The Performance of Bidding Firms in Merger and Acquisition (M&A) Deals: An Empirical Investigation of Public, Private and Subsidiary Acquisitions in Australia

Syed Mohammod Mostofa Shams

BBA in Banking and Finance (Honors) *University of Dhaka, Bangladesh*

MBA in Banking *University of Dhaka, Bangladesh*

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Joint Supervisors

Dr.Sisira Colombage

Dr. Abeyratna Gunasekarage

Department of Accounting and Finance

School of Business and Economics

Monash University

Victoria, Australia

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AMENDMENTS

ERRATA

p. 25 – reference added:http://www.austrade.gov.au/Buy/Australian-Industry-Capability/Financial-Services/default.aspx (under the investment banking heading)

p. 29 - 2nd paragraph; third line "it's" replaced as "its"

p. 37 – line 10 added: "Figure 2.6 highlights the main bid characteristics in M&A deals."

p. 38 – line 21 replaced "Figure 2.6" by "Figure 2.7"

p. 43 – 1st line "Acquisitions" used instead of "Aaquisitions"

p 84 line 11: modify as "Draper and Paudyal (2006) modify Fama and French's (1996) three-factor model to include an additional variable, the thirty-day average return prior to the announcement period. Instead of using the Carhart's (1997) four factor model......."

p. 113 – 4th last line: "profitable" changed as "profitability"

p.144 - p145 – "the" deleted from Section 4.3.5.1 and 4.3.5.3

p. 200 – the footnote number in the text changed as superscripted

p. 222 - 2nd paragraph; 2nd line: "biddings" replaced by "bidding"

p. 235 – Hypo 1: changed as "generate" instead of "observe"

p. 249 – added a line "The VIF result also confirms the above findings, as the centered VIF score is less than 10 for all variables suggesting that there is no multicollinearity threat for the models.

ADDENDUM

p 129 add at the end of para 2:
"Having investigated how the Australian stock market responds to the announcements of acquisitions of domestic targets with different organisational forms, the next chapter examines the abnormal returns earned by bidding firms when they announce the acquisitions of foreign targets. In addition to investigating the influence of organisational forms of these foreign targets and common bid and firm characteristics, the next chapter places an emphasis on the impacts of investor protection, economic freedom and legal system of the target country on the market response."

p 219: add at the end of para 1:
"Having established evidence in chapters III and IV on the market reaction to the announcements of both the domestic and foreign acquisitions, it is interesting to examine whether such market response is reflected in the long run performance of bidding firms. The next chapter investigates this issue by analysing the long run operating performance of bidding firms that acquire both domestic and foreign targets."

APPENDIX C
Table C.1
Variance Inflation Factors

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
Dummy stock only	0.000271	1.886724	1.322521
Dummy cash only	0.000269	1.947524	1.342668
Ln relative size	0.000015	3.010302	1.292161
Dummy unrelated dummy	0.000193	1.871432	1.094068
Dummy multiple bidder	0.000198	2.006415	1.134396
Dummy deal attitude	0.003610	1.051911	1.038762
Dummy mining target	0.000258	1.475402	1.113644
Ln market value	1.52E-05	7.168029	1.713552
Net profit scaled by total asset	0.000220	2.556106	2.347477
Net debt scaled by total asset	0.000387	1.425728	1.345388
Free cash flow scaled by total asset	0.001010	2.641163	2.531666
Dummy GFC period	0.000256	1.376566	1.058897
Constant	0.000443	10.33374	NA

Notice 1

Under the Copyright Act 1968, this thesis must be used only under the normal conditions of scholarly fair dealing. In particular no results or conclusions should be extracted from it, nor should it be copied or closely paraphrased in whole or in part without the written consent of the author. Proper written acknowledgement should be made for any assistance obtained from this thesis.

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ABBREVIATIONS

ABS	Australian Bureau of Statistics
ACCC	Australian Competition and Consumer Commission
ASIC	Australian Securities and Investments Commission
ASX	Australian Stock Exchange
ATP	Anti-takeover Provision
AFMA	Australian Financial Markets Association
BHAR	Buy and Hold Abnormal Returns
CLERP	Corporation Law Economic Reform Program Act
CAPM	Capital Asset Pricing Model
CEO	Chief Executive Officer
EFW	Economic Freedom of the World
FASB	Financial Accounting Standards Board
GFC	Global Financial Crisis
GDP	Gross Domestic Product
HML	High Minus Low
ICB	Industry Classification Benchmark
MV	Market Value
M&A	Mergers and Acquisitions
NI	Net Income
NPV	Net Present Value
OECD	Organisation for Economic Co-operation and Development
OCF	Operating Cash Flow
OLS	Ordinary Least Squares
ROA	Return on Asset
RFR	Risk Free Rate
RBA	Reserve Bank of Australia
SDC	Securities Data Company
SMB	Small Minus Big
SLC	Substantial Lessening of Competition
SIC	Standard Industrial Classification
TA	Total Asset
UNCTAD	United Nations' Conference on Trade and Development
UK	United Kingdom
USA	United States of America
US	United States
VIF	Variance Inflation Factors

ABSTRACT

This thesis investigates the market reaction to acquisition announcements made by Australian bidders as well as the long-run operating performance of them using three separate samples of acquisitions: acquisitions of public, private and subsidiary targets. This study was motivated by the economic significance of acquisition activities in Australia, particularly the acquisitions of private and subsidiary targets by listed bidders. These acquisitions are important corporate investment decisions to Australian managers since they have divergent impacts on shareholders and other corporate stakeholders.

The first two empirical studies of this thesis investigate the market reaction to acquisition announcements made by Australian bidding firms using large samples of domestic and foreign acquisitions for the period 2000-2010. The second empirical study examines the long-run operating performance of bidding firms. This study employs single factor, Fama-French three factor and four-factor models in generating abnormal returns when investigating the market response to acquisition announcements. It further analyses the impact of bid and firm characteristics in a multivariate setting. In addition, this study also analyses the market adjusted buy and hold returns as an alternative measure of abnormal return. The long-run operating performance is analysed using profitability and cash flow returns while controlling for the 'industry' and 'industry-and-size' benchmarks.

The first empirical study examines the market reaction to acquisition announcements when bidders announce acquisitions of domestic targets. The main findings of the first empirical study of this thesis are: (i) the market reactions are positive and significant around the acquisition announcements for all three samples analysed; (ii) bidders for private and subsidiary targets earn higher abnormal returns than bidders for public targets; (iii) bidders on private targets earn higher abnormal returns when the method of payment is stock; (iv) multiple bids for public targets are penalised by the capital market while acquisitions of unlisted public targets are rewarded; (v) privately negotiated acquisitions of private targets and acquisitions of subsidiaries from

listed parents for cash are associated with higher abnormal returns; (vi) acquisitions of private targets during the Global Financial Crisis (GFC) have a significant favourable effect on the wealth gains of Australian acquirers.

The second empirical study investigates the market reactions when Australian bidders announce acquisitions of foreign public, private and subsidiary targets. The main findings of this study are: (i) the market reaction is positive and significant for the subsidiary targets sample only, while it is negative and insignificant for the public targets and private targets samples; (ii) bidders on private targets earn significant positive abnormal returns when they use stock as the payment method; (iii) multiple bids for private targets and acquisitions of mining subsidiaries are rewarded by the capital market; (iv) investor protection offered by the target country positively influences the abnormal returns generated by the acquirers of public targets while it is negatively related with the return earned by the bidders for subsidiary targets ; (v) acquisitions of private and subsidiary targets from civil-law based target countries are associated with negative announcement period returns; (vi) the market reaction is significantly positive when bidders acquire private targets during the period when the Australian dollar is strong; (vi) acquisitions of public targets from the US are rewarded while the acquisitions of public targets from the UK are penalised.

The third empirical study examines the long-run operating performance of bidding firms following the acquisitions announcement. The main findings of this study are: (i) the long-run operating performance is positive and significant for the acquirers of private targets while it is declining for public and subsidiary targets samples; (ii) there is a negative relationship between stock-financed acquisitions and the long-run operating performance for all three samples; (iii) multiple bidders for private targets enjoy significant positive long-run operating performance; (iv) there is a negative (positive) relationship between the pre-acquisition profitability (pre-acquisition cash flow) and the long-run operating performance of bidders for public targets.

STATEMENT OF AUTHORSHIP

I hereby declare that this thesis is my own research work jointly supervised by Dr. Sisira Colombage and Dr. Abeyratna Gunasekarage and the work of this thesis has not been submitted or accepted for the completion of a degree or an award or a diploma in any university or equivalent institution. It is affirmed by me that any relevant information obtained from any other sources has been acknowledged or cited in the reference section of this thesis.

In addition, this thesis contains no material previously published or written by another person and extracted in whole or part from another thesis or report. The thesis-related publications or conferences with my supervisors which are either accepted or under review are listed in the relevant section of this thesis.

Syed Shams
March 2013

CONFERENCES AND RESEARCH PUBLICATIONS

Journal Articles Accepted for Publication

Shams, S.M.M., Gunasekarage, A., Colombage, S.R.N., 2013, Does the organisational form of the target influence market reaction to acquisition announcements? Australian evidence, *Pacific Basin Finance Journal* [P], vol 24, Elsevier BV * North-Holland, Netherlands, pp. 89-108

Colombage, S., Gunasekarage. A. & Shams, S.M, (2013). 'Target's organisational form and returns to Australian bidders in cross-border acquisitions', *Accounting and Finance*, First Submission on October 25, 2012. Revised and resubmitted on February 22, 2013 and second revision re-submitted on 9th May, 2013. [Status: accepted for publication on 20th May, 2013]

Conference Papers

Shams, S.M, Gunasekarage. A. & Colombage, S. (2013). 'An empirical investigation of long-run operating performance of public and private targets acquisitions: Australian evidence'. Submitted to 2013 Asian Finance Association (AsianFA) Annual Conference, Nanchang, China, July 15 – 17 [Status: paper accepted for presentation]

Shams, S.M, Gunasekarage. A. & Colombage, S. (2013). 'An empirical investigation of long-run operating performance of public and private targets acquisitions: Australian evidence'. Submitted to 2013 AFAANZ Conference, Perth Australia, July 7-9 (accepted for presentation).

Shams, S.M, Gunasekarage. A. & Colombage, S. (2013). 'Does the post-acquisition performance of bidding firms depend on the organisational form of targets acquired?'. Submitted to 2013 La Trobe Business School Research Symposium, Melbourne Australia, March 20.

Colombage, S., Gunasekarage. A. & Shams, S.M, (2013). 'Target's organisational form and returns to Australian bidders in cross-border acquisitions'. 2013 Accounting and Finance Conference, Queenstown New Zealand, April 12-13.

Shams, S.M, (2012). 'Returns to Australian bidders in cross-border Acquisitions – an empirical examination of public, private and subsidiary targets' 2012 Research in Focus Conference, Monash University, Gippsland Campus, September 27-28.

Shams, S.M, Gunasekarage. A. & Colombage, S. (2011). 'Returns to bidding firms around acquisition announcements: an analysis of public, private and subsidiary acquisitions in Australia'. 2012 AFAANZ Conference, Melbourne Australia, July 1-3.

Shams, S.M, Gunasekarage. A. & Colombage, S. (2011). 'Returns to bidding firms around acquisition announcements: an analysis of public, private and

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CHAPTER 1

Introduction

1.1 INTRODUCTION

The impact of mergers and acquisitions on shareholders' wealth and the long-run operating performance of bidders have been extensively researched in the literature of market for corporate control during the last three decades. One of the controversial issues in the literature of market for corporate control is whether Mergers[1] and Acquisitions[2] (M&As) create value. Mergers and Acquisitions M&As have become the most significant form of corporate investment decisions as they affect investors, society and organisations (Jensen, 1988; Masulis *et al.*, 2007).[3] The acquisition of one company by another is a popular form of a strategic corporate decision. Historically, the M&A waves have gathered a considerable interest among academics, practitioners and policy makers. Australia has also witnessed an increase in M&A activities. However, much research needs to be done in this country to understand the benefits of them for a market-based economy.

Prior studies that investigated the performance of M&A activities can be divided into two streams: (i) those that investigated short-run market performance of bidding and target firms, and (ii) those that examined the long term operating performance of acquiring firms. The existing empirical studies provide conclusive evidence that the target firms gain significant positive abnormal returns during the announcement period (see for example, Dodd, 1976; Bishop *et al.*, 1987; Andrade *et al.*, 2001; Fan and Goyal, 2006;

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[1] According to Horne *et al.* (1990) mergers refers to "a scheme under which the shareholders of two companies give up their shares in exchange for shares in a new company which has been formed to conduct the activities previously carried out by the separate companies".
[2] The term acquisition is used to describe an offer by one company to acquire a majority of the shares in another company.
[3] Masulis *et al.* (2007) termed acquisitions as the largest and most pronounced corporate investment decision which raises the issue of conflicts of interest between managers and shareholder in public companies.

Antoniou *et al.*, 2008a; Diepold *et al.*, 2008). However, the international evidence on the short-run market performance of bidding firms is inconclusive. Some studies report significant negative abnormal returns (Sudarsanam *et al.*, 1996; Walker, 2000; DeLong, 2001; Sudarsanam and Mahate, 2006; Gupta and Misra, 2007; Antoniou *et al.*, 2008a) while others provide evidence of insignificant abnormal returns (Franks *et al.*, 1991; Andrade *et al.*, 2001).

Healy, Palepu and Ruback (1992) contend that gains of takeover activities could be associated with the market inefficiency due to the market's overestimation of the value of strategic combinations. However, the evidence on the long term operating performance of bidding firms is also controversial. For example, Healy *et al.*, (1992), Powell *et al.*, (2005) and Linn and Switzer (2001) find a positive post-acquisition operating firm performance. On the other hand, Ghosh (2001), Sharma and Ho (2002), Dickerson *et al.*, (1997) and Meeks (1977) report either a deterioration or no significant change in post-acquisition operating performance. The results of long-run operating performance have been found to be sensitive to the performance measure used and the methodologies employed. Indeed, Abhyankar *et al.* (2005) contend that the influence of various methodologies and measurements on the performance of M&A events are still questionable. That is why Schoenberg (2006) suggests that "future acquisitions studies should consider employing multiple performance measures in order to gain a holistic view of outcome" (p-361). Thus, this study conducts a comprehensive analysis which covers capital market reaction and the long-run operating performance of acquiring firms to unveil the real synergic value of the takeover decisions of corporate managers.

More recently, studies from the US and the UK have brought a new dimension to this debate, mounting the argument that the market reaction to acquisition announcements is also influenced by the nature of the target firm; being a public or private firm. The evidence suggests that bidding firms acquiring private targets outperform their counterparts who acquire public targets (Chang, 1998; Ang and Kohers, 2001; Fuller *et al.*, 2002; Conn *et al.*, 2005; Draper and Paudyal, 2006; Faccio *et al.*, 2006). In Australia, the acquisitions market is dominated by publicly traded bidding firms acquiring private and subsidiary targets. However, the question of how these bidding

firms seeking an unlisted target perform around the announcement of the bid relative to those seeking a public target remains largely unexplored. Over an 11-year period from 2000-2010 inclusive, the Securities Data Company (SDC) database reported 11,189 domestic and foreign acquisitions by public bidding firms in Australia, with a high proportion of these transactions (77.22%) being acquisitions of private and subsidiary targets. This trend follows a similar pattern in both domestic and foreign acquisitions. But, as one would expect, the average annual deal value for acquisitions involving public targets is much higher than that for private and subsidiary targets. This indicates that the acquisition of public targets plays an economically significant role in the Australian market. In this context, it is worthwhile examining whether Australian investors perceive a lower volume of economically significant acquisitions of public targets or more frequent acquisitions of small scale private/subsidiary companies as value creating decisions.

To the knowledge of the author, only one prior study has examined the market reaction to acquisitions of domestic private targets in Australia. da Silva Rosa *et al.* (2004) analysed data for the period 1990 to 1998 and reported that listed firms bidding for a private target earn a significant abnormal return of 2.70 percent during the bid announcement period, while those bidding for a public target realise an insignificant return of 1.11 percent. However, their sample data contained only 140 acquisition events involving a private target. In any event, no prior study has investigated the returns earned by firms bidding for a subsidiary target in the Australian market, despite subsidiary firms being more economically significant than private targets in terms of deal value. Further, there is very little literature that investigates the bidder shareholder's market reactions when announcing acquisition of foreign targets. Diepold *et al.* (2008) investigates this issue based on a small sample of 20 acquisitions of public firms and provide evidence that the Australian bidders earn a statistically insignificant negative abnormal return during the announcement period of foreign acquisitions. However, the author did not investigate the market reactions to the announcement of acquisitions of private and subsidiary foreign targets. Ray and Warusawitharana (2009) suggest that acquisitions of subsidiaries are similar to asset purchase; therefore acquisitions of subsidiaries may have different stock market reactions compared to private

and public targets acquisitions. But it is hard to find any Australian evidence that investigates the acquisitions of these three samples (public, private and subsidiaries) covering both short-run market performance and long-run operating performance. These vacuums provide the primary motivation to investigate whether acquisitions associated with private firms and subsidiaries generate higher market reactions and long term financial performance compared to acquisitions associated with public targets for Australian acquirers. This thesis investigates the announcement period returns of public bidding firms using a large sample of Australian acquisition events, categorised by the target organisational form: public, private or subsidiary target acquisitions. Hence, the main objectives of this study are to (i) assess the relative abnormal returns of bidding firms acquiring different types of targets and (ii) examine the differences in the long-run operating performance of bidders for different types of targets.

Some researchers suggest that the failure to control for the effect of various bid characteristics and firm-specific characteristics might explain the mixed results relating to the performance of bidding firms. The acquiring firms' performance could be affected by some bid characteristics such as method of payment (cash, stock and mixed payment), bid atmosphere (friendly vs hostile), relatedness (acquisitions of related vs unrelated targets), relative size of the target and the experience of the bidders (single acquisitions vs multiple acquisitions). In addition, a number of firm characteristics may directly influence the acquisition outcome; for example the acquirer's pre-acquisition size, leverage, profitability and free cash holdings. Therefore, it is worthwhile to address these factors properly in the examination of the short-run market performance and the long-run operating performance of acquiring firms. Hence, this study also incorporates these factors when examining the performance of acquiring firm in a multiple regression framework.

Therefore, in summary, the purposes of this thesis is to investigate: (i) the impact of the target's organisational form on the acquirer's short term market performance; (ii) the impact of the target's organisational form on the acquirer's long-run operating performance; and (iii) the influence of bid and firm characteristics on the short term market performance and long-run operating performance of bidders.

The remainder of this chapter is organised as follows: Section 1.2 describes the background and motivation for this thesis; Section 1.3 highlights the research objectives and questions; Section 1.4 outlines the academic contributions of this thesis; while Section 1.5 covers the significance of the study. Finally Section 1.6 concludes the chapter by outlining the structure of the remaining chapters of this thesis.

1.2 BACKGROUND AND MOTIVATION

It is argued in the literature that mergers and acquisitions are potential sources of corporate value creation, improved efficiency and a better financial and operational performance (see for example, Bradley *et al.*, 1988; Weston *et al.*, 2004, Chapter 6). Even though the topic of market reaction to acquisition announcements has been subjected to extensive investigation in the USA, UK and Europe, a comprehensive investigation has not been conducted in Australia. The existing Australian studies, which are mainly limited to acquisitions of listed public targets, do not provide conclusive evidence. For example, earlier studies report positive abnormal returns to bidders (Dodd, 1976; Walter, 1984; Brown and Horin, 1986; Bishop *et al.*, 1987; Bugeja and Walter, 1995; da Silva Rosa *et al.*, 2004; Le and Schultz, 2007) while other studies find negative returns (Casey *et al.*, 1987; Bellamy and Lewin, 1992). Some studies report significant positive abnormal returns (Shekhar and Torbey, 2005; Diepold *et al.*, 2008; Humphery-Jenner and Powell, 2011). Porter and Singh (2010) explain, therefore, that it is very difficult to consolidate the previous evidence due to the drawbacks of some of the methodological approaches used in these studies. Moreover the findings of existing studies that analyse the long-run operating performance of merged firms also provide mixed results. They are unable to provide a consensus view on the impact of mergers and acquisitions on the post-acquisition performance of bidders (Sharma and Ho, 2002; Ben *et al.*, 2008).

While the evidence is mixed in relation to the acquisitions of listed targets, the market reaction to acquisition of private and subsidiary targets remains largely unexplored in this market. Even though the Australian M&A

market is dominated by the acquisitions private and subsidiary targets, such a sample of acquisitions has not been investigated in prior studies. In this context, it is important to investigate how the listed acquirers of private and subsidiary targets perform as opposed to the listed acquirers of public targets. There is a surge in the acquisition of private and subsidiary targets during the sample period 2000-2010. This is the primary motivation to empirically investigate the bidding firms' performance by making a clear distinction between three samples of acquisitions: public, private and subsidiary targets.

Apart from the inconclusive evidence in this area, it is expected that a number of regulatory reforms and unique institutional settings in Australia make this study interesting. Similar to the US, Australia has a well-developed economy based on a common law system and an active equity market. However, the existence of institutional and regulatory differences between these two jurisdictions implies that the US results may not hold in an Australian context (Bugeja *et al.*, 2009; Porter and Singh, 2010). The key regulatory and institutional factors underpinning the Australian takeover market are outlined as follows. First, Australia has a well-developed and active takeover market (similar to the US market) but the non-existence of a US-style ATP (Anti-takeover Provision) in Australia allows a different context to investigate the research issue. Second, unlike in the US, Australia has a unified National Corporations Act (*Corporations Act* 2001) which administers takeovers in all states. Third, capital gain tax reforms introduced in December 1999 allow target shareholders to defer their taxation for stock swap acquisitions. This may influence the market reaction to stock financed acquisitions differently from cash financed acquisitions. Fourth, the establishment of a Takeover Panel (commenced on 13 March, 2000) is expected to have an impact on shareholders reactions since the Panel ensures the quality and accessibility of information to the market in the most appropriate manner (Porter and Singh, 2010). Fifth, the release of GN7 by the Takeover Panel may increase the popularity of the break fee provision (Curtis and Pinder, 2007). This break fee provision is expected to have an influence on the bidder's announcement period returns. Finally, in March 2003, the Australian Stock Exchange (ASX) Corporate and Governance Council released 'Principles of Good Corporate Coherence and Best Practices

Recommendations' for Australian listed companies (see Henry, 2005). This may affect the acquisition outcome due to an improvement in corporate disclosures and practices. Given these regulatory differences and the initiation of different regulatory reforms during the sample periods, it is worthwhile to investigate the bidding firms' performance in a vagarious manner employing robust methodologies, large samples and different performance measures.

Thus, it is timely to undertake an empirical study that investigates both the market reaction and long-run operating performance of bidding firms, focusing on the three samples of acquisitions. This thesis attempts to fill this gap.

1.3 RESEARCH OBJECTIVES AND QUESTIONS

As discussed previously in section 1.1, the primary motive of this study is to investigate the bidding firm's performance in terms of short-run market performance and long term financial performance. With regard to short-run market performance, the main research aim is to examine whether market reactions differ between three samples of acquisitions: public, private and subsidiary targets in both domestic and foreign acquisitions. Therefore, this thesis examines whether the market reaction is characterised by the target's organisational form. Thus the first research question (RQ1) addressed can be stated as follows:

RQ1: Does the market reaction to the announcement of acquisitions by bidding firms depend on the target's organisational form?

While investigating the issue outlined above, a number of bid and firm characteristics are controlled in this thesis in order to examine whether these variables influence the stock market reaction during the acquisition announcement period. Therefore, to examine whether the associated bid and firm characteristics have a significant impact on market reaction, the following second research question (RQ2) is articulated:

RQ2: Does the short-run market performance of bidders for public, private and subsidiary targets depend on the bid characteristics and pre-acquisition financial characteristics of bidders?

There is a scarcity of studies that examined the long-run financial performance of bidding firms, in particular those that acquire unlisted targets in Australia. Therefore, this thesis investigates whether the short-run market reaction of acquisition announcement is reflected in the long-run operating performance of bidding firms. The third research question (RQ3), which follows, addresses this research objective:

RQ3: Does the long-run operating performance following the acquisitions announcement differ between bidders for public, private and subsidiary targets?

1.4 CONTRIBUTIONS OF THE THESIS

As far as it could be ascertained, this is the first study to analyse both market reaction and long-run operating performance in order to assess the performance of Australian bidding firms. The investigation of two performances possibly provides a holistic view of acquisition outcome for shareholders and Australian biddings firms. No other Australian study concurrently explores both market reaction and long-run operating performance using the same sample and dataset. A number of methodologies are employed in this study such as the single factor model, three factor model, four factor model, and the market adjusted buy and hold return to measure the abnormal returns during the period of acquisition announcement. Both 'industry adjusted' and 'industry-and-size adjusted' performance measures are used to assess the long-run operating performance in the post-acquisition periods. This thesis, therefore, attempts to fill this gap by examining the stock market reaction and long-run operating performance of bidding firm using both univariate and multivariate frameworks.

This thesis contributes to the literature in several ways. Firstly, it is the first study to use a large sample of Australian acquisition events to investigate whether firms bidding for a private or a subsidiary target perform differently during the announcement period, compared to firms bidding for a public target. Secondly, the sample data is drawn from the period January 2000 to December 2010, which covers a complete business cycle and includes a fast growing

period (2000 to mid-2007),[4] a recessionary period (mid-2007 to end 2009)[5] and a recovery period (2010). This facilitates an analysis of whether the economic environment has any effect on acquisition activities and bidding firm returns. Thirdly, this thesis examines and compares privately negotiated deals, the acquisition of unlisted public targets and the sale of a subsidiary by a listed parent company for cash when analysing the domestic acquisitions, while the impact of investor protection, economic freedom and legal system of target countries are analysed when assessing cross-border acquisitions. These aspects have not been investigated in prior Australian studies. Fourthly, this thesis empirically investigates whether the stock market reaction observed during the period of acquisition announcement is reflected in the long-run operating performance of bidding firms. Finally, this thesis covers a period where both bidding and target firms more actively used break fee provision in the deal agreements. The introduction of Guidance Note 7 (GN7) by the Takeover Panel in 2001[6] in the Australian M&A market may have worked in favour of bidding firms by discouraging the competing bids and lessening the uncertainty surrounding bid failure.

1.5 SIGNIFICANCE OF THE THESIS

The findings of this thesis will be beneficial to various stakeholders, particularly the bidding firms' shareholders, to assess the potential benefits of acquisition announcements. The findings may contribute to understanding the effectiveness of current regulations that govern the market for corporate control in Australia. The research findings should prove helpful to regulatory bodies, investment banks, M&A advisory firms, potential investors and academicians in this sector.

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[4] Porter and Singh (2010) state that the Australian economy enjoyed a significant growth during this period.

[5] According to Claessens *et al*. (2010), the majority of advanced economies experienced a recession in late 2007 or early 2008.

[6] According to the Australian Takeover Panel's Guidance Note 7: Lock-Up Devices, "a break fee is most commonly an arrangement entered into between a bidder or potential bidder and the target of a proposed takeover bid or merger. Some form of consideration will be payable by the target, if certain specified events occur which have the effect of preventing the bid from proceeding or causing it to fail (paragraph 7.15, p.4)."

The market reaction to domestic acquisition announcements basically examines whether the announcement period abnormal returns are conditional to the target's organisational form. If market reactions differ between the three samples (i.e. acquirers of public, private and subsidiary targets), then the regulators can intervene and take policy initiatives to remove/modify any specific policy to increase or decrease competition in the market for corporate control. In addition, the findings of RQ1 should be used as a reference for competitiveness in the market for corporate control for three types of targets separately and the impact of such competitiveness on the market reactions. These results also provide insight into the possible implications of several institutional and legal amendments during the study period.

The analysis of market reaction when acquiring foreign targets would show whether such a reaction depends on the foreign target's organisational form (public, private and subsidiary acquisitions). These analyses provide further evidence of whether the acquisition outcome depends on the target's country location, investor protection status of the target country and the economic freedom offered by target countries. These factors are specific to foreign acquisitions only and their impact on bidder's return should be explored to understand whether the gains of foreign acquisitions are influenced by these variables. Thus, it helps investors and other stakeholders to understand the value creation aspects of acquisition deals in cross-border acquisitions. Similarly, these findings may be attributable to future acquisition decisions of managers and academicians to consider them while evaluating the impact of the cross-border acquisitions.

Research Question 3 (RQ3) addresses the issue of the long term operating performance of bidding firms following the acquisition of targets. Such analysis is important for bidding firms' managers who intend to maximise the value for shareholders in the long-run through acquisition decisions. Managers can better understand the impact of acquisitions on the firm's operating performance. Specifically, the impact of the short-run market performance of bidding firms should be positively related with the long-run operating performance of bidding firms. The results should also reflect whether the long term financial performance of bidding firms is influenced by the target organisational form.

Finally, this study examines the impact of the GFC period while investigating these three research questions. This may help economists and policy makers to gauge whether economic factors also influence the shareholders' reactions and the financial performance of bidding firms. Moreover, the findings can provide points of reference for corporate decision makers as well as investors to gain an understanding about the relationship between value relevance investment decisions and the economic cycle.

1.6 STRUCTURE OF THE THESIS

The remainder of the thesis is organised as follows. Chapter 2 presents an overview of the institutional framework and M&A market in Australia. This chapter explores the institutional setting, recent regulatory reforms in Australia and how they differ with their counterparts in the UK and the US. This discussion primarily focuses on the issue of why such an investigation is necessary in the context of Australia.

Chapter 3 presents the research design to empirically investigate the market reaction to domestic acquisition announcements and addresses research questions 1 and 2. The chapter starts with a literature review and proceeds to develop hypotheses and to describe the sample selection process. The methodologies used to measure abnormal returns during the acquisition announcement event are discussed and the hypotheses developed on the basis of research findings are tested. This involves a detailed explanation of the empirical results achieved employing both univariate and multivariate frameworks.

Chapter 4 also investigates the market reaction to the announcement of cross-border acquisitions and, therefore, tests research questions 1 and 2 in a foreign acquisition setting. The chapter also begins with a literature review, develops the hypothesis and describes the sample selection process. The methodologies employed to assess the market reaction are presented and the hypotheses developed are tested. Further, the empirical results derived using both univariate and multivariate frameworks are explained.

Chapter 5 examines the long-run operating performance of bidding firms using three separate samples, for both domestic and cross-border acquisitions. This chapter addresses research question 3. It contains a literature review, hypotheses development section and a section on the sample selection process. The methodologies applied to calculate the long-run abnormal operating performance are presented. Finally, the empirical results in both univariate and multivariate frameworks are discussed.

Chapter 6 concludes and summarises the full thesis. This chapter revisits the main findings and the contributions of the thesis. It explains the main findings and contribution of each empirical study separately. In addition, the chapter outlines the main policy implications. The chapter ends with a discussion on the limitations of this thesis and provides suggestions for future research in the areas of this research exercise.

CHAPTER 2

Institutional Frameworks and Mergers and Acquisitions Market of Australia

2.1 INTRODUCTION

This chapter provides a fresh look at the Australian mergers and acquisitions market and the prevailing institutional settings that govern mergers and acquisition in Australia. The chapter explains not only the legal and tax considerations but also the current trends of domestic and foreign acquisitions in light of the rules and regulations that influence the market for corporate control. The coverage extends from discussion of the institutional settings, regulations, business structure and environment which influence M&A decisions (Section 2.2) to a comparison of domestic market trends with those of the UK and the US market settings (Section 2.3). The final section offers a summary of the chapter.

2.2 Australian Institutional Settings

There are a number of dissimilarities in the institutional environments and the regulatory frameworks of the US, UK and Australia, underpinning the need to investigate the M&A activities in Australia, since the majority of prior M&A studies are derived from the US and the UK markets. The discussion and comparison of a number of institutional settings, such as takeover regulations, anti-trust law, the economic environment, competition in the takeover market, ownership characteristics, dividend taxations policy, size and the value of the businesses and differences in corporate governance characteristics, reveals that these factors are expected to impact on acquisition performance differently between the US, the UK and Australia. This chapter

attempts to comprehensively highlight the characteristics in Australia that differ from its counterparts in the UK and the US and suggest the need to revisit the market performance of Australian acquisitions announcements.

2.2.1 Takeover Regulations

The takeover market of Australia is one of the unique and restricted markets among the capitalist economies (DeMott, 1987; Mannolini, 2002). The extensive amount of literature about corporate control and regulatory studies provides evidence about the prevalent phenomenon of the Australian takeover market. Although researchers claim that Australian corporations law is a replica of UK corporations law, considerable differences exists in relation to the takeover regulations of the market. The Australian takeover market is relatively young, dynamic, unique and protective compared to the UK and the US (Sappideen, 1986). Hutson (2002), therefore, appropriately termed the Australian takeover market as a hybrid of the British and US-based systems and, arguably, the most restrictive in the world. Although there are several plausible similarities pertaining to these three jurisdictions in terms of regulatory structure and principles, the unique features of current regulations make the takeover market both highly risky and relatively expensive in Australia compared to its counterparts in the UK and the US (Hutson, 2002).

According to the Australian Corporations Act 2001 (Cth), there are mainly two main methods of taking control of a listed company or trust such as takeover bids and schemes of arrangement. Usually in takeover bids, a potential acquirer makes an offer to all shareholders of a target company to buy their shares on the same terms. This is usually executed through an off-market bid which involves written offers to all shareholders instead of on-market bid where the broker operates in the market for a minimum period of one month and purchases the securities at the bid price. Chapter 6 of Corporations Act also specifies that acquisition can be done by a scheme of arrangement where the target management proposes a scheme to shareholders for approval upon which 100 percent of the target shares are transferred/cancelled to the acquirer in return for payment. Basically, it is a court approved arrangement between the target company and its shareholders

for the transfer or cancellation of their shares in exchange for cash and/or shares from the acquirer. This is a frequently used approach in takeovers in Australia in recent years since it provides flexibility in structuring a takeover or merger and the certainty of obtaining 100 percent of shares on a defined date subject to shareholders approval of the scheme.

A stable political system, independent judiciary, reliable money supply and recognition and protection of property rights of Australian settings are broadly consistent with those of the UK and the US settings (Mannolini, 2002). Despite the apparent similarity of such institutional settings of Australia in terms of philosophy and structure, the Australian takeover regulations poised in the middle of the US and the UK regulations. Particularly, the recent enactments of Australian takeover regulations, with necessary amendment and inclusion of new clause, provide high incentives to examine the Australian bidder's performance in this jurisdiction during the sample period of this study.[7]

Henry (2005) states that takeover activity in Australia is highly regulated. A number of bodies and legislation directly monitor takeover activities. According to Henry (2005), the takeover activity is primarily regulated by Chapter 6 of the Corporations Act 2001 (Cth). In addition, the Trade Practices Act, the Foreign Acquisitions and Takeovers Act and the Listing Rules of the Australian Stock Exchange also oversee Australian takeover bids. The relevant involvement of all these bodies is discussed below.

Firstly, according to Section 6.6 of the Corporations Act 2001 (Cth) acquirers must follow takeover regulations when they acquire unlisted targets with more than 50 members. It indicates that the takeover rules only apply to unlisted companies with more than 50 members.[8] However, as per the discussion paper of the Treasury (2007), an unlisted public company is a firm that has more than 50 non-employee members and which has an ability to raise money from the public.[9] The bidders for private targets, that typically have less than 50 members, can bypass costly procedures involved with a formal

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[7] Mannolini (2002) describe the Australian takeover laws as being quite unique on a world scale due to the reform mandated by Eggleston Report.
[8] See David and Bruce (1984)for detailed explanation.
[9] Treasurer (2007) reports that there are approximately 110,00 unlisted companies limited by guarantee and 7000 companies limited by shares as of November 2006. This is only 1 percent of total businesses in Australia.

takeover offer, whereas these procedures are compulsory in acquisitions of both listed and unlisted public targets. However, unlisted public bidders need to issue notice to the target if, at a particular time during the bid period, bidders' voting power rises to a particular threshold.[10] Therefore, the bidders on private targets can have an advantage, as the relative regulatory cost of acquiring private targets is lower than that of public targets.

Secondly, chapter 6 of the Corporations Act 2001 (Cth) generally prohibits more than 20 percent of the voting rights in a publicly listed or a publicly unlisted company. Such a threshold is too low to establish a control on a target firm and prevent Australian companies from acquiring a significant controlling equity stake before initiating a formal acquisition offer. Although both the UK and the Australian markets require a formal takeover bid if the relevant interests in voting shares exceed 20 percent in Australia and 30 percent in the UK, the actual takeover process varies significantly in these two jurisdictions. While the UK settings allow for a mandatory bid[11], there is no such option in the Australian takeover regulations. Therefore, the absence of such mandatory bid provisions, lower threshold (20%) and costly formal takeover process make the takeovers highly risky and relatively expensive in Australia.[12] In the US, it is possible for bidder to purchase a control block in a private negotiation without making a formal offer to shareholders. Bidding firms from the US are free to purchase or conduct a tender offer for share acquisitions either through private transactions or stock exchange purchases – at a price, or for a consideration, different from that of the general tender offer (DeMott, 1987). This environment may encourage bidders in their value enhancing acquisition decisions to search for private and subsidiary targets to which such a provision does not apply.

Thirdly, the Corporate Law Economic Reform Program Act (the CLERP Act 1999) was amended on 13 March 2000, giving additional powers

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[10] Section 654C defines the threshold at 25%, 50%, 75% and 90% or higher.
[11] Under the Code, any person acquiring thirty percent or more of the voting rights of a target is obliged to make an offer to the target's remaining shareholders at the highest price paid by the acquiring person or its associates for shares of that class within the preceding twelve months (DeMott, 1987).
[12] Mayanja (2004) stated that the current regulations produce extended delay to complete the formalities of A bidder's statement, pre-offer notification and launching the offer in the market. This ultimately promotes competing bids in the market and thus increases the target shareholders' benefit.

to the Takeover Panel [13] to resolve takeover disputes in a more effective manner which was previously known as the Corporations and Securities Panel. Part 6.10 of the Corporations Act and Part 10 of the Australian Securities and Investments Commission Act 1989 (Cth) (ASIC Act) provide the legislations which empower and regulate the operations of the Panel (Calleja, 2002). [14] The enactment of such legislation reduces the dependency on court based black letter law to resolve M&A disputes in Australia because the Takeover Panel in Australia has statutory power. [15] However, this is in contrast to the US market where government bodies indirectly regulate takeover disputes. [16] On the other hand, the London City Panel on Takeovers and Mergers is a non-statutory panel. Therefore, the new Takeover Panel resolves takeover disputes quickly, informally and more effectively, which creates substantial appeal in the business context (Thompson, 2002). This ensures greater certainty, using a higher level of expertise, compared to previous court-based system which relied on Supreme Court Judges around the country to review complex corporate matters.

Fourthly, anti-trust merger policies in Australia have remained virtually unchanged since 1974. However, when the Trade Practices Act was introduced, Australian firms were not subject to any statutory regulation process and relied on informal notifications and clearances. Section 50 of the Trade Practices Act (now known as the Competition and Consumer Act) prohibits acquisition of shares that would result in a substantial lessening of competition (SLC) in a market for goods and services. This new amendment allow the ACCC (Australian Competition and Consumer Commission) to provide timely assessments of merger proposals. The objective of the anti-trust merger policy in Australia is to facilitate mergers that are motivated by economic efficiency and disallow mergers that are inspired by monopoly

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[13] According to the ASIC, "The Takeovers Panel (formerly the Corporations and Securities Panel) is the primary forum for resolving disputes about a takeover bid until the bid period has ended. The Panel is a peer review body, with part time members appointed from the ASIC active Members of Australia's takeovers and business communities" (source: http://www.asic.gov.au/asic/asic.nsf/byheadline/Takoevers+Panel?openDocument).

[14] Section 658 of the Corporations Act 2001 defines the panel power to remedy unacceptable circumstances of takeover actions.

[15] Takeovers are mainly regulated by black letter laws in the US, which relies purely on courts and judicial enforcement to handle disputes of a takeover.

[16] Regulation in the UK is commonly termed as self-regulation governed by the City Code on Takeovers and Mergers.

power or rent seeking. The ACCC also has power to investigate cross-border acquisitions that may lessen competition in the Australian market. However, Section 2 of the Sherman Act 1890 does not prohibit monopoly power, which is obtained through "superior skill, foresight and industry". Charles W. Calomiris comments on Woodbridge and Williams (2003) reveals that stealth regulation is a serious problem in the US compared to Australia particularly in the telecommunications and banking sectors where acquisitions permission is withheld subject to alleged anti-trust concerns.

Fifthly, the Takeovers Panel introduced Guidance Note 7 about lock-up devices, in December 2001 with an objective to provide the market with guidance as to the situations where a break fee agreement will generally not result in the takeover being stymied by the Panel; therefore ensuring the transactions take place in an efficient, competitive and informed way.[17] The Panel recommends that break fee should not, in general, exceed 1 percent of the equity value of the target company. The break fee of 1 percent or less will generally be acceptable, while anything more than 1 percent will be examined closely by the Panel. Although this guideline is based on a more restrictive approach to deal protection devices compared to the US market, the use of such devices is becoming increasingly common and has attracted significant attention in Australia over recent years (Mannolini, 2002).[18] The popularity of break fee usage has increased significantly in recent years (see, Curtis and Pinder, 2007). [19] Exclusivity through break-up fee agreements provides assurance to bidding firms of the reimbursement of information costs if the bid is ultimately unsuccessful. By contracting the break fee, the target board gives the acquirer a greater assurance that the deal will close. Therefore, it ensures bidders have more confidence to undertake the necessary enquiries without fear of being out of pocket upon the discovery and disclosure of the synergies by attracting competing bidders. On the other hand, target management considers this as a device to attract more intense bidders resulting in an

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[17] The UK Takeover Code significantly limits the directors' ability to use deal protection devices. Furthermore, on July 21 2011 the Panel's Code Committee revised the Takeover Code to prohibit all types of deal protection devices (Saulsbury, 2012).

[18] Break fee in Australia cannot be more than 1 percent of the value of the target company subject to 'unacceptable circumstances' while it ranges from two to four percent in the US.

[19] Curtis and Pinder (2007) provide evidence that break fee agreements have increased from 3.5% in the year 2000 to 43.4% in 2006 in the takeover transactions.

increased takeover premium (Curtis and Pinder, 2007). Thus, Mayanja (2002) identifies this provision as the most effective method of ensuring that a takeover offer will be successful.[20]

Sixthly, takeover defenses[21] are very common in the US market, whereas both the UK (Takeover Code R.21.1) and Australia prohibits the use of takeover defenses in all circumstances. Therefore, the target shareholders' ability to constrain a takeover bid in Australia is very weak, since the issuance of a poison pill, golden parachutes, reverse bear hugs, scorched earth, share repurchase and other defensive tactics are limited by the Corporations Act, the Listing Rules (7.9) of the Australian Stock Exchange (ASX), and the Takeover Panel's decision (Thompson, 2002). Only in limited cases are share allotments permissible, but the sale of assets is also regulated by authority (Sappideen, 1986). Therefore, the absence of such takeover defenses in Australia ensures that shareholders have stronger rights and more influence over the CEO and the Board's action, which promotes more value-enhancing behaviour in Australian mangers (Humphery-Jenner and Powell, 2011). Takeover defenses encourage more negotiated deals by the target Board of Directors, which increases the price of the bid. However, prohibition of such defenses in the UK market increases the number of successful hostile takeover bids, which is an important mechanism to ensure manager accountability in the market for corporate control (Saulsbury, 2012).

Seventhly, in the US, partial bids are permitted as long as acceptances are pro-rated. Although current regulations allow partial bids in Australia, the partial bids are uncommon due to the 1986 amendment to the Australian takeovers legislation (Ramsay, 1992). But the City Code makes partial bids less attractive as a means of acquiring effective control of a target (DeMott, 1987). The City Code permits partial bids, only if Panel consent has been obtained (Sappideen, 1986). Although partial bids were very popular prior to 1986, this new amendment makes the partial takeovers in Australia virtually extinct. The successful partial bid adversely affected the position of target

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[20] Despite Jeon and Ligon (2011) reporting that break fee size is unrelated to announcement date abnormal returns for the US study, the Australian M&A market may not hold the same result.
[21] Takeover defenses are also known as anti-takeover provisions (ATPs) which offer protection to shareholders of target companies from disciplinary action. Takeover defences include chartered board, poison pills, dual class stock and charter amendments etc.

management and placed coercive pressure on the target company's shareholders (Lange *et al.*, 2000). However, acquirers secured a very strong position compared to the rival bidders through this mechanism (Sappideen, 1986).

Eighthly, the 'purchase' method of accounting for asset acquisitions is required under Australian accounting standards, whereas the 'pooling' method of accounting for business combinations is still operational in the UK.[22] In the US, the Financial Accounting Standards Board (FASB) adopts 'purchase' accounting in all cases. The 'purchase' method recognises goodwill as a surplus of purchase price over the value of assets acquired. The impact of the 'purchase' accounting method directly affects the reported earnings level, rather than cash flow level as goodwill is amortised pro rata over the expected useful life of the asset.

Ninthly, target shareholders in the US can withdraw their acceptance from an already accepted tender offer. This provision enables shareholders to accept the best offer among rival bidders (Sappideen, 1986). However, there is no such right in Australia and the UK. Unlike the UK and the US Acts, the Australian Act grants the offeror unrestricted power to withdraw the offer for shares that have not yet been tendered.

In addition to the above regulations, other bodies may be involved in the takeover process. The ASX Listing Rules play a key background role in the regulation and control of takeovers compared to US stock exchanges.[23] For example, the ASX may become involved in the takeover process when it is concerned that ASX rules are not complied with by the parties involved in the takeover. The ASX ensures that there is an informed market in the securities of the target company. ASX listing rules Guidance Note 8 requires a target to immediately notify the ASX and the wider market, of any information concerning it that a reasonable person would be expected to have that could have a material effect on the price or value of the target's securities.[24] A takeover proposal is likely to fall within this category of price sensitive information that should be disclosed. However, the disclosure obligation may

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[22] Stanton (1987) states that the pooling method of accounting is not very common in Australia.

[23] See http://www.ibanet.org/Search/Default.aspx?q=takeovers%20guide

[24] http://www.asxgroup.com.au/media/Guidance_Note_8.pdf

be waived if the approach and associated discussions with a target fall within five permitted exceptions to the general disclosure obligation. Moreover ASX Listing Rule 7.9 prohibits a target from issuing shares without shareholder approval for a period of three months when a takeover proposal is in process. The Australian Securities and Investments Commission (ASIC) acts as a facilitator of takeovers in Australia, and also has the broad regulatory authority to allow exemption and necessary modification to ensure fair and flexible takeover process.

Therefore, the above discussions support the argument that the Australian regime has institutional and regulatory differences compared to those of the US and the UK.

2.2.2 Corporate Governance Characteristics

There are a number of institutional differences that exist between the corporate governance characteristics of Australia compared to those in the US and the UK. These features may also influence the bidding firm's performance at the acquisition announcement in different ways.

For example, ownership concentration is relatively higher in Australia compared to the US and the UK. According to La Porta *et al.* (1999), 45 percent of a sample of the largest Australian companies have a shareholder holding of more than 10 percent of the equity, while in the UK this is the case in only 10 percent of the largest companies, and in the US only 20 percent of the largest companies have shareholders that own more than 10 percent of the equity. Ownership concentration acts as a substitute mechanism for takeovers in the market for corporate control. The stock market becomes more liquid if there is lower ownership concentration, which ultimately facilitates takeovers (Bolton and von Thadden, 1998). Therefore, such a corporate environment, with higher ownership concentration, may not encourage takeover activities and, thus, acquiring firms may experience difficulty in acquiring targets, which could possibly reduce the announcement period abnormal returns to bidding firms.

On the other hand, Lamba and Stapledon (2001) report that 72.1 percent of Australian listed companies have a non-institutional block holder

with a shareholding of at least 10 percent. The presence of block holders may indicate a source of external monitoring to the management more effectively and force a change in managerial strategy that increases firm value. Thus, superior firm performance is expected from such monitoring benefits. On the other hand, such a situation may encourage rival bidder to gain a controlling block through market purchase or a takeover bid. A number of studies find that a firm's market value increases when a block purchase is announced (see for details, Bethel and Liebeskind, 1993). Therefore, the higher percentage of block holding in Australia may have a positive influence on the acquisition outcome of Australian companies compared to their counterparts in the US and the UK.

Aggarwal *et al.* (2010) report that the overall level of corporate governance of US and UK firms is stronger than that in Australia. The authors develop a composite governance index using 44 attributes and report an index value of 48 percent for Australia, whereas it is 59 percent for the US and 55 percent for the UK. The analysis of this index shows that statistically significant differences exist between the level of corporate governance in Australia and the US. This indicates that an Australian firm's level governance is significantly lower than the governance in similar US firms. Shekhar and Torbey (2005) also state that the Australian corporate governance structure may have a differential influence on firm's performance compared to those in the US and the UK. The level of corporate governance may also have a differential influence on bidding firms' announcement period abnormal returns.

These institutional features of Australian corporate governance may influence the empirical findings of this thesis. These characteristics may induce the announcement period abnormal returns to bidding firms.

2.2.3 Business Structure

A number of Australian institutional features on the structure of business make a comparative study of public, private and subsidiary targets acquisitions interesting. Three principle features of Australian business sector are substantially different from the UK and the US market. Particularly the

structure of unlisted firms in Australia defined by the Corporations Act 2001 is sharply contrasted with the US definition.

The private company in Australia is equivalent to the proprietary limited company (Pty Ltd). In Australia, Section 113 of the Corporations Act 2001 limits a privately held company to 50 non-employee shareholders as opposed to the maximum of 500 in the US, according to the Securities Exchange Act of 1934, Section 12(g). Therefore, Australian private firms tend to be much smaller than their US counterparts. Hansen (1987) contends that the problem of information asymmetry should be larger as the target's size increases. Therefore, acquisition of Australian private companies can be associated with lesser information asymmetry compared to their US counterparts. Hence, one would expect a more positive market response in acquiring private targets in Australia.

Unlike in the UK, where both public and private companies must submit audited financial statements prepared under the prevailing accounting standards (Ball and Shivakumar, 2005), small Australian private companies are not bound by the same requirement and are not required to submit audited financial statements (part 2E of the Corporations Act 2001) as required by listed firms.[25] But the UK setting is particularly interesting because the private companies are required to file their accounts, and financial statements must be audited and must comply with the same accounting standards and tax laws as public companies (Ball and Shivakumar, 2005). The absence of audited financial statements may discourage many bidders due to the difficulty in valuing the target, which in turn may reduce the level of competition for acquisitions of privately held targets. This situation should allow Australian bidders to acquire private targets at a lower price and therefore such acquisitions should be associated with a positive market response. A counter argument is that the acquisition of private targets can be associated with a wider range of valuation errors on the part of bidders, as less public information is available for the purpose of deriving their values (Easley and

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[25] According to the Australian Securities and Investments Commission (ASIC), to be defined as a small private company, a firm should satisfy at least two of the following requirements: (i) consolided revenue of less than $25 million, (ii) consolidated gross assets of less than $12.5 million and (iii) number of employees less than 50. See http://www.asic.gov.au/asic/asic.nsf/byheadline/Financial+Reports?openDocument#1.

O'Hara, 2004). If the market's interpretation is in line with this, then the market response to such acquisitions should be negative.

Moreover, the contribution of Australian listed companies to the country's economy is relatively small compared with other Western economies. According to Dignam (2007), only one-third of Australia's largest companies are listed on the stock exchange, whereas approximately two-thirds of the UK's largest companies and nearly all the largest companies in the US are listed on their exchanges. This implies relatively larger shares of the firms are unlisted in Australia compared to their counterparts in the UK and the US. For instance, Stapledon (1999) reported on a comparative structure of Australian and UK businesses for the 500 largest non-financial business enterprises at the end of 1994. Interestingly, the author reports that domestically listed companies constitute only 35 percent in Australia compared to 63 percent in the UK, while unlisted domestic companies account for 26 percent in Australia and only 10 percent in the UK. This large group of unlisted firms induces and allows bidding firms to choose the asset they want to buy from the private target market instead of the comparatively small listed market. According to the Australian Bureau of Statistics (ABS), there were more than 2.1 million businesses in Australia as of June 2011, but only about 2,000 companies (0.1 percent) were listed on the ASX. This large pool of unlisted firms provides Australian bidders with a diverse menu of investment opportunities.

2.2.4 Business Performance

Not only is the size of unlisted sectors in Australia large, the performance of the Australian unlisted sector is also promising. The unlisted business sector, which includes both unincorporated businesses (for example, sole proprietorships and partnerships) and incorporated businesses, represents the bulk of total businesses, by number. Unlisted businesses tend to be smaller than those on the ASX. Around 99 percent of businesses satisfied the ABS definition of small and medium businesses by having fewer than 200 employees. The Reserve Bank of Australia recently published an article to compare the performance of the listed and unlisted sectors in Australia in its

December 2010 bulletin. According to the publication by the Reserve Bank of Australia (Bilston and Watson, 2010), a majority of Australian unlisted businesses exhibit a more stable level of profitability than their listed counterparts in recent years. [26] An earlier study by Davies (1971), which examined the Australian jurisdiction, provides evidence that private companies are economically more efficient than public firms. While the acquisition of unlisted targets may bring stability to acquirers' profits, whether they really create value for the bidder is questionable, as these well-performing unlisted targets can be expected to receive a fair value from bidders when they are acquired.
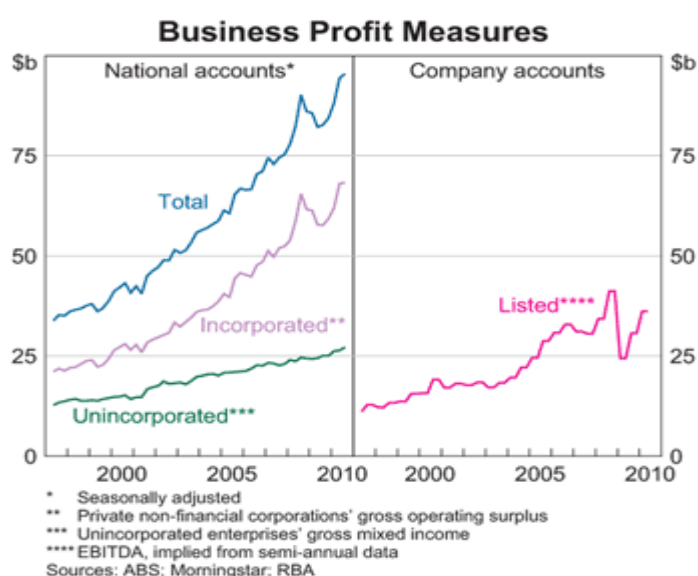
Figure 2.1 The profitability performance of listed and unlisted sectors of Australia over a ten year period. The figure presents semi-annual EBITDA data for listed companies, and gross operating surplus and gross income for the incorporated and unincorporated sectors from 2000-2010. Source: Reserve Bank of Australia Bulletin – December Quarter 2010

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[26] Details of unlisted sector performance in Australia is available in the link:
http://www.rba.gov.au/publications/bulletin/2010/dec/8.html

2.2.5. Investment Banking and M&A Advisory Services

The Australian investment banking sector is very well developed and world class, and has undergone significant growth in the last decade.[27] Most of the world's leading investments banking services are available in Australia.[28] The superior quality of investment banking services, as well as the prestige level of M&A advisory services, positively affects the announcement period abnormal returns of bidding firms. The literature provides evidence that bidders that hired prestigious advisers achieve a higher gain than those that hired less prestigious advisers (Bowers and Miller, 1990; Michel *et al.*, 1991; Bao and Edmans, 2011). Supporting these findings, the recent study of Golubov *et al.* (2012) provides strong evidence that top tier investment banking services are associated with higher bidder returns in public acquisitions. However, an advisor's reputation has no effect on bidder returns in acquisitions of unlisted firms. The World Economic Forum's *The Financial Development Report 2010* ranked Australia as fifth out of 57 of the world's leading financial systems and capital markets. In particular, Australia's non-banking financial services were ranked eighth. This suggests that Australia's highly developed investment banking services may positively affect the M&A outcome of Australian bidding firms.

2.2.6 Legal Structure and Recent Reforms

Australia's companies and securities codes (State-based Corporations Acts) have regulated the market in all the states since 1961, but nation-wide regulation (ASIC) came into effect in 2001 with the enactment of the *Corporations Act* in 2001 administered by the Australian Securities and Investments Commission (ASIC) (Luke, 2008). In contrast, the US has numerous state-based legislations, which governs takeover in each state (DeMott, 1987). The UK *Companies Act 2006*, which governs UK corporations, contains very few provisions directly concerning takeovers (Nicole, 2002). Thus, Bugeja *et al.*, (2009) question whether the US results

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[27] http://www.austrade.gov.au/Buy/Australian-Industry-Capability/Financial-Services/default.aspx

[28] http://www.austrade.gov.au/Buy/Australian-Industry-Capability/Financial-Services/default.aspx

hold for the Australian market in the context of the regulatory differences that exist in Australia.

Capital gains tax reform that was passed in December 1999 allows target shareholders to defer taxation until the subsequent sale of the shares that they received in any stock swap at the time of acquisition.[29] However, the capital gain realised in a cash-financed acquisition is subject to immediate tax. Before 10 December 1999, shareholders are liable for immediate capital gains tax irrespective of the method of payment on the sale of their shares. After the new amendment, bidders may be required to pay a higher premium in cash offers as a compensation for the immediate tax burden faced by the target shareholders. Therefore, this tax reform may have encouraged bidders to use stock as a method of payment in the acquisition of targets. Bugeja and Da Silva Rosa (2010) hypothesised that the immediate taxable implication of cash offers demanded higher premiums by target shareholders relative to equity bids.

Based on the *Income Tax Assessment Act 1936* and *1997*, the Australian corporate tax system allows dividend imputation, in which a company can attribute some or all of the tax paid by them to the shareholders as a means of tax credit to reduce the level of their income tax. However, according to Gujarathi and Feldmann (2006), none of the Organisation for Economic Co-operation and Development (OECD) countries follow the full imputation system. The full imputation system treats the corporate taxes as a prepayment of personal taxes. Australia also adopted a partial integration system, introduced in 1987, to address double taxation. The partial integration system provides tax relief either at the company level (dividend deduction or split rate) or at the shareholder level (dividend exemption, tax credit or split rate). However, none of the OECD countries offer company level tax relief. In Australia, the tax credit system is used to eliminate or reduce the tax disadvantages of dividend payment to shareholders and allows them to pay the differences between the corporate tax rate and marginal rate. In Australia, franked dividends (when tax is paid in Australia) do not suffer from tax disadvantages compared to unfranked dividends (profits earned outside

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[29] The US and the UK also allow defer taxation when receive equity as a method of payment.

Australia). The UK also follows a modified dividend imputation system using the tax credit system. However, the split rate method is used in the US, where shareholders are taxed at a lower rate when assessing their personal tax liability. These differential tax treatments may affect the acquisition outcome differently, as shareholders' responses to acquisition announcements may be directly linked to their taxation liability for any capital gains from investment.

These new features of the Australian M&A market– empowerment of the Takeover Panel, introduction of the break fee agreement, and the recent amendment of capital gains tax regulation – provide an interesting background for investigating the performance of bidding firms. Therefore, these features of the Australian M&A market make it pragmatically essential to investigate the performance of bidding firms in light of such changes. The existence of the abovementioned institutional and regulatory differences motivated this attempt to undertake an investigation of the market reactions of Australian bidding firms in a vagarious and robust manner in the Australian context.

2.3 AUSTRALIAN M&A MARKET

After record years of M&A deals in 2006 and 2007, which amounted to AU$4400bn. and AU$3600bn. respectively, the global market observed a cooling down period starting from 2008 due to the unfavourable consequences of the global financial turmoil (Hornke, 2009). Although the US market remained the global leader for M&A activities in 2010, with the total amount of deals announced being US$822bn., Australia ranked third, with a deal value of US$132bn.[30] According to an Austrade benchmarking report, this volume of Australian M&A deals was considered as the largest since 2008.[31] Australia maintained its global ranking of third position by capturing 5.4 percent of the worldwide market share in 2010. The *Financial Services Benchmark Report 2010* announced that Australia ranked first in the Asia-Pacific region, which is followed by China; Australia's volume of deals announced rose by 140 percent to US$132bn,.in 2010 compared to 2009. Another published report by Austrade showed that Australia maintained the top position in the Asia Pacific

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[30] See for details: http://www.austrade.gov.au/Invest/Reports-Resources/Benchmark-Report
[31] The largest volume of M&A deals occurred in 2007 (US$136.5bn.)

M&A market for the 2006-2008 period.[32] Australia also maintained the global rank of fifth and third position respectively for the financial years of 2006-07 and 2007-08. Austrade announced that the M&A activities were mainly driven by the mining; banking and insurance; oil, gas and petroleum refining; financial, energy, and telecommunication sectors during these periods. The Bureau of Industry Economics (1990) reported that an average of 8.13 percent of exchange-listed Australian firms was subjected to a takeover bid for each year between 1960 and 1988. Although recent global financial turmoil has slowed down M&A activities worldwide, the wave of mergers in Australia grew rapidly due to a sharp recovery in the economy and the strong Australian currency. Australian companies remained one of the most popular targets for mergers and acquisitions (excluding Japan) in the Asia-Pacific region.[33] These statistics provide the primary understanding that the Australian mergers and acquisitions market is very active and economically significant in terms of heavy investment.

2.3.1 Domestic M&A Market

The Australian stock market is small in size; at the end of 2010, the market capitalisation of the main Australian Stock Exchange (ASX) amounted to US$12,131bn., while its US and UK counterparts reported market capitalizations of US$18,805bn. and US$132,420bn. respectively.[34] As shown in the figures above, the size of the UK market is one and half times larger, whereas the US market is more than ten times larger than the Australian market. Although this market is, comparatively, much smaller than the US and the UK markets, the Australian M&A market is relatively active. This study conducted an analysis by gathering the necessary information from the Thomson Reuters SDC Platinum Mergers and Acquisitions database and making comparisons among the US, the UK and the Australian M&A markets during the period 2000-2010. The purpose of such comparisons is to provide an insight into why a comprehensive study is required for the Australian

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[32] For details see the link: http://www.austrade.gov.au/Invest/Investor-Updates/Data-Alert-080812/default.aspx (source: Thomson Reuters)

[33] For details see the link: http://news.smh.com.au/breaking-news-business/australia-and-china-head-ma-activity-20100105-lrzg.html.

[34] Data gathered from Datastream database.

context since the majority of M&A studies are conducted in the context of the US and the UK. The Thomson Reuters SDC Platinum Mergers and Acquisitions database recorded the total domestic target acquisitions at 95,761 in the US market; 24,077 acquisitions in the UK market, and 16,085 deals for the Australian market during the 11-year period (2000-2010). However, the majority of these bidding firms in Australia are listed (53.84%), which is sharply contrasted to the UK jurisdiction where bidding firms are mostly private firms (47.26%).[35] Therefore, this study considers only Australian listed bidders' performance. Over an 11-year period, from 2000-2010 inclusive, the Thomson Reuters SDC Platinum Mergers and Acquisitions database reported 43,747, 7,641 and 8,660 domestic acquisitions by public bidding firms in the US, UK and Australian markets respectively. The graph in Figure 2.2 shows the number of acquisitions by US, UK and Australian listed acquiring companies for the period from 2000-2010, on a quarterly basis. The graph clearly indicates that the highest number of acquisitions took place in the US market, followed by the Australian and the UK markets; this trend is similar in almost all quarters over the 11-year period. Although the UK is the second largest takeover market in the world, surprisingly, the number of domestic acquisitions by UK listed bidders is lower than its Australian counterparts; as indicated in discussion above, most UK bidding firms are private. The graph shows that M&A activities in Australia grew gradually until it reached its highest level just prior to the global recession period. Australia's M&A value decreased by 12 percent in 2007-08 compared to 2006-07.

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[35] Private bidding firms comprised 25.72% of the Australian acquisition market.

USA, UK and Australian Domestic M&A Market: 2000-2010

Figure 2.2 USA, UK and Australian Domestic M&A Market: 2000-2010.
Source: Thomson Reuters SDC Platinum Mergers and Acquisitions database.

Recent US and UK studies consistently indicate that private and subsidiary targets generate higher abnormal returns than the public targets. Based on the facts above, subsequent discussion of this chapter attempts to make a comparison of the US, UK and Australian M&A markets in relation to public, private and subsidiary acquisitions. First, according to the Thomson Reuters SDC Platinum Mergers and Acquisitions database, during the period 2000-2010 in Australia, 43.45 percent of acquisitions constitute private target acquisitions, while approximately 30.52 percent of the acquisitions were subsidiaries. Private target acquisitions form the highest percentage of acquisitions in the UK (59.51%), while subsidiary acquisitions are the highest in Australia (30.52%). Public target acquisitions are highest in the US (26.10%) followed by Australia (21.02%) and the UK (11.41%). The total acquisitions of private and subsidiary targets in the UK market (86.95%) outnumbered such acquisitions in both Australia (73.97%) and the US market (72.97%). This indicates that more than 70 percent of acquisitions by listed bidding firms in Australia are associated with private and subsidiary targets. A small number of acquisitions are held with joint venture and government organisations in

these countries. This justifies the need for a thorough empirical investigation analysing the impact of private and subsidiary targets, which remains largely unexplored in the context of Australia. The graph in Figure 2.3 shows the number of acquisitions by Australian listed bidders, categorised according to whether the target is a public, private or subsidiary company for the period from 2000-2010, on a quarterly basis. Acquisitions of private and subsidiary targets remained very high compared to public targets during this period; particularly acquisitions of subsidiaries reached their highest level compared to private acquisitions in 2009. Although the unlisted target market is a relatively large section of the overall M&A market share, this sector remained largely unexplored in Australia. Considering the high volume of subsidiary and private acquisitions in Australia, this thesis is primarily motivated to investigate bidding firms' market reaction during the acquisition announcement period.

Figure 2.3 Australian Domestic M&A Market for Public, Private and Subsidiary Target Acquisitions by Listed Bidding Firms: 2000-2010.
Source: Thomson Reuters SDC Platinum Mergers and Acquisitions database.

From a bidder's perspective, the impact of bid characteristics may differ across these three markets. The common bid characteristics include: payment method, relative size, deal atmosphere (friendly vs hostile), target industry (related vs unrelated), deal value (US$m.), and bidder status (single

vs multiple bidder). These characteristics have a direct influence on the bid outcome. These bid characteristics are found to be significantly associated with the announcement period abnormal returns of bidding firms.

First, the payment method is a very important bid characteristic and has been found to strongly influence the abnormal returns of bidding firms across a number of countries and time frames. The Thomson Reuters SDC Platinum Mergers and Acquisitions data analysis shows that the main payment method in Australia is cash only (18.39%), followed by stock only (12.56%), and 'cash and stock mix' (11.33%).[36] Both the UK (32.72%) and the US (32.16%) markets reveal that cash payment is frequently the means of payment for acquisitions in these countries. However, the percentage of stock as the payment method in Australia (12.56%) is higher than in the UK (6.92%) and the US (9.36%). The low usage of stock financing in the US and the UK markets is consistent with the literature, as stock financing mostly generates significant negative abnormal returns to bidding firms. However, why Australian companies prefer stock acquisitions to cash acquisitions, compared to its counterparts in the US and the UK, needs further investigation for this sample period. The graph in Figure 2.4 clearly shows that the stock only payment method is prominent in Australia, and it is used more frequently by Australian companies compared to the UK market in almost every year, except in 2000. The graph in Figure 2.4 shows the main payment methods (cash, stock, and cash and stock) used in the US, UK and Australian markets from 2000-2010. The market reactions of bidding firms are strongly related to the payment method used by bidding firms.

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[36] This study considers three main payment methods used in the US, the UK and Australia; cash only, stock only, and cash and stock only.

Methods of Payments Used in Major M&A Market: 2000-2010
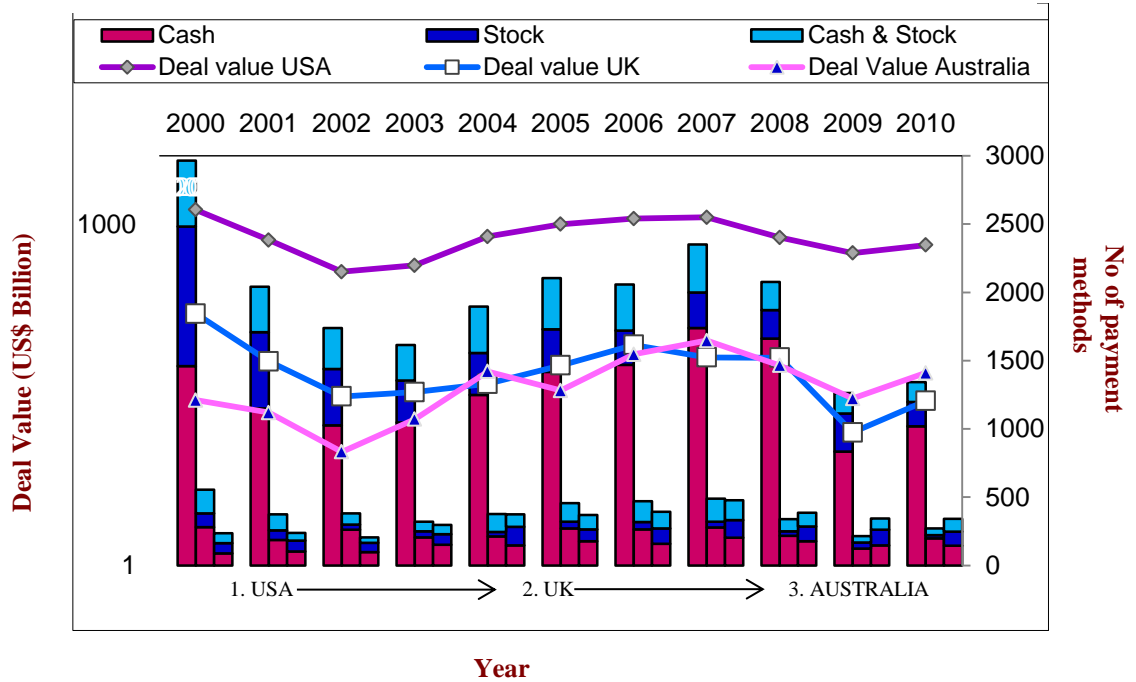
Figure 2.4 Deal Value and Payment Methods Used in Major M&A Markets: 2000-2010.
Source: Thomson Reuters SDC Platinum Mergers and Acquisitions database.

Second, the average deal value is lowest in Australia (US$77.20m.) but it is highest in the US (US$347.65m.) for listed bidding firms that acquired public, private and subsidiary targets. The average deal value of private and subsidiary targets in Australia is only US$15.18m. and US$43.06m. respectively. The average deal value for acquisitions involving public targets is much higher than for private and subsidiary targets in Australia. This indicates that the acquisition of public targets plays an economically significant role in the Australian market. On the other hand, the average deal value in the US is US$75.48m. and US$220.20m. for private and subsidiary targets respectively. Although the average deal value of public targets in the UK is similar to the US market, the average deal values for private (US$24.64m.) and subsidiary (US$78.94m.) targets are considerably lower compared to the US market. The average deal value of private and subsidiary targets in the US is approximately five times higher than the average deal value in Australia. The literature provides evidence that the deal value has a direct relationship with abnormal returns. The market reactions are expected to be higher for deals of larger value compared to deals of smaller value.

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Therefore, one would expect that the findings of the US and UK markets may not be fully reflected in the Australian context. The graph in Figure 2.5 shows the total deal value in US$bn. for the US, UK and Australian M&A markets for the sample period 2000-2010, using quarterly data. The graph shows that the total deal value in the Australian market exceeds the UK market in some quarters. Australia's M&A value decreased in 2007-08 by at least 12 percent compared to 2006-07. The total deal value of Australian firms increased sharply after the recessionary period, exceeding the UK market, as the Australian economy recovered from the global financial crisis more efficiently and quickly.

Deal Value of USA, UK and Australian M&A Market:2000-2010
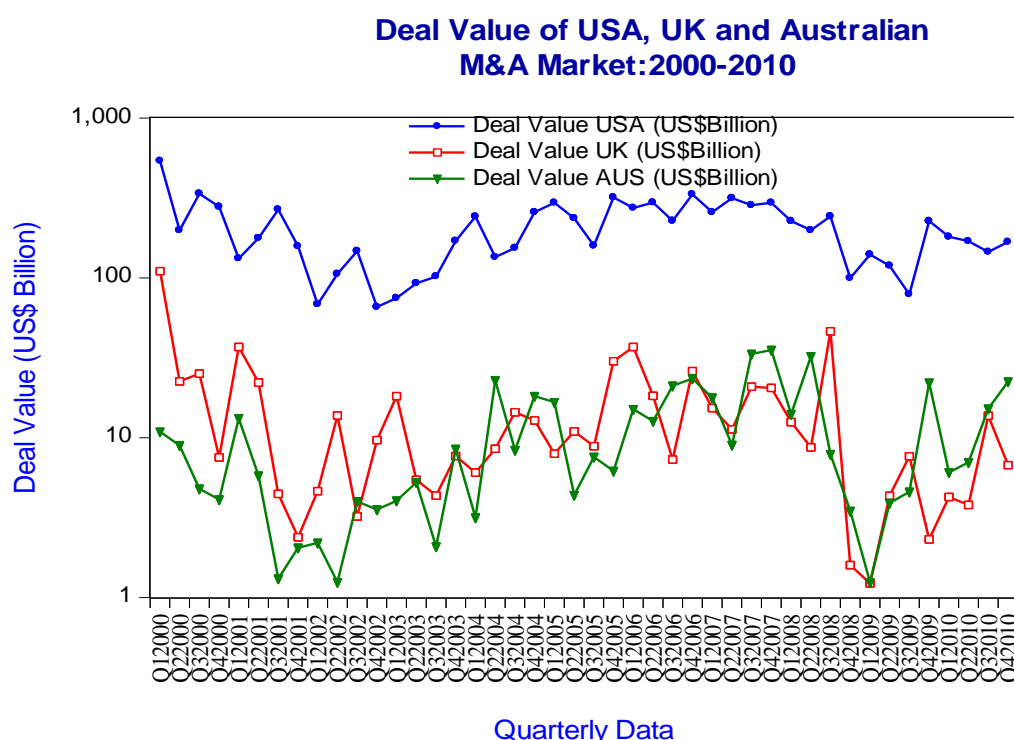
Figure 2.5 Deal Value of the US, UK and Australian M&A Markets: 2000-2010.
Source: Thomson Reuters SDC Platinum Mergers and Acquisitions database.
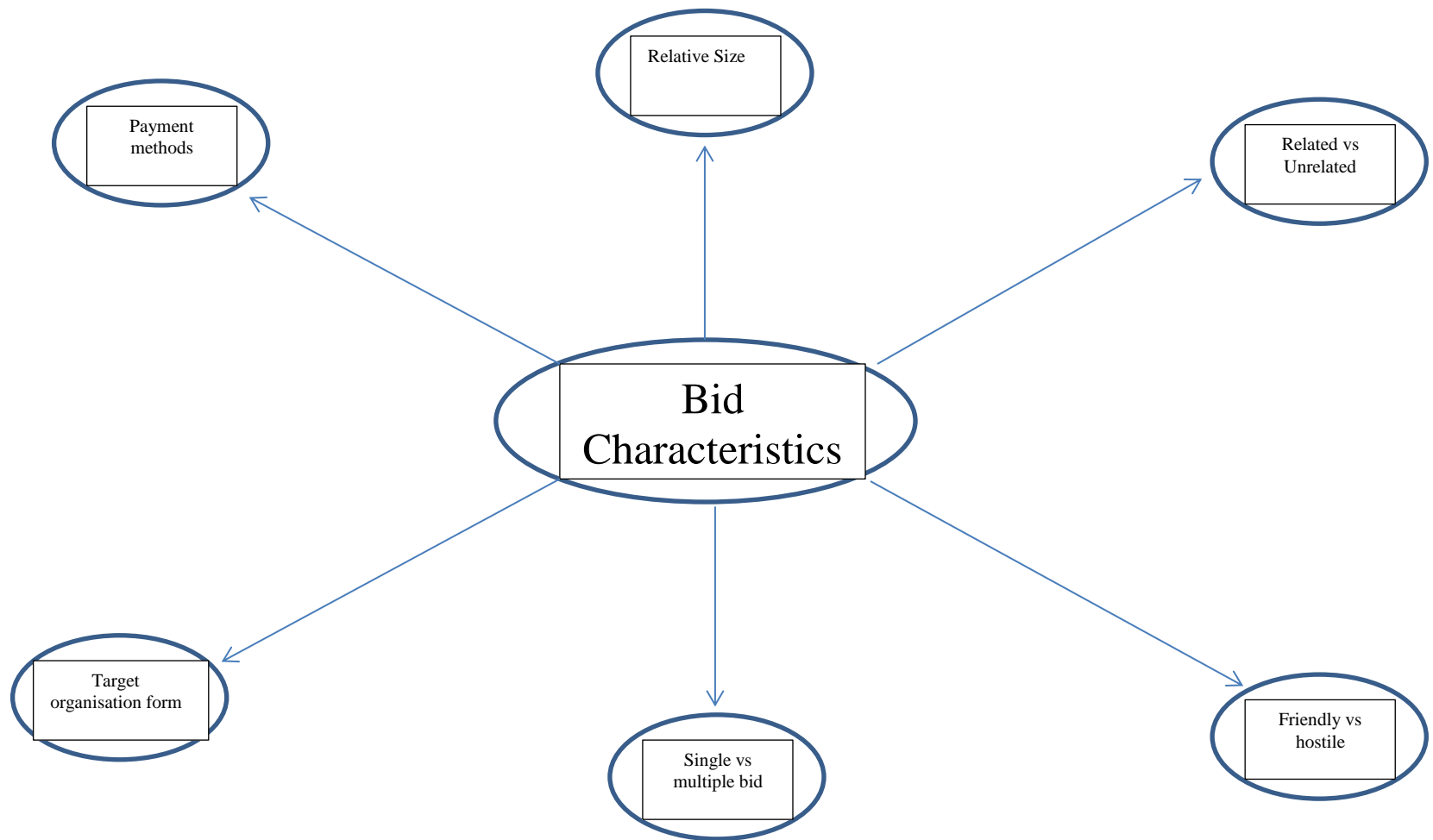
Figure 2.6 Main bid characteristics

Other bid characteristics include related and unrelated acquisitions. In all three markets, unrelated acquisitions outnumbered related acquisitions. The highest percentage of unrelated acquisitions occurred in the UK market (67.14%), whereas it was only 56.96 percent in the US market. In the Australian market, 60.60 percent of acquisitions were unrelated and 39.40 percent were related acquisitions. A further comparison of deal status (completed vs withdrawn) reveals that the percentage of deal completions is highest in the UK market (79.58%) but lowest in the Australian market (61.72%). The highest number of acquisitions withdrawn by Australian bidding firms was 5.15%, compared to the US and the UK markets. Figure 2.6 highlights the main bid characteristics in M&A deals.

The comparison outlined above between the US, the UK and Australian markets suggests that there are considerable institutional and regulatory differences that exist in the M&A market within the three jurisdictions. Therefore, one would expect a differential market response of domestic acquisitions by Australian companies.

2.3.2 Cross-border M&A Market

Historically, Australia has relied on capital inflow to augment the domestic savings available for investment, and such a volume of capital inflow represented approximately 2 percent of total GDP during the period 1950-1970. Prior to financial deregulation, capital flows were subject to a wide range of controls, such as restrictions on holdings by Australian residents of foreign currency balances and on holdings by non-residents of Australian currency balances, restrictions on overseas investment and borrowing by Australian residents and non-residents in Australia. Due to such strict exchange control policy which highly restricts the capital outflow from the country, overseas direct investment was negligible until the mid-1980s. This fixed exchange control policy remained in place for nearly 40 years, since World War II, and was the main concern for such an unfavourable environment for foreign investment. However, it has become increasingly important since then, not only in Australia, but also the global economy has

witnessed significant growth of foreign direct investment since the mid-1990s. The volume of global foreign direct investment exceeded US$1tn. in 1999 and 2000. Although Australia's foreign direct investment has increased rapidly since financial deregulation, Australia still remains a relatively small player in the international investment community compared to Western Europe and North America which have experienced larger growth.

Battellino (2002) stated that Australia has become a much more important exporter of capital since the removal of exchange controls, the liberalisation of foreign investment and other financial deregulation in the 1980s (removal of interest rate and lending controls) that helped to create a more open and outward looking environment for Australian businesses. The removal of exchange controls, specifically, accelerated the integration of the Australia capital market with global financial markets by allowing the value of the Australian dollar to be determined by market forces. In addition, subsequent ongoing pro-competitive financial and other economic reforms in the domestic market, as well as reforms in international markets, have also contributed to the development of foreign direct investment over the last three decades, and offer domestic investors a greater range of investment opportunities abroad. The dismantling of the fixed exchange system and financial controls in 1983, a rapid expansion of credit to the private sector, and a sharp rise in asset prices sharply affects the total capital inflows and outflows, as it allowed the Australian economy to become more integrated into the world financial system. Figure 2.7 shows that following financial deregulation both capital inflows and outflows measured as a percentage of GDP increased sharply in both directions.

Australian Capital Inflows and Outflows
Per cent of GDP - 3-year moving average
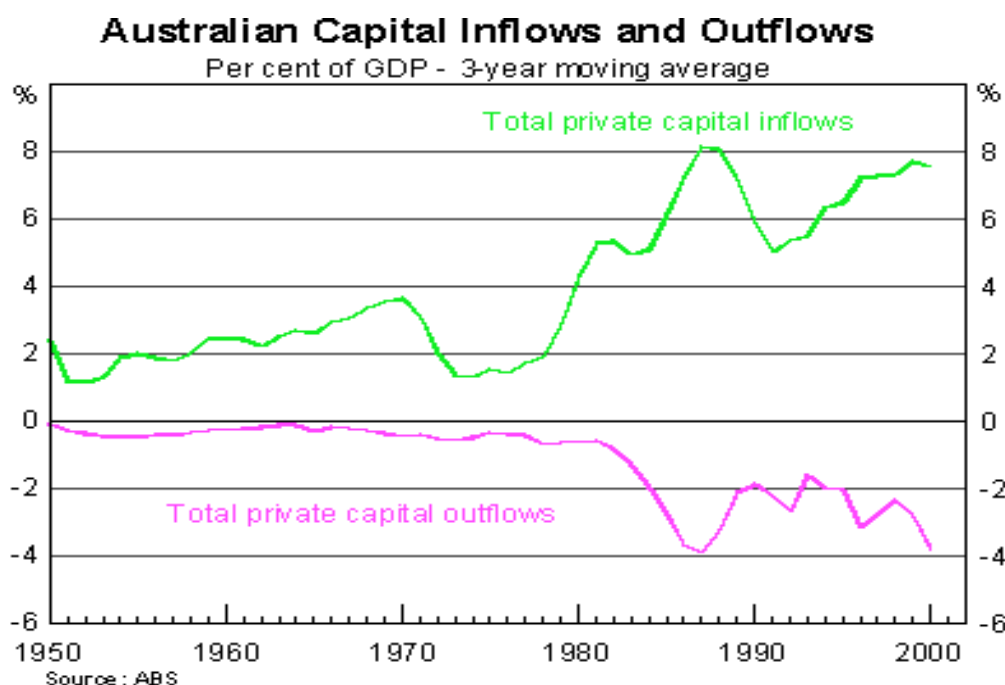
Figure 2.7 Australian capital inflows and outflows from 1950-2000.
Source- Australian Bureau of Statistics

The main capital outflows from Australia are categories as overseas investment of superannuation fund and direct investment by Australian companies. Overseas investment of Australian companies involves establishing overseas subsidiaries or purchasing overseas foreign companies. Critics raised concerned that increased foreign direct investment by Australian companies must occur at the expense of Australian national economy as it may leave Australia as a branch economy. However both Productivity Commission (2002) and Department of Foreign Affairs and Trade (2002) research paper indicates that foreign investment by Australian companies is more likely to be positive than negative for the domestic economy. The high level of participation of Australian companies in abroad, particularly in manufacturing sector, is positively related with the Australian exports and utilizes more Australian resources and skills in abroad. The contribution in the form of revenues, dividend, the transfer of best practices and technologies provide benefit to the home country. The following graph shows the sharp increase of foreign direct investment by Australian companies after the year 2000. However, the sharp declines in outflows in 2004-05 coincide with the

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relocation of News Corporation from Australia to the US. The study of Department of Foreign Affairs and Trade reports that a relatively small number of large Australian companies undertakes the majority of foreign direct investment. According to Battellino (2002), US is the number one destination for foreign targets which is $95 billion or 55 percent of total foreign direct investment of Australia. The UK is the second most important destination that constitutes 17 percent rest with the Continental Europe, Asia and New Zealand roughly at $13 billion or 8 percent of the total foreign direct investment.

Australia's foreign direct investment inflows and outflows, 1970 to 2011[a]
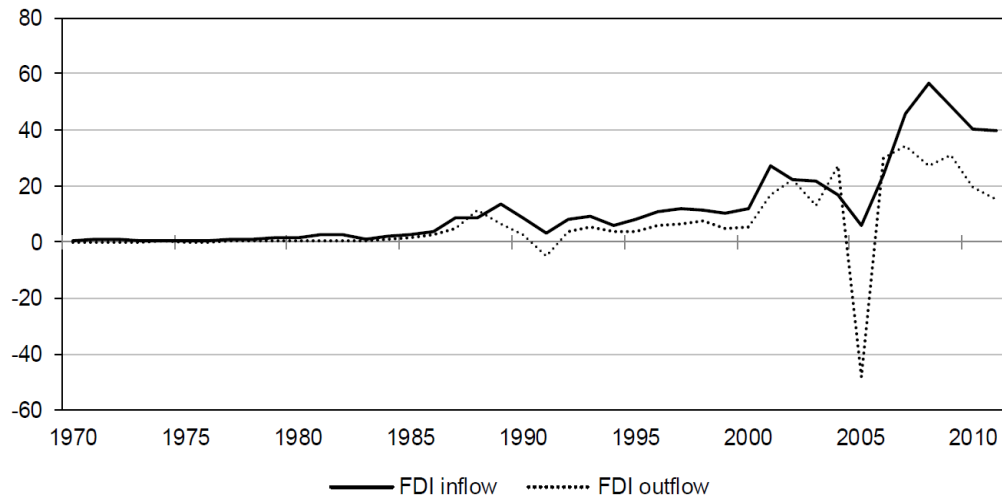
Figure 2.8 Australian foreign direct investment inflows and outflows ($bn.) abroad from 1970-2010.
Source: Australian Bureau of Statistics (Balance of Payments and International Investment Position, Australia, September 2011, Cat no 5302.0) [a] $bn.

Cross-border M&As have also grown exponentially in recent years and the value of worldwide M&A activity reached a record US$3.5tn. in 2000 (source: Thomson Financial). Ninety percent of purchasers and sellers of such M&A deals during that period are from developed countries. The height of global M&A deal value is also reflected in the Australian market; the total value of completed M&A deals by Australian companies reached A$11bn. in the year 2000 (source: Thomson Financial and KPMG Corporate Finance). According to a KPMG media

release in February 2002, the value of offshore acquisitions of Australian companies reached A$57bn. in 2001. This highlights the importance of cross-border acquisitions of Australian companies in the last decade.

When Australian companies acquire targets from abroad, Australian bidding firms are generally required to comply with the rules and regulations that prevail in the target country. However, Australian bidding firms acquiring a foreign target company may also trigger Section 606 of the Corporations Act if the foreign company holds 20 percent or more of the voting power in an Australian company. The listing rules in foreign stock exchanges may have a direct influence on the bidder's announcement period abnormal returns (Karolyi, 1998). The acquisition of public targets across borders requires listing on a foreign stock exchange. The cross-border listing provides a number of advantages, such as an enlarged investor base, enhanced local market trading for shares, and the opportunity to raise new capital (Karolyi, 1998). Particularly, listing in the US provides access to a highly liquid secondary market for their shares. Australian firms, however, seeking to list their shares on the US stock exchange are subject to greater scrutiny and monitoring from the press and investment community, which results in a higher valuation effect (Starks and Wei, 2004). This may increase the stock price of bidding firms because the listing has increased investor awareness and resulted in an improvement in corporate governance.

An analysis of the SDC Mergers and Acquisitions database report shows that there were 9,880, 5,406 and 2,174 cross-border acquisitions announced by the listed bidding firms in the US, the UK and the Australian M&A markets respectively during the period 2000-2010. The graph in Figure 2.9 shows the number of acquisitions by the US, the UK and Australian listed acquiring companies for the period from 2000-2010, on a quarterly basis. The graph clearly indicates that the highest number of acquisitions took place in the US market, followed by the UK and the Australian markets; in particular, foreign target acquisition by Australian companies witnessed a gradual increase every year until the global financial crisis took effect in late-2007. Australia's foreign acquisitions,

again, started to increase as the impact of the global financial crisis began to diminish.

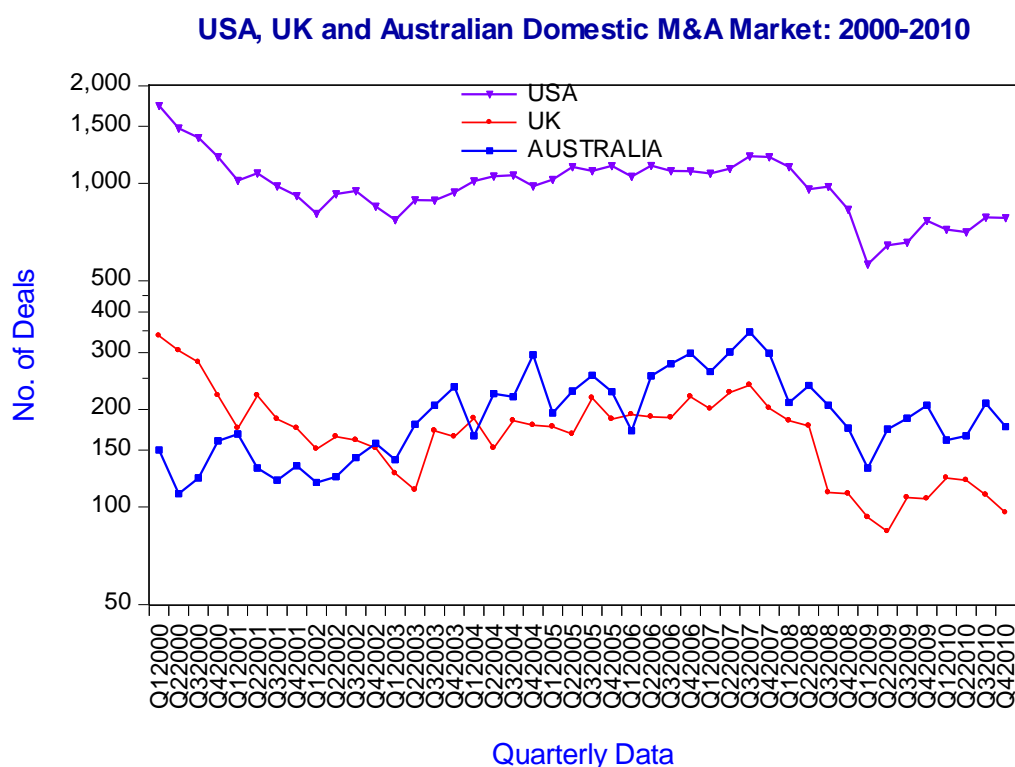**USA, UK and Australian Foreign Acquisitions by Listed Bidding Firms Period 2000-2010**
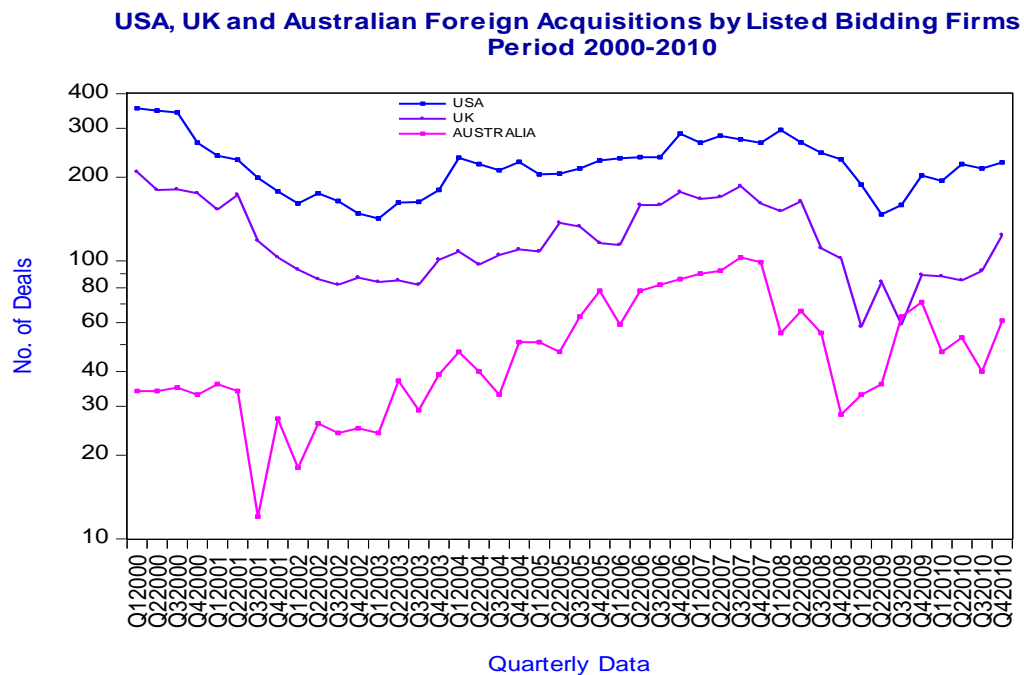
Figure 2.9 USA, UK and Australian Cross-border M&A Market: 2000-2010. Source: Thomson Reuters SDC Platinum Mergers and Acquisitions database.

Data extracted from the Thomson Reuters SDC Platinum Mergers and Acquisitions database indicates that the level of foreign private target acquisition by listed bidding firms in Australia is 50.23 percent, while foreign subsidiary acquisition is 37.35 percent. The percentage of private target acquisitions is highest in the US (53.29%) while subsidiary acquisitions are highest in Australia (37.35%). Foreign public target acquisitions are highest in the UK (11.56%), followed by the US (11.33%), and Australia (8.65%). The percentage of foreign private and subsidiary target acquisitions in Australia (87.58%) outnumbered such acquisitions in both the UK (85.00%) and the US (84.64%) markets. This indicates that nearly 90 percent of acquisitions by listed bidding firms in Australia are associated with private and subsidiary targets. The graph in Figure 2.10 shows the number of acquisitions by Australian listed bidders, categorised according to whether the target is a public, private or subsidiary company for the period from

2000-2010, on a quarterly basis. Acquisitions of private and subsidiary targets remained very high compared to public targets during this period; in particular, acquisitions of private targets reached their highest level during 2006 and 2007. Considering the high volume of private and subsidiary acquisitions in Australia, the primary motivation for this thesis is to investigate bidding firms' market reaction during the acquisition announcement period.
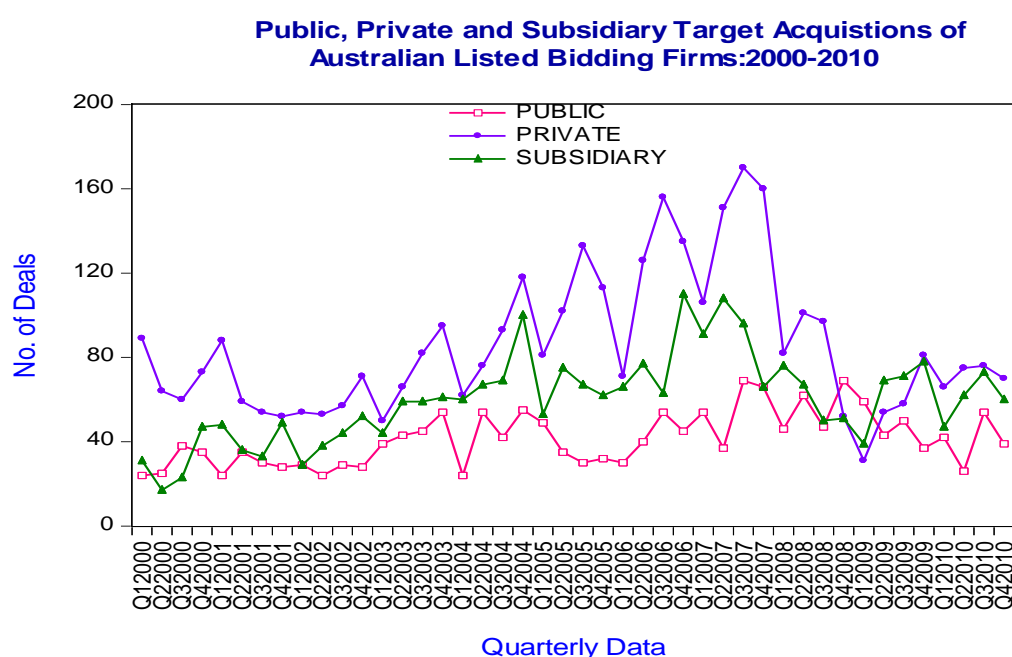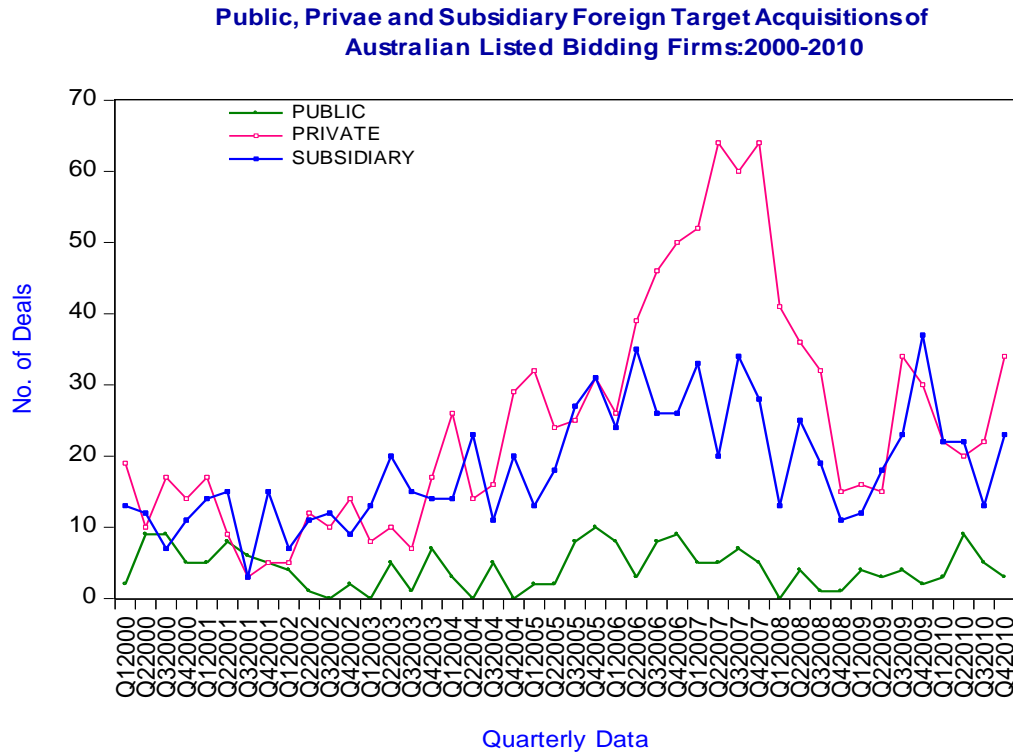

Figure 2.10 Australian Foreign Acquisition Market for Public, Private and Subsidiary Targets: 2000-2010.
Source: Thomson Reuters SDC Platinum Mergers and Acquisitions database

The average cross-border deal value was lowest in the US (US$207.57m.), but highest in the UK (US$235.82m.), for listed bidding firms that acquired public, private and subsidiary targets. The average deal value of foreign private and subsidiary targets in Australia is US$40.74m. and US$107.48m. respectively. The average cross-border deal value for public target acquisitions in Australia (US$1478.65m.) is significantly higher than that for private and subsidiary targets. Specifically, the average deal value of cross-border public target acquisitions is more than ten times larger than the domestic deal value for public targets, and

nearly three times larger than the average US deal value for those same targets. On the other hand, the average deal value in the US is US$77.64m., and US$211.29m. for private and subsidiary targets, respectively. Although the average deal value of public targets in the US is relatively lower compared to the UK and Australia, the average deal value of private targets is nearly double compared to those in the UK and Australia. However, the average deal value of subsidiary targets in Australia is similar to the US and the UK markets. The graph in Figure 2.11 shows that the total deal value of the Australian cross-border M&A market exceeded the UK and the US in the fourth quarter of 2007. Australia's cross-border M&A deal value started to decrease from the first quarter of 2008 and steadily declined until the second quarter of 2009. The Australian cross-border M&A deal value experienced sharp growth following the period of the global financial crisis, and reached the same level as that of the UK market.

Deal Value of USA, UK and Australian Cross-border M&A deals:2000-2010
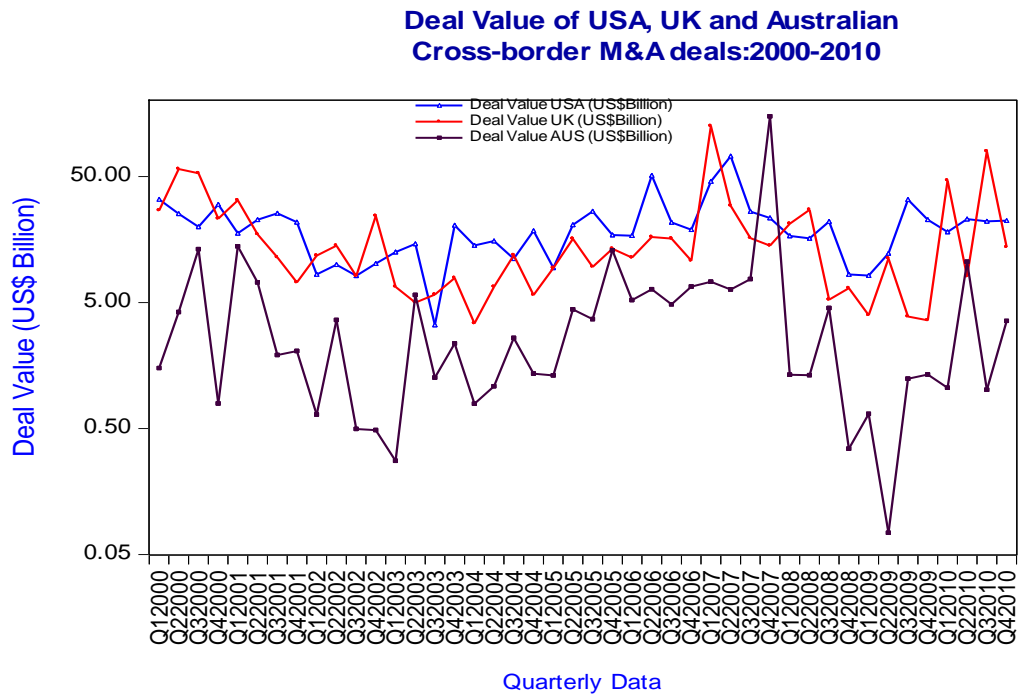
Figure 2.11 Cross-border Deal Value of the US, UK and Australian M&A Market: 2000-2010.
Source: Thomson Reuters SDC Platinum Mergers and Acquisitions database.

Australian companies mainly invested in the finance and insurance, mining and manufacturing sectors. The graph in Figure 2.12 shows that Australian companies invested heavily in foreign mining sectors in 2010 compared to 2001.[a] There was little change in the level of investment in other sectors between 2001 and 2010.

Direct investment abroad
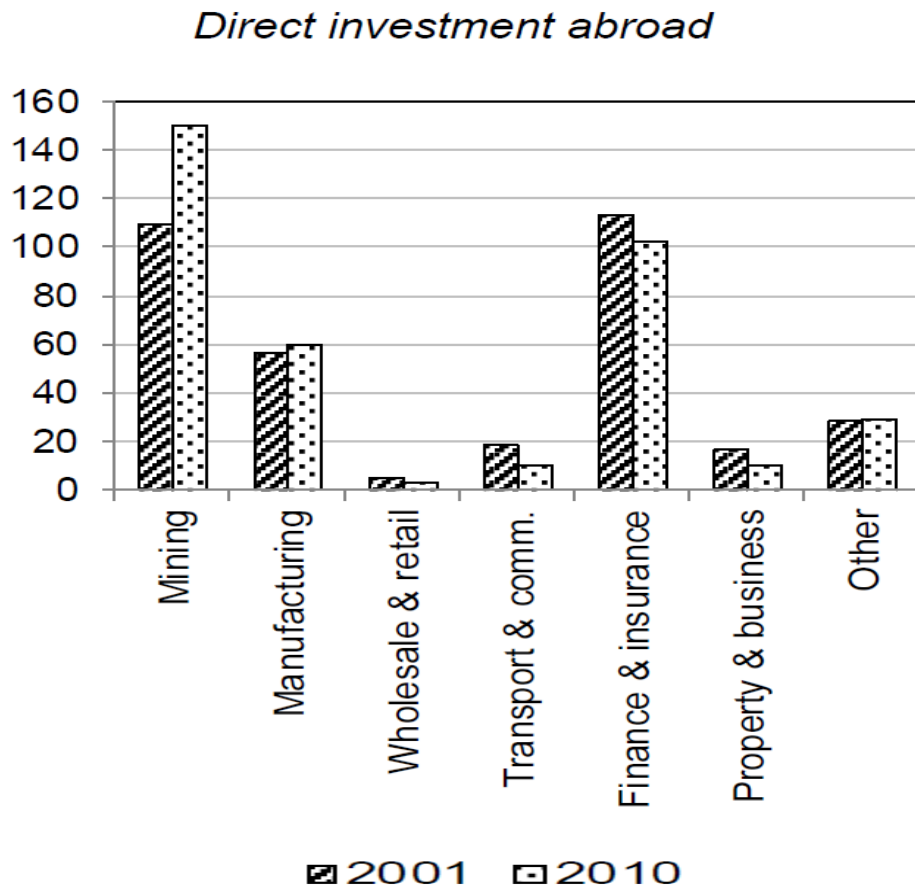
Figure 2.12 Industry Composition of the Stock of Australia's Foreign Direct Investment, 2001 and 2010.
Source: Australian Bureau of Statistics (International investment position, Australia: supplementary statistics, 2010, Cat. no. 5352.0) [a] $bn.

Further analysis reveals that the percentage of unrelated acquisitions is higher than the related acquisitions in cross-border deals. Unrelated acquisitions are highest in the US and lowest in Australia. In all three markets (the US, the UK and Australia), cash payment is considered as the principle payment method.

However, stock payment is more frequently used in the Australian market compared to the US and the UK.

2.4. CHAPTER SUMMARY

This chapter provides evidence that there have been significant developments in the institutional and regulatory frameworks of Takeover Regulations during the period 2000-2010. The empowerment of the Takeover Panel, introduction of deal protection devices, and capital gain tax reforms are major landmarks in the Australian market for corporate control. The main motivation for investigating bidding firms' performance in this period stem from the institutional and regulatory reforms outlined above, and the sharp increases in the volume of, and investment in, M&A activities in this decade. It is argued that Australian institutional settings differ from the US and the UK, which may influence the acquisition announcement outcome for Australian bidding firms.

CHAPTER 3

Target Organisational Form and Returns to Australian Bidders in Domestic Acquisitions

3.1 INTRODUCTION[37]

One of the controversial issues in the literature about the market for corporate control is whether Mergers and Acquisitions (M&As) create value. The existing empirical studies provide conclusive evidence that the target firms gain significant positive abnormal returns during the announcement period (Dodd, 1976; Bishop *et al.*, 1987; See for example, Andrade *et al.*, 2001; Fan and Goyal, 2006; Antoniou *et al.*, 2008a; Diepold *et al.*, 2008). However, the evidence on the short-run market performance of bidding firms is inconclusive. Some studies report significant negative abnormal returns (Dodd, 1976; Brown and Horin, 1986; Andrade *et al.*, 2001; Fan and Goyal, 2006; Antoniou *et al.*, 2008a), while others provide evidence of insignificant abnormal returns (Walter, 1984; Dennis and McConnell, 1986; Bradley *et al.*, 1988; Shekhar and Torbey, 2005; Diepold *et al.*, 2008).

Recent studies conducted in the US and the UK markets argue that the market reaction to acquisition announcements depends on the nature of the target. The evidence suggests that the bidders for private and subsidiary unlisted targets perform better than the bidders for public targets (Chang, 1998; Ang and Kohers,

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[37] Out of the content of this chapter, an article titled 'does the organisational form of the target influence the market reaction to acquisition announcements? Australian evidence' was produced. This article was presented at two conferences: (i) 4th International Accounting & Finance Doctoral Symposium, July 18-20, 2011, Universidad de Salamanca, Salamanca, Spain and (ii) 2012 AFAANZ Conference, July 1-3, 2012, Melbourne Australia. It was then submitted to 'Pacific Basin Finance Journal', an A-ranked journal by the Australian Business Deans council, in November 3, 2012. The journal sent it back to us with a 'revise and resubmit' decision. After addressing all the comments of the reviewers, the article was resubmitted to the journal on January 31, 2013. The paper accepted for publication on 5th April and available online 30th April, 2013.

2001; Conn *et al.*, 2005; Draper and Paudyal, 2006). The Australian M&A market is also dominated by the acquisition of private and subsidiary targets by public bidders. For the 11-year period from 2000-2010, the Thomson Reuters SDC Platinum Mergers and Acquisitions database reported 8,660 announcements of domestic acquisitions by listed bidders in Australia. Interestingly, 73.97 percent of these transactions were acquisitions of private and subsidiary targets by publicly listed bidders. The comparative figures for the US and the UK markets are 72.97 percent and 86.95 percent respectively. Further comparison between the USA, UK and Australia reveals that acquisitions of subsidiary targets are highest in Australia (30.52%) compared with the UK (27.44%) and the US (22.44%).

Against this background, the existing Australian literature on the announcement-period returns generated by bidding firms is mainly limited to the public bidder acquisitions of public targets. This chapter analyses the announcement period of abnormal returns earned by listed Australian acquirers using a large sample of domestic acquisitions separated into three groups, as public, private and subsidiary targets. These three groups of targets differ from each other with respect to their size, nature of ownership, liquidity, business risk, acquisition atmosphere, the length of time taken in the acquisition transaction, the level of information asymmetry, the premium paid, and the regulatory frameworks related to their acquisition processes. Therefore, it is worthwhile to include all types of target firms in the investigation of the bidding firms' performance and to analyse their performance in the Australian context.

Thus, the main objective of this chapter is to assess the relative abnormal returns of bidders that announce acquisitions of different types of targets while evaluating the impact of bid characteristics and firm characteristics. A number of theories and the existing empirical literature strongly suggests that bid characteristics may affect the announcement-period returns of bidding firms (Conn *et al.*, 2005), and therefore this study analyses the effect of these factors when investigating the bidding firms' performance, focusing on the target firms' organisational structure. In doing so, this chapter intends to provide a comprehensive analysis of the bidding firms' performance during the

announcement period, after incorporating several conventional bid and firm characteristics as well as a number of characteristics unique to the Australian market.

This chapter is organised as follows: Section 3.2 reviews the relevant literature. Section 3.3 develops hypotheses, while Section 3.4 describes the sample information. The next section explains the data and methodology. Section 3.6 explains the empirical findings. The final section offers conclusions.

3.2 LITERATURE REVIEW

3.2.1 General Evidence on Announcement Period Abnormal Returns

The extant literature on the market for corporate control provides contradictory and inconclusive evidence about the returns generated by bidding firms when they announce their intention to acquire a target firm. Early studies report positive abnormal returns to bidding firms. For example, Mandelker (1974) notes that "there is no evidence to indicate that the acquiring firms overpay and thus lose from mergers (p-329)". Ellert (1976) also argued that acquiring firms experienced large positive abnormal returns even when anti-merger complaints were lodged against the acquiring firm. Later on, Dodd and Ruback (1977) also found evidence of significant positive cumulative abnormal returns (CAR) of 2.83 percent in the offer month for successful bidders for the period of 1958-1975. Similarly, Langetieg (1978) reported that acquiring firms earned normal or slightly superior returns over a long event window (i.e. from 18 months prior to the announcement to one month prior to the announcement). Kummer and Hoffmeister (1978) also uncovered that bidding firms observed positive abnormal returns around, and including, the announcement month. However, some other studies report insignificant or small significant positive abnormal returns. For example, Higson and Elliott (1998) find insignificant positive announcement period abnormal returns (0.43%) whereas Franks and Harris (1989) report small

significant announcement period returns (1.0%) for UK bidding firms in the announcement month. All these studies analysed long term event windows.

The studies that investigate the returns generated by bidding firms using short-term event windows also provide evidence of significant positive abnormal returns. For example, Bradley (1980) finds an excess capital gain of 4 percent within five trading days of the offer. Similarly, both Bradley *et al.* (1982) and Bradley *et al.* (1988) report significant positive abnormal returns of 2.35 percent and 2.80 percent respectively for event windows that span between 21 and 26 days around the announcement. Jensen and Ruback (1983) summarised the findings of six US studies and reported that bidding firms realise significantly positive abnormal returns of about 3.81 percent in successful tender offers.[38] These studies provide strong evidence that bidding firms at least do not suffer any losses from mergers or acquisitions announcements during the periods analysed above.

However, subsequent studies analysing short event windows report insignificant or negatively significant abnormal returns to bidders, with consistent findings across numerous international markets. For example, Franks *et al.* (1991) provides evidence for the US market in which bidding firms observe insignificant negative abnormal returns of -1.02 percent during an 11-day event window. Carow *et al.* (2004) found that acquirers observed -1.06 percent mean industry adjusted returns during the three-day announcement period. Sudarsanam *et al.* (1996) find a -1.26 percent significant cumulative abnormal returns (CAR) in the announcement day for the UK acquirers over the period 1980-90. Andrade *et al.* (2001) report that UK acquirers earned insignificant abnormal returns (-0.7%) for a three-day event window during the period of 1973-1998.[39] Recent UK and US research provides evidence of significant negative abnormal return for bidding firms. Walker (2000) finds that US acquirers suffered losses by generating

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[38] However, some studies report insignificant positive abnormal returns during these periods. For example, Asquith (1983) reports small but insignificant positive excess returns for both successful and unsuccessful bidding firms at the press date. A similar picture emerges from the evidence of Eckbo (1983) who also finds insignificant positive abnormal returns (0.11%) on the announcement date.

[39] Gregory (1997) uncovers insignificant negative abnormal returns (ranges from -0.30% to -.71%) in the announcement month using six different models for the UK market.

significant cumulative market adjusted returns of -0.84 percent for a five-day event window around the announcement date. Gupta and Misra (2007) report similar significant negative abnormal returns (-1.84%) for bank acquirers for a three-day event window in the US market. The Sudarsanam and Mahate (2006) sample of 519 UK acquirers shows that acquirers suffer a significant loss of -1.4 percent surrounding the bid announcement period. Antoniou *et al.* (2008a) also find significant negative CARs of -1.3 percent during a three-day event window for UK bidding firms.

In an international study, Alexandridis *et al.* (2010) argue that the returns to bidders should be a function of the degree of competitiveness in the market for corporate control. Acquirers tend to pay excessive premiums when the acquisitions market is characterised by an intense competition, while the premium paid is lower when the competition is less intense. Accordingly, they hypothesise that the potential for value creation for bidders is limited when they acquire targets within highly competitive markets but benefits are possible when acquiring targets within less competitive markets. Their global study provides evidence of a significant negative relationship between the degree of competitiveness and abnormal returns to bidding firms. In particular, they find that announcement period abnormal returns are negative and significant for bidders in the US, the UK and Canada where the market for corporate control is highly competitive. In countries with less competitive markets, such as Japan, South America and the rest of Europe, bidders earn positive and significant abnormal returns.

Bruner (2002) analyses the findings of 44 studies. He finds that 19 studies reported negative returns (13 studies report significant negative returns and 6 studies reported insignificant negative returns) while 13 studies reported positive abnormal returns (7 studies reported insignificant positive returns and 6 studies reported significant positive abnormal returns) for event windows that ranged from -5 days to +5 days. Cakici *et al* (1991) argue that "wealth effects on shareholders of acquiring firms are much more puzzling, with either zero or negative wealth effects for shareholders of acquiring firms in domestic mergers

and acquisitions" (p-308). Therefore, it can be concluded that the market reaction to the announcement of acquisitions is complex and thus the existing evidence is mixed.

3.2.2 Influence of Bid Characteristics on Announcement Period Returns

The empirical literature and relevant theories suggest that a number of bid characteristics may have a direct effect on a bidder's return (Conn *et al.*, 2005). A substantial volume of existing evidence suggests that the methods of payment, merger premium, acquisition size, relatedness, frequency of bid attempts, characteristics of the target firm, friendliness of the acquisition, and the likelihood of bid success directly affect the announcement period returns earned by the acquiring firms (See, for details, Asquith *et al.*, 1983; Dodds and Quek, 1985; Travlos, 1987; Bradley *et al.*, 1988; Bellamy and Lewin, 1992; Anderson *et al.*, 1994; Chang, 1998; Ang and Kohers, 2001; Goergen and Renneboog, 2004; Conn *et al.*, 2005). The findings of these studies are briefly discussed below.

The existing empirical evidence places a great emphasis on the method of payment and the market reaction to acquisition announcements. The researchers have provided several explanations of why bidders use different payment methods to finance acquisitions. First, the role of information asymmetry about the bidder's or target's value influences the choice of payment method in acquisitions. Hansen (1987) suggests that when acquiring firms, managers possess information about the true value of their firm and choose the most profitable payment method for existing shareholders. Myers and Majiuf's (1984) model proposes that the managers will prefer a cash offer if they believe that their equities are undervalued, while stock payment will be offered in opposite situations. Therefore, the predication of a signalling model suggests that the cash-financed acquisition is considered as good news while the stock-financed acquisition conveys negative information to the market participants about the true value of the bidding firm. According to Martin's (1996) risk sharing hypothesis, acquiring firms who use stock payment in acquisitions force the target firms' shareholders to share both the upside and the downside risk of growth opportunities. Stock-financed

acquisitions also force target shareholders to share the risk of overpayment made by the acquirer. Therefore, it is expected that bidding firms generate higher returns in cash-financed acquisitions than in stock-financed acquisitions. Draper and Paudyal (1999) argue that in a competitive takeover market where both buyer and seller possess proper information regarding the value of business entities, the acquisition of a target should be a zero net present value transaction.. Thus, cash payment should not have any significant impact on a bidding firm's value. Second, according to Travlos (1987), the number of outstanding shares of the acquiring firm increases in stock-financed acquisitions, which results in a proportional decrease in managerial stockholdings. This decrease in stockholdings is associated with a drop in firm value. Therefore, the negative market reactions are expected in stock swap acquisitions. Third, the tax has different implications on cash and stock offers in acquisitions (Travlos, 1987). Stock-financed acquisitions allow target shareholders to defer their tax obligation until the subsequent sale of the shares received as consideration, while cash-financed acquisitions impose immediate capital gain taxes on target shareholders. This immediate taxation effect forces bidders to pay a higher premium to the target shareholders. This high acquisition price paid by the bidding firms in cash-financed acquisitions may possibly induce lower returns to the bidding firm. Fourth, according to Mitchell *et al.* (2004), the downward price pressure caused by the short selling of acquirers' stocks by merger arbitrageurs around the acquisition announcement explains a substantial part of the negative market reaction of equity-financed acquisitions. This suggests that equity financed acquisitions result in a dilution of share prices as it increases the outstanding number of shares but the value of the firm remains the same until expected synergies take effect.

A number of studies report that cash bids generate positive abnormal returns while their equity financed counterparts generate negative abnormal returns. For example, Travlos (1987) reported significant negative abnormal returns of -1.02% for stock-financed tender offers and insignificant positive abnormal returns of 0.22% for cash-financed tender offers on the announcement day. Later on, Franks *et al.* (1991), Walker (2000) and Andrade *et al.* (2001), find

significant negative abnormal returns of -3.15 percent, -3.28 percent and -1.50 percent respectively in stock financed acquisitions for short event windows that ranged from -5 to +5 days around the announcement. Nevertheless, several studies provide contradictory results to the above findings. For example, an early study of Dodds and Quek (1985) reported negative CAR (-1.92%) for cash financed deals compared to 0.78% for stock-financed deals in the announcement month in the UK market. Another study also provides evidence of significant positive announcement period returns for equity-financed bids by high-technology firms (Chatterjee and Kuenzi, 2001). They argue that during their study period (1991-99) equity payments act as a means of incentive creation rather than a valuation signal to the market. Goergen and Renneboog (2004) provide evidence of significant positive announcement period CARs for both cash (0.37%) and equity (0.98%) bids for European bidders. This is consistent with the finding of Eckbo and Thorburn (2000) who reported significant positive average abnormal returns for all cash and all stock payment methods for Canadian domestic bidders. The review above suggests that cash-financed and stock-financed deals are viewed differently in different countries and the possible market responses differ across different time periods.

A number of researchers argue that the relative size of the target influences the abnormal returns to acquirers (Asquith *et al.*, 1983; Franks and Harris, 1989; Ang and Kohers, 2001; Capron and Shen, 2007). Kuehn (1975) argues that the acquisition of smaller targets is associated with lower acquisition/incorporation costs for bidders and thus there should be a negative association between bidders' abnormal returns and the relative size of the target. On the other hand, Higson and Elliott (1998) argue that small targets have little visible impact on the acquirers and, therefore, an acquisition of a small target by a large bidder should be associated with a very small abnormal return. Draper and Paudyal (2006) provide a similar argument. They propose that the acquisition of small targets generates smaller amounts of synergy compared with the acquisition of large targets and, therefore, there should be a positive association between the relative size of the target and the abnormal returns earned by bidding firms. In contrast, Moeller *et al.*

(2004) and Tuch and O'Sullivan (2007) argue that the size effect is a result of the size of the acquirer rather than the size of the target. They state that small bidders are more careful in the acquisition process, particularly when making a potentially risky bid, because there would be a larger economic impact from acquisition decisions for small acquirers than for large acquirers.

The early study of Asquith *et al.* (1983) provides evidence that bidders' returns are strongly associated with the relative size of the target. The authors report that the cumulative excess returns are significantly greater when the target firm's equity value is 10 percent larger than the bidding firm's value. The findings above are confirmed in Jarrell and Poulsen (1989) and Morck *et al.* (1990). However, another group of researchers report either an insignificant or a negative relationship between the relative size of the target and the abnormal returns earned by the bidders (You *et al.*, 1986; Travlos, 1987; Asquith *et al.*, 1990). For example, Travlos (1987) reported a significant negative influence of relative size on abnormal return. Recent studies by Fuller *et al.* (2002) and Draper and Paudyal (2006) also reported significant negative returns for acquirers of relatively large public targets in their studies. Antoniou *et al.* (2007) stated that the relative size is not an important determinant for acquirers of public targets, as the relative size is associated with insignificant abnormal returns. Franks and Harris (1989) find the influence to be positive for relative sizes above 100 percent or below 50 percent but negative for relative sizes between 50 percent and 100 percent.

Several theoretical arguments in the literature support both the value-enhancing and value-reducing effects of diversification acquisitions. Berger and Ofek (1995) point out that diversification provides the benefits of greater operating efficiency, greater debt capacity, lower taxes, and less incentive to forego projects with positive net present value. Servaes (1996) provides two arguments to justify why firms diversify. These are: (i) to increase shareholder wealth through creating internal capital markets that overcome imperfections in external capital markets, and increased debt capacity gained by reduced earnings variability, and (ii) to increase managers' private benefits, as suggested by Jensen (1986). Singh and Montgomery (1987) provide three potential sources of value

creation for related acquisitions: (i) economies of scale, (ii) economies of scope, and (iii) market power. The authors state that economies of scale arise both from the expanded production of a specific product and from the bundle of resources to produce two or more products. In addition, market power arises when a market participant has the power to control price, quantity, and the nature of the product in the marketplace. Finally, managers have an incentive to acquire new unrelated businesses to conceal the poor performance of firms, which will reduce the threat of their replacement (Shleifer and Vishny, 1989).

The existing empirical evidence provides mixed evidence in relation to diversification and focuses on increasing acquisitions. For example, Morck *et al.* (1990) report that bidders observe positive mean returns of 2.38 percent in related acquisitions while earning negative mean returns of -1.89 percent in unrelated acquisitions. Draper and Paudyal (2006) also find that acquirers lose mostly from diversifying acquisitions. On the other hand, Matsusaka (1993) finds that the announcement of diversification acquisitions increased bidders' stock prices significantly, by 1.2 percent, while related acquisitions were associated with insignificant positive returns (0.35%). Fan and Goyal, (2006) and Antoniou, Guo *et al.* (2008b) also report significant positive wealth effects for diversifying acquisitions.

Multiple bids are an important determinant of the market reaction to acquisition announcements. Multiple bids may affect the bidder's return in two ways: (i) when multiple bidders contest for the same target (contested bids), and (ii) when one bidding firm is involved in multiple acquisition attempts (frequent acquirers). In the context of contested bids, Flanagan and O'Shaughnessy (2003) argue that the bargaining power of target firm shareholders increases when multiple bidders contest for the target. Bradley *et al.* (1988) provide evidence that the premium paid to target shareholders is higher in contested bids, and thus contested bids decrease the returns to acquiring firms. Bradley *et al.'s* (1988) analysis reveals that uncontested single bidders earn a significant CAR of 2.8 percent whereas contested bids are associated with an insignificant CAR of -0.70 percent during the period from five days before the announcement to 20 days after

the announcement. Franks and Harris (1989) also report insignificant abnormal returns of -0.4 percent and 0.3 percent respectively for contested and uncontested UK bidders in the announcement month.

A study conducted by Bain and Company of 1,700 public companies reports that frequent acquirers gain skills and experience through a host of small deals which enable them to create significant shareholder value (see Harding and Rovit, 2004). Antoniou *et al.* (2007) also argue that bidders involved in multiple acquisitions are more experienced in this field and thus a positive reaction may occur in the subsequent bids. In contrast, Fuller *et al.* (2002) suggests that in the case of subsequent deals, negotiation is not efficient and results in less synergy. Antoniou *et al.* (2007) attribute this deteriorating performance of subsequent deals by the same bidders to the hubris/overconfidence hypothesis outlined by Roll (1986).[40] Authors suggest a number of factors that contribute to this deteriorating performance in frequent acquisitions: (i) a less careful choice of targets by frequent bidders, (ii) a higher premium paid by frequent bidders in subsequent deals, and (iii) higher debt financing associated with subsequent acquisitions. A number of studies have found that single bidders earn higher abnormal returns compared with frequent bidders (Fuller *et al.*, 2002; Goergen and Renneboog, 2004; Antoniou *et al.*, 2007). Goergen and Renneboog (2004) find insignificant negative abnormal returns for multiple bidding firms. However, Asquith *et al.* (1983) report positive and significant announcement period returns of 0.7% for subsequent 2-4 acquisitions in a two-day event window.

Morck *et al.* (1988) propose two conjectures in relation to hostile and friendly takeovers. Hostile takeovers are evolved from the disciplinary motive of managers whereas friendly takeovers are associated with the synergistic drive of managers. With a synergistic motive, gains are achieved from efficiency through combining the physical operations of the bidder and the target. With a disciplinary motive, gains are achieved by altering the non-value-maximising operations of the target (Martin and McConnell, 1991). Therefore, when the target fails to control

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[40] The hubris hypothesis of takeovers implies that hubris-infected managers of bidding firms value the target higher than the market valuation, which may cause them to pay a higher premium to acquire the target (Roll, 1986).

its management's non value-maximising behaviour, it attracts hostile takeovers for disciplinary actions (Shivdasani, 1993). Bhagat *et al.* (1990) also suggest that gains from hostile takeovers could result from the cost savings from operating efficiencies or increased market power from joint operations. Conyon *et al.* (2001) contend that the main objective of a hostile takeover is to raise the return on corporate assets by substituting a new set of managers. This goal is achieved through increased labour productivity and job losses. Prior research found that hostile bids are associated with positive abnormal returns (Jarrell and Bradley, 1980; Bradley *et al.*, 1983), while friendly bids are associated with significant negative abnormal returns (Walker, 2000; Sudarsanam and Mahate, 2006). However, Goergen and Renneboog (2004) provide contradictory evidence of highly significant two-day positive abnormal returns of 2.43 percent for friendly acquisitions and -2.5 percent for hostile acquisitions.

In addition to these common bid characteristics, two other bid characteristics can be identified for Australian acquisitions, which become popular recently. These characteristics include privately negotiated deals and break fees. David and Bruce (1984) explain the private purchase exemption for Australian bidders who wish to purchase more than 20 percent of an asset bypassing the takeover regulations. When the majority of target shareholders approve the sale of shares in a general meeting, bidding firms are able to purchase the targets privately. Bidders may prefer privately negotiated deals over auctions, as auctions may force them to pay a higher premium to target firms (Xie, 2009). If private negotiations are held between the management teams of two companies, they are subjected to less scrutiny from the capital market. The associated lower competition allows bidders to acquire private targets at a lower price (Hunt, 2009). Greene and Junewicz (1984) stated that privately negotiated acquisition deals are bound by minimum regulatory requirements and bidders are in a position to negotiate different premiums for different shareholders of private targets in the US market. Therefore, privately negotiated deals may be associated with higher abnormal returns.

Break fees are an influential mechanism that increase shareholder wealth, as such fees provide incentives for second competing bidders (André *et al.*, 2004). According to the Takeover Panel's Guidance Note 7.15, "A break fee is most commonly an arrangement between a bidder or potential bidder and the target of a proposed takeover bid or merger. Some form of consideration will be payable by the target if certain specified events occur which have the effect of preventing the bid from proceeding or causing it to fail (triggers). These events will typically be outside the control of the bidder (but not necessarily the target or its shareholders)". There are arguments for and against the break fees in acquisitions. Break fees can reduce returns to acquirers if they increase the competition and the premium paid to the target by attracting competing bidders (Officer, 2003). On the other hand, break fees hinder the open and fair market by discouraging a fair auction process (Brantley, 2002). Chapple *et al.* (2007) discuss the agency view and efficient contracting perspective of break fees. According to the agency view, target management may secure a mostly personally favourable outcome by granting break fees to the bidding firms. However, such a personal benefit to target management could be achieved through the expense to the target shareholders. This could lead to a lower premium paid to the target's shareholders by the bidding firms and a reduction in competition in the market for corporate control. On the other hand, the efficient contracting view explains that break fees actually induce bids from other reluctant bidders and increase the competition in the market for corporate control. Thus, they strengthen the bargaining power of target management, which leads to more favourable terms and a positive wealth effect for target shareholders, thereby making a negative impact on bidders' returns. Curtis and Pinder (2007) view break fees as a cost-compensation device that grants the initial bidders the confidence to expend significant efforts and resources without the fear of being out of pocket if the bid is ultimately unsuccessful. The arguments above highlight the importance of analysing the effect of break fees in the Australian context.

Officer (2003), who analysed the announcement period return to both targets and bidders, finds that bidders with target break fees earn significantly

higher negative abnormal returns (-1.62%) than bidders with no target break fees (-0.83%). These findings are in line with the efficient contracting hypothesis. In Australia, there is also evidence to suggest that although break fees do not deter competing bidders or increase the probability of bid success, they certainly create negative wealth effects for target shareholders (Chapple *et al.*, 2007).

From the discussion above, the empirical evidence of the influence of bid characteristics on the abnormal returns generated by bidding firms is mixed: In summary: (i) a number of studies confirm the positive association between the relative size of the target and abnormal returns to bidders (Asquith *et al.*, 1983; Franks and Harris, 1989; Ang and Kohers, 2001; Capron and Shen, 2007), on the contrary, Kuehn (1975) finds a negative association with regards to relative size; (ii) according to Bradley *et al.* (1988), Fuller *et al.* (2002), Antoniou *et al*. (2007) and Ismail (2008), single bidders earn higher abnormal returns compared with frequent/multiple bidders, whereas Harding and Rovit (2004) argue that multiple bidders are associated with significant shareholder value; (iii) focused acquisitions are viewed positively by the capital market (Morck *et al.*, 1990; Hubbard and Palia, 1999), whereas diversified acquisitions are viewed in a more negative light (Lang and Stulz, 1994; Berger and Ofek, 1995; Servaes, 1996; Draper and Paudyal, 2006); and (iv) hostile bids are associated with positive abnormal returns (Jarrell and Bradley, 1980; Bradley *et al.*, 1983), whereas friendly bids are associated with significant negative abnormal returns (Walker, 2000; Sudarsanam and Mahate, 2006). However, contradictory evidence is also available in the literature in relation to bid frequency, focus and hostility (see, Asquith *et al.*, 1983; Schipper and Thompson, 1983a; Franks and Harris, 1989; Matsusaka, 1993; Fuller *et al.*, 2002; Goergen and Renneboog, 2004; Fan and Goyal, 2006; Humphery-Jenner and Powell, 2011).

3.2.3 Influence of Firm Characteristics on Announcement Period Returns

A number of the financial characteristics of the bidding firm have been identified by the researchers to have an influence on the abnormal returns generated by bidding firms.

The size of the bidding firm is an important determinant in this respect. Moeller *et al.* (2004) provide a number of arguments to justify why the size of the acquiring firm affects its abnormal returns. They argue that the conflict of interests between shareholders and managers is severe in large firms and they are more prone to the agency costs of free flows than their small counterparts as they do not have many growth opportunities. Therefore, managers of large firms usually pay a high premium in acquisitions. Also, hubris is more of a problem in the large firms because of their corporate status; these firms are more likely to compete with others and acquire targets at a high premium.[41] Moeller *et al.* (2004) investigated the size issue and the announcement period of abnormal returns and found that acquirers of smaller firms earn significant positive abnormal returns (2.32%) while their larger counterparts earn insignificant positive abnormal returns (0.076%). Interestingly, when the sample is classified according to organisational form, they find that large public target acquirers earn significant negative abnormal returns of -1.70 percent. Similarly, Antoniou, Guo *et al* (2008b) report that the size of the acquiring firms is negatively associated with the bidder's short-run abnormal returns.

Leverage influences the managerial decision-making process; it controls managerial discretion and, thus, managers of levered firms make decisions that are more aligned with the interests of shareholders. Leveraged bidders are more controlled for agency-related problems in acquisitions compared to non-leveraged bidding firms. A number of prior studies argue that leverage can mitigate the agency problem between stockholders and managers (Jensen and Meckling, 1976; Jensen, 1986; Stulz, 1990). Maloney *et al*. (1993) identify three advantages associated with the acquisition decisions of leveraged firms: (i) highly leveraged firms have less free cash flow to finance non-value enhancing acquisitions, (ii) managers of a highly leveraged firm exert more effort and work to avoid the threat of bankruptcy (Grossman and Hart, 1982), and (iii) a high level of debt is associated with a better decision-making process. Maloney *et al*. (1993)

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[41] See Moeller *et al*. (2004) for a detailed explanation about how these characteristics are more of a problem in large firms than small firms.

investigate the impact of leverage on acquirers' return and report that highly leveraged firms earn higher returns than their low leveraged counterparts; in particular, an increase in debt equity ratio from one to two quartiles increases the abnormal returns by around 0.5 percentage points. Ghosh and Jain (2000) also discover a positive relationship between the announcement period of market-adjusted returns for bidders and increases in financial leverage following mergers.

The free cash flows are defined as the excess funds available for the managers after financing all the positive net present value projects (Jensen, 1986). The managers of high free cash flow firms may invest such excess funds in unprofitable projects, such as acquisitions, in order to avoid payouts to shareholders. The availability of high free cash flows can also induce managerial hubris and overpayment in acquisitions (Jensen, 1986). The issue of value destroying acquisitions by cash rich bidders was investigated by Harford (1999). The author supports the agency costs of free cash flow concept and finds that cash rich firms are more inclined to make value reducing acquisitions that destroy seven cents in value for every excess dollar of cash reserves held. The managers may waste free cash flows through organisational inefficiencies or by investing in sub-optimal projects (Smith and Kim, 1994). Accordingly, Smith and Kim (1994) found that bidders with high free cash flows suffer from -1.37 percent significant negative CAR while those with low free cash flows observed insignificant -0.03 percent CAR during the two-day event window around the announcement date. Lang *et al.* (1991) also provide similar evidence. The authors find that CAR for high free cash flow bidders with low Tobin's q is -0.059 percent whereas it is 0.011 percent for low free cash flow bidders. All this evidence suggests that takeover announcements by high free cash flow bidders are associated with lower abnormal returns than those announced by low free cash flow bidders.

Acquisitions may also be triggered by both low profitable bidding firms to conceal their poor performance and also high profitable bidding firms to find new ways of growing. Capron and Shen (2007) argue that poorly performing bidding firms may attempt to conceal poor performance through making acquisition announcements. They find an insignificant negative relationship between pre-

merger profitability and acquirers' abnormal return. Morck *et al.* (1990) also provide evidence that poorly performing acquirers suffer from negative returns.

Therefore, the discussion above shows an understanding of the association between the financial attributes of the bidding firm and announcement period abnormal returns. According to the evidence, the main findings are as follows: (i) small size bidders earn higher abnormal returns than large sized bidders (Moeller *et al.*, 2004; Antoniou *et al.*, 2008b), (ii) there is a positive association between the acquirer's leverage and abnormal return (Maloney *et al.*, 1993; Ghosh and Jain, 2000), (iii) bidders with excessive cash reserves earn significant negative abnormal returns (Lang *et al.*, 1991; Harford, 1999), and (iv) there is a negative association between the bidder's pre-acquisition profitability and announcement period abnormal return (Capron and Shen, 2007).

3.2.4 Influence of Other Factors on Announcement Period Returns

In general, the market reaction to acquisition announcements is also affected by some other control variables such as merger waves, government regulations, different time periods and the state of the economy. Asquith *et al.* (1983) identified the period before October 1969 as the pre-regulatory change period in which the mergers and acquisitions market is most active and find that the acquirers earn significant abnormal returns of 4.4 percent during this period while they earn lower significant abnormal returns of 1.7 percent after October 1969. Schipper and Thompson (1983a) also provide evidence that changes in regulations are detrimental to the abnormal return performance of bidding firms. Similarly, Fan and Goyal (2006) observe greater wealth effects during the 1980s and 1990s compared with the 1960s and 1970s. Antoniou *et al.* (2008b) provide evidence of significant relationships between merger momentum variables and short-run market reaction. Goergen and Renneboog (2004) suggest that bidders make over payments, or assume more risk, during merger peaks. As European M&A activity grew rapidly during the 1990s, the authors split the sample into two groups as before 1999 and 1999-2000, and reported little difference in abnormal returns between these two periods. Ang and Kohers (2001) examine the influence

of the state of the economy on the premium paid to targets. They find that there is no evidence to suggest that bidders pay a higher premium in expansionary periods than in contractionary periods.

3.2.5 Announcement Period Abnormal Returns of Australian Bidding Firms

Although the volume and frequency of takeovers in Australia is high, the acquisitions in this market have not been extensively investigated compared to the US and the UK markets. Studies that analysed the announcement period of abnormal returns of Australian bidding firms provide inconclusive evidence over that time. Some studies provide evidence of significant or insignificant positive abnormal returns, whereas other studies show insignificant negative returns of bidding firms.

An early study by Dodd (1976) found that the shareholders of Australian successful bidders earn average positive cumulative abnormal residuals of 4.3 percent in the announcement month. Walter (1984) also found positive CARs of 28.2 percent over the period from week -100 to week 0 for 271 successful acquirers. However, the CAR started to decline from the pre-announcement week to the announcement week by 0.7 percent. By contrast, Casey *et al.* (1987) documented an insignificant abnormal return of -1.71 percent for a two-day event window. Bellamy and Lewin (1992) also reported an insignificant negative abnormal return of -0.285 percent for bidding firms on the announcement date. However, subsequent Australian studies mainly report either significant or insignificant positive CARs. For example, Bugeja and Walter (1995) reported a small but statistically insignificant positive abnormal return of 0.68 during a three-day announcement period. Similarly, Shekhar and Torbey (2005) reported positive and significant abnormal returns of 1.02 percent for bidding firms over a three-day event window. Le and Schultz (2007) used three different models to calculate abnormal returns and found that the bidding firms earn positive CARs for a three-day event window. Diepold *et al.* (2008) showed that bidders earn significant positive abnormal returns of 2.23 percent on the announcement date when there is no Australian Competition and Consumer Commission (ACCC)

involvement but realise significant negative abnormal returns of -2.47 percent when there is ACCC involvement. Porter and Singh (2010) find insignificant positive abnormal returns of 0.37 percent for a three-day event window during the period of 2000-2006. Humphery-Jenner and Powell (2011) also report insignificant positive CARs of 0.40 percent for acquirers of public targets for a three-day event window during an extended period of 1993-2007. These studies provide inconclusive evidence about the announcement period of abnormal return generated by Australian bidding firms.

Prior Australian studies also provide inconclusive evidence about the method of payment and abnormal returns. For example, the early study of Bellamy and Lewin (1992) found insignificant positive abnormal returns of 0.03 percent for cash-financed acquisitions and significant negative abnormal returns of -2.25 percent for stock-financed acquisitions during the period 1980-1988. However, Bugeja and Walter (1995), who conducted an analysis over a similar sample period, found insignificant negative cumulative market adjusted returns for cash payments of -3.36 percent and insignificant positive cumulative market adjusted returns for equity payments of 4.67 percent during the period from -60 days to +1 days around the announcement. Later on, da Silva Rosa *et al.* (2000) reported insignificant negative mean cumulative average abnormal returns for both cash-financed (-0.33%) and stock-financed (-1.46%) acquisitions for a two-day event window (0,+1). Shekhar and Torbey (2005) also document a negative relationship between cash payment and acquirers' announcement period returns. However, Humphery-Jenner and Powell (2011) arrive at an opposite finding in their recently published study. They report 1.71 percent significant positive three-day announcement period abnormal returns for stock-financed acquisitions of public targets while reporting insignificant abnormal returns for cash-financed acquisitions. Bugeja and da Silva Rosa (2010) examine the impact of introducing the capital gain tax (CGT) rollover relief reform and its association with acquisition payment methods, using both a pre- and post-CGT rollover relief period. The authors find that, after the introduction of capital gains tax rollover relief, the abnormal returns are significantly lower for the acquiring firms who use

the immediately taxable cash payment method. There is also evidence to suggest that the market views diversifying acquisition as a positive acquisition decision of Australian bidders (Shekhar and Torbey, 2005), and the relative size of the target has a negative but insignificant influence on bidders' abnormal returns (see Shekhar and Torbey, 2005; Le and Schultz, 2007). Contested Australian bids signal worthwhile investments in targets and thus bidders enjoy higher abnormal returns (Le and Schultz, 2007).

Australian studies that analyse firm characteristics also provide contradictory evidence as to what was uncovered in the UK and the US markets. For example, Humphery-Jenner and Powell (2011) analysed the size of bidding firms and its impact on announcement period returns. They find that large bidders earn significant positive abnormal returns (0.56%) during the three-day event window. The large bidders for public targets also earn statistically significant higher positive abnormal returns compared to smaller public targets when the method of payment is stock. Such evidence is not found in the UK and the US context. Le and Schultz (2007) provide evidence that free cash flow holdings of bidding firms have no association with the shareholder wealth effects of a takeover announcement.

3.2.6 Influence of Target Organisational Forms on Announcement Period Returns

Recent studies conducted in the US and UK markets differentiate the acquisitions of private targets from those of public targets. These studies argue that the acquirers of private targets should outperform the acquirers of public targets in terms of abnormal returns generated during the announcement period. The literature provides several theoretical explanations for why the market perceives an acquisition of a private or a subsidiary target as a value increasing decision compared with an acquisition of a public target. A number of empirical studies provide evidence supporting various arguments.

Hansen and Lott (1996) argue that the degree of freedom in auction models possibly predicts the returns for bidding firms. For example, private

targets have higher degrees of freedom to select the appropriate auction process whereas public targets are restricted in their choice of auction methods. Particularly, it is very difficult for public targets to commit to a sealed bid because of legal requirements. In turn, this encourages higher bids from competing bidders that sometimes exceed the bidder's own valuation for the target; thus, bidding firms are required to pay more than the actual value of the target. Therefore, shareholders of private target bidders capture higher gains than shareholders of public target bidders based on auction-theoretic justifications. The authors examine 252 acquisitions of public and private companies and find significant positive excess returns (1.15%) for acquirers of private targets whereas bidders for public targets suffered a -0.98 percent abnormal return.

Chang (1998) proposes a corporate monitoring hypothesis. When stocks are used to acquire a private target, a large blockholder or several blockholders may be created for the bidding firm. Therefore, the target can become a substantial blockholder of the bidding firm if it acquires a relatively large private target using equity as the method of payment. These blockholders are better able to monitor the actions and functions of the bidding firm management, and thus the performance of bidding firms may improve. Consequently, the shareholders of bidding firms can benefit from the potential reduction in agency costs, as the new blockholder is likely to monitor managers more closely. In support of this argument, Chang (1998) finds that the shareholders of private target bidders earn positive abnormal returns of 2.64 percent when they acquire private targets using stocks as the method of payment but observe insignificant positive abnormal returns of 0.09 percent in the case of cash offers for the USA market. Their further analysis revealed that the average abnormal return is 4.96 percent when a new blockholder emerges in the acquisition compared to 1.77 percent when no new blockholder is created in stock-financed acquisitions.

Ang and Kohers (2001) highlight that highly concentrated ownership of private firms is associated with lower internal agency conflicts within these firms. This lower internal conflict increases the bargaining power of such firms when confronted with potential bid offers. This strong bargaining power allows private

firm owners to decide how and when to sell their firms without any public pressure. Therefore, such firms receive the highest offer from the bidding firms. The authors argue that private target owners attract high premium deals from the potential bidders due to their high bargaining power. Although bidders paid high premiums to private targets, the authors provide evidence that the acquirers of private targets also earn significant positive abnormal returns irrespective of the method of payment. This indicates that takeovers of privately held firms are seen by the capital market as value enhancing decisions made by the bidding firms' manager. The authors report significant positive abnormal returns for both stock bids (1.32%) and cash bids (1.83%) for a two-day event window.

Fuller *et al.* (2002) propose the liquidity hypothesis. They argue that privately held firms and subsidiaries cannot be bought and sold as easily as publicly traded firms. Illiquid firms are less attractive targets, and hence less valuable than their liquid counterparts. This provides an opportunity for bidders to capture the associated discounts in purchasing these firms. Therefore, bidders for private and subsidiary targets earn higher abnormal returns than the bidders for publicly held targets. Using the modified market model for a five-day event window around the announcement day of a takeover, they reported significant positive CARs for both private (2.08%) and subsidiary (2.75%) target bidders that acquired five or more targets during a three-year period. On the other hand, the bidders for public targets realised significant negative CARs (-1.00%). The bidders for subsidiary targets (2.75%) earn higher abnormal returns than bidders for private targets (2.08%). The stock-financed acquisitions of private (2.43%) and subsidiary targets (3.23%) outperform the cash-financed acquisitions of private (1.62%) and subsidiary targets (2.56%). The authors explain such higher returns to bidders for private and subsidiary targets as a result of liquidity discounts in the relatively illiquid market of such targets. Furthermore, the perceived benefit of delayed tax liability and monitoring benefits from stock-financed acquisitions are associated with the larger returns for such bidders.

Draper and Paudyal (2006) propose a managerial motive hypothesis. According to this hypothesis, a manager's decision to acquire a small private firm

that has a less well-known standing is likely to be associated with a strong motivation to maximise shareholder wealth. In contrast, a manager's decision to acquire a large and well known public target can be associated with increasing firm size and gaining prestige.[42] Draper and Paudyal (2006) report that private target bidders gain significant positive excess returns (2.19%) while the acquirers of public targets either break even or suffer a small loss during the bid announcement period. They also find that the superior performance of private target acquirers remains unchanged even after controlling for the methods of payment.

Faccio *et al.* (2006) analyse acquisition announcements for 17 Western European countries and find significant average abnormal return of 1.48 percent for bidders of unlisted targets across time, countries, and even after controlling for other factors (i.e. method of payment, the acquirer size, investment opportunities, pre-announcement leakage of information about the transaction, and emergence of a blocckholder). Similar to US studies, they report higher abnormal returns for acquirers of unlisted targets when the method of payment is stock only (3.90%) compared to cash only (1.17%). However, bidders for listed targets observe significant negative market reactions in stock-financed acquisitions. In the context of the UK, Conn *et al.* (2005) also provide evidence that private target bidders gain significant positive abnormal returns (1.05%) whereas public target bidders observe significant negative abnormal returns (-0.99%) in a three-day event window. The authors also report significant higher CARs of 1.41 percent in the case of non-cash offers than significant CARs of 0.72 percent in the case of an all cash offer for acquirers of private targets.

Officer (2007) argues that the decision by a parent company to sell a subsidiary is often motivated by the need to resolve immediate liquidity constraints. Accordingly, he finds that parent firms sell subsidiaries at a significant discount following their poor return performance and that the firms accept a significantly higher discount for their non-traded assets when the cost of

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[42] The evidence suggests that executives in large, diversified firms with complex organisations seek to accumulate power and prestige rather than to create value for investors (Mahoney, 1979; Agarwal, 1981; Jensen, 1986; Kostiuk, 1990).

financing from alternative sources is high. The author reports that subsidiaries (private targets) are sold by parent companies at 28 percent (-17%) discount compared to publicly traded targets. Shleifer and Vishny (1992) argue that the urgent need for liquidity and the constraints associated with alternative sources of financing weaken the bargaining power of the owner of the subsidiary and forces them to sell their assets at a significant discount.

Mantecon (2008) argues that higher levels of informational uncertainty negatively affects the private target's bargaining position. The author argues that the cost of capital is relatively higher for private firms compared to public firms. This reduces the bargaining power of private targets compared to public targets. In addition, the higher cost of searching for information about undervalued private targets is associated with a reduced pool of buyers. These factors have detrimental effects on the private target's bargaining position. On the contrary, public targets have higher bargaining powers because public firms are better quality firms. The author reports that the two-day CAR is positive and significant (4.11%) for private targets and negative and significant for public targets (-1.83%) and the difference between the CARs is statistically significant. However, this study provides contrasting evidence to the findings of Chang (1998). The coefficient of new blockholder formation becomes negative and insignificant when both public and private targets are included in the multivariate framework, which suggests that the benefits provided by monitoring do not explain the listing effect.

In Australia, da Silva Rosa *et al.* (2004) investigate the bidding firms' abnormal return in relation to the type of target acquired. They report significant positive mean excess returns (2.70%) for the acquirers of private targets but insignificant excess returns (1.11%) for public targets acquirers. Interestingly, cash bidders for private targets earn significant positive excess returns of 3.26 percent while those using an equity/mixed payment method report insignificant excess returns (1.65%). A recent study by Humphery-Jenner and Powell (2011) provides opposing evidence; they find that stock-financed acquisitions of private targets are associated with positive CARs (4.53%) whereas cash-financed acquisitions are associated with insignificant positive CARs (0.94%).

Several bid and firm characteristics have also been analysed in relation to acquisitions of private and subsidiary targets. The literature provides mixed findings in this regard. The influence of relative size is remarkable for acquirers of private and subsidiary targets. Larger relative size (more than 20%) has a significant positive association with the abnormal returns generated by the bidders for private (5.75%) and subsidiary targets (6.71%) (Fuller *et al.*, 2002). Similarly, Ang and Kohers (2001) show that relative size variable has a positive and significant influence on the abnormal returns of private target bidders. However, Chang (1998) reported an insignificant influence of relative size variable on the returns of private target bidders. There is also mixed evidence available for related acquisitions. Ang and Kohers (2001) found focused acquisitions of private targets to be associated with negative and significant returns while Chang (1998) found that related acquisitions of private targets have an insignificant influence on bidders' abnormal returns. However, Fuller *et al.* (2002) find that there is an insignificant influence of related acquisitions on the abnormal returns of acquirers of both private and subsidiary targets. Fuller *et al.* (2002) also investigated the acquisition frequency and found that the first bidders for private and subsidiary targets earn significant higher abnormal returns (3.22% and 3.64% respectively) than fifth, or later, bidders for private and subsidiary targets (0.72% and 1.57% respectively). Similarly, Antoniou *et al.* (2007) find insignificant negative abnormal returns for the UK bidders for private (-0.10%) and subsidiary (-0.08%) targets when they execute five or more deals.

The size of the bidding firm also influences the announcement period returns of these bidders. For example, the study by Moeller *et al.* (2004) classified the sample according to the firm's organisational form and found that small and large acquirers of private and subsidiary targets earn statistically significant positive abnormal returns. However, the return differences between these two groups (small and large) are statistically significant at the 1 percent level. The mean cumulative return for both small (3.19%) and large (1.01%) bidders for subsidiary targets is higher than the small (2.14%) and large (0.70%) bidders for private targets. Faccio *et al.* (2006) report that small size bidders for private

targets outperform their large counterparts in terms of announcement period abnormal returns. Humphery-Jenner and Powell (2011) also provide similar evidence that small bidders for private targets outperform the large bidders of private targets in Australia. In contrast, the study by Mantecon (2008) provides evidence that small bidders for private targets earn statistically insignificant negative returns. This evidence emphasises the importance of examining these variables when investigating the different organisational forms of target firms.

While a considerable amount of research in Australia examines the gains for acquirers of public targets, there is relatively little research investigating the returns for acquirers of private and subsidiary targets. However, the study of da Silva Rosa *et al.* (2004) provided evidence that the successful bidders for private targets earn statistically significant positive abnormal returns during the announcement period. The excess returns for private target bidders are relevant only to method of payment issues. However, the conclusions of this study are based on a small sample of 155 acquisition announcements and the study mainly focuses on the impact of methods of payment and changes in corporate structure. Clearly, the issue of whether the market perceives the acquisitions of private and subsidiary targets differently from the acquisitions of public targets has not been explored in Australia. In particular, a study that makes a comparison between private, subsidiary and public targets acquisitions, while addressing the influence of deal/firm characteristics, is absent in this market. In this chapter, these issues are addressed using a comprehensive sample of acquisitions made by Australian listed firms during the 11-year period from January 2000 to December 2010.

3.3 HYPOTHESES DEVELOPMENT

According to Chang's (1998) corporate monitoring hypothesis, Ang and Kohers's (2001) bargaining power hypothesis, Draper and Paudyal's (2006) managerial motive hypothesis, and Fuller *et al.* (2002) liquidity hypothesis that acquirers of private targets should generate higher abnormal returns than acquirers of public targets due to the benefits of concentrated ownership, lower bargaining power, and the less liquid nature of private target firms. Moreover, according to the liquidity constraint hypothesis of Officer (2007), subsidiaries are sold at a higher discount by liquidity constrained parent companies; thus bidding firms are expected to earn higher abnormal returns when acquiring subsidiaries. On the basis of this evidence, the following hypothesis is proposed in this thesis:

Hypothesis 1: Bidders for private and subsidiary targets earn higher abnormal returns than bidders for public targets.

According to the corporate monitoring hypothesis of Chang (1998), a target might become a substantial blockholder of the bidding firm if the bidder acquires a relatively large private target using equity as the methods of payment. Consequently, the shareholders of bidding firms can benefit from the potential reduction in agency costs, as the new blockholder is likely to monitor managers more closely. Therefore, this study proposes the following hypotheses:

Hypothesis 2: Bidders for private companies earn higher abnormal returns when the method of payment involves stock rather than cash.

A parent company tends to sell a subsidiary at the time of a liquidity crisis or when the cost of funding from the alternate sources is very high (Officer, 2007). In such circumstances, bidders could acquire a subsidiary at a higher discount

when they use cash as the method of payment. On the basis of this argument, this study proposes the following hypothesis:

Hypothesis 3: Bidders for subsidiaries earn higher abnormal returns when the method of payment involves cash rather than stock.

In addition to testing the three hypotheses above, this study examines the influence of bid characteristics and firm characteristics on bidders' abnormal returns. These include relatedness, multiple bid attempts, deal attitude, privately negotiated deals, break fees as bid characteristics and bidder's market value of the equity, profitability, leverage and free cash flow of the bidding firm as firm characteristics.

3.4 SAMPLE AND DATA

To compile a comprehensive sample of successful acquisitions announced by listed Australian companies during a very recent period, this study searched the Thomson Reuters SDC Platinum Mergers and Acquisitions database for the 11-year period from January 2000 to December 2010. The announcements must satisfy several criteria in order to be included in the sample. First, announcements must involve domestic acquisitions of public, private and subsidiary targets made by Australian listed bidders.[43] Second, bid characteristic information such as deal value and method of payment must be available. Finally, the necessary share price and financial statement information must be available. Table 3.1 shows that the initial sample was 8,001. However, a number of acquisition announcements were excluded: (a) 434 target firms belong to joint ventures and government, (b) 2,282 due to the unavailability of a deal value, (c) 2,443 for missing information for acquisition payment methods, (d) 93 due to the unavailability of Datastream code,

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[43] The public targets category includes both listed and unlisted firms. This study keeps them together due to their similarities such as (i) the applicability of the same takeover regulations, (ii) the need to submit audited financial statements, and (iii) the ability to raise equity funds from the general public.

and (e) 84 due to missing accounting information. This screening procedure results in a final sample of 2,665 acquisition announcements. Compared with samples used in prior Australian studies (Hutson, 2000; da Silva Rosa and Walter, 2004; Maheswaran and Pinder, 2005; Shekhar and Torbey, 2005), this sample is very comprehensive.

Table 3.1
Sample Description: Sample Selection

Sample Selection	
Number of acquisition announcements	8,001
Less:	
Joint ventures and acquisitions of government ventures	434
Unavailability of transaction value	2,282
Unavailability of method of payment information	2,443
Unavailability of acquirer's Datastream code	93
Unavailability of necessary accounting information	84
Final Sample	**2,665**

Information about various bid characteristics and deal types are gathered from the Thomson Reuters SDC Platinum Mergers and Acquisitions database. Table 3.2 provides information on the various deal attributes for the final sample. This table shows a year-by-year analysis in which the number of domestic acquisitions made by Australian companies has gradually increased from 191 in 2000 to 385 in 2007. However, this trend reversed in 2008 and a decline in the number of acquisitions can be observed thereafter, most likely due to the global financial crisis. This trend is consistent with the view of Alexandrou and Sudarsanam (2001) that the mergers and acquisitions activities could peak in the periods of economic boom due to the abundance of current investment opportunities and the optimism about future investment prospects: "Sellers will have more valuable uses for the funds they raise from divestment and the buyers can put their purchases to more valuable use in economic boom times than in a recession" (p. 240).

Table 3.2
Sample Description: Bid and Firm Characteristics for Full Sample

Year-by-Year Sample Analysis

Year	# of Acquisition	Industry :Proportion		(%) of Shares Acquired	Average Deal Value ($m)	Method of Payment: Proportion				Bidder's Avg. Market Value 4 Weeks prior to Acquisition ($m)	Bidder's Average Raw Return: Day-25 to Day +25 (%)
		Related (%)	Unrelated (%)			Cash only (%)	Stock only (%)	Cash & Stock (%)	Others (%)		
2000	191	41.88	58.12	87.09	164.80	27.74	29.84	31.41	10.99	1,474.39	7.99
2001	171	50.29	49.71	89.59	92.67	27.48	34.50	25.14	12.86	1,274.29	7.99
2002	152	51.32	48.62	84.16	51.29	32.89	35.52	24.34	7.23	592.55	4.70
2003	214	53.74	46.26	73.81	75.67	42.99	27.57	23.36	6.07	590.02	23.56
2004	248	56.85	43.15	81.11	101.76	22.17	41.12	35.88	0.80	863.79	12.29
2005	246	54.47	45.53	83.98	110.49	31.70	26.42	36.58	5.28	933.66	12.10
2006	277	53.79	46.21	84.90	108.71	26.71	33.21	35.37	4.69	841.03	14.42
2007	385	62.08	37.92	85.99	124.02	28.05	30.64	34.80	6.49	1,223.79	10.10
2008	249	63.86	36.14	83.93	202.54	22.89	37.75	33.73	5.62	1,057.41	-6.93
2009	259	71.81	28.19	78.42	107.65	28.57	40.15	27.41	3.86	1,923.37	39.25
2010	273	65.56	34.44	81.51	82.60	29.30	32.60	32.23	5.86	514.47	36.74
Average	242	56.88	43.12	83.14	111.11	29.14	33.57	30.93	6.34	1,026.25	14.75

Note: This table reports the number of acquisitions in each year, the proportion of related and unrelated acquisitions, (%) of target shares acquired by the bidding firms, the average deal value in $m., as given by the SDC platinum database, the proportion of cash-only, stock-only, cash and stock, and others method of payment. Finally, it shows the bidders' average market value of the equity 1 month prior to acquisition announcement date and the raw return for the entire period analysed in this study.

In the sample, there is a trend for Australian firms to engage in focus increasing acquisitions; on average, 56.88 percent of the target firms are in related industries while 43.12 percent are in unrelated industries. Relatedness is defined when the bidders' four digit Standard Industrial Classifications (SIC) codes is matched by the targets' four digit SIC codes, and un-relatedness if they have different SIC codes. A substantial increase in focus increasing acquisitions can be observed during the period of the global financial crisis (2007-2009). The average percentage of outstanding equity acquired by the bidding firms ranges from a minimum of 74 percent in 2003 to a maximum of 90 percent in 2001 with an 11-year average of 83 percent. A typical acquisition deal has a value of A$111.11m. The methods of payments are stock (34%), followed by cash (29%), a combination of cash and stock (31%), and other forms of settlement (6%). The cumulative raw returns reported in the last column indicate that Australian bidders have realised positive returns during the 51 days around the announcement of acquisition deals.

Table 3.3 provides information about the industry membership of bidding firms. According to this table, approximately one quarter of these deals occurred in the mining sector and they have been driven mainly by the objective of increasing the focus of the business. Acquisitions of targets in the business services sector constitute 14 percent and acquisitions in the investment & commodity industry constitute 10.5 percent of deals. The bidding firms in the air transportation and shipment and legal services industries have concentrated solely on the acquisitions of related firms. Those in the repair services, soaps, cosmetics and personal care products, and other financial sectors have adopted a more diversified approach. The average deal value is highest in the commercial banks, credit institutions, insurance and bank holding companies sector, even though this sector accounted for only 2 percent of the total acquisitions. Additionally, the bidders in this sector reported the highest market value of the equity. The bidders in many industries reported positive returns around the announcement.

Table 3.3
Sample Description: Industry Sectors

Industry Classification

| Industry | # of Acquisition | Proportion | | (%) of shares acquired | Average Deal Value ($m) | Proportion | | | | Bidder's avg. Mkt. Value ($m) 1 month prior to bid | Bidder's Average Raw Return % (Day-25 to Day +25) |
		Related (%)	Unrelated (%)			Cash only (%)	Stock only (%)	Cash & Stock (%)	Others (%)		
Advertising Services	17	52.95	47.05	83.12	14.21	29.41	23.53	47.05	0	164.08	7.02
Agriculture, Forestry, and Fishing	39	56.41	43.59	84.74	20.49	48.71	12.82	35.89	2.56	240.51	3.07
Air Transportation and Shipping	2	100.00	0.00	100.00	185.25	50.00	0.00	50.00	0.00	4,077.05	8.61
Amusement and Recreation Services	24	29.16	70.84	79.49	447.26	33.33	29.16	29.16	8.33	2,018.55	30.05
Business Services	376	54.25	45.74	92.31	20.58	25.53	25.53	43.35	5.58	190.24	6.64
Chemicals and Allied Products	13	38.46	61.54	70.16	204.34	30.76	30.76	38.46	0.00	1,110.60	6.86
Commercial Banks, Bank Holding Companies	24	25.00	75.00	79.02	1729.75	58.33	16.63	12.50	12.50	25761.54	4.37
Communications Equipment	4	25.00	75.00	100.00	1.325	0.00	75.00	0.00	25.00	27.44	-7.70
Computer and Office Equipment	12	16.67	83.33	96.25	57.49	25.00	33.33	41.67	0.00	59.73	59.85
Construction Firms	49	20.40	79.59	81.11	168.70	38.77	8.16	46.93	6.12	709.54	12.47
Credit Institutions	11	18.18	81.81	100.00	1221.25	18.18	27.27	27.27	27.27	11047.67	11.05
Drugs	44	54.54	45.45	82.83	33.75	27.27	43.18	27.27	2.27	356.72	17.24
Educational Services	14	50.00	50.00	89.14	26.89	21.43	35.71	42.85	0.00	271.41	17.25
Electric, Gas, and Water Distribution	28	32.14	67.85	88.14	74.14	42.85	35.71	21.43	0.00	1,017.09	5.61
Electronic and Electrical Equipment	19	21.05	78.94	91.15	22.62	36.84	31.58	31.58	0.00	142.08	4.67
Food and Kindred Products	38	86.84	13.16	85.88	221.30	52.63	21.05	21.05	5.26	1,247.76	-00.63
Health Services	54	72.22	27.77	90.78	201.19	40.74	20.37	35.18	3.70	569.84	07.12
Holding Companies, Except Banks	1	0.00	100.00	17.18	0.64	100.00	0.00	0.00	0.00	2.15	13.13
Hotels and Casinos	10	60.00	40.00	94.06	22.87	30.00	10.00	50.00	10.00	181.08	5.87
Insurance	21	80.95	19.05	94.06	959.62	28.57	28.57	33.33	9.53	4,218.65	6.05
Legal Services	7	100.00	0.00	100	6.43	0.00	28.57	0.71.42	0.00	152.44	03.33

Table 3.3 Sample Description: Industry Sectors (Contd.)

Industry Classification (continued)

Investment & Commodity Firms, Dealers, Exchanges	281	43.06	56.93	70.63	125.29	34.52	34.16	27.05	4.27	938.71	12.93
Machinery	17	29.41	70.59	100.00	29.15	23.53	23.53	29.41	23.53	96.74	8.11
Measuring, Medical, Photo Equipment; Clocks	41	29.27	70.73	91.23	5.99	9.76	58.54	26.83	4.88	18.40	24.98
Metal and Metal Products	18	11.11	88.89	88.67	207.85	44.44	11.11	44.44	0.00	1,098.02	2.77
Mining	779	87.93	12.07	79.01	59.18	23.49	43.00	26.06	7.45	630.45	23.98
Miscellaneous (Retail Trade, Rubber, plastic etc)	54	22.22	77.78	76.24	56.95	35.19	33.33	24.07	7.41	524.31	9.87
Motion Picture Production and Distribution	14	21.43	78.57	77.50	24.73	42.86	35.71	21.43	0.00	125.26	6.70
Oil and Gas; Petroleum Refining	133	79.70	20.30	76.36	63.46	28.57	45.86	18.05	7.52	856.28	20.49
Other Financial	1	0.00	100.00	100.00	2.00	100.00	0.00	0.00	0.00	98.14	-6.36
Paper and Allied Products	5	80.00	20.00	91.65	60.88	0	40.00	60.00	0	195.67	20.09
Prepackaged Software	85	36.47	63.53	85.97	34.94	16.47	45.88	31.76	5.88	107.02	13.82
Printing, Publishing, and Allied Services	23	56.52	43.48	88.92	159.33	47.83	8.70	30.43	13.04	1,084.15	4.74
Public Administration	11	18.18	81.82	90.64	142.81	54.55	45.45	0.00	0.00	994.69	29.79
Radio and Television Broadcasting Stations	17	35.29	64.71	81.58	151.55	35.29	35.29	23.53	5.88	729.03	-2.39
Real Estate; Mortgage Bankers and Brokers	68	29.41	70.59	61.14	235.98	32.35	16.18	36.76	14.71	1,187.05	12.77
Repair Services	15	0.00	100.00	100.00	9.58	20.00	0.00	80.00	0.00	117.90	19.66
Retail Trade	37	29.73	70.27	97.03	47.32	40.54	16.22	35.14	8.11	4,476.29	6.53
Sanitary Services	12	50.00	50.00	100.00	7.17	16.67	25.00	58.33	0.00	78.69	13.57
Soaps, Cosmetics, and Personal-Care Products	6	0.00	100.00	80.06	29.05	33.33	33.33	16.67	16.67	655.99	28.12
Social Services	37	81.08	18.92	93.95	54.49	43.24	21.62	32.43	2.70	257.32	11.13
Stone, Clay, Glass, and Concrete Products	18	44.44	55.56	92.72	62.49	44.44	22.22	33.33	0.00	869.36	8.19
Telecommunications	95	29.47	70.53	89.17	21.21	22.11	31.58	37.89	8.42	2,626.37	25.02
Textile and Apparel Products	4	0.00	100.00	0.00	4.21	0.00	75.00	25.00	0.00	8.39	-12.96
Transportation, Shipping & Equipment (except air)	25	64.00	36.00	85.57	459.01	40.00	32.00	24.00	4.00	1,641.17	6.22
Wholesale Trade	58	13.79	86.21	88.76	488.05	22.41	27.59	41.38	8.62	1,153.05	11.96
Wood Product, Furniture and fixtures	4	25.00	75.00	100.00	9.78	50.00	25.00	25.00	0.00	61.52	18.69

Note: This table reports similar information to that reported in Table 3.2. However, information is arranged based on industry segments for the period of 2000-2010. Acquisitions made in the same industry are related acquisitions and acquisitions made in another industry are deemed un-related acquisitions. The percentage of shares acquired and average deal value refers to the average shares of target firms acquired by bidding firms and the average deal value in $m.

Table 3.4
Sample Description: Bid and Firm Characteristics for Three Samples

Classification by Target Status (Public vs Private vs Subsidiary)

	Public Targets (N =643)			Private Targets (N =1,310)			Subsidiary Targets (N=712)		
	Mean	Median	Stdev.	Mean	Median	Stdev.	Mean	Median	Stdev.
% of Shares Acquired	59.38	79.00	40.27	93.69	100.00	19.26	87.57	100.00	26.47
Value of the Deal ($m)	384.57	23.39	1,492.40	16.61	3.32	60.88	46.94	2.71	240.05
Bidder's Market Value ($m)	2,805.88	205.79	10,197.08	261.38	18.77	1,404.27	869.65	23.00	5,097.03
Bidder's Raw Return (%): Day -25 to Day +25	5.53	0.42	29.22	20.76	3.98	103.57	14.40	1.76	64.28

Note: Table 3.4 reports the sample statistics based on three different target types: public targets (643), private targets (1,310), and subsidiary targets (712). This table highlights the percentage of shares acquired by the bidding firms, deal value, bidders' market value of the equity, and bidders' raw return information for three sample groups. Bidders' market value of the equity and deal values are reported in $m. All other figures are shown as a percentage.

In Table 3.4, the total sample is divided into three sub groups (bidders for public, private and subsidiary targets) and descriptive statistics are reported for four main characteristics. The Table reveals several interesting points. First, this market is dominated by the acquisition of private entities (1,310 of 2,665, or 49%); the acquisitions of subsidiaries (712 of 2,665, or 27%) and public targets (643 of 2,665, or 24%). Second, bidders tend to acquire a high proportion of outstanding equity in private and subsidiary targets (94% and 88%, respectively) compared with their stakes in public targets (59%). Third, the lowest average deal value is paid to private targets whereas the highest deal value is paid to public targets. Fourth, in terms of average market capitalisation, the bidders for public targets are approximately 11 times larger than their counterparts who seek to takeover private targets. Finally, acquirers of private targets earn the highest returns around the acquisition event whereas acquirers of public targets earn the lowest returns.

This study uses the daily share price around the acquisition announcement to estimate the announcement period of abnormal returns for the bidding firms. Datastream data is used to collect the daily share price information for the bidding

firms and the daily values of the ASX All Ordinaries Index. The market index that is used in this study is the ASX All Ordinaries Index. These price/index data are used to calculate daily stock returns and the return on the market index. The Australian Financial Markets Association (AFMA) Bank Accepted Bill rate is collected from the Reserve Bank of Australia's (RBA) website. The AFMA 30-day Bank Accepted Bill rate is considered as a proxy for the risk free rate and returns are estimated using the daily data series collected from the RBA website.[44] This study further collects various accounting data such as the market value of equity, the book value of equity, net cash, net debt, net profit, and free cash flow for each bidder one year prior to the announcement date from Datastream. Most of these variables are required on an annual basis.

3.5 METHODOLOGY

Prior studies have used various methodologies to calculate abnormal returns during the announcement period. To examine the abnormal share returns earned by bidding firms around the announcement period, this study employs the event study methodology of Brown and Warner (1985). Even though prior studies (Fuller *et al.*, 2002; Conn *et al.*, 2005; Dong *et al.*, 2006) used the market model to estimate the expected return for bidding firms, this study does not estimate market model parameters, as a number of bidding firms in the sample are involved in multiple bids; this makes it difficult to have an event-free estimation period to generate market model parameters to estimate expected returns. Moreover, estimating beta will not significantly improve the abnormal return calculations for this study, which is evident from the findings of Brown and Warner (1980). In this study, both market adjusted returns and the abnormal returns generated by multifactor models (Jensen's alpha) are analysed. The abnormal returns are estimated for six event windows around the announcement day (i.e. day 0). They include a pre-announcement period (from day -26 to day -2), one of three

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[44] The Bank Accepted Bill rate is the rate of interest charged on short-term loans made between banks. Although the rate is not strictly risk free, it is often used as a proxy for the short-term risk-free rate.

announcement periods (day -1 to day +1, day -2 to day +2 and day -3 to day +3)[45], a post announcement period (day +2 to day +26) and a total period (day -26 to day +26).

3.5.1 Market-adjusted Buy and Hold Returns

This study estimates the market adjusted buy and hold returns for the six event windows mentioned above, similar to those used in Fuller *et al. (2002)* and Conn *et al*. (2005), as follows:

$$MABHR_{i,t} = \prod_{t=p}^{t=n}(1+R_{i,t}) - \prod_{t=p}^{t=n}(1+R_{m,t}) \qquad [1]$$

where, $MABHR_{i,t}$ = market adjusted buy and hold return of security i over time period t,

$R_{i,t}$ = return of security i over time period t,

$R_{m,t}$ = market return over time period t

$n - p$ = from 'n' days to 'p' days for respective event window need

This study calculates the mean and median values using the market adjusted buy and holds returns for different samples and interprets the significance level of the mean and median tests based on t-statistic and wilcoxon signed rank value, respectively.

3.5.2 Single Factor Model (Jensen's alpha)

The single factor model that generates Jensen's alpha does not require data for an estimation period which is free from the effects of the event under analysis. This study estimates Jensen's alpha as the measure of abnormal returns. The following equation is estimated:

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[45] Andrade *et al.* (2001) contends that the three-day event window is the most commonly used event window to capture the market response to acquisition announcements. Accordingly, this study uses the three-day model around the announcement date as the announcement period.

$$R_{i,t} - R_{f,t} = \alpha + \beta_{1,i}\left(R_{m,t} - R_{f,t}\right) + \varepsilon_{i,t} \qquad\qquad [2]$$

Where $R_{i,t}$ is the buy and hold return generated by the acquiring firm for a particular event window; $R_{f,t}$ is the buy and hold return generated by risk free asset for the same period; and $R_{m,t}$ is the buy and hold return generated by the market index for the same period. A statistically significant α indicates significant abnormal returns earned by the sample companies during the period under investigation.

3.5.3 Fama-French Three-Factor Model

Gaunt (2004) finds that, compared with CAPM, the three-factor model proposed by Fama and French (1996) performs better in explaining stock returns in Australia. Therefore, the following three-factor model is estimated as well:

$$R_{i,t} - R_{f,t} = \alpha + \beta_{1,i}\left(R_{m,t} - R_{f,t}\right) + \beta_{2,i}SMB_t + \beta_{3,i}HML_t + \varepsilon_{i,t} \qquad [3]$$

Where, *SMB* is the difference in buy and hold return between a small portfolio and a large portfolio and *HML* is the return difference in buy and hold return between high book-to-market portfolio and low book-to-market portfolio.

To construct the *SMB* and *HML* portfolios at the beginning of every year during the sample period, the book value of equity and market value of equity data are collected for all the companies in the ASX; this population contained both surviving and dead companies to avoid any survivorship bias in the data.[46] However, one of the major difficulties is estimating the ratio of book equity and market equity was due to the unavailability of book and market value data for all the Australian companies in the Datastream database. Beginning in 1999, companies were ranked at the end of every year on the basis of their market

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[46] Faff (2001) identifies the Australian market as an example in which the compilation of sufficiently extensive and reliable data to form the Fama and French factors is challenging. This study uses data for 546 companies in 1999 to form the SMB and HML factors. This population increased to 1,799 in 2010.

capitalisation; the 50 percent of companies with the highest market capitalisation are designated as a large portfolio and the bottom 50 percent are designated as a small portfolio. Then, the return difference between the small firms' portfolio and the large firms' portfolio (*SMB* factor) was calculated on a daily basis for the following year. Similarly, companies are ranked at the end of every year using their book-to-market (BM) value and the top 30 percent is assigned to a high BM stock and the bottom 30 percent is assigned to a low BM portfolio. Following this, the return difference between high BM portfolio and the low BM portfolio (*HML* factor) is generated on a daily basis for the following year. This process is repeated until 2010.

3.5.4 Four Factor Model

Draper and Paudyal (2006) modify Fama and French's (1996) three-factor model to include an additional variable, the thirty-day average return prior to the announcement period. Instead of using the Carhart's (1997) four factor model, this variable accounts for the possible information leakage about the intended acquisition prior to the announcement and isolates the effect of the share's past trend and controls the possible price effects of insider dealings. Following this argument, this study also estimates the following model:

$$R_{i,t} - R_{f,t} = \alpha + \beta_{1,i}\left(R_{m,t} - R_{f,t}\right) + \beta_{2,i}SMB_t + \beta_{3,i}HML_t + \beta_{4,i}M30_t + \varepsilon_{i,t} \qquad [4]$$

Where *M30* is the buy and hold return generated by the bidding firm during the 30-day period prior to the announcement period (i.e. from day -31 to day -2).

3.5.5 Multiple Regression Model for Bid Characteristics

To test the influence of the several bid characteristics discussed in Section 3.2.2, this study modifies equation [3] to include several bid characteristics and estimates the following regressions for bidders for public, private and subsidiary targets separately. The bidder's three-day buy and hold return is the dependent

variable and the independent variables include a number of bid characteristics. The equation estimated for the bidders for public targets takes the following form:

$$R_{i,t} - R_{f,t} = \alpha + \sum_{j=1}^{3} \beta_{j,i} MF_{j,i,t} + \sum_{j=1}^{9} \beta_{j+3,i} BC_{j,i,t} + \beta_{13,i} GFC_{j,i,t} + \varepsilon_{i,t} \qquad [5a]$$

Where the vector of *MF* variables contains the explanatory variables used to capture the effect of market factors with a vector of β_{1-3} coefficients, the vector of *BC* variables contains the control variables used to capture the effect of bid characteristics with a vector of β_{4-12} coefficients, and the *GFC* is the dummy variable that captures the effect of the global financial crisis. The nine bid characteristics used in the equation above are as follows: a cash-only deals dummy, a stock-only deals dummy, the natural logarithm of the relative size of the deal (derived by dividing the deal value by the bidder's market value of equity one month prior to the announcement), an unrelated acquisitions dummy (which takes the value of 1, if the bidder four digit SIC code is different from the target four digit SIC code, and 0 otherwise), a multiple bid dummy (which takes the value of 1, if a bidder has acquired more than one target during the sample period, and 0 otherwise), a deal attitude dummy (which takes the value of 1, if the bid is hostile or unsolicited, and 0 otherwise), a private deal dummy (which takes the value of 1, if the deal is privately negotiated, and 0 otherwise), a break fees dummy (which takes the value of 1, if a break fee is attached to the deal, and 0 otherwise), an unlisted public target dummy (which takes the value of 1, if the target is an unlisted public company, and 0 otherwise), and a GFC dummy (which takes the value of 1, if the acquisition take place during the period from July 2007 to December 2009, and 0 otherwise). The equation also includes two new dummy variables: the acquisitions of unlisted public targets by listed bidders and the acquisitions during the global financial crisis period from July 2007 to December 2009. These variables are important in the context of the study period analysed. As the unlisted public firms are a unique feature of the Australian corporate regime, the model above includes a dummy variable to capture the acquisitions of such targets by listed bidding firms. Since the sample period of this study includes

the period of the global financial crisis (i.e. July 2007 to December 2009), a dummy variable is included in the model to capture the effect of the GFC. This study considers the GFC period to be from July 1, 2007 to December 31, 2009 as the majority of advanced economies experienced a recession in late 2007 that lasted until the end of 2009.[47]

The equation estimated for private target acquirers takes the following form:

$$R_{i,t} - R_{f,t} = \alpha + \sum_{j=1}^{3} \beta_{j,i} MF_{j,i,t} + \sum_{j=1}^{7} \beta_{j+3,i} BC_{j,i,t} + \beta_{11,i} GFC_{j,i,t} + \varepsilon_{i,t} \qquad [5b]$$

Where the vector of *BC* variables contains the control variables used to capture the effect of bid characteristics with a vector of β_{4-10} coefficients, and the *GFC* is the dummy variable that captures the effect of global financial crisis. The seven bid characteristics considered in the above equation are: a cash only deals dummy, a stock only deals dummy, the natural logarithm of the relative size of the deal, an unrelated acquisitions dummy, a multiple bid dummy, a private deal dummy, a break fees dummy, and a GFC dummy.[48] This equation drops the dummy variables for deal attitude and an unlisted public target from the earlier equation of [5a], as these variables are not applicable for a private target sample.

The equation estimated for subsidiary targets takes the following form:

$$R_{i,t} - R_{f,t} = \alpha + \sum_{j=1}^{3} \beta_{j,i} MF_{j,i,t} + \sum_{j=1}^{8} \beta_{j+3,i} BC_{j,i,t} + \beta_{12,i} GFC_{j,i,t} + \varepsilon_{i,t} \qquad [5c]$$

Where the vector of *BC* variables contain the control variables used to capture the effect of bid characteristics with a vector of β_{4-11} coefficients, the vector of *BC* variables contains the control variables used to capture the effect of bid characteristics with a vector of β_{4-12} coefficients, and the *GFC* is the dummy variable that captures the effect of the global financial crisis. The eight bid characteristics variables included in this equation are cash only deals dummy, a

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[47](see Claessens *et al.*, 2010).
[48]The variables have been defined in the earlier equation.

stock only deals dummy, the natural logarithm of the relative size of the deal, an unrelated acquisitions dummy, a multiple bid dummy, a private deal dummy, a break fees dummy, a public parent dummy, and a GFC dummy. This equation adds a public parent dummy on top of the seven bid characteristics analysed in the earlier equation of [5b]. Officer (2007) points out that a subsidiary is being sold, most likely, by the liquidity-constrained parent companies; thus, acquisition discounts are significantly higher for such deals. Therefore, a dummy variable is included in the model to capture the sale of subsidiaries in the form of cash payments by publicly quoted parents. All of the above equations [5a], [5b] and [5c] are estimated using White's (1980) correction procedure for heteroscedastic standard errors.

3.5.6 Multiple Regression Model for Firm Characteristics

To examine the influence of firm characteristics, the following variables are added to the equations [5a], [5b] and [5c] as explanatory variables: the natural logarithm of the bidder's market value of equity one year prior to the acquisition announcement as the size measure; the return on assets as the profitability measure (calculated by dividing the net income by total assets of the most recent financial year); the debt ratio as the leverage measure (calculated by dividing net debt, i.e., total debt minus cash, by total assets of the most recent financial year); the free cash flow-to-assets ratio as a measure of cash richness (calculated by dividing net cash receipts from operations by total assets of the most recent financial year). The following equation is estimated for bidders for public targets:

$$R_{i,t} - R_{f,t} = \alpha + \sum_{j=1}^{3} \beta_{j,i} MF_{j,i,t} + \sum_{j=1}^{7} \beta_{j+3,i} BC_{j,i,t} + \sum_{j=1}^{4} \beta_{j+11,i} FC_{j,i,t} + \beta_{15,i} GFC_{j,i,t} + \varepsilon_{i,t} \quad [6a]$$

Where the vector of *MF* variables contains the explanatory variables used to capture the effect of market factors with a vector of β_{1-3} coefficients, the vector of *BC* variables contains the seven control variables used to capture the effect of bid characteristics with a vector of β_{4-10} coefficients, and the vector of

FC variables contain the four control variables used to capture the firms' financial characteristics (i.e. firm size, profitability, leverage and free cash flow) with a vector of β_{11-14} coefficients.[49] The seven bid characteristics used in this equation are as follows: a cash only deals dummy, a stock only deals dummy, the natural logarithm of the relative size of the deal, a multiple bid dummy, a private deal dummy, a break fees dummy, and an unlisted public target dummy. The four firm characteristics used in this equation are as follows: natural logarithm of acquirer market value of the equity, the return on assets, the net debt, and the free cash flow of the bidder one year prior to acquisition announcement. Finally, a GFC dummy is added to the equation.

The following equation is the estimated bidders for private targets.

$$R_{i,t} - R_{f,t} = \alpha + \sum_{j=1}^{3} \beta_{j,i} MF_{j,i,t} + \sum_{j=1}^{6} \beta_{j+3,i} BC_{j,i,t} + \sum_{j=1}^{4} \beta_{j+10,i} FC_{j,i,t} + \beta_{14,i} GFC_{j,i,t} + \varepsilon_{i,t} \quad [6b]$$

Where the vector of *BC* variables contains the six control variables used to capture the effect of bid characteristics with a vector of β_{4-9} coefficients, and the vector of *FC* variables contain the four control variables used to capture firms' financial characteristics (i.e. firm size, profitability, leverage and free cash flow) with a vector of β_{10-13} coefficients. The dummy variable for an unlisted public target has been dropped from this equation, as this variable is not applicable for bidders for private targets.

The above equation is estimated bidders for subsidiary targets.

$$R_{i,t} - R_{f,t} = \alpha + \sum_{j=1}^{3} \beta_{j,i} MF_{j,i,t} + \sum_{j=1}^{7} \beta_{j+3,i} BC_{j,i,t} + \sum_{j=1}^{4} \beta_{j+11,i} FC_{j,i,t} + \beta_{15,i} GFC_{j,i,t} + \varepsilon_{i,t} \quad [6c]$$

Where the vector of *MF* variables contains the explanatory variables used to capture the effect of market factors with a vector of β_{1-3} coefficients, the vector of *BC* variables contains the seven control variables used to capture the

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[49] This study drops two bid characteristics (the unrelated acquisitions dummy and the deal attitude dummy) in estimating equations [6a], [6b] and [6c] as these variables generated insignificant coefficients in respective models of equations [5].

effect of bid characteristics with a vector of β_{4-10} coefficients and the vector of *FC* variables contain the four control variables used to capture a firms' financial characteristics (i.e. firm size, profitability, leverage and free cash flow) with a vector of β_{11-14} coefficients. This equation adds a dummy variable for subsidiary targets that are sold by publicly listed parent companies for cash.

3.5.7 Correlation Matrix

Table 3.5 presents a pairwise Spearman rank-order correlation matrix for the necessary firm and bid characteristics used in the study. Both the stock only dummy and the Ln relative size variable have negative correlations with the cash only dummy that are statistically significant. The stock only dummy is also negatively correlated with the Ln market value of the equity, profitability and free cash flow variables. This suggests an inverse relationship between the stock payment method and the bidders' financial position. On the other hand, the cash only dummy has a positive correlation with the Ln market value of the equity variable, implying that large firms use cash as the method of payment for acquisition purposes. The Ln relative size variable has a strong negative correlation with the Ln market value of the equity, profitability and free cash flow variables. The correlation matrix also indicates that the Ln market value of the equity has significant and positive correlations with the profitability, leverage and free cash flow variables. The two strongly correlated variables in estimating equations [5a], [5b] and [5c] are between the cash only dummy and stock only dummy (-0.45). However, the highest correlation exists between the profitability and free cash flow variables (0.75) in estimating equations [6a], [6b] and [6c]. Finally, Table 3.5 confirms that the level of correlation between the various explanatory variables does not exceed 0.60, except between profitability and free cash flow (correlation value is 0.75). According to Gujarati (1995), the multicollinearity problem is present if the correlation between independent variables is above 0.80. Based on these correlation values, the threat of

multicollinearity can be assumed as being very limited in the estimation of regression models for this study.[50]

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[50] This study also analysed the variance inflation factors (VIF) and the results are reported in Table A.1 of Appendix A. The VIF scores were found to be less than 4, indicating the absence of the multicollinearity problem in the dataset.

Table 4.5
Spearman rank-order Correlations Matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
$R_{i,t}-R_{f,t}$ (01)	1.0000																		
$R_{m,t}-R_{f,t}$ (02)	**0.1388**	1.0000																	
SMB (03)	**0.0926**	**-0.2178**	1.0000																
HML (04)	**-0.0664**	**-0.3632**	0.0280	1.0000															
Dummy cash-only (05)	**-0.0647**	0.0364	0.0013	0.0207	1.0000														
Dummy stock-only (06)	0.0263	-0.0064	0.0244	0.0038	**-0.4517**	1.0000													
Ln relative size (07)	**0.1400**	-0.0157	0.0274	0.0010	**-0.2942**	**0.1878**	1.0000												
Dummy unrelated acquisition (08)	0.0294	-0.0284	0.0125	0.0225	0.0378	-0.0321	**0.1166**	1.0000											
Dummy multiple bidder (09)	**-0.0497**	-0.0092	-0.0024	0.0033	0.0245	**-0.0715**	**-0.1774**	0.0185	1.0000										
Dummy deal attitude (10)	-0.0147	0.0182	-0.0180	-0.0225	0.0371	**0.0444**	**0.0583**	0.0001	0.0125	1.0000									
Dummy private deal (11)	**-0.0719**	**0.0444**	0.0088	-0.0044	**0.2936**	**-0.1197**	**-0.1739**	0.0301	0.0120	0.0210	1.0000								
Dummy break fees (12)	**-0.0448**	-0.0085	0.0202	-0.0318	**-0.0462**	0.0669	0.1137	-0.0635	0.0372	-0.0017	**-0.0438**	1.0000							
Dummy unlisted public target (13)	0.0361	-0.0316	0.0089	0.0114	**-0.0664**	0.1163	0.0911	0.0015	-0.0231	-0.0039	-0.0207	-0.0074	1.0000						
Public parent dummy (14)	-0.0141	0.0145	0.0097	-0.0227	0.2019	-0.0941	-0.0798	-0.0544	0.0082	-0.0216	-0.0326	-0.0236	-0.0178	1.0000					
Dummy GFC period (15)	-0.0326	**-0.0649**	0.0601	**-0.0746**	-0.0314	**0.0415**	-0.0213	**-0.1109**	0.0880	0.0099	**0.0681**	**0.0838**	0.0189	**0.1689**	1.0000				
Ln market value (16)	**-0.1542**	-0.0297	-0.0484	0.0056	**0.2726**	**-0.2193**	**-0.3969**	-0.0449	**0.2220**	**0.1399**	**0.1022**	**0.1491**	**-0.0651**	0.0278	0.0102	1.0000			
Profitability (17)	**-0.0556**	-0.0245	**-0.0433**	0.0250	**0.1996**	**-0.2217**	**-0.2669**	-0.0153	**0.1576**	0.0588	0.0680	0.0765	**-0.0601**	0.0079	-0.0276	**0.5994**	1.0000		
Leverage (18)	**-0.0772**	-0.0257	-0.0437	0.0185	**0.1321**	**-0.1497**	**-0.1146**	0.0979	0.1477	0.0744	-0.0282	**0.0433**	-0.0057	-0.0156	**-0.0688**	**0.4012**	**0.2209**	1.0000	
Free cash flow (19)	**-0.0410**	-0.0127	-0.0457	0.0275	**0.2218**	**-0.2118**	**-0.2545**	-0.0362	**0.1382**	0.0610	0.0390	**0.0866**	-0.0387	0.0212	-0.0350	**0.5916**	**0.7521**	**0.2916**	1.0000

Note: The above table reports correlation matrices. In this table, $R_{i,t}-R_{f,t}$ = buy and hold security risk premium for three-day announcement period; $R_{m,t}-R_{f,t}$ = buy and hold market risk premium for three-day announcement period; SMB = the difference in buy and hold return between small portfolio and large portfolio; HML = the return difference in buy and hold return between high book to market portfolio and low book to market portfolio; Ln Rel Size =Natural log of relative size of bidders and target size; Dummy cash only = 1 when payment method used to acquire in the form of cash; Dummy stock only = 1 when payment method used is in the form of stock; Dummy unrelated acquisitions =1 when acquisition held with different industry; Dummy multiple bidder = 1 when one company made more than one acquisition during the sample period; Dummy deal attitude = 1 if the acquisition associated with a hostile manner; Dummy private deal = 1 if the deal negotiated privately; Dummy break fees =1 if the deal has break fees contract; Dummy unlisted public target = 1 if the listed bidder acquires unlisted public target; Dummy public parent = 1 if the public parent company sold their subsidiary firm in the form of cash

payment; Dummy GFC period = 1 if the acquisition held during the period of July 1, 2007 to December 31, 2009; Ln market value = The market value of the equity of the bidding firm (defined as the share price multiplied by the number of ordinary shares in issue) one year prior to the acquisition divided by the total asset of the firm; Profitability = Profitability is defined as the net income prior to acquisition announcement year divided by the total asset of the firm; Leverage = represent the net debt amount one year prior to the acquisition year of the bidder divided by the total asset of the firm; Free cash flow = The free cash flow represents the net cash receipts and disbursements resulting from the operations of the company prior to acquisition announcement year divided by the total asset of the firm. Bold text indicates significant coefficient.

3.6. EMPIRICAL FINDINGS

In this section, the findings in relation to the behaviour of abnormal returns of Australian bidders around the announcement of acquisitions are discussed. The findings are discussed under two separate sub-headings: 6.1. Univariate analysis, and 6.2. Multivariate analysis.

3.6.1 Univariate Analysis

Tables 3.6 to 3.13 report the excess returns for bidding firms around the announcement day by estimating equations [1], [2], [3] and [4]. Under the univariate analysis, sub-section (i) analyses the abnormal return of the sample firms employing four different models, which are: market adjusted buy and hold returns, single factor-model, three-factor model, and four factor model for six different event windows around the acquisition announcements. Sub-section (ii) discusses the abnormal return behaviour of three sub-samples: public targets acquisitions, private targets acquisitions, and subsidiary targets acquisitions. The impact of the method of payment is analysed in sub section (iii). Sub-sections (iv) and (v) show the impact of various bid and firm specific characteristics. Finally sub-section (vi) reports the abnormal return of bidding firms in different time periods by dividing the whole sample period into three time phases

3.6.1.1 Abnormal Returns Around Four Different Event Windows

Before testing the stated hypotheses, this section first analyses the abnormal returns of the full sample around four different event windows. Equations [1] to [4] are estimated for this purpose. Table 3.6 presents the market adjusted buy and hold return and the values of the alphas together with other coefficients of respective models for Australian acquirers. Altogether, six event windows are analysed in this section. These are: pre-announcement period event window, three event windows analysed during the announcement period, post announcement period event window, and the total period event window.

Panel A of Table 3.6 shows the market adjusted buy and hold returns for the six event windows analysed. The results reported in Panel A show that the market adjusted buy and hold return (both mean and median) is positive and significant for the full period, pre-announcement period and the three event windows in the announcement period. However, these bidders earn insignificant or negatively significant abnormal returns in the post event window (+2 days to +26 days). The bidding firms earn the highest announcement period returns in the seven-day event window (i.e. from -3-day to +3-day) compared to the other announcement period windows analysed. The mean (median) market-adjusted buy and hold return for all the acquirers is 7.75 percent (1.53%) in the 7-day event window.

An observation of Panel B for this Table reveals that the abnormal return (represented by α) is positive and significant during the announcement period. This conclusion applies to all three models estimated. The magnitude of the abnormal return generated by these three models is similar; they range from 3.88 percent to 7.10 percent in all three event windows suggesting that the market responses are very strong around the acquisition announcement period. However, higher abnormal returns are reported for five-day and seven-day event windows compared with the three-day event window. But all these announcement period event windows capture significant positive abnormal returns for bidding firms. However, it is evident that the magnitude of announcement period returns is relatively lower when multifactor models are estimated compared with market adjusted buy and hold returns. This supports the importance of an inclusion of market parameters in estimating excess returns.

Australian acquirers do not record any significant abnormal returns during the pre-announcement and post-announcement periods. There is no evidence of information leakages to the market before the announcement or a delayed response to such announcements. However, the post-acquisition period suffers from insignificant negative abnormal returns. This finding, that the market is efficient in a semi-strong form, contradicts previous Australian evidence. For example, Dodd (1976) reported negative abnormal returns for successful acquirers in the post-acquisition period. Walter (1984) also found significant negative excess returns in the week immediately following the acquisition. However, the finding of a positively significant

announcement period of abnormal returns is in line with the findings of many international studies. For example, Asquith *et al.* (1983) report significant positive excess returns of 0.9 percent for a two-day event window. Similarly, Jarrell and Poulsen (1989) find significant positive abnormal returns of 0.70 percent in the US market, while Humphery-Jenner and Powell (2011) and Shekhar and Torbey (2005) uncover positive abnormal returns in the Australian market. Also, Antoniou *et al.* (2007) report significant positive announcement period return for bidding firms in the UK market. Turning to the other coefficients, this study finds that the coefficients of *Rm–Rf* and *SMB* variables are consistently positive and significant in all three models estimated. However, *HML* and *M30* coefficients are insignificant in their respective models. Although the results are significant in all the announcement period event windows, this study uses a three-day announcement period event window for the remaining examinations. Andrade *et al.* (2001) contends that the three-day event window is the most commonly used event window to capture the market response to acquisition announcements.

Table 3.6 Bidders' Abnormal Returns for Six Event Windows

	Entire Period	Pre-announcement Period	Announcement Period			Post-announcement Period
	-26 days to +26 days	-26 days to -2 days	-1 day to +1 day	-2 days to +2 days	-3 days to +3 days	+2 days to +26 days
Panel A: Market Adjusted Buy and Hold Return						
Mean	0.1485*** (9.00)	0.0595*** (13.27)	0.0460*** (17.04)	0.0630*** (11.81)	0.0775*** (4.94)	0.0110 (0.91)
Median	0.0185*** (8.18)	0.0081*** (7.54)	0.0108*** (13.92)	0.0146*** (14.16)	0.0153*** (12.85)	-0.0222*** (7.47)
Panel B: Coefficient Estimates of Multi Factor Models						
Single Factor Model						
α	0.3269*** (5.17)	0.1135*** (6.31)	0.0551*** (8.95)	0.0710*** (12.06)	0.0703*** (9.91)	0.0188 (1.02)
$R_m\text{-}R_f\,(\beta_1)$	1.5887*** (7.29)	1.3031*** (11.43)	0.9596*** (3.80)	1.5867*** (9.73)	1.4185*** (9.23)	1.0589*** (5.33)
Three-factor Model						
α	0.1053* (1.77)	0.0268 (1.28)	0.0429*** (6.91)	0.0621*** (10.12)	0.0593*** (8.24)	-0.0286 (-1.46)
$R_m\text{-}R_f\,(\beta_1)$	1.2723*** (5.58)	1.1233*** (8.75)	1.3554*** (3.56)	1.7715*** (10.94)	1.5719*** (10.19)	0.8832*** (3.41)
SMB (β_2)	1.4559*** (6.90)	1.5780*** (6.19)	3.5257*** (4.94)	1.4733*** (5.34)	1.3002*** (6.06)	0.7361*** (4.59)
HML (β_3)	-0.3470 (-1.38)	-0.5375** (-2.02)	-0.1252 (-0.13)	0.3182*** (0.98)	0.3494 (1.38)	-0.5551 (-1.66)
Four-factor Model						
α	-0.0255 (-0.48)	-0.1284*** (-6.73)	0.0388*** (6.43)	0.0595*** (9.94)	0.0531*** (7.72)	-0.0291 (-1.52)
$R_m\text{-}R_f\,(\beta_1)$	0.9237*** (4.29)	0.2407*** (2.27)	1.3142*** (3.57)	1.7510*** (10.90)	1.5235*** (9.96)	0.8819*** (3.44)
SMB (β_2)	0.6370*** (3.97)	0.2422** (2.23)	3.4086*** (5.07)	1.4056*** (5.08)	1.1501*** (5.26)	0.7329*** (4.85)
HML (β_3)	-0.3455 (-1.57)	-0.1715 (-1.25)	-0.1385 (-0.15)	0.3192 (0.98)	0.3280 (1.29)	-0.5575 (-1.69)
M30 (β_4)	0.9699*** (7.96)	0.9066*** (12.23)	0.0395 (1.24)	0.0260 (1.44)	0.0611*** (3.40)	0.0039 (0.11)

Note: A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level and the *t*-statistics are in brackets. This table reports the market adjusted buy and hold abnormal returns in Panel A and the value of alphas are estimated using the single factor model (Panel B), three-factor model (Panel C), and four-factor model (Panel D) for the entire period of 53 days, pre-announcement period of 25 days, announcement period of 3, 5 and 7 days and post announcement period of 25 days. The equations [1], [2], [3] and [4] are executed to generate the market adjusted buy and hold return and the values of the alpha (α) for the models. The alpha (α) measures the announcement period abnormal returns after controlling market factors. All the variables are defined in the data and methodology section. The values of the alphas and market betas are reported in this table. All four models are estimated using the full sample for four different windows.

3.6.1.2 Announcement Period Abnormal Returns for Three Different Target Types

This study investigates Hypothesis 1 by showing the comparison among three samples. Table 3.7 reports the association between the target organisational form and the announcement-period abnormal return to bidding firms around the three-day event window. In this table, the sample is separated into three groups as acquirers of public targets, acquirers of private targets, and acquirers of subsidiary targets. According to the statistics reported in this table, all types of acquirers earn significant positive abnormal returns during the announcement period, regardless of the type of target acquired. This conclusion also applies to all four models estimated.

Panel A of Table 3.7 reports the market adjusted buy and hold return for the announcement period and the differences in means and medians between sub-samples (public, private and subsidiary). According to the statistics reported in this panel, Australian acquirers earn significant positive abnormal returns during the three-day announcement period regardless of the type of target acquired. The mean and median market-adjusted buy and hold returns are positive and statistically significant at the 1 percent level for all three samples analysed. For the subset of public, private and subsidiary targets, the mean (median) market-adjusted buy and hold returns are: 1.95 percent (0.23%), 6.87 percent (1.58%) and 6.47 percent (1.18%), respectively. The differences in means/medians reported in last two columns reveal that bidders for both private and subsidiary targets have earned statistically significant higher abnormal returns than their public target counterparts. Both mean and median differences are statistically significant at the 1 percent level. These findings provide strong support for Hypothesis 1.

Panel B reports coefficient estimates using equations [2] to [4] for a three-day event window. The abnormal returns for the full sample is 1.30 percent, which is consistent with the most recent study by Humphery-Jenner and Powell (2011) who report 1.52 percent abnormal returns for a similar event window. Similar to the results reported in Panel A, the Jensen's alpha is also positive and statistically significant irrespective of the type of the model employed to generate abnormal returns for all types of targets acquired. Bidding firms who also acquire

listed targets enjoy positive and significant excess returns (1.97%). The generally accepted view that bidders for listed targets earn insignificant or negative abnormal returns (Casey *et al.*, 1987; Bugeja and Walter, 1995; Andrade *et al.*, 2001; Carow *et al.*, 2004; Sudarsanam and Mahate, 2006) is not supported by this evidence. Clearly, Australian investors interpreted all types of acquisitions as value enhancing decisions.

However, the alpha values generated by all three models consistently indicate that both bidders for private targets and subsidiary targets realise higher abnormal returns than bidders for public targets.[51] For example, according to the abnormal returns generated by the three factor model, the bidders for private targets have earned significant positive abnormal returns of 4.82 percent, followed by the acquirers of subsidiary targets (4.45%) and then acquirers of public targets (1.97%), in a three-day event window.[52] This magnitude of abnormal returns remains unchanged across all models estimated. This finding provides clues about differential market responses to different types of acquisitions.

To test Hypothesis 1 in the Jensen's alpha framework (i.e. acquirers of private and subsidiary targets earn higher abnormal returns than acquirers of public targets), this study also estimates regressions using the full sample by adding two dummy variables that represent private targets acquisitions and subsidiary targets acquisitions. The coefficients of the private dummy and subsidiary dummy variables should tell us if the acquisitions of private targets and subsidiary targets are associated with higher abnormal returns compared with the acquisitions of public targets. The output of this exercise is reported in the last column in Panel B of Table 3.7. The coefficients of private and subsidiary dummy variables generated by all three models consistently indicate that bidders for both private companies and subsidiaries realise higher abnormal returns than their

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[51] To gauge the significant abnormal returns generated by the subsidiary targets sample, the subsidiary targets sample is separated into two groups according to the organisational form of the seller: (i) those sold by public parents and (ii) by unlisted parents. The result shows that both of these two groups earn significant positive abnormal returns of 5.0 percent and 3.6 percent, respectively.

[52] The five-day event window captures the similar trend of the abnormal returns for three different types of bidding firm. However, alpha values are larger for the five-day event window than three-day event window, indicating larger abnormal returns (see Table A.2 of Appendix A for details).

counterparts bidding for public targets. All these coefficients are positive and statistically significant at the 1 percent level. Therefore, the test of differences in mean/median market adjusted buy and hold returns and multifactor regression estimates support Hypothesis 1, which states that the bidders for private and subsidiary targets earn higher abnormal returns than the bidders for public targets.

Although the mean and median tests, as well as alpha values estimated using all three models, suggest that bidders for subsidiary targets earn relatively lower returns than private targets bidders, the un-tabulated mean/median difference between these two sub-samples is statistically insignificant. This suggests that there is no significant difference in abnormal returns generated by the private and subsidiary targets sample in the announcement period.[53]

In contrast to the findings of studies on the US and UK markets (Chang, 1998; Ang and Kohers, 2001; Draper and Paudyal, 2006), the results of this study provide evidence that Australian bidders for all three types of targets earn, on average, positive abnormal returns during the announcement period. These findings also differ from those of Fuller *et al.* (2002) who reported the largest abnormal returns for the acquirers of subsidiary targets in the US market. However, similar to Antoniou *et al.* (2007), this study provides evidence of the highest abnormal return for the acquirers of private targets compared with the bidders for subsidiary targets during the announcement period. In this study, the results generated by the single factor model remain unchanged even after controlling for market factors such as *SMB* and *HML* and prior stock returns (*M30*).The finding that bidders for private and subsidiary targets earn higher abnormal returns than bidders for public targets supports the predictions of the managerial motive and liquidity hypotheses. The market reaction, detected at the time when acquisitions are announced, indicates that investors believe that Australian managers create value when taking over other entities. Looking at the coefficients for the other market factors, this study does not provide any evidence to support the four-factor model. This study finds that the coefficients of the

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[53] Un-tabulated mean and median test of differences between private and subsidiary targets are statistically insignificant.

Table 3.7
Bidder's Announcement Period Abnormal Returns for Three Different Targets

Panel A: Differences in Mean/Median Market-adjusted Buy and Hold Return For Sub-Sample

	Public Targets	Private Targets	Subsidiary Targets	Public - Private	Public - Subsidiary
Mean	0.0195*** (4.42)	0.0687*** (10.35)	0.0647*** (5.98)	-0.0492*** (-4.93)	-0.0452*** (-3.72)
Median	0.0023*** (2.28)	0.0158*** (12.13)	0.0118*** (7.74)	-0.0135*** (6.00)	-0.0095*** (4.18)

Panel B: Coefficient Estimates of Multi Factor Models

	Public Targets	Private Targets	Subsidiary Targets	Full Sample
Single Factor Model				
α	0.0227*** (3.38)	0.0578*** (8.71)	0.0532*** (6.19)	0.0198*** (3.84)
R_m-R_f (β_1)	1.2765*** (4.21)	0.9203*** (3.04)	1.2097*** (3.31)	1.0907*** (5.71)
Private target dummy	-	-	-	0.0406*** (6.84)
Subsidiary target dummy	-	-	-	0.0314*** (4.64)
Three-factor Model				
α	0.0197*** (2.89)	0.0482*** (5.77)	0.0445*** (5.98)	0.0130** (2.43)
R_m-R_f (β_1)	1.3218*** (3.48)	1.1273*** (3.30)	1.4599*** (3.68)	1.2758*** (5.94)
SMB (β_2)	0.8053* (1.84)	2.5164*** (4.64)	2.3933*** (3.47)	2.0449*** (6.04)
HML (β_3)	-0.2981 (-0.49)	-0.4428 (-0.65)	-0.3338 (-0.44)	-0.3623 (-0.89)
Private target dummy	-	-	-	0.0399*** (6.74)
Subsidiary target dummy	-	-	-	0.0305*** (4.51)
Four-factor Model				
α	0.0229*** (3.31)	0.0460*** (6.38)	0.0452*** (5.84)	0.0126** (2.35)
R_m-R_f (β_1)	1.3856*** (3.67)	1.1084*** (3.24)	1.4625*** (3.69)	1.2666*** (5.91)
SMB (β_2)	0.9425* (2.08)	2.5097*** (4.63)	2.4101*** (3.47)	2.0557*** (6.04)
HML (β_3)	-0.2178 (-0.36)	-0.4509 (-0.66)	-0.3314 (-0.44)	-0.3714 (-0.91)
M30 (β_4)	-1.6094* (-1.95)	0.0136 (0.65)	-0.0063 (-0.35)	0.0026 (0.16)
Private target dummy	-	-	-	0.0395*** (6.79)
Subsidiary target dummy	-	-	-	0.0302*** (4.46)
Sample Size	**643**	**1,310**	**712**	**2,665**

Note: Panel A reports mean and median tests and the significance level using equation [1] The relevant *t*-values (mean) and *w*-values (median) are reported (in brackets). Panel B reports coefficient estimates for equations [2], [3] and [4] together with their relevant *t*-values (in brackets). These models are estimated for the full sample and three sub-samples (i.e. public target acquirers, private target acquirers and subsidiary target acquirers) separately. The alpha (α) measures the announcement period abnormal returns after controlling the market factors. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level.

R_m–R_f and *SMB* variables are consistently positive and significant in all three models estimated. However, the *HML* and *M30* coefficients are insignificant in respective models. For this reason, this study uses the three-factor model as the basis of estimation in the remaining sections of this chapter.

Figure 3.1 illustrates the cumulative average market-adjusted returns (CAMAR) of bidders around the 41-day announcement periods (-20 days to +20 days). The market return is deducted from the respective company returns to measure the net returns and the average abnormal returns are calculated for each day for the sample companies. These average abnormal returns are then added to calculate the cumulative abnormal returns for the period of -20 days to +20 days around the announcement period. The graph in Figure 3.1 clearly shows that private target acquirers' cumulative abnormal returns are sharply higher than the acquirers of subsidiary and public targets.

Announcement Period Cumulative Average Market Adjusted Returns from -20 days to +20 days
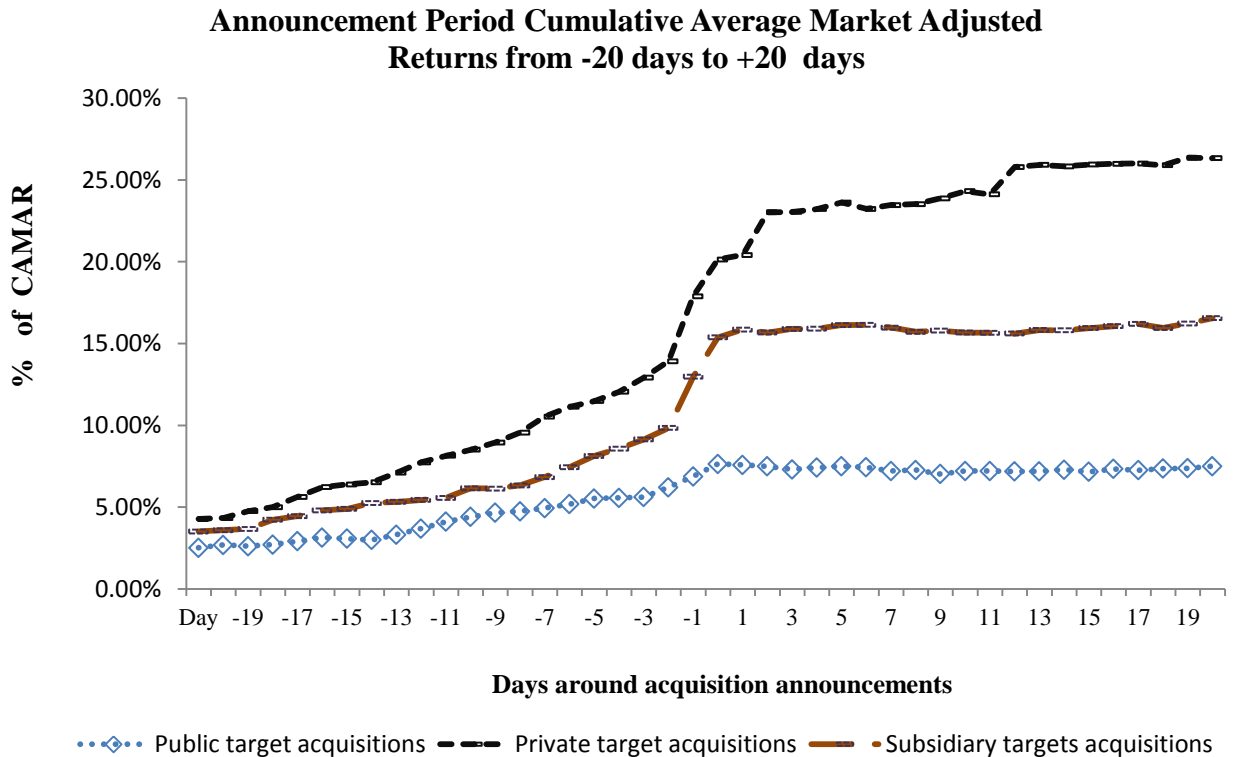
Figure 3.1 Cumulative Average Market Adjusted Returns (CAMAR) for Three Samples

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The graph illustrates that CAMARs starts to increase from -3 days from bid announcement to announcement day. Clearly, the returns for acquirers of private targets are substantially larger than acquirers of subsidiary and public targets in almost every day around the whole announcement event window. The graph strongly supports that the information content of acquisition announcements is impounded into share prices during the announcement period. There is no evidence of information leakages to the market before the announcement or delayed response to such announcement. CAMARs remain stable for public and subsidiary targets in the post-acquisition period. The bidders for private targets observe a maximum 26 percent CAR while subsidiary and public targets earn around 16 percent and 7.5 percent respectively in 41-day announcement period. This provides strong evidence that Australian bidders for private and subsidiary targets gain significantly from acquisition activity.

3.6.1.3 Method of Payment and Abnormal Returns

Prior studies have provided evidence that the abnormal returns generated by bidding firms can be sensitive to the method of payment. As explained in the literature review, cash bids are more favourably seen by the market than stock bids across several markets. Prior Australian studies also provide support for this view. Researchers in Australia have found that stock bids are associated with either insignificant or significant negative abnormal returns (Bellamy and Lewin, 1992; da Silva Rosa *et al.*, 2000). Despite this unfavourable market reaction to equity financed acquisition deals, the evidence uncovered in this study (see Table 3.2, Panel A), and in prior studies (See for example, Bugeja and da Silva Rosa, 2010; Humphery-Jenner and Powell, 2011), reveals that stock financing is a more prominent payment method than cash financing in Australia. The popularity of this payment method may result from the change in the treatment of capital gains tax, which allows target shareholders to defer their immediate tax burden. This study identifies four methods used by Australian companies to settle their deal values: cash payment, stock swap, a combination of cash and stock, and other

methods (see Table 3.2).[54] The last category comprises the settlements made using a combination of common stock, cash, debt, preferred stock, and convertible securities that are classified as 'other' by the SDC.

Table 3.8 reports the coefficient estimates for the three-factor model when each sample is sub-divided into four categories according to the payment method.[55] Panel A shows that the acquisitions of public targets are associated with significant abnormal returns only when the method of payment involves stock. The alpha is significant only for the stock only sample. This is confirmed by the positive (0.0257) and significant stock only dummy coefficient reported in the last column of the table. This finding contradicts prior Australian evidence that suggested cash-financed acquisitions of public targets performed better than their stock-financed counterparts (see Bellamy and Lewin, 1992; da Silva Rosa *et al.*, 2000). This evidence is consistent with the findings of a recent Australian study by Humphery-Jenner and Powell (2011) that documents a significant abnormal return of 1.71 percent when stock is exchanged for the shares of public target firms. They explain that the Australian merger arbitrage market is less active compared to the US; the authors attribute this to the significant positive abnormal returns for stock-financing public targets in Australia as opposed to the US. As suggested by Bugeja and da Silva Rosa (2010), the tendency for Australian acquirers to use stock swaps as a popular method of payment in their acquisitions, and the associated high abnormal returns for such transactions, may indicate that the change in capital gains tax reform has impacted the market's reaction to acquisition announcements.

Panel B of Table 3.8 reports findings for the acquirers of private targets. The statistics in this panel are used to test Hypothesis 2. This panel shows that the bidders for private targets earn positive and significant abnormal returns during the announcement period irrespective of the method of payment. This finding indicates that Australian investors perceive bids for private targets as value

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[54]In the sample, cash only is the commonly used method by public target bidders (41.99%) while a combination of cash and stock is highest for private (38.24%) and subsidiary target bidders (31.94%).

[55] Mean/median market adjusted buy and hold returns are shown in Table A.3 of Appendix A for four different types of payment methods.

creating decisions. However, the abnormal returns generated in stock-financed acquisitions (7.21%) for this sample are larger than the abnormal returns generated by cash-financed acquisitions (3.38%). This is further confirmed by the positive and significant coefficient (0.0257) reported for the stock only dummy in the last column of the table. This supports Hypothesis 2 that bidders for private companies earn higher abnormal returns when the method of payment involves stock rather than cash.

These findings do not lend support to the argument that stock financed acquisitions are made by overvalued bidders to acquire relatively less overvalued targets and therefore such acquisitions should be associated with negative returns (Shleifer and Vishny, 2003). However, the market's more positive response to stock-financed acquisitions of private targets lends support to the argument that stock financing acts as a means of mitigating information asymmetry about the target. Therefore, such acquisitions are associated with higher abnormal returns when the target is an unlisted firm, which is relatively difficult to value compared to a public target (Officer *et al.*, 2009). The bidding firm's shareholders perceive such a deal as value creating because a stock financing acquisition signals positive information about the bidding firm's value in the market, as the seller maintains its economic interests in the ongoing viability of the business assets or stock being sold (Andrew, 2006, p-134). In addition, this finding is consistent with the Chang (1998) hypothesis that the market may value the possible agency benefits associated with the monitoring role of target shareholders when they become concentrated owners of the bidding firm that acquires their firm through a stock swap. In this study sample, more than 90 percent of the stock-financed bids for private targets intended to gain a controlling stake by acquiring more than 50 percent of the outstanding equity of the target firm. The findings of significant positive abnormal returns for stock financed acquisitions do not support the results of the prior Australian study by da Silva Rosa *et al.* (2004), who found insignificant excess returns for bidding firms when the bidders used equity as the method of payment in the acquisition of private targets.

Panel C of Table 3.8 reports the findings for the acquirers of subsidiary targets. The statistics in this panel are used to test Hypothesis 3. The panel shows that the acquirers of subsidiary targets earn significant abnormal returns when the method of payment is either 'stock only' or 'cash and stock'. The alpha values generated for these two samples (8.39% and 6.35%) are positive and significant. The values of the alphas are positive and insignificant for the two payment methods of 'cash only' and 'others'. The cash only dummy variable reported in the last column is negative (-0.0349) and significant, suggesting that the cash payment method is associated with significantly lower abnormal returns compared with a stock only payment method. This finding fails to support Hypothesis 3, which proposes that cash-financed acquisitions of subsidiary targets are associated with higher abnormal returns relative to stock-financed acquisitions.

Table 3.8
Method of Payment and Announcement Period Abnormal Returns

	Cash-only	Stock-only	Cash and Stock	Other	Full Sample
Panel A: Public Targets					
α	0.0014 (0.26)	0.0361*** (2.98)	0.0277 (1.50)	0.0060 (0.10)	0.0061 (0.99)
R_m-R_f (β_1)	0.6904** (2.32)	1.8637*** (3.11)	1.7612** (2.22)	-1.0572 (-0.21)	1.3511*** (3.55)
SMB (β_2)	-0.1223 (-0.33)	1.5295** (2.14)	1.8092 (1.03)	2.7979 (1.19)	0.7845* (1.79)
HML (β_3)	-0.6765** (-2.22)	0.3772 (0.49)	2.4600 (1.21)	-2.3963 (-0.33)	-0.2707 (-0.45)
Stock-only dummy	-	-	-	-	0.0257*** (2.87)
Cash and stock dummy	-	-	-	-	0.0176 (1.47)
Other dummy	-	-	-	-	0.0378 (1.42)
Sample Size	**270**	**239**	**103**	**31**	**643**
Panel B: Private Targets					
α	0.0338** (2.07)	0.0721*** (2.84)	0.0381*** (4.02)	0.0959*** (2.88)	0.0298*** (3.10)
R_m-R_f (β_1)	0.9431 (1.50)	2.5876** (2.22)	0.6424 (1.46)	2.3784 (1.91)	1.1529*** (3.39)
SMB (β_2)	2.8044 (1.82)	9.5296*** (2.85)	0.7088 (1.57)	4.6672** (2.41)	2.4724*** (4.63)
HML (β_3)	-0.8811 (-0.61)	-0.4553 (-0.26)	-0.0926 (-0.18)	1.0790 (0.46)	-0.3536 (-0.52)
Stock-only dummy	-	-	-	-	0.0373*** (3.15)
Cash and stock dummy	-	-	-	-	0.0072 (0.76)
Other dummy	-	-	-	-	0.0514** (2.42)
Sample Size	**272**	**449**	**501**	**88**	**1,310**
Panel C: Subsidiary Targets					
α	0.0158 (1.50)	0.0839** (2.57)	0.0635*** (4.02)	0.0256 (0.70)	0.0583*** (4.68)
R_m-R_f (β_1)	-0.6059 (-0.50)	3.1993 (1.63)	2.0036*** (3.42)	0.6328 (0.40)	1.5067*** (3.78)
SMB (β_2)	0.9221 (0.91)	5.6142 (1.79)	5.2447** (2.58)	1.5755 (0.69)	2.4130*** (3.52)
HML (β_3)	-2.5940 (-1.21)	1.8018 (0.52)	0.6966 (0.43)	1.6511 (0.74)	-0.2745 (-0.37)
Cash-only dummy	-	-	-	-	-0.0349*** (-2.65)
Cash and stock dummy	-	-	-	-	0.0035 (-0.23)
Other dummy	-	-	-	-	-0.0155 (-0.63)
Sample Size	**226**	**205**	**230**	**51**	**712**

Note: The table reports coefficient estimates for equation [3] together with their relevant *t*-values (in brackets). These models are estimated for each category of method of payment under the three sub-samples (i.e. public target acquirers, private target acquirers and subsidiary target acquirers) analysed. The alpha (α) measures the announcement period abnormal returns after controlling the market factors. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level.

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Overall, the acquisition market appears to perceive stock-financed acquisitions more favourably than cash-financed acquisitions, as the 'stock only' dummy is positive and significant in both the public targets and the private targets samples. The finding that stock-financed acquisitions are associated with significantly higher abnormal returns than cash-financed acquisitions, irrespective of the nature of the target acquired, contradicts the findings of prior Australian studies such as Bellamy and Lewin, (1992), da Silva Rosa *et al.*, (2000) and da Silva Rosa *et al.* (2004). However, this evidence is consistent with the findings of a recent Australian study by Humphery-Jenner and Powell (2011) that documents a significant abnormal return of 3.72 percent when stock is exchanged for the acquisition of target firms. As suggested by Bugeja and da Silva Rosa (2010), the tendency for Australian acquirers to use stock swaps as a popular method of payment in their acquisitions, and the associated high abnormal returns for such transactions, may indicate that the change in capital gains tax has impacted the market's reaction to acquisition announcements.[56]

3.6.1.4 Bid Characteristics and Abnormal Returns

As discussed in section 2, the M&A literature provides evidence to support the argument that the abnormal returns generated by the bidding firm is conditional to a number of other bid characteristics. In order to investigate this issue, this study analyses the influence of factors such as relative size, bid frequency and the industry membership, and their impact on the abnormal return generated by the bidding firm. The sample companies are sub-divided into two groups using these variables and the three-factor model [equation 3] is estimated for each group separately for the three-day event window. In addition, a dummy variable is included in the three-factor model to represent the particular bid characteristic and the model was estimated using the total sample. However, for expositional simplicity, this study reports only the alpha values in Table 3.9.

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[56] Capital gain tax (CGT) reforms on December 10, 1999 allow shareholders to rollover the capital gain until the ultimate disposal of the interest received in the exchange as a result of the takeover. Prior to this period, shareholders were liable for immediate taxable capital gain or loss irrespective of the form of consideration paid.

Panel A of Table 3.9 exhibits the abnormal returns in regard to the relative size of the bidder. The relative size of the bidders is arrived at by dividing the deal value by the bidder's market value of the equity one month prior to the acquisition announcement. Using this relative size variable, bidders were ranked from the highest to the lowest in each year, and the top 30 percent was termed the 'high relative size' group and the bottom 30 percent was termed the 'low relative size' group. The literature suggests that (see Asquith *et al.*, 1983; Jarrell and Poulsen, 1989; Higson and Elliott, 1998; Draper and Paudyal, 2006) the acquisition of high relative size targets are associated with more synergies than the acquisition of low relative size targets. Therefore, this study expects high relative size acquirers to earn higher abnormal returns than low relative size acquirers.

The results in Table 3.9, Panel A, show that high relative size public target acquirers earn significant positive abnormal return (1.65%) while the low relative size group earns insignificant negative abnormal returns (-0.010%). This finding does not support Fuller *et al.* (2002) and Draper and Paudyal (2006) who report significant negative returns for acquisitions of larger public targets. On the other hand, both high and low relative size groups for bidders for private and subsidiary targets earn statistically significant abnormal returns. However, the magnitude of an abnormal return generated by high relative size acquirers is consistently higher than the abnormal return earned by low relative size acquirers in all three samples. In particular, the high relative size dummy is significant in both the private targets acquirer's sample (0.0607) and the subsidiary targets acquirer's sample (0.0732), indicating that the Australian acquirers earn statistically significant higher abnormal returns when they acquire relatively large private and subsidiary targets.

Table 3.9
Bid characteristics and Announcement Period Abnormal Returns

Panel A: Relative Size			
	Public Targets	**Private Targets**	**Subsidiary Targets**
High 30% (α)	0.0165*** (2.65) [193]	0.1017*** (5.50) [391]	0.0738*** (3.84) [214]
Low 30% (α)	-0.0010 (-0.15) [193]	0.0116** (2.15) [391]	0.0227*** (2.63) [214]
Dummy high relative size	0.0165 (1.61) [643]	0.0607*** (5.44) [1,310]	0.0732*** (4.69) [712]
Panel B: Frequent Acquirers			
Year-by-year sample analysis			
First bid (α)	0.0201*** (2.59) [515]	0.0529*** (6.27) [1015]	0.0433*** (5.33) [598]
Subsequent bids (α)	0.0164 (1.32) [128]	0.0352*** (2.64) [295]	0.0473*** (2.92) [114]
Dummy first bid	0.0058 (0.64) [643]	0.0148 (1.62) [1,310]	-0.0010 (-0.08) [712]
Bidder status			
Single bidder (α)	0.0324* (1.84) [174]	0.0721*** (4.65) [398]	0.0530*** (3.72) [243]
Multiple bidders (α)	0.0153** (2.28) [469]	0.0388*** (4.99) [912]	0.0399*** (4.87) [469]
Dummy single bidders	0.0167* (1.65) [643]	0.0293*** (2.78) [1,310]	0.0171 (1.39) [712]
Panel C: Industry Analysis			
Related acquisition (α)	0.0216** (2.20) [373]	0.0476*** (4.68) [690]	0.0402*** (4.85) [483]
Unrelated acquisition (α)	0.0159** (2.12) [270]	0.0486*** (4.86) [620]	0.0574*** (3.56) [229]
Dummy unrelated bidders	0.0088 (1.08) [643]	0.0046 (0.54) [1,310]	0.0204* (1.70) [712]
Mining bidders (α)	0.0340** (2.22) [182]	0.0742*** (3.96) [266]	0.0522*** (4.79) [331]
Non-mining bidders (α)	0.0111* (1.78) [461]	0.0406*** (5.51) [1044]	0.0355*** (3.47) [381]
Dummy mining bidders	0.0038 (0.38) [643]	0.0315** (2.46) [1,310]	0.0020 (0.18) [712]
High tech bidders (α)	0.0487** (2.51) [94]	0.0314** (2.47) [367]	0.0129 (0.70) [137]
Non high tech bidders (α)	0.0151** (2.07) [549]	0.0544*** (6.33) [943]	0.0497*** (6.21) [575]
Dummy high tech bidders	0.0157** (2.26) [643]	-0.0039 (-0.40) [1,310]	0.0022 (0.15) [712]
Panel D: Acquisition Atmosphere			
Friendly bids (α)	0.0184** (2.51) [66]	-	-
Hostile bids (α)	0.0302 (1.62) [577]	-	-
Dummy hostile bidders	0.0044 (0.34) [643]	-	-

Note: The table reports coefficient estimates for equation [3] together with their relevant *t*-values (in brackets) and sample size [in brackets]. These models are estimated for various bid characteristics (i.e. the relative size, bid frequency, acquisition industry and atmosphere) for the three samples (i.e. public target acquirers, private target acquirers and subsidiary target acquirers) analysed. The alpha (α) measures the announcement period abnormal returns after controlling the market factors and bid characteristics. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level. Only the values of alphas are reported in this table.

Many studies find that the bidders' announcement period returns have a direct relationship with bid frequency. Fuller *et al.* (2002) document a negative market reaction around acquisition announcement for bidding firms that are involved in multiple acquisitions of public targets. Antoniou *et al.* (2007) also confirm the Fuller *et al.* (2002) explanation by reporting an inverse relationship between the order of acquisitions deals and announcement period returns. On the contrary, Asquith *et al.* (1983) find evidence of a positive price reaction even in the fourth bid. Literature also suggests that bidders involved in multiple acquisitions are more experienced in this field and thus a positive reaction may occur in the subsequent bids (Antoniou *et al.*, 2007). These counter arguments provide motivation to examine this issue in an Australian context.

To investigate the impact of bid frequency, the sample was divided into two groups: (i) first bid and (ii) subsequent bids.[57] This study defines these terms using two different definitions: yearly bid frequency and bidder status. In the first category, the initial bid is termed the 'First bid', while if the same bidders place more than one bid in the same year they are termed 'Subsequent bids'. This process is followed for each sample year separately to obtain two samples. In the second category, a bidder who announces only one bid during the entire sample period is termed a 'Single bidder' and all other bidders are termed 'Multiple bidders'. In this study, first bid comprises 79.85 percent of bidding firms while the remaining 20.15 percent are subsequent bids under first classification. In the second category, 30.58 percent bidders are considered as single bidders and the remaining 69.42 percent are multiple bidders. These differences provide justification for using two different definitions to investigate the influence of multiple acquisitions. Panel B of Table 3.9 shows that the abnormal returns for all the higher order deals are lower than the abnormal returns for lower order bids in all target types. Subsequent bidders for public targets observe insignificant returns (1.64%), while it is significant (2.01%) for the first bid category. Both private and subsidiary bidders earn significant excess returns in both categories. However, the

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[57] Multiple bidders are highest in percentage for private target bidders (48.09%), followed by subsidiary (47.36%) and public target bidders (41.68%).

coefficient of the single bidders dummy is statistically insignificant in all three groups, which suggests that there are no differences in abnormal returns between the single and subsequent acquisition groups. The magnitude of a 'Single bidder' coefficient is higher than the 'First bid' coefficient for all types of target acquisitions. In this definition, the single bidder dummy variable is statistically significant for public and private targets groups while it is insignificant for subsidiary targets. This finding tends to favour the argument that multiple acquisition attempts are not seen by the capital market as favourably as single acquisition attempts.

The existing literature is supportive of the argument that diversifying acquisitions generate lower returns for bidding firms compared with focus increasing acquisitions. Similar to Morck *et al.* (1990), value reducing results are also reported by Berger and Ofek (1995) for unrelated acquisitions. Servaes (1996) comments that "the valuation results provide no evidence to indicate that diversification benefits shareholders". Maquieira *et al.* (1998) also report that conglomerates do not create financial synergies for stockholders. However, some studies have uncovered evidence of positive abnormal returns for diversifying bidders (see for example, Weston and Mansinghka, 1971; Amihud *et al.*, 1986). To examine this issue for the Australian market, the sample was categorised into two groups as related and unrelated acquisitions; related if both the target and the bidder share the same four digit SIC codes and unrelated if they have different SIC codes. This percentage of diversifying acquisitions in Australia is relatively similar to the USA and the UK markets (Fuller *et al*., 2002; Carow *et al*., 2004; Antoniou *et al*., 2008b). In this study sample, 58.01 percent of acquisitions were found to be related acquisitions while the remaining 41.99 percent were identified as unrelated acquisitions. Bidding firms of private targets are associated with the highest percentage of unrelated acquisitions in the sample (47.33%), followed by public targets (41.99%) and subsidiary targets (32.16%).

Panel C of Table 3.9 shows that bidding firms generate, on average, higher abnormal returns when they acquire unrelated targets than when they acquire related targets. This conclusion is particularly relevant to subsidiary target

acquisitions; the bidders for these targets earned statistically significant higher abnormal returns (5.74%) when acquisition is associated with unrelated targets. The strong positive association between the unrelatedness of acquisitions and abnormal returns is highly pronounced for the subsidiary target acquisitions, as indicated by the significant coefficient (0.0204) of the unrelated dummy of such targets. However, the insignificant sector dummy for public and private targets suggests that there is no statistical difference in abnormal returns between these two samples.

In addition, this study investigates mining and high tech bidders' performance, as acquisitions are soaring in these industries. In this sample, mining bidding firms are comprised of 29.23 percent and high tech bidders represent 15.80 percent of the total sample. The percentages of mining (high tech) bidders for the samples are: public targets 6.83 (3.53) percent, private targets 9.98 (13.77) and subsidiary targets 12.42 (5.14) percent. The mining and high tech bidders are associated with the highest acquisitions with subsidiary and private targets respectively. There is consistent evidence of higher announcement period returns for bidders from mining industry regardless of type of target acquired. But such return differences are statistically significant between mining and non-mining bidding firms, only for private targets acquirers. On average, high tech bidders earn lower announcement period returns compared with non-high tech bidders. However, such consistent evidence is not present for the public target acquisitions. The insignificant coefficient of the high tech dummy variables for private and subsidiary targets indicates no differences in abnormal returns for those two groups. These differences are pronounced for mining bidders for public targets. The evidence reveals that, on average, mining targets bidders enjoy higher announcement period returns than non-mining targets bidders, while high tech targets bidders earn lower announcement period returns compared with non-high tech target bidders.

Panel D of Table 3.9 shows abnormal returns for hostile and friendly public target bidders. The result shows that friendly public target bidders enjoy significant positive abnormal returns compared with their counterparts that make

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hostile bids. However, the insignificant coefficient of the hostile acquisition dummy (0.0044) reveals that there is no significant difference between these two groups for Australian public target bidders. The unlisted targets in the Australian M&A market do not experience any hostile or unfriendly acquisition attempts.

3.6.1.5 Firm Characteristics and Abnormal Returns

A number of prior studies focused on various firm characteristics and examined their association with the abnormal returns of bidding firms. Pre-acquisition profitability, pre-acquisition cash flow holdings, pre-acquisition leverage, and the market value of the equity of the bidding firm, have been found to be strongly associated with announcement period return performance. This study examines these characteristics by categorising the sample firms into two groups: 'High' and 'Low' for each characteristic. Bidding firms were ranked from highest to the lowest on the basis of respective firm characteristics; the top 30 percent was assigned to the 'High' category and the bottom 30 percent was assigned to the 'Low' category. This process was continued for the full sample period. The abnormal return is estimated using the three-factor model for a three-day event window for each sub-sample group for comparison. The results are reported in Table 3.10.

Panel A of Table 3.10 shows the relationship between profitability, which is measured by return on asset (ROA), and announcement period of abnormal returns. There is evidence to suggest that the market reacts more positively when less profitable firms make acquisitions rather than when highly profitable firms make such attempts. For example, the highly profitable acquirers of public targets observe insignificant announcement period of abnormal returns (0.003%) while low profitable acquirers earn significant positive returns (5.02%). Similarly, the magnitudes of the abnormal returns generated by low profitability acquirers of private targets and subsidiary targets (4.38% and 2.53%, respectively) are higher than those achieved by high ROA acquirers (2.82% and 1.81%, respectively). The positive and significant coefficients generated by the low ROA dummy for the

acquirers of private and subsidiary targets clearly indicate that low ROA targets outperform their high ROA target in terms of the abnormal returns generated. These findings are consistent with Capron and Shen (2007) who report a negative relationship between profitability and the acquirers' abnormal returns.

Harford (1999) finds that cash-rich firms are more likely to be involved in value decreasing acquisitions. The empirical results also show that an increase in free cash flow is associated with a decrease in the bidder's gain from takeover activities (Lang *et al.*, 1991). This finding is in line with the free cash flow theory of Jensen (1986). The theory states that highly empowered managers may spend excessive free cash flow in negative net present value (NPV) projects instead of paying them to shareholders. Therefore, this study analyses the bidders' returns on the basis of free cash flow (measured by dividing the net cash receipts from operations by total assets of the most recent financial year) of bidders. The relevant findings are reported in Panel B of Table 3.10. The findings reveal that, on average, the market response is more positive and significant when cash tight acquirers make acquisitions. This evidence is more pronounced for bidders for public and subsidiary targets, where cash rich firms observed insignificant announcement period return while cash tight acquirers realise significant positive returns. In the sub-sample of private target acquisitions, even though both groups earned significant positive returns, the magnitude of the abnormal returns is large for cash tight acquirers. The positive significant coefficient generated for the low cash flow dummy for private and subsidiary targets supports the view that cash tight acquisitions outperform their cash rich counterparts in terms of abnormal returns. Clearly, as Jensen (1986) highlighted, the market is willing to accept cash tight companies' acquisition programs as more value creating activities compared with those initiated by cash rich firms. However, this finding is inconsistent with a prior Australian study by Le and Schultz (2007) that reports no association between free cash flows and the bidding firm's shareholder wealth effects.

Panel C of Table 3.10 reports the influence of pre-acquisition debt (measured by dividing net debt by total assets for the most recent financial year) on abnormal returns. The empirical literature suggests that leverage limits

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managerial discretion as high debt payment reduces the future free cash flow (Masulis *et al.*, 2007). Therefore, managers of highly leveraged firms are more inclined to improve firm performance to avoid financial distress (Maloney *et al.*, 1993). This study expects leverage to have a positive effect on abnormal returns during the announcement period. However, the results reported in Panel C of Table 3.10 show that highly leveraged public and subsidiary target acquirers earn mostly insignificant abnormal returns whereas low leveraged bidders earn statistically significant abnormal returns. Bidders for private targets enjoy significant positive abnormal returns in both cases; however, low leveraged bidders earn higher abnormal returns compared with high leveraged bidders. The significant negative coefficients generated by high leveraged dummy for public, private and subsidiary targets (-1.88%, -3.23% and -2.69%, respectively) consistently indicate that low leveraged Australian acquirers earn significantly high abnormal returns than their high leveraged counterparts, irrespective of the type of target acquired.

Panel D of Table 3.10 shows the abnormal returns performance on the size of the bidding firms. The size of the bidding firm has been found to be an important determinant of the abnormal returns generated by bidding firms. It is evident in the literature that small firms' managers are more likely to make decisions that align with the shareholders' interests compared with the managers of large firms (Moeller *et al.*, 2004). On average, the magnitude of abnormal returns realised by small size bidders is higher than for large size bidders for any sub-sample analysed. In all samples, such abnormal returns differences between small and large bidding firms are statistically significant at the 1 percent level, as indicated by the significant coefficients of the small size dummy.

Table 3.10
Firm characteristics and Announcement Period Abnormal Returns

Panel A: Pre-acquisition ROA

	Public Targets	Private Targets	Subsidiary Targets
High (Top 30% ROA) (α)	0.0003 (0.05) [195]	0.0282*** (3.55) [396]	0.0181** (2.20) [214]
Low (Bottom 30% ROA) (α)	0.0502*** (3.10) [192]	0.0438*** (2.88) [388]	0.0253*** (2.88) [212]
Low ROA dummy	0.0087 (1.13) [643]	0.0345*** (4.66) [1,310]	0.0322*** (3.21) [712]

Panel B: Pre-acquisition Free Cash Flow

	Public Targets	Private Targets	Subsidiary Targets
High (Top 30% free cash flow) (α)	0.0051 (0.54) [193]	0.0394*** (4.31) [393]	0.0119 (1.41) [214]
Low (Bottom 30% free cash flow) (α)	0.0443*** (2.77) [191]	0.0473*** (3.19) [389]	0.0787*** (4.56) [211]
Low cash flow dummy	0.0046 (0.53) [643]	0.0177** (2.19) [1,310]	0.0268*** (2.62) [712]

Panel C: Pre-acquisition Net Debt

	Public Targets	Private Targets	Subsidiary Targets
High (Top 30% net debt) (α)	0.0064 (0.76) [194]	0.0330*** (2.95) [389]	0.0191 (1.49) [215]
Low (Bottom 30% net debt) (α)	0.0204* (1.73) [193]	0.0583*** (4.69) [391]	0.0666*** (4.40) [213]
High levered dummy	-0.0188*** (-2.58) [643]	-0.0323*** (-3.86) [1,310]	-0.0269** (-2.50) [712]

Panel D: Pre-acquisition Market Value

	Public Targets	Private Targets	Subsidiary Targets
Large (Top 30% market value) (α)	0.0086 (1.12) [194]	0.0222** (2.51) [395]	0.0233*** (2.45) [216]
Small (Bottom 30% market value) α)	0.0538*** (3.26) [192]	0.0738*** (4.47) [391]	0.0873*** (4.77) [212]
Small size dummy	0.0227*** (3.33) [643]	0.0421*** (5.99) [1,310]	0.0461*** (4.98) [712]

Note: The table reports coefficient estimates for equation [3] together with their relevant *t*-values (in brackets) and sample size [in brackets]. These models are estimated for various firm characteristics (i.e. the pre-acquisition ROA, cash holdings, net debt holdings and size of the bidding firms) under the three sub-samples (i.e. public target acquirers, private target acquirers and subsidiary target acquirers) analysed. The alpha (α) measures the announcement period abnormal returns after controlling the market factors and firm characteristics. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level. The values of alpha only are reported in this table.

3.6.1.6 Abnormal Returns of Sample Firms by Time Periods

      According to Asquith *et al*. (1983), the market for corporate control may change from time to time due to a number of reasons such as government regulations, acquisition volume and tax laws. Many earlier studies examine acquisition performance considering the impact of different time periods. [58] Therefore, this study also examines the bidding firms' abnormal returns across sub-periods. The years 2004-2007 were considered the most active M&A market period in Australia in terms of volume of acquisition deals reported in the Thomson Reuters SDC Platinum Mergers and Acquisitions database.[59] On the other hand, the economy was experiencing financial turmoil in 2008 and 2009 due to the global financial crisis. Therefore, the total sample period was classified into three sub periods, 2000-03, 2004-07 and 2008-10, and equation [3] was estimated for each period separately for the three-day event window. The alpha values generated by the model are presented in Table 3.11.

Table 3.11
Bidder's Abnormal Returns by Time Period

	Public Targets	**Private Targets**	**Subsidiary Targets**
2000-2003	0.0162 (1.38) [203]	0.0464*** (3.46) [344]	0.0580*** (3.40) [181]
2004-2007	0.0062 (0.75) [241]	0.0349*** (4.18) [621]	0.0387*** (3.05) [294]
2008-2010	0.0220 (1.62) [199]	0.0845*** (5.12) [345]	0.0489*** (4.00) [237]

Note: The table reports coefficient estimates for equation [3] together with their relevant *t*-values (in brackets) and sample size [in brackets]. These models are estimated for the sub-samples (i.e. for the period of 2000-03, 2004-07 and 2008-10) analysed. The alpha (α) measures the announcement period abnormal returns after controlling the market factors and time periods. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level. The values of the alphas only are reported in this table.

      The table shows that in the years 2000-2003, the bidding firms observed significant abnormal returns when they acquired private and subsidiary targets only. However, subsidiary bidders earned the highest announcement period returns during these time periods. These two groups also earned significant

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[58] See for example, Bradley *et al.* (1988), Jarrell and Bradley (1980) and Schipper and Thompson (1983b).
[59] See details discussion in chapter 2.

abnormal returns during the sub period of 2004-2007. The bidders for all types of targets observe relatively lower abnormal returns during this period compared with earlier periods (2000-2003). This is surprising, as the economy was booming during this time period with an active takeover market. Bidders for private targets enjoy the highest announcement period returns during the period of 2008-2010 suggesting that private targets have been sold at a higher discount during the GFC period. Overall, the sub-period analysis does not provide any support for the argument that the abnormal returns performance of bidding firms in Australia varies across different time periods.

The findings above from univariate analysis provide strong evidence that both bid and firm characteristics influence the abnormal returns generated by bidding firms. Therefore, it is worthwhile to investigate such variables in a multivariate framework in analysing the announcement period of abnormal returns for bidding firms.

3.6.2 Multivariate Analysis

The earlier sections show abnormal returns for bidding firms using a univariate framework. The analysis of univariate results reveals that a number of factors directly influence the abnormal returns generated by bidding firms during the announcement period. Therefore, this study further investigates the influence of bid and firm specific characteristics by performing multivariate regressions. As the prior univariate results provide evidence of fundamental differences between bidders for public, private and subsidiary targets, regressions are estimated for each group separately. Sub section (i) discusses the findings obtained from the estimation of multiple regression models including a number of bid characteristics. These include commonly used bid characteristics and some others that are associated with the Australian jurisdiction. Sub-section (ii) analyses the bidders' announcement period of abnormal returns when both bid and firm characteristics are included.

3.6.2.1 The Influence of Bid Characteristics on Announcement Period Abnormal Returns

The results generated by estimating equations [5a], [5b] and [5c] are presented in Table 3.12 for the three samples separately.[60] Several observations follow from the results generated for the three sub-samples. First, the constant term is positive and significant at the 1 percent level in all three acquisition samples, even after controlling for the effects of influential bid characteristics; irrespective of the nature of the target, Australian investors perceive acquisitions as value creating decisions. Second, the magnitudes of constant terms are much higher compared with those reported in Table 3.7, indicating the importance of incorporating these control variables in the analysis of abnormal returns generated by bidding firms. Third, the coefficients for two market variables [$(R_m–R_f)$ and *SMB*] are consistently positive and significant in all three samples analysed. Fourth, bids for Australian private and subsidiary targets are more value creating compared with such acquisitions in the US market. For example, Fuller *et al.* (2002) report 4.2 percent (8.5%) abnormal returns for acquirers of private targets (subsidiary targets) for a five-day event window, whereas this sample generates three-day abnormal returns of approximately 7.07 percent for private targets acquisitions and approximately 9.37 percent for subsidiary targets acquisitions. Finally, the relative size variable generates a significant positive coefficient, indicating the market's positive assessment of possible synergies associated with the acquisition of relatively large targets irrespective of the nature of the target's organisational form.

The findings also indicate that stock-financed acquisitions of private targets are associated with significant positive abnormal returns; the method of financing does not seem to have a significant influence on the abnormal returns for bidders of public targets. The 'cash-only dummy' generates a mainly insignificant coefficient for bidders on public (-0.0097) and private targets

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[60] The re-estimation of equation [5a], [5b] and [5c] based on longer event windows (both five and seven days) to assess the sensitivity of the reported results for the length of the test window was also found significant in all models that are estimated.

(0.0044). However, the magnitude of the coefficient of the 'cash-only dummy' is consistently lower than that of the 'stock-only dummy' providing some support for the tax based argument. On average, the market does not seem to either reward or penalise cash-financed acquisitions in a significant fashion for the acquisitions of public and private targets. As Draper and Paudyal (1999) argue with the 'competitive takeover market hypothesis', the market's neutral response to cash offers may indicate that it views cash-financed acquisitions as zero net present value transactions. The market does not seem to believe that the bidders use their overvalued equity to finance acquisition deals; the coefficient on the stock-only dummy variable is insignificant for the 'public targets' and 'subsidiary targets' sub-samples and is positive as well as significant for the 'private targets' sample.

These findings contrast with US and UK evidence in the field that has found equity-financed acquisitions to be associated with significantly negative abnormal returns (see Travlos, 1987; Draper and Paudyal, 1999; Moeller *et al.*, 2004; Song and Walkling, 2005). The finding of a positive and statistically significant coefficient for the stock-only dummy variable in the 'private targets' sample supports the view that the emergence of blockholders and the monitoring benefits associated with such transactions are valued positively by the capital market. This view is supported by the result that stock-financed acquisitions of private targets earn significant positive abnormal returns; though bidders are unwilling to use equity to finance acquisitions of private targets due to a high level of information asymmetry associated with such firms (Hansen, 1987).

The coefficient for the multiple-bid dummy (-0.0139) is negative and marginally significant at the 1 percent level for the acquirers of public targets. The coefficient is insignificant for the two unlisted target acquirer samples. The market appears to interpret multiple acquisition attempts made by the acquirers of public targets as value reducing activities motivated by agency considerations and/or hubris. Multiple acquisitions of public targets may be influenced by managerial motives, such as empire building and prestige, rather than creating value for shareholders (Mahoney, 1979; Agarwal, 1981; Kostiuk, 1990). The break fee variable has a different influence in the three samples. The variable's

impact is marginally significant and positive on the abnormal returns generated by acquisitions of private targets (significant at the 10% level) and its significant influence is negative for both public and subsidiary target acquisitions (at 5% and 1%, respectively). The findings for the 'public target acquirers' and the 'subsidiary target acquirers' are consistent with the evidence reported in the prior Australian study by Chapple *et al.* (2007) that documents the detrimental effect from the target shareholder perspective. The researchers find that break fees have a detrimental effect on shareholders wealth in bidder firms. However, the positive coefficient generated for the acquirers of a 'private target' sample suggests that the bidders for such targets are able to use break fees to ensure the success of a bid and to acquire private targets at an attractive price. The differential findings uncovered for the break fees variable, in particular for the acquirers of public and private targets, may be related to the difference in information asymmetry between these two categories of firms. As the degree of information asymmetry is high for private targets, by entering into a break fee agreement, bidders may signal to the market that they seal a valuable deal for a less competitive target. On the other hand, when such an agreement is entered into in acquiring a public target, it may signal to the market that the bidder has locked in a deal that may not be worth it.

In the public target sample, public target acquirers earn significant higher abnormal returns when they acquire unlisted public targets. The unlisted public targets dummy generates a positive coefficient (0.0890) that is significant at the 1 percent level. The market seems to favour such acquisitions, perhaps because of the bargaining power that the bidders can enjoy when negotiating with an unlisted target because of the information asymmetry associated with such targets and the resultant weak competition. Faccio *et al.* (2006) document similar evidence for European markets which they term the 'listing effect'. The acquirers of private targets generate higher abnormal returns when they make acquisitions through privately negotiated deals. For this sample, the 'private deals' dummy generates a positive coefficient (0.2055) that is significant at the 1 percent level. This finding could also be attributable to the greater information asymmetry within private

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firms that allows bidders to make different offers to individual investors of the target and thereby acquire the target at an attractive price.

When a bidder acquires a subsidiary from a publicly listed parent firm for cash, such a bidder generates significantly higher abnormal returns. The publicly listed parent dummy in this sample generates a positive coefficient of 0.0434, significant at the 10 percent level. This finding is particularly interesting as the 'cash payments dummy' generates a significantly negative coefficient for this category of acquisitions. One possible explanation for this result is that even though not all the subsidiary acquisitions funded by cash are value creating, on balance, those that are sold by publicly listed parents to fund their urgent liquidity needs are interpreted as value enhancing acquisitions by the capital market. This finding provides partial support for the liquidity hypothesis proposed by Officer (2007) and the fire sale of assets argument by Shleifer and Vishny (1992).

There is some evidence to suggest that the business cycle influences the abnormal returns earned by bidding firms, as companies that acquired private targets during the period of the global financial crisis have realised significant positive abnormal returns. The coefficient of the GFC dummy is positive (0.0264) and significant at the five percent level for the acquirers of private targets. This finding indicates that private firms are more vulnerable to recession than public entities. Private firms also provide opportunities for financially strong bidders to use their competitive position over weak firms and to acquire them at a discounted value (Alexandrou and Sudarsanam, 2001).

Table 3.12
Multiple Regression Estimates (Bid Characteristics)

Independent Variable	Acquisition of Public Targets		Acquisition of Private Targets		Acquisition of Subsidiary Targets	
	Equation 1	Equation 2	Equation 1	Equation 2	Equation 1	Equation 2
Constant	0.0391^{***} (2.86)	0.0373^{***} (2.72)	0.0729^{***} (6.41)	0.0707^{***} (6.24)	0.0885^{***} (5.86)	0.0937^{***} (6.05)
R_m-R_f	1.3420^{***} (3.61)	1.4023^{***} (3.91)	1.2695^{***} (3.73)	1.1836^{***} (3.48)	1.5138^{***} (3.93)	1.5051^{***} (3.91)
SMB	0.8623^{*} (1.96)	0.9093^{**} (2.18)	2.2633^{***} (4.39)	2.2714^{***} (4.45)	2.2355^{***} (3.44)	2.2141^{***} (3.41)
HML	-0.3306 (-0.52)	-0.3494 (-0.56)	-0.0515 (-0.08)	-0.1108 (-0.17)	-0.5324 (-0.73)	-0.5237 (-0.71)
Cash-only dummy	-0.0144 (-1.26)	-0.0097 (-0.80)	0.0065 (0.66)	0.0044 (0.45)	-0.0147 (-1.24)	-0.0233^{**} (-2.01)
Stock-only dummy	0.0000 (0.00)	-0.0082 (-0.64)	0.0210^{**} (2.07)	0.0184^{*} (1.82)	0.0069 (0.49)	0.0066 (0.47)
Ln relative size	0.0050^{**} (2.25)	0.0040^{*} (1.86)	0.0173^{***} (7.41)	0.0167^{***} (7.14)	0.0167^{***} (5.57)	0.0177^{***} (5.74)
Unrelated dummy	0.0109 (1.34)	0.0075 (0.93)	-0.0027 (-0.32)	-0.0028 (-0.33)	0.0083 (0.73)	0.0082 (0.71)
Multiple bid dummy	-0.0162^{*} (-1.93)	-0.0139^{*} (-1.68)	0.0009 (0.11)	0.0016 (0.18)	-0.0086 (-0.84)	-0.0079 (-0.77)
Deal Attitude Dummy	0.0017 (0.13)	0.0034 (0.26)	-	-	-	-
Private deal dummy	-	-0.0130 (-1.36)	-	0.2055^{***} (3.66)	-	-0.0926 (-1.37)
Break fees dummy	-	-0.0292^{**} (-2.46)	-	0.2115^{*} (1.87)	-	-0.1025^{***} (-3.98)
Unlisted public target dummy	-	0.0890^{***} (3.05)	-	-	-	-
Public parent dummy	-	-	-	-	-	0.0434^{*} (1.76)
GFC period dummy	0.0011 (0.10)	0.0052 (0.50)	0.0284^{**} (2.58)	0.0264^{**} (2.43)	0.0060 (0.51)	-0.0011 (-0.09)
F-Statistics	4.74^{***}	7.15^{***}	14.12^{***}	13.05^{***}	8.56^{***}	7.07^{***}
N	643	643	1,310	1,310	712	712
Adjusted R^2	0.0550	0.1108	0.0828	0.0920	0.0874	0.0929

Note: The table reports coefficient estimates and their respective *t*-values (in brackets) for equations [5a], [5b] and [5c]. The dependent variable is the bidder's three-day buy and hold excess return and the independent variables included in the model are three market variables, traditional bid characteristics and bid characteristics specific to Australia. . The constant (α) measures the announcement period abnormal returns after controlling a set of explanatory variables. A $^{***,\ (**),\ (*)}$ indicates statistical significance at the 1%, (5%), (10%) level. The issue of heteroscedasticity was corrected by using White's adjustment procedure.

Table 3.3 shows that some industries (i.e. mining; business services; investment and commodity; air transportation and shipment; legal services; repair services; soaps, cosmetics and personal care products; other financial; commercial banks, credit institutions, insurance and bank holding) made a disproportionate contribution to some sample characteristics. The equation [4] is re-estimated by including dummy variables for these industries. The main findings remain similar, even though the bidders that acquire targets in industries such as mining, business services, and investment and commodity, were found to generate an insignificant coefficient. To conserve space, this study does not report them.

In summary, when the findings are compared among three groups, they indicate that stock financed acquisitions of private targets are associated with significant positive abnormal returns. This supports Hypothesis 2. On the other hand, cash financed acquisitions of subsidiaries are associated with significant negative excess returns for the bidding firms. This finding does not support Hypothesis 3. Multiple bid attempts by public targets are associated with significantly lower abnormal returns. Break fees has a positive impact on the abnormal returns generated by private target acquisitions while it has a negative influence on both public and subsidiary target acquisitions. This suggests that both public and subsidiary target bidders use break fees as a tool to maximise their own utility at the expense of the firm's shareholders. The acquirers of public targets generate higher abnormal returns when they acquire unlisted targets while the acquirers of private targets generate higher abnormal returns when they make acquisitions through privately negotiated deals. Subsidiary target bidders earn significant higher abnormal returns when they acquire the target from a listed parent for cash. During the GFC period, bidders for private targets gained higher abnormal returns compared to other bidders, suggesting private targets are sold at a discount in this recessionary period.

Table 3.13 Multiple Regression Estimates (Bid and Firm Characteristics)

Independent Variable	Acquisition of Public Targets	Acquisition of Private Targets	Acquisition of Subsidiary Targets
Constant	0.0620*** (3.51)	0.0918*** (6.96)	0.1195*** (6.09)
R_m-R_f	1.3189*** (3.64)	1.0996*** (3.23)	1.4696*** (3.76)
SMB	0.8647** (2.07)	2.1991*** (4.35)	2.1136*** (3.21)
HML	-0.4879 (-0.79)	-0.1492 (-0.23)	-0.4489 (-0.61)
Cash-only dummy	-0.0117 (-0.97)	0.0088 (0.90)	-0.0111 (-0.92)
Stock-only dummy	-0.0156 (-1.18)	0.0176* (1.71)	0.0044 (0.31)
Ln relative size	0.0007 (0.32)	0.0153*** (6.08)	0.0151*** (4.95)
Multiple bid dummy	-0.0107 (-1.27)	0.0057 (0.65)	-0.0020 (-0.20)
Private deal dummy	-0.0277*** (-2.68)	0.1818*** (3.09)	-0.0635 (-0.80)
Break fees dummy	-0.0280** (-2.34)	0.2213** (1.98)	-0.0779*** (-2.83)
Unlisted public target dummy	0.0820*** (2.77)	-	-
Public parent dummy	-	-	0.0304 (1.37)
Ln market value	-0.0043** (-2.01)	-0.0075*** (-2.98)	-0.0098*** (-3.20)
Profitability	0.0107 (1.04)	0.0089 (0.96)	0.0005 (0.04)
Leverage	-0.0237* (-1.70)	-0.0204* (-1.70)	-0.0039 (-0.22)
Free cash flow	-0.0066 (-0.27)	0.0290 (1.34)	0.0173 (0.60)
GFC period dummy	0.0028 (0.26)	0.0267** (2.48)	0.0000 (0.00)
F-Statistics	**7.11***	**12.11***	**6.44***
N	**643**	**1,310**	**712**
Adjusted R²	**0.1249**	**0.1062**	**0.1029**

Note: The table reports coefficient estimates and their respective t-values (in brackets) for equations [6a], [6b] and [6c]. The dependent variable is the bidder's three-day buy and hold excess return and the independent variables included in the model are three market variables, traditional bid characteristics and firm characteristics specific to Australia. The constant (α) measures the announcement period abnormal returns after controlling a set of explanatory variables. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level. The issue of heteroscedasticity was corrected by using White's adjustment procedure. Multicollinearity issue is checked by variance inflation factors (VIF) and VIF score found less than 4 for this model estimated (see Table A.1 of Appendix A).

3.6.2.2 The Influence of Firm Characteristics on Announcement Period Abnormal Returns

The results generated by estimating the equations [6a], [6b] and [6c] are reported in Table 3.13 for bidders for public, private and subsidiary targets respectively. [61] This table shows that the inclusion of firm financial characteristics does not significantly alter the main findings reported in Table 3.12. However, the inclusion of these financial characteristics increases the abnormal returns generated by bidding firms by at least two percentage points in all three categories of acquirers. The coefficient of the pre-acquisition size variable is negative and significant in all three sub-samples. This variable generates coefficients of -0.0043, -0.0075 and -0.0098 for public, private and subsidiary target bidders, respectively. The announcement period of abnormal returns is negatively related to the size of the bidding firm. This suggests that large bidders in Australia earn significantly lower abnormal returns than their small bidder counterparts. This remains valid for all types of acquisitions. This finding supports the most recent Australian evidence of Humphery-Jenner and Powell (2011), which suggests that large bidders in Australia pay higher premiums for targets than their small bidder counterparts and, in consequence, earn lower abnormal returns. This finding also supports the argument that managers of large bidders are more motivated by hubris (Roll, 1986) when acquiring a target. The pre-acquisition leverage variable also generates negative and significant coefficients in both the 'public target acquisitions' (-0.0237) and 'private target acquisitions' (-0.0204) samples. According to the predictions of agency theory/free cash flow theory (Jensen and Meckling, 1976; Jensen, 1986), the managers of highly leveraged firms should make value creating decisions including acquisitions. However, the findings do not support the argument above; the market does not perceive leveraged firms' acquisition decisions more positively. This view can be further justified based on the insignificant coefficients generated for the free cash-flow variable across all three samples. Overall, the multivariate results confirm the findings

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[61] There was a strong correlation (0.75) between the free cash-flow measure and the profitability variable. This study re-estimated equation [6] after dropping the free cash-flow variable. The results remain qualitatively similar to those reported in Table 3.13.

of earlier analyses that the bidding firm's announcement period return depends on a number of bid and firm characteristics.

3.7 CONCLUSION

This chapter is motivated by the lack of empirical evidence on bidding firms' market performance around the announcement of acquisitions of private and subsidiary targets in Australia. Although there is a high volume of acquisition of private and subsidiary targets, no prior study has conducted a comparative analysis between such targets and public targets. To fill this void, this study analyses a large sample of acquisitions separated into three groups, public, private and subsidiary target acquisitions that were announced in the most recent 11-year period. Market adjusted buy and hold returns and the risk adjusted abnormal returns are generated using the single factor model and multi-factor models; for instance, three-factor and four-factor models are employed to improve the quality of estimations. Therefore, the result of this study can be considered to be neutral to methodological differences and thus generate consistent and reliable announcement period returns for Australian

The study's main finding is that the announcement period of abnormal returns earned by bidding firms depends on the nature of the target acquired. This study uncovers a clear relationship between the type of the target acquired and the bidders' announcement period returns. The bids for private companies and subsidiaries are associated with higher positive abnormal returns than the bids for public targets. All four models used to generate abnormal returns confirm this finding. The research findings of this chapter provide strong support for the first hypothesis that the acquirers of private and subsidiary targets earn higher abnormal returns than the acquirers of public targets. However, the bidders for public targets also earn significant positive announcement period abnormal returns in Australia. These findings indicate that Australian managers are more involved in value creating acquisitions compared to their US and UK counterparts.

This study finds a significant association between the abnormal returns to bidding firms' shareholders and the method of payment choice in acquisition. The mode of payment in acquisitions explains a significant variation in abnormal returns for bidders for public and subsidiary targets; private target bidders' earn consistent returns regardless of the payment method. The most popular method of settlement in Australia is stock swaps. This popularity may result from the change in the treatment of capital gains tax that was introduced in 1999. This study finds that bidders earn higher abnormal returns when the method of payment is stock compared with cash settlements. Interestingly, the abnormal returns enjoyed by bidding firms are highest when bids for targets come with stocks as the payment method irrespective of the type of the target acquired. However, when the influences of other bid characteristics are controlled for, this study finds a statistically significant association between stock-financed deals and abnormal returns, only for the sample of private target acquirers. This finding provides strong support for the second hypothesis that bidders for private companies earn higher abnormal returns when the method of payment involves stock rather than cash. The market perceives agency benefits arising from the monitoring role of target shareholders positively when bidders acquire private entities through stock swaps that may make the owners of targets major blockholders of the acquirer.

With respect to specific bid characteristics examined in this study, it is revealed that acquirers of relatively large targets earn higher abnormal returns, whereas more frequent bidders earn negative abnormal returns. The multiple bid attempts by bidders for public targets are penalised by the capital market. The market seems to interpret these attempts as motivated by managerial objectives such as empire building and gaining prestige rather than creating value for bidders' shareholders. Attempts made by public target bidders to acquire unlisted firms are rewarded with positive abnormal returns. Such transactions seem to create value for the bidding firms because of the strong bargaining power possessed by bidding firms over the target due to greater information asymmetry associated with unlisted targets and the resultant weak competition. Similarly, privately negotiated deals initiated by acquirers of private targets are also associated with positive abnormal returns. This may be

attributable to efficiency gains and associated favourable outcomes; bidders may have to negotiate with only a few individual investors and they are then in a position to offer different premiums to different shareholders for the target. Surprisingly, this study finds that the attachment of break fees to acquisition deals has differential effects on different targets. Break fees have a significant positive influence on the abnormal returns generated by the bidders for private targets but a significant negative influence on the abnormal returns earned by the bidders for both public and subsidiary targets. Although it is difficult to reconcile these differential effects, the results indicate that this device reduces competition in the acquisition market for 'private targets' and increases the competition in the acquisition markets for 'public targets' and 'subsidiary targets'. This study also finds that low leveraged firms, low profitability firms, small size firms, and cash tight firms are the winners of significant abnormal returns in the acquisition market. The main findings remain unchanged when this study re-examined the proposed hypotheses after controlling for the financial characteristics of bidding firms.

Overall the result suggests that acquirers earn significant positive abnormal returns regardless of the target choice in the Australian market; the magnitude of return depends on the nature of target firms, however. Further, this gain is strongly related to the method of payment, relative size and bid frequency of the bidding firm. The abnormal return is also associated with the pre-acquisition profitability, net debt, firm size and free cash flow holdings of the bidding firm. Having investigated how the Australian stock market responds to the announcements of acquisitions of domestic targets with different organisational forms, the next chapter examines the abnormal returns earned by bidding firms when they announce the acquisitions of foreign targets. In addition to investigating the influence of organisational forms of these foreign targets and common bid and firm characteristics, the next chapter places an emphasis on the impacts of investor protection, economic freedom and legal system of the target country on the market response."

CHAPTER 4

Target Organisational Form and Returns to Australian Bidders in Cross-border Acquisitions[62]

4.1 INTRODUCTION

Mergers and acquisitions constitute a frequently used means by Australian companies to achieve an 'overseas presence strategy' in order to expand, diversify and capture market opportunities for their businesses. According to the Productivity Commission's Research Paper (2002), the regulatory impediments associated with the Australian taxation regime, labour market policies, merger laws and environmental regulations inhibit the growth in the domestic market. These regulatory factors, together with the increased domestic and global competition triggered by globalisation, have forced local businesses to go international. Adaption of an overseas expansion strategy is motivated by the need to gain brand awareness overseas, gaining access to extended sales channels and distribution networks, pooling managerial skills, accessing international financial markets and building international brand image.[63]

Australian companies have been very active in pursuing cross-border investments. According to the United Nations' Conference on Trade and Development (UNCTAD) World Investment Report 2010, Australian

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[62] Out of the content of this chapter, an article titled 'target's organisational form and returns to Australian bidders in cross-border acquisitions' was produced. This was submitted to 'Accounting and Finance, an A-ranked journal by the Australian Business Deans council, in October 25, 2012. The journal sent it back to us with a 'revise and resubmit' decision. After addressing all the comments of the reviewers, the article was resubmitted to the journal on February 22, 2013 and second revision resubmitted on 9th May, 2013. The paper accepted for publication on 20th May, 2013. The same article has been accepted for presentation at the 2013 Accounting and Finance Conference, April 12-13, 2013, Queenstown, New Zealand.

[63] This is evident in the large sum of capital invested by companies around the world in cross-border acquisitions. According to Larson (2007), companies around the world invested US$ 1.3 trillion in 2006 in cross border acquisitions. The international acquisitions activities continued its strengthening trend recording its highest transaction value of US$1.13 trillion in the first quarter of 2007 (Saigol and Politi, 2007, March 30).

companies' total investment abroad amounted to US$178.20bn during the period 2000-2010, whereas the amount invested in Australia was US$160.56bn for the same period.[64] Even though the number of foreign acquisitions made by Australian bidders is only one third of the number of domestic acquisitions in the above period, the average dollar value of foreign deals is significantly larger (U$197.16 million) than the average dollar value of domestic transactions (U$78.06 million) (Source: Securities Data Company's Merger and Acquisitions database). These statistics indicate that the Australian market for foreign acquisitions is active and it plays a significant role in the Australian economy.

Despite this significant investment of Australian bidding firms in cross-border targets, the investigation of whether these foreign acquisitions add value to bidding firms remains unexplored in this market. Particularly, the market reaction to announcements of cross-border acquisitions by Australian bidders has not been extensively investigated in this market.[65] Additionally, the effect of the target's organisational form on the market's response to cross-border acquisition announcements has not been investigated in this country.

As explained in Chapter 3, recent studies conducted in the US and UK markets have found that the market reaction to acquisition announcements depends on the nature of the target acquired. Their evidence suggests that bidders of unlisted targets perform better than their counterparts who acquire public targets in domestic acquisition market (Chang, 1998; Ang and Kohers, 2001; Conn *et al.*, 2005; Draper and Paudyal, 2006). For the 11-year period from 2000-2010, the Thomson Reuters SDC Platinum Mergers and Acquisitions database reported that there were 2,642 foreign acquisitions by listed Australian bidders. Interestingly, 88.49 percent of these transactions were acquisitions of private and subsidiary targets by publicly listed Australian bidders. In this context, it is important to examine the effect of a target's organisational form on the market's response to cross-border acquisition announcements, which has not been investigated in this country.

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[64] Source: http://unctad.org/Sections/dite_dir/docs/wir2010_anxtab_9.pdf
[65] One exception is the study by Diepold *et al.* (2008), which found that the Australian bidders earn statistically insignificant negative abnormal returns during the announcement period of foreign acquisitions. However, this study is based on a sample of 20 acquisitions of public firms.

To fill this void, this chapter investigates the announcement period abnormal returns for a large sample of Australian acquirers during the period of January 2000 to December 2010 that bid for public, private and subsidiary foreign targets.

The remainder of this chapter is organised as follows: Section 4.2 discusses the theories related to foreign investment. Section 4.3 explains the relevant literature, while Section 4.4 develops the hypotheses tested in the study. Section 4.5 presents the sample information and data. Section 4.6 explains the analytical methodology. Section 4.7 discusses the findings. The final section offers conclusions.

4.1 WHY FIRMS INVEST ABROAD?

Hymer (1976) states that firms invest abroad in order to exploit inherent advantages associated with investing in another country. The advantages achieved through the international operations include lower cost of the factors of production, control of a more efficient production function, access to a strong distribution network, access to patented/superior technology, specific management and marketing skills, and brand names. Dunning (1977) argues that firms invest abroad because of ownership-specific advantages (i.e. gaining access to intangible assets, specific management skills, unique production techniques, specific markets, advanced technology, patents, trademarks and raw materials), location-specific advantages (i.e. producing the product at a lower cost in the foreign country and exposing the product to the foreign market) and internalisation-incentive advantages (i.e. exploiting and creating the core competencies of firms abroad by internalising [66] the information-based assets that will increase the firm value in direct proportion to the scale of the firm's market). However, the classical motives of foreign direct investment, outlined above, have changed over time. According to Dunning's (1993) business strategy theory, firms expand abroad in order to exploit, protect or enhance their competitive advantages or core competencies.

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[66] Internalisation occurs when the transaction costs on the free market are higher than the internal costs.

Therefore, a firm's decision to acquire a firm abroad is now considerably based on its overall business strategy.

Agarwal (1980) divides theories underpinning the main motives of cross-border acquisitions into two groups: (i) those based on the assumption of perfect markets, and (ii) those based on the assumption of imperfect markets. The theories that belong to the first category include the differential rates of return hypothesis, portfolio diversification hypothesis, and the output and market size hypothesis. According to these theories, companies invest abroad in order to earn higher rates of return, reduce the risk of a firm's earnings through diversification, and increase the growth of the host country's sales and GDP (Fatemi, 1984; Morck and Yeung, 2003). The theories that belong to the second category include behavioural hypothesis, product life cycle hypothesis, oligopolistic reactions hypothesis, and internalisation hypothesis. According to these theories, firms invest abroad in order to fulfil managers' self-interest (Yung, 2001), induce a firm's dependence on its management (Shleifer and Vishny, 1989), obtain the cost advantages (i.e. labour cost) at a particular stage of the product life cycle (Vernon, 1966), maintain the competitive market share where one firm triggers similar foreign investment in response to other leading firms in the industry (Knickerbocker, 1973), and internalise the markets for intermediate products (Coase, 1937; Caves, 1971; Buckley and Casson, 1976; Dunning, 1977; Rugman, 1980; Helpman, 1984).

Most of the theories discussed above argue that value creation is the main motive for cross-border investments. Hence, it can be argued that the stock market should interpret the announcements of cross-border acquisitions as value creating decisions and, therefore, the market reaction to such announcements should be positive.

4.3 LITERATURE REVIEW

Since the objective of this chapter is to examine how the market responds when a bidding firm announces its intention to acquire a foreign target, this section reviews the literature in this particular area.

4.3.1 Market Reactions to Cross-border Acquisition Announcements

The general evidence on the market reaction to cross-border acquisition announcements provides contradictory results. A number of studies provide evidence of significant positive abnormal returns to bidding firms when cross-border acquisition announcements are made to the public, while others report zero abnormal returns.

The studies conducted prior to 2000 mainly report significant negative or insignificant abnormal returns for bidding firms. For example, Doukas and Travlos (1988) reported that announcement day abnormal returns (0.08%) were positive but statistically insignificant for US bidders who engaged in foreign acquisitions during 1975-1983. Similarly, Fatemi and Furtado (1988) find no significant effects of foreign acquisitions for US bidders in a two-day event window, except when US firms initially enter into a foreign market. Datta and Puia (1995) uncover significant negative excess returns (-0.42%) in a two-day event window for US acquiring firms.

Subsequent US studies report mainly significant positive market reactions to the announcement of the acquisition of foreign targets. For example, Fuller and Glatzer (2003) find significant positive abnormal returns (0.363%) in a three-day event window for 382 US bidders that acquire foreign targets during 1995-2001. Freund *et al.* (2007) also find that US bidders that acquire foreign companies observe significant positive abnormal returns of 1.37 percent in a three-day event window. In a recent study, John *et al.* (2010) report significant abnormal returns of 0.33 percent for a three-day event window for 1,525 US industrial firms that acquire non-US targets during the period 1984-2005. However, there are some recent studies that observed an insignificant market response. Kiymaz and Mukherjee (2000) reported insignificant positive abnormal returns for six different event windows for US bidders that acquired targets from eight different countries during 1982-1991. The work of Eckbo and Thorburn (2000) also confirms that the returns for the US bidders for Canadian targets are insignificant. Kiymaz and Mukherjee (2001) show that the abnormal returns to US acquirers of foreign targets are insignificant (0.50%) when the market model parameters are generated using

pre-announcement period return data and positive and significant (1.09%) when they are based on post-event returns.

The literature also provides mixed evidence for foreign bidders that make acquisitions in the US market. For example, Wansley *et al.* (1983) report significant positive abnormal returns for foreign bidders who acquire US targets during the period 1970-1978 for a 42-day event window (i.e. from day -41 to day 0). Cakici *et al.* (1996) investigate both the foreign bidders who acquire US targets and the US bidders that acquire foreign targets for the period 1983-1992. Their analyses show significant positive abnormal returns (between 0.63% and 1.96%) for foreign bidders of US targets and insignificant negative abnormal returns for US bidders of foreign targets. Seth *et al.* (2002) report similar results that foreign bidders for US industrial targets earn positive abnormal returns. However, Dewenter (1995) reports insignificant positive abnormal returns for foreign bidders that acquire US chemical and retail targets. Contrary to this evidence, both Mathur *et al.* (1994) and Kuipers *et al.* (2009) provide evidence that forign bidders realise significant negative abnormal returns when they attempt to acquire US targets. Eun *et al.* (1996) also report that abnormal returns for foreign bidders of US targets is significantly negative (-1.2%) during the period 1979-1990.

The literature also provides mixed evidence for European bidders that acquire foreign targets. Gregory and McCorriston (2005) find insignificant negative abnormal returns (-0.00022) for an event window of five days (i.e. from day -3 to day +1) for the UK bidders that acquire targets across the world during 1984-1995. Similarly, Schoenberg (2006) reports insignificant negative cumulative abnormal returns (-0.02%) for a 21-day period for the UK bidding firms. Although the abnormal returns reported by Uddin and Boateng (2009) for the UK bidding firms that acquired foreign targets was positive and significant in the announcement date, the cumulative abnormal returns are negative for a long event window (i.e. from -10-day to +10day). However, Goergen and Renneboog (2004) find evidence of significant positive abnormal returns (6.29%) for a two-day event window for bidding firms from the UK and Ireland that acquired foreign targets. Wang and Liao (2009) also uncover significant positive abnormal returns (1.13%) in a two-day event window for bidders in western European countries. Corhay and Rad (2000) report that

Dutch bidders earn significant positive abnormal returns (1.44%) when they acquire European targets but insignificant abnormal returns when they acquire US targets.

The studies conducted in the Japanese market also provide mixed evidence. Kang (1993) examines 119 Japanese bidders that acquire US targets and report statistically significant abnormal returns of 0.51 percent in a three-day event window during 1975-1988. On the other hand, Higgins and Beckman (2006) investigate Japanese bidders that acquire global targets and report insignificant abnormal returns for all the event windows analysed.

From the discussion above, it is clear that the existing evidence on the market reaction to cross-border acquisitions is inconclusive.

4.3.2 Evidence on Cross-border vs Domestic Acquisitions

Although comparing domestic and cross-border acquisitions is not often straightforward and could result in ambiguous conclusions, a number of studies compare the stock market reaction to the acquisition of domestic and foreign targets. Bertrand and Betschinger (2012) argue that cross-border acquisitions are associated with greater efficiency gains than domestic acquisitions because acquirers gain access to the additional resources and skills that are not available in the domestic market. Also, such acquisitions entail new opportunities for growth, which overcome the restrictions of the domestic market and increase the efficiency of business operations across borders. According to Seth *et al.* (2002), the sources of synergies underlying cross-border acquisitions are greater than those associated with domestic acquisitions. As the sources of value creation in cross-border mergers and acquisitions are unique compared to domestic acquisitions, one would expect announcements of foreign acquisitions to be associated with higher abnormal returns than domestic acquisitions.

Hudgins and Seifert (1996) find no significant difference in the announcement period gains or losses between domestic and cross-border acquisitions for the US financial bidding firms. Biswas *et al.* (1997) report insignificant positive abnormal returns (0.1261%) for the US bidding banks that acquire foreign targets and significant negative abnormal returns (-

0.3991%) to those that acquire domestic targets in a two-day event window. On the other hand, Francis *et al.* (2008) report that US bidders earn significant positive abnormal returns in both cross-border (0.96%) and domestic (1.49%) acquisitions in a three-day event window. Moeller and Schlingemann (2005) find that, even though both cross-border and domestic acquisitions are associated with positive abnormal returns (0.307 % and 1.173%, respectively), the difference in abnormal returns between two groups is significant, implying that acquirers of domestic targets realise higher returns than the bidders for foreign targets.

Studies conducted in European countries also do not provide evidence that these two types of acquisitions are associated with differential abnormal returns. For example, Feito-Ruiz and Menéndez-Requejo (2011) find that European acquirers of domestic targets earn significant abnormal returns of 0.64 percent while the acquirers of foreign targets earn significant abnormal returns of 1.38 percent in a three-day event window. The difference between the abnormal returns of these two groups is statistically insignificant. However, Martynova and Renneboog (2006) reveal that European cross-border acquisitions are associated with statistically lower announcement period returns (0.40%) compared to domestic acquisitions (0.60%). Conn *et al.* (2005) conduct a comparative analysis of domestic and foreign acquisitions by UK listed companies. Their results show that the abnormal returns for the bidders of both domestic and cross-border targets are positive (0.68% and 0.33%, respectively) and significant in a three-day event window. Barbopoulos *et al.* (2012) also provide similar evidence. They found that the UK acquirers of both domestic and cross-border targets realise significant positive abnormal returns of 1.22 percent and 1.24 percent, respectively. These abnormal returns are not significantly different from each other. Similarly, Lowinski *et al.* (2004) do not find any significant difference between the abnormal returns earned by the Switzerland bidders for national and cross-border targets.

Studies conducted in other countries also provide inconclusive evidence with regard to the market reaction to domestic versus cross-border acquisitions. Dutta *et al.* (2013) find statistically significant higher stock market reactions in cross-border deals compared to domestic deals for Canadian bidding firms. Mantecon (2009) provides contrasting evidence using

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large samples of cross-border (6824) and domestic (23,959) acquisitions gathered from 75 buyer nations during the period 1985-2005. The author finds statistically significant higher positive abnormal returns in domestic acquisitions (0.53%) than in cross-border deals (0.29%) in a three-day announcement period. The difference between these abnormal returns is statistically significant at the 1 percent level.

From this discussion, it is clear that there is no conclusive evidence to suggest that bidders for foreign targets outperform those that bid for domestic targets. Such a conclusion applies to many countries and across different time periods.

4.3.3 Influence of Bid Characteristics on Cross-border Acquisitions

As a number of bid characteristics have been found to influence domestic acquisitions, the researchers have also examined the influence of bid characteristics on the abnormal return generated by bidders in cross-border acquisitions.

The method of payment is an important decision in foreign acquisitions. A number of factors influence this choice. Fuller and Glatzer (2003) argue that bidders use stocks as the method of payment when: (i) the foreign target's value is unknown, (ii) foreign targets are difficult to value due to differences in accounting systems, political issues or greater information asymmetries, (iii) the accounting standards of the target country do not provide adequate value-relevant accounting information, and (iv) exchange rates are more stable and more favourable for them. On the other hand, they may use cash when they acquire targets from civil law countries due to weak levels of shareholder protection and law enforcement in such jurisdictions. Rossi and Volpin (2004) also argue that foreign bidders are reluctant to use stock as the method of payment for targets in countries with lower levels of investor protection because of the higher risk of expropriation associated with stock financing. Dutta *et al.* (2013) provide three arguments in favour of stock-financed acquisitions in cross-border deals. First, a dramatic change in target management through a cash-financed acquisition may hinder the post-acquisition integration process severely (Denis and Denis, 1995). Second,

stock-financed acquisitions retain the local shareholders of a cross-border target, which is very important in monitoring the activities of the newly acquired firm (Kang and Kim, 2008). Third, the problem of high information asymmetry in cross-border acquisitions can be mitigated by sharing a part of the acquirer's ownership with foreign shareholders of the target firm (Chen and Hennart, 2004; Reuer *et al.*, 2004). Mantecon (2009) argues that the shareholders of foreign targets accept stocks as the method of payment only if they have a positive assessment about the future performance of the bidder; this provides a positive signal to the capital market. However, Faccio and Masulis (2005) argue in favour of cash-financing. They argue that the shareholders of foreign targets may prefer a cash settlement because of high trading costs, low liquidity and the exposure to exchange rate risk associated with foreign stocks. Moeller and Schlingemann (2005) also suggest that bidders are forced to pay cash in foreign acquisitions because target shareholders are reluctant to accept foreign equity, given that foreign shares are more risky and they don't get the access to timely and comprehensive information about those foreign firms.

A number of empirical studies provide evidences about the method of payment. John *et al.* (2010) report significant negative abnormal returns for the US bidders of foreign public targets when the payment is made by either stocks (-2.97%) or a mixture of cash and stocks (-0.54%), and significant positive abnormal returns (0.695%) when cash is used. Fuller and Glatzer (2003) report significant negative abnormal returns for stock-financed foreign acquisitions and insignificant positive abnormal returns for cash-financed acquisitions. Freund *et al.* (2007) also find a significant positive relationship between cash-financed acquisitions and abnormal returns for the US bidders for foreign targets; they find an insignificant negative relationship for stock-financed acquisitions. However, Markides and Ittner (1994) find an insignificant relationship between cash-financed acquisitions and abnormal returns for the US bidders. Dewenter (1995) documents an insignificant negative relationship between stock-financed acquisitions and abnormal returns when foreign bidders acquire US targets. Therefore, the US context provides inconclusive evidence in relation to the method of payment used in foreign acquisitions.

In European markets, Feito-Ruiz and Menéndez-Requejo (2011) report that, even though both cash and stock payment methods are associated with positive abnormal returns in cross-border deals, only cash deals are associated with significant returns. Uddin and Boateng (2009) also report marginally significant abnormal returns for cash acquisitions in the UK market. However, abnormal returns are negative and insignificant for non-cash financed acquisitions for the different event windows analysed. In contrast, Conn *et al.* (2005) report insignificant positive abnormal returns for cash-financed acquisitions (0.21%) while reporting significant positive abnormal returns (0.62%) for non-cash financed acquisitions. However, Barbopoulos *et al.* (2012) find both cash (0.98%) and stock payment (4.98%) methods to be associated with significant abnormal returns for UK acquirers of foreign targets. For Canadian bidders, Dutta *et al.* (2013) report statistically significant higher positive abnormal returns for stock-financed foreign acquisitions (6.02%) compared to those financed by cash (1.33%). Mantecon (2009) finds a significant negative relationship between stock-financed acquisitions and abnormal returns for bidders from 75 countries that acquire targets from 128 foreign nations.

As discussed in Chapter 3, the relative size of the target is an influential variable that explains the announcement period abnormal returns of bidding firms. Cross-border acquisitions also provide similar evidence. For example, Markides and Ittner (1994) find that the larger the foreign target acquired, the higher the abnormal returns for US bidders. Fuller and Glatzer (2003) also find that relative size has a significant positive influence on abnormal returns for US bidders for foreign targets. Similarly, the relative size variable has a positive and significant influence on the market reaction to cross-border deals announced by European bidding firms that acquire targets across the world (Feito-Ruiz and Menéndez-Requejo, 2011). However, the findings above are contrasted when foreign bidders acquire US targets. Cakici *et al.* (1996) find an insignificant negative relationship between relative size and abnormal returns when foreign bidders acquire US targets. However, Mathur *et al.* (1994) find a significant positive relationship when the relative size is between 20-50 percent, but a significant negative relationship when the relative size is between 0-10 percent when foreign bidders acquired US targets.

Denis *et al*. (2002) state that global diversification serves managers' own objectives in three ways: i) through managing a large multinational corporation they gain more power and prestige; ii) they obtain a large compensation for managing a globally diversified large-size firm; and iii) reducing managers' risk by managing a diversified personal portfolio. Therefore, attempts to diversify globally through cross-border acquisitions can be associated with negative returns. Accordingly, Freund *et al.* (2007) find that the global, industrial, or both types of diversifications have a statistically significant negative impact on abnormal returns for US bidding firms that acquire foreign targets. Similar evidence of a negative relationship between unrelated acquisitions of foreign targets and bidders' abnormal returns have been reported by Markides and Ittner (1994) and Moeller and Schlingemann (2005), for US bidders, and by Uddin and Boateng (2009), for UK bidders. However, Morck and Yeung (2003) find that both industrial and geographic diversifications are associated with higher returns for US bidders if targets possess information-based intangible assets. Dos Santos *et al.* (2008) also find that international diversification does not necessarily destroy value but industrial diversification results in negative returns. On the other hand, Barbopoulos *et al.* (2012) report significant positive excess returns for UK bidders in both focused and diversifying acquisitions of foreign targets. Feito-Ruiz and Menéndez-Requejo (2011) find no significant differences in abnormal returns between focused and diversified deals in European cross-border acquisitions.

Doukas (1995) argues that the gain from cross-border acquisitions should be higher for bidders if they have prior experience in foreign acquisitions. This is because such experience may reduce the transaction cost and ensure smoothness in the integration process of such acquisitions. However, Seth *et al.* (2002) report an insignificant positive relationship between multiple acquisitions and abnormal returns for a sample of world-wide foreign bidders. Eun *et al.* (1996) also provide evidence of an insignificant negative relationship between multiple bid attempts and abnormal returns.

When more than one bidder competes for the target, it reduces the announcement period abnormal returns for bidding firms' shareholders. The

competition among bidders increases the target's bargaining power over bidders and, therefore, results in higher premiums paid to targets. Accordingly, Kuipers *et al.* (2009) report that greater competition for target firms reduces the abnormal returns of foreign bidders that acquire US targets. Similarly, Cakici *et al.* (1996) document that uncontested foreign bids generate significantly higher returns to acquirers compared to contested bids. Dewenter (1995) reports an insignificant negative relationship between contested bids and abnormal returns for foreign bidding firms that acquire US targets. Similar evidence is provided by Danbolt (1995) who finds the market response to competitive bids to be poorer than uncompetitive bids. Kang (1993) finds that the competition in bids has a significant negative influence on the abnormal returns of Japanese bidders that acquire US targets.

Ninon and Theodor (2000) argue that the acquisition of high-tech targets has a direct influence on the future performance of bidding firms. This explanation has a high relevance to the acquisition of foreign high-tech targets because bidders seek knowledge, superior technology and information-based assets through acquisitions abroad. Accordingly, they find that the acquirers of high tech targets earn significant positive abnormal returns of 1.26 percent. Similarly, Conn *et al.* (2005) report significant positive abnormal returns (0.90%) for the cross-border acquisitions made in the high-tech industry compared to insignificant abnormal returns (0.07%) generated for non high-tech acquisitions.

4.3.4 Influence of Firm Characteristics on Cross-border Acquisitions

As discussed in section 3.2.3 of Chapter 3, a number of firm characteristics influence the announcement period abnormal returns of bidding firms. These variables are also expected to influence the abnormal returns generated by bidders for foreign targets. For example, Feito-Ruiz and Menéndez-Requejo (2011) report that abnormal returns for small bidders are positive and significant (3.04%) while they are insignificant for large bidders. However, Francis *et al.* (2008) report significant positive abnormal returns for both large (0.69%) and small (3.63%) US bidders for cross-border targets. Danbolt (1995) reports that large foreign bidders perform relatively better than

small bidders over the bid period when they acquire listed UK targets. However, this difference is statistically insignificant. Similarly, Kang (1993) reports a significant positive relationship between bidders' size and abnormal returns for Japanese bidding firms that acquire foreign targets.

Based on Jensen's (1986) free cash flow hypothesis, Doukas (1995) argues that managers invest in international markets to receive higher compensation, power, prestige, and job satisfaction. According to this argument, overinvesting firms should earn lower returns in foreign acquisitions compared to their underinvesting counterparts. The authors report statistically significant positive abnormal returns (0.41%) for underinvesting bidders of foreign targets (those with q ratios greater than 1) and insignificant negative returns (-0.18%) for overinvesting bidders (those with q ratios less than 1) for a two-day event window. They provide further evidence that there is a negative relationship between abnormal returns to low q bidders and their free cash flows, which suggests that firms having substantial free cash flows but no growth opportunities when they overinvest abroad. However, in their European study, Feito-Ruiz and Menéndez-Requejo (2011) find no significant difference in abnormal returns between high and low free cash flow bidders in cross-border deals.

Highly leveraged bidders should be subjected to severe scrutiny and strong monitoring by credit suppliers when they make acquisitions abroad. Accordingly, Kang (1993) finds that the abnormal return earned by Japanese bidders that acquire US targets is positively related to the leverage ratio and the loan ratio of bidding firms. Markides and Ittner (1994) support the view that US bidders of foreign targets engage in value destroying acquisitions when they have large profits. Their results provide evidence of a significant negative relationship between profitability and the abnormal returns of such bidders. A similar significant negative relationship is reported by Markides and Oyon (1998) for US bidders of foreign targets.

4.3.5 Influence of Factors Specific to Foreign Acquisitions

The literature has identified a number of factors that are specific to foreign acquisitions. The researchers have investigated how these factors

influence the abnormal returns earned by the bidders of foreign targets. In this section, a brief review of this literature is provided.

4.3.5.1 Influence of Investor Protection

According to Kuipers *et al.* (2009), "a strong rule of law and security owner protection mechanisms in the acquiring firm country act as a substitute contracting mechanism for mitigating the classic agency costs of the firm" (p. 566). They argue that bidding firms pursue value maximising investment decisions for their shareholders when such firms are located in high investor protection countries.[67] In agreement with this argument, they find that the announcement period abnormal returns earned by the acquirers in countries with strong shareholder protection are significantly higher than those earned by the bidders in countries with weak investor protection. Rossi and Volpin (2004) report that acquiring firms that are located in high investor protection countries typically buy targets from countries with weak investor protection; when they acquire targets form high investor protection countries, they tend to pay a higher premium. Martynova and Renneboog (2008) find that when the acquiring firm's country has stronger legal and institutional environments than the target country, then the acquiring firm earns higher abnormal returns.

However, Bris and Cabolis (2008) provide the opposite view. They argue that targets that are located in weak shareholder protection countries have more concentrated ownership structures and therefore they are in a strong situation to bargain a high price for their firms from bidders located in strong shareholder protection countries. However, their study provides evidence that the acquiring firms do not gain or lose when they acquire targets from countries that offer weak protection to investors. The recent study by John *et al.* (2010) examines the influence of the shareholder protection of the target country on the announcement period abnormal returns of US bidding firms using both the anti-director rights index and the anti-self-dealing index as the measures of shareholder protection. For the public targets sample, they find significant negative abnormal returns (-0.76%) for high protection target

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[67] La Porta *et al.* (2000) define investor protection as the enforcement of regulations and laws to protect investors, who finance firms, for their certain rights or powers such as disclosure and accounting rules which provide investor with the information, to receive dividends on pro-rate terms, to vote for directors, to participate in shareholders' meeting etc.

countries while significant positive abnormal returns (0.94%) in low protection target countries. The finding is the opposite for private targets. They report significant positive abnormal returns (0.67%) for high protection target countries and insignificant positive abnormal returns (0.33%) for low protection target countries.

4.3.5.2 Influence of Legal System

According to La Porta *et al.* (1997), common law countries provide better investor protection than civil-law countries because the quality of law enforcement is higher in common law (rich) countries. Since investors expect to receive a high protection for their funds when they invest abroad, there is a tendency for capital to flow from low investor protection countries to high investor protection countries. Accordingly, Barbopoulos *et al.* (2012) argue that bidding firms face higher competition when acquiring targets from common law countries which offer high protection. This may cause bidders to pay a higher premium to acquire targets from common law based countries compared to those based in civil law countries. However, Feito-Ruiz and Menéndez-Requejo (2011) provide evidence that acquiring firms earn statistically higher abnormal returns when they acquire targets from common law based countries (2.33%) than from civil law countries (0.17%). In contrast, Barbopoulos *et al.* (2012) find that UK bidders earn economically higher excess returns when targets are located in civil law countries (1.30%) compared to common law countries (1.11%).

4.3.5.3 Influence of the Economic Freedom

Economic freedom is very important in cross-border acquisitions since the investment risk, transaction cost, information asymmetry, and agency problems are strongly related with the level of economic freedom offered by the target country (Wang and Wang, 2012). Mantecon (2009) argues that target countries with a low level of economic freedom may impose restrictions on foreign direct investment and attempt to retain control of domestic operations. Similarly, Moeller and Schlingemann (2005) argue that bidders should earn relatively higher gains when they acquire targets from less

restrictive (i.e. more economic freedom) countries. An opposing argument is that it may be difficult to find undervalued targets from countries with high economic freedom due to the high competition and strong legal compliance in the takeover market, which require the payment of a high premium to acquire targets in such countries. The existing studies provide mixed evidence in relation to the association between economic freedom of the target country and bidders' returns. For example, the study by Moeller and Schlingemann (2005) reports a significant positive association, except for the UK, between high economic freedom (less restrictive environment) and abnormal returns while reporting a marginally significant negative relationship between low economic freedom (more restrictive environment) and bidders' abnormal returns. However, Conn *et al.* (2005) find that the bidders earn significant positive announcement period abnormal returns (0.90%) when they acquire targets from countries with low economic freedom.

4.3.5.4 Relative Strength of the Currency

Froot and Stein (1991) suggest that the strong home currency of the bidding firm provides a competitive advantage in purchasing foreign targets. The cost of the acquisition is lower when the domestic currency is relatively strong. An opposing argument is that bidders pay excessive premiums in cross-border deals when their currency is strong compared to the targets' currency (Vasconcellos *et al.*, 1990; Harris and Ravenscraft, 1991). Accordingly, Kiymaz and Mukherjee (2000) find a significant positive relationship between the strength of the local currency and the premium paid in cross-border acquisitions.

Several studies examine the influence of the exchange rate in cross-border acquisitions. Markides and Ittner (1994) report a significant positive relationship between the exchange rate and abnormal returns suggesting that the strength of the dollar has a positive influence on abnormal returns earned by US bidders when they acquire foreign targets. Kang (1993) provides similar evidence of a statistically significant positive relationship between the exchange rate and abnormal returns for Japanese bidders who acquire US targets. However, Moeller and Schlingemann (2005) find an insignificant

relationship between a strong dollar value and the abnormal returns of US bidders in cross-border deals. Conn *et al.* (2005) find a similar insignificant relationship for UK bidders. Cakici *et al.* (1996) and Eun *et al.* (1996) also find the strength of the domestic currency has no influence on bidders' abnormal returns when they analysed foreign bidders that acquired US targets. On the other hand, Mathur *et al.* (1994) report a significant negative relationship between exchange rate and abnormal returns to foreign bidding firms for US targets.

4.3.5.5 *Influence of the Target Country*

A number of country characteristics of targets may affect the announcement period returns of bidding firms in cross-border deals. Moeller and Schlingemann (2005) state that severe agency problems, greater information asymmetry and concentrated ownership of target countries could lower the bidder's returns. On the other hand, bidders' returns could be higher when foreign targets are relatively undervalued due to the low level of shareholder protection, low level of the efficiency of corporate governance, civil law based legal system, and a lower degree of competition in the market for corporate control. According to Kiymaz and Mukherjee (2000), the market reaction to the announcement of cross-border acquisitions depends on the social, political and economic differences between the countries of the bidder and the target.

The literature provides mixed evidence about the association between country characteristics and announcement period abnormal returns in foreign acquisitions. Cakici *et al.* (1996) report that abnormal return is positive and significant for Australian, Japanese and UK bidding firms that acquire US targets, while it is insignificant for bidders in Canada, France, Netherlands, Sweden, Switzerland and Italy. But Mathur *et al.* (1994) find significant positive abnormal returns for Switzerland bidders and significant negative abnormal returns for the UK bidders that acquire the US firms. Eun *et al.* (1996) find that abnormal returns are positive and significant for Japanese bidders (3.62%), negative and significant for UK bidders (-4.28%), and insignificant for Canadian bidders who acquire US targets. But Gregory and

McCorriston (2005) find insignificant negative returns for UK bidders who acquire US targets. Seth *et al.* (2002) report that Australian, Canadian, French and Japanese bidders earn positive returns while British, Switzerland and German bidders experience negative returns when acquiring US industrial targets. The findings of Kiymaz and Mukherjee (2000) reveal that US bidders observe insignificant or weakly significant positive abnormal returns when they acquire targets from Australia, France, Germany, Italy, Netherlands and Switzerland. However, the authors document negative returns for the bidders that acquire targets from the UK and Canada.

4.3.6 Announcement Period Return of Australian Bidding Firms in Cross-border acquisitions

There is limited empirical evidence on cross-border acquisitions conducted in the context of Australia. Diepold *et al.,* (2008) provide the first evidence that Australian bidding firms that acquire foreign targets earn insignificant negative abnormal returns (-1.21%) in a two-day event window. The detailed analysis by Diepold (2005) shows that Australian bidders that acquire US targets observed significant negative abnormal returns (-5.87%) while positive and insignificant (1.10%) for European targets.

Several international studies that analysed foreign bidders' performance also investigate the market reactions for Australian bidding firms. However, the evidence is contrary to the findings of Diepold *et al.* (2008) reported above. For example, both Cakici *et al. (1996)* and Kiymaz and Mukherjee (2000) report significant positive abnormal returns of 4.57 percent and 6.71 percent, respectively, for Australian bidders that acquire US targets. Their findings are consistent with the undervaluation-target hypothesis developed by Gonzalez *et al.* (1998), which states that foreign companies are more likely to acquire undervalued US targets. But Mathur *et al.* (1994) find insignificant positive abnormal returns for Australian bidders that acquire US targets in a three-day event window.

4.3.7 Influence of Target Organisational Forms on Cross-border Acquisitions

Section 3.2.6 of Chapter 3 contains a discussion of a number of theoretical explanations to justify why the market perceives an acquisition of a private company or a subsidiary as more value-creating than an acquisition of a public company. These explanations are equally applicable in cross-border acquisitions. However, there are a number of additional factors that could influence the market reaction to the acquisition of foreign private, subsidiary and public targets.

First, the acquisition of foreign public targets attracts more media attention, press coverage and analyses from the investment community. Such a level of coverage is not often observed when acquiring small private firms and subsidiaries overseas (Starks and Wei, 2004). This high level of media coverage for public targets could attract competitors and thereby increase the premium paid to foreign public targets. Foreign private and subsidiary targets are not subject to such competition and therefore could be bought at a discount; therefore, such acquisitions can be seen as more value creating by the capital markets than the acquisition of foreign public targets. Second, if the public targets are located in developed countries, such as the US and the UK, the acquisition of such targets can be subject to strict takeover regulations that could increase the cost of the deal (Feito-Ruiz and Menéndez-Requejo, 2011). In such a situation, the acquisition of private and subsidiary foreign targets can be more attractive to investors. Third, the costs incurred by the acquirers in relation to searching for information about foreign private and subsidiary targets is relatively higher than public targets as they do not have a public price, do not benefit from analyst research, and disclose limited information (Mantecon, 2008). This high cost of obtaining accurate information may deter potential buyers from expending resources in searching undervalued foreign private/subsidiary targets, making the acquisition market for such targets less competitive. This situation may allow foreign bidders to acquire cross-border private and subsidiary targets at an attractive price (Mantecon, 2009).

Although in domestic settings, studies conducted on the acquisition of private and subsidiary targets consistently indicate significant positive

abnormal returns to biddings firms, such consistent evidence is not found in the literature on foreign acquisitions. The US evidence provides mixed findings. For example, Fuller and Glatzer (2003) find significant negative returns for US bidders that acquire foreign public targets (-0.540%), while significant positive abnormal returns when they acquire foreign private (0.705%) and subsidiary targets (1.665%). Similarly John *et al*. (2010) also find significant positive returns for acquisitions of foreign private targets (0.53%). On the other hand, Moeller and Schlingemann (2005) document negative returns for US bidders when they acquire foreign private and subsidiary targets.

The study of Feito-Ruiz and Menéndez-Requejo (2011) provides evidence of significant positive abnormal returns for the acquisitions of private targets (2.03%) in cross-border deals executed by European listed bidders. Similar evidence is provided by Conn *et al.* (2005) for UK bidders of foreign private targets. They report that UK bidders earn significant positive abnormal returns when they acquire private targets (0.38%) abroad. Contrary to this, Uddin and Boateng (2009) report insignificant positive abnormal returns for the UK bidders of foreign private targets. For world-wide acquisitions, Mantecon (2009) reports significant positive abnormal returns for both private (0.32%) and subsidiary (0.40%) targets. However, Mathur *et al.* (1994) provide evidence of insignificant negative returns for foreign bidders who acquire unlisted US targets (both privately held companies and wholly owned subsidiaries). Interestingly, Barbopoulos *et al.* (2012) show that UK acquirers of foreign private targets earn statistically lower excess returns (1.15%) compared to acquisition of domestic private targets (1.61%). Therefore, there is no conclusive evidence across a number of markets to suggest that the acquisitions of foreign private and subsidiary targets are associated with significant positive abnormal returns for bidding firms.

The target's organisational form also influences the method of payment used by bidders in foreign acquisitions. The acquisition of foreign private and subsidiary targets using equity is associated with the monitoring benefits compared to such acquisitions using cash. As the shares of private firms are closely held, the target shareholders become new outside blockholders and thereby become monitors of the acquiring firms (Chang, 1998; Fuller *et al.*,

2002). Such monitoring benefits are very important in the acquisition of foreign targets due to long distance and cultural differences (Dutta *et al.*, 2013). Therefore, when foreign private targets are acquired using stock as the method of payment, such acquisitions are valued by bidding firms' shareholders more positively compared to cash-financed acquisitions. Conn *et al.* (2005) find that UK bidders earn insignificant abnormal returns (0.27%) in cash-financed acquisitions of foreign private targets, while non-cash acquisitions earn significant positive abnormal returns (0.66%). On the other hand, the US study by Fuller and Glatzer (2003) reports significant positive abnormal returns for private (1.38%) and subsidiary (2.07%) targets when the payment method is cash but insignificant negative abnormal returns for stock-financed acquisitions of both private and subsidiary targets. Interestingly, John *et al.* (2010) find that the US bidders of private targets earn insignificant returns when payment the method is either cash or stock; only the mixed payment method generates significant positive abnormal returns.

4.4 HYPOTHESIS DEVELOPMENT

The objective of this chapter is to examine if the abnormal returns generated by Australian bidders in cross-border acquisitions during the announcement period depends on the organisational form of the target acquired. The theoretical arguments outlined in Chapter 3, Section 3.2.6, together with the additional reasons and empirical evidence discussed in Section 4.3.7, support the view that the acquirers of foreign private and subsidiary targets earn higher abnormal returns than the acquirers of public targets. Accordingly, the following hypothesis is tested:

Hypothesis 1: Acquirers of private and subsidiary targets earn higher abnormal returns than acquirers of public targets in cross-border acquisitions.

In addition to the above hypothesis, this chapter also investigates a number of bid and firm characteristics which are commonly cited in the literature. Moreover, Section 4.3.5 discussed a number of variables specific to foreign acquisitions which have been found to influence the abnormal returns

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generated by bidders. For example, investor protection, the legal system, and the degree of economic freedom have differential impacts on the announcement period abnormal returns generated by the bidders of public, private and subsidiary targets in cross-border acquisitions (Moeller and Schlingemann, 2005; John *et al.*, 2010; Barbopoulos *et al.*, 2012). Therefore, this study intends to investigate the influence of all the factors discussed in the literature review while analysing the bidders' abnormal returns on acquisition announcements.

4.5 SAMPLE AND DATA

This study analyses acquisitions of foreign targets announced by Australian listed firms for the 11-year period from January 2000 to December 2010. The information about these acquisition announcements is gathered from the Thomson Reuters SDC Platinum Mergers and Acquisitions database. These acquisitions are expected to meet the following criteria:

I. Acquisitions must involve foreign acquisitions of public, private and subsidiary targets made by Australian listed bidders,

II. Bid characteristic information, such as deal value and method of payment information, must be available, and

III. Share price data and financial statement information must be available.

Table 4.1 shows that the initial sample was 2,531. However, the following acquisition announcements were excluded: (a) 99 announcements as they were joint ventures and government ventures, (b) 877 announcements due to the unavailability of the deal value, (c) 779 announcements due to unavailability of information about the method of payment, (d) 30 announcements due to the unavailability of the Datastream codes, and (e) 32 announcements due to missing accounting information. This produces a final sample of 714 foreign acquisition announcements.

Table 4.1
Sample Description: Sample Selection

Sample Selection	
Total number of acquisition announcements	2531
Less:	
Joint ventures and acquisitions of government ventures	99
Unavailability of deal value	877
Unavailability of method of payment information	779
Unavailability of acquirer's Datastream code	30
Unavailability of necessary accounting information	32
Final sample	**714**

Table 4.2 reports the distribution of 714 acquisitions by calendar year. This table shows that the number of foreign acquisitions remains below 40 between 2000 and 2004 and then increases substantially between 2005 and 2007. The highest number of foreign acquisitions takes place in 2007. Even though the number of acquisitions drops in 2008, probably due to the GFC, they start picking up in 2009 and continue to grow thereafter. The statistics in the last three columns reveal that foreign acquisitions of Australian bidders are mainly driven by the acquisitions of private (355 out of 714; 49.72%) and subsidiary (270 out of 714; 37.82%) targets.

Table 4.2
Sample Description: Distribution of Foreign Acquisitions by Year

Year	No. of Acquisitions	% of acquisitions	Target categories		
			Public	Private	Subsidiary
2000	32	4.48%	5	15	12
2001	34	4.76%	15	4	15
2002	21	2.94%	4	8	9
2003	33	4.62%	5	10	18
2004	37	5.18%	2	21	14
2005	80	11.20%	11	36	33
2006	105	14.71%	14	55	36
2007	120	16.81%	11	74	35
2008	75	10.50%	5	46	24
2009	84	11.76%	7	39	38
2010	93	13.03%	10	47	36
Grand Total	**714**	**100%**	**89**	**355**	**270**

Table 4.3 provides industry classifications for bidders and targets using Standard Industrial Classifications (SIC) codes. The acquiring firms of the sample come from 46 industries, while the foreign targets are spread across 52 industries. However, private and subsidiary targets come from 39 and 34 distinct industry sectors, respectively, while public targets come from 22 industries. The majority of both bidders and targets are mainly located in the mining industry; 35 percent of the bidders and 36.13 percent of the targets are from this industry. This suggests that Australian firms seek natural resource based investments abroad rather than knowledge and information-intensive investments. The mining targets acquisitions are highest in the subsidiary targets sample (52.33%), followed by private targets (33.72%), and public targets (13.95%). Other main industry drivers of foreign targets are 'Business Services' (13.59%), 'Oil and Gas; Petroleum Refining' (8.82%), 'Investment and Commodity Firms, Dealers Exchanges' (5.04%), and 'Pre-packaged Software' (3.92%).

Table 4.3
Sample Description: Industry Sectors

Name of the Industry	Acquirers	Targets	Target Industry		
			Public target	Private target	Subsidiary target
Mining	251	258	36	87	135
Oil and Gas; Petroleum Refining	50	63	7	31	25
Amusement and Recreation Services	8	6	0	5	1
Telecommunications	14	12	1	5	6
Food and Kindred Products	11	5	1	2	2
Stone, Clay, Glass, and Concrete Products	2	2	0	1	1
Investment & Commodity Firms, Dealers, Exchanges	67	36	10	15	11
Drugs	23	22	0	17	5
Insurance	5	4	1	2	1
Metal and Metal Products	17	6	2	3	1
Chemicals and Allied Products	9	13	0	8	5
Pre-packaged Software	25	28	3	18	7
Printing, Publishing, and Allied Services	5	4	1	2	1
Business Services	97	97	4	79	14
Machinery	18	7	0	6	1
Miscellaneous Manufacturing	5	4	0	4	0
Health Services	16	17	1	11	5
Motion Picture Production and Distribution	1	1	0	1	0
Commercial Banks, Bank Holding Companies	5	4	1	1	2
Textile and Apparel Products	2	0	0	0	0
Paper and Allied Products	5	4	0	1	3
Measuring, Medical, Photo Equipment; Clocks	10	12	0	8	4
Transportation Equipment	2	4	0	1	3
Transportation and Shipping (except air)	11	13	7	5	1
Aerospace and Aircraft	1	1	0	1	0
Real Estate; Mortgage Bankers and Brokers	5	16	1	6	9
Wholesale Trade-Durable Goods	6	17	1	10	6
Miscellaneous Retail Trade	4	1	0	1	0
Retail Trade-Food Stores	1	1	0	0	1
Public Administration	4	0	0	0	0
Repair Services	2	1	1	0	0
Air Transportation and Shipping	2	2	2	0	0
Sanitary Services	1	1	0	0	1
Social Services	4	4	1	2	1
Other Financial	1	0	0	0	0
Rubber and Miscellaneous Plastic Products	3	3	1	0	2
Advertising Services	2	1	0	1	0
Wood Products, Furniture, and Fixtures	2	4	0	1	3
Wholesale Trade-Nondurable Goods	1	6	0	3	3
Computer and Office Equipment	1	1	1	0	0
Electric, Gas, and Water Distribution	5	6	4	0	2
Educational Services	4	1	0	1	0
Hotels and Casinos	1	0	0	0	0
Radio and Television Broadcasting Stations	1	0	0	0	0
Electronic and Electrical Equipment	3	9	0	6	3

Table 4.3
Sample Description: Industry Sectors (cont.)

Name of the Industry	Acquirers	Targets	Target Industry		
			Public target	**Private target**	**Subsidiary target**
Communications Equipment	1	3	0	3	0
Agriculture, Forestry, and Fishing	0	4	2	1	1
Credit Institutions	0	2	0	0	2
Holding Companies, Except Banks	0	4	0	2	2
Personal Services	0	1	0	1	0
Construction Firms	0	2	0	2	0
Soaps, Cosmetics, and Personal-Care Products	0	1	0	1	0
Total	**714**	**714**	**89**	**355**	**270**

Some bid characteristics for the three samples (bidders for public, private and subsidiary targets) are reported in Table 4.4, Panel A. The summary statistics reported reveal that the unrelated acquisitions are slightly higher than related acquisitions. (A related acquisition is classified as such when the bidder and the target share the same SIC code, while an acquisition is classified as unrelated if it has a different SIC code). Cash settlement seems to be a more popular method than other payment methods. However, among these three samples, the proportion of cash settlement is highest in the public targets sample (65.17%), followed by subsidiary (42.22%) and private (34.37%) targets samples. Australian firms seem to prefer targets in the UK and Canada when acquiring public targets whereas it is the US when acquiring private and subsidiary targets. The top five destinations for Australian acquirers are the US, the UK, New Zealand, Canada and South Africa, across all types of targets.

Panel B of Table 4.4 reports some bid, firm and investor protection characteristics for three samples. This panel reveals that Australian bidders tend to acquire a high proportion of equity in private and subsidiary targets (86% and 82%, respectively) compared with their stakes in public targets (61.58%). The average deal value offered for public targets is $2,176.26 million; they were $28.95 million and $79.47 million for private and subsidiary targets, respectively. The average market capitalisation of the bidders for foreign public targets is approximately eight times larger than their counterparts who

seek to takeover private targets. Acquirers of subsidiary targets earn the highest raw returns around the acquisition event, whereas acquirers of public targets earn the lowest returns.

Panel B of Table 4.4 also reports some statistics for two indices used to measure the investor protection and economic freedom of target countries. These indices are the revised anti-director rights index and the economic freedom index, respectively. The revised anti-director rights index is available for only 619 acquisitions while the economic freedom index is available for the full sample. The average anti-director rights index is 4.12 for public targets followed by private (3.94) and subsidiary targets (3.78). This average measure of this index suggests that public targets are mostly acquired from high investor protection countries, as indicated by their high mean scores. However, the mean values of the index for the subsidiary targets are lower than the mean values for the full sample, indicating that subsidiary targets are mainly acquired from low investor protection countries. The mean value of this index for the private targets is marginally above the means of the full sample. The Economic Freedom of the World (EFW) index is the highest for the public targets (77.49) sample, followed by private (73.99) and subsidiary targets (69.15) samples.

Table 4.4 Sample Description: Bid, Firm and Investor Protection Characteristics

Panel A: Bid Characteristics by Target Status (Public Vs Private Vs Subsidiary)

	# of Acquisition	Relatedness: proportion		Method of Payment: Proportion				Target Country: Top Four			
		Related (%)	Unrelated (%)	Cash only (%)	Stock only (%)	Cash & Stock (%)	Others (%)	1	2	3	4
Bidder of public target	89	41.57	58.43	65.17	17.98	10.11	6.74	UK (21) & Canada (21)	New Zealand (20)	USA (14)	Singapore/ Denmark/ Papua N Guinea (02)
Bidder of private target	355	38.31	61.69	34.37	20.00	40.56	5.07	USA (84)	UK (54)	New Zealand (34)	Canada (29)
Bidder of subsidiary target	270	44.44	55.56	42.22	21.48	32.59	3.7	USA (43)	Canada (22)	South Africa (21)	New Zealand (19)

Panel B: Summary Statistics of Bid, Firm and Investor Protection Characteristics by Target Status (Public Vs Private Vs Subsidiary)

	Public Targets (N =89)			Private Targets (N =355)			Subsidiary Targets (N=270)		
	Mean	Median	Stdev./obs.	Mean	Median	Stdev/obs	Mean	Median	Stdev./obs
% of Shares Acquired	61.58	81.64	40.74	86.24	100	26.29	82.78	100	29.58
Value of the Deal ($m)	2,176.26	88	15,349.87	28.95	5.56	83.03	79.47	5.60	402.17
Bidder's Market Value of Equity ($m)	6,997.76	1,134.34	15,632.54	926.94	43.55	4,167.81	1,604.31	31.53	7,622.97
Bidder's Raw Return (%): Day -25 to Day +25	0.07	0.06	0.20	0.09	0.01	0.44	0.19	0.06	0.55
Target anti-director rights Index	4.12	4	85	3.94	4	309	3.78	4	225
Target Economic Freedom of the World (EFW) Index	77.49	79.9	89	73.99	79.2	347	69.15	70.15	258

This study uses the following sources to collect the necessary data: i) the daily share price data for the acquiring firms and the daily values of the ASX All Ordinaries Index are collected from the Datastream database. These price/index data are used to calculate daily stock returns and the return on the market index. ii) the AFMA Bank Accepted Bill rate is collected from the Reserve Bank of Australia's (RBA) website. This is used as the proxy for the risk free rate. iii) the market value of equity and accounting information, such as net debt, net profit and free cash flow for each bidder one year prior to the announcement date, are collected from the Datastream database. iv) the information on the Revised Anti-director Rights Index is available for 72 countries from Professor Andrei Shleifer's database at the Department of Economics, Harvard University.[68] v) the Economic Freedom of the World Index is obtained from the Heritage Foundation website.[69] vi) the information on the legal system of target countries is taken from La Porta *et al*. (1998), and those that are not available from La Porta *et al*. are obtained by verifying and cross-checking various internet sources. vii) the exchange rate between the Australian dollar and the US dollar is collected from the Reserve Bank of Australia's website.[70]

The revised Anti-director Rights Index, which was initially developed by La Porta *et al.* (1998) and further revised by Djankov *et al.* (2008), has been used to measure the impact of the investor protection variable. The Revised Anti-director Rights Index is used because it addresses some of the concerns of the original index having precise definitions in meeting each criteria of the index. This Revised Anti-director Rights Index can take the values between 1 and 6, and is available for 72 countries. This index measures the protection of minority shareholders in the corporate decision-making process (e.g. the requirement to disclose the transaction and the shareholder ownership of the insider).

The Economic Freedom of the World (EFW) Index has been used by Gwartney *et al.* (1996) to investigate its effect on announcement period abnormal returns. This index is calculated on the basis of trade policy, taxation,

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[68] See the link: http://www.economics.harvard.edu/faculty/shleifer/dataset
[69] See the link: http://www.heritage.org/index/explore?view=by-region-country-year
[70] See the link: http://www.rba.gov.au/statistics/hist-exchange-rates/index.html

government intervention, foreign investment policy, banking, pricing controls, property rights and regulation. Each country is assigned a score; a lower score represents high restrictive economies (low economic freedom) and a higher score denotes less restrictive economies (high economic freedom).

4.6 METHODOLOGY

The methodology employed in this chapter is similar to that used in Chapter 3 in estimating the announcement period abnormal returns. Both the market adjusted buy and hold return and the alpha value generated by the Fama-French Three-Factor model are used to estimate the abnormal returns generated by bidding firms around the announcement of the acquisitions of foreign targets.

4.6.1 Market-adjusted Buy and Hold Return

This study estimates the market adjusted buy and hold returns using the modified market model similar to that used in Fuller *et al.* (2002) and Conn *et al.* (2005).

$$MABHR_{i,n-p} = \prod_{t=p}^{t=n}(1+R_{i,t}) - \prod_{t=p}^{t=n}(1+R_{m,t}) \qquad [1]$$

where, = market adjusted buy and hold return of security 'i' over time period 'p' days to 'n' days,

$R_{i,t}$ = return of security i on day t,

$R_{m,t}$ = return on the ASX All Ordinaries market index on day t

Once the market-adjusted buy and hold return is calculated for each announcement, the mean and median values are calculated for three samples. The significance of these mean and median market-adjusted buy and hold returns is interpreted by conducting t-tests and wilcoxon signed rank tests.

4.6.2 Fama-French Three-Factor Model

In addition, the following three-factor model is estimated:

$$R_{i,t} - R_{f,t} = \alpha + \beta_{1,i}\left(R_{m,t} - R_{f,t}\right) + \beta_{2,i}SMB_t + \beta_{3,i}HML_t + \varepsilon_{i,t} \qquad [2]$$

where, $R_{i,t}$ is the buy and hold returns generated by the acquiring firm i for a particular event windows; $R_{f,t}$ is the buy and hold return generated by risk free asset for the same period and $R_{m,t}$ is the buy and hold return generated by the market index for the same period. *SMB* is the difference in buy and hold return between small portfolio and large portfolio and *HML* is the difference in buy and hold return between high book-to-market portfolio and low book-to-market portfolio.[71]

The abnormal returns are estimated for six event windows around the announcement day (i.e. day 0). They include a pre-announcement period (from day -26 to day -2), three announcement period event windows (day -1 to day +1, day -2 to day +2 and day -3 to day +3) , a post announcement period (day +2 to day +26) and a total period (day -26 to day +26). In addition, three-day abnormal returns are compared among different samples when the influence of bid characteristics, firm characteristics and factors specific to foreign target acquisitions on the announcement period abnormal returns are analysed.

4.6.3 Multiple Regression Model for Bid Characteristics

To test the influence of several bid characteristics discussed in Section 4.3.3, this study modifies equation [2] to include several bid characteristics and estimates the following regression equation for bidders of public, private and subsidiary targets separately:

$$R_{i,t} - R_{f,t} = \alpha + \sum_{j=1}^{3} \beta_{j,i}MF_{j,i,t} + \sum_{j=1}^{7} \beta_{j+3,i}BC_{j,i,t} + \beta_{11,i}GFC_{j,i,t} + \varepsilon_{i,t} \qquad [3]$$

where, the vector of *MF* variables contains the explanatory variables used to capture the effect of market factors (i.e. $R_{m,t} - R_{f,t}$ SMB_t HML_t) with

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[71] The process of generating *SMB* and *HML* factors was explained in detail in section 3.5.3 of Chapter 3.

a vector of β_{1-3} coefficients, the vector of *BC* variables contains the control variables used to capture the effect of bid characteristics with a vector of β_{4-10} coefficients, and the *GFC* is the dummy variable that captures the effect of global financial crisis. The seven bid characteristics used in the equation above are as follows: a cash only deals dummy (which takes the value of 1 if the acquisition is purely a cash-financed acquisition and 0 otherwise), a stock only deals dummy (which takes the value of 1 if the acquisition is a fully stock-financed acquisition and 0 otherwise), the natural logarithm of the relative size of the deal (derived by dividing the deal value by the bidder's market value of equity one month prior to the announcement), an unrelated acquisitions dummy (which takes the value of 1 if the bidder's SIC code is different from target's SIC code and 0 otherwise), a multiple bid dummy (which takes the value of 1 if a bidder has acquired more than one target during the sample period and 0 otherwise), a deal attitude dummy (which takes the value of 1 if the bid is hostile or unsolicited and 0 otherwise), a mining target dummy (which takes the value of 1 if a bidder has acquired a mining target and 0 otherwise). The mining target dummy is included because 36.13 percent of the targets come from this industry. The GFC dummy takes the value of 1 if the acquisition takes place during the period from July 2007 to December 2009 and 0 otherwise. The GFC variable is important in the context of the study period analysed since the sample period of this study includes the period of the global financial crisis (i.e. July 2007 – December 2009).

4.6.4 Multiple Regression Model for Bid and Firm Characteristics

To examine the influence of both bid and firm characteristics, a number of selected bid characteristics that generated significant coefficients in equation [3] and four firm characteristics are added to the equation [2] as explanatory variables. The bid characteristics include: a cash only deals dummy, a stock only deals dummy, the natural logarithm of the relative size of the deal, a multiple bid dummy, and a mining target dummy.[72] The firm

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[72] This study drops two bid characteristics (an unrelated acquisitions dummy and a deal attitude dummy) in estimating equation [4] as these variables generated insignificant coefficients in equation [3]. However, even though the cash only dummy generates

characteristics include: the natural logarithm of the bidder's market value one year prior to the acquisition announcement as the size measure; the return on assets as the profitability measure (calculated by dividing the net income by total assets of the most recent financial year); the debt ratio as the leverage measure (calculated by dividing net debt, i.e., total debt minus cash, by total assets of the most recent financial year); the free cash flow-to-assets ratio as a measure of cash richness (calculated by dividing net cash receipts from operations by total assets of the most recent financial year). The following equation is estimated for bidders of public, private and subsidiary targets:

$$R_{i,t} - R_{f,t} = \alpha + \sum_{j=1}^{3} \beta_{j,i} MF_{j,i,t} + \sum_{j=1}^{5} \beta_{j+3,i} BC_{j,i,t} + \sum_{j=1}^{4} \beta_{j+8,i} FC_{j,i,t} + \beta_{13,i} GFC_{j,i,t} + \varepsilon_{i,t} \quad [4]$$

where, the vector of *MF* variables contains the explanatory variables used to capture the effect of market factors (i.e. $R_{m,t} - R_{f,t} \quad SMB_t \quad HML_t$) with a vector of β_{1-3} coefficients, the vector of BC variables contains the five control variables used to capture the effect of bid characteristics (i.e. a cash only deals dummy, a stock only deals dummy, the natural logarithm of the relative size of the deal, a multiple bid dummy and a mining target dummy) with a vector of β_{4-8} coefficients, and the vector of *FC* variables contain the four control variables used to capture firms' financial characteristics (i.e. firm size, profitability, leverage and free cash flow) with a vector of β_{9-12} coefficients and, finally, a *GFC* dummy that captures the effect of GFC.

4.6.5 Multiple Regression Model for Foreign Acquisitions Specific Characteristics

To investigate the influence of foreign acquisition specific characteristics and their impact on announcement period abnormal returns, this chapter analyses the influence of investor protection, economic freedom, the legal system of target countries and the relative strength of the Australian dollar. For this purpose, the Revised Anti-director Rights Index as the proxy for investor protection, the Economic Freedom of the World Index value as the

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insignificant coefficients in equation [3], it is included in equation [4] as its inclusion ensures that the model captures the influence of payment method.

proxy for the economic freedom of the target country, a dummy variable for civil law based target countries and the relative strength of Australian dollar are included in the regression model. In addition, dummy variables to represent the top four target countries (US, UK, Canada and New Zealand) are included in the model. Two more dummy variables are included in the model for mining target acquisitions and the GFC period. Equation [2] was modified to include all these variables and the regressions are estimated for the three samples separately. The following equation is estimated for bidders for public, private and subsidiary targets:

$$R_{i,t} - R_{f,t} = \alpha + \sum_{j=1}^{3} \beta_{j,i} MF_{j,i,t} + + \sum_{j=1}^{4} \beta_{j+3,i} FS_{j,i,t} + \beta_{8,i} MT_{j,i,t} + \sum_{j=1}^{4} \beta_{8+j,i} CC_{j,i,t} + \beta_{13,i} GFC_{j,i,t} + \varepsilon_{i,t} \quad [5]$$

where, the vector of *MF* variables contains the explanatory variables used to capture the effect of market factors (i.e. $R_{m,t} - R_{f,t}$ SMB_t HML_t) with a vector of β_{1-3} coefficients, the vector of *FS* variables contains the four control variables used to capture the effect of the foreign acquisitions specific characteristics (i.e. the Revised Anti-director Rights Index, the Economic Freedom of the World Index, civil law based target countries dummy and the relative strength of the Australian dollar) with a vector of β_{4-7} coefficients, the *MT* variable represents the acquisitions of mining targets, the vector of *CC* variables represents the dummies used for the top four target countries (i.e. US, UK, Canada and New Zealand), and the *GFC* variable represents the GFC dummy. Following John *et al.* (2010), the investor protection and economic freedom proxies are formed as follows: log of (1+ Revised Anti-director Rights Index) and log of (1+ Economic Freedom of the World Index). The exchange rate variable is calculated using the approach used by Bugeja (2011). The average of the daily exchange rate for the full sample period is subtracted from the average of the daily exchange rate in the respective year of acquisitions, and then this amount is divided by the average daily exchange rate over the full sample period. A positive value of this variable for a particular year indicates that the Australian dollar is stronger than the US dollar for the respective year, and vice versa.

In addition, equation [5] is expanded by including both bid and firm characteristics which are found to be significant in equation [4]. The following equation is estimated for bidders for public, private and subsidiary targets:

$$R_{i,t} - R_{f,t} = \alpha + \sum_{j=1}^{3} \beta_{j,i} MF_{j,i,t} + \sum_{j=1}^{5} \beta_{j+3,i} BC_{j,i,t} + \sum_{j=1}^{4} \beta_{j+8,i} FC_{j,i,t}$$

$$+ \sum_{j=1}^{4} \beta_{j+12,i} FS_{j,i,t} + \sum_{j=1}^{4} \beta_{16+j,i} CC_{j,i,t} + \beta_{21,i} GFC_{j,i,t} + \varepsilon_{i,t} \quad [6]$$

where, the vector of MF variables contains the explanatory variables used to capture the effect of market factors (i.e. $R_{m,t} - R_{f,t} \; SMB_t \; HML_t$) with a vector of β_{1-3} coefficients, the vector of BC variables contains the five control variables used to capture the effect of bid characteristics (i.e. a cash only deals dummy, a stock only deals dummy, the natural logarithm of the relative size of the deal, a multiple bid dummy, and a mining target dummy) with a vector of β_{4-8} coefficients, and the vector of FC variables contain the four control variables used to capture firms' financial characteristics (i.e. firm size, profitability, leverage and free cash flow) with a vector of β_{9-12} coefficients, the vector of FS variables contains the four control variables used to capture the effect of foreign acquisitions specific characteristics (i.e. Revised Anti-director Rights Index, the Economic Freedom of the World Index, civil law based target countries dummy, and the relative strength of Australian dollar) with a vector of β_{13-16} coefficients, and the vector of CC variables represents the dummies used for top four target countries (i.e. US, UK, Canada and New Zealand) with a vector of β_{17-20} coefficients, and the GFC variable represents the GFC dummy.

4.6.6 Multiple Regression Model for Australian Domestic and Foreign Acquisitions

Finally, this study investigates whether the announcement period abnormal returns earned by Australian bidders depend on whether they acquire a domestic target or a foreign target. For this purpose, both domestic and foreign acquisitions are pooled and analysed in a multiple regression

framework. A number of bid and firm characteristics are added to equation [2] and the following regression equation is estimated:

$$R_{i,t} - R_{f,t} = \alpha + \sum_{j=1}^{3} \beta_{j,i} MF_{j,i,t} + \sum_{j=1}^{5} \beta_{j+3,i} BC_{j,i,t} + \sum_{j=1}^{4} \beta_{j+8,i} FC_{j,i,t} + \sum_{j=1}^{2} \beta_{j+12,i} CBC_{j,i,t} + \beta_{15,i} GFC_{j,i,t} + \varepsilon_{i,t} \quad [7]$$

where, the vector of MF variables contains the explanatory variables used to capture the effect of market factors (i.e. $R_{m,t} - R_{f,t}$ SMB_t HML_t) with a vector of $\boldsymbol{\beta_{1-3}}$ coefficients, the vector of *BC* variables contains the five control variables used to capture the effect of bid characteristics (i.e. a stock only deals dummy, a cash only deals dummy, the natural logarithm of the relative size of the deal, a multiple bid dummy, and a mining target dummy) with a vector of $\boldsymbol{\beta_{4-8}}$ coefficients, the vector of *FC* variables contains the four control variables used to capture firms' financial characteristics (i.e. firm size, profitability, leverage, and free cash flow) with a vector of $\boldsymbol{\beta_{9-12}}$ coefficients, and the vector of *CBC* variables contain two important variables used to capture cross-border acquisition characteristics with a vector of $\boldsymbol{\beta_{13-14}}$ coefficients, and, finally, a *GFC* dummy that captures the effect of the GFC period. The market variables, bid characteristics and firm characteristics were defined in earlier equations. The two cross-border characteristics included in the model are the cross-border target dummy (which takes the value of 1 if an Australian bidder has acquired a foreign target and 0 otherwise) and a cross-border mining target dummy (which takes the value of 1 if an Australian bidder has acquired a foreign target from mining industry and 0 otherwise).

4.6.7 Correlation Matrix

Table 4.5 presents the pairwise Spearman rank-order correlation matrix for the bid characteristics, firm characteristics and factors specific to foreign acquisitions, which are investigated in various regressions in this chapter. The stock only dummy and the ln relative size are negatively and significantly correlated with the cash only dummy. The cash only dummy is positively correlated with the ln market value, profitability, leverage and free cash flow variables; it is negatively correlated with the strong exchange rate variable.

This suggests that large bidders, profitable bidders and cash rich bidders tend to use the cash payment method in settling deals. This is also reflected in the negative relationship between the stock only dummy and the firm characteristics (ln market value, profitability, leverage and free cash flow). The correlation matrix also indicates that the ln market value has significant and positive correlation with the profitability, leverage and free cash flow variables. The economic freedom index has a significant negative relationship with the mining targets dummy, while the civil law country dummy has a significant positive relationship with the mining target dummy. This indicates that the mining targets are acquired from low economic freedom and civil law based target countries. Finally, Table 4.5 confirms that the level of correlation between various explanatory variables does not exceed 0.70, except between profitability and free cash flow (correlation value is 0.75). According to Gujarati (1995), the multicollinearity problem is present if the correlation between the independent variables is above 0.80. Based on these correlation values, the threat of multicollinearity can be assumed to be very limited in the estimation of the regression models of this study. Moreover, the variance inflation factors (VIF) are also estimated to cross-check the correlation matrix (see Appendix B, Table B.1). The VIF results confirm the above findings, as the centred VIF score is less than 10 for all variables suggesting that there is no multicollinearity threat for the models.

Table 4.5
Spearman rank-order Correlations Matrix

Name of the variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
R_i-R_f (1)	1.00																							
R_m-R_f (2)	**0.13**	1.00																						
SMB (3)	0.05	**-0.30**	1.00																					
HML (4)	-0.02	**-0.44**	**0.15**	1.00																				
Stock only dummy (5)	**0.07**	**0.13**	-0.07	-0.06	1.00																			
Cash only dummy (6)	-0.05	**-0.09**	0.07	-0.01	**-0.42**	1.00																		
Ln relative size (7)	**0.14**	0.02	-0.03	-0.03	**0.12**	**-0.24**	1.00																	
Unrelated dummy (8)	-0.02	-0.02	-0.01	0.00	0.00	-0.02	-0.03	1.00																
Multiple bid dummy (9)	0.02	**-0.10**	0.05	0.03	**-0.19**	0.12	**-0.31**	0.03	1.00															
Deal attitude dummy (10)	0.01	0.01	-0.01	-0.06	0.04	0.06	**-0.11**	0.00	0.01	1.00														
Mining target dummy (11)	0.01	-0.02	-0.03	-0.01	0.05	-0.10	**0.18**	**0.10**	0.00	**0.07**	1.00													
Ln market value (12)	**-0.13**	**-0.07**	0.01	0.00	**-0.26**	**0.40**	**-0.53**	0.02	**0.33**	**0.11**	**-0.34**	1.00												
Profitability (13)	-0.04	-0.04	0.01	0.02	**-0.22**	**0.28**	**-0.33**	0.00	**0.25**	0.04	**-0.27**	**0.61**	1.00											
Leverage (14)	**-0.07**	0.01	-0.01	-0.01	**-0.11**	**0.26**	**-0.18**	-0.04	**0.13**	0.03	**-0.34**	**0.46**	**0.29**	1.00										
Free cash flow (15)	**-0.07**	-0.03	0.04	0.02	**-0.20**	**0.32**	**-0.34**	0.03	**0.29**	0.08	**-0.27**	**0.63**	**0.75**	**0.35**	1.00									
Anti-director rights index (16)	0.06	-0.03	0.02	0.03	0.01	-0.03	0.03	-0.03	0.01	0.03	**0.09**	-0.07	0.04	0.01	-0.03	1.00								
Economic freedom Index (17)	0.04	0.02	0.00	0.03	0.03	-0.07	-0.10	-0.05	**0.07**	0.01	**-0.36**	**0.15**	**0.17**	**0.22**	**0.18**	0.03	1.00							
Civil-law countries dummy (18)	-0.01	0.01	0.06	-0.05	-0.03	0.05	**0.10**	0.04	-0.04	-0.04	**0.26**	**-0.14**	-0.09	**-0.14**	**-0.14**	**-0.30**	**-0.61**	1.00						
Exchange rate (19)	**0.07**	**-0.09**	0.11	-0.08	0.03	-0.07	0.00	0.04	0.00	**-0.10**	**0.18**	**-0.14**	-0.09	**-0.19**	**-0.10**	0.04	0.04	0.04	1.00					
US Country dummy (20)	-0.01	0.05	-0.03	-0.03	**0.02**	-0.04	-0.01	-0.01	0.00	-0.04	**-0.22**	**0.08**	-0.02	0.01	0.06	**-0.62**	**0.27**	**-0.28**	-0.01	1.00				
UK Country dummy (21)	-0.03	0.05	0.00	**-0.07**	-0.07	**0.07**	0.06	-0.05	0.00	-0.04	**-0.09**	**0.07**	**0.11**	**0.08**	0.06	**0.49**	0.00	**-0.21**	-0.02	**-0.23**	1.00			
Canada Country dummy (22)	-0.06	0.00	0.00	**0.08**	-0.01	0.02	-0.06	-0.06	-0.01	**0.07**	**0.17**	**0.06**	-0.03	-0.01	0.05	0.00	-0.01	**-0.18**	**0.11**	**-0.19**	**-0.15**	1.00		
New Zealand Country dummy (23)	-0.04	-0.03	-0.01	**0.08**	-0.01	0.00	**-0.18**	**0.08**	0.05	0.04	**-0.20**	**0.18**	**0.21**	**0.17**	**0.17**	0.00	**0.42**	**-0.19**	**-0.16**	**-0.20**	**-0.15**	**-0.13**	1.00	
GFC period dummy (24)	0.05	0.03	-0.02	**-0.13**	-0.02	-0.02	-0.04	-0.04	0.06	-0.04	0.06	-0.05	-0.01	-0.05	-0.01	-0.01	0.06	0.00	**0.52**	0.07	0.03	0.01	**-0.13**	1.00

Note: The above table reports Spearman rank-order correlation matrix. In this table, $R_{i,t}$-$R_{f,t}$ = buy and hold excess return for three-day announcement period; $R_{m,t}$-$R_{f,t}$ = buy and hold market risk premium for three-day announcement period; SMB= the difference in buy and hold return between small portfolio and large portfolio; HML= the difference in buy and hold return between high book to market portfolio and low book to market portfolio; Stock-only dummy = 1 when payment method used is in the form of stock; Cash-only dummy= 1 when payment method used to acquire in the form of cash; Ln Rel Size =Natural log of relative size; Unrelated dummy =1 when acquisition held with different industry; Multiple bid dummy = 1

when bidding firms make more than one acquisition during the sample period; Deal attitude dummy = 1 if the bid is hostile or unsolicited one; Mining target dummy=1 when a bidder acquires a mining target; Ln market value = The natural logarithm of the market value of the bidding one year prior to the acquisition; Leverage = the net debt amount of the bidder one year prior to the acquisition year divided by the total asset of the firm; Profitability = the net income of the bidder one year prior to acquisition year divided by the total asset of the firm; Free cash flow = the net cash receipts and disbursements resulting from the operations of the bidder one year prior to acquisition year divided by the total asset of the firm; Anti-director Rights Index = log value of (1+ the index value), Economic Freedom of the World Index = the log value of (1+ the index value); Civil law countries dummy = 1 when the target is located in a civil law based country; Exchange rate = the relative strength of Australian dollar value against the US dollar; US Country dummy = 1 when the targets are located in the USA; UK Country dummy = 1 when the targets are located in the UK; Canada Country dummy = 1 when the targets are located in Canada; New Zealand Country dummy = 1 when targets are located in New Zealand; and GFC period dummy = 1 if the acquisition occurred during the GFC period Bold text indicates probability is significant.

4.7 EMPIRICAL FINDINGS

This section discusses the findings in relation to the announcement period abnormal returns earned by Australian bidders that acquire foreign targets. The findings are explained under two separate sub headings: 4.7.1 Univariate analysis, and 4.7.2 Multivariate analysis.

4.7.1 Univariate Analysis

This section explains the abnormal returns derived by estimating equations [1] and [2] for the three samples and for various sub-samples. The abnormal returns for bidding firms around the announcement periods are reported in Tables 4.6 and 4.7. The announcement period abnormal returns for the full sample for six different event windows are discussed in sub-section (i). Sub section (ii) presents the abnormal returns for three sub-samples separately: acquirers of foreign public targets, acquirers of foreign private targets and acquirers of foreign subsidiary targets. The abnormal returns under three payment methods for three samples are discussed in sub-section (iii) separately. A discussion of the influence of bid and firm characteristics, respectively, on abnormal returns is contained in sub-sections (iv) and (v). The final sub-section shows the impact of foreign acquisitions specific factors on abnormal return.

4.7.1.1 Abnormal Returns Around Six Different Event Windows

The abnormal returns are estimated for six event windows for the full sample of Australian acquirers of foreign targets. Equations [1] and [2] are estimated for this purpose. Panel A of Table 4.6 shows the mean and median market adjusted buy and hold returns generated using equation [1]. Panel B reports the values of the alphas together with other coefficients generated by equation [2].

According to Panel A of Table 4.6, the market adjusted buy and hold return for the full sample (as revealed by both mean and median) is positive and significant for the full period, pre-announcement period and various announcement periods analysed. The mean (median) market adjusted buy and hold returns earned by the Australian bidders for foreign targets for the full period and for the pre-announcement period are 11.41 percent (2.95%) and 6.33 percent (0.09%), respectively. These companies have realised a mean (median) market adjusted return of 6.08 percent (1.05%) during the three day announcement period. As one would expect, the announcement period abnormal returns are larger in magnitude when the event window is either five days or seven days. However, these bidders earn significant negative returns (-2.53%) in the post event window (+2 days to +26 days).

An observation of Panel B of Table 4.6 reveals that the abnormal return (represented by α) is positive and significant during the pre-announcement and announcement periods only. Among the three announcement periods analysed, the highest abnormal return of 4.66 percent is reported for the five-day event window. The three-day announcement period abnormal return is 3.47 percent. The magnitude of the announcement period abnormal return is relatively lower when multifactor models are estimated compared with the market adjusted buy and hold return. This suggests the importance of the inclusion of market parameters in estimating abnormal returns.

Australian firms that acquire foreign targets do not record any significant abnormal returns during the post-announcement period. They tend to earn negative returns during this period. However, they earn significant positive returns during the pre-announcement period, implying that the information on these acquisitions is leaked to the market in advance. This is a phenomenon which was not observed in Chapter 3 when domestic acquisitions were analysed. Nevertheless, Australian bidders for foreign targets realise significant positive returns during the announcement period of acquisitions. This finding contrasts with the results of Diepold *et al*. (2008) who found that Australian bidders for

foreign targets earn insignificant negative abnormal returns during the announcement period.

Overall, the above findings do not support the findings of some international studies that acquisitions of foreign targets earn significant negative abnormal returns (Mathur *et al.*, 1994; Eun *et al.*, 1996; Bris *et al.*, 2008). However, these findings are in line with the positive and significant abnormal returns reported in studies such as Fuller and Glatzer (2003), Goergen and Renneboog (2004), Freund *et al.* (2007) and John *et al.* (2010). Australian investors interpret cross-border acquisitions as value enhancing decisions. Since Australia is a country with strong shareholder rights, these findings are consistent with the classic agency cost framework, which predicts that managers in countries with strong shareholder rights act in the interest of their shareholders and pursue more profitable acquisitions than the managers from countries with weak shareholder rights (Kuipers *et al.*, 2009).

Although the abnormal returns are significant in all three announcement period event windows analysed, this study uses the three-day announcement period event window for the remaining analyses. This is similar to the approach adopted in Chapter 3. Andrade *et al.* (2001) contend that the three-day event window is the most commonly used event window to capture the market response to acquisition announcements.

Table 4.6
Bidders' Abnormal Returns for Six Event Windows

	Entire Period	Pre-announcement Period	Announcement Period			Post Announcement Period
	-26 days to +26 days	-26 days to -2 days	-1 day to +1 day	-2 days to +2 days	-3 days to +3 days	+2 days to +26 days
Panel A: Market Adjusted Buy and Hold Return						
Mean	0.1141*** (6.78)	0.0633*** (5.27)	0.0608*** (7.75)	0.0715*** (6.46)	0.0715*** (6.49)	-0.0135 (-1.55)
Median	0.0295*** (4.17)	0.0092*** (3.41)	0.0105*** (7.16)	0.0143*** (6.79)	0.0128*** (6.41)	-0.0253*** (-4.15)
Sample Size	**714**	**714**	**714**	**714**	**714**	**714**
Panel B: Coefficient Estimates of Three Factor Model						
α	0.0589 (0.79)	0.0913*** (2.55)	0.0347*** (3.83)	0.0466*** (3.36)	0.0339** (2.24)	-0.0411 (-0.52)
R_m-R_f (β_1)	1.1511*** (5.90)	1.5119*** (6.35)	-0.1710 (-0.31)	0.7795* (1.68)	0.7429* (1.73)	0.9794* (1.76)
SMB (β_2)	1.3173*** (3.76)	0.9745*** (2.59)	2.1755** (2.25)	2.5942*** (2.75)	2.6800*** (3.38)	0.9770*** (4.64)
HML (β_3)	-1.3273*** (-3.59)	-0.2690 (-0.84)	-0.3556 (-0.41)	-0.5144 (-0.59)	-1.2282* (-1.86)	-1.9003*** (-3.27)
Sample Size	**714**	**714**	**714**	**714**	**714**	**714**

Note: Panel A reports mean and median market adjusted buy and hold return for different event windows. Panel B reports the coefficient estimates of equation [2]. The dependent variable is the bidder's buy and hold excess return for different event windows. The alpha (α) measures the announcement period abnormal returns after controlling the market factors. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level. The relevant t-values and w-values are reported in parentheses.

4.7.1.2 Announcement Period Abnormal Returns for Three Different Target Types

Table 4.7 reports the announcement period abnormal returns for the three samples, acquirers of foreign public, private and subsidiary targets, during the three-day announcement-period. According to the statistics reported in Table 4.7, Australian acquirers earn significant positive abnormal returns during the announcement period when they acquire foreign private and subsidiary targets and insignificant returns when they acquire cross-border public targets. The statistics reported in both panels support this conclusion.

Panel A of Table 4.7 reports the market adjusted buy and hold return. The mean and median market-adjusted buy and hold returns are positive and significantly different from 0 at the 1 percent level for private and subsidiary targets samples. The mean (median) market adjusted buy and hold returns earned by these two groups are 6.38 percent (1.07%) and 7.40 percent (1.36%), respectively. The acquirers of foreign public targets earn insignificant returns. The mean (median) differences reported in last two columns show that bidders for foreign private and subsidiary targets earn statistically significantly higher abnormal returns than those that acquire public targets. Both mean and median differences are statistically significant at the 1 percent level. These findings strongly support Hypothesis 1 that bidders for private and subsidiary targets earn higher abnormal returns than bidders for public targets in cross-border acquisitions.

Panel B reports coefficient estimates generated by equation [2] for the three-day event window for three samples. According to these results, the alpha is positive and statistically significant at the one percent level for private and subsidiary targets samples. The bidders for subsidiary targets earn the highest abnormal returns of 4.72 percent followed by the bidders for private targets (3.21%). The acquirers of public targets realise insignificant returns. In order to test Hypothesis 1, the three-factor model is estimated using the full sample, including two dummy variables for acquisitions of private and subsidiary targets. The findings reported in the last column of Panel B reveal that both the 'private

targets dummy' and the 'subsidiary targets dummy' generate positive coefficients (0.0523 and 0.0652, respectively), which are significant at the 1 percent level. This implies that the acquirers of these two types of foreign targets earn statistically significant higher returns than the acquirers of foreign public targets. Therefore, the test of differences in the mean/median market adjusted buy and hold returns and the three factor estimates support Hypothesis 1, which states that the bidders for private and subsidiary targets earn higher abnormal returns than bidders for public targets in cross-border acquisitions.

Figure 4.1 illustrates the cumulative average market-adjusted returns (CAMAR) of bidders around the 41-day announcement periods (-20 days to +20 days). The market return is deducted from the return of the company to calculate the market-adjusted return, and the average market-adjusted return is calculated for each day for the sample companies. These average returns are then added to get the cumulative abnormal returns for the period from -20 days to +20 days around the announcement period. The graph in Figure 4.1 clearly shows that the acquirers of subsidiaries and private firms demonstrate a substantial increase in market-adjusted returns during the announcement period while the acquirers of public targets do not observe such a pattern.
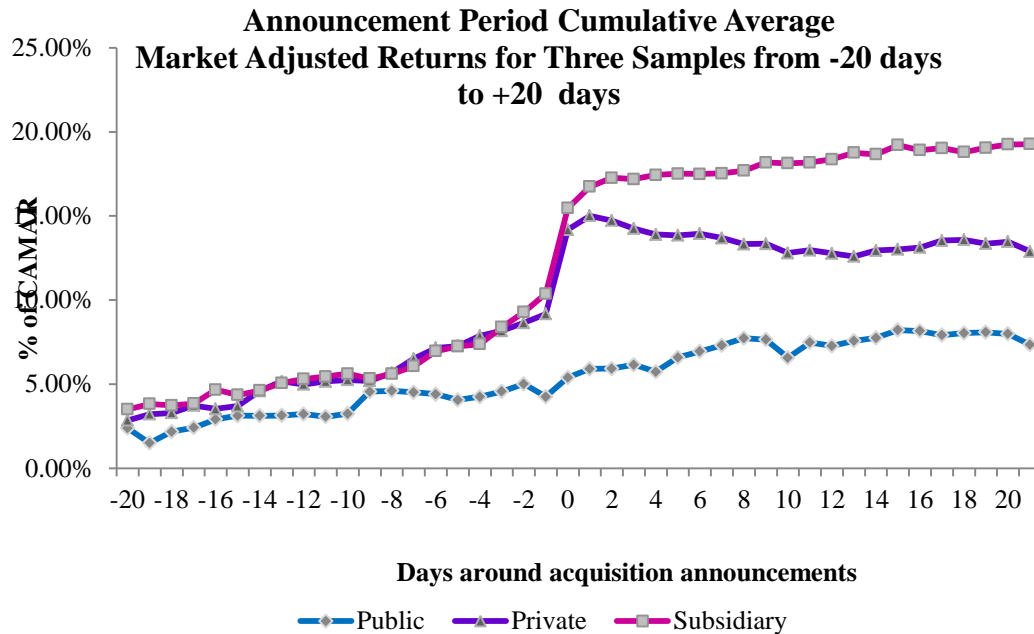
Figure 4.1 Cumulative Average Market Adjusted Returns (CAMAR) for Three
Samples

Although these findings are consistent with some US and UK evidence
(Fuller and Glatzer, 2003; Conn *et al.*, 2005; Mantecon, 2009; John *et al.*, 2010;
Feito-Ruiz and Menéndez-Requejo, 2011), these results are inconsistent with the
findings of Moeller and Schlingemann (2005) and Uddin and Boateng (2009) who
report negative abnormal returns for the acquirers of private and subsidiary targets
in the US and UK markets. The market reaction, detected at the time when
acquisitions are announced, indicates that investors believe that Australian
managers create value when taking over foreign private and subsidiary entities.

Table 4.7
Table 4.7
Bidder's Announcement Period Abnormal Returns for Three Different Targets

Panel A: Differences in Mean/Median Market-adjusted Buy and Hold Return For Three Samples

	Public Targets	Private Targets	Subsidiary Targets	Public - Private	Public - Subsidiary
Mean	0.0089 (0.79)	0.0638*** (5.79)	0.0740*** (5.18)	-0.0549** (-2.42)	-0.0651*** (-2.53)
Median	0.0050 (0.08)	0.0107*** (5.60)	0.0136*** (5.10)	-0.0057*** (2.57)	-0.0086*** (2.63)

Panel B: Coefficient Estimates of Three-Factor Model For Three Samples

	Public Targets	Private Targets	Subsidiary Targets	Full Sample
A	0.0129 (0.61)	0.0321*** (3.13)	0.0472*** (2.61)	-0.0158 (-0.27)
R_m-R_f (β_1)	1.1397 (0.95)	-0.4354 (-0.64)	-0.0202 (-0.02)	-0.1488** (2.28)
SMB (β_2)	-0.8872 (-0.76)	2.3157* (1.67)	3.1783* (1.85)	2.1948 (-0.38)
HML (β_3)	1.0745 (0.79)	-0.6902 (-0.77)	-0.1711 (-0.08)	-0.3300 (3.29)
Private target dummy	-	-	-	0.0523*** (3.52)
Subsidiary target dummy	-	-	-	0.0652*** (4.51)
Sample Size	**89**	**355**	**270**	**714**

Note: Panel A reports mean and median market adjusted buy and hold return for three samples by estimating equation [1]. The last two columns in this panel test the differences in means and medians. Panel B reports coefficient estimates for equation [2]. The dependent variable is the bidder's three-day buy and hold excess return. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level. The alpha (α) measures the announcement period abnormal returns after controlling the market factors. The relevant t-values and w-values are reported in parentheses.

The remaining analyses of this chapter use the three-factor model as the basis of estimation, as both the market-adjusted buy and hold returns and the three factor model provide similar evidence. However, the results relating to mean and median market-adjusted buy and hold returns and regression estimates based on the market-adjusted buy and hold returns are reported in the relevant appendices.

4.7.1.3 Announcement Period Abnormal Returns for Different Payment Methods

Table 4.8 exhibits the association between the method of payment and abnormal return. As discussed in the literature review, market reaction to the announcement of cross-border acquisitions is strongly influenced by the payment method. The abnormal returns are estimated using a three-factor model.[73] The results show that cash-financed acquisitions of foreign public and private targets are associated with significant positive abnormal returns. The associated abnormal returns for these two groups, as reflected by alpha values, are 4.34 percent and 3.02 percent, respectively. In addition, the acquirers of private targets earn significant abnormal returns of 2.96 percent in cash plus stock financed deals. On the other hand, acquirers of subsidiary targets earn significant abnormal returns when they use 'stock' and 'cash and stock' as the method of payment. The relevant abnormal returns are 8.77 percent and 6.29 percent, respectively. The significant positive abnormal returns found for cash financed acquisitions of public and private targets are consistent with the findings of a number of international studies (Fuller and Glatzer, 2003; Freund et al., 2007; John et al., 2010; Feito-Ruiz and Menéndez-Requejo, 2011; Barbopoulos et al., 2012; Dutta et al., 2013).

According to Table 4.4 of the sample description, 'cash only' and 'cash and stock' are the prominent payment methods used by Australian bidders in cross-border acquisitions for all three categories of targets. Therefore, this chapter investigates whether such payment methods outperform the 'stock only' payment

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[73] The market adjusted buy and hold returns for three different payment methods are also analysed. The mean and median statistics are reported in Table B.2 in Appendix B. The findings are qualitatively similar to what has been reported in Table 4.8.

method. To test whether 'cash only' and 'cash plus stock' payment methods are associated with higher abnormal returns than stock-financed acquisitions, the three-factor model is modified by adding two dummy variables to represent 'cash only' deals and 'cash and stock' deals, and regressions are estimated for the respective samples. The output is reported in the last column of each panel. For the public targets sample, the 'cash only' and 'cash and stock' dummies generate insignificant coefficients, implying that the differences in abnormal returns between these two payment methods and the 'stock only' method are insignificant. The 'cash only' dummy generates significant negative coefficients in both private and subsidiary samples, implying that the acquirers of these two types of targets generate significantly lower excess return when they use cash as the method of payment rather than stock. The positive and significant coefficient for the 'cash and stock' dummy generated for the subsidiary sample indicates that the acquirers of foreign subsidiaries earn higher returns when they use a combination of cash and stock rather than 'stock only' to finance acquisition deals. Overall, the results support the finding that stock and mixed payment methods earn higher abnormal returns than the cash only payment method.

For the private targets sample, the insignificant abnormal returns generated for equity-financed acquisitions (note that the alpha is insignificant for this category) are surprising compared to what has been found for domestic acquisitions. In Chapter 3, it was found that the bidders for domestic private targets earned statistically significant abnormal returns of 7.21 percent (using the three-factor model) when they use equity as the method of payment. To explore this mysterious result, further analysis is conducted. This analysis revealed that stock-financed foreign acquisitions generates significant positive abnormal returns for Australian bidders when they acquire private targets from the US, UK, Canada and Singapore. Bidding firms earn 15.32 percent abnormal returns, significant at the 5 percent level, when they acquire private targets from those countries with stock financing. However, abnormal returns are negative and insignificant (-5.95%) for the rest of the countries. It seems that the Australian shareholders

perceive stock-financed acquisitions of private targets from the US, UK, Canada and Singapore as value creating compared to acquisitions from other countries.

Overall, the results show that stock-financed acquisitions are associated with significant positive abnormal returns for private and subsidiary samples, while the cash payment method generates significant abnormal returns for the public targets sample. This indicates that shareholders of Australian bidding firms prefer their managers to use stock as the method of payment in cross-border acquisitions of private and subsidiary targets. This finding is consistent with the findings of a number of international studies that report significant positive abnormal returns for stock-financed cross-border acquisitions (Chen and Hennart, 2004; Conn *et al.*, 2005; Dutta *et al.*, 2013).

Table 4.8
Method of Payment and Announcement Period Abnormal Returns

Coefficient Estimates of Three-Factor Model For Methods of Payment				
	Cash only	**Stock only**	**Cash and Stock**	**Full Sample**
Panel A: Public Targets				
A	0.0434^{*} (1.77)	-0.0393 (-0.80)	-0.0107 (-0.25)	0.0085 (0.26)
R_m-R_f (β_1)	2.7416^{***} (3.05)	-4.2227 (-1.06)	-0.2758 (-0.13)	1.1626 (0.94)
SMB (β_2)	-1.6554 (-1.21)	3.9849 (1.02)	-1.5996 (-0.52)	-0.8739 (-0.69)
HML (β_3)	1.7625^{**} (1.38)	-6.4201^{*} (-1.80)	-1.3947 (-0.66)	1.0560 (0.78)
Cash only dummy	-	-	-	0.0086 (0.19)
Cash and stock dummy	-	-	-	-0.0097 (-0.22)
Sample Size	**58**	**16**	**09**	**89**
Panel B: Private Targets				
A	0.0302^{***} (2.89)	0.0349 (0.94)	0.0296^{*} (1.82)	0.0799^{***} (3.00)
R_m-R_f (β_1)	1.1864^{**} (2.13)	-2.4166 (-1.03)	-1.1042 (-0.86)	-0.4597 (-0.67)
SMB (β_2)	0.7850 (0.97)	11.064 (1.86)	1.2353 (0.55)	2.6608^{*} (1.88)
HML (β_3)	1.7397 (1.07)	-0.1710 (-0.03)	-1.8978 (-1.59)	-0.8630 (-0.93)
Cash only dummy	-	-	-	-0.0858^{***} (-2.62)
Cash and stock dummy	-	-	-	-0.0494 (-1.42)
Sample Size	**122**	**71**	**144**	**355**
Panel C: Subsidiary Targets				
A	0.0089 (0.28)	0.0877^{**} (2.36)	0.0629^{**} (2.24)	0.0611 (1.96)
R_m-R_f (β_1)	-0.7318 (-0.44)	0.1648 (0.06)	0.0076 (0.00)	-0.2818 (-0.28)
SMB (β_2)	2.1953 (1.03)	-1.2785 (-0.24)	6.7539^{*} (1.76)	3.1902^{*} (1.81)
HML (β_3)	-4.1590 (-1.21)	8.3081 (1.64)	1.7525 (0.62)	-0.5451 (-0.25)
Cash only dummy	-	-	-	-0.0546^{*} (-1.60)
Cash and stock dummy	-	-	-	0.0157^{**} (0.37)
Sample Size	**114**	**58**	**88**	**270**

Note: The table reports coefficient estimates for equation [2]. The model is estimated for each category of method of payment under the three samples (i.e. public target acquirers, private target acquirers and subsidiary target acquirers) analysed. The dependent variable is the bidder's three-day buy and hold excess return. The alpha (α) measures the announcement period abnormal returns after controlling the market factors. A [***, (**), (*)] indicates statistical significance at the 1%, (5%), (10%) level. The relevant t-values are reported in parentheses.

4.7.1.4 Bid Characteristics and Abnormal Returns

This chapter identified a number of bid characteristics, discussed in Section 4.3 of the literature review, that have an influence on the abnormal returns generated by bidding firms for foreign targets. Therefore, before estimating the multiple regression models, this thesis analyses the influence of relative size, bid frequency, relatedness, the industry of bidders and targets, and the acquisition atmosphere on the abnormal returns generated by the bidding firms. Each sample is divided into two groups using each bid characteristic and equation [2] is estimated separately for each group. In addition, equation [2] was modified by including a dummy variable to represent the relevant bid characteristic and the model was estimated using all the observations of each sample. This was done to test if one particular group earns significantly higher abnormal returns than the other group. However, for expositional simplicity, only the alpha values generated by equation [2] and the coefficients generated for the bid character dummy are reported in Table 4.9.[74]

Panel A of Table 4.9 shows the abnormal returns in relation to the relative size of the target firm. Each sample is divided into two groups as high relative size and low relative size. For this purpose, using the ratio of deal value to bidder's market value of equity, all the bidding firms were ranked from the highest to the lowest; the top 30 percent was termed the 'high relative size' group and the bottom 30 percent was termed the 'low relative size' group. It is generally accepted that bidding firms earn statistically higher abnormal returns when they acquire large targets compared to small targets. The results show that the magnitude of the alpha values generated by equation [2] across three samples for the high relative size group (2.72%, 4.66% and 5.34% for public, private and subsidiary samples, respectively) are consistently larger than that those generated for the low relative size group (-0.05%, 1.08% and 4.25% for public, private and subsidiary samples, respectively) implying that higher the relative size, higher the

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[74] The abnormal returns are also estimated for the selected bid characteristics by estimating equation [1]. Table B.3 of Appendix B reports the results. The findings are similar to what have been reported in Table 4.9.

announcement period abnormal returns for bidding firms. When the equation [2] is modified by including a 'high relative size dummy' and estimated using all the observations of each sample, the coefficient for this 'high relative size' dummy turned out to be positive and statistically significant for all three samples (0.0461, 0.0774 and 0.0842, respectively, for public, private and subsidiary samples), providing evidence that the high relative size group earns statistically significant higher positive abnormal returns than the low relative size group across all three samples analysed. The coefficient on the high relative size dummy is significant at the 1 percent level for private and subsidiary targets samples while it is significant at the 10 percent level for public target sample. This evidence is consistent with prior UK and US studies (Markides and Ittner, 1994; Fuller and Glatzer, 2003; Feito-Ruiz and Menéndez-Requejo, 2011). However, in this study, the relative size effect is highest in the subsidiary targets sample, followed by private targets sample and public targets sample, respectively.

There is a positive association between the bidding firms' experience in the acquisition market and the announcement period abnormal returns in cross-border acquisitions (Doukas, 1995). Panel B of Table 4.9 shows the association between the acquisition frequency and announcement period abnormal returns. Each sample is classified into two groups; single and multiple bidders. Single bidders are those that made only one acquisition during the sample period and multiple bidders are those that placed more than one bid in the sample period. The alpha values generated by equation [2] for the 'multiple bidders' group is positive and significant for the private targets and subsidiary targets samples. All the other alpha values were found to be insignificant. Therefore, there is some evidence to suggest that experienced bidders earn significant abnormal returns when they bid for foreign private and subsidiary targets. However, when equation [2] was estimated for all the observations by including a 'multiple bid' dummy, the coefficients on that dummy were found to be insignificant for all three samples, implying that the experienced bidders do not necessarily earn significantly higher returns than inexperienced bidders. These findings do not strongly support the arguments provided by Doukas (1995) that the gains from cross-border

acquisitions can be higher if the bidding firms have prior foreign acquisition experience because this may reduce the transaction costs and smooth the integration process of such acquisitions.

In Panel C of Table 4.9, the influence of the relatedness of acquisitions has been analysed. Each sample is classified into two groups, related and unrelated acquisitions; where they are related if both the target and the bidder share the same four-digit SIC code and unrelated if they have different SIC codes. This study finds very weak evidence to suggest that relatedness influences the announcement period returns of bidders. Even though the alpha values generated in equation [2] for the 'related acquisitions group' are positive and significant in the private and subsidiary samples, the coefficient for the 'unrelated bid' dummy generated by modifying equation [2] remains insignificant for all three samples. Therefore, it cannot be concluded that relatedness influences the abnormal returns of the bidders for foreign targets.

Panels D and E of Table 4.9 shows the results of the analysis of the influence of the industry membership of bidders and targets on the announcement period abnormal returns of bidders. Australian foreign acquisitions are dominated by the acquisition of mining targets. Therefore, two groups, such as mining and non-mining bidders/targets, are analysed. In addition, both high tech and non-high tech bidders/targets are also analysed, as bidder shareholders may perceive the acquisition of high tech targets as being associated with potential growth opportunities. The results in Panel D show that bidders for mining firms earn positive and significant abnormal returns of 0.0962 percent when they acquire subsidiary targets. In this subsidiary acquisitions sample, 47 percent of bidders (127 of 270 bidders) are from the mining industry, 96 percent of whom (122 of 127 subsidiaries) acquired mining subsidiaries. The non-mining bidders earn positive and significant abnormal returns of 2.40 percent when they acquire private targets. The coefficient for the 'mining bidders' dummy in the modified equation [2] is positive and statically significant for both the private targets and subsidiary targets samples. This implies that mining bidders earn significantly higher positive abnormal returns than non-mining bidders when they acquire

either private or subsidiary foreign targets. However, such a disparity between these two types of bidders cannot be observed when they acquire foreign public targets.

In the same panel, the bidders are categorised into two groups, high tech bidders and non-high tech bidders. Both high-tech and non-high tech bidders earn significant abnormal returns of 3.34 percent and 2.90 percent, respectively, when they acquire private targets. However, as the insignificant high-tech bidders dummy indicates, the difference in performance between these two groups is insignificant. Non-high tech bidders earn positive and significant abnormal returns of 5.59 percent when they acquire foreign subsidiaries; their performance is different from that of high-tech bidders in a statistically significant margin (as revealed by the negative and significant coefficient generated for the 'high-tech bidders dummy' in the subsidiary targets sample).

Panel E of Table 4.9 shows that bidders for foreign public targets earn significant positive abnormal returns of 2.80 percent when they acquire non-mining targets. Even though the bidders for private targets realise significant positive abnormal returns of 5.97 percent and 2.13 percent, respectively, when they acquire both mining and non-mining targets, the magnitude of the abnormal returns generated by bidders for mining targets is much higher than those generated by the bidders for non-mining targets. As the coefficient of 'mining targets dummy' (0.1003) for this sample indicates, bidders for foreign private targets realise significantly higher abnormal returns when they acquire mining targets compared to the acquisition of non-mining targets. Bidders for subsidiary targets earn statistically significant positive abnormal returns (7.98%) when they acquire mining firms. However, it cannot be said that these bidders earn significantly higher abnormal returns than the bidders for non-mining subsidiaries, as the coefficient for the 'mining targets dummy' for this sample (0.0093) is insignificant.

The same panel separates targets into two groups, high tech and non-high tech firms, for all three samples. The bidders for private companies and subsidiaries earn positive and significant abnormal returns of 4.38 percent and

4.01 percent, respectively, when they acquire non-high-tech targets. The negative and significant coefficients generated for the 'high-tech targets dummy' in private and subsidiary targets samples reveal that the bidders for non-high firms in these two groups of targets earn significantly higher abnormal returns than those that bid for high-tech targets. This evidence contrasts with Conn *et al.* (2005) who found significant positive abnormal returns for the bidders for high tech targets in cross-border acquisitions.

Panel F of Table 4.9 analyses the announcement period abnormal returns on the basis of the acquisition atmosphere. Each sample is split into two groups, friendly acquisitions and hostile acquisitions. When the bidders acquired the target in an unfriendly manner, such a bid is defined as a 'hostile acquisition', otherwise it is considered as a 'friendly acquisition'. Most of these foreign acquisitions are friendly in nature; the percentages of friendly acquisitions are as follows: public 83.15 percent, private 95.77 percent and subsidiaries 92.59 percent. For the friendly bids group, the three-factor model generates significant positive alpha values of 3.00 percent and 4.22 percent, respectively, in private and subsidiary samples, implying that friendly acquisitions of foreign private and subsidiary targets are welcomed by the investors of bidding firms. However, as the 'hostile bid dummy' generates insignificant coefficients, it cannot be argued that friendly bids necessarily outperform hostile bids, or vice versa.

Table 4.9
Bid Characteristics and Announcement Period Abnormal Returns

	Public	Private	Subsidiary
Panel A: Relative Size			
High relative size (α)	0.0272 (0.69)	0.0466[*] (1.82)	0.0534[**] (1.92)
Low relative size (α)	-0.0049 (-0.40)	0.0108[**] (2.10)	0.0425[**] (2.10)
High relative size dummy	0.0461[*] (1.78)	0.0774[***] (3.62)	0.0842[***] (2.53)
Panel B: Acquisition Frequency			
Single bidder (α)	-0.0137 (-0.68)	0.0137 (0.95)	0.0302 (1.19)
Multiple bidder (α)	0.0375 (1.26)	0.0523[***] (3.69)	0.0732[***] (3.23)
Multiple bidder dummy	0.0100 (0.32)	0.0318 (1.42)	-0.0025 (-0.09)
Panel C: Relatedness			
Related acquisition (α)	0.0144 (0.99)	0.0482[***] (3.75)	0.0482[***] (3.76)
Unrelated acquisition (α)	0.0037 (0.10)	0.0066 (0.37)	0.0515[***] (3.12)
Dummy unrelated bidders	0.0178 (0.66)	-0.0177 (-0.82)	-0.0040 (-0.14)
Panel D: Bidders Industry Analysis			
Mining bidders (α)	-0.0036 (-0.10)	0.0549 (1.58)	0.0962[***] (3.19)
Non-mining bidders (α)	0.0205 (1.44)	0.0240[**] (2.26)	0.0188 (1.10)
Mining bidders dummy	-0.0048 (-0.19)	0.0859[***] (2.51)	0.0836[***] (2.97)
High-tech bidders (α)	-0.0075 (-0.63)	0.0334[*] (1.83)	0.0241 (1.00)
Non high-tech bidders (α)	0.0127 (0.59)	0.0290[**] (2.34)	0.0559[***] (2.56)
High-tech bidders dummy	0.0011 (0.07)	-0.0097 (-0.47)	-0.0512[**] (-2.23)
Sample Size	**89**	**355**	**270**

Table 4.9
Bid Characteristics and Announcement Period Abnormal Return (cont.)

	Public		Private		Subsidiary	
Panel E: Target Industry Analysis						
Mining targets (α)	-0.0098	(-0.27)	0.0597[*]	(1.70)	0.0798[***]	(2.59)
Non-mining targets (α)	0.0280[**]	(2.14)	0.0213[**]	(2.15)	0.0244	(1.44)
Mining targets dummy	-0.0121	(-0.48)	0.1003[***]	(2.86)	0.0093	(0.46)
High-tech targets (α)	0.1046	(0.89)	-0.0068	(-0.28)	0.0339	(1.29)
Non high-tech targets (α)	0.0073	(0.34)	0.0438[***]	(3.86)	0.0401[***]	(3.90)
High-tech targets dummy	0.0288	(0.90)	-0.0380[*]	(-1.82)	-0.0426[*]	(-1.83)
Panel F: Acquisition Atmosphere						
Friendly bids (α)	0.0164	(0.73)	0.0300[***]	(2.82)	0.0422[**]	(2.25)
Hostile bids (α)	0.0057	(0.21)	-0.0282	(-0.46)	0.1072	(1.61)
Hostile bids dummy	-0.0203	(-0.89)	0.0242	(0.49)	0.0320	(0.67)

Note: The table reports coefficient estimates for equation [2] together with their relevant *t*-values (in brackets). This model is estimated for the three samples (i.e. public target acquirers, private target acquirers and subsidiary target acquirers) for three-day event window. The dependent variable is the bidder's three-day buy and hold excess return. The alpha (α) measures the announcement period abnormal returns after controlling the market factors and bid characteristics. A [***], [**], [*] indicates statistical significance at the 1%, (5%), (10%) level.

4.7.1.5 Firm Characteristics and Abnormal Returns

In this section the influence of four firm characteristics on bidders' abnormal returns are analysed. They include pre-acquisition profitability, pre-acquisition cash flow, pre-acquisition leverage, and the pre-acquisition size of bidding firms. Each sample is classified into two groups, as 'High' and 'Low' on the basis of each firm characteristic. For this purpose, in each year of the sample period, all the bidding firms were ranked from highest to the lowest on the basis of a particular firm characteristic; the top 30 percent was assigned to the 'High' category and the bottom 30 percent was assigned to the 'Low' category. This process was continued for each year for the full sample period. The abnormal return is estimated using the three-factor model for the three-day event window for Panel A of Table 4.10 shows the abnormal returns for bidding firms when the samples were split using profitability. Consistent with the findings in Chapter 3 for domestic acquisitions, this table provides evidence that low profitable Australian bidding firms outperform high profitable bidders in terms of announcement period abnormal returns when they acquire foreign private and subsidiary targets. The alpha values generated by equation [2] for the 'low profitable group' in these two samples are positive (4.65% and 11.29%, respectively) and significant. More importantly, in these two samples, the modified equation [2] generates positive and significant coefficients for the 'low profitability dummy', implying that low profitable bidders earn significantly higher returns than high profitable bidders when they acquire private and subsidiary targets. This finding is consistent with the prior evidence of both Markides and Oyon (1998) and Markides and Ittner (1994) who find that that US bidders for foreign targets do not necessarily make value creating acquisitions when they are highly profitable. Profit constrained acquirers tend to make value creating foreign acquisitions, and the market responds positively to such bids as evidenced in this study.

Panel B of Table 4.10 reports the association between bidders' cash flow holdings prior to acquisition and announcement period abnormal returns. Even

though the alpha values are mostly insignificant, the coefficient of the 'low cash holdings dummy' is positive and significant for the private and subsidiary targets samples. Such a finding implies that the market responds more positively when cash tight bidders acquire foreign private and subsidiary targets.

Panel C of Table 4.10 analyses the impact of leverage. Highly leveraged bidders for public targets earn significant positive abnormal returns (6.15%) while those with low leverage earn insignificant returns (-6.11%). As Kang (1993) suggests, this may indicate that the creditors of highly leveraged bidders have strong incentives to monitor large investments abroad and, therefore, such bidders tend to pursue value creating acquisitions and, in consequence, observe a positive market response. However, low leveraged bidders for private and subsidiary targets also observe statistically significant positive abnormal returns as indicated by positive and significant alpha coefficients (5.27% and 8.98%, respectively). The 'high leveraged dummy' generates negative and significant coefficients in public targets and subsidiary targets samples, suggesting that highly leveraged firms earn statistically lower abnormal returns compared to low leveraged bidding firms. Overall, the Australian market tends to perceive the foreign acquisition decisions of low leveraged bidding firms as more value creating than those initiated by highly leveraged bidding firms.

Panel D of Table 4.10 analyses the influence of pre-acquisition size. A number of studies report that large bidders perform relatively better than small bidders in cross-border acquisitions (Kang, 1993; Danbolt, 1995; Francis *et al.*, 2008). In this study, such a finding was observed only for the acquirers of foreign public targets. For the bidders for private and subsidiary foreign targets, small bidders perform better than large bidders. In particular, , the 'small size dummy' generates positive and significant coefficients for the private and subsidiary targets samples while being insignificant for the public targets sample, implying that small bidders outperform the large bidders significantly in cross-border acquisitions when they acquire private and subsidiary targets.

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Table 4.10
Firm characteristics and Announcement Period Abnormal Returns

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Panel A: Pre-acquisition Profitability

	Public Targets	Private Targets	Subsidiary Targets
High (Top 30% ROA) (α)	0.0004 (0.02)	0.0018 (0.25)	0.0306* (1.74)
Low (Bottom 30% ROA) (α)	0.0032 (0.07)	0.0465* (1.85)	0.1129** (2.54)
Low profitability dummy	0.0027 (0.57)	0.0795*** (2.77)	0.0970** (2.42)

Panel B: Pre-acquisition Cash Flow

	Public Targets	Private Targets	Subsidiary Targets
High (Top 30% free cash flow) (α)	0.0015 (0.10)	0.0076 (1.09)	0.0150 (1.08)
Low (Bottom 30% free cash flow) (α)	0.0021 (0.05)	0.0459* (1.70)	0.0481 (1.37)
Low cash flow dummy	0.0036 (0.11)	0.0850*** (2.72)	0.0712* (1.80)

Panel C: Pre-acquisition Leverage

	Public Targets	Private Targets	Subsidiary Targets
High (Top 30% net debt) (α)	0.0615** (2.17)	0.0245** (2.00)	0.0167 (0.67)
Low (Bottom 30% net debt) (α)	-0.0611 (-1.65)	0.0527** (2.30)	0.0898** (2.13)
High leverage dummy	0.0154 (0.68)	-0.0609*** (-3.33)	-0.0614*** (-2.56)

Panel D: Pre-acquisition Size

	Public Targets	Private Targets	Subsidiary Targets
Large (Top 30% market value) (α)	0.0232** (2.20)	-0.0071 (-1.41)	0.0295*** (4.13)
Small (Bottom 30% market value) α	0.0088 (0.27)	0.0648** (2.29)	0.0756** (2.01)
Small size dummy	0.0174 (0.45)	0.0992*** (3.26)	0.1202*** (2.85)

Note: The table reports coefficient estimates for equation [2] together with their relevant *t*-values in brackets. The model is estimated for four firm characteristics (i.e. the pre-acquisition ROA, cash holdings, net debt holdings and size of the bidding firms). A $^{***,(**),(*)}$ indicates statistical significance at the 1%, (5%), (10%) level. The dependent variable is the bidder's three-day buy and hold excess return. The alpha (α) measures the announcement period abnormal returns after controlling the market factors and firm characteristics. The value of alphas are reported in this table.

4.7.1.6 Influence of Factors Specific to Foreign Acquisitions

4.7.1.6.1 Investor Protection, Economic Freedom, Legal Origin of Target Countries, Strength of the Dollar and Abnormal Return

Table 4.11 reports the findings in relation to factors specific to foreign acquisitions. The factors analysed include investor protection, economic freedom and legal origin of target countries, and the strength of the Australian dollar.[75]

Panel A of Table 4.11 shows the abnormal returns in relation to the investor protection of target countries. Each sample is divided into two groups; high investor protection and low investor protection countries. This study uses the Revised Anti-director Rights Index for such a classification. The mean Revised Anti-director Rights Index for the full sample of this study is 3.9 and the average index value greater or equal to 3.9 is classified as high Anti-director Rights Index countries, and vice versa. It is argued that bidding firms earn higher abnormal returns when they acquire targets from low investor protection countries. The results, as shown in Panel A, indicate that bidders for public targets generate insignificant returns in both high (0.06%) and low (4.98%) protection countries. The results differ between private and subsidiary samples. The alpha is positive and significant (3.34%) for the private targets sample in high protection countries while it is insignificant in low protection countries (2.11%). This finding is consistent with John *et al.* (2010) and Moeller and Schlingemann (2005); they find that abnormal returns are higher for high protection private target countries. For the subsidiary targets sample, the abnormal returns (5.80%) are statistically significant at the 1 percent level for low protection countries. This finding is consistent with the argument provided by Rossi and Volpin (2004) that acquirers

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[75] The factors specific to foreign target acquisitions are also examined using the market-adjusted buy and hold return (i.e. equation [1]). The results are presented in Table B.5 of Appendix B. These findings are slightly different to what have been reported in Table 4.11. The main findings related to investor protection remains unchanged as there is no significant difference between high and low investor protection countries. However, the acquisitions of subsidiaries domiciled in civil law countries are associated with statistically higher abnormal returns than those located in common law countries. The acquisitions of public and private targets that are located in low economic freedom target countries are associated with significantly higher abnormal returns than those domiciled in high economic freedom target countries.

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do not pay high premiums when acquiring targets from low investor protection countries as their takeover market is competitive; they therefore earn significantly higher returns than those that acquire targets in high protection countries. However, the coefficients of the high protection dummy variables in all three samples are insignificant, suggesting that investor protection does not explain the announcement period abnormal returns of Australian bidding firms. The results show weak evidence across all three samples that investor protection is a strong determinant of abnormal returns in foreign acquisitions.

Panel B of Table 4.11 reports the abnormal returns based on the economic freedom of target countries. Each sample is divided into two groups; 'high economic freedom target countries' and 'low economic freedom target countries'. For this purpose, the mean value of the economic freedom index of the total population is used; target countries with an economic freedom index greater or equal to 72.64, the mean value of the index for the population, are classified as high economic freedom target countries and those with scores less than that value were classified as low economic freedom target countries. The results reveal that the announcement period abnormal returns are positive (3.93 %) and statistically significant at the 1 percent level for the acquirers of private targets when the targets are located in high economic freedom countries. The acquirers of subsidiary targets earn significant positive abnormal returns (5.80%) when the targets come from low economic freedom countries. For the public targets sample, the announcement period abnormal returns are statistically insignificant in both groups. The dummy variable that represents low economic freedom countries is only statistically significant for the subsidiary targets sample, suggesting that bidders earn statistically significant higher abnormal returns when they acquire subsidiary targets from low economic freedom countries compared to the acquisition of subsidiaries from high economic freedom countries. Such a significant difference cannot be observed for the acquisitions of private targets and public targets.

Panel C of Table 4.11 analyses the abnormal returns on the basis of legal origin. Australian firms tend to acquire more targets from common law based

countries (72.69%) compared to civil law based target countries (27.31%). According to Barbopoulos *et al.* (2012), bidding firms are expected to face higher competition in acquiring targets from common law countries and thus pay a higher premium for targets in such countries. Therefore, a more positive market reaction is expected when Australian firms acquire targets from civil law countries compared to common law countries. The results reveal that the acquisitions of public targets from both common law and civil law based countries are associated with insignificant returns. Bidders for private targets earn significant positive abnormal returns (3.90%) when they acquire targets from common law countries while bidders for subsidiaries earn significant positive abnormal returns (13.51%) when they acquire targets from civil law based countries. However, there is no significant difference in abnormal returns between common law and civil law based target countries across all three samples as indicated by the insignificant coefficient of the common law dummy. Therefore, this study finds no evidence to support the argument that acquirers of targets from civil law countries earn higher returns than acquirers of targets from common law countries.

Panel D of Table 4.11 examines the association between the strength of the dollar and abnormal returns. Each sample is classified into two groups; the strong Australian dollar period and the weak Australian dollar period. When the average daily exchange rate for a particular sample year is higher than the average daily exchange rate for the full sample year, then this year is considered as a strong dollar period, otherwise, as a weak dollar period. The results reveal that bidders earn significant positive abnormal returns during strong exchange rate periods when they acquire private and subsidiary targets. This is further confirmed by the significant positive coefficients generated for the strong exchange rate dummy variable for the private and subsidiary targets samples. The strong exchange rate period does not explain the variation in abnormal returns for public targets acquisitions.

It is obvious that the announcement period abnormal returns are conditional to economic freedom, investor protection and legal origin of target

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countries. Particularly, the bidders for private targets earn significant positive abnormal returns when they acquire targets from high investor protection and high economic freedom countries. Bidders for subsidiaries earn significant positive abnormal returns when targets are acquired from low investor protection and low economic freedom countries. Consistent with this finding, bidders for private targets generate significant positive abnormal returns from common law based target countries and bidders for subsidiary targets earn significant positive abnormal returns from civil law based target countries.

Table 4.11
Announcement Period Abnormal Returns for Foreign Acquisitions Specific Factors

Panel A: Investor Protection of Target Countries (Anti-director Rights Index)			
	Public	Private	Subsidiary
High anti-director rights index target countries(α)	0.0063 (0.28)	0.0393*** (2.64)	0.0013 (0.07
Low anti-director rights index target countries (α)	0.0498 (1.08)	0.0211 (1.44)	0.0580** (2.09)
High anti-director rights index dummy	-0.0279 (-1.16)	0.0201 (1.08)	0.0237 (0.85)
Panel B: Economic Freedom of Target Countries			
High-economic freedom index target countries (α)	0.0168 (0.73)	0.0451*** (3.99)	0.0179 (1.14)
Low-economic freedom index target countries (α)`	-0.0539 (-0.77)	-0.0109 (-0.46) [119]	0.0808*** (2.53)
Low EFW index dummy	0.0679 (1.15)	0.0404 (1.54)	0.0797*** (3.03)
Panel C: Legal System (Common Law vs Civil Law of Target Countries)			
Common law (α)	0.0102 (0.43)	0.0390*** (3.34)	0.0052 (0.34)
Civil law (α)	-0.0103 (-0.14)	-0.0022 (-0.09)	0.1351*** (3.59)
Common law dummy	-0.0072 (-0.31)	-0.0420 (-1.32)	-0.0463 (-1.53)
Panel D: Exchange Rate			
Strong exchange rate period (α)	0.0296 (1.05)	0.0370*** (3.40)	0.0568*** (2.60)
Weak exchange rate period (α)	-0.0045 (-0.35)	0.0161 (0.59)	0.0243 (0.95)
Strong exchange rate period dummy	0.0336 (1.52)	0.0700*** (3.22)	0.0550** (2.25)

Note: The table reports coefficient estimates for equation [2] together with their relevant *t*-values in brackets. The dependent variable is the bidder's three-day buy and hold excess return. The alpha (α) measures the announcement period abnormal returns after controlling the market factors and bid characteristics. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level.

4.7.1.6.2 Target Country Characteristics and Abnormal Returns

In addition to the four characteristics above, the announcement period abnormal returns are analysed across target countries. The results are reported in Table 4.12.[76]

This study analyses the market reactions for the top ten destinations of Australian bidding firms. The analysis reveals that Australian shareholders observe significant negative abnormal returns (-4.02%) when the bidders acquire public targets from the UK. Although Australian firms prefer to acquire public targets from the UK market (23.33%) over the USA (9.93%), such acquisitions are viewed negatively by the shareholders. Interestingly, investors' reactions reverse when Australian firms acquire private targets from the UK; they now earn significant positive abnormal returns (3.39%). A similar positive market reaction is uncovered when Australian firms acquire private targets from the US, Singapore and Hong Kong markets. Singapore and Hong Kong are the two preferred destinations for Australian bidding firms to acquire private targets; more than 62 percent of targets from these countries are private firms. Interestingly, country variation does not explain much of the abnormal returns for bidders of subsidiary targets.

In addition to analysing abnormal returns on the basis of target countries, in Panel B of Table 4.12, abnormal returns are analysed on the basis of the continent to which targets belong. This analysis reveals that Europe and North America are the top destinations for Australian firms, as the majority of acquisitions (50.28%) take place in these two continents. More than 50 percent of such acquisitions are of private targets (52.65%). Market reactions are positive and statistically significant when Australian companies acquire private targets from Europe (3.33%) and North America (4.28%). This response is negative when they acquire private targets from Africa, South America and Oceania. Asia and Africa are the preferred destinations when Australian firms acquire subsidiary targets. The abnormal returns are relatively higher at 11.17 percent for

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[76] The abnormal returns for country characteristics are also estimated using equation [1]. The results are qualitatively similar and are reported in Table B.6 of Appendix B.

acquisitions of subsidiaries from Africa while it is 7.85 percent for acquisitions of subsidiaries from Asia. This result indicates that Australian shareholders value the acquisitions of mining subsidiaries from these regions, particularly given that the acquisition of mining subsidiaries is more pronounced in Africa (85.11%) and Asia (46.88%). For the public targets sample, none of the continents generate significant announcement period abnormal returns.

Table 4.12
Target Country Characteristics and Announcement Period Abnormal Returns

	Public	Private	Subsidiary
Panel A: Target Country Analysis			
USA (α)	0.0459 (0.97)	0.0361** (2.01)	0.0043 (0.24)
UK (α)	-0.0402*** (-2.93)	0.0339* (1.93)	-0.0012 (-0.06)
New Zealand (α)	0.0065 (0.38)	-0.0248 (-1.17)	-0.0013 (-0.03)
Canada (α)	0.0421 (0.75)	0.0765 (1.48)	0.0366 (0.61)
South Africa (α)	-	-0.0420 (-0.38)	0.0425 (0.89)
Singapore (α)	-	0.2491** (2.53)	-0.0241 (-2.11)
China (α)	-	-0.0291 (-0.44)	0.1984 (1.44)
Hong Kong (α)	-	0.1284* (1.88)	-0.0177 (-1.17)
Indonesia (α)	-	-0.0203 (-0.17)	-0.0288 (-0.23)
Brazil (α)	-	-	-0.0127 (-0.14)
Panel B: Continent Analysis			
Asia (α)	-0.1471 (-2.36)	0.0344 (0.92)	0.0785** (2.16)
Europe (α)	-0.0135 (-0.74)	0.0333** (2.07)	0.0149 (0.88)
Africa (α)	0.0065 (0.38)	-0.0050 (-0.07)	0.1117** (2.11)
North America (α)	0.0607 (1.43)	0.0428*** (2.51)	0.0068 (0.34)
South America (α)	0.0459 (0.97)	-0.0468 (-0.92)	0.1449 (1.58)
Oceania (α)	0.0075 (0.51)	-0.0193 (-0.98)	-0.0024 (-0.07)
Sample Size	**89**	**355**	**270**

Note: The table reports coefficient estimates for equation [2] together with their relevant *t*-values (in brackets). The dependent variable is the bidder's three-day buy and hold excess return. The alpha (α) measures the announcement period abnormal returns after controlling the market factors and bid characteristics. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level.

4.7.2 Multivariate Analysis

The univariate analyses above reveal that a number of bid characteristics, firm characteristics, and foreign acquisitions-specific characteristics influence the abnormal return generated by bidding firms during the announcement period. It is important to examine the influence of these variables in a multivariate framework. This section reports the findings discovered by employing multiple regressions. Sub-section (i) discusses the findings obtained from the estimation of regression equation [3] when bid characteristics only are added to the three-factor model. Sub-section (ii) reports the output of regression equation [4] when both bid and firm characteristics are added. Sub-section (iii) reports the findings of estimating regression equation [5] when foreign acquisition-specific variables are added to three-factor model. Sub-section (iv) reports the findings of estimating regression equation [6] when bid, firm and foreign acquisition-specific variables are added to three-factor model. Finally, sub-section (v) reports the outcome of equation [7] where a comparison between domestic and foreign acquisitions is made.

4.7.2.1 The Influence of Bid Characteristics on Announcement Period Returns

Equation [3] is estimated for each sample and the results are presented in Table 4.13.[77] The model F-statistic is highly significant for the private and subsidiary targets samples. It is marginally significant for the public targets sample, probably because of the small sample size. The low adjusted R-squared values indicate that the explanatory power of the model is low. This low adjusted R-squared value is consistent with the international literature that investigates cross-border acquisitions (Conn *et al*., 2005; Barbopoulos *et al*., 2012).

A number of observations follow from the results generated for the three samples. As the constant term reveals, Australian bidders for foreign public and private targets do not earn significant abnormal returns during the announcement

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[77] Equation [3] is re-estimated using the market adjusted three-day buy and hold returns as the dependent variable and the coefficient estimates remain qualitatively similar to those reported in Table 4.13. The results are reported in Table B.7 of Appendix B.

period once the influence of bid characteristics is taken into account. However, bidders for foreign subsidiary targets realise positive and significant abnormal returns of 5.25 percent during the announcement period of such bids. Compared with the results reported in Table 4.7 where all three samples generated significant positive coefficients, the public and private targets samples have lost the significance of the constant term, whereas the subsidiary targets group has retained its statistical significance while increasing the magnitude of the constant term. This indicates the importance of incorporating these control variables in the analysis of abnormal returns generated by bidding firms. However, the insignificant abnormal returns generated for the public and private targets samples is similar to what was reported by Conn *et al.* (2005) for UK acquirers.

Turning to the bid characteristics included in the model, the relative size variable generates a significant positive coefficient for all three samples (0.0116 for the public targets sample, 0.0157 for the private targets sample, and 0.0183 for the subsidiary targets sample), indicating the market's positive assessment of the possible synergies associated with the acquisition of relatively large targets. This supports the generally accepted view that large cross-border deals are associated with higher abnormal returns than small cross-border deals (Markides and Ittner, 1994; Fuller and Glatzer, 2003; Feito-Ruiz and Menéndez-Requejo, 2011).

The findings also indicate that the stock-financed acquisitions of foreign private targets are associated with marginally significant positive excess returns. This finding is in line with the study by Dutta *et al.* (2013). They argue that stock-financed acquisitions of foreign private targets may allow the bidder to mitigate the high information asymmetry of foreign private firms while ensuring the monitoring activities of the newly acquired firm by the local shareholders. However, the method of financing does not seem to have a significant influence on the excess returns for bidders for public targets. The 'cash only dummy' mainly generates insignificant negative coefficients for both bidders for private and subsidiary targets. This is surprising, as cash is mostly used by Australian bidding firms when acquiring targets from abroad. The market does not seem to either reward or penalise cash-financed foreign acquisitions in a significant

fashion. These findings contrast with the US evidence that has found cash-financed foreign acquisitions to be associated with significant positive abnormal returns (Fuller and Glatzer, 2003; Freund *et al.*, 2007; John *et al.*, 2010).

The coefficient for the multiple-bid dummy is positive and significant for the bidders for private targets but it is positive and insignificant for the other two types of bidders. The market appears to interpret multiple acquisition attempts made by the Australian bidders for foreign private targets as value enhancing activities. This finding for foreign private targets is consistent with the argument provided by Doukas (1995) that the gain from the cross-border acquisition will be higher if the bidding firms have prior foreign acquisition experience, because it may reduce the transaction costs and smooth the integration process of such acquisitions. Overall, the findings do not support the view that multiple acquisitions of targets may be influenced by managerial motives such as empire building and prestige rather than creating value for shareholders, as all three samples provide positive coefficients for this variable (Mahoney, 1979; Agarwal, 1981; Kostiuk, 1990). One of the main motives associated with foreign acquisitions is the industrial diversification (Morck and Yeung, 2003). However, the insignificant coefficients generated for the unrelated dummy across all three samples indicate that the Australian market has an indifferent view regarding the value created/destroyed in such acquisitions. A similar finding is uncovered for the deal attitude. The dummy variable that captures this characteristic enters into the regression model with an insignificant coefficient across all three samples. The significant positive coefficients reported for the mining targets dummy in both private and subsidiary targets samples indicate that acquisitions of foreign mining targets are interpreted as value enhancing exercises by Australian investors.

The GFC dummy is positive and significant in both the public targets and private targets samples. This evidence suggests that the business cycle influences the abnormal returns earned by bidding firms because the companies that acquired overseas public and private targets during the period of the global financial crisis have realised positive and significant excess returns. This fact indicates that

overseas firms are more vulnerable to recession and provide opportunities for financially strong Australian bidders to use their competitive position over weak foreign firms; and to acquire them at a discounted value (Alexandrou and Sudarsanam, 2001).

Equation [3] is re-estimated using longer event windows (both five and seven days) to assess the sensitivity of the results reported in Table 4.13. These results are reported in Table B.8 of Appendix B. The regression estimates for the longer event windows also provide similar results to those reported in Table 4.13.

Table 4.13 Multiple Regression Estimates (Bid Characteristics)

Independent Variable	Acquisition of Public Targets		Acquisition of Private Targets		Acquisition of Subsidiary Targets	
Constant	-0.0175	(-0.59)	-0.0188	(-0.71)	0.0525*	(1.76)
R_m-R_f	1.3714	(1.33)	-0.2792	(-0.43)	-0.0268	(-0.02)
SMB	-0.4625	(-0.40)	2.2256*	(1.69)	3.4470**	(1.90)
HML	1.2536	(1.15)	0.0477	(0.05)	0.1769	(0.08)
Cash only dummy	0.0271	(1.33)	-0.0113	(-0.61)	-0.0216	(-0.75)
Stock only dummy	0.0081	(0.18)	0.0711*	(1.82)	0.0266	(0.65)
Ln relative size	0.0116*	(1.92)	0.0157***	(2.99)	0.0183**	(2.31)
Unrelated dummy	0.0223	(0.85)	-0.0110	(-0.48)	-0.0220	(-0.83)
Multiple bid dummy	0.0246	(1.03)	0.0643***	(2.62)	0.0271	(0.90)
Deal attitude dummy	-0.0043	(-0.19)	0.0506	(1.05)	0.0396	(0.80)
Mining target dummy	0.0009	(0.03)	0.0733**	(2.27)	0.0602**	(2.33)
GFC period dummy	0.0680**	(2.00)	0.0694***	(3.32)	-0.0091	(-0.35)
F-Statistics	**1.66***		**5.38***		**2.18***	
N	**89**		**355**		**270**	
Adjusted R^2	**0.07**		**0.12**		**0.05**	

Note: The table reports coefficient estimates and their respective *t*-values (in brackets) for the regression equation [3]. The dependent variable is the bidder's three-day buy and hold excess return and the independent variables included in the model are three market variables and a number of bid characteristics. The constant (α) measures the announcement period abnormal returns after controlling a set of explanatory variables. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level. The issue of heteroscedasticity was addressed by using White's adjustment procedure.

4.7.2.2 The Influence of Bid and Firm Characteristics on Announcement Period Returns

Equation [4] is estimated in order to examine the influence of the financial characteristics of the bidding firms on their announcement period abnormal returns. This equation includes three market variables and bid characteristics that were found to have a significant influence on the excess return of at least one sample analysed and the four firm characteristics explained in the methodology section. The findings are reported in Table 4.14. [78] The inclusion of firm characteristics increases the level of significance of the regression models as reflected by F statistics and the adjusted R squared for all three samples. However, the inclusion of the firm financial characteristics does not significantly alter the main findings reported in Table 4.13. Nevertheless, the inclusion of these financial characteristics produces an insignificant constant term for the subsidiary targets sample, making all three constants insignificant once both bid characteristics and firm characteristics are included in the model. [79]

The coefficient of the pre-acquisition size variable (i.e. ln market value) is negative and significant for the private targets sample but positive and significant for the public targets sample. This indicates that smaller the size of the bidders for foreign private targets, the higher the excess return generated during the announcement period, and the larger the size of the bidders for public targets, the larger the excess return generated during the announcement period. The finding for the public targets sample is consistent with Danbolt (1995) that the size has a positive association with the abnormal returns generated by bidders for foreign public targets. The findings of the private targets sample is also consistent with

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[78] Equation [4] is re-estimated using the market adjusted three-day buy and hold returns as the dependent variable. The coefficient estimates are qualitatively similar to those found in Table 4.14 but the constant term becomes positive and significant for both private (significant at 5 percent level) and subsidiary targets (significant at 10 percent level) samples. The results are shown in Table B.9 of Appendix B.

[79] Since there was a strong correlation (0.75) between the free cash-flow measure and the profitability variable, this study re-estimated equation [4] after dropping the free cash-flow variable. The results remain qualitatively similar to those reported in Table 4.14 (see Table B.10 of Appendix B).

the findings of Feito-Ruiz and Menéndez-Requejo (2011); they support the argument that shareholders value the acquisition decision of small bidders more favourably. The pre-acquisition profitability variable also generates positive and significant coefficients for both the 'public targets' and the 'subsidiary targets' samples. This supports the view that highly profitable companies create more value when they acquire foreign public and subsidiary targets. The pre-acquisition leverage variable is negative and significant for the subsidiary targets sample. According to the predictions of agency theory/free cash flow theory (Jensen and Meckling, 1976; Jensen, 1986), the managers of highly leveraged firms should make value creating decisions that include acquisitions. However, this finding does not support the argument above; the market does not perceive leveraged firms' acquisition decisions more positively. The significant negative coefficients of the free cash flow variable for all three samples suggest that the market interprets the acquisitions decisions of high cash flow holding firms in a negative manner. This finding supports the managerial motive hypothesis of cross-border acquisitions.

Table 4.14 Multiple Regression Estimates (Bid and Firm Characteristics)

Independent Variable	Acquisition of Public Targets		Acquisition of Private Targets		Acquisition of Subsidiary Targets	
Constant	-0.0449	(-1.15)	0.0110	(0.39)	0.0440	(1.26)
R_m-R_f	1.2905***	(2.55)	-0.2584	(-0.48)	0.9008	(0.84)
SMB	-0.7103	(-1.06)	2.3562*	(1.79)	3.2545*	(1.86)
HML	-0.2823	(-0.41)	-0.0339	(-0.04)	0.6730	(0.34)
Cash only dummy	0.0071	(0.35)	0.0121	(0.65)	-0.0076	(-0.24)
Stock only dummy	-0.0159	(-0.56)	0.0741*	(1.87)	0.0165	(0.50)
Ln relative size	0.0063	(1.42)	0.0080	(1.38)	0.0174**	(2.10)
Multiple bid dummy	0.0160	(0.82)	0.0751***	(2.88)	0.0403	(1.24)
Mining target dummy	-0.0121	(-0.65)	0.0482	(1.44)	0.0386*	(1.61)
Ln market value	0.0110*	(1.84)	-0.0145***	(-2.48)	0.0010	(0.21)
Profitability	0.0535*	(1.81)	-0.0001***	(-2.99)	0.0117**	(2.31)
Leverage	-0.0365	(-1.19)	-0.0313	(-1.19)	-0.0609**	(-1.97)
Free cash flow	-0.3026***	(-5.18)	-0.0061***	(-2.57)	-0.0750*	(-1.74)
GFC period dummy	0.0236	(1.12)	0.0658***	(3.22)	-0.0152	(-0.60)
F-Statistics	**10.34*****		**5.72*****		**3.73*****	
N	**89**		**355**		**270**	
Adjusted R^2	**0.58**		**0.15**		**0.12**	

Note: The table reports coefficient estimates and their respective *t*-values (in brackets) for the regression equation [4]. The dependent variable is the bidder's three-day buy and hold excess return and the independent variables included in the model are three market variables, bid characteristics and firm financial characteristics. The constant (α) measures the announcement period abnormal returns after controlling a set of explanatory variables. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level. The issue of heteroscedasticity was addressed by using White's adjustment procedure.

4.7.2.3 Influence of Factors Specific to Foreign Acquisitions

To investigate the influence of factors specific to foreign acquisitions on the announcement period abnormal returns, equation [5] is estimated. This equation includes three market variables, four variables specific to foreign acquisitions (investor protection, economic freedom, legal system of the target country, and the relative strength of the exchange rate), a dummy variable representing mining targets acquisitions, dummies representing the top four target destinations (US, UK, Canada, and New Zealand) and, finally, a dummy variable capturing the GFC period. The findings are reported in Table 4.15.[80]

The results from regression equation [5] suggest that none of the foreign acquisitions-specific variables have a significant influence on excess returns except the legal system of target countries. The civil law country dummy indicates that acquisitions of foreign private targets from civil law based countries are associated with lower excess returns for shareholders of bidding firms compared with the acquisitions from common law countries. The positive and significant mining target dummy for subsidiaries indicates that acquisitions of mining subsidiaries create value for shareholders. All the country dummies generate significant negative coefficients for private targets and insignificant coefficients for subsidiaries. When Australian bidders acquire UK public targets, they earn negative returns during the announcement period.

In the next stage, equation [6] is estimated. This regression model includes the bid and firm characteristics that were found to be significant in equation [3] and the foreign acquisitions-specific factors. The results are reported in Table 4.16. After inclusion of these variables, the results reveal that bidders' abnormal returns are largely a function of investor protection and economic freedom of target countries. The results are reported in Table 4.16. The inclusion of factors specific to foreign target acquisitions, along with the bid and firm characteristics, once

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[80] Equation [5] was estimated using market-adjusted by and hold return as the dependent variable. The findings are reported in Table B.11 of Appendix B. The findings remain qualitatively similar to those reported in Table 4.15. However, the Revised Anti-directors Rights Index becomes significant at the 1 percent level for public targets sample and the relative strength of Australian dollar variable becomes significant at 10 percent level for subsidiary targets sample.

again, increase the adjusted R squared indicating the importance of including all these variables in the multiple regressions when investigating the market reaction to cross-border acquisitions.

The regression results in Table 4.16 show that the coefficient of the Revised Anti-director Rights Index is positive and significant for the public targets groups; however, it is negative and significant for the subsidiary targets group. This suggests that Australian bidders for public targets earn significant positive returns and bidders for subsidiaries encounter significant negative returns when they acquire targets from high investor protection countries. The significant positive relationship observed in this study for the public targets sample contrasts with the finding of John *et al.* (2010) who found a significant negative relationship between shareholder protection and abnormal returns for public targets. However, the results of this study should be interpreted with caution since the public targets sample is based on 84 announcements and the majority of these targets (83%) are acquired from high investor protection countries. The finding of an insignificant coefficient for the investor protection variable in the private targets sample is consistent with the evidence of John *et al.* (2010). The economic freedom variable is insignificant in all three samples, implying that the economic freedom of the target country does not have any significant influence on the excess return of Australian bidders. The civil law country dummy generates negative and significant coefficients for both the private and subsidiary targets samples. It is expected that Australian bidders could gain from acquiring targets from civil law based countries since targets in those countries can be bought at a discount; the takeover market is relatively inactive due to less demand for targets domiciled in civil law countries. However, the negative coefficients may support the alternative view that due to differences in legal environments and cultural differences between Australia (common law based country) and civil law based target countries, shareholders may perceive such acquisitions as value reducing activities due to the high cost involved in the post-acquisition integration process (Barbopoulos *et al.*, 2012). The bid characteristics provide similar results to those reported in Table 4.14, except the mining target dummy, which remain

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insignificant for all three samples. The slight changes that occurred in the firm characteristics and size variable is insignificant for all three samples, while the leverage variable generates significant coefficients in all three samples. The coefficient of the relative strength of the Australian dollar is positive and significant for the private targets sample, which suggests that the market interprets acquisitions of foreign private targets by Australian bidders during the period of strong dollar as value creating.

Table 4.15 Multiple Regression Estimates (Factors Specific to Foreign Targets)

Independent Variable	Public		Private		Subsidiary	
Constant	0.9154	(0.63)	-0.6580	(-1.28)	0.4758	(0.79)
R_m-R_f	2.2179**	(1.99)	0.3296	(0.62)	0.1894	(0.16)
SMB	-0.5536	(-0.63)	0.9974	(0.98)	3.9510**	(1.96)
HML	1.9530	(1.25)	0.0891	(0.10)	2.4902	(1.06)
Rev. anti-director rights index	0.3804	(1.32)	-0.1739	(-1.40)	-0.2694	(-1.13)
Economic freedom of the world index	-0.5454	(-0.72)	0.4553	(1.53)	-0.1311	(-0.36)
Civil-law country dummy	-0.1882	(-1.12)	-0.0975***	(-2.68)	-0.0852	(-1.23)
Relative strength of Australian dollar	0.0190	(0.29)	0.0823	(1.26)	0.2153	(1.55)
Mining target dummy	0.0052	(0.14)	0.0550	(1.53)	0.0598**	(1.90)
US target country dummy	-0.0639	(-0.57)	-0.1027**	(-2.55)	-0.0711	(-1.21)
UK target country dummy	-0.2092*	(-1.82)	-0.0811**	(-2.54)	-0.0078	(-0.21)
Canada target country dummy	-0.1664	(-1.26)	-0.0826**	(-1.94)	-0.0528	(-0.86)
New Zealand target country dummy	-0.1335	(-1.32)	-0.1183***	(-3.38)	-0.0286	(-0.55)
GFC period dummy	0.0801**	(2.10)	0.0280	(1.43)	-0.0477	(-1.29)
F-Statistics	**2.54***		**2.43***		**1.96**	
N	85		308		225	
Adjusted R^2	**0.19**		**0.06**		**0.05**	

Note: The table reports coefficient estimates and their respective *t*-values (in brackets) for the regression equation [5]. The dependent variable is the bidder's three-day buy and hold excess return and the independent variables included in the model are three market variables, bid and firm characteristics, investor protection variable, economic freedom variable, civil law based countries dummy, exchange rate variable, top four country dummies and GFC period dummy. The constant (α) measures the announcement period abnormal returns after controlling a set of explanatory variables. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level. The issue of heteroscedasticity was addressed by using White's adjustment procedure.

However, this variable generates insignificant coefficients for the other two samples. Barbopoulos *et al.* (2012) also find insignificant coefficients for the exchange rate variable when they analysed the abnormal returns of bidders for public, private and subsidiary targets. Surprisingly, acquisitions of public targets from the US are valued positively while acquisitions of public targets from the UK are perceived as value destructing by Australian shareholders. All the country variables generate insignificant coefficients in the private targets sample. Significant value reductions are observed for Australian bidders that acquire US subsidiaries. The rest of the country variables generate insignificant coefficients in the subsidiary targets sample. Overall, the results suggest that investor protection and the legal system are important determinants of the market reaction to the announcement of cross-border acquisition by Australian bidding firms.

Table 4.16 Multiple Regression Estimates (Factors Specific to Foreign Acquisitions)

Independent Variable	Public		Private		Subsidiary	
Constant	-0.3404	(-0.59)	-0.1592	(-0.29)	0.4535	(0.77)
R_m-R_f	1.2646**	(1.99)	0.2281	(0.43)	1.2097	(1.22)
SMB	-0.5748	(-0.74)	1.0015	(0.96)	5.1399***	(2.50)
HML	-0.1533	(-0.19)	0.3125	(0.37)	3.2261	(1.42)
Cash only dummy	-0.0037	(-0.16)	0.0207	(1.23)	-0.0085	(-0.28)
Stock only dummy	-0.0218	(-0.65)	0.0652*	(1.94)	0.0036	(0.10)
Ln relative size	0.0050	(0.88)	0.0114*	(1.90)	0.0237**	(2.07)
Multiple bid dummy	0.0260	(1.26)	0.0450**	(2.14)	0.0211	(0.67)
Mining target dummy	-0.0127	(-0.44)	0.0216	(0.57)	0.0273	(0.88)
Ln market value	0.0087	(1.37)	-0.0065	(-1.26)	0.0051	(0.93)
Profitability	0.0414	(1.57)	-0.0001***	(-2.56)	0.0131**	(2.19)
Leverage	-0.0423*	(-1.51)	-0.0305*	(-1.12)	-0.0597**	(-2.19)
Free cash flow	-0.2713***	(-5.02)	-0.0083***	(-3.57)	-0.0261	(-0.79)
Rev. anti-director rights index	0.4704***	(3.53)	-0.0912	(-0.72)	-0.4865**	(-2.09)
Economic freedom of the world index	-0.0078	(-0.03)	0.1478	(0.47)	-0.0013	(-0.00)
Civil-law country dummy	-0.0087	(-0.18)	-0.0659*	(-1.88)	-0.1478**	(-1.92)
Relative strength of Australian dollar	0.0167	(0.29)	0.1011*	(1.75)	0.2090	(1.45)
US target country dummy	0.0669*	(1.79)	-0.0485	(-1.18)	-0.1453**	(-2.39)

Table 4.16 Multiple Regression Estimates (Factors Specific to Foreign Acquisitions Cont.)

Independent Variable	Public		Private		Subsidiary	
UK target country dummy	-0.0765**	(-2.49)	-0.0435	(-1.47)	-0.0292	(-0.56)
Canada target country dummy	-0.0064	(-0.14)	-0.0226	(-0.53)	-0.0566	(-0.87)
New Zealand target country dummy	-0.0029	(-0.10)	-0.0476	(-1.26)	-0.0507	(-1.03)
GFC period dummy	0.0327	(1.25)	0.0225	(1.23)	-0.0328	(-0.95)
F-Statistics	**6.66*****		**3.17*****		**2.87*****	
N	**84**		**304**		**220**	
Adjusted R^2	**0.59**		**0.13**		**0.15**	

Note: The table reports coefficient estimates and their respective *t*-values (in brackets) for the regression equation [6]. The dependent variable is the bidder's three-day buy and hold excess return and the independent variables included in the model are three market variables, bid and firm characteristics, investor protection variable, economic freedom variable, civil law based countries dummy, exchange rate variable, top four country dummies and GFC period dummy. The constant (α) measures the announcement period abnormal returns after controlling a set of explanatory variables. A [***, (**), (*)] indicates statistical significance at the 1%, (5%), (10%) level. The issue of heteroscedasticity was addressed by using White's adjustment procedure.

4.7.2.4 The Comparison between Domestic and Foreign Acquisitions

In order to examine whether foreign acquisitions generate higher abnormal returns than domestic acquisitions, equation [7] is estimated. This equation includes three market variables, five bid characteristics (a cash only deals dummy, a stock only deals dummy, the natural logarithm of the relative size of the deal, a multiple bid dummy, and a mining target dummy), four firm characteristics (firm size, profitability, leverage and free cash flow), two foreign acquisitions-related variables (a cross-border target dummy and a cross-border mining target dummy), and a dummy variable capturing the GFC period. The observations used for each sample include both domestic and foreign acquisitions. The results are reported in Table 4.17.[81]

The constant is positive and significant at the 1 percent level in all three samples reflecting the positive and significant market reaction to acquisition announcements. However, the coefficient of the cross-border targets dummy is insignificant for all three samples. This suggests that cross-border acquisitions do not generate significantly higher abnormal returns than the domestic acquisitions for Australian bidding firms. This finding is consistent with a number of international studies that do not find any significant differences in market reactions between cross-border and domestic acquisitions (Hudgins and Seifert, 1996; Feito-Ruiz and Menéndez-Requejo, 2011; Barbopoulos *et al.*, 2012). But these findings do not support the studies that report significant differences in abnormal returns between these two groups (see, Moeller and Schlingemann, 2005; Francis *et al.*, 2008; Dutta *et al.*, 2013). However, in cross-border deals, mining target acquisitions have significant positive effects on both the private and subsidiary samples. Interestingly, the stock financing payment method for private targets remains positive and statistically significant, even after controlling for domestic and foreign acquisitions. This provides strong evidence that stock-financed private target acquisitions are perceived as value creating by the capital

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[81] Equation [7] is also estimated using the market adjusted buy and hold return as the dependent variable. The results are qualitatively similar (see Table B.12 of appendix B).

market regardless of whether the targets are acquired in domestic or cross-border markets. However, cash-financed acquisitions are associated with insignificant excess returns for both public and subsidiary targets samples.

Other variables in these models have similar signs to those reported in previous sections. For example, the relative size variable is positive and significant for both the private and subsidiary targets samples. The multiple bid dummy and the mining target dummy variables generate insignificant coefficients for all three samples. Both the multiple bid dummy and the mining target dummy lost their significance after controlling for the domestic acquisitions, since these variables were found to have significant coefficients when only foreign acquisitions are analysed. The size variable is negative and significant for all three samples, suggesting that a significant negative relationship exists between bidders' size and the abnormal returns, which is consistent with a number of studies (Moeller et al., 2004; Humphery-Jenner and Powell, 2011). The coefficient on profitability variable is negative and significant for the private targets sample whereas the free cash flow variable is negative and significant for the subsidiary targets sample. The GFC dummy variable is statistically significant for the private targets sample, implying that, during the GFC period, bidders for private targets gained higher abnormal returns, which suggests that private targets are sold at a discount in this recessionary period.

Table 4.17 Multiple Regression Estimates (Domestic and Foreign Targets)

Independent Variable	Acquisition of Public Targets	Acquisition of Private Targets	Acquisition of Subsidiary Targets
Constant	0.0550*** (3.24)	0.0664*** (5.70)	0.1002*** (5.94)
R_m-R_f	1.0826*** (3.15)	0.8577*** (2.94)	1.2005*** (2.91)
SMB	0.6091 (1.61)	2.2214*** (4.37)	2.5104*** (3.47)
HML	-0.2314 (-0.41)	0.0783 (0.15)	-0.2024 (-0.26)
Cash only dummy	-0.0156 (-1.48)	0.0059 (0.70)	-0.0037 (-0.30)
Stock only dummy	-0.0089 (-0.70)	0.0227** (2.15)	0.0016 (0.12)
Ln relative size	0.0024 (1.25)	0.0122*** (5.22)	0.0130*** (4.47)
Multiple bid dummy	-0.0082 (-1.02)	0.0043 (0.51)	0.0095 (0.86)
Mining target dummy	-0.0012 (-0.13)	0.0015 (0.13)	-0.0115 (-1.04)
Ln market value	-0.0039* (-1.77)	-0.0061*** (-2.66)	-0.0086*** (-3.51)
Profitability	-0.0061 (-0.48)	-0.0001*** (-3.55)	0.0125** (2.57)
Leverage	-0.0063 (-0.58)	-0.0173 (-1.57)	-0.0075 (-1.21)
Free cash flow	-0.0381 (-0.97)	-0.0034 (-1.12)	-0.0366** (-2.02)
Cross-border target dummy	0.0115 (1.14)	-0.0037 (-0.33)	0.0061 (0.43)
Cross-border mining target dummy	-0.0238 (-1.02)	0.0691** (1.77)	0.0547** (2.03)
GFC period dummy	0.0022 (0.23)	0.0385*** (4.00)	-0.0018 (-0.15)
F-Statistics	**5.86*****	**12.26*****	**9.22*****
N	**731**	**1659**	**977**
Adjusted R^2	**0.09**	**0.09**	**0.11**

Note: The table reports coefficient estimates and their respective *t*-values (in brackets) for the regression equation [7]. The dependent variable is the bidder's three-day buy and hold excess return and the independent variables included in the model are three market variables, bid characteristics and firm financial characteristics for both domestic and cross border acquisitions. The constant (α) measures the announcement period abnormal returns after controlling a set of explanatory variables. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level. The issue of heteroscedasticity was addressed by using White's adjustment procedure.

4.8 CONCLUSION

Despite the existence of an extensive body of literature on assessing the wealth effects of cross-broader acquisitions in developed markets, very little has been done to investigate the impact of the organisational form of the foreign target on bidding firms' market performance around the announcement of such acquisitions. Although the foreign acquisition market in Australia is dominated by the acquisitions of private and subsidiary targets, no prior comparative analysis has been conducted to investigate this issue. In order to fill this research gap, this thesis conducts an investigation of the acquiring shareholders' gains around bid announcements while classifying cross-border acquisitions into three main categories: public, private and subsidiary targets.

The estimates of abnormal returns, using the market adjusted buy and hold return and a three-factor model, reveals that the acquirers of foreign targets earn statistically significant positive abnormal returns when they acquire private and subsidiary targets. The investigations provide evidence in support of the hypothesis that the bidders for foreign private and subsidiary targets earn significantly higher abnormal returns than the bidders of foreign public targets.

Sample characteristics indicate that cash payment is the most common method used by Australian acquirers of foreign targets to settle payment. However, when the influences of other bid characteristics are controlled for, cash financed deals were found not to be associated with significant abnormal returns across all three samples. However, when bidders use their own equity to finance the acquisition deals of foreign private targets, such acquisitions are associated with significant positive returns. This finding provides strong support for the monitoring benefits argument in relation to acquisitions of foreign private targets.

An analysis of specific bid characteristics reveals that the bidders for private targets that make multiple bids obtained a positive market response. The market interpreted these attempts as more value creating exercises due to the reduction in transaction costs and the smoothing out of the business integration process. The most rewarded and value-creating foreign target

acquisitions are the ones where the bidders acquire private and subsidiary mining targets, probably because of the potential expansion of similar production lines to international markets. The investor protection offered by target countries explains the excess returns earned by the acquirers around the acquisition of foreign targets. However, this relationship is significantly positive for public targets and significantly negative for subsidiary targets. The economic freedom of the target countries does not explain capital market reactions around the acquisition announcement. Country variables are mostly insignificant, except acquisitions of targets from the US and the UK. The strength of the dollar is found to have a positive and significant influence on returns of the acquirers of private targets. The findings also show that the acquisition announcements during the GFC period are associated with significant positive abnormal returns for the bidders for public and private targets. The main findings remain unchanged even after controlling for the financial characteristics of bidding firms. Having established evidence in chapters III and IV on the market reaction to the announcements of both the domestic and foreign acquisitions, it is interesting to examine whether such market response is reflected in the long run performance of bidding firms. The next chapter investigates this issue by analysing the long run operating performance of bidding firms that acquire both domestic and foreign targets.

CHAPTER 5

Long-run Operating Performance of Australian Bidding Firms

5.1 INTRODUCTION[82]

One of the controversial issues in the literature of market for corporate control is whether the positive stock price performance around the time of the acquisition announcement shows in the firm's long-run operating performance, and whether it creates real economic gains for the bidding firms (See, for example, Meeks, 1977; Healy *et al.*, 1992; Manson *et al.*, 1994; Switzer, 1996; Manson *et al.*, 2000; Ghosh, 2001; Linn and Switzer, 2001). The literature reviews, as well as results reported in Chapters 3 and 4 of this thesis, support the view that Australian bidders experience an increase in equity value at the acquisition announcement. This chapter presents the first empirical study that investigates three-year post-acquisition operating performance using three samples (public, private and subsidiary targets) covering both domestic and foreign acquisitions.

The short-run market performance of an acquisition announcement is possibly influenced by a number of factors such as information asymmetry, capital market efficiency, and shareholders protection. As discussed in Chapters 3 and 4, there are a number of theoretical explanations available in the literature that focus on the shareholders' value creation around acquisition announcement. These value creation theories are more favorable for bidding firms that acquire private and subsidiary targets than for public targets acquisitions. Given that shareholders value creation around the acquisition announcement period is significant and positive for the short event windows,

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[82] Out of the content of this chapter, an article titled ''does the post-acquisition performance of bidding firms depend on the organisational form of targets acquired?' was produced. This article has been presented at 2013 La Trobe Business School Research Symposium, Melbourne, Australia, to be held on the 20th March 2013.

one would expect such value creation should be found in the long-run operating performance of bidding firms. This study, therefore, expects a significant positive relationship between the market's assessment of the gains and the real operating performance following the acquisition announcement periods. Therefore, investigating the long-run operating performance among these three samples provides a comprehensive review of value creation from such acquisitions. The main objective of this chapter is to analyse whether announcement period abnormal returns are driven by real economic gains or from capital market inefficiency.

The investigation of the long-run operating performance is advantageous over short-run market performance because such measures are not directly related to the current market price, and, therefore, reduce the impact of the market's continual re-evaluation of the future announcement-related events (Parrino and Harris, 1999). The main research question addressed in this chapter is whether the post-acquisition long-run operating performance of the bidder depends on the characteristics associated with the ownership of the targets (i.e. public, private and subsidiary samples) and other bid and firm characteristics. There are two main factors that motivate this investigation. First, much of the research conducted in Australia on short-run market performance did not investigate the long-run operating performance. Second, prior Australian studies that analyse the long-run operating performance do not analyse the acquirers of all three types of targets separately; namely bidders on public, private and subsidiary targets.

The remainder of this chapter is set out as follows: Section 5.2 discusses the literature review. Section 5.3 develops the hypothesis and Section 5.4 outlines the sample and data, followed by the methodologies. Section 5.6 outlines the main findings and Section 5.7 provides conclusions.

5.2 LITERATURE REVIEW

Prior studies on long-run performance of M&A activities can be divided into two streams: (i) long-run market reactions of bidding firms, and (ii) long-term operating/financial performance of acquiring firms. The prior

evidence on the long-term operating performance of bidding firms is controversial (Martynova *et al.*, 2006). According to the authors, the existing empirical literature provides three streams of results: i) a significant improvement, ii) a significant decline, and, finally, iii) an insignificant post-acquisition operating performance. These mixed results may be attributable to the sensitivity to the performance measures, the benchmark used and the methodologies employed. Abhyankar *et al.* (2005) contend that the influence of various methodologies and measurements on the performance of M&A events is still questionable.

5.2.1 International Evidence of Operating Performance

The early studies mostly report declining operating performance of bidding firms. For example, the studies by Ravenscraft and Scherer (1989) and Herman and Lowenstein (1988) report that there is no evidence of improved operating performance in the post-acquisition period based on profitability measures. Ravenscraft and Scherer (1989) analyse 2,732 US manufacturing corporations and report declined profitability in the post-acquisition period using three profitability variables (operating income scaled by assets, sales, and cash flow scaled by sales) during 1975-1977. The study by Herman and Lowenstein (1988) investigates 56 hostile takeovers for the period 1975-1983, and reports lower returns immediately after acquisitions using both the return on common equity (ROE) and return on capital (ROC) measures. Fowler and Schmidt (1989) also confirm that post-acquisition financial performance significantly declines compared to the pre-acquisition period for 42 US industrial manufacturing firms during the period 1975-1979. Similar evidence is reported in a prior study by Hogarty (1970).

However, the subsequent US studies mostly report significant improvement in operating performance in the post-acquisition period. For example, Healy *et al.* (1992) address a number of methodological problems in previous studies. Therefore, the study by Healy *et al.* (1992) is considered by Ghosh (2001) as the most important for methodological innovation in the literature. Healy *et al.* (1992) examine the post-acquisition performance of US public industrial bidding firms from January 1979 to June 1984. The authors

used cash flow measures to evaluate a firm's performance by positing that accounting data were imperfect in measuring economic performance. They report significant improvements in operating cash flow returns for 50 large US merged firms. They report statistically significant median industry-adjusted operating returns of 3.0 percent in year 1, 5.3 percent in year 2, 3.2 percent in year 3 and 3.0 percent in year 4, for the merged firms. The overall industry-adjusted median cash flow return for the sample firms in the five post-merger years is 2.8 percent, which is significant at 1 percent level. They explain that such an improvement in post-merger cash flow returns is the result of increased asset productivity without decreasing their long term investment (i.e. capital outlays and R & D expenditure) in the post-merger period. In a similar period, Cornett and Tehranian (1992) also report improvement in operating performance for the merged US banks. They find statistically significant 1.2 percent industry-adjusted operating cash flow returns for the merged banks in comparison with the industry. Parrino and Harris (1999) also report that statistically significant industry-adjusted cash flow returns are 2.1 percent for 197 U.S acquisitions during the period 1982-1987.

Using a large sample of 324 acquisitions, Switzer (1996) provides further evidence for a 20-year period (1967-1987), which supports the findings of Healy *et al.* (1992) of an improved operating performance in the post-acquisition period using industry adjusted cash flow return. The author reports 3.03 percent industry-adjusted median operating cash flow returns for the post-acquisition period, and the difference between pre-acquisition and post-acquisition performance is 1.97 percent for the overall sample, which is significant at 1 percent level. This result clearly indicates that operating cash flow returns for the combined firms in the post-acquisition period is statistically larger than the cash flow returns for the two firms individually. This is consistent with positive investor reactions during acquisition announcement, which reflects the expected synergistic benefits from the combined entity. The author suggests that the significant operating cash flow returns in the post-acquisition period is due to increased operational efficiencies.

Linn and Switzer (2001) report an increasing industry-adjusted cash flow operating performance for 324 US bidding firms in the post-acquisition

periods and find an annual median (mean) performance of 2.84 percent (3.16%) for the five-year periods. They also find that the median (mean) performance of 1.81 (2.20%) percent is statistically significant after controlling the pre-acquisition performance for the period 1967-1987. The results clearly provide evidence that the use of median values is not sensitive to performance measures, as the mean value provides similar evidence. Similarly, Andrade *et al.* (2001) find, on average, an improved post-acquisition cash flow operating margin relative to industry benchmarks. Heron and Lie (2002) also find significant positive post-acquisition median operating income (operating income scaled by sales) relative to industry and pre-event performance matched control firms. Based on the results reported by Healy *et al.* (1992), Switzer (1996), and Linn and Switzer (2001), it appears that takeovers create improvements in operating performance in the US context during this period.

Ghosh (2001), however, questioned the methodology used by Healy *et al.* (1992), highlighting that the use of the industry-adjusted median as a benchmark for comparison is likely to be biased because the acquirer observes a superior performance during the pre-acquisition periods. Therefore, the author proposes and develops a benchmark that accounts for pre-acquisition performance and size of merging firms to construct matched-sample firms. The results show that the median cash flow returns for post-acquisition in year 1 (1.19%), year 2 (1.96%) and year 3 (0.90%), are all insignificant using a benchmark that is constructed based on pre-acquisition size, industry, and performance. The author finds that the changes in both median cash flow returns (0.26%) and median cash flow margins (1.06%) are statistically insignificant relative to the matched firm for the 315 US acquisitions for the period 1981-1995. Similar insignificant positive profitability is reported by Chatterjee (2000) for the three-year post-acquisition period compared to pre-merger profitability. Clark and Ofek (1994) also investigate the post-acquisition operating performance for a sample of US bidding firms that acquired distressed targets during 1981-1988. They report that median cash flow performance seems to decrease at first and increase slightly, both in absolute terms and after adjusting for the industry median. In all three post-acquisition years, the median cash flow performance is negative when

controlled for industry-adjusted matched firms. Therefore, based on the US evidence outlined above, it is difficult to reconcile the findings for the post-acquisition operating performance for US bidding firms.

The findings of UK studies also provide mixed eveidence. For example, Meeks (1977) investigates the post-acquistion performance of 233 UK acquirers and finds that profitability increased in the acquisition announcement year and decreased in the subsequent years. Dickerson *et al.* (1997) analysed the effect of 2941 acquisitions on company performance, in terms of profitability, and reported that an acquirer, on average, observes a significant reduced rate of return on assets of 1.38 percent, compared to a non-acquirer, in the first year of acquisition. The results also imply that the profitability of acquirers decreases by approximately 2.04 percent per annum in the post-bid period. Further, they noticed a 17.7 percent performance deficiency in relation to industry counterparts. The results are robust for both adjusted and unadjusted profit measures. Chatterjee and Meeks (1996) explain that the choice of accounting method/treatment of goodwill significantly affects the post-acquisition operating performance. They report no significant changes in profitability up to 1984, whereas a significant positive profitability is reported from 1985-1989 after the introduction of choice of accounting treatment in takeovers. Both Manson *et al.* (1994) and Manson *et al.* (2000) also report positive median combined equity market adjusted returns. The recent study by Powell and Stark (2005) examines the post-operating performance of 191 UK industrial bidding firms using two benchmarks (industry adjusted; and industry, size and pre-performance adjusted) and operating performance measures (operating cash flow and pure cash flow) for the period January 1985 to July 1993. The results reported in the change model [83] suggest that the firm's raw benchmark-unadjusted performance measures are positive and insignificant in post-operating periods. The positive operating performance remains unchanged, even after controlling for the benchmarks in the post-acquisition periods, and the results show an increasing trend of operating performance. Using the regression model used by Healy *et al.* (1992), the authors report statistically significant positive intercept (ranges

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[83] Change model captures whether or not a significant difference exists between post-acquisition and pre-acquisitions operating performance measures.

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from 0.80 to 3.1 percent) that indicate significant improvements in operating performance subject to various deflator and benchmarks used, and controlled for bid characteristics. Their study provides evidence that the size of the improved operating performance is sensitive to the measure of operating cash flows and deflators used. However, they find higher post-operating performance when industry, firm size and pre-acquisition performance is compared to the industry-adjusted benchmark. Cosh *et al.* (2006) also report a significant positive increase of profitability measures from 1.08 percent to 1.65 percent relative to non-merging control firms matched on industry and pre-acquisition profitability. However, the cash flow performance measures are positive and insignificant for all three deflators (cash flow scaled by assets, sales, and market value). Similarly, Carline *et al.* (2009) also find significant median (mean) industry-adjusted operating cash flow returns of 4.3 percent (9.7%), and this performance is statistically higher than pre-acquisition performance for 81 completed UK deals during the period 1985-1994. Guest *et al.* (2010) also report a significant positive post-acquisition operating performance in every year (from 1 to 3), and the average profitability of the three-year timeframe is 2.66, significant at the 1 percent level. In addition, the difference between pre- and post-takeover performance also reveals a significant positive profitability of 2.62 percent, which implies that takeovers significantly improved the UK merging firms' return on equity during the period 1985-1996.

In the European context, Martynova *et al.* (2006) report a significant positive median industry-adjusted cash flow performance in the post-acquisition periods. However, median cash flow performance is positive but insignificant for industry, size and performance-adjusted benchmarks (both EBITDA and adjusted EBITDA scaled by book value of assets and sales) during 1997-2001. Gugler *et al.* (2003) report an insignificant increase in profit and a significant decrease in sales volume in the post-acquisition period for continental Europe. Ooghe *et al.* (2006) investigate the privately held Belgian bidding firms and report significant lower 'industry-adjusted' and 'industry and size adjusted' profitability in the post-acquisition years.

Rahman and Limmack (2004) investigate the operating cash flow performance of 94 publicly listed Malaysian bidding companies that acquired

113 private targets during the period 1988-1992. The authors report that median control-adjusted cash flow performance increased from an average of 0.12 percent in the pre-acquisition period (statistically insignificant) to an average of 2.95 percent (statistically significant at the 1 percent level) in the post-acquisition period. Although the authors assumes that the different result between this study and prior UK and US studies may be associated with the accounting methods employed, fundamentally these results support some market-based studies that acquirers of private firms will generate higher abnormal returns than acquirers of public firms.

Ikeda (1983) finds an improvement in profit performance (using both return on equity and return on total assets) in the Japanese manufacturing industry. Kruse *et al.*, (2002) find an insignificant positive 'raw' and 'industry and size-adjusted' long-run median operating cash flow performance for 46 Japanese firms during the period 1969-1992. The findings are consistent for both the change and intercept models. However, Yeh and Hoshino (2002) report a statistically significant decline in median profitability and sales volume in the post-merger period compared to the pre-merger period for 86 Japanese mergers. Yeh and Hoshino (2000) also find that industry-adjusted ROE and ROA declined in the post-acquisition periods and relative pre-acquisition periods of Taiwanese corporations.

In an analysis of world-wide mergers, Gugler *et al.* (2003) investigate the effects of 69,605 merger announcements around the world using control non-merging adjusted profitability and sales measures during the period 1981-1998. Their overall results provide evidence of increased profits in most countries but s statistically significant decrease in sales volume in the five-year post-acquisition period.

5.2.2 Evidence on Cross-border vs. Domestic Acquisitions

Using similar methodologies adopted by Healy *et al.* (1992), Moeller and Schlingemann (2005) examine the comparative post-acquisition operating performance between cross-border and domestic acquisitions using both raw and industry-adjusted operating cash flow measures (deflated by market value of assets). They report that a mean/median change in operating performance

(post-acquisition minus pre-acquisition) of -0.067 and -0.002 for cross-border and domestic samples, respectively; the difference is significant at the 5 percent level. Their regression estimates further confirm similar results since the cross-border dummy is negative and significant. Martynova *et al.* (2006) also report 1.81 percent decreases, while 0.57 increases in the profitability measure following cross-border and domestic acquisitions, respectively. However, the difference is statistically insignificant. Therefore, they conclude that the merger-induced operating performance of bidders for cross-border targets perform is less than for the bidders for domestic targets. However, Gugler *et al.* (2003) do not find any significant differences in the effects of cross-border and domestic mergers around the world.

5.2.3 Influence of Bid Characteristics on Operating Performance

There is some evidence to suggest that the failure to control for the effect of various bid characteristics and firm-specific issues might explain the mixed results relating to the performance of bidding firms. In this context, researchers have examined a number of factors such as the method of payment, relative size of the target, the acquirer's size, deal values, and the acquirer's prior financial standing. However, the studies that addressed these issues report mixed results (see, Healy *et al.*, 1992; Linn and Switzer, 2001; Heron and Lie, 2002; Sharma and Ho, 2002; Powell and Stark, 2005).

Linn and Switzer (2001) directly investigate how payment methods influence the long-run operating performance of US bidding firms. They find cash-financed acquisitions enjoy higher positive industry-adjusted annual median cash flow operating performance (4.76%) compared to stock-financed acquisitions (0.12%) for the post-acquisition periods. The industry-adjusted annual median cash flow operating performance for 'cash and stock' is 2.54 percent for the post-acquisition periods. The regression estimates also support this finding by providing evidence of a significant negative relationship between stock financing acquisition and long-run operating performance. Ghosh (2001) also reports that cash acquisitions are strongly associated with statistically significant positive cash flow returns (3.05%), while the stock only payment method generates either insignificant or significant cash flow

returns when controlling other variables in regression models. However, a number of studies report that there is no significant relationship between the method of payment and post-acquisition long-run operating performance (see, Healy *et al.*, 1992; Heron and Lie, 2002; Martynova *et al.*, 2006). On the other hand, Powell and Stark (2005) report a mostly insignificant negative relationship between cash-financed acquisitions and the post-operating performance of UK bidding firms. However, in the Australian context, Sharma and Ho (2002) find that payment methods do not influence the post-acquisition performance, while Ben *et al.* (2008) document a negative relationship between stock-financing acquisitions and post-acquisition performance.

An important determinant of post-acquisition performance is the relative size of the target firm (Asquith *et al.*, 1983). It is expected that the larger relative size of the target should result in improved operating performance. The study by Healy *et al.* (1992) provides evidence that both the target size or target relative size to bidders has no association or influence on post-merger performance for US bidding firms. Similarly, Fowler and Schmidt (1989) and Heron and Lie (2002) also report that the size of the target relative to that of the acquirer has no association with the changes in operating performance. However, Switzer (1996) and Linn and Switzer (2001) find that there is a significant positive relationship between post-acquisition abnormal operating performance and the size of the target firm. Similarly, Martynova *et al.* (2006) also document a statistically higher post-acquisition performance for relatively large targets (3.36%) compared to small targets (-1.35%). Chatterjee (2000) provides a differential finding; positive performance in the first year after acquisition and a decline in performance for the subsequent two years after acquiring large targets. In contrast to the findings above, Powell and Stark (2005) report a significant negative relationship between the relative size of the target and the industry-adjusted cash flow accruals scaled by book value of asset variable's performance for post-acquisition performance of UK biddings firms.

Healy *et al.* (1992) examine hostile and friendly acquisition and post-merger operating performance. They do not find any significant differences in post-merger cash flow performance among these groups. Ghosh (2001) also examines friendly acquisitions and reports an insignificant relationship

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between cash flow returns and friendly acquisitions. Martynova *et al.* (2006) also find lower profitability for hostile takeovers compared to friendly takeovers in the post-acquisition period; however, such difference is not statistically significant. Ben *et al.* (2008) find an insignificant relationship between hostility and post-acquisition operating performance for Australian bidding firms.

The US literature provides mixed evidence between the relatedness of acquisitions and long-run operating performance. For example, Ghosh (2001) reports a significant negative relationship between cash flow operating performance and the related acquisitions of US bidding firms. However, Healy *et al.* (1992) and Heron and Lie (2002) find a significant positive post-acquisition performance of US bidding firms for high business overlap transactions (relatedness). On the other hand, a number of US studies show an insignificant relationship between relatedness and operating performance. For example, Fowler and Schmidt (1989), Switzer (1996), Parrino and Harris (1999), and Linn and Switzer (2001) depict a statistically insignificant relationship between focus-increasing acquisitions and post-acquisition performance. Powell and Stark (2005) report either a statistically insignificant (using cash flow scaled TMV or adjusted TMV) or significant negative relationship (using cash flow scaled book value of assets) between relatedness and post-acquisition performance of UK bidding firms. For the European market, Martynova *et al.* (2006) also do no find any impact of related acquisitions on the post-acquisition performance of bidding firms. Sharma and Ho (2002) report statistically insignificant lower cash flow performance for related acquisitions compared to unrelated acquisitions in the post-acquisition period for Australian bidding firms. Similarly, Megginson *et al.* (2004) find an insignificant positive post-acquisition operating performance for focus-increasing mergers, while a significant decline in post-acquisition performance for focus-decreasing mergers. On the contrary, Kruse *et al.* (2002) find a significant positive relationship between unrelatedness and post-acquisition operating performance.

Fowler and Schmidt (1989) find a significant positive relationship between acquirer experience (multiple acquisitions) and post-acquisition performance. This suggests that experienced management can consolidate the

firms successfully. Contrary to this finding, Dickerson *et al.* (1997) report a significant negative impact on acquiring firms that make acquisitions in the subsequent year.

5.2.4 Influence of Firm Characteristics on Operating Performance

The size of the bidding firms has a strong influence on acquisition performance (Moeller *et al.*, 2004). Gugler *et al.* (2003) state that mergers between small firms are aligned with the objective of increasing efficiency through economies of scale and scope, while mergers between large firms are more likely to increase market power. Their findings reveal that the profitable mergers of small firms around the world increase the sales volume by $150 million while increasing profits by 25.0 percent. This result is sharply contrasted for large profitable mergers in which sales volume decreases by $1 bn. Choi and Zéghal (1999) examine accounting firm mergers and point out that large European bidding firms (France, Germany, the Netherlands and the UK) are found to significantly outperform small European bidding firms after the mergers. On the other hand, Healy *et al.* (1992) and Kruse *et al.* (2002) do not find any significant differences between size and post-acquisition performance of merging firms. Sharma and Ho (2002) also provide similar evidence that there is no significant difference between large and small acquisitions.

It is argued that highly leveraged acquirers should outperform low leveraged acquirers in long-run operating performance because highly leveraged acquirers are under a high degree of monitoring and supervision by their lenders (Maloney *et al.*, 1993). The literature fails to provide evidence supporting this argument. For example, Switzer (1996) finds that there is no relationship between bidder leverage and post-acquisition operating performance. Similarly, Linn and Switzer (2001) also find an insignificant relationship between leverage and post-acquisition performance. In the European context, Martynova *et al.* (2006) also suggest that "higher levels of pre-acquisition leverage do not lead to higher post-acquisition profitability" (p-15).

According to Jensen's (1986) free cash flow theory, the managers of firms with substantial free cash flows invest in negative NPV projects, and thus are involved in takeover decisions which result in poor takeover performance. However, the prior studies are unable to support this conjecture. The evidence of bidders' cash reserve and long-run operating performance also show that profitability is statistically insignificant for different levels of holdings of cash reserves, and cash holdings are negatively related to performance (Martynova *et al.*, 2006).

The existing literature does not provide conclusive evidence in relation to the operating performance of bidding firms during the post-acquisition period. This comment is particularly relevant to the Australian market. The prior empirical studies, conducted across a number of countries, examine the listed bidding firm's performance when acquiring listed targets. These studies calculate the operating performance for a number of pre-acquisition and post-acquisition periods, and test whether operating performances differ significantly between the post-acquisition period and pre-acquisition period. However, no attempt has been made to explore the listed bidding firm's operating performance when they acquire private and subsidiary targets; although acquisitions of such targets are more frequent (da Silva Rosa *et al.*, 2004). One vital reason for this is the non-availability of accounting data for private and subsidiary targets. Therefore, it is not possible to compare the pre-acquisition and post-acquisition performance for bidders for private and subsidiary targets. Holding this limitation, this study, therefore, aims to investigate whether any significant difference exists between the acquisitions of public, private and subsidiary targets, subject to the control/benchmark adjusted firm in the post-acquisition period. The main objective of this investigation is to make comparisons between public, private and subsidiary samples based on post-acquisition periods only, rather than predicting the outcome of the acquisition decision.

5.2.5 Operating Performance of Australian Bidding Firm

The Australian studies provide mixed results in relation to post-acquisition operating performance. The research on takeover activities in

Australia is very limited and unexplored in relation to the international literature (McDougall and Round, 1986). McDougall and Round (1986) refer to the first Australian empirical studies of takeovers, which were conducted by Bushnell (1957, 1961) for the period 1947-1959.. After examining 673 mergers, Bushnell (1957, 1961) reports that the main focus of merger activities, which were predominant, include tax purpose, backward and forward vertical integration, diversification, interstate expansion and economies of scale. However, it appears that McDougall and Round (1986) were probably the first researchers who examined the operating performance of takeover activities in Australia using accounting rates of return (Stanton, 1987). McDougall and Round examine 88 mergers of public companies in the retail, transport and industrial sectors between 1970 and 1981. They find that profitability and leverage were deteriorating in the post-acquisition period compared to the pre-acquisition period after controlling the matched non-merging firms.

Sharma and Ho (2002) analyse post-acquisition mean/median control firm adjusted performance for a three-year period against the pre-acquisition period using both earnings (return on assets, return on ordinary shareholders' equity, profit margin, and earnings per share) and cash flow measures (cash flow return on assets, cash flow return from sales, cash flow return on average ordinary shareholders' equity, and cash from operations minus preference dividends on number of ordinary shares) for 36 Australian merged firms during 1986-1991. They create the benchmark/control firms by selecting 36 firms, which were not involved in any acquisitions during the observed period, matched on the basis of the industry and size of the acquirer. They report a statistically insignificant decline in median earnings and cash flow performance in post-acquisition periods. However, their mean analysis reveals a significant positive post-acquisition performance (for 1-3 years) for return on assets, earnings per share and cash flow return from sales. The regression estimates also provide similar insignificant negative or positive returns for most measures, except median ROA. Hyde (2002) also reports a significant decrease in the profitability of merging firms compared to non-merging firms for the Australian petroleum industry during 1980-1994. Studies by Avkiran (1999), that analysed Australian trading banks, and Ralston *et al.* (2001), that

investigates credit unions, also report reduced/lower efficiency in the post-acquisition period compared to the pre-acquisition period and non-merging credit unions, respectively.

A recent study by Ben *et al.* (2008) analyses a number of performance measures such as profitability, cash flow, efficiency, financial leverage, and the growth performance of 72 acquisitions during the period 1 January 1999 to 30 June 2004. This study uses industry benchmarks instead of the size and industry benchmarks used by Sharma and Ho (2002). Their non-parametric tests reveal a significant negative profitability performance (both ROA and ROE) in the post-acquisition period. However, their regression estimates confirm the significant improved industry-adjusted performance for mean return on asset, return on equity, operating cash flow, scaled by both total asset and equity, for the three years following the acquisition announcement.

Brailsford and Knights' (1998) working paper provides evidence of a significant decline in industry-adjusted cash flow performance in the post-acquisition period for 368 bidding firms during the period 1981-1992. They report a further decline in industry-adjusted cash flow performance in both the pre-acquisition and post-acquisition periods.

Overall, prior Australian studies provide mixed evidence for the long-run operating performance of merging firms. However, the matched control firm and aggregate industry ratios used by Sharma and Ho (2002) and Ben *et al.* (2008), respectively, indicate major limitations. Sharma and Ho consider the matched firms benchmark only, while Ben *et al.* consider the industry aggregates benchmark only. Furthermore, the study by Ben *et al.* did not discuss the construction of the industry aggregate in detail. For example, it is not clear whether Ben *et al.* construct the benchmark using all live companies, or both live and dead companies, in the ASX, or whether they have excluded merging firms from the benchmark. As the lituratue provides evidence that measuring the operating performance is subject to perfomance measures and benchmarks, reinvestigation of this issue with a large sample is vital to robust benchmarks and performance measures. International literatrue commonly uses the 'industry-adjusted' benchmark and 'size and industry-adjusted' benchmark. This approach has not been tested by these Australian studies. The

current study overcomes this limiation by constructing both 'industry' and 'industry and size' benchmarks for Australian firms.

5.3 HYPOTHESIS DEVELOPMENT

The objective of this chapter is to examine whether the post-acquisition operating performance of bidding firms depends on the target organisational forms. There is conclusive evidence that the stock market significantly rewards acquisitions of unlisted targets compared to listed targets across a number of countries (Chang, 1998; Fuller *et al.*, 2002; da Silva Rosa *et al.*, 2004; Conn *et al.*, 2005; Faccio *et al.*, 2006; Officer, 2007; John *et al.*, 2010). The theoretical arguments discussed in Chapter 3 (section 3.2.6) and the empirical evidence discussed in Chapter 4 (section 4.3.7), as well as the main findings of these two chapters (bidders earn higher abnormal returns when acquiring private and subsidiary targets compared to public targets), support the view that the acquirers of private and subsidiary targets should outperform the acquirers of public targets in the post-acquisition periods in both domestic and foreign acquisitions. Accordingly, the following hypothesis is tested:

Hypothesis 1: Acquirers of private and subsidiary targets generate higher post-acquisition operating performance than acquirers of public targets in both domestic and cross-border acquisitions.

In addition to the above hypothesis, the findings of Chapters 3 and 4 support the view that stock-financed acquisitions generate higher operating performance than cash-financed acquisitions in both the domestic and foreign markets. These higher market reactions found in Chapters 3 and 4 for stock-financed acquisitions should reflect in the bidding firm's long-run operating performance. Therefore, the following hypothesis is proposed:

Hypothesis 2: Stock-financed acquisitions generate higher post-acquisition operating performance than cash-financed acquisitions.

5.4 SAMPLE AND DATA

This chapter considers the acquisition announcements of 2,665 domestic and 714 foreign targets by listed firms for the 11-year period from January 2000 to December 2010, which were analysed in Chapters 3 and 4. The necessary bid characteristics for these acquisition announcements are gathered from the Thomson Reuters SDC Platinum Mergers and Acquisitions database. This study shortlisted these acquisitions announcement based on the following criteria:

I. Acquisitions must involve domestic and foreign public, private and subsidiary target acquisitions made by Australian listed bidders during 2000-2008. This study excludes the acquisitions announced during the period 2009-2010 since the bidding firms will be assessed for three years of post-acquisition performance.

II. Acquisitions involving banks and financial institutions must be excluded because of their specific accounting and regulatory requirements

III. Partial, withdrawn and pending acquisitions must be excluded

IV. The necessary accounting and market value data must be available on Datastream to calculate the various measures of operating performance for the three-year post-acquisition period and industry-adjusted and industry and size adjusted benchmarks for each operating performance measures.[84]

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[84]This study considers three-year post-acquisition periods in order to analyse a large sample.

Table 5.1
Sample Description: Sample Selection

Sample Selection	Domestic Acquisitions	Foreign Acquisitions
Number of acquisition announcements	2665	714
Less:		
Excluding acquisitions of the year 2009 and 2010	532	177
Excluding financial bidding firms	279	64
Excluding partial, withdrawn and pending acquisitions	597	155
Excluding firms due to unavailability of accounting data	217	47
Total	**1,040**	**271**

Table 5.1 shows that the initial sample was 2665 and 714 domestic and cross-border acquisitions, respectively. However, a number of acquisition announcements were excluded: (a) 532 domestic and 177 foreign acquisitions were removed as these acquisitions were announced during the period 2009 and 2010; (b) 279 domestic and 64 foreign acquisition announcements were excluded because the bidding firms operated in the finance industry; (c) 597 domestic and 155 foreign acquisition announcement were deducted as these acquisitions were not completed; and (d) 217 domestic and 47 foreign acquisition announcements were excluded due to the unavailability of accounting and financial statement information. This provides a final sample of 1,040 domestic and 271 foreign acquisition announcements. This is the largest data set compared to previous major studies that analyse long-run operating performance (see, Healy *et al.*, 1992; Ghosh, 2001; Linn and Switzer, 2001; Heron and Lie, 2002; Sharma and Ho, 2002; Powell and Stark, 2005; Martynova *et al.*, 2006).

Table 5.2

Sample Description: Distribution of Domestic and Foreign Acquisitions by Year

Year	Domestic Acquisitions		Foreign Acquisitions	
	No. of Acquisitions	% of acquisitions	No. of Acquisitions	% of acquisitions
2000	108	10.38%	19	7.01%
2001	80	7.69%	17	6.27%
2002	69	6.63%	8	2.95%
2003	107	10.29%	23	8.49%
2004	108	10.38%	19	7.01%
2005	122	11.73%	36	13.28%
2006	124	11.92%	53	19.56%
2007	198	19.04%	62	22.88%
2008	124	11.92%	34	12.55%
Grand total	**1040**	**100%**	**271**	**100%**

Table 5.2 reports the distribution of the domestic and foreign acquisitions by calendar year. This table shows that the number of domestic acquisitions remains below 100 between 2001 and 2002 and then increases substantially in 2007. More than 54.71 percent of acquisitions occurred during the period 2005-2008. However, there is a large variation in the sample distribution in the foreign-acquisition sample. The lowest number of acquisitions (8) occurred in 2002 while the highest number of acquisitions (62) took place in 2007. Nearly 70 percent of acquisitions occurred during the period 2005-2008. The number of foreign acquisitions increases sharply from 2004 to 2007 and then drops drastically due to the global financial crisis.

Table 5.3 Sample Description: Bid Characteristics and Operating Performance

Panel A: Domestic Acquisitions

	# of Acquisition	Relatedness		Method of Payment				Grand Raw Operating Performance Measures			
		Related (%)	Unrelated (%)	Cash only (%)	Stock only (%)	Cash & Stock (%)	Others (%)	CF/TA Median (Mean) (%)	CF/MV Median (Mean) (%)	NP/TA Median (Mean) (%)	NP/MV Median (Mean) (%)
Bidder of public target	229	59.39	40.61	45.85	29.69	18.34	6.11	4.98 (2.87)	6.75 (2.99)	3.42 (-5.66)	4.34 (-8.66)
Bidder of private target	573	55.50	44.50	23.73	30.89	40.84	4.54	3.55 (-1.37)	7.62 (6.10)	1.87 (-11.27)	4.06 (-10.04)
Bidder of subsidiary target	238	64.71	35.29	34.45	27.73	31.51	6.30	0.73 (-3.04)	1.85 (-0.31)	-2.41 (-13.68)	-1.76 (-14.35)

Panel B: Foreign Acquisitions

	# of Acquisition	Relatedness		Method of Payment				Grand Raw Operating Performance Measures			
		Related (%)	Unrelated (%)	Cash only (%)	Stock only (%)	Cash & Stock (%)	Others (%)	CF/TA Median (Mean) (%)	CF/MV Median (Mean) (%)	NP/TA Median (Mean) (%)	NP/MV Median (Mean) (%)
Bidder of public target	36	41.67	58.33	61.11	19.44	13.89	5.56	9.72 (8.82)	8.69 (8.62)	6.07 (1.92)	4.97 (-1.85)
Bidder of private target	146	41.78	58.22	35.62	18.49	38.36	7.53	3.07 (-3.35)	5.10 (-4.03)	-8.51 (-16.01)	-7.00 (-30.34)
Bidder of subsidiary target	89	44.94	55.06	51.69	17.98	26.97	3.37	-0.60 (-3.77)	-0.18 (3.40)	-3.04 (-18.63)	-2.24 (-15.32)

The main bid characteristics and raw operating performance measures for the three samples (bidders of public, private and subsidiary targets) are reported separately in Panel A of Table 5.3. The summary statistics reported reveal that the related acquisitions are higher than unrelated acquisitions across all three samples; related acquisitions are defined when the bidder and target share the same Standard Industrial Classifications (SIC) codes and unrelated if they have different SIC codes. 'Cash only' is the main form of payment for public (45.85%) and subsidiary target (34.45%) samples, while 'Cash and Stock' (40.84%) is the main payment method for private target acquisitions. These bid characteristics follow, on average, a similar pattern to the results reported in Chapter 3 for the full domestic acquisition sample. Bidders' raw grand median (median value of three year post-acquisition periods), cash flow return and profitability performance consistently indicate that bidders for public targets achieve higher positive operating performance in almost all measures reported (cash flow scaled by market value of the equity) compared to bidders for private and subsidiary targets. However, bidders for subsidiary targets observe positive median cash flow returns while they encounter negative median profitability. The grand mean measures report either lower or negative cash flow performance compared to the grand median measures, while the grand mean profitability measures consistently indicate negative performance across all three samples.

Panel B of Table 5.3 reveals that Australian bidders tend to acquire unrelated cross-border acquisitions in all three samples. The payment methods used follow similar patterns to those reported for the domestic sample in Panel A. Cash is the main means of payment for public and subsidiary target acquisition while the mixed method of payment is frequently used for private target acquisitions. The median operating performance measures are relatively higher for foreign public targets compared to domestic public targets. Surprisingly, operating performance measures show either lower or negative values for bidders for the foreign private and subsidiary targets sample compared to the domestic private or subsidiary targets sample. Specifically, bidders for foreign subsidiary targets consistently indicate mean and median negative operating performance for all four measures.

This study uses Worldscope data because Worldscope data is based on company's annual report figure, which is considered as the better source of financial information to calculate the financial ratios than the Datastream data Worldscope data is based on a trailing 12-month period, if applicable, and represents the sum of the relevant item reported in the last 12 months. This study collects various accounting data such as net profit, free cash flow, the market value of equity, total assets, net cash and net debt from Datastream. These variables are obtained on an annual basis.

5.5 METHODOLOGY

Prior studies have used the change and intercept methodologies (Healy *et al.*, 1992; Ghosh, 2001) to calculate the abnormal post-acquisition operating performance for bidding firms by controlling the pre-acquisition performance. However, to examine whether post-acquisition operating performance differs between the three samples (public, private and subsidiary targets), this study follows a similar methodology/approach to that used by Neely and Rochester (1987) who did not compare the post-acquisition performance with the pre-acquisition performance. The authors compare the post-acquisition operating performance of the acquirer relative to the non-merging control firm. Due to the significant lack of availability of data for the private and subsidiary targets required to consolidate the pre-acquisition data for bidding and target firms, this study had no option but to accept the methodology used by Neely and Rochester (1987) and, therefore, was unable to control for pre-acquisition operating performance. The post-acquisition operating performance is examined using both univariate and multivariate analysis.

5.5.1 Univariate Analysis:

This study uses a number of operating performance (return on assets, return on equity, cash flow return on assets, cash flow return on equity) measures in evaluating the post-acquisition performance of bidding firms relative to non-merging firms. Median operating performance measures are used throughout this chapter since the usage of median values is very common

and widely accepted (see, Healy *et al.*, 1992; Loughran and Ritter, 1997; Mikkelson *et al.*, 1997; Rahman and Limmack, 2004; Powell and Stark, 2005). However, mean values are also analysed and reported in the relevant appendices, for robustness purposes. The performance measures are defined below.

5.5.1.1 Cash flow measures:

According to Barber and Lyon (1996), the measure of cash flow can overcome the potential problems associated with profitability measures. Two cash flow return measures are calculated for each of the three samples and the differences in medians are tested for the three-year post-acquisition periods between the samples. These cash flow return measures include operating cash flow (OCF), scaled by total assets, and operating cash flow (OCF), scaled by the market value of equity. They are calculated as follows:

i)   OCF/TA= *Cash flow from operations /Total assets*

ii)   OCF/MV= *Cash flow from operations / Market value of equity*

Operating cash flow is defined as the operating activities which represent the net cash receipts and disbursements resulting from the operations of the company. It is the sum of funds from operations, funds from/used for other operating activities, and extraordinary items.

This study considers two deflators such as total asset and market value of equity. Total market value more accurately reflects the productivity of the firm's assets in generating economic benefits than the book value of assets (Powell and Stark, 2005). However, according to Barber and Lyon (1996), market values are a forward-looking measure and reflect not only the assets in place but also all assets the firm is expected to acquire. Both Healy *et al.* (1992) and Ghosh (2001) use the total market value as deflators. Consistent with Powell and Stark (2005), this study also uses total assets as a deflator to examine the sensitivity of estimates of operating performance improvement in relation to the use of market value-based deflators.

5.5.1.2 Profitability measures:

The literature suggests that profitability, an accrual-based measure, is not an ideal measure to assess post-acquisition operating performance since earnings can easily be manipulated by managers (Barber and Lyon, 1996). However, this study analyses profitability to investigate the robustness of the findings. Two profitability measures are calculated for each of the three samples and the differences in medians are tested for the three-year post-acquisition period between the samples. These profitability measures include net income (NI), scaled by total assets, and net income (NI), scaled by total assets by the market value of equity. They are calculated as follows:

i) *NI/TA= Net Income / Total assets*

ii) *NI/MV=Net Income / Market value of equity*

Net income represents income after all operating and non-operating income and expense, reserves, income taxes, minority interest, and extraordinary items.

The two deflators used in this study are total asset and market value of equity. Total asset represents the sum of total current assets, long-term receivables, investment in unconsolidated subsidiaries, other investments, net property plant and equipment, and other assets. According to Sharma and Ho (2002), Australian consolidation rules require that assets acquired through acquisitions are recorded at fair market value; therefore, total assets will be reflected in the market value of assets. The market value of equity is the market price of the shares at the end of the year multiplied by the total number of outstanding common shares.

Although a number of authors argue that the improvement or efficiency gain may not be realised in the operating performance until the five-year post-acquisition period[85], this chapter analyses the three-year post-acquisition period for the four ratios outlined above, as extending the post-acquisition period for more than three years will reduce the sample size. In addition, according to Sharma and Ho (2002), the analysis of the three-year period reduces the possibility of other spurious effects of endogenous variables or

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[85] See Healy *et al.* (1992), Ghosh (2001), Schoenberg (2006) and Manson *et al.* (1994)

survivorship bias that may influence the post-acquisition analysis. The post-acquisition performance of acquiring firms is examined for a period of three years: i.e. from year +1 to year +3. The four ratios are calculated (cash flow/total asset, cash flow/market value, net profit/total asset, and net profit/market value) for three post-acquisition periods individually (year 1 to year 3) and also for the gross periods (3 year post-acquisition periods) for each of the bidding firms. Raw ratios are then adjusted with the 'industry benchmark' and 'industry and size benchmark'. The control-adjusted operating performance is measured by deducting the relevant benchmark measures of operating performance from the bidder's raw operating performance measures. The median values are used for these ratios and the differences in median values are tested between the relevant samples.[86] This study detects the abnormal operating performance using non-parametric Wilcox test statistics.[87] This study reports Wilcoxon signed-ranks test values for the significance level of the median value for each year and each sample, and Wilcoxon/Mann-Whitney test values are used for the significance level between two samples.

The following equations are estimated for the three samples:

Cash flow return = Cash flow from operations/Total asset   [1]

Industry-adjusted cash flow return = bidding firm's cash flow to total asset − industry cash flow to total asset   [2]

Industry and size adjusted cash flow return = bidding firm's cash flow to total asset − industry and size matched cash flow to total asset   [3]

The three equations above are also estimated using the market value of equity as deflators. Equation [1], [2] and [3] are then modified with the profitability measures (net profit scaled by total asset and net profit scaled by market value of equity) and re-estimated for three samples. These equations

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[86] For expositional simplicity, this study reports the median analyses and the mean analyses are reported in the relevant appendix.
[87] The parametric t-statistics are reported for the mean calculation.

are estimated for each year and for the three-year median operating performance for each sample.

The two benchmarks are used in this study: i) industry-adjusted benchmark, and ii) industry and size adjusted benchmark. These benchmarks are used to compare the merging firms' operating performance. Previous studies use different types of benchmarks. For example, Healy *et al.* (1992), Martynova *et al.* (2006), Manson *et al.* (1994), and Harford (1999) use the median industry performance benchmark. However, Barber and Lyon (1996) and Ghosh (2001) use the benchmarks that control industry, size and pre-performance, and argue that industry medians are likely to be biased because acquiring firms experience superior performance prior to acquisition. This argument has more relevance when post-acquisition performance is measured by controlling pre-acquisition performance. However, the current study concentrates only on post-acquisition operating performance relative to the benchmarks. Therefore, this study uses the median 'industry benchmark' and median 'industry and size benchmark'. To construct the industry-adjusted median benchmark, this study gathers all the necessary accounting and market value information to calculate the four ratios outlined above for each of the years from 2000 to 2011. In order to avoid the survivorship bias, all the delisted/dead companies are considered to construct the benchmarks. The Datastream research list for Australia contains only live companies in the ASX. Exclusion of such delisted/dead companies may cause significant bias in calculating industry averages for each sample year (Powell and Stark, 2005). The Industry Classification Benchmark (ICB) is used to categorise each company according to their industry and the median values are calculated for each ratio for each industry category for each particular year.[88] Furthermore, this study excludes the ratios for those firms that make acquisition announcements during the sample periods. Finally, median aggregate industry ratios are then deducted from the respective industry matched bidding firm's raw ratios to calculate the abnormal operating performance.

Similarly, this study constructs the industry and size adjusted benchmarks, where each company is ranked based on the market value of

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[88] ICB provides 10 industry classifications to monitor broad industry trends.

equity in each year. Companies are defined into three categories on the basis of the market value of equity such as small, medium and large companies. Using this size classification, the median industry ratio is calculated for each industry into three sized groups (e.g. small size industry, medium size industry, and large size industry) for each year. Similarly, all the bidding firms are also categorised based on industry and size groups, and then matched industry and size median industry aggregate ratios are subtracted from the industry and size matched bidding firm's raw ratio. This process is repeated for each bidding firm.

5.5.2 Multiple Regression Model:

The literature outlines tests conducted on a number of bid and firm characteristics, which are discussed in Sections 5.2.4 and 5.2.5, and this study considers a number of bid and firm characteristics while estimating the multiple regression models for bidders for public, private and subsidiary targets separately. The bidder's three-year median industry and size adjusted post-acquisition operating performance (*ISAOP*) measure is the dependent variable and the independent variables include a number of bid and firm characteristics. This study tests both the measure of cash flow performance, cash flow returns on asset and cash flow returns on equity, for each equation outlined below. The following equation is estimated for both domestic and foreign bidders:

$$ISAOP_{i,z} = \alpha + \sum_{j=1}^{7} \beta_{j,i} BC_{j,i,t} + \sum_{j=1}^{4} \beta_{j+7,i} FC_{j,i,t} + \beta_{12,i} GFC_{j,i,t} + \varepsilon_{i,t} \qquad [4]$$

Where ISAOP$_{i,z}$ is the median post-acquisition industry and size adjusted cash flow operating performance measure for takeover I, and z represents each of the operating performance measures, the vector of *BC* variables contains the explanatory variables used to capture the effect of bid characteristics with a vector of β_{1-7} coefficients, the vector of *FC* variables contains the control variables used to capture the effect of firm characteristics with a vector of β_{8-11} coefficients, and the *GFC* is the dummy variable that captures the effect of the global financial crisis. The seven bid characteristics

used in the equation above are as follows: a cash-only deals dummy, a stock-only deals dummy, the natural logarithm of the relative size of the deal (derived by dividing the deal value by the bidder's market value of equity one month prior to the announcement), an unrelated acquisitions dummy (which takes the value of 1 if the bidder's four digit SIC code is different from the target's four digit SIC code and 0 otherwise), a multiple bid dummy (which takes the value of 1 if a bidder has acquired more than one target during the sample period and 0 otherwise), a deal attitude dummy (which takes the value of 1 if the bid is hostile or unsolicited and 0 otherwise), and a mining target dummy (which takes the value of 1 if a bidder has acquired a mining target and 0 otherwise). The four firm characteristics used in the equation are as follows: the natural logarithm of the bidder's market value one year prior to the acquisition announcement, as the size measure; the return on assets, as the profitability measure (calculated by dividing the net income by total assets of the most recent financial year); the debt ratio, as the leverage measure (calculated by dividing net debt, i.e., total debt minus cash by total assets of the most recent financial year); and the free cash flow-to-assets ratio, as a measure of cash richness (calculated by dividing net cash receipts from operations by total assets of the most recent financial year). A GFC dummy (which takes the value of 1 if the acquisition takes place during the period from July 2007 to December 2009 and 0 otherwise) is also considered to capture the effects of the global financial crisis in the sample period. The equation above is modified for the domestic private and subsidiary target samples by dropping the dummy variable for deal attitude, as this variable is not applicable for the private and subsidiary target samples.

Finally, the following regression model is estimated for the full sample based on 'industry and size' adjusted median cash flow operating performance for year 1 and year 3 separately to examine whether any change occurred in operating performance with the passage of time.

$$ISAOP_{i,z} = \alpha + \sum_{j=1}^{7} \beta_{j,i} BC_{j,i,t} + \beta_{8,i} DPT_{j,i,t} + \sum_{j=1}^{2} \beta_{j+8,i} FTC_{j,i,t} + \sum_{j=1}^{4} \beta_{j+10,i} FC_{j,i,t} + \beta_{15,i} GFC_{j,i,t} + \varepsilon_{i,t} \quad [5]$$

Where $ISAOP_{i,z}$ is the median post-acquisition industry and size adjusted cash flow operating performance measure for takeover *i,* and *z* represents each of the operating performance measures, the vector of *BC* variables contains the explanatory variables used to capture the effect of bid characteristics with a vector of β_{1-6} coefficients, a domestic private target dummy (which takes the value of 1 if the bidder acquired a domestic private target and 0 otherwise), the vector of *FTC* variables contains the two control variables used to capture the effect of foreign acquisitions characteristics with a vector of β_{9-10} coefficients (foreign target dummy variable: it takes the value of 1 if the bidder acquired a foreign targets and 0 otherwise; and foreign private target dummy variable: it takes the value of 1 if the bidder acquired a foreign private targets and 0 otherwise), the vector of *FC* variables contains the control variables used to capture the effect of firm characteristics with a vector of β_{11-14} coefficients, and the *GFC* is the dummy variable that captures the effect of the global financial crisis. Similar to equation [4a], this study includes seven bid characteristics, four firm characteristics and a GFC variable in above equation. The equation above is estimated for the year 1 and year 3 post-acquisition periods separately using the full sample.

The intercept of the above equations is interpreted as an estimate of improvements in performance relative to the control firms for the samples. According to Sharma and Ho (2002), "alpha *(α)* which is independent of pre-acquisition performance would indicate the extent to which post-acquisition performance is a function of the acquisition" (p-178). All of the equations [4] and [5] above are estimated using White's (1980) correction procedure for heteroscedastic standard errors.

5.5.3 Correlation Matrix:

Table 5.4 presents a pairwise Spearman rank-order correlation matrix for the firm and bid characteristics considered necessary in examining long-run operating performance. Both the stock only dummy and the ln relative size have negative correlations with the cash only dummy, which are statistically significant. The stock only dummy is also negatively correlated with the unrelated acquisitions. The profitability and free cash flow variables have the

highest correlations (0.74). This suggests a strong positive relationship between free cash flow and the profitability of bidding firms. On the other hand, the cash only dummy has a significant negative relationship with all the firm characteristics implying that large, highly profitable, leveraged and cash holdings firms do not use cash payment frequently. The ln relative size variable has a strong negative correlation with the ln market value, profitability, leverage, and free cash flow variables. The correlation matrix also indicates that the ln market value has a significant and positive correlation with the profitability, leverage and free cash flow variables. The two strongly correlated variables in estimating equations [4] and [5] are between the free cash flow and profitability variables (0.74) and the free cash flow and ln market value variables (0.62). However, the highest correlation exists between the profitability and free cash flow variables (0.74) in estimating equations [4] and [5]. Finally, Table 5.4 confirms that the level of correlation between the various explanatory variables does not exceed 0.80. According to Gujarati (1995), the multicollinearity problem is present if the correlation between the independent variables is above 0.80. Based on these correlation values, the threat of multicollinearity may not have any significant impact in the estimation of the regression models in this study. The VIF result also confirms the above findings, as the centered VIF score is less than 10 for all variables suggesting that there is no multicollinearity threat for the models. (see appendix C.1)

Table 5.4
Spearman rank-order Correlations Matrix

Name of the variables	1	2	3	4	5	6	7	8	9	10	11	12	13
IS_FC_TA (1)	1.00												
Stock only dummy (2)	0.05	1.00											
Cash only dummy (3)	-0.03	**-0.44**	1.00										
Ln relative size (4)	0.00	**-0.28**	**0.18**	1.00									
Unrelated dummy (5)	**-0.06**	-0.00	-0.00	**0.14**	1.00								
Multiple bid dummy (6)	0.03	0.02	**-0.08**	**-0.16**	-0.02	1.00							
Deal attitude dummy (7)	-0.02	**0.06**	0.02	0.05	- 0.02	0.02	1.00						
Mining target dummy (8)	0.01	**-0.06**	**0.10**	0.01	**-0.21**	0.00	0.01	1.00					
Ln market value (9)	0.02	**0.24**	**-0.26**	**-0.37**	-0.06	**0.27**	**0.11**	**-0.18**	1.00				
Profitability (10)	**0.16**	**0.17**	**-0.28**	**-0.26**	**-0.06**	**0.17**	0.04	**-0.14**	**0.62**	1.00			
Leverage (11)	0.00	**0.11**	**-0.22**	**-0.11**	0.06	**0.22**	0.06	**-0.23**	**0.45**	**0.25**	1.00		
Free cash flow (12)	**0.19**	**0.23**	**-0.27**	**-0.25**	**-0.06**	**0.14**	0.03	**-0.18**	**0.62**	**0.74**	**0.31**	1.00	
GFC period dummy (13)	0.01	-0.04	-0.02	**-0.09**	**-0.08**	**0.14**	0.02	**0.08**	**0.08**	**0.05**	**-0.07**	0.04	1.00

Note: The table above reports the Spearman rank-order correlation matrix. In this table, IS_FC_TA = the 'industry and size' adjusted cash flow returns for three-year period; Stock only dummy = 1 when payment method used is in the form of stock; Cash only dummy = 1 when payment method used is in the form of cash; Ln Rel Size = Natural log of relative size of bidders and target size; Unrelated dummy = 1 when acquisition held with different industry; Multiple bid dummy = 1 when bidding firms make more than one acquisition during the sample period; Deal attitude dummy = 1 if the acquisition associated with an hostile manner; Mining target dummy = 1 when bidder acquired mining target; Ln market value = The market value of the bidding firm (defined as the share price multiplied by the number of ordinary shares in issue) one year prior to the acquisition divided by the total assets of the firm; Leverage = the net debt amount one year prior to the acquisition year of the bidder divided by the total assets of the firm; Profitability = the net income prior to acquisition announcement year divided by the total assets of the firm; Free cash flow = the net cash receipts and disbursements resulting from the operations of the company prior to acquisition announcement year divided by the total assets of the firm, and a GFC period dummy = 1 if the acquisition held during the period of 1st July, 2007 to 31st December, 2009. Bold text indicates probability is significant.

5.6 EMPIRICAL FINDINGS

In this section, the findings in relation to the post-acquisition operating performance of Australian bidders using four different performance measures during the three post-acquisition periods are discussed. Further the results are discussed under two separate sub-headings: 6.1. Univariate analysis, and 6.2. Multivariate analysis.

5.6.1 Univariate Analysis

Table 5.5 and Table 5.6 report the abnormal operating performance for bidding firms that acquired public, private and subsidiary targets, separately, by estimating the equation [1], [2] and [3]. Under the univariate analysis, sub-section (i) analyses the abnormal operating performance of the sample firms employing four different measures for three samples during the three-year post-acquisition period; sub-section (ii) discusses the impact of the method of payment for three samples.

5.6.1.1 Abnormal Operating Performance for Three Different Target Types

Table 5.5 reports the post-acquisition median operating performance of bidding firms that acquired domestic public, private and subsidiary targets using four performance measures.[89] A number of observations can be made from the results presented in Table 5.5. First, the raw operating cash flow performance measure is positive and significant for the public target sample and insignificant for the private and subsidiary target samples. However, it indicates increasing post-acquisition operating performance for the private target sample while declining trends for the subsidiary target sample. Second, both benchmarks seem to have a significant effect on the magnitude of the

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[89] Table C.2 of Appendix C shows the mean operating performance for three samples of domestic acquisitions. The results are qualitatively similar but the magnitude of mean operating performance relative to non-merging control firms is relatively higher than median operating performance relative to non-merging firms. The operating performance is mostly positive and significant for the 'industry and size' adjusted control benchmark. Furthermore, there is weak evidence that bidders for private and subsidiary targets earn higher operating performance compared to public target acquisitions, although strong evidence found in the median analysis.

post-acquisition periods. For example, abnormal operating performance is much lower once the 'industry and size' adjusted benchmark is controlled for implying the importance of considering such benchmarks when assessing post-acquisition performance. Third, the profitability measure provides weak support in relation to improved profitability following acquisitions. For example, the profitability measure is either insignificant or significant and negative for the private and subsidiary target samples.

Panel A of Table 5.5 reports the post-acquisition operating performance for bidders for public targets. The bidder's raw operating performance (cash flow scaled by both total asset and market value of equity) is positive and significant for all three years and ranges from 4.37 percent to 6.92 percent. When the bidder's raw cash flow returns for both measures are controlled with the 'industry' and 'industry and size' benchmarks, they also generate statistically significant positive abnormal operating performance. However, the magnitude of such operating performance is much lower compared to the bidder's raw returns. This clearly indicates that benchmarks have a strong impact on operating performance. The yearly and grand median cash flow return measures consistently indicate that bidders for public targets generate statistically significant higher abnormal operating performance after controlling for the 'industry' and 'industry and size' benchmarks. The profitability measures do not provide such consistent evidence that bidders for public targets earn statistically significant positive profitability across all measures and controlled benchmarks. For example, the grand industry-adjusted profitability measure is positive and significant at the 1 percent level which ranges from 2.40 percent to 3.69 percent when controlled for 'industry benchmark', while the grand profitability median is insignificant for the 'industry and size' adjusted benchmark.

Panel B of Table 5.5 reports the post-acquisition operating performance for private target acquisitions. Panel B does not provide consistent evidence that bidders for the private targets sample generate higher abnormal operating performance compared to the control firms. The findings are subject to the benchmarks controlled. The grand median cash flow return is positive and significant (0.19% to 3.06%) when controlled for the 'industry and size' benchmark, while it is insignificant when controlled for the industry

benchmark. The profitability measures mostly provide evidence of statistically negative profitability. The grand median profitability (ranges from -0.01% to -0.06%) is negative and significant after controlling for both benchmarks.

Panel C of Table 5.5 shows that the grand median operating cash flow returns are positive and significant for bidders for subsidiaries (ranges from 0.15 % to 0.28%) after controlling for both benchmarks. These grand median values are comparatively higher for the subsidiary sample compared to the grand median value found in Panel B for the private target sample, indicating higher abnormal operating performance for bidders that acquired subsidiaries. The profitability measures provide mixed evidence. Industry-adjusted profitability shows insignificant grand median values while profitability (net profit scaled by total asset) is negative and significant (-0.03%) when controlled for the 'industry and size' benchmark.

Panel D of Table 5.5 reports the median difference between these three samples. The median differences consistently indicate that bidders for public targets outperform bidders for private and subsidiary targets in the post-acquisition period for all four performance measures using both raw returns and returns controlled for industry benchmark. However, such differences lost their significance level when the 'industry and size' benchmark was controlled for. This finding is surprising given that the share market perceived acquisitions of private and subsidiaries as more value creating than acquisitions of public targets. This indicates that investors in private and subsidiary targets overestimate the synergetic effect of a takeover.

Table 5.5 Post-acquisitions Median Operating Performance for Domestic Targets

Post-acquisitions Year	Cash flow/Total Asset			Cash flow/Market Value			Net profit/Total Asset			Net Profit/Market Value		
	Raw Performance	Industry Adjusted	Industry and Size Adjusted	Raw Performance	Industry Adjusted	Industry and Size Adjusted	Raw Performance	Industry Adjusted	Industry and Size Adjusted	Raw Performance	Industry Adjusted	Industry and Size Adjusted
Panel A: Public Targets (1)												
1	0.0437***	0.0401***	0.0255***	0.0536***	0.0219***	0.0041	0.0336*	0.0409***	0.0072	0.0392*	0.0244***	-0.0008
2	0.0489***	0.0442***	0.0164***	0.0675***	0.0341***	0.0215***	0.0335	0.0325***	0.0003	0.0392	0.0211***	0.0090
3	0.0605***	0.0571***	0.0174***	0.0692***	0.0349*	0.0150***	0.0382**	0.0535***	0.0120*	0.0501*	0.0374***	0.0164***
Grand Median	0.0498***	0.0471***	0.0159***	0.0675***	0.0338*	0.0149***	0.0342	0.0369***	0.0031	0.0433	0.0240***	0.0036
Panel B: Private Targets (2)												
1	0.0092**	0.0008**	-0.0009	0.0109	-0.0075***	0.0116***	0.0131***	0.0064***	-0.0020**	0.0145***	0.0001***	0.0060
2	0.0280	0.0067	0.0175***	0.0426***	0.0108**	0.0377***	0.0012***	-0.0075***	-0.0077***	0.0160***	0.0009***	0.0146
3	0.0305	0.0195*	0.0271***	0.0501***	0.0292***	0.0482***	0.0034***	-0.0033***	-0.0093***	0.0012***	0.0018***	0.0114**
Grand Median	0.0273	0.0097	0.0197**	0.0419***	0.0106	0.0306***	0.0088***	-0.0050***	-0.0061**	0.0181***	-0.0010***	0.0093
Panel C: Subsidiary Targets (3)												
1	-0.0147	0.0223	0.0086	-0.0087	0.0125	0.0154*	-0.0258***	0.0091	-0.0023**	-0.0174***	0.0058*	0.0011*
2	0.0177	0.0291**	0.0281*	0.0148	0.0209**	0.0333***	-0.0287***	0.0090	0.0041	-0.0199***	0.0083**	0.0025*
3	-0.0083	0.0283**	0.0181*	-0.0045	0.0201	0.0308**	-0.0275***	0.0039*	-0.0158***	-0.0197***	0.0081**	-0.0022**
Grand Median	0.0190	0.0251**	0.0241**	0.0208	0.0154**	0.0285***	-0.0241***	0.0080	-0.0033**	-0.0183***	0.0134	0.0023
Panel D: Median differences												
2-1	-0.0225***	-0.0374***	0.0038	-0.0256**	-0.0232***	0.0157	-0.0254***	-0.0419***	-0.0092	-0.0252**	-0.0250***	0.0057
3-1	-0.0308***	-0.0220***	0.0082	-0.0467**	-0.0184*	0.0136	-0.0583***	-0.0289***	-0.0064	-0.0616***	-0.0106***	-0.0013

Note: This table reports the cash flow returns and profitability measures of operating performance of the bidding firms which are deflated by the total assets and the market of equity at the end of the year by estimating equations [1], [2] and [3] for three samples. 'Industry' and 'industry and size' adjusted values are computed as the difference between the firm median value and the median value of the industry benchmark and the industry and size benchmark. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level; Panel A, B, C use Wilcoxon signed-ranks test value and Panel D uses Wilcoxon/Mann-Whitney test value for significance level.

Overall, these results indicate that bidders for the domestic public, private and subsidiary targets samples observed an improved cash flow operating performance in the post-acquisition period. These findings are consistent with a number of international studies that report improved operating performance for bidding firms in the post-acquisition period (Ikeda, 1983; Cornett and Tehranian, 1992; Healy *et al.*, 1992; Switzer, 1996; Parrino and Harris, 1999; Linn and Switzer, 2001; Gugler *et al.*, 2003; Rahman and Limmack, 2004; Powell and Stark, 2005; Cosh *et al.*, 2006; Carline *et al.*, 2009). However, the findings of this study do not support the prior Australian evidence of an insignificant or significant decline in operating performance (Brailsford and Knights, 1998; Hyde, 2002; Sharma and Ho, 2002). [90] Although the results of this study may not be comparable to the studies above due to the differential methodology applied, caution needs to be taken in interpreting these results. This study does not control pre-acquisition performance to calculate the abnormal operating performance during post-acquisition periods; the abnormal returns are estimated relative to the control benchmarks. The results also suggest that the 'industry and size' benchmark has a more positive impact on the private and subsidiary target samples than does the 'industry' benchmark. However, the 'industry and size' benchmark reduces the abnormal operating performance for the public target sample compared to the 'industry' benchmark.

Table 5.6 reports the post-acquisition median operating performance for bidding firms that acquired foreign public, private and subsidiary targets.[91] The main findings that can be derived from the table cited above are: (i) the bidder's raw returns are positive and increasing every year across all three samples indicating an improvement in operating performance; (ii), unlike the domestic sample, the post-acquisition operating performance for foreign bidding firms is higher when the 'industry and size' benchmark is controlled for compared to the 'industry' adjusted benchmark; (iii) grand annual cash flow performance is positive and significant for the public and subsidiary

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[90] These differences in results between this study and prior Australian studies may be attributable to the construction of benchmarks sine the prior studies use different benchmarks compared to this study.

[91] The Table C.3 of Appendix C shows the mean operating performance for three samples of foreign acquisitions. The results are qualitatively similar.

target sample and insignificant for the private target sample; and (iv) the profitability measure is negative and significant for the private target while it is positive and significant for the public target after controlling for the benchmarks.

Panel A of Table 5.6 reports the operating performance for bidding firms that acquired foreign public targets. The four operating performance measures consistently indicate that the bidders for public targets earn a statistically higher operating performance relative to the 'industry' and 'industry and size' benchmarks in the post-acquisition periods. The grand cash flow median returns range from 3.77 percent to 9.37 percent while they range from 3.34 percent to 5.96 percent for the profitability measure. The abnormal operating performance shows an increasing trend from year 1 to year 3 indicating the positive effects of cross-border public target acquisitions.

Panel B of Table 5.6 reports the post-acquisition operating performance for the foreign private targets sample. Cash flow operating returns are mostly insignificant irrespective of the two benchmarks controlled for. The profitability measure, on the other hand, is negative and statistically significant for both yearly measures and for the full period. The significant negative grand median ranges from -0.09 percent to -0.32 percent. This suggests that bidders for private targets do not earn any abnormal cash flow operating performance either in raw returns or benchmark-controlled returns. In particular, such bidders observed significant negative profitability in both measures irrespective of any benchmarks controlled for following the acquisition announcement of foreign private targets.

Panel C of Table 5.6 shows that bidders for foreign subsidiaries earn positive cash flow returns when controlled for the 'industry' benchmark. The grand industry adjusted cash flow median returns range from 5.03 percent to 5.24 percent. However, their profitability measures do not show any significant negative returns similar to the private target sample but the profitability measures are mostly statistically insignificant, except the industry-adjusted net profit scaled by total asset measure.

Panel D of Table 5.6 shows the median differences across the samples. The median differences report that bidders for foreign public targets outperform the bidders for foreign private and subsidiary target samples in

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almost all the performance measures estimated. The difference between the public and private targets is statistically significant at the 1 percent confidence level, implying that bidders for foreign public targets achieve a statistically higher operating performance following the acquisition announcement.

The overall findings, reported in Tables 5.5 and 5.6, of statistically significant abnormal operating performance and significant median differences for bidders for public targets in domestic and foreign acquisitions fails to support Hypothesis 1 that acquirers of private and subsidiary targets observe higher post-acquisition operating performance than acquirers of public targets in both domestic and cross-border acquisitions.

Table 5.6 Post-acquisitions Median Operating Performance for Foreign Targets

Post-acquisitions Year	Cash flow/Total Asset			Cash flow/Market Value			Net profit/Total Asset			Net Profit/Market Value		
	Raw Performance	Industry Adjusted	Industry and Size Adjusted	Raw Performance	Industry Adjusted	Industry and Size Adjusted	Raw Performance	Industry Adjusted	Industry and Size Adjusted	Raw Performance	Industry Adjusted	Industry and Size Adjusted
Panel A: Public Targets (1)												
1	0.0698***	0.0626***	0.0147**	0.0737***	0.0528***	0.0339***	0.0382	0.0596**	0.0347	0.0489	0.0416**	0.0310
2	0.1069***	0.0950***	0.0444***	0.0845***	0.0822***	0.0361***	0.0383	0.0696**	0.0117	0.0474	0.0286	0.0076
3	0.0661***	0.1150***	0.0587***	0.0795***	0.0920***	0.0347***	0.0451*	0.0745***	0.0465*	0.0521**	0.0609***	0.0366
Grand Median	0.0972***	0.0937***	0.0509***	0.0868***	0.0771***	0.0377***	0.0607	0.0596***	0.0417*	0.0497**	0.0491***	0.0334*
Panel B: Private Targets (2)												
1	0.0204	0.0217	0.0050	0.0259	0.0045	0.0121	0.0273**	0.0052	-0.0112*	0.0211*	-0.0120**	-0.0011
2	0.0347	0.0241	-0.0010	0.0388	0.0115	0.0213	-0.0258***	-0.0125***	-0.0353***	-0.0262***	-0.0160***	-0.0204***
3	0.0345	0.0297	0.0046	0.0406*	0.0335	0.0351**	-0.0294***	-0.0155***	-0.0373***	-0.0343***	-0.0142***	-0.0252***
Grand Median	0.0345	0.0250	0.0004	0.0400	0.0201	0.0267*	-0.0029***	-0.0107**	-0.0325***	-0.0031***	-0.0123***	-0.0093***
Panel C: Subsidiary Targets (3)												
1	0.0389	0.0453***	0.0110	0.0426**	0.0351***	0.0104*	0.0154	0.0399*	0.0103	0.0236	0.0295	0.0035
2	0.0470	0.0505***	0.0165	0.0332*	0.0409**	0.0124	0.0244	0.0461*	0.0034	0.0275	0.0183	-0.0022
3	0.0513*	0.0581***	0.0179*	0.0540**	0.0739***	0.0258**	0.0171	0.0343	-0.0015	0.0302	0.0362	0.0099
Grand Median	0.0483	0.0503***	0.0173	0.0524**	0.0525***	0.0134*	0.0259	0.0399*	0.0030	0.0328	0.0233	-0.0022
Panel D: Median differences												
2-1	-0.0627***	-0.0687***	-0.0505***	-0.0468***	-0.0570***	-0.0110**	-0.0636***	-0.0703***	-0.0742***	-0.0528	-0.0614***	-0.0427***
3-1	-0.0489***	-0.0434**	-0.0336**	-0.0344**	-0.0246**	-0.0243**	-0.0348**	-0.0197*	-0.0387	-0.0169**	-0.0258*	-0.0356

Note: This table reports the cash flow returns and profitability measures of operating performance of the bidding firms which are deflated by the total assets and the market of equity at the end of the year by estimating equations [1], [2] and [3] for three samples. 'Industry' and 'industry and size' adjusted values are computed as the difference between the firm median value and the median value of the industry benchmark and the industry and size benchmark. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level; Panel A, B, C use Wilcoxon signed-ranks test value and Panel D uses Wilcoxon/Mann-Whitney test value for significance level.

5.6.1.2 Abnormal Operating Performance for Different Payment Methods

Table 5.7 reports the post-acquisition median operating performance of bidding firms that acquired domestic targets classifying the full sample into three main payment methods: cash-only, stock-only and cash and stock.[92] Panel A reports the operating performance for cash-financed domestic acquisitions. Cash-financed acquisitions earn significant positive abnormal operating performance following the acquisition announcement. The operating performance increases from year 1 to 3 for all four measures. The grand median 'industry' and 'industry and size' adjusted operating cash flow ranges are from 0.20 percent to 0.74 percent, while profitability ranges are from 0.06 percent to 0.55 percent. All the grand median operating performance measures are statistically significant at the 1 percent level. The magnitude of operating performance is lower for the 'industry and size' adjusted benchmark compared to the 'industry' adjusted benchmark only.

Panel B reports the post-acquisition operating performance for stock-financed acquisitions. The bidder's raw operating performance is negative and statistically significant at the 1 percent level across all four performance measures when the payment method is stock. When the raw operating performances are adjusted with the 'industry' and 'industry and size' benchmarks, they reveal very weak support for improved operating performance. Particularly, the grand 'industry and size' adjusted median cash flow returns become insignificant and positive. On the other hand, the industry-adjusted cash flow returns provide mixed performance. The grand median industry adjusted grand cash flow return on asset is positive and significant (0.01%) while it is negative and significant (-0.11%) for industry-adjusted grand cash flow returns on equity. The grand median profitability measures consistently indicate that post-acquisition operating profitability is statistically significant and negative for both measures. These results are

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[92] Table C.4 of Appendix C analysed the post-acquisition operating performance for main payment methods for three samples separately. The analyses strongly support the main findings reported in Table 5.7 that stock-financed acquisitions significantly underperform. The results also support the view that the stock-financed acquisitions observed underperform relative to other payment methods for the three samples separately.

surprising given that stock-financed domestic acquisitions are highly rewarded by capital markets.

Panel C shows the improved post-acquisition operating performance for the mixed-payment method. Cash flow returns on asset are insignificant in year 1 when the industry effects are adjusted but it shows an increasing trend for years 2 and 3. However, cash flow returns on equity is statistically significant for each year and for the full period. Cash flow return on equity shows a higher operating performance compared to cash flow returns on assets. The grand cash flow return median is higher when the 'industry and size' benchmarks are adjusted compared to the 'industry' adjusted benchmark alone. This is in contrast to the cash-financed acquisition returns where the 'industry and size' adjusted returns are lower than the 'industry' adjusted returns. Profitability measures provide inconclusive evidence because the grand median returns on assets are negative at the 10 percent level when both benchmarks are adjusted. The grand median return on equity is significant when industry effects are controlled for but becomes insignificant when the industry and size adjusted benchmark is adjusted.

Panel D provides evidence that stock-financed acquisitions are underperforming compared to both cash and mixed-financed acquisitions across all four operating performance measures. Cash-financed acquisitions statistically outperform stock-financed acquisitions at the 1 percent significance level.

Overall, the results indicate that stock-financed domestic deals significantly underperform compared to cash-financed domestic acquisitions in the long-run. This indicates that investors are overenthusiastic about stock-financed acquisitions in the short-run. The improved operating performance of cash-financed acquisitions provides support for prior UK and US studies (Ghosh, 2001; Linn and Switzer, 2001). However, these findings contradict the studies that report no significant differences of operating performance in post-acquisition periods (Sharma and Ho, 2002; Powell and Stark, 2005). The significant negative operating performance of stock-financed acquisitions is consistent with the prior Australian study by Ben *et al.* (2008) who document a negative relationship between stock-financed acquisitions and long-run operating performance.

Table 5.7 Post-acquisitions Median Operating Performance for Payment Method used in Domestic Acquisitions

Post-acquisitions Year	Cash flow/Total Asset			Cash flow/Market Value			Net profit/Total Asset			Net Profit/Market Value		
	Raw Performance	Industry Adjusted	Industry and Size Adjusted	Raw Performance	Industry Adjusted	Industry and Size Adjusted	Raw Performance	Industry Adjusted	Industry and Size Adjusted	Raw Performance	Industry Adjusted	Industry and Size Adjusted
Panel A: Cash-only (1)												
1	0.0510***	0.0329***	0.0108**	0.0609***	0.0263***	0.0187***	0.0431***	0.0333***	0.0052*	0.0504***	0.0262***	0.0156**
2	0.0601***	0.0353***	0.0178***	0.0756***	0.0413***	0.0348***	0.0370**	0.0229***	0.0063	0.0488**	0.0263***	0.0174*
3	0.0587***	0.0426***	0.0200***	0.0748***	0.0446***	0.0380***	0.0408***	0.0324***	0.0082*	0.0564***	0.0425***	0.0248***
Grand Median	0.0581***	0.0373***	0.0208***	0.0740***	0.0393***	0.0329***	0.0386***	0.0242***	0.0063**	0.0551***	0.0246***	0.0167***
Panel B: Stock-only (2)												
1	-0.0450***	-0.0110***	-0.0029	-0.0359***	-0.0220***	-0.0027*	-0.0822***	-0.0093***	-0.0093***	-0.0617***	-0.0272***	-0.0097***
2	-0.0345***	0.0039**	0.0197	-0.0239***	-0.0079***	0.0086	-0.0825***	-0.0155***	-0.0091**	-0.0572***	-0.0121***	-0.0030**
3	-0.0276***	0.0080	0.0254	-0.0274***	-0.0067*	0.0166*	-0.0981***	-0.0258***	-0.0124***	-0.0828***	-0.0291***	-0.0038***
Grand Median	-0.0352***	0.0010**	0.0175	-0.0264***	-0.0115***	0.0067	-0.0950***	-0.0186***	-0.0113***	-0.0737***	-0.0303***	-0.0123***
Panel C: Cash and Stock only (3)												
1	0.0368***	0.0106	0.0054	0.0470***	0.0156**	0.0198***	0.0280	0.0064	-0.0049	0.0368	0.0045	0.0017
2	0.0486***	0.0210**	0.0202**	0.0690***	0.0364***	0.0441***	0.0213**	-0.0033**	-0.0106***	0.0303**	0.0082**	0.0107
3	0.0518***	0.0276**	0.0264***	0.0807***	0.0463***	0.0577**	0.0154***	-0.0032**	-0.0116***	0.0199***	0.0045***	0.0044**
Grand Median	0.0486***	0.0198**	0.0202***	0.0687***	0.0361***	0.0384***	0.0267	-0.0032*	-0.0091*	0.0333*	0.0050**	0.0065
Panel D: Median differences												
2-1	-0.0933***	-0.0363***	-0.0033	-0.1004***	-0.0508***	-0.0262***	-0.1336***	-0.0428***	-0.0176***	-0.1288***	-0.0549***	-0.0290***
2 −3	-0.0838	-0.0188***	-0.0027	-0.0951**	-0.0476***	-0.0317***	-0.1217	-0.0154**	-0.0022	-0.1070**	-0.0353**	-0.0188

Note: This table reports the cash flow returns and profitability measures of operating performance of the bidding firms which are deflated by the total assets and the market of equity at the end of the year by estimating equations [1], [2] and [3] for three payment methods. 'Industry' and 'industry and size' adjusted values are computed as the difference between the firm median value and the median value of the industry benchmark and the industry and size benchmark. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level; Panel A, B, C use Wilcoxon signed-ranks test value and Panel D uses Wilcoxon/Mann-Whitney test value for significance level.

Table 5.8 reports the post-acquisition median operating performance of bidders for foreign targets using the three main payment methods: cash only, stock only and cash and stock.[93] Panel A reports the operating performance for cash-financed foreign acquisitions. Cash-financed acquisitions earn positive and significant cash flow returns which range from 0.17 percent to 0.76 percent. These statistically significant cash flow returns remain unchanged even after controlling the 'industry' and 'industry and size' benchmarks. However, the profitability measures provide very weak support in favor of positive and significant profitability in post-acquisition periods. The return on asset measure is positive and significant (0.27%) only when controlled for industry effects.

Panel B reports the post-acquisition operating performance for stock-financed foreign acquisitions. The post-acquisition operating performance is either significantly negative or insignificant positive. The grand median cash flow return on assets is positive but insignificant when the 'industry' adjusted benchmark is controlled. The profitability measure is negative and significant for the 'industry' adjusted group while it is negative and insignificant for the 'industry and size' adjusted group. There is no evidence of statistically significant positive cash flow returns for stock-financed foreign acquisitions. Overall, stock-financed foreign acquisitions do not provide any evidence of improved operating performance after controlling the benchmarks.

Panel C shows statistically insignificant cash flow returns in the post-acquisition periods for mixed-financed acquisitions. This finding does not support that such acquisitions are associated with declining post-acquisition operating performance. Profitability measures show statistically significant negative profits for the return on assets measure after adjusting the 'industry and size' benchmark. The mixed-financed acquisitions, on average, do not support the deteriorating post-acquisition operating performance.

Panel D strongly indicates that foreign stock-financed acquisitions are underperforming compared to cash-financed acquisitions in both the raw

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[93] The Table C.5 of Appendix C analysed the post-acquisition median operating performance for main payment methods for three samples separately. The results are slightly different. There is no statistical difference found between these three payment methods used to acquire public target sample and between stock only and mix payment of subsidiary target sample.

measure and the 'industry' adjusted measure. However, there is very weak evidence that stock-financed acquisitions also underperform compared to mixed-financed acquisitions.

The results presented in Tables 5.7 and 5.8 suggest that stock-financed acquisitions do not show any improved operating performance compared to cash-financed and mixed-financed acquisitions in both domestic and foreign acquisitions. These findings fail to support Hypothesis 2 that stock-financed acquisitions generate higher post-acquisition operating performance than cash-financed acquisitions in domestic and foreign acquisitions. The results indicate that stock-financed acquisitions perform worse in domestic acquisitions, as indicated by their significant level in all four performance measures, compared to foreign acquisitions. However, cash-financed acquisitions consistently outperform in the post-acquisition periods in both the domestic and foreign acquisitions.

Overall, the findings above from the univariate analysis provide strong evidence that acquisitions of public targets generate higher abnormal operating performance compared to acquisitions of private and subsidiary targets in both domestic and foreign acquisitions. The payment method indicates that cash-financed acquisitions are associated with statistically significant positive abnormal operating performance compared to the stock and mixed payment methods.

Table 5.8 Post-acquisitions Median Operating Performance for Payment Method used in Foreign Acquisitions

	Cash flow/Total Asset			Cash flow/Market Value			Net profit/Total Asset			Net Profit/Market Value		
Post-acquisitions Year	Raw Performance	Industry Adjusted	Industry and Size Adjusted	Raw Performance	Industry Adjusted	Industry and Size Adjusted	Raw Performance	Industry Adjusted	Industry and Size Adjusted	Raw Performance	Industry Adjusted	Industry and Size Adjusted
Panel A: Cash-only (1)												
1	0.0689***	0.0681***	0.0109***	0.0647***	0.0549***	0.0310***	0.0358***	0.0596***	0.0089	0.0410***	0.0317***	0.0070*
2	0.0721***	0.0763***	0.0333***	0.0773*	0.0686***	0.0267***	0.0320	0.0312*	-0.0055	0.0404	0.0182	-0.0039*
3	0.0652***	0.0612***	0.0224***	0.0814***	0.0785***	0.0415***	0.0310	0.0216**	-0.0132	0.0385	0.0294	0.0015
Grand Median	0.0738***	0.0630***	0.0166***	0.0758***	0.0734***	0.0336***	0.0346	0.0272**	-0.0062	0.0444	0.0207	-0.0015
Panel B: Stock-only (2)												
1	-0.0437**	0.0008	0.0063	-0.0351**	-0.0080**	-0.0120	-0.0978***	-0.0113*	0.0017	-0.0598***	-0.0281**	-0.0116
2	-0.0197*	0.0136	0.0242	-0.0181*	-0.0048	0.0121	-0.1050***	-0.0180*	-0.0252	-0.0658***	-0.0377***	-0.0213**
3	-0.0123	0.0421	0.0351	-0.0083	0.0278	0.0343**	-0.0742***	-0.0133	-0.0102	-0.0369*	0.0094	0.0075
Grand Median	-0.0196*	0.0294	0.0270	-0.0194	-0.0009	0.0196	-0.0942***	-0.0122	-0.0096	-0.0383***	-0.0206**	-0.0055
Panel C: Cash and Stock only (3)												
1	0.0341	0.0224	0.0036	0.0328	0.0140	0.0282	0.0267*	0.0003	-0.0260	0.0171	-0.0027	-0.0048
2	0.0341	0.0248	-0.0071	0.0388	0.0161	0.0055	0.0133***	-0.0096*	-0.0314***	0.0118**	-0.0130*	-0.0076**
3	0.0332	0.0250	-0.0009	0.0336	0.0395	0.0294	0.0098**	-0.0095	-0.0366***	0.0046**	0.0164*	-0.0088**
Grand Median	0.0347	0.0248	-0.0071	0.0406	0.0201	0.0288	0.0128**	-0.0051	-0.0325***	0.0118	0.0038	-0.0006
Panel D: Mean differences												
2-1	-0.0934***	-0.0336***	0.0104	-0.0952***	-0.0743***	-0.0140*	-0.1288***	-0.0394***	-0.0034	-0.0827***	-0.0413***	-0.0040
2-3	-0.0543	0.0046	0.0341	-0.0600**	-0.0210**	-0.0092	-0.1070	-0.0071	0.0229	-0.0501**	-0.0244	-0.0049

Note: This table reports the cash flow returns and profitability measures of operating performance of the bidding firms which are deflated by the total assets and the market of equity at the end of the year by estimating equations [1], [2] and [3] for three payment methods. 'Industry' and 'industry and size' adjusted values are computed as the difference between the firm median value and the median value of the industry benchmark and the industry and size benchmark. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level; Panel A, B, C use Wilcoxon signed-ranks test value and Panel D uses Wilcoxon/Mann-Whitney test value for significance level.

5.6.2 Multivariate Analysis

The result of the univariate analysis reveals that bidders for public targets observe significant positive improved operating performance and that cash-financed acquisitions generate higher operating performance than stock-financed acquisitions. Therefore, this study further investigates this issue after controlling for the influence of the relevant bid- and firm-specific characteristics in a multivariate regressions framework. As the prior univariate results provide evidence of fundamental differences between bidders for public, private and subsidiary targets, regressions are estimated for each group separately. Sub-section (i) discusses the findings of the estimation of the multiple regression models including a number of bid and firm characteristics for domestic acquisitions; sub-section (ii) analyses the operating performance for foreign acquisitions after controlling the relevant bid and firm characteristics; and sub-section (iii) outlines the operating performance for the full sample after controlling for the relevant bid and firm characteristics.

5.6.2.1 The Influence of Bid and Firm Characteristics on the Operating Performance of Domestic Acquisitions

The results generated by estimating equation [4] for domestic public, private and subsidiary targets are presented in Table 5.9 for three samples separately. The model F-statistic is highly significant for the public and private targets samples while being significant/insignificant for the subsidiary targets sample. The low adjusted R-squared values indicate that the explanatory power of the model is low. However, this low adjusted R-squared is consistent with previous studies that analyse regression based estimates (Heron and Lie, 2002; Powell and Stark, 2005; Martynova *et al.*, 2006).

The dependent variable for each sample is the median annual 'industry and size' adjusted cash flow returns for the post-acquisition period. Both the cash flow returns on asset and cash flow returns on equity provide quantitatively similar results. The constant term is negative and insignificant for the public and subsidiary target samples while it is positive and significant for the private target sample (cash flow scaled by market value) after

controlling for the effects of several bid and firm characteristics. These findings contrast what has been reported in non-parametric analysis for the public and subsidiary target samples. The results clearly indicate that controlled post-acquisition operating performance declines for bidders for public and subsidiary target samples while controlled operating performance improved significantly for the private target sample. This finding supports the market based reactions found in many studies across a number of countries, where shareholder value acquisitions of private targets in a significant positive fashion. The insignificant declining post-acquisition operating performance for the public targets sample provides support for the previous Australian study by Sharma and Ho (2002) but contradicts with the study by Ben *et al.* (2008) who reported improved post-acquisition operating performance in regression based estimates. The significant positive operating performance for private target acquisitions supports the findings of Rahman and Limmack (2004) who report an improvement in operating performance for Malaysian bidding firms following private target acquisitions.

With respect to the bid characteristics, the findings indicate that most bid characteristics are insignificant. The cash-financed acquisitions generate mostly positive operating performance while stock-financed acquisitions observe negative operating performance across all performance measures examined in the three samples. For the private target sample, the multiple bid dummy is positive and significant at the 1 percent level for both measures. Although the capital market does not reward the multiple bid acquisitions in a significant fashion for the private targets sample, as discussed in Chapter 3, the post-acquisition operating performance is positive and significant for those bidders. Similarly, multiple bidders for subsidiaries also enjoy positive and significant post-acquisition operating performance. This suggests that experienced bidders can benefit from acquisitions in the long-run due to their expertise in the post-integration process. This finding is consistent with the prior evidence of Fowler and Schmidt (1989). The relative size of the target variable is positive and significant for the public targets sample. This indicates that listed bidding firms that acquire larger targets can increase their operating performance in the post-acquisition period.

The bidder's firm characteristics reveal that profitability is negative and significant while free cash flow is positive and significant for the public targets sample. This indicates that profitable companies are involved in value reducing acquisition activities while higher cash holdings result in improved operating performance. The private targets sample provides weak support in favour of improved operating performance for bidding firms that are highly leveraged or those that maintain higher levels of cash holdings. For the subsidiary targets sample, none of the firm level variables are statistically significant. Finally, the significant GFC dummy variable for the private targets sample provides evidence of improved post-acquisition operating performance. This finding supports the significant positive market reactions found in Chapters 3 and 4 for acquisitions of private targets during the GFC period.

Table C.6 of Appendix C reports the industry and size adjusted profitability measures in a regression framework. The profitability measures strongly indicate a significant negative effect in the post-acquisition periods for all three samples. This negative profitability may be attributable to those bidders who made acquisitions announcements during the GFC period; operating performance was analysed during the GFC period (43% of the domestic sample and 55% of the foreign acquisitions sample) for bidders that announced acquisitions during the period 2005-2008. Other firms and bid characteristics remain qualitatively similar. However, cash acquisitions, in particular, show remarkable improvement in operating performance during the sample period.

Further, Tables C.7 and C.8 of Appendix C show the industry-adjusted operating cash flow and profitability measures, respectively. The results are different for the 'industry adjusted' cash flow performance measure compared to the 'industry and size adjusted' results. The constant is negative for all three samples, indicating declining cash flow operating performance. Similarly, the 'industry adjusted' profitability measure is also significant and negative, showing a declining long-run operating profitability performance.

Table 5.9
Multiple Regression Estimates of Domestic Acquisitions (Bid and Firm Characteristics)

Independent Variable	Free Cash Flow/Total Asset (Industry and Size adjusted)			Free Cash Flow/Market Value (Industry and Size adjusted)		
	Public	Private	Subs.	Public	Private	Subs.
Constant	-0.0385 (-1.07)	0.0468 (1.19)	-0.0107 (-0.28)	-0.0115 (-0.23)	0.0482** (1.98)	-0.0258 (-0.55)
Cash only dummy	0.0111 (0.54)	0.0112 (0.55)	-0.0076 (-0.25)	0.0282 (1.11)	-0.0310 (-1.59)	0.0271 (0.82)
Stock only dummy	-0.0176 (-0.75)	-0.0033 (-0.13)	-0.0421 (-1.36)	-0.0412 (-1.40)	-0.0190 (-1.02)	-0.0236 (-0.79)
Ln relative size	0.0029 (0.51)	0.0058 (0.98)	0.0031 (0.40)	0.0132** (2.01)	0.0062 (1.43)	0.0039 (0.45)
Unrelated dummy	-0.0138 (-0.66)	-0.0177 (-0.74)	-0.0009 (-0.03)	0.0060 (0.24)	-0.0010 (-0.06)	0.0171 (0.63)
Multiple bid dummy	0.0058 (0.37)	0.0622*** (3.12)	-0.0065 (-0.26)	0.0287 (1.55)	0.0563*** (3.71)	0.0459* (1.77)
Deal attitude dummy	-0.0266 (-1.05)	-	-	-0.0042 (-0.05)	-	-
Mining target dummy	-0.0100 (-0.40)	0.0059 (0.25)	0.0315 (1.07)	-0.0222 (-0.73)	-0.0156 (-0.75)	0.0200 (0.95)
Ln market value	0.0094 (1.38)	-0.0149 (-1.16)	0.0118 (1.55)	0.0035 (0.44)	-0.0025 (-0.47)	0.0044 (0.63)
Profitability	-0.1239*** (-4.97)	-0.0376 (-1.06)	0.0371 (1.01)	-0.0988*** (-3.18)	0.0012 (0.05)	0.0056 (0.19)
Leverage	-0.0422 (-1.04)	0.0575 (1.36)	0.0280 (0.70)	0.0181 (0.43)	0.0514** (2.48)	0.0068 (0.17)
Free cash flow	0.2684** (2.47)	0.2345* (1.93)	0.0558 (0.67)	0.2293** (2.23)	0.0442 (1.06)	0.0496 (0.78)
GFC period dummy	0.0053 (0.20)	-0.0113 (-0.56)	-0.0175 (-0.46)	0.0274 (0.91)	0.0297* (1.63)	0.0269 (0.97)
F-Statistics	2.62***	5.04***	2.09**	2.05**	3.83***	1.15
N	229	573	238	229	573	238
Adjusted R2	0.08	0.07	0.05	0.05	0.05	0.01

Note: The table reports coefficient estimates and their respective *t*-values (in brackets) for the regression equation [4] using industry and size adjusted performance measures. The dependent variable is the 'industry and size' adjusted cash flow returns and independent variables included in the model are a number of bid and firm characteristics. A $^{***,(**),(*)}$ indicates statistical significance at the 1%, (5%), (10%) level. The issue of heteroscedasticity was addressed by using White's adjustment procedure.

5.6.2.2 The Influence of Bid and Firm Characteristics on the Operating
Performance of Foreign Acquisitions

A similar estimation is also conducted for foreign acquisitions using equation [4] and the results are presented in Table 5.10 for the three samples separately. The 'industry and size' adjusted cash flow returns are the dependent variables for each sample. The cash flow returns on assets provides a slightly different result to the cash flow returns on equity. The cash flow returns on assets measure provides a negative and insignificant constant term for the foreign private and subsidiary targets, while showing an insignificant positive constant term for foreign public targets. The cross-border deals for cash measure earns positive operating performance in the post-acquisition period. Particularly, overseas private targets acquired for cash are associated with significant positive cash flow returns on assets. On the other hand, stock-financed acquisitions show a negative cash flow return on equity performance for all three samples. The relative size variable is negative and significant for the public targets sample while it is positive and significant for the subsidiary target sample. These results imply that bidders earn negative operating performance when acquired by large foreign public targets but significant positive operating performance when the target is a subsidiary. These results suggest that bidding firms face difficulties in capturing the benefits of acquisitions due to the difficulties in managing large targets in the post-acquisition integration period. Multiple acquisitions of foreign public targets by listed bidding firms do not align with shareholders' interests, as indicated by their significant decline in post-acquisition operating performance. This is in contrast to the finding for the private targets sample, which reported improved post-acquisition operating performance for multiple bidders. Surprisingly, when bidders acquired foreign private targets in a hostile manner, these acquisitions also achieved significant positive post-acquisition operating performance.

In regards to the firm characteristics, the highly profitable bidders for private targets sample suffers from declining post-acquisition operating performance while the highly leveraged bidders for subsidiaries sample enjoys improved post-acquisition operating performance. The significant positive

operating performance for the subsidiary sample indicates that leveraged bidders are more aligned with shareholders' wealth maximisation goals. The free cash flow variable is positive and significant for both the public and private targets samples. This suggests that high holdings of cash in the pre-acquisition periods are positively related to the post-acquisition period operating performance.

A significant negative result was found for the cash flow returns on equity measure for the public targets sample and a significant positive result for the private and subsidiary targets. These results are consistent with the findings for domestic acquisitions. The findings are similar for the other variables cash flow return on assets measure. However, there is weak support in favour of the unrelated acquisitions for public targets sample, indicating that industrial diversification is beneficial for public target acquisitions.

Overall, the acquisitions of foreign targets do not improve the operating performance of bidding firms in the long-run, irrespective of the type of target acquired. This indicates that managing foreign targets is more challenging for bidding firms than managing local targets due to a number of unique challenges found in foreign acquisitions.

Appendix C.10 analyses the industry-adjusted cash flow returns. Almost all the constant terms are negative; however, they are negative and significant for both the private and subsidiary targets samples when cash flow returns on assets is measured. Cash financing has a positive impact on operating performance while stock financing is negatively related. Similar negative evidence is found for the industry adjusted profitability measures in appendix C.11. Table C.11 of Appendix C reports the industry and size adjusted profitability measures in a regression framework. The results reveal declining post-acquisition operating performance. Both the cash only and stock only payment method variables document a negative relationship between profitability and long-run operating performance for the public targets sample. Other variables are qualitatively similar.

Table 5.10
Multiple Regression Estimates of Foreign Acquisitions (Bid and Firm Characteristics)

Independent Variable	Free Cash Flow/Total Asset (Industry and Size adjusted)			Free Cash Flow/Market Value (Industry and Size adjusted)		
	Public	Private	Subs.	Public	Private	Subs.
Constant	0.0113 (0.09)	-0.1487 (-1.15)	-0.0744 (-1.22)	-0.0871 (-1.07)	0.0862 (0.90)	0.0608 (0.88)
Cash only dummy	0.0188 (0.32)	0.0863* (1.65)	0.0151 (0.30)	0.0055 (0.16)	0.0336 (0.71)	0.0418 (1.20)
Stock only dummy	0.0720 (1.10)	0.0001 (0.00)	-0.0106 (-0.14)	-0.0221 (-0.48)	-0.0686 (-1.25)	-0.0763 (-0.89)
Ln relative size	-0.0135** (-2.35)	-0.0086 (-0.37)	0.0289** (2.57)	0.0044 (1.06)	-0.0211 (-1.46)	0.0313** (2.59)
Unrelated dummy	0.0157 (0.33)	0.0073 (0.13)	0.0615 (1.53)	0.0671* (1.78)	-0.0227 (-0.45)	0.0164 (0.46)
Multiple bid dummy	-0.0908* (-2.03)	0.0957* (1.69)	0.0501 (0.95)	-0.0590 (-1.24)	0.0962** (2.21)	0.0346* (0.57)
Deal attitude dummy	-0.0316 (-0.75)	0.1968* (1.85)	-0.0041 (-0.07)	0.0297 (1.27)	0.1436*** (2.96)	0.0741 (1.35)
Mining target dummy	0.0188 (0.41)	0.0185 (0.20)	0.0493 (1.15)	0.0033 (0.08)	-0.0094 (-0.17)	-0.0004 (-0.01)
Ln market value	-0.0055 (-0.34)	-0.0038 (-0.17)	0.0119 (1.01)	0.0154 (1.20)	-0.0381* (-1.65)	-0.0024 (-0.20)
Profitability	0.1889 (0.88)	-0.1361** (-2.15)	0.0663 (0.45)	-0.0623 (-0.34)	-0.0665 (-1.49)	-0.1242 (-1.49)
Leverage	0.1473 (1.59)	0.0809 (1.11)	0.1796* (1.65)	0.0005 (0.00)	0.0631* (1.73)	0.0712 (1.08)
Free cash flow	0.7470*** (4.95)	0.2213* (1.59)	0.0992 (0.52)	0.3755** (2.26)	0.2315** (2.12)	0.1570 (0.99)
GFC period dummy	-0.0986 (-1.47)	0.0714 (0.90)	-0.0086 (-0.12)	0.0721 (1.05)	0.0513 (1.54)	-0.0035 (-0.05)
F-Statistics	**4.05*****	**1.55**	**2.28****	**1.93**	**2.25****	**1.67***
N	**29**	**88**	**75**	**29**	**88**	**75**
Adjusted R^2	**0.57**	**0.07**	**0.17**	**0.28**	**0.15**	**0.10**

Note: The table reports coefficient estimates and their respective *t*-values (in brackets) for the regression equation [4] using the industry and size adjusted performance measures. The dependent variable is the 'industry and size' adjusted cash flow returns and independent variables included in the model are a number of bid and firm characteristics. A ***, $^{(**)}$, $^{(*)}$ indicates statistical significance at the 1%, (5%), (10%) level. The issue of heteroscedasticity was addressed by using White's adjustment procedure.

5.6.2.3 The Influence of Bid and Firm Characteristics on the Operating Performance of the Full Sample

Equation [5] is estimated for the full sample using the performance measures for year 1 and year 3, and the results are presented in Table 5.11. The results from regression model [5] highlight whether the post-acquisition operating performance changes from year 1 to year 3 after controlling all the variables. The median industry and size adjusted cash flow returns on year 1 and year 3 is the dependent variable in this regression model and includes a number of control variables. The cross-border target represents a dummy variable which takes the value of 1 if the target is located outside Australia. The two private target dummy variables represent 1 if the target is either a domestic private target or a cross-border private target.

The constant is negative and insignificant for year 1 but positive and insignificant for year 3 after controlling all influential variables, indicating that bidders' post-acquisition operating performance is improving from year 1 to year 3. The findings are consistent for both cash flow returns measures.

The foreign target dummy variable shows negative and insignificant cash flow returns on assets in both years. This indicates that the acquisitions of foreign targets observe declining operating performance compared to the acquisitions of domestic targets. These negative cross-border effects are consistent with prior studies that compare the operating performance of domestic and cross-border acquisitions (Moeller and Schlingemann, 2005; Martynova *et al.*, 2006). This study further investigates the domestic and foreign private target dummy, since acquisitions of private targets are associated with significant positive market reactions across a number of countries. However, the domestic private target dummy variable takes the negative sign, which depicts a negative relationship between the acquisitions of domestic private targets and long-run operating performance in both year 1 and year 3. The foreign private targets dummy captures a positive relationship in year 1 and a negative relationship in year 3. This evidence does not provide any support that acquisitions of private targets reflect real gains for bidding firms in the post-acquisition period.

The other variables reveal similar results reported in the earlier table. Inclusion of other variables in this model unveils that all bid characteristics become insignificant for the cash flow returns on asset measure. The free cash flow variable is positive and highly significant in year 1 but shows a weak relationship in year 3. The leverage variable is also significant in year 3. These results confirm the earlier findings.

The cash flow returns on equity measure provides slightly different results for bid and firm characteristics. The relative size variable provides weak support in year 1. However, the multiple bid variable provides strong support in both year 1 and year 3. Firm characteristics provide similar results found in the cash returns on asset measure. However, the GFC variable shows a significant positive relationship between the acquisition of targets during the GFC period and long-run operating performance in both years.

Overall, the results support that bidding firms do not observe any significant gain in the post-acquisition period. There is no strong support that such acquisitions also result in a decline in the operating performance in a significant manner. However, the positive constant term in year 3 indicates that bidding firms gradually improve their operating performance after the takeover has taken place.

Table 5.11 Multiple Regression Estimates of Full Sample (Bid and Firm Characteristics)

	Industry and Size Adjusted		Industry and Size Adjusted	
	Cash Flow/Total Asset (Y1)	**Cash Flow/Total Asset (Y3)**	**Cash Flow/Market Value (Y1)**	**Cash Flow/Market Value (Y3)**
Constant	-0.0392 (-0.97)	0.0052 (0.13)	-0.0239 (-0.75)	0.0297 (0.78)
Cash only dummy	0.0051 (0.19)	-0.0144 (-0.34)	0.0213 (1.20)	-0.0207 (-0.53)
Stock only dummy	-0.0418 (-1.32)	-0.0031 (-0.07)	-0.0262 (-1.32)	-0.0109 (-0.47)
Ln relative size	0.0004 (0.05)	0.0110 (1.19)	0.0093^{*} (1.82)	0.0062 (0.93)
Unrelated dummy	-0.0039 (-0.18)	0.0288 (0.69)	-0.0003 (-0.02)	0.0118 (0.48)
Multiple bid dummy	0.0193 (0.84)	0.0022 (0.05)	0.0465^{***} (3.00)	0.0453^{*} (1.83)
Deal attitude dummy	0.0210 (0.84)	0.0223 (0.69)	0.0116 (0.49)	-0.0075 (-0.12)
Mining target dummy	-0.0265 (1.20)	0.0059 (0.14)	0.0178 (1.14)	-0.0255 (-0.72)
Domestic private target dummy	-0.0265 (-1.06)	-0.0211 (-0.67)	-0.0054 (-0.32)	0.0271 (0.85)
Foreign private target dummy	0.0266 (0.84)	-0.0653 (-1.11)	0.0075 (0.29)	-0.0233 (-0.45)
Foreign target dummy	-0.0201 (-0.79)	-0.0428 (-1.14)	0.0104 (0.50)	-0.0007 (-0.01)
Ln market value	0.0039 (0.49)	0.0056 (0.85)	0.0006 (0.12)	-0.0020 (-0.38)
Profitability	-0.0290 (-0.87)	-0.0593 (-1.31)	-0.0217 (-1.02)	-0.0265 (-1.17)
Leverage	0.0650 (1.43)	0.0673^{*} (1.76)	0.0211 (0.92)	0.0954^{***} (2.98)
Free cash flow	0.2544^{***} (2.59)	0.3751^{*} (1.71)	0.1385^{***} (3.07)	0.1191^{**} (1.94)
GFC period dummy	0.0208 (1.03)	0.0504 (1.39)	0.0438^{**} (2.58)	0.0417^{*} (1.64)
F-Statistics	4.99^{***}	2.72^{***}	4.35^{***}	1.76^{**}
N	1232	1232	1232	1232
Adjusted R^2	0.05	0.02	0.04	0.01

Note: The table reports coefficient estimates and their respective *t*-values (in brackets) for the regression equation [5] using the industry and size adjusted performance measures. The dependent variable is the 'industry and size' adjusted cash flow returns and independent variables included in the model are a number of bid and firm characteristics. A $^{***, (**), (*)}$ indicates statistical significance at the 1%, (5%), (10%) level. The issue of heteroscedasticity was addressed by using White's adjustment procedure.

5.7 CONCLUSION

This is the first Australian study that analyses the long-run operating performance of bidding firms using a large dataset classified into three samples (bidders for public, private and subsidiary targets) that examines a number of performance measures and is controlled for 'industry' and 'industry and size' benchmarks. The majority of the target companies in the sample are private targets (719) and subsidiaries (327) compared to a small sample of public targets (265). Therefore, the results generated in this analysis are not comparable with the findings of other studies conducted using only public targets.[94]

The initial non-parametric analyses of domestic acquisitions suggests that domestic bidders for public targets earn significantly positive operating performance irrespective of the controlled benchmarks applied, while the abnormal operating performance for the domestic bidders for private and subsidiaries is subject to performance measures and controlled benchmarks. The cash flow returns show positive operating performance whereas profitability measures show a significant negative performance for the latter two samples. When payment methods are investigated, the results reveal that cash-financed acquisitions generate significantly improved operating performance compared to the other two payment methods. The stock-financed domestic acquisitions encounter a significant negative operating performance. These findings do not support the hypotheses. However, based on the regression-based estimates, Hypothesis 1, that acquirers of private targets observe higher post-acquisition operating performance than acquirers of public targets in both domestic and cross-border acquisitions, cannot be rejected. The regression estimates reveal a mostly positive constant for the private targets sample indicating that post-acquisition operating performance improved for this sample. However, the evidence obtained for payment methods in the regression-based estimates support the non-parametric

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[94] Excluding those analyses where operating performance is assessed for three samples separately.

results that the stock-financed acquisitions underperformed in the post-acquisition periods.

The non-parametric result for the foreign acquisitions reveals that the cash flow returns measure consistently indicates that the bidders for public targets observe a significant positive operating performance, while there is no strong evidence found in relation to the private targets sample. The cash flow returns measure provides moderate support for a significant positive operating performance across a number of performance measures and benchmarks. The profitability measure is statistically significant and negative for the private targets sample, while it is mostly insignificant for the subsidiary targets sample. However, bidders for public targets enjoy positive and significant profitability in the post-acquisition periods. The payment methods analysis also shows a significant positive operating performance for cash-financed deals while it is insignificant for the stock only and mixed-payment methods. These findings do not support any of the hypotheses. The direction of the operating performance in the multiple regression models is mixed for the three samples and subject to the performance measures employed. However, none of these constants is statistically significant. The payment method analysis in the regressions estimate suggests that cash-financed deals are positive for all three samples while stock-financed deals are mostly negative.

Other findings reveal that multiple bidders for private and subsidiaries acquisitions observe statistically significant positive post-acquisition operating performance in both domestic and foreign acquisitions. The relative size variable is positively related with domestic acquisitions but it has differential findings in foreign acquisitions across three samples. This variable is positively related with acquisitions of foreign subsidiaries but negatively related to the acquisitions of foreign public and private targets. The profitability variable is negatively related with the post-acquisition operating performance of public target bidders, while leverage is positively related with private targets and subsidiaries. The free cash flow variable also shows a significant positive relationship with post-acquisition operating performance.

Overall, the results suggest that there is a positive indication of improved operating performance following acquisitions announcements. However, the results indicate that an improvement in post-acquisition periods is manly driven by median cash flow returns and acquisition which is financed with cash payment. The operating performance measures are strongly conditional on the performance measures and benchmark applied. The findings in this chapter should not be interpreted in a similar fashion to other studies, as most studies compared post-acquisition operating performance compared to pre-acquisition operating performance, whereas this study reports only the post-acquisition operating performance controlled for benchmark performance. All in all, this result strongly suggests that economic gains from takeovers are conditional on the type of target acquired.

CHAPTER 6

Conclusion

6.1 INTRODUCTION

This thesis investigates the short-run market reactions to announcements made by Australian bidders both in acquiring public, private and subsidiary targets and their long-run operating performance. These issues are investigated for both domestic and foreign acquisitions. The literature provides convincing evidence that the market reaction is significantly higher when announcing the acquisitions of unlisted targets such as private firms and subsidiaries compared to public targets. Even though the market reaction to announcements of acquisitions of public targets has been investigated in Australia, no prior study has investigated how the market reacts to announcements of acquisitions of unlisted targets. In particular, a comprehensive investigation of whether the market reaction depends on the organisational form of the target has not been conducted using large samples of acquisitions of public, private and subsidiary targets. This provides the preliminary motivation to investigate the issues outlined above in the Australian context. In addition, the differences in the institutional settings between Australia and other developed countries, such as the USA and the UK (discussed in Chapter 2), the absence of a study that conducts a comparative analysis of whether the long-run performance of bidders depends on the nature of the target acquired and the absence of a study that investigates how the market reacts to acquisitions of foreign targets also provide motivations for this empirical investigation. Accordingly, this thesis investigated the market reaction to acquisitions of domestic and foreign public, private and subsidiary targets, and the long-run operating performance of such bidders, in post-acquisition periods. In doing so,

the influence of several bid and firm characteristics, together with those that are specific to the Australian institutional setting, are investigated.

6.2 CHAPTERS SUMMARY

6.2.1 Market Reactions to Domestic Acquisitions

Chapter 3 analyses the market reaction to the announcement of acquisition decisions by listed Australian bidding firms for three samples separately for the period 2000-2010. The literature provides evidence that the market reaction depends on the target's organisational form, i.e. whether the target is a listed or an unlisted firm. Therefore, this chapter's intention was to analyse the impact of the target's organisational form on the market reaction to acquisition announcements. The abnormal stock returns are estimated employing a number of methodologies, such as the single factor model, the three-factor model, the four-factor model and the market adjusted buy and hold returns, to overcome any methodological issues arising from limiting the analyses to a particular method. Therefore, the findings of this study are robust to divergent methodologies advanced in the finance literature. Moreover, this study investigates a number of bid characteristics which are not investigated in prior Australian studies. Particularly, this thesis uses a large sample of announcements gathered through a long period to calculate the abnormal returns of Australian bidding firms, addressing a number of bid and firm characteristics while separating their influence into three samples (public, private and subsidiary). The findings consistently provide evidence that all types of acquisitions generate positive and significant abnormal return to bidders, implying that the capital market perceives acquisitions as value creating decisions irrespective of the organisational form of the target acquired. However, the bidders for private firms and subsidiaries earn consistently higher abnormal returns than those that acquire public targets. The findings remain robust to a number of approaches used to estimate abnormal return.

In addition to the main findings for the three samples of acquisitions, the findings in relation to the method of payment provide evidence that differ from those reported for the US and UK markets. The market reaction is positive and significant for stock-financed acquisitions; this conclusion applies to all three samples analysed. However, cash-financed acquisitions generate significant positive abnormal returns for acquirers of private targets. Other bid and firm characteristics provide mostly similar results that were observed in the previous literature. Overall, these findings support the view that, even though acquisitions create value for Australian shareholders, they gain the most when they acquire private and subsidiary targets.

6.2.2 Market reactions to Foreign Acquisitions

Chapter 4 examines the market reaction to the announcement of acquisitions of cross-border targets by Australian bidding firms. Foreign investments in Australian companies have risen continuously since financial deregulation in early 1970. Most of these investments come in the form of acquisitions. However, few studies investigate the market reaction to the announcement of foreign acquisitions. This study investigated this issue using 714 acquisition announcements during the period 2000-2010, spanning across three samples (acquisitions of public, private and subsidiaries). The findings reveal that the magnitude of abnormal returns generated in cross-border acquisitions is conditional on the organisational form of the target. Both the bidders for private and subsidiary targets earn significant positive abnormal returns, while acquisitions of public targets generate insignificant returns irrespective of the model employed. However, the abnormal returns for the three samples become insignificant once the bid and firm characteristics are controlled for. The analysis of payment methods reveals that stock-financed acquisitions of foreign private targets is associated with positive and significant returns after controlling for the bid and firm characteristics. The analysis of variables specific to foreign acquisitions also provides mixed evidence. The investor protection variable affects the acquisitions of public and subsidiary targets differently; it has a

significant positive impact on the excess return earned by the acquirers of public targets while having a significant negative impact on the acquirers of subsidiary targets. The economic freedom of the target country does not have any significant influence on the abnormal returns across the three samples.

Turning to other variables, the results show that multiple acquisitions generate significant positive abnormal returns for the 'private targets sample' while acquisitions of private and subsidiary targets from the mining industry are also associated with significant positive abnormal returns. Surprisingly, there is no evidence of significant positive abnormal returns for the top four target country destinations irrespective of the type of the target acquired. Therefore, the main findings of foreign acquisitions are conditional on a number of factors such as bid characteristics, firm characteristics and foreign acquisition specific characteristics.

6.2.3 Long-run Operating Performance

Chapter 5 investigated the long-run operating performance of Australian bidding firms that acquire public, private and subsidiary targets from both domestic and foreign markets. It is worthwhile to investigate the long-run operating performance to assess whether acquisitions create long-run benefits to shareholders. This study analyses large samples of 1,040 domestic and 271 foreign acquisitions for the period 2000-2008. Both industry-adjusted and industry-and-size-adjusted performance measures are analysed. The univariate analysis reveals that acquisitions of both domestic and foreign public targets generate higher post-acquisition operating performance than acquisitions of private and subsidiary targets. Similarly, higher operating performance is reported for cash-financed acquisitions than for stock-financed and mixed-financed acquisitions in both domestic and foreign settings. When the bid and firm characteristics are controlled in a multiple regression framework, there is no evidence of positive operating performance for public targets acquisitions while there is weak evidence of significant positive operating performance for domestic private targets acquisitions. The cash-financed acquisitions generate positive long-

run operating performance while stock-financed acquisitions generate negative long-run operating performance. The analysis of the full sample indicates that operating performance, basically, improves from year 1 to year 3. However, the significant positive operating performance is conditional on the relative size of the target, experience of bidding firms, and the pre-acquisition leverage and cash holdings of bidding firms.

Overall, the results do not provide strong evidence that acquisitions of private and subsidiary targets enjoy positive long-run operating performance in post-acquisition periods. It is surprising that significant the positive market reactions observed for stock-financed acquisitions do not translate into improved operating performance for bidding firms in the long-run. Perhaps the three-year post-acquisition period is too short to capture the real economic gains associated with acquisition-related decisions.

6.3 ACADEMIC CONTRIBUTIONS

This thesis contributes to the literature in several ways. The main contributions of this thesis are discussed based on three empirical chapters of this thesis.

6.3.1 Market Reactions to Domestic Acquisitions

The investigation of domestic acquisitions using three samples makes several contributions. First, to the best knowledge of the author, this is the first Australian study that investigates the market reaction to acquisition announcements using a large sample of public, private and subsidiary targets. As the literature suggests, managers can create higher value through acquisitions of private and subsidiary targets than acquisitions of public targets. However, previous Australian studies mainly focus on acquisitions of public targets, although the market perceives acquisitions of private and subsidiary targets to be more value creating than acquisitions of public targets. Second, this study controls

for a number of bid and firm characteristics while investigating the market reactions of bidding firms. Andrade *et al.* (2001) and Bruner (2002) explain that market reaction is conditional on different bid characteristics such as the payment method, hostility, relative size, diversification, etc. Therefore, this study controls for a number of traditional and new bid characteristics in the Australian context. For example, this study incorporates a number of unique characteristics, which have not been investigated, related to the Australian legal and institutional settings (such as break fees, unlisted public targets, and privately negotiated deals) while addressing the bidding firms' short-run market performance. These aspects have not been investigated in previous Australian studies. In particular, the influence of break fees, introduced through Guidance Note 7 (GN7) in 2001, on the return earned by bidders has not been investigated in this market. Finally, this study controls for the GFC period while examining the announcement period of abnormal returns. In this respect, the influence of the economic cycle on acquisition activities, and the resultant abnormal return, is scrutinised.

6.3.2 Market Reactions to Foreign Acquisitions

The second empirical study examines the market reaction to the announcement of cross-border acquisitions using the three samples (public, private and subsidiary targets). The investigation of cross-border acquisitions makes a three-fold contribution. First, although the Australian firms' investment abroad, in terms of acquisitions, has been increasing continuously since financial deregulation, there is no evidence of prior studies that conduct a comprehensive investigation into the market reaction to the announcement of such acquisitions. This largely unexplored area is addressed in this investigation. The results reveal that bidding firms observe zero returns when acquiring foreign targets, after controlling for several bid and firm characteristics. Second, while examining the market reactions of cross-border acquisitions, this study controls a number of variables that are specific to foreign acquisitions. These variables include investor protection, economic freedom and the legal system of the target country, which affect the acquisition outcome of foreign targets. For example, the investor

protection of the target country is positively related with the abnormal returns for acquisition of public targets, while it is negatively related with abnormal returns for acquisition of subsidiary targets. However, the economic freedom of the target country has no effect on market reactions. These findings are a new addition to the literature. Third, this thesis further confirms that value creation from cross-border acquisitions is conditional on the location of the target country. Acquisition of public targets in the US creates significant value while acquisition of public targets in the UK significantly reduces value. These findings help the managers of bidding firms to seek targets from destinations that will create value for shareholders.

6.3.3 Long-run Operating Performance

Chapter 5 investigates the long-run operating performance of bidding firms using a large sample of public, private and subsidiary targets acquisitions, both from domestic and foreign markets. This chapter contributes to the literature in three ways. First, this is the first study that investigates the long-run operating performance of bidding firms using the three samples of public, private and subsidiary targets, separately, to establish whether the short-run market performance translates into an improved long-run operating performance of the bidding firms. Second, this study uses both the 'industry adjusted benchmark' and 'industry and size adjusted benchmark' to measure long-run operating performance. Such measures have not been used in an Australian context before. Finally, the findings of this study are a purely new addition to the literature since no prior study compares the long-run operating performance between bidders for public, private and subsidiary targets in both domestic and foreign acquisitions.

6.4 RESEARCH IMPLICATIONS

Mergers and acquisitions decisions have substantial impacts on various stakeholders in Australia, such as investors and regulators. Therefore, it is

essential to strengthen the existing literature with further research regarding the impact of mergers and acquisitions to identify whether these decisions create wealth for bidding firms' shareholders. There is extensive research available in the UK, USA and Europe on mergers and acquisitions. However, in the context of the Australian market, there are few published studies, to date, which have examined the market reaction and operating performance of acquiring firms. Therefore, the major implications of this thesis are as follows: Firstly, this thesis helps to develop an understanding about the real economic gains associated with acquisitions. This will allow regulators to formulate strategies in order to provide incentive for firms to engage in M&A activities subject to these circumstances, as well as provide protection against managers who are inclined to destroy shareholder value. Secondly, the findings will also be beneficial to shareholders and other investors to understand the nature of the underlying benefits that are associated with these corporate events. Similarly, there could be possible implications for investors to estimate the economic growth of their investment from such corporate decisions. Finally, the relevant stakeholders will be better able to ascertain potential synergies, in terms of the operating and financial efficiency, arising from acquisitions.

6.5 LIMITATIONS

This thesis has some limitations. First, the findings of cross-border public target acquisitions are based on a small sample. Therefore, findings should be interpreted cautiously for the acquisition of foreign public targets. Second, the investigation of long-run operating performance does not compare the post-acquisition performance with pre-acquisition performance of the merged firm. Due to the unavailability of publicly available data for private and subsidiary targets, this thesis was unable to measure the financial performance of consolidated firms in the pre-acquisition period. Third, this study does not employ the most commonly used market model to capture the announcement period abnormal returns. Instead, it uses the single-factor, three-factor, and four-factor

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models, and market adjusted buy and hold returns, while investing the short-run market performance. Fifth, this study does not consider the creation of blockholders while investigating the private targets sample to examine if the creation of blockholders is associated with monitoring benefits when acquiring private firms. However due to absence of block ownership data, it is not possible to conduct such an analysis.

6.6 FUTURE RESEARCH

The investigation of the three research questions of this thesis provides several avenues for extending the current research work. Schoenberg (2006) suggests that, in order to achieve a holistic view of acquisitions outcome, future studies should consider multiple performance measures in their analysis. Therefore, the author is of the view that acquisition performance can be assessed in a number of ways. Further analyses need to be conducted to check whether the long-run market performance of bidding firms reflects the shareholders' expectations of acquisition decisions. An interesting area for future research would be an examination of the long-term shareholder wealth implications for the three samples: public, private and subsidiary acquisitions. This type of an investigation would shed light on whether the short-run positive market reaction of bidding firms is an unbiased forecast of the future long-term market performance. Future studies could be conducted to see what motivates the bidding firms' manager to choose cash payment over stock payment, or vice versa, and what factors influence such decisions of bidding firms. In addition, to test the monitoring benefits of the stock-financed acquisitions of private targets, the work of this thesis can be extended to examine how the creation of blockholders in acquisitions of private targets, using stock as the method of payment, influences the market reaction and long-run operating performance. Further, a study needs to be conducted incorporating the corporate governance profiles of bidding firms, since a number of studies suggest that acquiring firms' performance is conditional on characteristics such as their board size and ownership. Finally, a cross-country

study of bidding firms' performance, that controls for bid, firm and corporate governance characteristics, may produce some interesting insights into this area of research.

6.7 CHAPTER SUMMARY

This chapter has provided a summary of the three independent empirical studies (market reactions to domestic acquisitions, market reaction to foreign acquisitions, and the long-run operating performance of bidding firms of both domestic and foreign acquisitions) conducted in this thesis. This chapter also outlines the main research contributions and implications of these three research issues. This thesis further sheds light on a number of limitations and provides future research directions.

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APPENDIX A

Table A.1
Variance Inflation Factors

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
$R_{m,t}$-$R_{f,t}$	0.044679	4.911735	1.406682
SMB	0.104117	1.738929	1.040969
HML	0.155017	1.441559	1.352754
Dummy cash-only	0.000041	4.244719	1.787022
Dummy stock-only	0.000050	2.299947	1.399124
Ln relative size	0.000002	8.393390	1.313857
Dummy unrelated acquisition	0.000031	2.715376	1.084398
Dummy multiple bidder	0.000031	4.161790	1.189616
Dummy deal attitude	0.000161	1.186757	1.124341
Dummy private deal	0.000068	1.482145	1.304384
Dummy break fee	0.000260	1.290436	1.167397
Dummy unlisted public targets	0.000773	1.086735	1.055894
Dummy cash for listed parent	0.000518	1.186326	1.120812
Dummy GFC period	0.000045	2.097565	1.209104
Ln market value	0.000002	18.820530	1.751181
Net profit scaled by total asset	0.000022	1.247771	1.213279
Net debt scaled by total asset	0.000123	2.569271	2.569258
Free cash flow scaled by total asset	0.000103	2.970024	2.146591
Constant	0.000088	27.539570	NA

Note: The Table A.1 reports the centered VIF score and any score less than 10 indicates that there is no threat of multicollinearity issue in the model.

Table A.2

Bidder's Announcement Period Abnormal Returns for Different Targets (5 days)

	Public Targets	Private Targets	Subsidiary Targets
Single factor model	-2 days to +2 days	-2 days to +2 days	-2 days to +2 days
α	0.0246*** (3.11)	0.0909*** (9.37)	0.0791*** (7.14)
R_m-R_f (β_1)	1.2264*** (5.23)	1.7429*** (6.63)	1.7184*** (5.42)
Three-factor model			
α	0.0211** (2.57)	0.0813*** (7.77)	0.0656*** (6.07)
R_m-R_f (β_1)	1.2938*** (5.51)	1.9483*** (7.63)	1.9259*** (5.94)
SMB (β_2)	0.4534 (1.20)	1.6647*** (3.68)	1.9928*** (3.90)
HML (β_3)	0.7476 (1.27)	0.1129 (0.23)	0.2076 (0.35)
Four-factor model			
α	0.0192** (2.40)	0.0788*** (7.75)	0.0643*** (5.95)
R_m-R_f (β_1)	1.2771*** (5.46)	1.9257*** (7.62)	1.9190*** (5.95)
SMB (β_2)	0.3836 (1.00)	1.6017*** (3.49)	1.9642*** (3.91)
HML (β_3)	0.7644 (1.30)	0.1170 (0.24)	0.1983 (0.34)
M30 (β_4)	0.0353 (0.75)	0.0188 (0.82)	0.0156 (0.44)
Sample Size	**643**	**1,310**	**712**

Note: The Table A.2 reports coefficient estimates for equations [2], [3] and [4] together with their relevant *t*-values (in brackets). These models are estimated for the three sub-samples (i.e. public target acquirers, private target acquirers and subsidiary target acquirers) separately for the announcement period of 5-day event window. The dependent variable is the bidder's three-day buy and hold excess return. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level.

Table A.3

Method of Payment and Abnormal Returns (Mean and Median test)

Differences in Mean/Median Market-Adjusted Buy and Hold Return

	Cash-only	Stock-only	Cash and Stock	Other	Cash – Stock
Public Targets					
Mean	0.0043 (1.18)	0.0308*** (3.52)	0.0242* (1.94)	0.0501 (1.53)	-0.0265*** (-2.92)
Median	0.0001 (0.69)	0.0034 (2.10)	0.0005 (0.081)	0.0167 (1.30)	-0.0033 (1.05)
Sample Size	**270**	**239**	**103**	**31**	
Private Targets					
Mean	0.0494*** (4.35)	0.1015*** (6.36)	0.0443*** (7.13)	0.0997*** (4.29)	-0.0521** (-2.33)
Median	0.0092*** (5.22)	0.0159*** (6.76)	0.0177*** (7.74)	0.0295*** (4.22)	-0.0067 (1.64)
Sample Size	**272**	**449**	**501**	**88**	
Subsidiary Targets					
Mean	0.0393*** (2.65)	0.0850*** (3.26)	0.0765*** (4.18)	0.0434 (1.66)	-0.0457 (-1.56)
Median	0.0094*** (3.87)	0.0136*** (4.72)	0.0160*** (5.06)	0.0011 (1.07)	-0.0042 (1.66)
Sample Size	**226**	**205**	**230**	**51**	

Note: The Table A.3 reports mean and median test for equations [1] together with their relevant t-values (for mean) and w-values (for median) (in brackets). These models are estimated for the three sub-samples (i.e. public target acquirers, private target acquirers and subsidiary target acquirers) separately for the announcement period of 3 days event window. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level.

Table B.1
Variance Inflation Factors

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
$R_{m,t}$-$R_{f,t}$	0.242413	2.467714	1.461607
SMB	0.518728	1.355606	1.164443
HML	0.647270	1.342336	1.318816
Dummy stock-only	0.000411	1.604021	1.295352
Dummy cash-only	0.000293	2.558374	1.455917
Ln relative size	0.000016	3.416073	1.559659
Dummy unrelated acquisition	0.000219	1.772069	1.066739
Dummy multiple bidder	0.000246	2.741673	1.235557
Dummy deal attitude	0.000830	1.135548	1.058973
Dummy mining target	0.000351	2.132782	1.494351
Ln market value	0.000014	7.944654	1.958125
Net profit scaled by total asset	0.000000	1.040135	1.038823
Net debt scaled by total asset	0.000089	1.186704	1.181107
Free cash flow scaled by total asset	0.000017	1.172915	1.161253
Rev. anti-director rights index	0.010830	104.2414	2.390722
Economic freedom of the world index	0.034466	2460.396	2.647326
Dummy civil-law countries	0.000957	3.958267	3.150989
Exchange rate	0.002249	1.531345	1.261596
Dummy U.S	0.000955	4.492679	3.450791
Dummy UK	0.000696	2.089187	1.779933
Dummy Canada	0.000923	2.093512	1.859369
Dummy New Zealand	0.000944	2.298827	2.022817
Dummy GFC Period	0.000244	1.906026	1.172457
Constant	0.115426	2341.390	NA

Note: This table B.1 reports the centered VIF scores for number of independent variables. Any score less than 10 indicate that there is no threat of multicollinearity issue in the model.

Table B.2

Method of Payment and Abnormal Returns (Mean and Median Test)

Differences in Mean/Median Market-adjusted Buy and Hold Return For Methods of Payment

	Cash-only	**Stock-only**	**Cash and Stock**	**Cash – Stock**	**Cash – Cash and Stock**
Public Targets (Mean)	0.0130 (1.27)	0.0125 (0.25)	-0.0092 (-0.70)	0.0005 (0.01)	0.0038 (0.84)
Public Targets (Median)	0.0094 (1.44)	-0.0264 (0.90)	-0.0204 (0.59)	0.0358* (1.77)	0.0298 (1.29)
Private Targets (Mean)	0.0325*** (3.60)	0.1225*** (3.29)	0.0628*** (3.51)	-0.0901*** (-2.93)	-0.0303 (-1.43)
Private Targets (Median)	0.0106*** (3.53)	0.0099*** (2.79)	0.0106*** (3.04)	0.0061 (0.80)	0.0000 (0.02)
Subsidiary Targets (Mean)	0.0429*** 2.79)	0.0977*** (2.94)	0.1067*** (3.34)	-0.0548* (-1.71)	-0.0638* (-1.92)
Subsidiary Targets (Median)	0.0059** (2.04)	0.0233*** (2.95)	0.0345*** (4.09)	-0.0174 (1.56)	-0.0286*** (2.31)

Note: The table B.2 reports the mean and median value by estimating equation [1] for payment methods used in foreign acquisition and their relevant *t*-values and *w*-values are reported in brackets. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level.

Table B.3

Bid Characteristics and Announcement Period Abnormal Returns

	Public	Private	Subsidiary
Panel A: Relative Size			
High relative size	0.0330 (1.46)	0.1022*** (4.69)	0.1136*** (3.84)
Low relative size	-0.0132 (-1.30)	0.0183*** (2.10)	0.0352*** (2.98)
Mean differences	0.0462* (1.86)	0.0839*** (3.74)	0.0784*** (2.46)
Panel B: Acquisition Frequency			
Single bidder	0.0073 (0.28)	0.0480*** (3.54)	0.0749*** (3.71)
Multiple bidder	0.0097 (0.97)	0.0786*** (4.59)	0.0732*** (3.63)
Mean differences	-0.0024 (0.10)	-0.0306 (-1.39)	0.0017 (0.06)
Panel C: Relatedness			
Related acquisition	0.0016 (0.20)	0.0720*** (4.99)	0.0768*** (4.18)
Unrelated acquisition	0.0191 (0.78)	0.0506*** (2.98)	0.0704*** (3.12)
Mean differences	-0.0175 (-0.77)	0.0214 (0.94)	0.0064 (0.22)
Panel D: Bidders Industry Analysis			
Mining bidders	0.0083 (0.33)	0.1324*** (3.80)	0.1205*** (4.59)
Non-mining bidders	0.0092 (1.08)	0.0408*** (4.75)	0.0326** (2.55)
Mean differences	-0.0009 (-0.04)	0.0916*** (3.66)	0.0879*** (3.12)
High-tech bidders	0.0082 (0.73)	0.0553*** (3.45)	0.0253* (1.78)
Non high-tech bidders	0.0089 (0.74)	0.0667*** (4.85)	0.0842*** (4.96)
Mean differences	-0.0007 (-0.02)	-0.0114 (-0.45)	-0.0589 (-1.56)
Sample Size	**89**	**355**	**270**

Table B.3

Bid Characteristics and Announcement Period Abnormal Returns (contd.)

	Public		Private		Subsidiary	
Panel E: Target Industry Analysis						
Mining targets	0.0039	(0.15)	0.1434*** (4.05)		0.1163*** (4.49)	
Non-mining targets	0.0122	(1.52)	0.0379*** (4.48)		0.0317*** (2.86)	
Mean differences	-0.0083	(-0.36)	0.1055*** (4.22)		0.0846*** (3.00)	
High-tech targets	0.0306	(1.00)	0.0724*** (5.34)		0.0315** (2.25)	
Non high-tech targets	0.0061	(0.51)	0.0375** (2.28)		0.0812*** (4.92)	
Mean differences	0.0245	(0.68)	0.0349 (1.37)		-0.0497 (-1.22)	
Panel F: Acquisition Atmosphere						
Friendly bids	0.0125	(0.96)	0.0630*** (5.58)		0.0727** (4.84)	
Hostile bids	-0.0091	(-0.52)	0.0813 (1.60)		0.0905 (1.93)	
Mean differences	0.0216	(0.72)	-0.0183 (-0.33)		-0.0178 (-0.33)	

Note: The table B.3 reports the mean abnormal returns for equation [1] together with their relevant *t*-values (in brackets). The model is estimated for the three samples (i.e. public target acquirers, private target acquirers and subsidiary target acquirers) for three-day event window. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level.

Firm characteristics and Announcement Period Abnormal Returns

Panel A: Pre-acquisition Profitability

	Public Targets	Private Targets	Subsidiary Targets
High (Top 30% ROA)	0.0051 (0.62)	0.0144** (2.36)	0.0438*** (2.66)
Low (Bottom 30% ROA)	0.0159 (0.45)	0.1192*** (4.13)	0.1467*** (3.62)
Mean differences	-0.0108 (-0.29)	-0.1048*** (-3.55)	-0.1029** (-2.35)

Panel B: Pre-acquisition Cash Flow

	Public Targets	Private Targets	Subsidiary Targets
High (Top 30% free cash flow)	0.0096 (1.25)	0.0170*** (2.70)	0.0238*** (2.68)
Low (Bottom 30% free cash flow)	0.0160 (0.46)	0.1207*** (4.00)	0.1264*** (3.15)
Mean differences	-0.0064 (-0.17)	-0.1037*** (-3.38)	-0.1026** (-2.50)

Panel C: Pre-acquisition Leverage

	Public Targets	Private Targets	Subsidiary Targets
High (Top 30% net debt)	0.0242 (1.24)	0.0218*** (2.36)	0.0304 (2.08)
Low (Bottom 30% net debt)	0.0014 (0.05)	0.1071*** (3.84)	0.1454*** (3.50)
Mean differences	0.0228 (0.62)	-0.0853*** (-2.90)	-0.1150*** (-2.62)

Panel D: Pre-acquisition Size

	Public Targets	Private Targets	Subsidiary Targets
Large (Top 30% market value)	0.0006 (0.10)	-0.0013 (-0.32)	0.0230*** (3.33)
Small (Bottom 30% market value)	0.0226 (0.64)	0.1334** (4.42)	0.1596** (3.75)
Mean differences	-0.0220 (-0.60)	-0.1347*** (-4.42)	-0.1366*** (-3.16)

Note: The table B.4 reports the mean abnormal returns for equation [1] together with their relevant *t*-values in brackets. The model is estimated for four firm characteristics (i.e. the pre-acquisition ROA, cash holdings, net debt holdings and size of the bidding firms. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level.

Table B.5

Announcement Period Mean Abnormal Returns for Foreign Acquisitions Specific Factors

Panel A: Target Countries with Anti-director Rights Index (ADRI)

	Public Targets	Private Targets	Subsidiary Targets	Public-Private	Public-Subsidiary	Private-Subsidiary
High anti-director rights index target countries	-0.0089 (-0.93)	0.0551*** (4.86)	0.0714*** (3.10)	-0.0640*** (-2.67)	-0.0803** (-1.98)	-0.0163 (-0.69)
Low anti-director rights index target countries	0.0234 (1.05)	0.0358*** (2.49)	0.0389** (2.20)	-0.0124 (-0.30)	-0.0155 (-0.35)	-0.0031 (-0.14)
Mean differences	-0.0323 (-1.54)	0.0193 (1.04)	0.0325 (1.02)	-	-	-
Panel B: Legal Origin of Target Countries						
Common law	-0.0051 (-0.68)	0.0481*** (4.62)	0.0393*** (3.38)	-0.0532*** (-2.50)	-0.0444*** (-2.40)	0.0088 (0.54)
Civil law	0.0103 (0.37)	0.0895*** (2.63)	0.1031*** (4.01)	-0.0792 (-0.64)	-0.0900 (-0.89)	-0.0136 (-0.32)
Mean differences	-0.0154 (-0.61)	-0.0414 (-1.55)	-0.0638*** (-2.49)	-	-	-
Panel C: Target Countries with Economic Freedom of the World (EFW) Index						
High-economic freedom index target countries	-0.0089 (-0.96)	0.0445*** (4.50)	0.0449*** (3.89)	-0.0534** (-2.53)	-0.0538*** (-2.97)	0.0004 (-0.02)
Low-economic freedom index target countries	0.0624 (1.05)	0.0977*** (3.46)	0.0851*** (4.35)	-0.0353 (-0.39)	-0.0227 (-0.32)	-0.0126 (0.38)
Mean differences	-0.0713* (-2.08)	-0.0532** (-2.12)	-0.0402 (-1.59)	-	-	-

Note: The table B.5 reports mean value estimates for equation [1] together with their relevant *t*-values in brackets. The model is estimated for the three samples (i.e. bidders for public targets, bidders for private target and bidders for subsidiary targets) separately. Panel A defines high-protection countries with anti-director rights index greater or equal to 3.90, the mean value for all acquisitions. Panel B classifies the sample based on legal origin of the target countries. Panel C defines high economic freedom target countries with index value greater or equal to 72.64, the mean value for all acquisitions. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level.

Table B.6

Target Country Characteristics and Announcement Period Abnormal Returns

	Public		Private		Subsidiary	
Panel A: Target Country Analysis						
USA	0.0336	(1.58)	0.0448**	(2.45)	0.0132	(0.93)
UK	-0.0202	(-1.89)	0.0291**	(2.54)	0.0155	(0.78)
New Zealand	-0.0029	(-0.25)	0.0056	(0.41)	0.0543*	(1.94)
Canada	-0.0000	(-0.00)	0.0056*	(1.80)	0.0543	(1.39)
South Africa	-		0.0328	(0.64)	0.1542	(1.37)
Singapore	-		0.2038***	(3.91)	0.0016	(0.08)
China	-		0.0738	(1.63)	0.0849	(1.56)
Hong Kong	-		0.0521	(1.39)	0.0347	(1.77)
Indonesia	-		0.0729	(1.05)	0.1163	(1.23)
Brazil	-		-		0.1121	(1.42)
Panel B: Continent Analysis						
Asia	0.0178	(1.44)	0.1500***	(4.45)	0.0698**	(2.65)
Europe	-0.0165	(-1.51)	0.0263**	(2.48)	0.0193	(1.44)
Africa	0.6382	(0.00)	0.0866*	(1.75)	0.1775***	(3.01)
North America	0.0134	(0.69)	0.0489***	(3.14)	0.0343**	(2.10)
South America	0.0250	(0.00)	-0.0209	(-0.61)	0.1214**	(2.03)
Oceania	-0.0006	(-0.06)	0.0070	(0.56)	0.0454**	(2.11)
Sample Size	**89**		**355**		**270**	

Note: The table B.6 reports the abnormal returns for equation [1] together with their relevant *t*-values (in brackets). The model is estimated for top target country destination and six continents. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level.

Table B.7

Table B.7 Multiple Regression Estimates (Bid Characteristics using MABHR)

Independent Variable	Acquisition of Public Targets	Acquisition of Private Targets	Acquisition of Subsidiary Targets
Constant	-0.0256 (-1.04)	0.0146 (0.68)	0.0766*** (2.45)
Cash only dummy	0.0323 (1.43)	-0.0051 (-0.31)	-0.0153 (-0.49)
Stock only dummy	0.0123 (0.32)	0.0662* (1.66)	0.0235* (0.58)
Ln relative size	0.0117* (1.75)	0.0172*** (3.38)	0.0167** (2.18)
Unrelated dummy	0.0238 (0.89)	-0.0133 (-0.57)	-0.0250 (-0.94)
Multiple bid dummy	0.0202 (0.90)	0.0656*** (2.69)	0.0249 (0.82)
Deal attitude dummy	-0.0044 (-0.21)	0.0424 (0.85)	0.0242 (0.49)
Mining target dummy	0.0044 (0.15)	0.0796** (2.35)	0.0676** (2.59)
GFC period dummy	0.0677* (1.89)	0.0644*** (3.15)	-0.0115 (-0.41)
F-Statistics	**1.93***	**6.47***	**2.14****
N	**89**	**355**	**270**
Adjusted R²	**0.07**	**0.11**	**0.03**

Note: The table B.7 reports coefficient estimates and their respective *t*-values (in brackets) for the regression equation [3]. The dependent variable is the bidder's three-day buy and hold market adjusted returns and the independent variables included in the model are three market variables and a number of bid characteristics. The constant (α) measures the announcement period abnormal returns after controlling a set of explanatory variables. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level. The issue of heteroscedasticity was addressed by using White's adjustment procedure.

Table B.8

Multiple Regression Estimates (Bid and Firm Characteristics for Longer Event Windows)

Independent Variable	5-day event window						7-day event window					
	Public		Private		Subs.		Public		Private		Subs.	
Constant	-0.0255	(-0.44)	-0.0226	(-0.77)	0.0475	(0.94)	-0.0798	(-0.65)	-0.0360	(-1.36)	0.0430	(0.83)
R_m-R_f	0.7366	(0.46)	0.4474	(0.88)	2.5626***	(2.78)	-0.6754	(-0.24)	0.6625	(1.75)	1.6454***	(2.37)
SMB	0.4632	(0.32)	1.9134**	(2.14)	5.0572**	(2.22)	0.4679	(0.37)	2.2283***	(2.92)	4.1690**	(2.55)
HML	0.5790	(0.57)	-0.7480	(-0.96)	1.7219	(0.75)	-3.0121	(-0.82)	-1.2082 *	(-1.79)	-0.0360	(-0.03)
Cash only dummy	0.0335	(1.14)	-0.0043	(-0.23)	0.0341	(0.57)	0.0314	(0.98)	-0.0111	(-0.59)	0.0264	(0.47)
Stock only dummy	0.0385	(0.66)	0.0714*	(1.82)	0.0715	(0.91)	0.0540	(0.61)	0.0777**	(2.03)	0.0770	(1.02)
Ln relative size	0.0132*	(1.82)	0.0162***	(2.91)	0.0207	(1.36)	0.0172*	(1.80)	0.0109**	(1.96)	0.0178	(1.28)
Unrelated dummy	0.0172	(0.51)	-0.0217	(-1.01)	-0.0762	(-1.57)	0.0539	(0.88)	-0.0200	(-0.94)	-0.0968	(-2.06)
Multiple bid dummy	0.0148	(0.57)	0.0787**	(3.05)	0.0847	(1.51)	-0.0096	(-0.22)	0.0653**	(2.57)	0.0914	(1.67)
Deal attitude dummy	-0.0132	(-0.48)	0.0153	(0.37)	0.0300	(0.46)	-0.0063	(-0.14)	0.0107	(0.22)	-0.0167	(-0.30)
Mining target dummy	0.0143	(0.41)	0.0869***	(2.67)	0.1431**	(2.19)	0.0581	(1.16)	0.0708**	(2.22)	0.1505**	(2.55)
GFC period dummy	0.0577	(1.20)	0.0622***	(3.25)	-0.0492	(-1.23)	0.0990	(1.10)	0.0574***	(2.90)	-0.0853	(-2.06)
F-Statistics	**0.98**		**5.96***		**2.23**		**1.10**		**5.73***		**3.16***	
N	**89**		**355**		**270**		**355**		**355**		**355**	
Adjusted R²	**-0.00**		**0.13**		**0.05**		**0.01**		**0.13**		**0.08**	

Note: The table B.8 reports coefficient estimates and their respective *t*-values (in brackets) for the regression equation [4] using longer event windows. The dependent variable is the bidder's three-day buy and hold excess return and the independent variables included in the model are three market variables and a number of bid characteristics. The constant (α) measures the announcement period abnormal returns after controlling a set of explanatory variables. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level. The issue of heteroscedasticity was addressed by using White's adjustment procedure.

Table B.9

Multiple Regression Estimates (Bid and Firm Characteristics using MABHR)

Independent Variable	Acquisition of Public Targets		Acquisition of Private Targets		Acquisition of Subsidiary Targets	
Constant	-0.0450	(-1.16)	0.0492**	(1.96)	0.0663*	(1.83)
Cash only dummy	0.0064	(0.33)	0.0190	(1.06)	-0.0007	(-0.02)
Stock only dummy	-0.0096	(-0.36)	0.0688*	(1.71)	0.0119	(0.34)
Ln relative size	0.0062	(1.48)	0.0091	(1.63)	0.0148**	(1.90)
Multiple bid dummy	0.0154	(0.83)	0.0778***	(2.96)	0.0413	(1.24)
Mining target dummy	-0.0135	(-0.72)	0.0546	(1.58)	0.0357	(1.51)
Ln market value	0.0098*	(1.74)	-0.0160***	(-2.61)	-0.0023	(-0.51)
Profitability	0.0493*	(1.86)	-0.0001***	(-3.24)	0.0118**	(2.50)
Leverage	-0.0343	(-1.18)	-0.0255	(-1.00)	-0.0635**	(-2.02)
Free cash flow	-0.2863***	(-5.62)	-0.0042***	(-1.75)	-0.0801*	(-1.87)
GFC period dummy	0.0230	(1.06)	0.0612***	(3.06)	-0.0187	(-0.67)
F-Statistics	**13.21*****		**5.72*****		**4.52*****	
N	**89**		**355**		**270**	
Adjusted R^2	**0.58**		**0.15**		**0.12**	

Note: The table B.9 reports coefficient estimates and their respective *t*-values (in brackets) for the regression equation [4]. The dependent variable is the bidder's three-day buy and hold market adjusted returns and the independent variables included in the model are three market variables, bid characteristics and firm financial characteristics. The constant (α) measures the announcement period abnormal returns after controlling a set of explanatory variables. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level. The issue of heteroscedasticity was addressed by using White's adjustment procedure.

Table B.10

Multiple Regression Estimates (Bid and Firm Characteristics Excluding Free Cash Flow)

Independent Variable	Acquisition of Public Targets		Acquisition of Private Targets		Acquisition of Subsidiary Targets	
Constant	-0.0349	(-0.97)	0.0171	(0.60)	0.0683*	(1.83)
R_m-R_f	0.5086	(0.53)	-0.2413	(-0.38)	0.7211	(0.68)
SMB	-0.3759	(-0.46)	2.2286*	(1.73)	3.3225*	(1.90)
HML	0.1014	(0.14)	-0.0601	(-0.07)	0.6662	(0.32)
Stock only dummy	-0.0038	(-0.11)	0.0736**	(1.94)	0.0160	(0.55)
Ln relative size	0.0049	(1.06)	0.0081	(1.40)	0.0165*	(1.89)
Multiple bid dummy	-0.0049	(-0.23)	0.0764***	(2.95)	0.0311	(0.97)
Mining target dummy	-0.0492**	(-2.22)	0.0537	(1.67)	0.0406*	(1.64)
Ln market value	0.0107	(1.44)	-0.0145***	(-2.61)	-0.0040	(-0.74)
Profitability	-0.0895*	(-1.67)	-0.0001**	(-2.43)	0.0119**	(2.25)
Leverage	-0.1206	(-1.37)	-0.0179	(-0.70)	-0.0567*	(-1.70)
GFC period dummy	0.0275	(1.19)	0.0670***	(3.31)	-0.0136	(-0.53)
F-Statistics	**5.40*****		**6.55*****		**3.84*****	
N	**89**		**355**		**270**	
Adjusted R^2	**0.36**		**0.15**		**0.11**	

Note: The table B.10 reports the coefficient estimates and their respective *t*-values in brackets for the regression equation [4] without free cash flow variable. The dependent variable is the bidder's three-day buy and hold excess return and the independent variables included in the model are three market variables, bid characteristics and firm financial characteristics. The constant (α) measures the announcement period abnormal returns after controlling a set of explanatory variables. A $^{***,\,(**),\,(*)}$ indicates statistical significance at the 1%, (5%), (10%) level. The issue of heteroscedasticity was addressed by using White's adjustment procedure.

Table B.11

Multiple Regression Estimates (Factors Specific to Foreign Acquisitions)

Independent Variable	Public		Private		Subsidiary	
Constant	0.5947	(0.41)	-0.6443	(-1.21)	0.4929	(0.77)
Rev. anti-director rights index	0.5673***	(2.75)	-0.2007	(-1.59)	-0.1908	(-0.81)
Economic freedom of the world index	-0.4698	(-0.60)	0.4677	(1.56)	-0.1535	(-0.40)
Civil-law country dummy	-0.1396	(-0.92)	-0.1000***	(-2.66)	-0.0764	(-1.10)
Relative strength of Australian dollar	0.0075	(0.11)	0.0903	(1.40)	0.2539*	(1.76)
Mining target dummy	0.0023	(0.07)	0.0538	(1.47)	0.0575*	(1.83)
US target country dummy	-0.0225	(-0.23)	-0.1097**	(-2.70)	-0.0692	(-1.25)
UK target country dummy	-0.1935*	(-1.74)	-0.0835*	(-2.65)	-0.0120	(-0.33)
Canada target country dummy	-0.1231	(-1.02)	-0.0847**	(-2.00)	-0.0605	(-0.94)
New Zealand target country dummy	-0.1057	(-1.11)	-0.1197***	(-3.41)	-0.0116	(-0.25)
GFC period dummy	0.0770**	(1.93)	0.0243	(1.28)	-0.0556	(-1.39)
F-Statistics	2.69***		3.04***		1.80*	
N	85		308		225	
Adjusted R^2	0.17		0.06		0.03	

Note: The table B.11 reports coefficient estimates and their respective *t*-values (in brackets) for the regression equation [5]. The dependent variable is the bidder's three-day buy and hold market adjusted returns and the independent variables included in the model are three market variables, bid and firm characteristics, investor protection variable, economic freedom variable, civil law based countries dummy, exchange rate variable, top four country dummies and GFC period dummy. The constant (α) measures the announcement period abnormal returns after controlling a set of explanatory variables. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level. The issue of heteroscedasticity was addressed by using White's adjustment procedure.

Table B.12: Multiple Regression Estimates (Domestic and Foreign Targets using MABHR)

Independent Variable	Acquisition of Public Targets		Acquisition of Private Targets		Acquisition of Subsidiary Targets	
Constant	0.0608***	(3.33)	0.0884***	(6.51)	0.1517***	(4.58)
Cash only dummy	-0.0201	(-1.68)	0.0230	(1.92)	0.0085	(0.45)
Stock only dummy	-0.0133	(-0.91)	0.0399**	(2.70)	0.0078	(0.30)
Ln relative size	0.0022	(1.13)	0.0169***	(5.06)	0.0184***	(3.11)
Multiple bid dummy	-0.0084	(-0.97)	0.0042	(0.35)	-0.0006	(-0.05)
Mining target dummy	0.0001	(0.02)	0.0176	(0.96)	-0.0238	(-1.16)
Ln market value	-0.0042	(-1.84)	-0.0082***	(-2.93)	-0.0130***	(-4.06)
Profitability	-0.0075	(-0.56)	-0.0001***	(-3.47)	0.0118**	(2.48)
Leverage	-0.0083	(-0.72)	-0.0170	(-1.12)	-0.0103	(-1.08)
Free cash flow	-0.0344	(-0.84)	-0.0028	(-0.83)	-0.0455*	(-1.62)
Cross-border target dummy	0.0128	(1.29)	-0.0092	(-0.72)	-0.0079	(-0.46)
Cross-border mining target dummy	-0.0275	(-1.15)	0.0449**	(1.07)	0.0491*	(1.61)
GFC period dummy	0.0054	(0.53)	0.0591***	(3.79)	0.0103	(0.42)
F-Statistics	**4.61***		**11.31***		**5.55***	
N	**731**		**1659**		**977**	
Adjusted R²	**0.06**		**0.07**		**0.05**	

Note: The table B.12 reports the coefficient estimates and their respective *t*-values (in brackets) for the regression equation [7]. The dependent variable is the bidder's three-day buy and hold market adjusted returns and the independent variables included in the model are three market variables, bid characteristics and firm financial characteristics for both domestic and cross border acquisitions. The constant (α) measures the announcement period abnormal returns after controlling a set of explanatory variables. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level. The issue of heteroscedasticity was addressed by using White's adjustment procedure.

APPENDIX C

Table C.1
Variance Inflation Factors

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
Dummy stock only	0.000271	1.886724	1.322521
Dummy cash only	0.000269	1.947524	1.342668
Ln relative size	0.000015	3.010302	1.292161
Dummy unrelated dummy	0.000193	1.871432	1.094068
Dummy multiple bidder	0.000198	2.006415	1.134396
Dummy deal attitude	0.003610	1.051911	1.038762
Dummy mining target	0.000258	1.475402	1.113644
Ln market value	1.52E-05	7.168029	1.713552
Net profit scaled by total asset	0.000220	2.556106	2.347477
Net debt scaled by total asset	0.000387	1.425728	1.345388
Free cash flow scaled by total asset	0.001010	2.641163	2.531666
Dummy GFC period	0.000256	1.376566	1.058897
Constant	0.000443	10.33374	NA

Note: This table C.1 reports the centered VIF scores for number of independent variables. Any score less than 10 indicate that there is no threat of multicollinearity issue in the model.

Table C.2: Post-acquisitions Mean Operating Performance Criteria of Domestic Targets for Three Samples

	Cash flow/Total Asset			Cash flow/Market value			Net profit/Total Asset			Net Profit/Market Value		
Year	Raw Performance	Industry Adjusted	Industry and Size Adjusted	Raw Performance	Industry Adjusted	Industry and Size Adjusted	Raw Performance	Industry Adjusted	Industry and Size Adjusted	Raw Performance	Industry Adjusted	Industry and Size Adjusted
Panel A: Public Targets												
1	0.0196	0.1143***	0.0362***	0.0131	0.0633***	0.0042	-0.0736***	0.2058***	0.0660***	-0.1193***	0.1081***	-0.0269
2	0.0077	0.1024***	0.0242	0.0234	0.0736***	0.0145	-0.1116***	0.1678***	0.0280	-0.1547***	0.0727	-0.0623
3	0.0314	0.1261***	0.0479***	0.0524**	0.1026***	0.0436*	-0.0517***	0.2276***	0.0878***	-0.1236***	0.1038***	-0.0312
Grand Mean	0.0196	0.1143***	0.0361***	0.0296**	0.0798***	0.0208	-0.0790***	0.2004***	0.0606***	-0.1325***	0.0948***	-0.0401
Panel B: Private Targets												
1	-0.1027***	-0.0132	0.0158	-0.0467***	-0.0006	0.0158	-0.2310***	0.0117	0.0471*	-0.2394***	-0.0172	-0.0215
2	-0.0673***	0.0220	0.0511***	0.0209	0.0670***	0.0835***	-0.2201***	0.0227	0.0580**	-0.2385***	-0.0163	-0.0206
3	-0.0609*	0.0284	0.0575***	0.0230	0.0690***	0.0855***	-0.2143***	0.0285	0.0638***	-0.3013***	-0.0790**	-0.0833**
Grand Mean	-0.0770***	0.0124	0.0414**	-0.0009	0.0451***	0.0616***	-0.2218***	0.0210	0.0563***	-0.2597***	-0.0375*	-0.0418
Panel C: Subsidiary Targets												
1	-0.0714**	0.0338	0.0313	-0.0239	0.0346*	0.0385*	-0.2380***	0.0562	0.0536	-0.2151***	0.0085	-0.0198
2	-0.0406**	0.0646***	0.0621***	0.0201	0.0786***	0.0825***	-0.2071***	0.0871**	0.0845**	-0.2728***	-0.0490	-0.0775
3	-0.0103	0.0948***	0.0924***	-0.0190	0.0394**	0.0433**	-0.1634***	0.1307***	0.1281***	-0.2222***	0.0014	-0.0269
Grand Mean	-0.0408**	0.0644***	0.0619***	-0.0076	0.0509***	0.0548***	-0.2028***	0.0913***	0.0888***	-0.2367***	-0.0130	-0.0414
Panel D: Mean Differences												
2-1	-0.0966***	-0.1019***	0.0053	-0.0305	-0.0347*	0.0408*	-0.1428***	-0.1794***	-0.0043	-0.1272***	-0.1323***	-0.0017
2 –3	-0.0604***	-0.0499*	0.0258	-0.0372*	-0.0289	0.0340	-0.1238***	-0.1091***	0.0282	-0.1042**	-0.1078**	-0.0013

Note: The Table.C.2 reports mean cash flow returns and profitability measures which are deflated by the total assets and the market of equity at the end of the year by estimating modifying equations [1], [2] and [3]. 'Industry' and 'industry and size' adjusted mean values are computed as the difference between the firm mean value and the mean value of the industry benchmark and the industry and size benchmark. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level; Panel A, B, C and D parametric *t*-statistics value for significance level.

Table C.3: Post-acquisitions Mean Operating Performance Criteria of Foreign Targets for Three Samples

Year	Cash flow/Total Asset			Cash flow/Market value			Net profit/Total Asset			Net Profit/Market Value		
	Raw Performance	Industry Adjusted	Industry and Size Adjusted	Raw Performance	Industry Adjusted	Industry and Size Adjusted	Raw Performance	Industry Adjusted	Industry and Size Adjusted	Raw Performance	Industry Adjusted	Industry and Size Adjusted
Panel A: Public Targets												
1	0.0657***	0.1739***	0.0550***	0.1322**	0.1709***	0.0942*	-0.0371	0.3239***	0.0257	-0.2888	-0.0800	-0.2743
2	0.0844***	0.1926***	0.0737***	0.0851***	0.1238***	0.0471*	-0.0263	0.3348***	0.0366	-0.3522	-0.1434	-0.3377
3	0.0923***	0.2005***	0.0816***	0.0795***	0.1183***	0.0416**	0.0171	0.3783***	0.0801**	-0.0263	0.1825**	-0.0118
Grand Mean	0.0808***	0.1890***	0.0701***	0.0989***	0.1377***	0.0610***	-0.0154	0.3457***	0.0474	-0.2224	-0.0136	-0.2079
Panel B: Private Targets												
1	-0.0334*	0.0814***	0.0410**	-0.0121	0.0433**	0.0121	-0.1104***	0.1277***	0.0568**	-0.1557***	0.0184	-0.0637
2	-0.0766**	0.0382	-0.0021	-0.0008	0.0547*	0.0234	-0.2980***	-0.0598	-0.1307**	-0.2939***	-0.1197**	-0.2018***
3	-0.0870***	0.0278	-0.0125	-0.0294	0.0261	-0.0051	-0.3107***	-0.0725	-0.1434	-0.3087***	-0.1345*	-0.2166***
Grand Mean	-0.0657***	0.0492**	0.0087	-0.0141	0.0414*	0.0101	-0.2397***	-0.0015	-0.0724	-0.2528***	-0.0786*	-0.1607***
Panel C: Subsidiary Targets												
1	-0.0129	0.1427***	0.0581**	0.0580	0.1119**	0.0623	-0.1025***	0.2354***	0.0890**	-0.1048**	0.1152**	-0.0067
2	-0.0305	0.1252***	0.0406	0.0186	0.0725***	0.0229	-0.1262***	0.2118***	0.0653*	-0.0990***	0.1210***	-0.0009
3	-0.0269	0.1287***	0.0441	0.0188	0.0727*	0.0231	0.0171	0.1840***	0.0375	-0.1430***	0.0770	-0.0449
Grand Mean	-0.0234	0.1322***	0.0476**	0.0318	0.0857***	0.0361	-0.1275***	0.2104***	0.0640**	-0.1156***	0.1044***	-0.0175
Panel D: Mean Differences												
2-1	-0.1465***	-0.1398***	-0.0614	-0.1130**	-0.0963**	-0.0509	-0.2243**	-0.3472***	-0.1198	-0.0304	-0.0650	0.0472
2 –3	-0.1042**	-0.0568	-0.0225	-0.0671	-0.0520	-0.0249	-0.1121*	-0.1353*	0.0166	0.1068	0.1180	0.1904*

Note: The Table C.3 reports mean cash flow returns and profitability measures which are deflated by the total assets and the market of equity at the end of the year by estimating modifying equations [1], [2] and [3]. 'Industry' and 'industry and size' adjusted mean values are computed as the difference between the firm mean value and the mean value of the industry benchmark and the industry and size benchmark. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level; Panel A, B, C and D parametric *t*-statistics value for significance level.

Table C.4: Post-acquisitions Domestic Bidder's Median Operating Performance for Three Payment Methods

Year	Cash flow/Total Asset			Cash flow/Market value			Net profit/Total Asset			Net Profit/Market Value		
	Raw Performance	Industry Adjusted	Industry and Size Adjusted	Raw Performance	Industry Adjusted	Industry and Size Adjusted	Raw Performance	Industry Adjusted	Industry and Size Adjusted	Raw Performance	Industry Adjusted	Industry and Size Adjusted
Panel A: Public Targets												
Cash-only (1)	0.0644***	0.0519***	0.0183**	0.0748***	0.0434***	0.0234***	0.0436**	0.0463	0.0193*	0.0534**	0.0328***	0.0233**
Stock-only (2)	0.0055	0.0353**	0.0142	0.0071	0.0152	0.0061	-0.0201***	0.0245	-0.0105	-0.0222***	0.0044	-0.0160**
Mix (3)	0.0829***	0.0529***	0.0208*	0.0908***	0.0515***	0.0286**	0.0441***	0.0443***	-0.0043	0.0515***	0.0310**	-0.0046
Panel B: Private Targets												
Cash -only (4)	0.0373***	0.0218***	0.0190*	0.0586***	0.0199*	0.0267**	0.0382***	0.0105**	-0.0032	0.0586**	0.0140*	0.0117*
Stock-only (5)	-0.0515***	-0.0138***	0.0263	-0.0405***	-0.0235***	0.0119	-0.1320***	-0.0395	-0.0093**	-0.0926***	-0.0363***	0.0046
Mix (6)	0.0486***	0.0098	0.0164*	0.0740***	0.0381***	0.0464***	0.0303	-0.0056***	-0.0079*	0.0411	0.0042**	0.0098
Panel C: Subsidiary Targets												
Cash -only (7)	0.0773***	0.0649***	0.0352***	0.0864***	0.0732***	0.0460***	0.0383**	0.0409***	0.0119	0.0538**	0.0467***	0.0167
Stock-only (8)	-0.0332**	0.0077	-0.0047	-0.0251***	-0.0135**	-0.0097	-0.1042***	-0.0333***	-0.0394***	-0.0597***	-0.0282***	-0.0170*
Mix (9)	-0.0149	0.0227	0.0219*	-0.0068	0.0122	0.0330**	-0.0456***	0.0033**	-0.0113	-0.0472***	-0.0157**	-0.0078
Panel D: Mean Differences												
2-1	-0.0589***	-0.0166**	-0.0041	-0.0677***	-0.0282***	-0.0173	-0.0637***	-0.0218***	-0.0298**	-0.0756***	-0.0284***	-0.0393***
2-3	-0.0774***	-0.0176*	-0.0066	-0.0837***	-0.0363***	-0.0225	-0.0642***	-0.0198**	-0.0062	-0.0737***	-0.0266**	-0.0114
5-4	-0.0888***	-0.0356***	0.0073	-0.0991***	-0.0434***	-0.0148	-0.1702***	-0.0500***	-0.0061	-0.1512***	-0.0503***	-0.0071
5-6	-0.1001***	-0.0236***	0.0099	-0.1145***	-0.0616***	-0.0345***	-0.1623***	-0.0339**	-0.0014	-0.1337***	-0.0405**	-0.0052
8-7	-0.1105***	-0.0572***	-0.0399**	-0.1115***	-0.0867***	-0.0557***	-0.1425***	-0.0742***	-0.0513**	-0.1135***	-0.0749***	-0.0337**
8-9	-0.0183**	-0.0150	-0.0266	-0.0183**	-0.0257**	-0.0427**	-0.0586*	-0.0366	-0.0281	-0.0125	-0.0125	-0.0092

Note: The Table C.4 reports the grand median (median of post 3 years) cash flow returns and profitability of the bidding firms which are deflated by the total assets and the market of value of equity by estimating equations [1], [2] and [3] for main payment methods. 'Industry' and 'industry and size' adjusted values are computed as the difference between the firm median value and the median value of the 'industry' benchmark and the 'industry and size' benchmark. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level; Panel A, B, C use Wilcoxon signed-ranks test value and Panel D uses Wilcoxon/Mann-Whitney test value for significance level.

Table C.5: Post-acquisitions Foreign Bidders Median Operating Performance for Three Payment Methods

Year	Cash flow/Total Asset			Cash flow/Market value			Net profit/Total Asset			Net Profit/Market Value		
	Raw Performance	Industry Adjusted	Industry and Size Adjusted	Raw Performance	Industry Adjusted	Industry and Size Adjusted	Raw Performance	Industry Adjusted	Industry and Size Adjusted	Raw Performance	Industry Adjusted	Industry and Size Adjusted
Panel A: Public Targets												
Cash only (1)	0.0836^{***}	0.0488^{***}	0.0100^{*}	0.0854^{***}	0.0474^{***}	0.0291^{**}	0.0503	0.0592^{**}	0.0321	0.0489^{*}	0.0192^{**}	0.0056
Stock only (2)	0.0633^{*}	0.1090^{**}	0.1018^{**}	0.0890^{**}	0.0609^{**}	0.0606^{**}	0.0304	0.1231	0.0442	0.0363	0.0540	0.0396
Mix (3)	0.1329	0.2050^{*}	0.1080^{*}	0.1017	0.1337^{*}	0.0911^{*}	0.0967	0.2008^{*}	0.0744^{*}	0.0837	0.1337	0.0692
Panel B: Private Targets												
Cash –only (4)	0.0660^{***}	0.0591^{***}	0.0079^{*}	0.0601^{***}	0.0601^{***}	0.0414^{**}	0.0255	0.0198	-0.0220^{**}	0.0278	0.0007	-0.0100^{*}
Stock-only (5)	-0.0379^{**}	0.0059	0.0167	-0.0230^{**}	-0.0084^{***}	0.0231	-0.1485^{***}	-0.0137^{*}	-0.0241	-0.0537^{***}	-0.0303^{**}	-0.0205
Mix (6)	0.0489	0.0248	-0.0071	0.0540	0.0399	0.0304	0.0302	-0.0107^{**}	-0.0357^{***}	0.0359	-0.0086^{**}	-0.0019^{**}
Panel C: Subsidiary Targets												
Cash –only (7)	0.0079^{*}	0.0962^{***}	0.0315^{**}	0.0414^{**}	0.1044^{***}	0.0371^{***}	-0.0220^{**}	0.0846^{**}	0.0022	-0.0100^{*}	0.0556^{**}	0.0032
Stock-only (8)	-0.0210	-0.0130	-0.0062	-0.0326	-0.0323	-0.0215	-0.0280	0.0090	-0.0025	-0.0251	-0.0119	-0.0055
Mix (9)	-0.0358	0.0223	-0.0192	-0.0246	0.0077	-0.0091	-0.0619^{**}	0.0178	0.0063	-0.0386^{*}	0.0055	-0.0077
Panel D: Mean Differences												
2-1	-0.0203	0.0602	0.0918^{*}	0.0036	0.0135	0.0315	-0.0199	0.0639	0.0121	-0.0126	0.0348	0.0340
2-3	-0.0696	-0.0960	-0.0062	-0.0127	-0.0728	-0.0305	-0.0663	-0.0777	-0.0302	-0.0474	-0.0797	-0.0296
5-4	-0.1039^{***}	-0.0532^{***}	0.0088	-0.0831^{***}	-0.0685^{***}	-0.0183	-0.1740^{**}	-0.0335^{*}	-0.0021	-0.0815^{**}	-0.0310^{**}	-0.0105
5-6	-0.0868^{**}	-0.0189	0.0238	-0.0770^{***}	-0.0483^{**}	-0.0073	-0.1787^{*}	-0.0030	0.0116	-0.0896^{**}	-0.0217	-0.0186
8-7	-0.0289^{***}	-0.1092^{***}	-0.0377^{*}	-0.0740^{***}	-0.1367^{***}	-0.0586^{**}	-0.0060	-0.0756^{**}	-0.0047	-0.0151	-0.0675^{***}	-0.0087
8-9	0.0148	-0.0353	0.0130	-0.0080	-0.0400	-0.0124	0.0339	-0.0088	-0.0088	0.0135	-0.0174	0.0022

Note: The Table C.5 reports the grand median (median of post 3 years) cash flow returns and profitability of the bidding firms which are deflated by the total assets and the market of value of equity by estimating equations [1], [2] and [3] for main payment methods. 'Industry' and 'industry and size' adjusted values are computed as the difference between the firm median value and the median value of the 'industry' benchmark and the 'industry and size' benchmark. A ***, $^{(**)}$, $^{(*)}$ indicates statistical significance at the 1%, (5%), (10%) level; Panel A, B, C use Wilcoxon signed-ranks test value and Panel D uses Wilcoxon/Mann-Whitney test value for significance level.

Table C.6
Multiple Regression Estimates of Domestic Acquisitions (Bid and Firm Characteristics)

Independent Variable	Net Profit /Total Asset (Industry and size adjusted)			Net Profit /Market Value (Industry and size adjusted)		
	Public	Private	Subs.	Public	Private	Subs.
Constant	-0.1457* (-1.85)	-0.0161 (-0.31)	-0.0955** (-2.05)	-0.3649** (-2.42)	-0.1210** (2.29)	-0.3128***(-3.32)
Cash only dummy	0.0211 (0.74)	0.0801** (2.39)	0.0574 (1.29)	0.1421** (2.13)	0.0659 (1.51)	0.2017*** (2.74)
Stock only dummy	-0.0436 (-1.15)	-0.0153 (-0.35)	-0.0292 (-0.55)	-0.0330 (-0.48)	0.0611 (1.40)	0.1081 (1.50)
Ln relative size	0.0158 (1.57)	0.0151 (1.48)	0.0090 (0.91)	0.0387* (1.83)	0.0195 * (1.70)	-0.0045 (-0.29)
Unrelated dummy	-0.0201 (-0.59)	-0.0219 (-0.58)	-0.0511 (-1.13)	-0.0191 (-0.40)	-0.0306 (-0.83)	-0.0320 (-0.44)
Multiple bid dummy	0.0493* (1.68)	0.0817** (2.42)	-0.0155 (-0.43)	0.0707 (1.34)	0.0383*** (1.13)	-0.0115 (-0.18)
Deal attitude dummy	-0.0524 (-0.87)	-	-	-0.3092 (-1.05)	-	-
Mining target dummy	-0.0362 (-0.85)	-0.0364 (-0.75)	0.0761* (1.91)	0.0038 (0.05)	-0.0498 (-1.09)	0.1545***(3.06)
Ln market value	0.0287** (2.13)	-0.0115 (-0.80)	0.0114 (1.08)	0.0563** (2.56)	0.0148 (1.10)	0.0052 (0.35)
Profitability	-0.1212***(-2.89)	-0.0226 (-0.53)	0.0533 (1.12)	-0.1849* (-1.66)	0.0341 (0.85)	-0.0309 (-0.43)
Leverage	-0.1051 (-1.50)	0.0326 (0.63)	0.0699 (1.09)	-0.1846* (-1.62)	-0.0755* (-1.62)	-0.0378 (-0.41)
Free cash flow	0.1725 (1.16)	0.2801** (2.34)	0.0610 (0.70)	0.4982* (1.83)	-0.0250 (-0.36)	0.0736 (0.57)
GFC period dummy	-0.1025* (-1.89)	-0.0040 (-0.10)	0.0408 (0.87)	-0.0765 (-1.53)	0.0075* (0.22)	0.0845 (1.48)
F-Statistics	**2.86*****	**4.02*****	**2.23****	**4.02*****	**1.01**	**2.04****
N	**229**	**573**	**238**	**229**	**573**	**238**
Adjusted R^2	**0.09**	**0.05**	**0.05**	**0.14**	**0.00**	**0.05**

Note: The Table C.6 reports coefficient estimates and their respective *t*-values (in brackets) for the regression equation [4] using the industry and size adjusted performance measures. The dependent variable is the 'industry and size' adjusted profitability measures and independent variables included in the model are a number of bid and firm characteristics. A $^{***, (**), (*)}$ indicates statistical significance at the 1%, (5%), (10%) level. The issue of heteroscedasticity was addressed by using White's adjustment procedure.

Table C.7

Multiple Regression Estimates of Domestic Acquisitions (Bid and Firm Characteristics)

Independent Variable	Free Cash Flow/Total Asset (Industry adjusted)			Free Cash Flow/Market Value (Industry adjusted)		
	Public	Private	Subs.	Public	Private	Subs.
Constant	-0.0674* (-1.71)	-0.0599 (-1.59)	-0.0820 (-2.09)	-0.0529 (-1.03)	-0.0482** (1.98)	-0.1007** (-2.03)
Cash only dummy	0.0183 (0.80)	0.0140 (0.70)	0.0056 (0.19)	0.0337 (1.33)	-0.0310 (-1.59)	0.0349 (1.05)
Stock only dummy	-0.0228 (-0.97)	-0.0106 (-0.46)	-0.0422 (-1.31)	-0.0451 (-1.54)	-0.0190 (-1.02)	-0.0332 (-1.05)
Ln relative size	0.0011 (0.18)	0.0048 (0.84)	0.0029 (0.39)	0.0116* (1.77)	0.0062 (1.43)	0.0024 (0.28)
Unrelated dummy	-0.0417* (-1.88)	-0.0193 (-0.83)	-0.0296 (-1.17)	-0.0208 (-0.81)	-0.0010 (-0.06)	-0.0082 (-0.28)
Multiple bid dummy	0.0103 (0.63)	0.0618*** (3.22)	-0.0022 (-0.08)	0.0264 (1.39)	0.0563*** (3.71)	0.0478* (1.80)
Deal attitude dummy	-0.0405 (-1.36)	-	-	-0.0140 (-0.16)	-	-
Mining target dummy	0.0080 (0.29)	0.0246 (1.07)	0.0366 (1.23)	-0.0025 (-0.08)	-0.0156 (-0.75)	0.0298 (1.36)
Ln market value	0.0212*** (2.82)	0.0101 (0.82)	0.0326 (4.21)	0.0155* (1.82)	-0.0025 (-0.47)	0.0232*** (3.14)
Profitability	-0.1121*** (-4.52)	-0.0260 (-0.73)	0.0387 (0.95)	-0.0862*** (-2.89)	0.0012 (0.05)	-0.0048 (-0.15)
Leverage	-0.0313 (-0.75)	0.0455 (1.10)	0.0316 (0.76)	0.0179 (0.42)	0.0514** (2.48)	-0.0005 (-0.01)
Free cash flow	0.3380*** (2.66)	0.2627* (2.20)	0.1138 (1.24)	0.2689** (2.21)	0.0442 (1.06)	0.0971 (1.36)
GFC period dummy	-0.0061 (-0.22)	-0.0188 (-0.96)	-0.0323 (-0.85)	0.0196 (0.64)	0.0297* (1.63)	0.0124 (0.44)
F-Statistics	**6.24*****	**10.83*****	**7.44****	**4.02**	**10.81*****	**3.83*****
N	**229**	**573**	**238**	**229**	**573**	**238**
Adjusted R^2	**0.22**	**0.16**	**0.23**	**0.14**	**0.16**	**0.12**

Note: The Table C.7 reports coefficient estimates and their respective *t*-values (in brackets) for the regression equation [4] using the industry and size adjusted performance measures. The dependent variable is the 'industry' adjusted cash flow returns and independent variables included in the model are a number of bid and firm characteristics. A ***, $^{(**)}$, $^{(*)}$ indicates statistical significance at the 1%, (5%), (10%) level. The issue of heteroscedasticity was addressed by using White's adjustment procedure.

Table C.8
Multiple Regression Estimates of Domestic Acquisitions (Bid and Firm Characteristics)

Independent Variable	Net Profit/Total Asset (Industry adjusted)			Net Profit/Market Value (Industry adjusted)		
	Public	**Private**	**Subs.**	**Public**	**Private**	**Subs.**
Constant	-0.1976** (-2.32)	-0.1587** (-3.24)	-0.1824*** (-3.56)	-0.3649** (-2.42)	-0.2511*** (-5.03)	-0.4102*** (-3.94)
Cash only dummy	0.0341 (1.06)	0.0746** (2.28)	0.0688 (1.52)	0.1421** (2.13)	0.0704* (1.62)	0.2153*** (2.91)
Stock only dummy	-0.0532 (-1.31)	-0.0322 (-0.76)	-0.0248 (-0.46)	-0.0330 (-0.48)	0.0593 (1.46)	0.1100 (1.47)
Ln relative size	0.0156 (1.42)	0.0111 (1.11)	0.0097 (0.99)	0.0387* (1.83)	0.0149 (1.34)	-0.0052 (-0.33)
Unrelated dummy	-0.0417 (-1.52)	-0.0237 (-0.65)	-0.0793* (-1.73)	-0.0191 (-0.40)	-0.0453 (-1.27)	-0.0462 (-0.61)
Multiple bid dummy	-0.0565* (1.64)	0.0760** (2.33)	0.0025 (0.06)	0.0707 (1.34)	0.0374 (1.13)	0.0066 (0.10)
Deal attitude dummy	-0.0776 (-1.26)	-	-	-0.3092 (-1.05)	-	-
Mining target dummy	-0.0087 (-0.19)	-0.0212 (-0.45)	0.0634* (1.64)	0.0038 (0.05)	-0.0317 (-0.73)	0.1572*** (3.08)
Ln market value	0.0445*** (3.02)	0.0195 (1.41)	0.0360*** (3.34)	0.0563** (2.56)	0.0396*** (2.97)	0.0277* (1.84)
Profitability	-0.0940** (-2.24)	-0.0118 (-0.29)	0.0544 (1.21)	-0.1849* (-1.66)	0.0461 (1.27)	-0.0298 (-0.43)
Leverage	-0.0928 (-1.26)	0.0138 (0.27)	0.0836 (1.29)	-0.1846* (-1.62)	-0.0804* (-1.86)	-0.0338 (-0.36)
Free cash flow	0.2650 (1.59)	0.3260*** (2.87)	0.1271 (1.55)	0.4982** (1.83)	0.0241 (0.37)	0.1194 (0.94)
GFC period dummy	-0.1052* (-1.80)	-0.0122 (-0.32)	0.0363 (0.77)	-0.0765 (-1.53)	0.0057* (0.17)	0.0708 (1.24)
F-Statistics	**5.40*****	**8.96*****	**5.83*****	**4.02*****	**3.07*****	**2.90*****
N	**229**	**573**	**238**	**229**	**573**	**238**
Adjusted R²	**0.19**	**0.13**	**0.18**	**0.14**	**0.04**	**0.08**

Note: The Table C.8 reports coefficient estimates and their respective *t*-values (in brackets) for the regression equation [4] using the industry and size adjusted performance measures. The dependent variable is the 'industry' adjusted profitability measure and independent variables included in the model are a number of bid and firm characteristics. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level. The issue of heteroscedasticity was addressed by using White's adjustment procedure.

Table C.9
Multiple Regression Estimates of Foreign Acquisitions (Bid and Firm Characteristics)

Independent Variable	Net Profit/Total Asset (Industry and size adjusted)			Net Profit/Market Value (Industry and size adjusted)		
	Public	Private	Subs.	Public	Private	Subs.
Constant	0.0349 (0.28)	-0.2843* (-1.89)	-0.0961 (-0.79)	-0.1472 (-1.39)	-0.1156 (-1.37)	0.0357 (0.31)
Cash only dummy	-0.1506* (-1.74)	0.0268 (0.35)	-0.0565 (-0.81)	-0.1871** (-2.51)	-0.0257 (-0.42)	-0.0485 (-0.98)
Stock only dummy	-0.2310** (-2.13)	-0.1564 (-0.88)	0.0181 (0.20)	-0.3429*** (-4.68)	-0.0621 (-0.62)	-0.1025 (-1.36)
Ln relative size	-0.0099 (-1.18)	-0.0127 (-0.38)	0.0094 (0.68)	0.0070 (1.03)	-0.0296* (-1.70)	0.0064 (0.66)
Unrelated dummy	-0.0546 (-1.18)	0.0753 (0.78)	0.1077** (2.05)	-0.0218 (-0.49)	-0.0563 (-0.79)	0.0285 (0.84)
Multiple bid dummy	0.0522 (0.66)	0.1603* (1.97)	-0.0440 (-0.89)	0.1044** (2.08)	0.0927* (1.86)	-0.0356 (-0.78)
Deal attitude dummy	-0.1023* (-1.96)	0.2501* (1.70)	0.0208 (0.31)	-0.0501 (-1.51)	0.1617** (2.14)	0.0529 (1.23)
Mining target dummy	-0.0593 (-1.27)	0.0692 (0.61)	0.0128 (0.17)	-0.1118** (-2.19)	0.1807** (2.12)	0.0174 (0.37)
Ln market value	0.0078 (0.44)	0.0058 (0.19)	0.0156 (1.07)	0.0453** (2.14)	-0.0165 (-0.84)	0.0056 (0.47)
Profitability	-0.7783** (-2.89)	-0.2978*** (-4.27)	0.0641 (0.33)	-1.1668*** (-4.22)	-0.0683* (-1.62)	-0.0759 (-0.57)
Leverage	0.1555 (1.16)	0.2193*** (2.76)	0.2513* (1.79)	-0.1158 (-0.94)	0.1811** (2.53)	0.0298 (0.39)
Free cash flow	0.8254*** (4.19)	0.3114** (1.99)	0.1454 (0.52)	0.6211** (2.82)	0.1169 (1.06)	0.0219 (0.08)
GFC period dummy	-0.2018** (-2.71)	-0.1252 (-0.44)	-0.0939 (-0.67)	-1.1046*** (-12.16)	0.0378* (0.60)	-0.2447 (-1.56)
F-Statistics	**4.81*****	**1.91****	**1.78***	**30.96*****	**1.85****	**1.61**
N	**29**	**88**	**75**	**29**	**88**	**75**
Adjusted R²	**0.62**	**0.11**	**0.11**	**0.93**	**0.11**	**0.09**

Note: The Table C.9 reports coefficient estimates and their respective *t*-values (in brackets) for the regression equation [4] using the industry and size adjusted performance measures. The dependent variable is the 'industry and size' adjusted profitability measure and independent variables included in the model are a number of bid and firm characteristics. A ***, (**), (*) indicates statistical significance at the 1%, (5%), (10%) level. The issue of heteroscedasticity was addressed by using White's adjustment procedure.

Table C.10
Multiple Regression Estimates of Foreign Acquisitions (Bid and Firm Characteristics)

Independent Variable	Free Cash Flow/Total Asset (Industry adjusted)			Free Cash Flow/Market Value (Industry adjusted)		
	Public	Private	Subs.	Public	Private	Subs.
Constant	-0.0450 (-0.46)	-0.175* (-1.61)	-0.1294** (-2.11)	-0.1190 (-1.34)	0.0410 (0.42)	-0.0096 (-0.19)
Cash only dummy	0.0076 (0.15)	0.0904* (1.83)	0.0377 (0.72)	-0.0479 (-0.92)	0.0159 (0.33)	0.0666** (1.99)
Stock only dummy	-0.0054 (-0.08)	-0.0077 (-0.10)	0.0049 (0.07)	-0.1260 (-1.91)	-0.0915* (-1.73)	-0.0595 (-0.73)
Ln relative size	-0.0090 (-1.40)	-0.0056 (-0.26)	0.0298** (2.60)	0.0123 (2.32)	-0.0177 (-1.25)	0.0288** (2.61)
Unrelated dummy	0.0288* (0.64)	0.0114 (0.21)	0.1107** (2.59)	0.0549 (1.10)	-0.0303 (-0.61)	0.0558 (1.61)
Multiple bid dummy	-0.1035** (-2.08)	0.0967* (1.89)	0.0491 (0.94)	-0.0554 (-1.00)	0.1017** (2.42)	0.0441 (0.76)
Deal attitude dummy	-0.0275 (-1.36)	0.2336*** (2.78)	0.0216 (0.40)	0.0081 (0.38)	0.1679*** (2.87)	0.0730 (1.56)
Mining target dummy	0.0536 (-0.79)	0.0395 (0.49)	0.0477 (1.10)	0.0180 (0.43)	0.0085 (0.16)	0.0166 (0.58)
Ln market value	0.0157 (1.35)	0.0070 (0.37)	0.0241** (1.96)	0.0395*** (3.13)	-0.0255 (-1.08)	0.0056 (0.50)
Profitability	0.0661 (1.06)	-0.0663 (-1.25)	0.0806 (0.54)	-0.3737* (-1.84)	-0.0545 (-1.32)	-0.0654 (-1.03)
Leverage	0.0616 (0.62)	0.1091 (1.97)	0.2216** (1.99)	-0.0539 (-0.68)	0.0679** (2.00)	0.1067* (1.62)
Free cash flow	0.7124*** (4.01)	0.2974** (2.40)	0.1696 (0.88)	0.3394** (2.37)	0.2749** (2.58)	0.2366* (1.83)
GFC period dummy	-0.1105* (-1.73)	0.0611 (0.73)	-0.0146 (-0.24)	0.0464 (0.60)	0.0529* (1.65)	-0.0164 (-0.29)
F-Statistics	**5.15*****	**3.64*****	**4.78*****	**2.05***	**3.69*****	**3.11*****
N	**29**	**88**	**75**	**29**	**88**	**238**
Adjusted R^2	**0.64**	**0.27**	**0.38**	**0.31**	**0.27**	**0.26**

Note: The Table C.10 reports coefficient estimates and their respective *t*-values (in brackets) for the regression equation [4] using the industry and size adjusted performance measures. The dependent variable is the 'industry' adjusted cash flow returns and independent variables included in the model are a number of bid and firm characteristics. A $^{***, (**), (*)}$ indicates statistical significance at the 1%, (5%), (10%) level. The issue of heteroscedasticity was addressed by using White's adjustment procedure.

Table C.11
Multiple Regression Estimates of Foreign Acquisitions (Bid and Firm Characteristics)

Independent Variable	Net Profit/Total Asset (Industry adjusted)			Net Profit/Market Value (Industry adjusted)		
	Public	Private	Subs.	Public	Private	Subs.
Constant	-0.0450 (-0.45)	-0.2983** (-2.38)	-0.1853* (-1.71)	-0.1190 (-1.34)	-0.1752**(-2.12)	-0.0633 (-1.35)
Cash only dummy	0.0076 (0.15)	0.0236 (0.33)	-0.0144 (-0.20)	-0.0479 (-0.92)	-0.0558 (-1.02)	-0.0040 (-0.10)
Stock only dummy	-0.0054 (-0.08)	-0.2005 (-1.11)	0.0461 (0.54)	-0.1260* (-1.91)	-0.1085 (-1.15)	-0.0633 (-1.00)
Ln relative size	-0.0090 (-1.40)	-0.0104 (-0.34)	0.0110 (0.76)	0.0123** (2.32)	-0.0222 (-1.46)	0.0053 (0.62)
Unrelated dummy	0.0288 (0.64)	0.0547 (0.57)	0.1543* (2.73)	0.0549 (1.10)	-0.0733 (-1.05)	0.0626** (2.27)
Multiple bid dummy	-0.1035** (-2.08)	0.1687** (2.24)	-0.0355 (-0.72)	-0.0554 (-1.00)	0.1068** (2.21)	-0.0270 (-0.79)
Deal attitude dummy	-0.0275 (-0.79)	0.3466** (2.42)	0.0426 (0.58)	0.0081 (0.38)	0.2229*** (2.92)	0.0427 (1.13)
Mining target dummy	0.0536 (1.35)	0.0991 (0.93)	0.0140 (0.18)	0.0180 (0.43)	0.1787** (2.35)	0.0421 (1.27)
Ln market value	0.0157 (1.06)	0.0148 (0.58)	0.0314** (2.15)	0.0395*** (3.13)	0.0025 (0.14)	0.0167* (1.89)
Profitability	0.0661 (0.33)	-0.1644**(-2.48)	0.1341 (0.77)	-0.3737* (-1.84)	-0.0434 (-1.06)	0.0307 (0.38)
Leverage	0.0616 (0.62)	0.2454***(4.05)	0.2927** (2.13)	-0.0539 (-0.68)	0.1816***(2.75)	0.0406 (0.63)
Free cash flow	0.7124*** (4.01)	0.4126***(3.11)	0.2091 (0.85)	0.3394** (2.37)	0.1749* (1.73)	0.1604 (1.16)
GFC period dummy	-0.1105* (-1.73)	-0.1339 (-0.46)	-0.1066 (-0.80)	0.0464 (0.60)	0.0429 (0.68)	-0.2696** (-1.95)
F-Statistics	**5.14*****	**2.84*****	**4.46*****	**2.05***	**3.35*****	**4.97*****
N	**29**	**88**	**75**	**29**	**88**	**75**
Adjusted R^2	**0.64**	**0.20**	**0.36**	**0.31**	**0.24**	**0.39**

Note: The Table C.11 reports coefficient estimates and their respective *t*-values (in brackets) for the regression equation [4] using the industry and size adjusted performance measures. The dependent variable is the 'industry' adjusted profitability measure and independent variables included in the model are a number of bid and firm characteristics. A $^{***, (**), (*)}$ indicates statistical significance at the 1%, (5%), (10%) level. The issue of heteroscedasticity was addressed by using White's adjustment procedure.