for example, the lower standard deviation of 0.53 of the natural log value of the base remuneration of CEOs indicates that the base salary deviated less from the mean value than STI (standard deviation=3.73) and LTI (standard deviation=4.44). Columns 5 to 9 of Table 4.6 present the quantiles of the variables as well as the minimum and maximum value of each variable. It is noteworthy to mention that all the dependent variables had the same minimum value of '0' and a maximum value of '1' because they are indicator variables that represent the related variable code of '1' and '0'.

4.9 Pearson correlation matrix

Before proceeding to multivariate analysis, this study examined the direction and strength of pairwise relationships between variables using a Pearson correlation matrix. Table 4.10 presents the coefficient values for the variables. Coefficients that are statistically significant at the 1% level are presented in bold, coefficients statistically significant at 5% are presented in italic, and coefficients statistically significant at the 10% level are underlined.

In explaining the direction of correlationship between each pair of variables, the correlation matrix shows the dependent variable RAM is negatively related to the main independent variables of interest (BASE and LTI); however, it is positively related to STI. The Pearson correlation matrix shows the dependent variable OTH is related to the main independent variables of interest in the opposite direction. In other words, if one main independent variable of interest has a positive relationship with the dependent variable RAM, the same independent variable has a negative relationship with the dependent variable OTH. These results suggest that the decision to disclose NGFM depends on the section (RAM and OTH) in which NGFM has been disclosed.

To put it differently, components of remuneration of CEOs affect the decision to disclose NGFM in results for announcement to the market in one direction while they affect the decision to disclose NGFM in other sections in the opposite direction.

The correlation matrix also demonstrates that the decision to exclude various types of expense items is influenced in various ways depending on the individual component of CEOs' remuneration structure. A few excluded expense items have statistically

significant correlation with one component of remuneration while other excluded expense items have statistically significant correlation with other components of remuneration.

Results of the correlation matrix shown in Table 4.10, also suggest that only the base component of CEOs' remuneration has a statistically significant and negative relationship with the decision to exclude all three recurring expense items (depreciation and amortization, tax related items, and interest related items).

However, two components of the remuneration structure of CEOs have statistically significant positive relationships with the decision to exclude two types of non-recurring expenses.

Table 4.10: Pearson correlation matrix for all variables

Panel A	1	2	3	4	5	6
BASE(1)	1					
STI(2)	0.1125	1				
LTI(3)	0.3809	-0.0191	1			
RAM(4)	-0.0972	0.1471	-0.0395	1		
OTH(5)	0.0454	-0.1235	-0.1170	**-0.2030**	1	
D&A(6)	-0.1192	0.0209	*-0.2103*	-0.0058	-0.0371	1
TAX(7)	0.0601	0.0129	*-0.1731*	-0.3673	0.0443	0.1255
INTER(8)	-0.1265	0.0976	**-0.2974**	-0.1	0.0971	0.3685
SOA(9)	-0.0328	0.0648	0.0645	-0.0205	0.0317	0.0339
M&A(10)	0.0641	0.1418	0.0807	0.1174	0.0244	-0.0429
IMPAIR(11)	-0.0366	-0.0382	0.1597	0.0617	0.0501	0.045
RECON(12)	**0.2827**	0.1599	-0.0214	-0.0669	0.0010	0.1162
GROWTH(13)	-0.0972	-0.0232	-0.0618	-0.0116	0.0204	0.1045
STD.ROE(14)	-0.4781	-0.0704	-0.1001	**-0.2227**	0.0653	0.0952
LEV(15)	0.0512	0.0555	0.1241	0.06	**-0.3321**	-0.0022
ASSETS(16)	**0.3321**	-0.0229	**0.2221**	-0.1308	**0.2382**	*-0.1874*
INTAN(17)	0.0001	0.0194	-0.4082	0.0948	*0.1608*	0.5031
MARKET_CAP(18)	0.422	-0.0648	0.2111	**-0.2589**	-0.0459	-0.2491
Panel B	7	8	9	10	11	12
TAX(7)	1					
INTER(8)	0.3191	1				
SOA(9)	-0.058	0.0596	1			
M&A(10)	-0.0374	-0.2087	*0.0663*	1		
IMPAIR(11)	-0.025	0.0334	*0.0788*	0.1212	1	
RECON(12)	0.121	0.2011	*0.0826*	-0.0148	0.0729	1
GROWTH(13)	-0.019	0.054	-0.0478	0.012	0.0875	-0.0403
STD.ROE(14)	*0.1638*	-0.0663	-0.0569	-0.0883	-0.0485	-0.0786
LEV(15)	0.0791	-0.1118	-0.0415	**0.2644**	0.0095	0.0236
ASSETS(16)	*0.208*	*-0.177*	-0.0388	*0.2059*	0.0461	0.1006
INTAN(17)	0.0013	**0.3869**	-0.0575	0.041	-0.0111	**0.2531**
MARKET_CAP(18)	0.2287	-0.1197	-0.0752	0.1334	0.0571	*0.1782*
Panel C	13	14	15	16	17	18
GROWTH(13)	1					
STD.ROE(14)	0.0233	1				
LEV(15)	0.3607	-0.1253	1			
ASSETS(16)	-0.0606	*-0.1834*	0.7147	1		
INTAN(17)	0.0647	-0.1593	*-0.2066*	**-0.3124**	1	
MARKET_CAP(18)	0.1079	-0.0779	**0.2219**	0.407	-0.0517	1

The coefficients of variables of Pearson correlation matrix are presented in the above table. The variables included in the matrix are all the variables that have been analysed in logistic regression models in this study. The three main independent variables of interest have been defined as natural log value of base salary of CEOs (BASE); natural log value of short-term incentives of CEOs (STI) and natural log value of long-term incentives of CEOs (LTI). The nine dependent variables have been defined as RAM (decision of disclosures of non-GAAP financial measures in results for announcement to the market); OTH (decision of disclosures of non-GAAP financial measures in other sections of preliminary final report); D&A (decision to exclude depreciation & amortization expense items when non-GAAP financial measures have been disclosed); TAX (decision to exclude tax related expense items when non-GAAP financial measures have been disclosed); INTER (decision to exclude interest related expense items when non-GAAP financial measures have been

(continued to the next page)

(Table 4.10 continued)

disclosed); SOA (decision to exclude losses on sales of assets when non-GAAP financial measures have been disclosed); M&A (decision to exclude merger & acquisition related costs when non-GAAP financial measures have been disclosed); IMPAIR (decision to exclude impairment expenses when non-GAAP financial measures have been disclosed); RECON (decision to provide reconciliation between non-GAAP financial measures and GAAP measures when non-GAAP financial measures have been disclosed by the companies). Six control variables have been defined as price to book value to measure growth of companies (GROWTH); previous three-year standard deviation of return on equity to measure variability of companies' profitability (STD_ROE); total liabilities to total equity to measure leverage of companies (LEV); natural log value of total assets to consider the size of companies (ASSETS); proportion of total intangibles to total assets to measure intensity of intangibles of companies (INTAN) and natural log value of market capitalization (MARKET_CAP) for measuring size of companies.
The values of the coefficients of variables which are statistically significant at 1% level have been presented in **bold** font.
The values of the coefficients of variables which are statistically significant at 5% level have been presented in *italic* font.
The values of the coefficients of variables which are statistically significant at 10% level have been presented in underline font.
The number 1–6 in the panel A represents the variables 1–6 which are in the first column in the panel A.
The number 7–12 in the panel B represents the variables 7–12 which are in the first column in the panel B.
The number 13–18 in the panel C represents the variables 13–18 which are in the first column in the panel C.

STI has a statistically significant and positive relationship with exclusion of merger and acquisition related expenses and LTI has a statistically significant, positive relationship with impairment related expenses.

The correlation matrix also presents the decision to provide reconciliation between non-GAAP financial measures and GAAP measures when non-GAAP measures have statistically significant positive relationships with two components (base and STI) of CEOs' remuneration.

In the following sections, this study shows the multivariate relationship to determine the statistically significant variables.

4.10 Logistic regression analysis: components of remuneration and decision to disclose NGFMs in results for announcement to the market and other sections of preliminary final reports

Model 1 in Table 4.11 presents the results related to the decision to disclose non-GAAP financial measures in a mandatory identifying section 'results for announcement to the market' in the preliminary final report.

The results show that the independent variable, base component of remuneration of CEOs, is statistically significant (p value=0.088) in the decision to disclose non-GAAP financial measures in results for announcement to the market. This result

substantiates the statistically significant relationship between the base components of CEOs' remuneration and the decision to disclose NGFM in results for announcement to the market. The negative sign of the coefficient indicates the negative relationship, suggesting that companies are less likely to disclose non-GAAP financial measures in results for announcement to the market when the base component of CEOs' remuneration is higher. Results also show that both STI and LTI are statistically insignificant to the decision to disclose non-GAAP financial measures in results for announcement to the market. The p values of STI and LTI are 0.370 and 0.724 respectively. These insignificance of these two components (STI and LTI) reflect their lower proportion in remuneration structure in Australia.

This result implies that companies are less likely to disclose NGFM under the mandatory heading in the preliminary final report. When the base component is substantially higher than the STI and LTI components in the remuneration structure, it may not be enough motivation to disclose NGFM in the mandatory identified section.

In addition, the results in Model 1 substantiate that companies bigger in size, have high-growth, and lower profit variability are less likely to disclose NGFM in results for announcement to the market. However, highly leveraged companies are more likely to disclose. These four control variables are statistically significant in the decision to disclose NGFM in results for announcement to the market, where p values of growth, standard deviation of ROE for the last three years, leverage, and assets, are 0.072, 0.001, 0.043, and 0.030, respectively. These control variables indicate that companies with better characteristics in terms of size, profit variability, and growth are less likely to disclose NGFM in the results for announcement to the market. This evidence suggests companies are taking an altruistic view when disclosing non-GAAP information in a mandatory identified results section.

Model 2 in Table 4.11 presents the results related to decision to disclose non-GAAP financial measures in other sections apart from the mandatory identified section in the preliminary final report. The results demonstrate that short-term incentives (STI) are statistically significant (p value=0.078) with a negative relationship. This evidence suggests companies are more likely to disclose NGFM in other sections of the preliminary final report when STI is smaller. This perspective of CEOs indicates

an altruistic motivation. The results also confirm that the base component is still statistically significant, with a p value of 0.091; however, the relationship is positive. This indicates CEOs are more likely to disclose NGFM in other sections of the preliminary final report when the base increases. The base component is an opportunistic motive for CEOs.

The likely reason is the amount of remuneration received in the form of various components, base, STI, and LTI in the remuneration structure. Since the base component is substantially higher than STI and LTI, CEOs are less motivated to disclose in a mandatorily identified section than to disclose in other sections of the preliminary final report.

Table 4.11: The influences of CEOs remuneration-components on decision to disclose non-GAAP financial measures in RAM (results for announcement to the market) and OTH (other sections of preliminary final report) in FY2010–2012

	Model (1)	Model (2)
Variables	RAM	OTH
BASE	-0.877*	1.361*
	(0.514)	(0.806)
STI	0.0634	-0.301*
	(0.0708)	(0.171)
LTI	0.0159	-0.164
	(0.0451)	(0.105)
GROWTH	-0.156*	0.108
	(0.0869)	(0.138)
STD_ROE	-5.201***	3.110**
	(1.555)	(1.231)
LEVERAGE	0.201**	-0.157**
	(0.0991)	(0.0794)
ASSETS	-0.751**	0.190
	(0.347)	(0.298)
INTAN	-0.0255	2.006
	(1.000)	(1.476)
Constant	30.14***	-13.67*
	(10.12)	(7.790)
Number of observations	142	142
Year fixed effects	Yes	Yes

Logistic regression demonstrates the impacts of CEOs remuneration-components on decision to disclose Non-GAAP Financial Measures (NGFMs). *Model 1* represents the results related to the decision to disclose NGFM in a must identifying section titled 'results for announcement to the market' in preliminary final report. Accordingly, the dependent variable *RAM* (decision to disclose NGFM in results for announcement to the market) is measured by assigning code '1' when NGFMs have been disclosed and '0' otherwise. *Model 2* represents the results related to decision to disclose NGFM in other sections apart from the mandatorily identified section in preliminary final report. Accordingly, the dependent variable *OTH* (decision to disclose NGFM in other sections) is measured by assigning code '1' when NGFMs have been disclosed and '0' otherwise. Both Model 1 and Model 2 have the same independent variables which are natural log value of base salary of CEOs (BASE); natural log value of short-term incentives of CEOs (STI); natural log value of long-term incentives of CEOs (LTI); price to book value to measure growth of companies (GROWTH); previous three-year standard deviation of return on equity to measure variability of companies' profitability (STD_ROE); total liabilities to total equity to measure leverage of companies (LEVERAGE); natural log value of total assets to consider the size of companies (ASSETS) and proportion of total intangibles to total assets to measure intensity of intangibles of companies (INTAN).
Robust standard errors in parentheses.
***p<0.01, **p<0.05, *p<0.1

They may not opt to disclose in the mandatory identified section because the incentives (STI and LTI) are not substantial compared to the base salary in the remuneration structure. As long as CEOs receive the highest proportion of remuneration in fixed form, they are less likely to be motivated to disclose in a section that must be identified with the results of companies. This could be the possible justification for CEOS' altruistic motivation when disclosing NGFM in a mandatory identified section of the preliminary final report.

Model 2 reveals that leverage is negatively statistically significant, with the p value of 0.048, and the standard deviation of ROE for last three years is positively statistically significant, with the p value of 0.012. These results are also consistent compared with Model 1 because they influence in opposite directions in the two models.

The likely crucial factors are the section where NGFMs have been disclosed, the proportion of remuneration components, as well as other company factors.

4.11 Logistic regression analysis: remuneration components and decision to exclude expense items when NGFMs have been disclosed

The analysis of the dependent variable STOCKCOMP, defined as the decision to exclude stock related expenses when NGFM has been disclosed, provides no results. The reason is that expense items were excluded by the companies only in two fiscal years. Consequently, logistic regression provides no result because of insufficient data for the dependent variable (STOCKCOMP).

The results of the remaining three dependent variables are presented in Table 4.12. The logistic regression demonstrates the impacts of CEOs' remuneration components on to exclude depreciation and amortization (D&A), tax-related items (TAX), and interest expense related (INTER) items, when non-GAAP financial measures have been disclosed.

Model 1 in Table 4.12 presents the results related to the dependent variable D&A when non-GAAP financial measures have been disclosed. The dependent variable D&A has a statistically significant (p value=0.091) positive relationship with the base component of remuneration of CEOs.

Table 4.12: The influences of CEOs remuneration-components on decision to exclude recurring expense items when non-GAAP financial measures have been disclosed by the companies in FY2010–2012

	Model (1)	Model (2)	Model (3)
VARIABLES	D&A	TAX	INTER
BASE	0.831*	0.844	-0.948*
	(0.492)	(0.543)	(0.514)
STI	-0.00963	0.00989	0.0898
	(0.0669)	(0.0693)	(0.0882)
LTI	-0.0911	-0.143**	-0.128*
	(0.0574)	(0.0699)	(0.0759)
GROWTH	0.0849	-0.0528	0.233**
	(0.0712)	(0.0471)	(0.118)
STD_ROE	2.008	3.128***	-6.024**
	(1.462)	(1.012)	(2.541)
LEVERAGE	0.0702	0.0319	-0.0732
	(0.0561)	(0.0374)	(0.0555)
MARKETCAP	-1.121***	0.438*	0.0871
	(0.345)	(0.249)	(0.253)
Constant	13.41	-21.53***	11.14*
	(8.351)	(7.117)	(6.581)
No. of observations	142	142	142
Year fixed effects	Yes	Yes	Yes

Logistic regression demonstrates the impacts of CEOs remuneration-components on decision to exclude recurring expense items when Non-GAAP Financial Measures (NGFMs) have been disclosed by the companies. Three types of excluded recurring items are depreciation & amortization (D&A), tax-related items (TAX) and interest expense related (INTER) have been analysed by Model 1, Model 2 and Model 3 respectively. *Model 1* represents the results related to the dependent variable D&A (decision to exclude depreciation & amortization expense items when NGFMs have been disclosed) is measured by assigning code '1' when companies have excluded and '0' otherwise. *Model 2* represents the results related to the dependent variable TAX (decision to exclude tax related expense items when NGFMs have been disclosed) is measured by assigning code '1' when companies have excluded and '0' otherwise. *Model 3* represents the results related to the dependent variable INTER (decision to exclude interest related expense items when NGFMs have been disclosed) is measured by assigning code '1' when companies have excluded and '0' otherwise. The independent variables for Model 1 to Model 3 have the same independent variables which are natural log value of base salary of CEOs (BASE); natural log value of short-term incentives of CEOs (STI); natural log value of long-term incentives of CEOs (LTI); price to book value to measure growth of companies (GROWTH); previous three-year standard deviation of return on equity to measure variability of companies' profitability (STD_ROE); total liabilities to total equity to measure leverage of companies (LEVERAGE) and natural log value of market capitalization to consider the size of companies (MARKETCAP).
Robust standard errors in parentheses.
***p<0.01, **p<0.05, *p<0.1

This analysis reveals that companies are more likely to exclude depreciation and amortization expenses if the base salary is higher. Also, the size of companies is negatively statistically significant (p value=0.001), indicating that the smaller a company's size the higher the likelihood of excluding depreciation and amortization related expenses when NGFMs have been disclosed. Black and Christensen (2009) substantiated that exclusion of depreciation and amortization is positively related to the magnitude of total manager exclusions.

Model 2 in Table 4.12 presents the results related to the dependent variable TAX (decision to exclude tax related expense items when non-GAAP financial measures have been disclosed). The dependent variable TAX has a negative statistically

significant (p value=0.041) relationship with long-term incentives of CEOs. This suggests that smaller LTI likely affects higher exclusion of tax related items. Moreover, Model 2 shows that two control variables are positively statistically significant. Companies with higher profit variability (p value=0.002) and bigger in size (p value=0.079) are more likely to exclude tax related expense items when NGFMs have been disclosed. (Black and Christensen (2009) substantiated that exclusion of tax related expenses is positively related to the magnitude of total manager exclusions. However, in this study, the relationship is negative because of the independent variable is the LTI which differs from the total exclusions by managers. Isidro and Marques (2013) considered tax items exclusion in their recurring adjustments; however, they did not establish the relationship to the individual item which has been investigated in this study. Similarly, Model 3 in Table 4.12 presents the results related to the dependent variable INTER (decision to exclude interest related expense items when non-GAAP financial measures have been disclosed). The dependent variable INTER has a negative statistically significant (p value=0.092) association with long-term incentives and a negative, but statistically significant (p value=0.065) relationship, with the base component of CEOs' remuneration. Findings also substantiate that companies with higher growth and lower profit variability are more likely to exclude interest related expense items when NGFMs have been disclosed because the p value is 0.048 for the positively statistically significant variable GROWTH and 0.018 for the positively statistically significant variable STD_ROE.

Secondly, this study analyzed the decision to exclude non-recurring expense items in relation to the components of remuneration of CEOs when NGFMs were disclosed in the preliminary final report. The analysis of the dependent variable DEBTRET, defined as the decision to exclude early debt retirement related expenses and the dependent variable BADDEBT, defined as the exclusion of bad and doubtful debt related expense items, have no results. The reason is companies did not exclude many of these expense items to provide any result. The variable DEBTRET was excluded only once by one company, while BADDEBT was excluded by three companies. Consequently, logistic regression provides no result for these dependent variables because of insufficient data. This study also analyzed the variables RESTRUC and OTX, but found no significant result to tabulate.

The results of the remaining three dependent variables (SOA, M&A, and IMPAIR) are presented in Table 4.13.

Model 1 in Table 4.13 presents the results related to the dependent variable SOA (decision to exclude losses on sales of assets when non-GAAP financial measures have been disclosed). The dependent variable SOA has a positive and statistically significant (p value=0.013) relationship with short-term incentives. This provides evidence that companies are more likely to exclude losses on sales of assets to achieve more short-term incentives.

Table 4.13: The influences of CEOs remuneration-components on decision to exclude non-recurring expense items when non-GAAP financial measures have been disclosed by the companies in FY2010–2012

	Model (1)	Model (2)	Model (3)
VARIABLES	SOA	M&A	IMPAIR
BASE	-1.315	-0.365	-1.467***
	(1.000)	(0.586)	(0.505)
STI	0.175**	0.198***	0.0328
	(0.0703)	(0.0574)	(0.0499)
LTI	0.274	0.0397	0.211**
	(0.188)	(0.0656)	(0.0864)
GROWTH	-0.320	0.0258	0.0977
	(0.359)	(0.147)	(0.0736)
STD_ROE	-10.54	-3.021	-2.556*
	(9.899)	(3.170)	(1.406)
LEVERAGE	-0.0666	0.0936**	-0.0659
	(0.130)	(0.0403)	(0.0431)
MARKETCAP	0.0274	0.100	0.358
	(0.434)	(0.261)	(0.221)
Constant	10.22	-2.643	8.664
	(13.82)	(7.739)	(6.686)
No. of observations	142	142	142
Year fixed effects	Yes	Yes	Yes

Logistic regression demonstrates the impacts of CEOs remuneration-components on decision to exclude non-recurring expense items when Non-GAAP Financial Measures (NGFMs) have been disclosed by the companies. Three types of excluded recurring items are losses on sales of assets (SOA), merger & acquisition related costs (M&A) and impairment expenses (IMPAIR) have been analysed by Model 1, Model 2, and Model 3 respectively. *Model 1* represents the results related to the dependent variable SOA (decision to exclude losses on sales of assets when NGFMs have been disclosed) is measured by assigning code '1' when companies have excluded and '0' otherwise. *Model 2* represents the results related to the dependent variable M&A (decision to exclude merger & acquisition related costs when NGFMs have been disclosed) is measured by assigning code '1' when companies have excluded and '0' otherwise. *Model 3* represents the results related to the dependent variable IMPAIR (decision to exclude impairment expenses when NGFMs have been disclosed) is measured by assigning code '1' when companies have excluded and '0' otherwise. The independent variables for Model 1 to Model 3 have the same independent variables which are natural log value of base salary of CEOs (BASE); natural log value of short-term incentives of CEOs (STI); natural log value of long-term incentives of CEOs (LTI); price to book value to measure growth of companies (GROWTH); previous three-year standard deviation of return on equity to measure variability of companies' profitability (STD_ROE); total liabilities to total equity to measure leverage of companies (LEVERAGE) and natural log value of market capitalization to consider the size of companies (MARKETCAP).
Robust standard errors in parentheses.
***p<0.01, **p<0.05, *p<0.1

Model 2 presents the results related to the dependent variable M&A (decision to exclude merger and acquisition related costs when non-GAAP financial measures have been disclosed). The dependent variable M&A is positive and statistically significant (p value=0.001) in relation to the short-term incentives of CEOs. Also, highly leveraged companies were more likely to exclude merger and acquisition related expense items when NGFMs were disclosed (positively statistically significant p value of 0.02).

Model 3 presents the results related to the dependent variable IMPAIR (decision to exclude impairment expenses when non-GAAP financial measures have been disclosed). The dependent variable IMPAIR has a positively statistically significant (p value=0.014) relationship with long-term incentives and a negatively statistically significant (p value=0.004) relationship with the base component of remuneration of CEOs. These findings substantiate that companies are more likely to decide to exclude impairment related expense items if long-term incentives are greater and base salary is low.

Furthermore, the results in Model 3 reveal more complex insights into the influence of individual components of remuneration on the exclusion decision of impairment related expenses. Here, two components of the remuneration structure are statistically significant with an opposite direction of relationship. The first is the base component that is negatively related (p value=0.004) and the second is the LTI component which is positively related (p value=0.014). When two opposite relationships coexist and have statistically significant values, the trends of these variables over the period help better understand the relationship. The trend of base salary is consistently increased over the period (40.67% in FY2010, 41.43% in FY2011, and 41.82% in FY2012); in contrast, the trend of LTI and the exclusion of impairment related charges have inconsistently increased in fiscal year 2012. The pattern of LTI was 28.19% in FY2010, 27.88% in FY2011, and rapidly increased to 33.21% in FY2012. In a similar way, the pattern of exclusion of impairment expense is approximately 25% in FY2010, 26% in FY2011, then suddenly increased to 46% in FY2012.

4.12 Logistic regression analysis: remuneration components and decision to provide reconciliation between NGFMs and GAAP measures

Logistic regression results in Table 4.14 demonstrate the impacts of components of CEOs' remuneration on decision to provide reconciliation between non-GAAP financial measures and GAAP measures when NGFMs have been disclosed by the companies. Model 1 in Table 4.14 presents the results related to the dependent variable RECON, defined as the decision to provide reconciliation between non-GAAP financial measures and GAAP measures when non-GAAP financial measures have been disclosed by the companies.

Results substantiate that both base and short-term incentives are positively statistically significant. The p value of the base component is 0.007 and the p value of STI is 0.029. Also, the standard deviation of the past three years (ROE) is positively statistically significant, with the p value of 0.002. These results indicate that companies are more likely to provide reconciliation when base salary, short-term incentives, and profit variability are higher.

Table 4.14: The influences of CEOs remuneration-components on decision to provide reconciliation between non-GAAP financial measures and GAAP measures when non-GAAP financial measures have been disclosed by the companies in FY2010–2012

VARIABLES	Model (1) RECON
BASE	1.553***
	(0.576)
STI	0.125**
	(0.0571)
LTI	-0.0905
	(0.103)
GROWTH	-0.0400
	(0.0528)
STD_ROE	2.941***
	(0.961)
LEVERAGE	0.00371
	(0.0530)
ASSETS	0.384*
	(0.222)
INTAN	7.003***
	(1.845)
Constant	-31.66***
	(7.169)
Number of observations	142
Year fixed effects	Yes

Logistic regression demonstrates the impacts of CEOs remuneration-components on decision to provide reconciliation between Non-GAAP Financial Measures (NGFMs) and GAAP measures when NGFMs have been disclosed by the companies. *Model 1* represents the results related to the dependent variable RECON which has been defined as the decision to provide reconciliation between NGFMs and GAAP measures when NGFMs have been disclosed by the companies and it has been measured by assigning code '1' when companies have provided reconciliation and '0' otherwise. The independent variables are natural log value of base salary of CEOs (BASE); natural log value of short-term incentives of CEOs (STI); natural log value of long-term incentives of CEOs (LTI); price to book value to measure growth of companies (GROWTH); previous three-year standard deviation of return on equity to measure variability of companies' profitability (STD_ROE); total liabilities to total equity to measure leverage of companies (LEVERAGE); natural log value of total assets to consider the size of companies (ASSETS) and proportion of total intangibles to total assets to measure intensity of intangibles of companies (INTAN).
Robust standard errors in parentheses.
***p<0.01, **p<0.05, *p<0.1

4.13 Summary of hypotheses: acceptance and rejection

Table 4.15 presents the list of the hypotheses developed based on the three research objectives of this study, the acceptance and rejection of hypotheses, partially significant with a particular independent variable, and no result hypotheses.

Table 4.15: List of acceptance and rejection of hypotheses based on the three types of decision to disclose non-GAAP financial measures

Decision	Measuring the decision	Hypothesis	Accepted/ Rejected
1. The decision to disclose non-GAAP financial measures in preliminary final report.	The decision to disclose non-GAAP financial measures in results for announcement to the market of preliminary final repot	***Hypothesis 1A:*** *The decision to disclose non-GAAP financial measures in results for announcement to the market is more likely when short-term incentive (STI) in the remuneration structure of CEOs is significantly related to the decision.*	Rejected
		Hypothesis 1B: *The decision to disclose non-GAAP financial measures in results for announcement to the market is less likely when long-term incentive (LTI) in the remuneration structure of CEOs is significantly related to the decision.*	Rejected
		Hypothesis 1C: *The decision to disclose non-GAAP financial measures in results for announcement to the market is less likely when base salary in the remuneration structure of CEOs is significantly related to the decision.*	Accepted
	The decision to disclose non-GAAP financial measures in other sections of preliminary final repot	***Hypothesis 1D:*** *The decision to disclose non-GAAP financial measures in other sections of preliminary final report is less likely when short-term incentive (STI) in the remuneration structure of CEOs is significantly related to the decision.*	Accepted
		Hypothesis 1E: *The decision to disclose non-GAAP financial measures in other sections of preliminary final report is more likely when long-term incentive (LTI) in the remuneration structure of CEOs is significantly related to the decision.*	Rejected
		Hypothesis 1F: *The decision to disclose non-GAAP financial measures in other sections of preliminary final report is more likely when base salary in the remuneration structure of CEOs is significantly related to the decision.*	Accepted
2. The decision to exclude expense item when non-GAAP financial measures have been disclosed.	The decision to exclude recurring expense item when non-GAAP financial measures have been disclosed	***Hypothesis 2:*** *The decision to exclude expense item when non-GAAP financial measures have been disclosed is more likely because the components (base, STI and LTI) of remuneration structure of CEOs are significantly related to the decision:*	
		Equation 4: *The decision to exclude depreciation and amortization when non-GAAP financial measures have been disclosed is more likely because the components (base, STI and LTI) of remuneration structure of CEOs are significantly related to the decision.*	Base is significant

		Equation 5: *The decision to exclude tax related expense when non-GAAP financial measures have been disclosed is more likely because the components (base, STI and LTI) of remuneration structure of CEOs are significantly related to the decision.*	LTI is significant
		Equation 6: *The decision to exclude interest-related items when non-GAAP financial measures have been disclosed is more likely because the components (base, STI and LTI) of remuneration structure of CEOs are significantly related to the decision.*	Base is significant
		Equation 7: *The decision to exclude stock-based compensation when non-GAAP financial measures have been disclosed is more likely because the components (base, STI and LTI) of remuneration structure of CEOs are significantly related to the decision.*	No result
	The decision to exclude non-recurring expense item when non-GAAP financial measures have been disclosed.	***Equation 8:*** *The decision to exclude losses on sales of assets when non-GAAP financial measures have been disclosed is more likely because the components (base, STI and LTI) of remuneration structure of CEOs are significantly related to the decision.*	STI is significant
		Equation 9: *The decision to exclude merger & acquisition related costs when non-GAAP financial measures have been disclosed is more likely because the components (base, STI and LTI) of remuneration structure of CEOs are significantly related to the decision.*	STI is significant
		Equation 10: *The decision to exclude impairment expenses when non-GAAP financial measures have been disclosed is more likely because the components (base, STI and LTI) of remuneration structure of CEOs are significantly related to the decision.*	Base & LTI are significant
		Equation 11: *The decision to exclude restructuring charges when non-GAAP financial measures have been disclosed is more likely because the components (base, STI and LTI) of remuneration structure of CEOs are significantly related to the decision.*	Rejected
		Equation 12: *The decision to exclude early debt retirement when non-GAAP*	No result

		financial measures have been disclosed is more likely because the components (base, STI and LTI) of remuneration structure of CEOs are significantly related to the decision.	
		Equation 13: *The decision to exclude bad and doubtful debt items when non-GAAP financial measures have been disclosed is more likely because the components (base, STI and LTI) of remuneration structure of CEOs are significantly related to the decision.*	No result
		Equation 14: *The decision to exclude other items when non-GAAP financial measures have been disclosed is more likely because the components (base, STI and LTI) of remuneration structure of CEOs are significantly related to the decision.*	Rejected
3. The decision to provide reconciliation between non-GAAP financial measures and GAAP measures when non-GAAP financial measures have been disclosed.		***Hypothesis 3A:*** *The decision to provide reconciliation between non-GAAP financial measures and GAAP measures is more likely when base salary in remuneration structure of CEOs is significantly related to the decision.*	Accepted
		Hypothesis 3B: *The decision to provide reconciliation between non-GAAP financial measures and GAAP measures is more likely when short-term incentive (STI) in remuneration structure of CEOs is significantly related to the decision.*	Accepted
		Hypothesis 3C: *The decision to provide reconciliation between non-GAAP financial measures and GAAP measures is more likely when long-term incentive (LTI) in remuneration structure of CEOs is significantly related to the decision.*	Rejected

Chapter Five: Discussion and Conclusions

5.1 Overview

The first part of this chapter discusses the results of non-GAAP financial measures and remuneration structure of CEOs; the hypotheses' acceptance and rejection, and their implications. The second part of this chapter explains the concluding remarks, limitations, and indicates future research avenues.

5.2 Key findings: components of remuneration of CEOs and non-GAAP financial measures

This empirical research examined the pay-behaviour relationship by analyzing remuneration components of chief executive officers on decision to disclose voluntarily non-GAAP financial measures.

Findings confirm that the remuneration structure of CEOs in Australia, on average, is comprised of approximately 41.31% of base salary, 29.76% of LTI components, and 28.93% of STI components, over the period FY2010–FY2012. These findings indicate the major interchange between the components of total remuneration. The outcomes from this analysis also suggest that the significantly diminishing STI component is attributed to the increase of the BASE and LTI components. The base component has increased gradually over the period with a significant increase in FY2011 while LTI has a mixed trend over the period with an increment in FY2012 compared to the FY2010.

This empirical study provides results in relation to how the components of CEOs' remuneration influence the decision to disclose non-GAAP financial measures in the mandatory section of preliminary final reports. In contrast, this study also presents the results of component influence on disclosure decision in a different setting that is the other sections of the preliminary final report. Findings from this study confirm that the number of companies disclosing in a mandatory section has decreased significantly over the period and the results are opposite for disclosure decisions in

other sections. Results suggest that the number of companies that disclosed non-GAAP financial measures in other sections has increased gradually over the period.

In addition, this study demonstrates that twelve types of expenses items comprising three broad categories (recurring expense items, non-recurring expense items, and below-the-line items) have been excluded when companies decided to disclose non-GAAP financial measures. Findings reveal that the non-recurring expense category includes seven types of expense items: i) restructuring charges (RESTRUC); ii) gains and losses on sales of assets (SOA); iii) merger and acquisition related costs (MA&A); iv) early debt retirement (DEBTRET); v) costs related to bad and doubtful debt (BADDEBT); vi) impairment expenses (IMPAIR); and vii) other expense items (OTX). The recurring expense category includes four types of expense items: i) depreciation and amortization expense (D&A); ii) stock based compensation expense (STOCKCOMP); iii) tax related expense (TAX); and iv) interest related expense (INTER). The below-the-line category includes one type of expense item: charges for retroactive application of accounting changes (RETRO).

Furthermore, this study substantiates that, on average, 79% of companies provided reconciliation when they disclosed non-GAAP financial measures. The evidence suggests that the trend of providing reconciliation has increased from 77% in FY2010 to 80% in FY2011 and it has continued at 80% in FY2012.

Finally, this study reports various terminologies of non-GAAP financial measures reported by companies over the period FY2010–FY2012. Compared to the literature, several variants of a single measure have not only been disclosed, but also a number of new terminologies have been reported to disclose non-GAAP financial measures.

5.3 Discussion: the first research objective

Research objective 1: Examine the relationship between the components (base, STI, and LTI) of remuneration structure of CEOs and the decision to disclose non-GAAP financial measures in the section 'results for announcement to the market' and in the 'other sections' of preliminary final reports.

i. *Decision to disclose non-GAAP financial measures in results for announcement to the market of preliminary final report.*

The results confirm hypothesis 1C (the decision to disclose non-GAAP financial measures in results for announcement to the market is less likely when base salary in the remuneration structure of CEOs is significantly related to the decision) is accepted, since the base component of remuneration of CEOs is statistically significant. The evidence substantiates that there is a negative relationship between the base components of remuneration of CEOs and the decision to disclose NGFM in results for announcement to the market.

The results demonstrate that when the fixed component (base salary) of remuneration is the largest in the remuneration structure, it influences the decision in an opposite way to the influence of incentives which are at risk (STI and LTI). These findings provide significant insight to understand the relationship between base salary and NGFM in the context of the mandatory identified section. As long as CEOs receive their highest proportion of remuneration in fixed form, they are less likely to disclose this in such a section that must include key results of companies. These indicate the altruistic motivation of CEOs when base salary is substantial in the remuneration structure. Thus, these results contribute to the literature of remuneration, as well as the non-GAAP financial measures, by extending knowledge in these fields.

The findings also substantiate that companies with larger assets, higher growth, and lower profit variability are less likely to disclose NGFM in the results for announcement to the market because these variables are negatively statistically significant. However, results show that highly leveraged companies are more likely to disclose NGFM in the results for announcement to the market since there is a positive statistically significant association with the decision to disclose NGFMs.

These outcomes of control variables indicate that companies with good characteristics in terms of size, profit variability, and growth are less likely to disclose NGFM in a mandatory identified section. This also suggests that CEOs take an altruistic view when disclosing in a mandatory identified results section.

Hypotheses 1A and 1B are rejected as not statistically significant.

ii. *Decision to disclose non-GAAP financial measures in other sections of preliminary final report.*

The results confirm that hypothesis 1D (the decision to disclose non-GAAP financial measures in other sections of the preliminary final report is less likely when short-term incentive (STI) in the remuneration structure of CEOs is significantly related to the decision) is accepted, since the STI component of remuneration of CEOs is statistically significant. The evidence substantiates that there is a negative association between the STI components of remuneration of CEOs and the decision to disclose NGFM in other sections of the preliminary final report.

This evidence suggests companies are less likely to disclose NGFM in other sections of the preliminary final report. The results support the logical grounds for developing this hypothesis. The main reason is that other sections of the preliminary final report do not include any mandatory identified section, such as results for announcement to the market. Thus, the response to this section was expected to be different and the findings confirm this hypothesis. Essentially, the crucial factor is the section where the NGFMs are being disclosed in considering the proportion of the STI component.

In addition, hypothesis 1F (the decision to disclose non-GAAP financial measures in other sections of the preliminary final report is more likely when base salary in the remuneration structure of CEOs is significantly related to the decision) is accepted, since the base salary of remuneration of CEOs is statistically significant. The evidence substantiates a positive relationship between the base salary component of remuneration of CEOs and the decision to disclose NGFM in other sections of the preliminary final report. This evidence shows that the opposite relationship compared to reporting the disclosure decision in the mandatory identified section. This finding supports the development of the hypothesis that the decision to disclose NGFM differs based on the underlying section (RAM or OTH) when remuneration structure includes the highest amount for fixed salary compared to the incentives at risk.

Also, the results reveal that leverage and standard deviation of ROE are statistically significant. In comparison to Model 1, the results are consistent because leverage in Model 2 is negatively affected, whereas leverage is positively affected in Model 1. Similarly, standard deviation of ROE is opposite in Models 1 and 2. This means companies with high variability in ROE are more likely to disclose in other sections, but higher leverage companies tend to disclose less in other sections of the

preliminary final report. Hypothesis 1E was rejected for not being statistically significant.

Thus, the evidence from this study extends the knowledge of non-GAAP disclosure and remuneration of CEOs by understanding their relationship patterns in the context of a different remuneration structure combination.

5.4 Discussion: the second research objective

Research objective 2: Examine the relationship between the components (base, STI, and LTI) of remuneration structure of CEOs and the decision to exclude expense items when non-GAAP financial measures have been disclosed.

This study not only analyzed the recurring expense items but also the non-recurring expense items, to provide a comprehensive understanding of the influence of remuneration on the decision to exclude expense items. Results confirm that twelve expense items, including one below-the-line item, four recurring expense items, and seven non-recurring expense items, were excluded by the companies when they disclosed non-GAAP financial measures. This study disregarded examining the below-the-line item and, subsequently, examined the remaining eleven expense items by incorporating all the remuneration components into the research framework.

The logistic regression confirms that six expense items have statistically significant relationships with a number of components of CEOs' remuneration structure. These six statistically significant expense items were three recurring expense items (depreciation and amortization, tax related items, and interest related items) and three non-recurring expense items (losses on sales of assets, merger and acquisition related expenses, and impairment expenses).

i. Exclusion of recurring expense item: depreciation and amortization

Equation 4, the decision to exclude depreciation and amortization when non-GAAP financial measures have been disclosed, is more likely because the components (base, STI, and LTI) of remuneration structure of CEOs are significantly related to the decision, confirming that the dependent variable, D&A (depreciation and amortization costs) has a statistically significant positive relationship with the base

component of CEOs' remuneration. This analysis reveals that companies are more likely to exclude depreciation and amortization expense if the base salary is higher. Also, company size is negatively statistically significant indicating that the smaller a company's size the higher the likelihood of excluding depreciation and amortization related expenses when NGFMs have been disclosed. These empirical results suggest that the opportunistic motive underpins the exclusion of recurring depreciation and amortization expense items.

ii. Exclusion of recurring expense item: tax related items

Equation 5, the decision to exclude tax related expense when non-GAAP financial measures have been disclosed, is more likely because the components (base, STI, and LTI) of remuneration structure of CEOs are significantly related to the decision, showing that the dependent variable, TAX (tax related items) has a negative statistically significant relationship with CEOs' long-term incentives. This suggests that lower LTI is more likely to affect exclusion of tax related items. Moreover, Model 2 represents two control variables that are positively statistically significant. Companies with higher profit variability and bigger in size are more likely to exclude the tax related expense items when NGFMs have been disclosed. This finding supports the goal alignment of agency theory that ensures stakeholders' interest by allocating incentives at risk which are long-term incentives.

iii. Exclusion of recurring expense item: interest related items

Equation 6, the decision to exclude interest-related items when non-GAAP financial measures have been disclosed is more likely because the components (base, STI, and LTI) of remuneration structure of CEOs are significantly related to the decision, confirms that the dependent variable, INTER (interest related items) has a negative statistically significant association with long-term incentives (LTI) and a negative statistically significant association with the base component of CEOs' remuneration. The evidence also substantiates that companies with higher growth and lower profit variability are more likely to exclude interest expense related items because of positively statistically significant GROWTH and STD_ROE.

Overall, the evidence provided by this study suggests companies are more likely to be opportunistic by excluding recurring expense items of tax and interest when long-term incentives are smaller. Thus, setting up CEOs with long-term incentives

alleviates opportunistic motivation. The proponents of agency theory argue to align incentives with a long-term option to maximize shareholders' interest. The results of this analysis also support the views of agency theory.

iv. Exclusion of non-recurring expense item: losses on sales of assets

Equation 8, the decision to exclude losses on sales of assets when non-GAAP financial measures have been disclosed is more likely because the components (base, STI, and LTI) of remuneration structure of CEOs are significantly related to the decision, demonstrates that the dependent variable SOA (losses on sales of assets) has a positive statistically significant relationship with short-term incentives. This analysis provides evidence that companies are more likely to exclude losses on sales of assets to achieve higher short-term incentives. This evidence shows the opportunistic perspective by excluding losses on sales of assets to achieve more short-term incentives.

v. Exclusion of non-recurring expense item: merger and acquisition related costs

Equation 9, the decision to exclude merger and acquisition related costs when non-GAAP financial measures have been disclosed is more likely because the components (base, STI, and LTI) of remuneration structure of CEOs are significantly related to the decision, shows that the relationship of the dependent variable, M&A (merger and acquisition related costs) is positively statistically significant with the short-term incentives of CEOs. Also, highly leveraged companies are more likely to exclude merger and acquisition related expense items when NGFMs have been disclosed being positively statistically significant. These findings also imply the opportunistic view by excluding merger and acquisition related expenses to obtain more short-term incentives.

vi. Exclusion of non-recurring expense item: impairment expenses

Equation 10, the decision to exclude impairment expenses when non-GAAP financial measures have been disclosed is more likely because the components (base, STI, and LTI) of remuneration structure of CEOs are significantly related to the decision, confirms that the dependent variable, IMPAIR (impairment expenses) has a positively statistically significant relationship with long-term incentives and a negatively statistically significant relationship with the base component of

remuneration of CEOs. Also, results demonstrate that companies with lower profit variability are more likely to exclude impairment charges since the variability of profit, and STD_ROE are negatively statistically significant. This evidence substantiates the view that companies are more likely to decide to exclude impairment related expense items if long-term incentives are not significantly increased whereas base salary is gradually increasing with a significant increase in FY2011.

These results explain that, from an altruistic point of view, CEOs with a higher proportion of base salary are less likely to exclude the restructuring related charges. In contrast, in given remuneration structures where LTIs have not increased significantly, CEOs are more likely to exclude impairment expenses to achieve greater incentives from fixed salary from an opportunistic point of view. These results support the pattern of LTI and exclusion of impairment charges over the period. LTIs increased in the fiscal year 2012, as did the exclusion of impairment charges. In contrast, the trend of base component gradually increased over the period. This implies that when two variables have significant influence in opposite directions, it is likely there are unusual patterns of these variables.

Equation 7 (the decision to exclude stock-based compensation when non-GAAP financial measures have been disclosed is more likely because the components (base, STI, and LTI) of remuneration structure of CEOs are significantly related to the decision); equation 12 (the decision to exclude early debt retirement when non-GAAP financial measures have been disclosed is more likely because the components (base, STI, and LTI) of remuneration structure of CEOs are significantly related to the decision); and equation 13 (the decision to exclude bad and doubtful debt items when non-GAAP financial measures have been disclosed is more likely because the components (base, STI, and LTI) of remuneration structure of CEOs are significantly related to the decision) have no result because the number of companies that excluded these three types of expense items was not enough to run the logistic regression.

Moreover, equation 11 (the decision to exclude restructuring charges when non-GAAP financial measures have been disclosed is more likely because the components (base, STI, and LTI) of remuneration structure of CEOs are significantly

related to the decision) and equation 14 (the decision to exclude other items when non-GAAP financial measures have been disclosed is more likely because the components (base, STI, and LTI) of remuneration structure of CEOs are significantly related to the decision) have no statistically significant result and consequently these two hypotheses are rejected. Since these two hypotheses have no significant results, the results are not tabulated in this paper.

5.5 Discussion: the third research objective

Research objective 3: Examine the relationship between the components (base, STI, and LTI) of remuneration structure of CEOs and the decision to provide reconciliation between non-GAAP financial measures and GAAP measure when non-GAAP financial measures have been disclosed.

Hypothesis 3A (the decision to provide reconciliation between non-GAAP financial measures and GAAP measures is more likely when base salary in remuneration structure of CEOs is significantly related to the decision) and hypothesis 3B (he decision to provide reconciliation between non-GAAP financial measures and GAAP measures is more likely when short-term incentives (STI) in remuneration structure of CEOs is significantly related to the decision) have been accepted because the base salary and short-term incentives are positively statistically significant. Also, the standard deviation of past three year ROE is positively statistically significant indicating companies are more likely to provide reconciliation when base salary, and profit variability are higher.

These results support the literature and previous empirical studies. The evidence suggests that the trend of providing reconciliation increased from 77% in FY2010 to 80% in FY2011 and FY2012, while on average 18% of companies provided a list of items. This study found that 3% companies did not provide either reconciliation or a list of items when they disclosed non-GAAP financial measures. This supports the ASIC initiative in 2011 in issuing RG230 to require companies to provide reconciliation. The empirical test validates the reasoning that the nature of remuneration structure of CEOs in Australia, coupled with the regulatory reformation, means companies are taking altruistic view to provide reconciliation between non-GAAP and GAAP information.

Hypothesis 3C was rejected due to no statistically significant result.

5.6 Conclusions

This empirical research examined the pay-behaviour relationship by analyzing the influence of components of remuneration structure of chief executive officers on three types of decisions regarding disclosures of non-GAAP financial measures.

With the purpose of investigating the relationship, this study considered all components (base salary, short-term incentives, and long-term incentives) of CEOs' remuneration structure. To examine the behavioural outcomes, this study measured the three types of decisions about disclosures of non-GAAP financial measures and then analyzed the relationships. The first type of decision included whether companies disclosed non-GAAP financial measures in results for announcement to the market and in other sections of the preliminary final report. The second type of decision included whether companies excluded expense items in reporting non-GAAP financial measures. Finally, the third type of decisions included whether companies provided reconciliation between non-GAAP financial measures and GAAP measure when non-GAAP financial measures were disclosed.

Findings from this study confirm that base salary is the largest proportion of the remuneration structure of CEOs in Australia, while the proportion of STI and LTI are nearly the same. Furthermore, this study shows a major interchange among individual components of remuneration structure of CEOs in Australia. The evidence suggests that the base component is increasing sharply while the tumbling STI has been attributed to the rising base and LTI components.

This evidence substantiates the opposing direction of relationship regarding disclosures of non-GAAP financial measures in results for announcement to the market and in other sections of the preliminary final report in Australia. Fewer companies are disclosing NGFMs in the section of results for announcement to the market; in contrast, more companies are disclosing NGFMs in the other sections of the preliminary final report. This study finds that the base component of remuneration of CEOs plays an altruistic role, being negatively statistically significant in relation to disclosures of NGFMs in the section of results for

announcement to the market. This scenario is also true for companies that are big, have high growth, and lower variability of profit, because these are also negatively statistically significant, while highly leveraged companies are more likely to disclose NGFMs in the section of results for announcement to the market. This study found a completely opposite direction of relationship when companies disclose NGFMs in other sections of the preliminary final report. Only the STI component is negatively statistically significant, indicating opportunistic motivations that are also true for highly leveraged companies when disclosing NGFMs in the other sections.

This study found various types of expense items have statistically significant relationships with different components of CEOs' remuneration structure. However, there is no evidence that the STI component is statistically significant in excluding recurring expense items, so either base or LTI components significantly influence the exclusion of recurring expense items. Further insights support the opportunistic motivations of companies because LTI is negatively significant in excluding tax and interest related expense items. Again, support for the agency theory can mitigate the exclusion of tax and interest related expense items. In contrast, STI plays a significant role in excluding non-recurring expense items, such as merger and acquisition expenses and loss on sales of assets. No other component of the remuneration structure influences the exclusion of merger and acquisition expenses and loss on sales of assets. Here, STI plays an opportunistic motivation to gain benefits, while two components, base and LTI, are significant in excluding impairment expense. The insights explain that components need to be balanced in devising CEOs' remuneration structure because they are significant in reverse way, i.e., base is negatively significant and LTI is positively significant.

Finally, the results indicate that base salary and short-term incentives impact the decision to provide reconciliation in a positive way. The underlying factor is the variability of profit, because ROE is positively significant. Consequently, LTI effect is not significant.

Thus, this empirical study contributes to the non-GAAP literature and remuneration of CEOs in several ways. It contributes to the literature of non-GAAP disclosure by measuring the direct relationship between the decision to disclose non-GAAP financial measures and components of CEOs' remuneration. Moreover, in contrast to

prior studies of non-GAAP financial measures, this study maintains the remuneration structure by incorporating all components into the research framework. Consequently, it extends the non-GAAP literature by examining the proposition that executives recognize and undertake actions in various ways depending on individual reward components (Devers et al. 2007).

In addition, this study provides empirical evidence of the remuneration structure of CEOs in an Australian context, which is different to the United States and major European countries. Thus, it contributes to non-GAAP literature by providing empirical evidence from a different context.

Furthermore, in relation to the methodology of non-GAAP data collection, this study significantly contributes to non-GAAP literature because it examines the source documents of non-GAAP financial measures through reading and subsequently hand-collecting the data. In contrast to prior studies, except Marques (2006), this study does not rely on proxies for non-GAAP measures provided by commercial databases, nor does it rely on keyword search strings to identify instances for non-GAAP financial measures. To overcome the disadvantages of proxies for non-GAAP data and keyword search strings, this study has considered collecting non-GAAP financial measures in line with Marques (2006).

Moreover, this study contributes to evaluate policy implications of regulatory bodies because it provides a number of empirical outcomes regarding the disclosures of non-GAAP financial measures and remuneration of CEOs. These findings help to assess several aspects of initiatives adopted by regulatory institutions. For example, RG 230, a recent endeavour by the Australian Securities and Investments Commission, requires companies to present reconciliation between non-GAAP and GAAP measures. One part of this study captures this aspect and confirms that the general trend of providing reconciliation increased in FY2011. Moreover, as soon as RG 230 came into effect in 2011, with guidance regarding the use of non-GAAP measures, the disclosures of non-GAAP financial measures has declined in the results for announcement to the market section and increased in other sections of the preliminary final report.

Last but not the least, this study provides empirical evidence regarding non-GAAP financial measures and components of remuneration of CEOs to provide a number of insights about these relationships. These suggest that CEOs are more likely to be opportunistic by excluding recurring expense items of tax and interest when long-term incentives are fewer. Thus, formulating the incentives of CEOs by incorporating long-term incentives, helps reduce opportunistic motivation. The proponents of agency theory argue that to align the incentives with long-term options maximize shareholders' interests. Thus, the results of this analysis also support the views of agency theory. Moreover, findings regarding non-recurring excluded expense items suggest that long-term incentives significantly affect the exclusion of impairment related charges. These types of expenditure usually generate benefits in the long run. Moreover, short-term incentives influence the exclusion of losses on sales of assets and merger and acquisition-related charges. Additionally, base salaries significantly affect decisions to exclude impairment charges, from an altruistic point of view.

Like other studies, this study has limitations that could shape future research avenues. The extensive nature of disclosures of preliminary final reports in Australia limited this study to investigating up to 150 observations over three fiscal years for 50 companies. Future study may include more observations to extend the research further. Moreover, this study can be extended to analyze how GAAP based performance is related to components of remuneration i.e., STI, LTI and base salary. The pay-behaviour relationship with remuneration can be extended by incorporating further variables related to CEO i.e., tenure, age. Furthermore, the area of informativeness of non-GAAP information can be explored when GAAP related performance is not strong.

Appendices

Appendix to Chapter Two

Table A.2.1: The list of non-GAAP terminologies from the most relevant recent studies

Author (Year)	Research context	Terminology Found in the Study
Isidro and Marques (2013)	Europe	EBIT; adjusted EBIT; EBITDA; adjusted EBITDA.
(Black et al. 2012)	USA	*Original search keywords:* Pro forma; pro-forma; proforma. *Expanded search string:* Earnings excluding; net income excluding; adjusted net income; adjusted loss; cash earnings; earnings before; free cash flow; normalized EPS; normalized earnings; recurring earnings; distributable cash flow; GAAP one-time adjusted; GAAP adjusted; cash loss.
Cameron, Percy and Clarke (2012)	Australia	Variants of EBIT or EBITDA; NPAT excluding; underlying earnings; normalized earnings
Sek and Taylor (2011)	Australia	*Profit* cash earnings/profit after tax; cash profit before provisions; operating profit after tax excluding significant transactions; profit after tax excluding significant/non-core items; underlying profit after tax; cash earnings excluding conduit costs; cash basis revenue growth; core earnings. *Ratio* cash earnings per share; cash earnings per share ex HK sale; underlying earnings per share; earnings per share excluding goodwill; cash return on equity; underlying return on equity; underlying cash earnings to average ordinary equity; cash earnings on average full time employees (FTE); cash dividend payout ratio; underlying cash dividend payout ratio; cash dividend cover; cash expenses-to-income; underlying expenses-to-income; cash earnings on average assets; cash expenses to funds under administration (FUA); underlying expenses to FUA; cash expenses to average in-force premiums; underlying expenses to average in-force premiums. *Other non-GAAP performance measures:* Economic value added (EVA); economic profit.
Black and Christensen (2009)	USA	*Original search keywords:* Pro forma; pro-forma; proforma. *Expanded search string:* Earnings excluding; net income excluding; adjusted net income; adjusted loss; cash earnings; earnings before; free cash flow; normalized EPS; normalized earnings; recurring earnings; distributable cash flow; GAAP one-time adjusted; GAAP adjusted; cash loss.
Entwistle, Feltham and Mbagwu (2006)	USA	EPS excluding various items; ongoing earnings; underlying earnings; adjusted net income; core EPS.

(continued on next page)

Table A.2.1 (continued)

Marques (2006)	USA	*Non-GAAP earnings and other disclosures:* Non-GAAP income measures; non-GAAP operating earnings or EBIT_DA (EBIT; EBITDA; adjusted EBIT; adjusted EBITDA); non-GAAP cash flow or cash earnings. *Non-GAAP earnings per share:* Non-GAAP earnings from continuing operations, per share; non-GAAP operating earnings, per share; non-GAAP cash earnings, per share; non-GAAP cash flow, per share. *Non-GAAP aggregated disclosures:* Non-GAAP net income; non-GAAP income from continuing operations; non-GAAP operating income; non-GAAP cash earnings; non-GAAP cash flow; EBIT_DA.
Lougee and Marquardt (2004)	USA	Pro forms earnings; pro forma net income; pro forma net loss; adjusted earnings; adjusted net income; adjusted loss.
(Bhattacharya et al. 2003)	USA	Pro forma; pro-forma; proforma.
Wallace (2002)	USA	Earnings excluding; net income excluding; adjusted net income; adjusted loss; cash earnings; earnings before; free cash flow; normalized EPS; normalized earnings; recurring earnings; distributable cash flow; GAAP one-time adjusted; GAAP adjusted; cash loss.

Appendix to Chapter Three

Table A.3.1: List of the observations collected for remuneration of CEOs from the database (SIRCA) for FY2010-2012

No	Ticker	FY	No	Ticker	FY	No	Ticker	FY	No	Ticker	FY
1	AGL	2010	36	CSL	2011	71	OSH	2010	106	WOR	2012
2	AGL	2011	37	CSL	2012	72	OSH	2011	107	WOW	2010
3	AGL	2012	38	CWN	2010	73	OSH	2012	108	WOW	2011
4	AIO	2011	39	CWN	2011	74	QBE	2010	109	WOW	2012
5	AIO	2012	40	CWN	2012	75	QBE	2011	110	WPL	2010
6	AMC	2010	41	FMG	2010	76	QBE	2012	111	WPL	2011
7	AMC	2011	42	FMG	2011	77	RHC	2010	112	WPL	2012
8	AMC	2012	43	FMG	2012	78	RHC	2011			
9	AMP	2010	44	IAG	2010	79	RHC	2012			
10	AMP	2011	45	IAG	2011	80	RIO	2010			
11	AMP	2012	46	IAG	2012	81	RIO	2011			
12	ANZ	2010	47	ILU	2010	82	RIO	2012			
13	ANZ	2011	48	ILU	2011	83	SHL	2010			
14	ANZ	2012	49	ILU	2012	84	SHL	2011			
15	ASX	2010	50	IPL	2010	85	SHL	2012			
16	ASX	2011	51	IPL	2011	86	STO	2010			
17	ASX	2012	52	IPL	2012	87	STO	2011			
18	AZJ	2011	53	JHX	2010	88	STO	2012			
19	AZJ	2012	54	JHX	2011	89	SUN	2010			
20	BHP	2010	55	JHX	2012	90	SUN	2011			
21	BHP	2011	56	MQG	2010	91	SUN	2012			
22	BHP	2012	57	MQG	2011	92	TLS	2010			
23	BXB	2010	58	MQG	2012	93	TLS	2011			
24	BXB	2011	59	NAB	2010	94	TLS	2012			
25	BXB	2012	60	NAB	2011	95	TOL	2010			
26	CBA	2010	61	NAB	2012	96	TOL	2011			
27	CBA	2011	62	NCM	2010	97	TOL	2012			
28	CBA	2012	63	NCM	2011	98	WBC	2010			
29	CCL	2010	64	NCM	2012	99	WBC	2011			
30	CCL	2011	65	ORG	2010	100	WBC	2012			
31	CCL	2012	66	ORG	2011	101	WES	2010			
32	CPU	2010	67	ORG	2012	102	WES	2011			
33	CPU	2011	68	ORI	2010	103	WES	2012			
34	CPU	2012	69	ORI	2011	104	WOR	2010			
35	CSL	2010	70	ORI	2012	105	WOR	2011			

Table A.3.2: List of the companies that reported more than one CEO position in their annual report

Company	FY	No of CEOs	Description of CEO position
MGR	2010	3	CEO-Development
			CEO-Development, NSW and Victoria
			CEO-Investment Management
MGR	2011	4	CEO-Development
			CEO-Development, NSW and Victoria
			CEO-Investment
			CEO-Queensland
MGR	2012	2	CEO-Development
			CEO-Investment
SGP	2010	3	CEO-Commercial Property
			CEO-Residential
			CEO-Retirement Living Head of Strategy
SGP	2011	3	CEO-Commercial Property
			CEO-Residential
			CEO-Retirement Living Head of Strategy
SGP	2012	3	CEO-Commercial Property
			CEO-Residential
			CEO-Retirement Living Head of Strategy
WDC	2010	2	Joint Chief Executive Officer
WDC	2011	2	Co-Chief Executive Officers
WDC	2012	2	Co-Chief Executive Officers

Table A.3.3: Recurring, non-recurring and below-the-line expense items from the most relevant recent studies

Author (Year)	Excluded expense items	Expense category
Marques (2006); Black and Christensen (2009);Bhattacharya et al. (2003)	Earnings before and after discontinued operations	Below-the-line
	Extraordinary items	Below-the-line
	Retroactive application of accounting changes	Below-the-line
Black and Christensen (2009)	Restructuring charges	Infrequent/Non-recurring
	Gains and losses on sales of assets	Infrequent/Non-recurring
	Merger and acquisition related costs	Infrequent/Non-recurring
	Early debt retirement	Infrequent/Non-recurring
	Stock related expenses (preferred stock conversion and IPO expenses)	Infrequent/Non-recurring
Bhattacharya et al. (2003)	Research & development (R&D) costs and write-offs of purchased in-process R&D costs	Infrequent/Non-recurring
Sek and Taylor (2011)	Charge to provide for bad and doubtful debts-economic cycle	Infrequent/Non-recurring
	Impairment expenses	Infrequent/Non-recurring
	Gains and losses from the fair value movements in hedges	Recurring
Isidro and Marques (2013); Black and Christensen (2009)	Research and development (R&D) costs and write-offs of purchased in-process R&D	Recurring
	Depreciation and amortization costs	Recurring
	Stock-based compensation costs	Recurring
	Tax-related items	Recurring
	Interest-related items	Recurring
	Adjustments to arrive at funds from operations	Recurring

Table A.3.4: Calculation of converting US$ remuneration of CEOs to A$ amount

Code	Year	Amount in USD					Exchange Rate A$1 to US$	Amount in AUD				
		Base Salary	Cash Bonus	STI	Superannuation	LTI		Base Salary	Cash Bonus	STI	Superannuation	LTI
BHP	2010	2,038,885.00	2,330,527.00	0.00	815,554.00	6,076,697.00	0.88	2,316,915.00	2,648,326.00	0.00	926,766.00	6,905,338.00
BHP	2011	2,114,814.00	2,351,448.00	0.00	845,926.00	6,236,238.00	0.99	2,136,176.00	2,375,200.00	0.00	854,471.00	6,299,230.00
BHP	2012	2,201,000.00	0.00	0.00	880,400.00	6,630,607.00	1.03	2,136,893.00	0.00	0.00	854,757.00	6,437,483.00
BXB	2010	1,408,000.00	692,000.00	0.00	27,000.00	438,000.00	0.88	1,597,640.00	785,204.00	0.00	30,637.00	496,993.00
BXB	2011	1,730,000.00	1,000,000.00	0.00	0.00	260,000.00	1.00	1,734,684.00	1,002,707.00	0.00	0.00	260,704.00
BXB	2012	2,430,000.00	1,043,000.00	0.00	0.00	661,000.00	1.03	2,358,307.00	1,012,228.00	0.00	0.00	641,498.00
CPU	2010	845,596.00	503,734.00	0.00	12,705.00	2,449,620.00	0.88	962,545.00	573,402.00	0.00	14,462.00	2,788,412.00
CPU	2011	991,204.00	429,113.00	0.00	14,907.00	1,850,424.00	0.98	1,010,608.00	437,513.00	0.00	15,199.00	1,886,648.00
CPU	2012	1,207,440.00	446,438.00	0.00	16,419.00	927,353.00	1.04	1,160,108.00	428,937.00	0.00	15,775.00	891,000.00
FMG	2010	88,210.00	12,028.00	0.00	10,024.00	0.00	0.88	100,000.00	13,636.00	0.00	11,364.00	0.00
JHX	2010	936,860.00	1,688,832.00	0.00	12,999.00	3,744,250.00	0.85	1,100,764.00	1,984,293.00	0.00	15,273.00	4,399,307.00
JHX	2011	944,137.00	948,342.00	0.00	17,072.00	5,075,476.00	0.94	999,298.00	1,003,749.00	0.00	18,069.00	5,372,011.00
JHX	2012	956,825.00	1,959,285.00	0.00	14,700.00	6,301,560.00	1.07	893,060.00	1,828,715.00	0.00	13,720.00	5,881,613.00
OSH	2010	1,573,700.00	2,012,863.00	0.00	37,605.00	1,836,669.00	0.92	1,712,964.00	2,190,991.00	0.00	40,933.00	1,999,204.00
OSH	2011	2,102,632.00	254,024.00	0.00	15,980.00	1,818,045.00	1.03	2,037,829.00	246,195.00	0.00	15,487.00	1,762,013.00
OSH	2012	2,143,166.00	1,077,023.00	0.00	16,701.00	1,528,982.00	1.04	2,068,893.00	1,039,698.00	0.00	16,122.00	1,475,994.00
QBE	2010	1,956,000.00	934,000.00	0.00	19,000.00	1,440,000.00	0.92	2,137,705.00	1,020,765.00	0.00	20,765.00	1,573,770.00
QBE	2011	2,326,000.00	0.00	0.00	15,000.00	1,454,000.00	1.04	2,234,390.00	0.00	0.00	14,409.00	1,396,734.00
QBE	2012	1,623,000.00	0.00	0.00	0.00	1,126,000.00	1.04	1,566,602.00	0.00	0.00	0.00	1,086,873.00
RIO	2010	1,403,000.00	1,248,000.00	0.00	1,708,000.00	3,683,000.00	0.92	1,528,655.00	1,359,773.00	0.00	1,860,972.00	4,012,857.00
RIO	2011	1,619,000.00	0.00	0.00	1,974,000.00	4,595,000.00	1.03	1,567,735.00	0.00	0.00	1,911,494.00	4,449,501.00
RIO	2012	1,667,000.00	3,000.00	0.00	2,156,000.00	4,970,000.00	1.04	1,609,539.00	2,897.00	0.00	2,081,684.00	4,798,687.00
WPL	2010	2,563,341.00	1,704,861.00	0.00	0.00	3,374,812.00	0.92	2,794,137.00	1,858,362.00	0.00	0.00	3,678,670.00
WPL	2011	1,375,146.00	978,550.00	0.00	9,569.00	1,460,264.00	1.03	1,331,603.00	947,565.00	0.00	9,266.00	1,414,025.00
WPL	2012	2,255,383.00	2,380,590.00	0.00	16,693.00	2,559,787.00	1.04	2,178,483.00	2,299,420.00	0.00	16,124.00	2,472,507.00

Table A.3.5: Calculation of US$ remuneration of CEOs to AU$ for the companies that reported one of its CEOs remuneration in US$

CEO	Exchange Rate A$1 to US$ (AUD/USD)	Currency	Year	Base	Cash bonus	LTI
CEO1	1.0178	US$	2010	2,500,000	3,360,000	2,755,051
CEO1	1.0170	US$	2011	2,500,000	3,360,000	2,460,633
CEO1	1.0370	US$	2012	2,500,000	3,360,000	4,626,270
CEO1		A$	2010	2,456,278	3,301,238	2,706,869
CEO1		A$	2011	2,458,210	3,303,835	2,419,501
CEO1		A$	2012	2,410,800	3,240,116	4,461,205
CEO2		A$	2010	2,500,000	4,000,000	2,995,272
CEO2		A$	2011	2,500,000	4,000,000	2,384,334
CEO2		A$	2012	2,500,000	4,000,000	4,465,943
				Total Remuneration Amount		
CEO1+CEO2		A$	2010	4,956,278	7,301,238	5,702,141
CEO1+CEO2		A$	2011	4,958,210	7,303,835	4,803,835
CEO1+CEO2		A$	2012	4,910,800	7,240,116	8,927,148

Table A.4.1: List of terminologies of non-GAAP financial measures disclosed in FY2010

No	Terminology of Non-GAAP Financial Measure
1	Adjusted Debt/EBITDA
2	Adjusted EBITDA
3	Adjusted net debt
4	Alternative EPU(earnings per unit)
5	Attributable profit excluding exceptional items
6	Before one-off accounting adjustments and charges
7	Cash earnings
8	Cash earnings - ongoing
9	Cash earnings on average equity
10	Cash earnings per share
11	Cash earnings to average ordinary equity
12	Cash earnings to average tangible ordinary equity
13	Cash earnings- weighted average ordinary shares
14	Cash earnings-dividend payout ratio
15	Cash earnings-expense to income ratio
16	Cash earnings-total banking expense/income
17	Cash ROE(return on equity)
18	Continuing operations before significant items
19	Core earnings
20	Core EPS
21	Core net profit after tax
22	Core operating profit
23	Core profit after tax
24	Diluted EPS before specific non-cash and significant items
25	Diluted EPS excluding
26	Earnings excluding specific non-cash and significant items
27	EBIT(earnings before interest & tax)
28	EBIT / Sales
29	EBIT before significant items
30	EBIT excluding
31	EBIT interest cover
32	EBIT margin
33	EBIT margin excluding
34	EBIT/Average funds employed
35	EBITA(earnings before interest, tax and intangibles amortisation)
36	EBITA/Net interest
37	EBITDA(earnings before interest, tax, depreciation and amortisation)
38	EBITDA before significant items
39	EBITDA interest cover
40	EBITDA margin
41	EBITDA margin on sales revenue
42	EBITDA/Net interest
43	EBITDA/Op Cash Flow
44	EBITDA/Operating Revenue
45	EBITDAR(earnings before finance costs, tax, depreciation, amortisation and rent)
46	EBITDAX(earnings before interest, borrowing costs, tax, depreciation and amortisation, profit on sale of other non-current assets, impairment, restatement of deferred tax and exploration costs expensed)
47	Effective tax rate before significant items
48	Effective tax rate excluding
49	EPS before significant item
50	EPS before specific non-cash and other significant items
51	EPS on underlying profit

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Table A.4.1 (continued)

52	Free cash flow
53	Free cash flow per share
54	Funds from operations adjusted for
55	Gearing ratio
56	General corporate costs excluding
57	Group cash earnings
58	Interest tax shield
59	Management company EBIT
60	Net debt/EBITDA
61	Net operating profit excluding
62	Net profit after tax before one-off items
63	Net profit after tax excluding significant items
64	Net profit after tax pre significant items
65	Net profit after tax underlying basis
66	Net profit before
67	Net profit before significant items
68	Net profit from ordinary activities after tax but before significant items
69	Net underlying finance costs
70	Non-cash items
71	Non-core items
72	Non-recurring items (NRI)
73	Normalised net profit after tax
74	NPAT before non-recurring items
75	NPAT before significant items
76	NPAT excluding individually material items
77	NPAT excluding significant items
78	One-off factors
79	One-off items
80	Operating profit (profit before specific non-cash and significant items)
81	Operating profit after tax and minorities before significant items
82	Operating profit before income taxes excluding
83	Operating profit before other significant items
84	Operating profit before specific non-cash items
85	Payout ratio before significant items
86	Pro forma
87	Pro forma adjustment
88	Pro forma comparatives
89	Pro forma earnings per share (cash basis)
90	Pro forma net interest income
91	Pro forma operating expenses
92	Pro forma operating expenses to operating income
93	Pro forma profit
94	Pro forma results
95	Profit/(loss) before tax and finance costs
96	Profit after tax attributable to members (before significant item)
97	Profit after tax before
98	Profit after tax before hedge restructure and close out adjustments
99	Profit before depreciation and amortisation, net finance costs, equity accounted investments and tax
100	Profit before income tax expense
101	Profit before individually material items
102	Profit before tax and capital items
103	Profit before tax and net finance costs
104	Profit from continuing operations before finance costs, tax, amortisation and specific items
105	Profit from continuing operations before finance costs, tax, depreciation, amortisation and specific items
106	Profit from operations as assessed by directors

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Table A.4.1 (continued)

107	Profit/(loss) after tax, after adjusting
108	Pro-forma adjustment
109	Proportional results
110	Proportionate EBITDA
111	Return on shareholders' funds before significant items
112	ROACE before significant items
113	ROI before significant items
114	Underlying average ordinary shareholders' equity
115	Underlying depreciation and amortization
116	Underlying earnings
117	Underlying earnings attributable to members
118	Underlying earnings before tax
119	Underlying earnings per ordinary share
120	Underlying EBIT
121	Underlying EBIT margin
122	Underlying EBIT/Sales
123	Underlying EBITDA
124	Underlying EBITDA/interest coverage
125	Underlying effective tax rate
126	Underlying EPS
127	Underlying EPS (ordinary share)
128	Underlying financial measures
129	Underlying free cash per security
130	Underlying income tax
131	Underlying net financing costs
132	Underlying net interest income
133	Underlying net profit after income tax excluding significant items
134	Underlying net profit after tax
135	Underlying operating expenses to average assets
136	Underlying operating expenses to operating income
137	Underlying operating profit after tax
138	Underlying operational profit
139	Underlying ordinary share dividend payout ratio
140	Underlying profit
141	Underlying profit after tax
142	Underlying profit before tax
143	Underlying proportional basis
144	Underlying proportional EBITDA
145	Underlying provision charge
146	Underlying return on capital
147	Underlying return on equity
148	Underlying share of interest, tax, depreciation and amortization of equity accounted investees
149	Underlying tax expense

Table A.4.2: List of terminologies of non-GAAP financial measures disclosed in FY2011

No	Terminology of Non-GAAP Financial Measure
1	Adjusted Debt/EBITDA
2	Adjusted EBITDA
3	Adjusted gearing ratio
4	Adjusted net debt
5	Alternative EPU(earnings per unit)
6	Attributable profit excluding exceptional items
7	Cash conversion (free cash flow / EBITDA)
8	Cash earnings
9	Cash earnings - ongoing
10	Cash earnings on average equity
11	Cash earnings to average ordinary equity
12	Cash earnings to average tangible ordinary equity
13	Cash earnings-dividend payout ratio
14	Cash earnings-expense to income ratio
15	Cash earnings-total banking expense/income
16	Cash earnings-weighted average ordinary shares
17	Cash EPS
18	Cash EPS (basic)
19	Cash EPS (diluted)
20	Cash net profit
21	Cash ROE(return on equity)
22	Continuing operations before significant items
23	Core earnings
24	Core EPS
25	Core net profit after Tax
26	Core profit after Tax
27	Current underlying tax
28	Diluted EPS before specific non-cash and significant items
29	Diluted EPS excluding
30	Earnings before
31	Earnings before interest, tax and significant items
32	EBIT
33	EBIT before significant items
34	EBIT excluding
35	EBIT excluding individually material item/Net financing costs)
36	EBIT interest cover before significant items
37	EBIT margin
38	EBIT margin excluding
39	EBIT margin on sales revenue
40	EBIT/Average funds employed
41	EBIT/Sales
42	EBITA(earnings before interest, tax and intangibles amortisation)
43	EBITA / Net interest expense
44	EBITA margin
45	EBITDA(earnings before interest, tax, depreciation and amortisation)
46	EBITDA before the management adjustment
47	EBITDA interest cover
48	EBITDA margin
49	EBITDA margin on sales revenue
50	EBITDA/Op Cash Flow
51	EBITDA/Operating Revenue
52	EBITDAR(earnings before finance costs, tax, depreciation, amortisation and rent)
53	EBITDAX(earnings before interest, borrowing costs, tax, depreciation and amortisation, profit on sale of other non-current assets, impairment, restatement of deferred tax and exploration costs expensed)
54	EBITDAX(earnings before interest, tax, depreciation, depletion, exploration and impairment)

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Table A.4.2 (continued)

55	Effective tax rate excluding
56	EPS before significant items
57	EPS before specific non-cash and other significant items
58	EPS excluding exceptional items
59	EPS excluding non-recurring items
60	EPS on Underlying profit
61	EPS(cash basis)
62	Free cash flow
63	Free cash flow per share
64	Funds from operations adjusted for
65	Funds from operations to adjusted debt
66	Gearing ratio
67	General corporate costs excluding
68	Group cash earnings
69	Individually significant non-recurring items
70	Interest tax shield
71	Net debt/EBITDA
72	Net debt/underlying EBITDA
73	Net operating costs excluding depreciation & amortization
74	Net operating profit excluding
75	Net profit after tax - cash basis
76	Net profit after tax excluding
77	Net profit after tax per share-cash basis
78	Net profit before
79	Net profit from ordinary activities after tax but before significant items
80	Net underlying finance costs
81	Non-cash items
82	Non-core items
83	Non-GAAP measure
84	Non-IFRS financial information
85	Non-IFRS profit
86	Non-recurring expenses
87	Non-recurring items
88	Non-statutory profit
89	Normalised net profit after tax
90	NPAT excluding significant items
91	NPAT pre non-recurring items
92	One-off adjustments
93	One-off contribution
94	One-off impact
95	One-off items
96	Operating profit (profit before specific non-cash and significant items)
97	Operating profit before income taxes excluding
98	Operating profit before other significant items
99	Operating profit before specific non-cash items
100	Payout ratio excluding non-recurring items
101	Pro forma
102	Pro forma information
103	Pro forma net interest income
104	Pro forma operating expenses
105	Pro forma operating expenses to operating income
106	Pro forma profit
107	Pro forma results
108	Pro forma underlying effective tax rate
109	Productive capital
110	Profit after income tax and minorities, excluding significant items

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Table A.4.2 (continued)

111	Profit after income tax attributable to members (before significant items)
112	Profit after tax adjusted for
113	Profit after tax before
114	Profit after tax excluding individually material items
115	Profit after tax for the period adjusted for
116	Profit before depreciation and amortisation, net finance costs, equity accounted investments and tax
117	Profit before tax and net finance costs
118	Profit before tax and non-controlling interests
119	Profit from continuing operations before finance costs, tax, amortisation and specific items
120	Profit from continuing operations before finance costs, tax, depreciation, amortisation and specific items
121	Profit from operations as assessed by directors
122	Proportional EBITDA
123	Reported NPAT pre significant items
124	Return on shareholders' funds excluding non-recurring items
125	ROACE excluding non-recurring items
126	ROI before significant items
127	Underlying average assets
128	Underlying average ordinary shareholders' equity
129	Underlying depreciation and amortization
130	Underlying earnings
131	Underlying earnings attributable to members
132	Underlying EBIT
133	Underlying EBIT margin
134	Underlying EBIT/sales
135	Underlying EBITA
136	Underlying EBITDA
137	Underlying EBITDA interest coverage
138	Underlying effective tax rate
139	Underlying EPS
140	Underlying EPS (ordinary share)
141	Underlying free cash
142	Underlying income tax
143	Underlying net financing income/costs
144	Underlying net interest income
145	Underlying net profit after income tax excluding significant items
146	Underlying net profit after tax
147	Underlying NPAT
148	Underlying operating expenses
149	Underlying operating expenses to average assets
150	Underlying operating expenses to operating income
151	Underlying operating profit after tax
152	Underlying ordinary share dividend payout ratio
153	Underlying performance
154	Underlying profit
155	Underlying profit after income tax
156	Underlying Profit after tax
157	Underlying profit after tax attributable to securityholders' to issued capital
158	Underlying profit before tax
159	Underlying profit before tax attributable to securityholders' to revenue and other income
160	Underlying proportional EBITDA
161	Underlying provision charge
162	Underlying results(cash basis)
163	Underlying return on capital
164	Underlying return on equity
165	Underlying share of interest, tax, depreciation and amortization of equity accounted investees
166	Underlying tax expense

Table A.4.3: List of terminologies of non-GAAP financial measures disclosed in FY2012

No	Terminology of Non-GAAP Financial Measure
1	Adjusted debt/EBITDA
2	Adjusted EBITDA
3	Adjusted gearing ratio
4	Adjusted net debt
5	Alternative basic earnings per security
6	Attributable profit excluding exceptional items
7	Basic earnings per share excluding exceptional items
8	Basic EPS before specific non-cash and other significant items
9	Cash basis-net profit after tax
10	Cash costs
11	Cash earnings
12	Cash earnings on risk-weighted assets
13	Cash earnings results
14	Cash earnings to average ordinary equity
15	Cash earnings to average tangible ordinary equity
16	Cash earnings-dividend payout ratio
17	Cash earnings-expense to income ratio
18	Cash earnings-total banking expense to income ratio
19	Cash Earnings-weighted average ordinary shares
20	Cash EPS
21	Cash EPS-basic
22	Cash EPS-diluted
23	Cash NPAT
24	Cash return on equity(ROE)
25	Continuing operations before significant items
26	Core earnings
27	Core EPS
28	Core lending portfolio
29	Core net Profit
30	Core NPAT
31	Core profit after tax
32	Diluted EPS before specific non-cash and significant items
33	Diluted EPS excluding
34	Earnings before interest, tax and significant items
35	Earnings before interest, tax, depreciation, amortisation & rent(EBITDAR)
36	Earnings from continuing operations before interest and tax
37	Earnings per share based on underlying consolidated profit
38	EBIT
39	EBIT/Average funds employed
40	EBIT after material items
41	EBIT before material items
42	EBIT before significant items
43	EBIT excluding
44	EBIT excluding individually material item/Net financing costs adjusted for capitalized borrowing cost
45	EBIT interest cover before significant items
46	EBIT margin
47	EBIT margin excluding
48	EBIT margin on sales revenue
49	EBIT/net financing costs)
50	EBITA
51	EBITA/Net interest expense
52	EBITDA
53	EBITDA after material items
54	EBITDA before material items
55	EBITDA interest cover
56	EBITDA margin

(Continued on next page)

Table A.4.3 (continued)

57	EBITDA margin on sales revenue
58	EBITDA/Net interest expense
59	EBITDA/Op cash Flow
60	EBITDA/operating revenue
61	EBITDAR
62	EBITDAX(earnings before interest, tax, depreciation, depletion, exploration and impairment)
63	Effective tax rate excluding
64	EPS before significant items
65	EPS excluding individually material items
66	EPS on underlying profit
67	Free cash flow
68	Free cash flow per share
69	Free cash flows
70	Free cashflow
71	Funds employed excluding
72	Funds from operations adjusted for
73	Funds from operations to adjusted debt
74	Gearing ratio
75	General corporate costs excluding
76	Group cash earnings
77	Interest cover (cash basis)
78	Interest tax shield
79	leverage (financial indebtedness by EBITDA)
80	Management adjusted EBITDA
81	Management business EBIT
82	Net debt/EBITDA
83	Net operating profit excluding
84	Net profit after tax excluding individually material items
85	Net profit after tax-underlying basis
86	Net profit before individually material items
87	Net profit from ordinary activities after tax but before significant items
88	Net underlying finance costs
89	Non-cash items
90	Non-core items
91	Non-IFRS
92	Non-IFRS financial information
93	Non-IFRS financial measures
94	Non-IFRS information
95	Non-IFRS measures
96	Non-IFRS profit
97	Non-recurring items
98	Non-statutory basis
99	Non-statutory profit
100	Normalized results
101	NPAT before
102	NPAT excluding significant items
103	NPAT pre non-recurring items
104	One-off items
105	Operating profit (profit before specific non-cash and significant items)
106	Operating profit before other significant items
107	Operating profit before specific non-cash items
108	Productive capital
109	Profit after income tax attributable to members before significant items
110	Profit after tax adjusted for
111	Profit after tax before hedge restructure and other significant items

(Continued on next page)

Table A.4.3 (continued)

112	Profit after tax before individually material items
113	Profit after tax for the period adjusted for
114	Profit before depreciation and amortisation, net finance costs, equity accounted investments and tax
115	Profit before income tax
116	Profit before income tax and finance cost
117	Profit before income tax expense
118	Profit before tax
119	Profit before tax and net finance costs
120	Profit before tax, shareholders' interest, depreciation and amortisation
121	Profit from continuing operations before finance costs, tax, amortisation and non-core items
122	Profit from continuing operations before finance costs, tax, depreciation, amortisation and non-core items
123	Profit from operations as assessed by directors
124	Pro-forma
125	Proportional EBITDA
126	Return on equity (cash basis)
127	Return on invested capital (before significant items)
128	Underlying average interest rate
129	Underlying average ordinary shareholders' equity
130	Underlying basic EPS
131	Underlying consolidated profit
132	Underlying depreciation and amortization
133	Underlying earnings
134	Underlying earnings attributable to members
135	Underlying earnings per share
136	Underlying EBIT
137	Underlying EBIT margin
138	Underlying EBITDA
139	Underlying EBITDA interest coverage
140	Underlying effective tax rate
141	Underlying EPS
142	Underlying EPS(ordinary share)
143	Underlying free cash
144	Underlying income tax benefit
145	Underlying income tax expense
146	Underlying net financing costs
147	Underlying net financing income
148	Underlying net interest income
149	Underlying net interest margin
150	Underlying net profit after tax
151	Underlying non-controlling interest
152	Underlying operating cash flow before interest and tax
153	Underlying operating expenses
154	Underlying operating expenses to average assets
155	Underlying operating expenses to operating income
156	Underlying operating revenue
157	Underlying ordinary share dividend payout ratio
158	Underlying payout ratio
159	Underlying performance
160	Underlying profit
161	Underlying profit after income tax
162	Underlying profit after tax
163	Underlying profit after tax attributable to securityholders'/issued capital
164	Underlying profit after tax excluding significant items
165	Underlying profit before tax
166	Underlying profit before tax attributable to securityholders'/revenue and other income

(Continued on next page)

Table A.4.3 (continued)

167	Underlying proportional EBITDA
168	Underlying results
169	Underlying return on average assets
170	Underlying return on capital
171	Underlying return on equity
172	Underlying return on shareholders' funds
173	Underlying ROACE
174	Underlying share of interest, tax, depreciation and amortization of equity accounted investees
175	Underlying tax expense

Table A.4.4: The coding for the decision to disclose NGFM in RAM and OTH for FY2010-2012

No	Ticker	FY2010		FY2011		FY2012	
		RAM	OTH	RAM	OTH	RAM	OTH
1	AGL	1	1	1	1	1	1
2	AIO	1	0	1	1	1	1
3	AMC	1	1	1	1	1	1
4	AMP	1	0	1	0	1	0
5	ANZ	1	1	1	1	1	1
6	APA	1	1	1	1	1	1
7	ASX	1	1	1	1	1	1
8	AZJ	Missing	Missing	1	1	1	1
9	BHP	0	1	0	1	0	1
10	BXB	1	0	1	1	1	1
11	CBA	0	1	0	1	0	1
12	CCL	1	1	1	1	1	1
13	CPU	1	1	1	1	0	1
14	CSL	1	1	1	0	1	1
15	CWN	0	1	0	1	0	1
16	DXS	1	1	1	1	1	1
17	FMG	0	1	0	1	0	1
18	GMG	1	1	1	1	1	0
19	GPT	1	0	1	0	1	0
20	IAG	0	1	0	1	0	1
21	ILU	1	1	1	1	1	1
22	IPL	0	1	0	1	0	1
23	JHX	0	1	0	1	0	1
24	LLC	0	1	0	1	0	1
25	MGR	1	1	0	1	0	1
26	MQG	1	0	1	1	1	1
27	NAB	1	0	1	0	1	0
28	NCM	1	1	1	1	0	1
29	NVN	1	1	0	1	1	1
30	ORG	0	1	0	1	0	1
31	ORI	1	1	1	1	1	1
32	OSH	1	1	0	1	0	1
33	QBE	0	1	0	1	0	1
34	RHC	1	1	1	1	1	1
35	RIO	1	1	1	1	1	1
36	SCG	Missing	Missing	0	1	0	1
37	SGP	1	1	1	1	1	1
38	SHL	1	1	1	1	1	1
39	STO	1	1	0	1	0	1
40	SUN	1	0	1	0	1	1
41	SYD	1	1	1	1	0	1
42	TCL	1	1	1	1	1	1
43	TLS	0	1	0	1	0	1
44	TOL	1	1	1	1	1	1
45	WBC	0	1	0	1	0	1
46	WES	0	1	0	1	0	1
47	WFD	1	1	0	1	0	1
48	WOR	0	1	0	1	0	1
49	WOW	0	1	0	1	0	1
50	WPL	0	1	0	1	0	1

Coding '1' denotes the NGFM has been disclosed by the company and '0' otherwise.

Table A.4.5: List of other expense items excluded in disclosures of non-GAAP financial measures in FY2010

Adjustment for liability discount rate changes
Adjustment for property revaluations
Adjustments for treasury shares
Cost of increased large individual risk and catastrophe claims
Environmental remediation cost/asbestos costs
Fair value changes:
Gains/losses from fair value changes & hedge ineffectiveness
Gains/losses from fair value changes in investment properties and associates
Gains/losses from fair value changes in performance fee liability
Gains/losses from fair value changes in commodity derivatives(ineligible for hedge accounting)
Gains/losses from fair value changes in derivative contracts
Gains/losses from fair value changes in economic hedging
Gains/losses from fair value changes in embedded derivatives and hedges
Gains/losses from fair value changes in financial instruments
Gains/losses from fair value changes in financial instruments that do not qualify as effective
Gains/losses from fair value changes in hedge restructure and close out impact
Gains/losses from fair value changes in ineffectiveness of interest rate hedge
Gains/losses from fair value changes in investment properties & deferred management fee contracts
Gains/losses from foreign exchange movements
Legal costs of the consolidated entity, defence and settlement of claims
Losses from realized/unrealized equity
Provision for write-down of inventories
Re-estimation of the subordinated loan notes
Rent
Rent (non-cash portion)
Revaluation losses from investments
Securities issued costs under the employee incentive scheme

Table A.4.6: List of other expense items excluded in disclosures of non-GAAP financial measures in FY2011

Adjustment for movements in economic hedges (hybrid instruments)
Adjustments for treasury shares (held in the managed funds and life business)
Cost for delay mitigation
Cost of defined benefit pension plan
Cost of increased large individual risk and catastrophe claims
Environmental remediation cost/asbestos costs
Expenses related to ASIC
Expenses related to favourable dispute settlement
Flexibles market sector rationalisation
Fair value changes:
Gains/losses from fair value changes & hedge ineffectiveness
Gains/losses from fair value changes in derivatives
Gains/losses from fair value changes in economic hedges
Gains/losses from fair value changes in embedded derivatives and hedges
Gains/losses from fair value changes in financial instruments and foreign exchange movements
Gains/losses from fair value changes in financial instruments(economic hedge but not qualify for hedge accounting)
Gains/losses from fair value changes in hedging
Gains/losses from fair value changes in ineffectiveness of interest rate hedge
Gains/losses from fair value changes in interest rate hedges that do not qualify for hedge accounting
Gains/losses from fair value changes in investment properties
Gains/losses from fair value changes in investment properties and associate
Gains/losses from fair value changes in market adjustment of annuity
Gains/losses from foreign exchange movements
Gains/losses from foreign exchange on net debt and intragroup balances
Gains/losses from revenue and net investment hedges
Impact of lower risk-free discount rates
Legal costs of the consolidated entity, defence and settlement of claims
Loss from capital transactions
Loss on buyback of government guaranteed debt
Natural disasters adjustment
Non-cash adjustment to inventories and development profits
Provision for payment protection insurance
Re-estimation of the subordinated loan notes
Rent (non-cash portion)
Revaluations loan hedge
Revaluations of property
Revaluations of property (consolidated and equity accounted)
Securities issued costs under the employee incentive scheme
Unrealised losses on cash and fixed interest securities
Unwinding of discounted liabilities
Voluntary redundancy schemes

Table A.4.7: List of other expense items excluded in disclosures of non-GAAP financial measures in FY2012

Adjustment to inventories and development profits
Adjustments for inventory on hand at acquisition
Adjustments for treasury shares
Adjustments for treasury shares (held in the managed funds and life business)
Capitalization cost of capital indexed bonds less interest expense
Cost of increased large individual risk and catastrophe claims
Cost of restoration of premises
Environmental remediation cost/asbestos costs
Expenses related to ASIC
Fair value changes:
Gains/losses from fair value and hedge ineffectiveness
Gains/losses from fair value changes in derivatives
Gains/losses from fair value changes in economic hedging
Gains/losses from fair value changes in financial instruments
Gains/losses from fair value changes in financial instruments and foreign exchange movements
Gains/losses from fair value changes in foreign exchange loss
Gains/losses from fair value changes in ineffective hedges
Gains/losses from fair value changes in interest rate hedge
Gains/losses from fair value changes in interest rate hedges that do not qualify for hedge accounting
Gains/losses from fair value changes in interest rate swaps
Gains/losses from fair value changes in investment properties
Gains/losses from fair value changes in investment properties and associate
Gains/losses from fair value changes in restructured and closed out hedge contracts
Gains/losses from fair value changes in interest swaps not qualifying as hedges
Gains/losses from foreign exchange
Hedging costs
Legal costs of the consolidated entity, defence and settlement of claims
Loss on buyback of government guaranteed debt
Net unrealised loss from fair value adjustment of other financial assets
Pension costs
Provision for customer redress
Remediation costs for incidents net of related insurance recoveries
Rent
Rent (non-cash portion)
Revaluations of property
Revaluations of property (consolidated and equity accounted)
Securities issued costs under the employee incentive scheme
Stamp duty
Unrealised foreign exchange losses

Table A.4.8: The coding for the decision to disclose reconciliation between non-GAAP & GAAP financial measures for FY2010-2012

YEAR	TICKER	CODE	YEAR	TICKER	CODE	YEAR	TICKER	CODE
2010	AGK	1	2011	AGK	1	2012	AGK	1
2010	AIO	1	2011	AIO	1	2012	AIO	1
2010	AMC	0	2011	AMC	0	2012	AMC	0
2010	AMP	1	2011	AMP	1	2012	AMP	1
2010	ANZ	1	2011	ANZ	1	2012	ANZ	1
2010	APA	1	2011	APA	1	2012	APA	1
2010	ASX	0	2011	ASX	0	2012	ASX	0
2010	AZJ	Missing	2011	AZJ	0	2012	AZJ	0
2010	BHP	1	2011	BHP	1	2012	BHP	1
2010	BXB	0	2011	BXB	0	2012	BXB	0
2010	CBA	1	2011	CBA	1	2012	CBA	1
2010	CCL	1	2011	CCL	1	2012	CCL	0
2010	CFX	1	2011	CFX	1	2012	CFX	1
2010	CPU	1	2011	CPU	1	2012	CPU	1
2010	CSL	0	2011	CSL	0	2012	CSL	0
2010	CWN	1	2011	CWN	1	2012	CWN	1
2010	DXS	1	2011	DXS	1	2012	DXS	0
2010	FMG	0	2011	FMG	0	2012	FMG	0
2010	GMG	0	2011	GMG	1	2012	GMG	1
2010	GPT	1	2011	GPT	1	2012	GPT	1
2010	IAG	0	2011	IAG	0	2012	IAG	0
2010	ILU	0	2011	ILU	0	2012	ILU	0
2010	IPL	0	2011	IPL	0	2012	IPL	0
2010	JHX	0	2011	JHX	0	2012	JHX	0
2010	LLC	1	2011	LLC	1	2012	LLC	1
2010	MGR	0	2011	MGR	0	2012	MGR	0
2010	MQG	0	2011	MQG	0	2012	MQG	0
2010	NAB	1	2011	NAB	1	2012	NAB	1
2010	NCM	1	2011	NCM	1	2012	NCM	1
2010	ORG	1	2011	ORG	1	2012	ORG	1
2010	ORI	1	2011	ORI	1	2012	ORI	1
2010	OSH	0	2011	OSH	0	2012	OSH	0
2010	QBE	0	2011	QBE	0	2012	QBE	0
2010	RHC	1	2011	RHC	1	2012	RHC	1
2010	RIO	1	2011	RIO	1	2012	RIO	1
2010	SGP	0	2011	SGP	1	2012	SGP	1
2010	SHL	1	2011	SHL	1	2012	SHL	1
2010	STO	1	2011	STO	1	2012	STO	1
2010	SUN	1	2011	SUN	1	2012	SUN	1
2010	SYD	1	2011	SYD	1	2012	SYD	1
2010	TCL	1	2011	TCL	1	2012	TCL	1
2010	TLS	1	2011	TLS	1	2012	TLS	1
2010	TOL	0	2011	TOL	0	2012	TOL	0
2010	WBC	1	2011	WBC	1	2012	WBC	1
2010	WDC	1	2011	WDC	1	2012	WDC	1
2010	WES	1	2011	WES	1	2012	WES	1
2010	WOR	1	2011	WOR	1	2012	WOR	1
2010	WOW	1	2011	WOW	1	2012	WOW	1
2010	WPL	1	2011	WPL	1	2012	WPL	1
2010	WRT	Missing	2011	WRT	1	2012	WRT	1

Coding '1' denotes the reconciliation has been provided by the company and '0' otherwise.

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