KEY PREDICTORS OF AUSTRALIAN LISTED COMPANY POST-ACQUISITION PERFORMANCE

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February 2012

A thesis submitted in fulfilment of the requirements for the degree

Doctorate of Business Administration from RMIT University

CERTIFICATION

I hereby certify that:

a)   Except where due acknowledgement has been made, the work is mine alone;

b)   The work has not been submitted previously, in whole or in part, to qualify for any other academic award; and,

c)   The content of the thesis is the result of work, carried out since the official commencement date of the approved research program.

Stephen Childs   Date   19/10/2012

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Abbreviations

ANCOVA	Analysis of Covariance
ANOVA	Analysis of Variance
ASX	Australian Stock Exchange
CAPM	Capital Asset Pricing Model
CAR	Cumulative Abnormal Return
GDP	Gross Domestic Product
GICS	Global Industry Classification Standard
MANCOVA	Multivariate Analysis of Covariance
MANOVA	Multivariate Analysis of Variance
OECD	Organisation for Economic Co-operation and Development
R&D	Research and Development
ROA	Return on Assets
ROI	Return on Investment
ROS	Return on Sales
SIC	Standard Industry Codes
US	United States of America
VIF	Variance Inflation Factor

Related Refereed Publications

The following published refereed publications by the author support the research findings.

Antecedents of post-acquisition domestic and foreign-market performance, British Academy of Management Annual Conference Proceedings, 2008.

Pre-acquisition influences of performance and total risk on foreign-market acquisitions, Strategic Management Society Annual Conference Proceedings, 2008.

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ABSTRACT

Studies have attempted to show that revenue stream diversification resulting from acquisition explains the differences observed in subsequent company performance. Despite more than thirty-five years of research, however, the results remain inconclusive. This study examines both company and industry performance following domestic and foreign acquisitions in an attempt to resolve this uncertainty. An examination is made of the relationship between performance of the acquiring company and its industry before and after acquisition, making particular note of risk level, regulatory constraint and technical intensity. This results in measureable predictors of performance following acquisition.

Two dominant research streams have emerged in the literature to date; the first utilises market-based performance measures, the second utilises accounting-based performance measures. Both streams attempt to demonstrate that companies with a single revenue stream after acquisition deliver better performance from operational synergies than companies with multi-revenue stream operations. The observed performance difference is attributed to synergies that are only available to single revenue stream companies. These may include cost reduction from consolidation of production, research and development, manufacturing, marketing and distribution.

Inconsistent results have emerged from previous studies presented in the literature, for which there are a number of possible explanations. One is the failure to account for the cost of achieving operational synergies which are often only partially realised, if at all. Unintentional or intentional above market payment offers another explanation for the inconsistency, as does the cross-sectional method employed by some prior studies. This method does not show clearly whether the diversification of revenue streams has affected performance, as it may also indicate that performance has affected the diversification of revenue streams.

Consistent with prior research, multiple regression analysis was used to test models of performance prior to and after acquisition. The study period, 2000 to 2006, was selected to reflect the current macro-economic climate and all acquisitions of Australian listed companies within that period were included. To demonstrate appropriateness of the method and suitability of the data, the model commonly used by prior studies was first tested using recent Australian listed company data. The results of this test suggest superior performance after acquisition when the target company is related by revenue stream to that of the acquirer, compared with a target company unrelated by revenue stream. Suggesting that this model may be incomplete, a small body of literature examines pre-diversification performance characteristics in an attempt to explain post-diversification performance differences. Early studies have found that company performance is largely a reflection of its industry performance. In addition, a recent study of domestic acquisitions found that company performance after acquisition largely reflected its performance before acquisition. In an extension to this research, the present study shows that diversification achieved through acquisition is not significant in predicting post-acquisition performance for a recent sample of domestic and foreign-market acquisitions by Australian listed companies. It also considers regulatory constraint, technology asset seeking, risk and monopoly power as predictors of performance after acquisition. Operational differences when companies enter foreign markets have largely been ignored in the literature to date. Production and cognitive impediments suggest a reduction in performance, whilst foreign-market operations may also provide mitigation against revenue cycle fluctuations, including industry and currency. Additionally, anti-competitive legislation may provide a motive for diversification outside the jurisdiction of the domestic market authority. Similarly, technology intensive companies may utilise foreign-market acquisition to asset-seek the latest technology in order to maintain or better their market position.

The findings of this study suggest that revenue stream diversification does not explain differences in performance after acquisition, rather, it is determined by the performance of the acquirer before acquisition. In addition, high levels of risk and monopolistic power are associated with high performance. However, this excludes the use of acquisition to establish foreign market operations where an interim decrease in performance can be expected, suggesting the presence of time-limited organisational impediments associated with experience level. An expected decrease in performance for members of regulated industries was not found and, when considered with the finding that high performance is

associated with monopoly power, it suggests that government attempts to ensure competitive markets may be ineffective. Further research is required to explain the unexpected finding that low-technology intensive companies outperform high-technology equivalents post acquisition.

Chapter 1

INTRODUCTION

1.1   Introduction to the Problem

The acquisition of one company by another is widely employed as a corporate diversification strategy. In this context, acquisition refers to the acquiring company taking 100% ownership of the target company, where both are exchange listed companies. Research in this area to date has focused on attempts to demonstrate that revenue stream diversification explains the differences observed in company performance after acquisition. However, despite more than thirty-five years of research the results remain inconclusive. This thesis examines the relationship between the revenue stream of an acquiring company and that of its acquisition target, and sets out to determine the key predictors of company performance following diversification through acquisition in domestic and foreign-market cases.

Diversification through acquisition may be driven by a number of factors. Merging of company operations leading to economies of scale is one such factor, but one that is only available in cases where the acquirer and target company share the same revenue stream. The desired economies of scale may include consolidation of production, research and development (R&D), manufacturing, marketing and distribution. The current study, utilising recent Australian listed company data, first replicates prior research which has demonstrated that the acquisition of a target company that shares the same revenue stream delivers superior performance, suggesting the realisation of scale economies. In an

extension of the prior research, this study then examines the pre-acquisition company attributes of performance, risk, technical intensity and regulatory constraint as predictors of performance after acquisition.

Previous studies have predominantly attempted to explain the differences in company performance before and after acquisition using dichotomous models of related diversification versus unrelated diversification. Related diversification refers to a company that derives its income from a single revenue stream, whilst unrelated diversification refers to a company that derives its income from multiple revenue streams. Related diversification, in this context through acquisition, provides comparatively better performance than unrelated diversification. Synergies that are only available from the integration of operations in cases of related diversification are expected to create a better competitive position. These synergies may include purchasing power, distribution or monopoly power and the use of complementary products. The latter reduces interoperability and supportability risk from related product offerings, thereby increasing consumer value. Used throughout this thesis, Miller (2006) first termed this phenomenon as relatedness theory. Two dominant research streams are discernible in the literature. The first utilises stock-market-based performance measures in event studies. In the context of the present study, this is the measurement of a security's price change in response to an acquisition. The second research stream involves accounting-based performance measures, commonly expressed as return on assets (ROA).

Meta-analyses are the aggregation of results from multiple studies to estimate the relationship between two or more variables (Hunter & Schmidt 2004), and have been used to examine the results of previous research into this topic. King, Dalton, Daily and Covin's (2004) meta-analysis of 93 studies found a statistically significant relationship between superior performance and acquisition made in the same revenue stream. In contrast, Palich, Cardinal and Miller's (2000) analysis of 55 studies did not find any relationship between the number of revenue streams after acquisition and superior performance, indicating inconsistencies between the two analyses.

Park (2003) found that for a 1970s USA domestic market sample, the performance of a company prior to acquisition explained its performance after acquisition. Examination of the modern market, however, suggests that it has greater complexity than has been

observed in the past, with the advent of, for example, globalisation and anti-competitive regulatory constraints (ACCC 1999, 2008; DIISR 2009). Park's (2003) results, therefore, in general may not apply to today's market. For instance, Australian companies may utilise foreign market acquisition for asset seeking in order to remain competitive in fast-evolving high-technology markets (Tunny 2010) since the local market is characterised by low R&D intensity levels (DIISR 2009). Seemingly contrasting theories suggest that companies which operate in both domestic and foreign markets experience a decrease in performance when the scale economies that are available in the domestic market are reduced, if available at all, in foreign markets (Palich, Carini & Seaman 2000). Companies with operations in foreign markets, however, may also receive protection from domestic market downturn and currency fluctuations, such as the strength of the Australian dollar against the American dollar (Michel & Shaked 1984).

A structurally attractive industry is characterised by high cost of entry resultant from hard-to-copy capabilities and resources, which in turn suggests an association with high profits (Porter 1980; 1981). It is logical to assume that managers retain greater industry and domestic market knowledge allowing them to make better decisions. It then follows that managers within structurally attractive industries are motivated to make acquisitions within their own industry and within the domestic market, in order to mitigate otherwise potentially reduced profits. The drive for foreign acquisition results from conditions such as a lack of local market opportunities, government regulatory control, asset seeking requirements and economic cycle protection. Acquisition opportunities may not exist in the local market or, by demonstrating a monopolistic position after acquisition, may result in proposal rejection by anti-competitive regulatory authorities attempting to maintain a competitive market. Companies are therefore encouraged to seek foreign-market acquisition opportunities beyond the domestic authority's jurisdiction.

Whilst strategic management literature has largely ignored the influence of government regulation on company acquisition strategy, its importance has been demonstrated empirically in the finance literature. Campa and Hernando (2004) found that company acquisitions made in industries previously under government control, or still heavily regulated, generated lower value than equivalent acquisitions in unregulated industries. Companies may also utilise acquisition either to obtain assets not available in the local market or to increase R&D intensity (Ruckman 2009). For example, Anand and Delios

(2002) observed that the USA, a country with high levels of technology-intensive R&D, attracted a disproportionate share of foreign investment in these industries. Companies in countries with low levels of R&D intensity (Tunny 2010), such as Australia, are more likely to execute foreign acquisition to gain access to the latest technology (Caves 1996) in order to achieve or maintain a competitive technological advantage.

Foreign market acquisition research studies that examine the differences in performance after acquisition, are also inconclusive, with some studies reporting a decrease in performance from reduced operational integration opportunities, whilst others report protection from currency and industry cycle fluctuations. The influence of government regulatory constraint, globalisation and the requirement to keep up with the latest technology in the modern market place has largely been ignored by previous studies. In addition, these studies typically employ cross-sectional methods to measure a company's performance change in response to an acquisition event. The key methodological issue with cross-sectional studies is that if the event influences performance then the reverse may also be true in that performance may influence the event. Therefore, this research attempts to address following question.

Research Question (RQ1)

What characteristics of an Australian listed acquiring company and its target company prior to acquisition explain performance difference after acquisition ?

1.2   Theoretical and Practical Significance

The present study seeks to enhance the research on diversification through acquisition by first replicating the majority of prior studies in testing support for relatedness theory (Miller 2006), but in this case using recent Australian listed company acquisition data. The integration of operations where the acquiring and target companies operate in the same industry is expected to create a better competitive position than between those operating differing industries. This exercise demonstrates the appropriateness of the data and suitability of the analytical techniques, in order to provide a baseline for theory enhancement. In an extension of previous research, this study offers an alternate theory to

explain the difference in company performance after acquisition and, in doing so, suggests that the models employed by previous analyses in the tests of relatedness theory (Miller 2006) may be incomplete. Using a recent sample of Australian acquisition data, and recognising differences between domestic and foreign market acquisition, this study extends the work of Park (2003). Park (2003) found that an acquiring company's industry and individual performance prior to acquisition, for a sample of 1970s USA domestic acquisitions, largely reflected its performance after acquisition. The present study shows that company performance after acquisition reflects industry and company performance prior to acquisition in domestic and foreign market cases, irrespective of the diversification of revenue streams, in modern Australian market conditions. This study sets out to offer further explanation for the difference in company performance following acquisition through the inclusion of additional variables into models. The variables analysed are: company and acquisition size, total risk, regulated industry membership, and technology intensity. The influence of acquisition (measured in terms of total assets) and company size on the choice of target, and the acquirers performance after acquisition, have been largely ignored in previous research.

The test carried out here of models that included these variables showed that high-performing companies are more likely to execute large-scale foreign market acquisition and experience an interim decrease in performance after acquisition. This may indicate that opportunities are not available in the domestic market, or that management are mitigating against domestic market industry downturn and currency fluctuations, as suggested by the coinsurance theory of Michel & Shaked (1984). The interim performance decrease suggests that operational synergies may be available in foreign market acquisition cases but take longer to realise than in domestic cases. This may partially reflect management's experience level; Meyer-Doyle (2012) found that management's acquisition experience level impacts performance after acquisition. In addition, larger companies and large scale acquisition were associated with superior performance after acquisition in all models tested. This finding suggests that companies with the ability to exercise monopoly power in a market produce higher performance. Monopoly power may provide cheaper access to capital and enable a company to demand lower prices from suppliers and higher prices from customers.

Risk mitigation was considered as a motive for company acquisition with the proposition that companies are able to mitigate risk by increasing the number of revenue streams. The basis for this proposition was portfolio theory's(Markowitz 1959) association of high risk with "putting all your eggs in one basket." It follows that as the number of revenue streams increase, the more likely it is that a company will exhibit market performance, therefore companies exhibiting low risk also exhibit lower performance. The findings of this research demonstrate that increasing total risk with acquisition results in increased company performance. Debt represents a source of risk for a company. It may be able to increase its debt capacity with acquisition, a proposition supported by the finding for monopoly power discussed above. Larger companies are likely to obtain access to cheaper capital after acquisition making an increase in debt position a viable option that in-turn increases their risk level.

Regulatory constraint and technology asset seeking are observed in some specific industries, providing different motives for acquisition compared to other industries. These are, therefore, examined as special cases. Regulatory constraint suggests that limited opportunities exist in the domestic market therefore members of regulated industries are more likely to seek foreign market acquisition. Campa and Hernando (2004) found that company acquisitions in government-controlled or regulated industries generated inferior performance compared with those in unregulated industries, with a greater reduction in performance observable in foreign market acquisition cases. In contrast, the present study found no discernible performance difference between acquisitions within regulated industries or those in unregulated industries. The current work also hypothesised that limited opportunities exist in the Australian domestic market to utilise company acquisition in order to acquire the latest technology due to low levels of R&D intensity. Members of high technology industries, therefore, would be more likely to execute foreign market company acquisition. Furthermore, due to high start-up costs that restrict new companies entering the industry, thereby suggesting less competition, technology-intensive industries are associated with high profits. This study found, however, that high profits were associated with low technology-intensive companies following acquisition, irrespective of whether that acquisition was from the local market or a foreign market.

1.3   Significance and Contribution of this Research

The findings of the present study have practical significance for managers and investors. Managers using acquisition to improve company performance or maintain market position are unlikely to achieve economies of scale with operational synergies. It is speculated that the expected synergies are not realised in practice due to underestimation of associated costs, complexity, and management commitment. Managers using acquisition to establish foreign market operations are likely to experience a moderate decrease in performance in the period immediately after acquisition. Companies operating in high technology intensive industries more likely to experience the decrease than their low technology intensive counterparts. One explanation for this phenomenon is that management practices and cultural differences may impede technology transfer.

1.4   Methodology and Research Design Overview

This research was contextualised in terms of the deductive research methodology, aiming to establish generalisations that correspond to natural and social world uniformities and the theories that explain them (Popper 1959). Theoretical argument leads to construction of hypotheses, followed by the collection of appropriate data for testing. Other research paradigms were rejected, including the retroductive, interpretive abduction and inductive methods. The retroductive methodology relies upon the demonstrated existence of phenomena from which models are then constructed, as opposed to the use of hypothetical models. Similarly, the interpretive abduction methodology was rejected as it requires observation of every day concepts (Gill & Johnson 2002) which could not be observed in this case. Likewise, the inductive paradigm was rejected as it produces generalisation derived from observation, where cause is established from description and a positivist view, comprised of ontological assumptions of an ordered universe consisting of discrete and observable events (Blaikie 2000). Induction would also require the collection of large quantities of data, with measurement of many concepts to justify generalisation; by comparison, the development and test of hypothetical models in this study provided a clear focus for the research with generalisation from a relatively small quantity of data.

The deductive strategy was developed by Popper (1959); it is a nomothetic method emphasising the importance of systematic protocol and technique. Popper (1969) contends that unbiased observation is impossible as observations are made within a frame of reference, from a point of view. Therefore, it is necessary to derive a tentative hypothetical answer from theoretical argument in order to inform the data gathering direction. Induction and deduction share positivism's ontological assumption that social phenomena exist independently of observer and social actors. According to Blaikie (2000), deduction's core argument is that observations do not provide a reliable foundation for scientific theory; instead, deduction attempts to overcome the deficiencies of positivism. The logic of deduction is the reverse of positivism as it holds that data collection is selective and interpreted by the observer. The aim for the researcher is to develop a theory that matches the phenomenon under study, that is, one that matches reality. A review of prior acquisition-based research in the strategic management field further endorsed this decision, where all studies examined used this paradigm.

1.5   Method Overview

The strategy used in the present study was divided into six key stages (Hair, Black, Babin, Anderson & Tatham 2006), with stage one defining the objective and research problem, plus selection of the paradigm and technique. This was achieved by performing a preliminary literature review to identify the research problem, commonly utilised research paradigms and representations of the relationships to be studied. A subsequent and thorough literature review enabled development of a conceptual model specifying the dependent and independent concepts. Ideas and topics of interest were identified, as opposed to specific measures, to minimise the risk of omitting relevant concepts. Selection of multivariate techniques followed, informed by the type of variables selected for analysis and the ability to transform variables where required. Next, variables were identified based on theoretical argument. A major consideration was specification error concerning both the omission and irrelevant inclusion of variables. Hair et al. (2006) recommend the inclusion of potentially irrelevant variables when doubt exists, as exclusion may seriously bias the results and negatively affect any interpretation.

Stage two comprised development and documentation of the research plan; this included determination of minimum and desired sample sizes along with identification of special variable formulations to represent non-linear or interaction terms in the analysis. Stage three involved evaluation of underlying technique assumptions (all multivariate techniques rely on both conceptual and statistical assumptions). In stage four, the researcher assessed the overall model fit, estimated the multivariate models and appraised their generalisability. The model was assessed for acceptable levels of statistical criteria, relationship identification, and practical significance. Stage five involved interpretation of the variates. To provide empirical evidence of generalisable multivariate relationships, effect was interpreted by examining the estimated coefficients for each variable. Finally, in stage six, the researcher validated the generalisability of the result to the total population.

Multiple regression analysis was selected as the most appropriate statistical technique for analysis of the research. This technique allows investigation of the relationship between a single dependent variable and multiple independent variables. The analysis process weights the independent variables forming the regression variate to denote the relative contribution, in order to ensure the maximum level of prediction from the set. Whilst correlation complicates the process, this facilitates the interpretation of the influence of each variable in making the prediction (Hair et al. 2006).

1.6   Outline of the Thesis

This thesis has seven chapters. Chapter one serves as an introduction to the topic providing background, research justification, research question and definitions. Chapter two details the literature review and associates this research with the current state of relevant of knowledge. This aids in providing background, justification of the research through identification of existing gaps, and selection of applicable theory, research strategy and methods. The work described in chapter two facilitates the construction of a theoretical framework and hypotheses in chapter three. Chapter four outlines the process of identification of variables and details of the methodology employed, including a

detailed justification of the paradigm, analysis tools, procedures and limitations. Chapter five presents the multivariate analysis results of acquisition data collected. The hypothesised model and its theoretical implications are discussed in chapter six whilst chapter seven outlines the strengths and limitations of the study, its practical implications and provides suggestions for future research.

1.7 Conclusion

Previous acquisition research has attempted primarily to demonstrate a relationship between company performance and the diversification of revenue streams. This study attempts to demonstrate that performance difference may be partially explained by industry and company performance, risk level, regulated and technology industry membership, monopoly power and foreign market operations.

Utilising a widely accepted research method and analysis technique the present study addresses the key methodological issue of whether the diversification of business streams through acquisition influences performance or vice versa. This study first replicates the results of prior studies using recent Australian data. It then shows that a company's performance after acquisition is largely a reflection of its performance prior to acquisition, irrespective of the diversification of business streams. It is also finds that companies entering foreign markets experience a short-term decrease in performance. Regulatory constraint is not detrimental to performance and low-technology intensive industry members are shown to out-perform high-technology companies after acquisition. Companies may increase performance by utilising acquisition to increase risk and monopoly power.

The next chapter documents the critical literature review completed within the study.

Chapter 2

LITERATURE REVIEW

2.1 Introduction

As outlined in chapter 1, The difference in company performance after acquisition has been the subject of academic investigation for over 35 years, yet results remain inconclusive. The majority of studies have attempted to attribute the performance difference to a company's diversification expressed in terms of the number of revenue streams. Contrasting recent research has found that a company's performance after acquisition within the domestic market largely reflects its performance before the acquisition. In an extension, this study seeks to explain company performance differences after domestic and foreign market acquisition by using the company's pre-acquisition characteristics. These include the integration of the target company's revenue streams with those of the acquirer, industry membership, acquisition and acquirer size, risk level, regulatory constraint and industry technology intensity.

After an introduction to the topic, this review identifies two main streams of company acquisition-related research within the strategic management field that attempt to establish an association between existing business diversification, in terms of revenue stream, and performance after acquisition. A review of incomplete models and methodological issues, that may explain the inconsistent results to date, follows. The motives of company management for executing acquisition are considered in the context of geographical diversification and the match between the target company's revenue stream and that of the

acquirer. With respect to geographical diversification, the effect of special cases of industry, regulatory constraint and technology intensity on acquisition motive are investigated. The final section reviews the research of Park (2003) (of which, the research in this thesis can be considered an extension), offering further explanation for performance differences.

The literature on diversification and associated topics was reviewed comprehensively to facilitate definition of key terms, statement of the research problem, identification of the shortcomings of previous research and to provide a basis for enhancement of existing testable and replicable findings. The identification of a substantial body of diversification and acquisition literature demonstrated the perceived relevance and significance of the topic within the scientific community (Sekaran 1992). Peer reviewed scholarly journals in the field of strategic management were the primary source.

2.2   Key Definitions

The main terms used in this thesis, namely strategy, competitive advantage and foreign-market acquisition, are defined in this section since there appear to be no commonly accepted definitions of them in the literature.

Strategy

Definitions of strategy in the early management literature were formed from a holistic perspective: "The determination of the basic goals and the objectives of an enterprise and the adoption of courses of action and the allocation of resources necessary for carrying out these goals" (Chandler 1962 p.13). Hawkins and Rajagopal (2005) analysed the writings of Sun Tzu, a military strategist and philosopher who lived around 400 BC, and discussed their relevance to the modern business environment. They argued that the term strategy can be confused with methodology or tactics and interpreted from Sun Tzu's observation that a strategy, "if properly applied," defines the successful outcome before release of resources. Mintzberg (1994) observed that most people define a strategy as a plan or as a pattern and that should you then ask them to describe their organisation's strategy, most will do so, violating their own definition. Mintzberg (1994) contends that strategy is a

term defined one way but often is used in another and concludes that the definitions of strategy as a plan and as a pattern are valid as organisations not only plan but evolve patterns out of their experiences. This has given rise to the concept of incremental (emergent) strategy in which ongoing adaptation results from day-to-day prioritisation and investment decisions producing a pattern of fundamental change without prior intention to do so (Burnes 2004; Christensen & Raynor 2003). The reason for the myriad of varying definitions of strategy can be explained through examination of the Greek origin of the term strategia, meaning "the art of war" according to Feurer and Chaharbaghi (1997). Several dimensions may be associated with this term in a business environment including scope, process, method, ownership period, philosophy, content and implementation. Given that acquisition is an intended outcome of management activity, in this context, the strategy is the method to achieve a pre-defined (as opposed to emerging) outcome. This thesis therefore defines strategy as *the definition of desired outcome and the process to achieve the outcome*.

Competitive Advantage

Two opposing theories, often termed *industrial organisation* (Chamberlin, 1933; Rothschild, 1987) and *resourced based view* (Penrose 1959; Rumelt 1984; Wernerfelt 1984) have provided the basis for definitions of competitive advantage in the literature. Porter (1985 p.1), an *industrial organisation* advocate, defined competitive strategy as "the search for a favorable competitive position in an industry, the fundamental arena in which competition occurs." The outcome, if achieved, may be termed competitive advantage; Kay (1993, p.30) stated, "A distinctive capability becomes a competitive advantage when it is applied to an industry and brought to a market". Similarly, Feurer & Charharbaghi (1997, p.60) defined competitive strategy as, "a factor or a combination of factors which makes an organization more successful than other organizations in a competitive environment and cannot be easily emulated by its competitors". Competitive advantage was not always differentiated from organisational performance in early literature. O'Shannassy (2008) noted that Porter (1985) uses the terms interchangeably. Later arguments (Newbert 2008; O'Shannassy 2008; Powell 2001) differentiated the concepts, suggesting competitive advantage was a significant predictor of organisational performance (defined as the rents accrued as a result of strategy implementation (Rumelt, Schendel & Teece 1994). Newbert (2008) utilised the *resource-based view* to examine empirically the use of rare and valuable resources to attain competitive advantage. The

findings suggested the greater the resource value and rareness, the greater the competitive advantage and ultimately organisation performance. Harrison, Bosse and Phillip (2010) suggested that managing-for-stakeholders (the allocation of more resources to satisfy the needs and demands of legitimate stakeholders than would be necessary to simply retain their wilful participation) creates sustainable competitive advantage. The current study speculates that competitive advantage can be achieved by exercising monopoly power to reduce costs from up- and down-stream scale economies; it is the size of acquisition as opposed to the rarity or value of resources that creates the competitive advantage. Therefore, this research utilises a generally accepted *industrial organisation* stream based conceptualisation of competitive advantage (Barney 1991) as *the implementation of a strategy not currently implemented by other companies that facilitates cost reduction or market opportunity exploitation and results in competitive threat neutralisation.*

Foreign-market acquisition

Few researchers have defined 'foreign-market' in the acquisition context, most relying on dictionary type definitions of trade between two countries or economic zones. Anand, Capron and Mitchell (2005, p.781) claimed that the common definition is resource based: "The geographic origin of the target maps to the geographic diversity of the target's resources". They further argued the target's geographic scope is a more relevant indicator of the geographic diversity to which an acquirer may gain access. Domestic targets, those domiciled in the same country, may retain geographically diverse resources whilst foreign-market targets may centralise resources in a single market. This research therefore defines foreign-market diversification as *the existence of primary lines of business of an acquirer and target in separate economic zones.*

2.3   Literature Review

2.3.1   Research Evolution

Often identified as the first piece of published research on performance after diversification, Rumelt's (1974) study found an association between company performance and the extent of diversification of its revenue streams. During the 1980s and 1990s, many researchers attempted to further explain performance difference after

diversification achieved by acquisition with additional attributes. From 2000, foreign market acquisition and industry composition (mostly in terms of technology content) were commonly considered in attempts to overcome inconsistent results. As an introduction to the literature, this section provides evolutionary background to the two main streams of research: *event studies* and *existing business*.

Rumelt's research (1974) demonstrated that company performance varied, not only in terms of the diversity in its product range, but in the relationships they established between revenue streams. He also found that performance varied significantly across groups of companies that followed differing diversification strategies. Rumelt's (1982) sample consisted of 100 randomly selected Fortune 500 companies from 1949, 1959 and 1969, and 50 of the largest in 1974: after removal for incomplete data 273 companies remained. His earlier research (Rumelt 1974) defined nine categories of diversification, whilst his later replication study (Rumelt 1982) reduced these nine to seven, derived from the following revenue-based ratios:

R_s The company specialisation ratio (expressed as the fraction of revenue accounted for by the largest single business unit);

R_v The company vertical ratio (expressed as the fraction of revenue attributable to the largest product grouping);

R_c The company related-core ratio (the fraction of revenues attributable to the largest group of businesses with common skill, strength, or resource);

R_r The company related ratio (the fraction of revenues attributable to the largest group of businesses related in some way. Each must be related to at least one other in the group but need not share skill or resource).

Note that $R_s < R_v \leq R_c \leq R_r$.

Rumelt (1982) noted that companies do not report sufficient levels or commonality of information to permit more than an estimate of the ratios. The resulting, slightly modified, categories of the later research are illustrated in Table 2.1.

Table 2.1: Rumelt's Diversification Strategy Categories

Symbol	Category	Ratio Specification
SB	Single Business	$R_s \geq 0.95$
DV	Dominant Vertical	$R_v \geq 0.70$
DC	Dominant Constrained	$0.95 < R_s < 0.70$; $R_c > (R_r + R_s)/2$
DLU	Dominant Linked-Unrelated	$0.95 < R_s; < 0.70$; $R_c < (R_r + R_s)/2$
RC	Related Constrained	$R_s < 0.70$; $R_c > 0.70$; $R_c > (R_r + R_s)/2$
RL	Related Linked	$R_s < 0.70$; $R_c > 0.70$; $R_c < (R_r + R_s)/2$
UN	Unrelated Business	$R_r < 0.70$

(Rumelt 1982 p.360)

For his replication research (Rumelt 1982), analysis of variance (ANOVA) showed that the model provided an adequate fit with results similar to the 1974 research. Dominant vertical and unrelated business categories demonstrated significantly lower performance than others, whilst the related constrained group provided the best performance. The question of what produces the observed differences in performance became the focus for two continuing streams of research in the strategic management literature.

Sometimes termed *event studies*, the most dominant stream of empirical research examines the diversification of revenue streams and company performance (Lubatkin & O'Neill 1988; Lubatkin, Chung, Rogers & Owers 1989; Montgomery & Singh 1984). Researchers in this stream typically employed cross sectional time-event studies, that is, the measurement of a security's price change in response to an event. In this context, the event is the acquisition of one company by another. Despite inconsistent results, the research generally supports the contention that diversification within a single revenue stream provides better performance than diversification into new revenue streams (for example a mining company acquirers another mining company rather than a clothing manufacturer). Subsequent research (Chatterjee 1986; Lubatkin 1987) speculated that prior studies failed to apply appropriate controls thereby making the results questionable.

The other dominant stream, sometimes termed *existing business*, considered the relationships between the diversification of revenue streams and the economic performance of a company (Amit & Livnat 1988; Bettis 1981; Bettis & Hall 1982;

Christensen & Montgomery 1981; Rumelt 1974, 1982). In this context, revenue stream diversification may be achieved by organic growth or acquisition. Accounting-based performance measures, including return on assets (ROA) or return on investments (ROI), were most commonly utilised. Compared with the *event studies* stream, the *existing business* stream more consistently supports the idea that diversification within a single revenue stream delivers better performance. Nevertheless, Tuch and O'Sullivan's (2007) review of empirical research on performance impact found that, in the short term, acquisitions have an insignificant impact on shareholder wealth and, in the long term, negative returns. Tuch and O'Sullivan (2007) concluded that research utilising accounting performance measures and benefits of acquisition within the same revenue stream had produced inconsistent results.

King et al. (2004) performed a meta-analysis of 93 post-acquisition performance studies examining the relationship between commonly utilised variables encompassing market based and accounting performance research. Meta-analysis is a statistical synthesis technique involving the aggregation of results from multiple studies to estimate the relationship between two or more variables (Hunter & Schmidt 2004). King et al.'s (2004) findings indicate a modest negative performance effect of acquisition and suggested additional variables were required to explain the phenomenon. Similarly, a meta-analysis of 55 published studies by Palich, Cardinal and Miller (2000) examined three competing models of acquisition performance after acquisition – the linear, curvilinear and inverted U-model. The first model hypothesises a linear relationship between diversification of revenue streams and performance, the second speculates that the relationship may not exist in all cases and the third posits that moderate levels of revenue stream diversification deliver the best performance (Lubatkin & O'Neill 1987). Palich, Cardinal and Miller's (2000) results indicate support for the curvilinear model in which moderate levels of revenue stream diversification yield higher levels of performance after acquisition than either limited or extensive diversification. Small acquisitions are not likely to influence an acquirer's performance whilst the expected operational synergies of large-scale acquisition might not be realised. It would therefore appear, surprisingly, that prior research has largely ignored the performance impacts of acquisition size relative to acquiring company size. Similarly, Shin and Jalajas (2010) found an inverted-U relationship between technological diversification and the effect on R&D activities. This suggests that asset-seeking company acquisition, employed by high-technology companies to obtain the most

recent R&D in order remain competitive, may have a positive or negative effect. Technology relatedness in acquisition may increase the capacity for business units to learn from each other but may also stifle innovation.

The next section examines the major research streams in the field of diversification and posits causes for the inconsistency in results to date.

2.4   Revenue Streams and Performance After Acquisition

Both research streams have sought to explain the difference in company performance after diversification through acquisition by testing what Miller (2006) termed relatedness theory , which holds that a company assuming ownership of another company within the same revenue stream will perform better than if it acquired a company with a different revenue stream. This performance difference is attributed to the synergistic alignment between the companies; the literature suggests that two broad categories of operational and financial synergies are available.

Operational synergies are purported to occur with scale economies, for example, if the cost of joint production is less than that of individual production. Output synergies in R&D, manufacturing, marketing and distribution may be realised through consolidation of businesses (Chatterjee & Lubatkin 1990; Kumar 2009; Rumelt 1974; Salter & Weinhold 1978). Interoperable products and single supplier support may add consumer value from one-stop sourcing of complementary products, reduced risk of interoperability and support of the entire solution as opposed to component parts (Porter 1985). Financial synergies create a better competitive position by consolidation of market power enabling exercise of monopoly power within the chosen market (Porter 1985). This phenomenon may result simply from company size, which can act as a deterrent for any potential entrant into the industry. Cheaper access to capital (Grossman & Stiglitz 1976) and cross-subsidisation of products and predatory pricing may also be available to enhance market share, and ultimately profitability (Amit & Livnat 1988; Bettis 1981; Chatterjee & Lubatkin 1990; Rumelt 1974). It is argued that financial synergies can be exploited through any acquisition, irrespective of the relationship between the acquiring and target company's

revenue streams (Chatterjee 1986; Chatterjee & Lubatkin 1990; Singh & Montgomery 1987). Likewise, collusive synergies represent a company's ability to dictate prices by exerting market power through its size (Chatterjee 1986; Lubatkin 1983). Buyers may be forced to accept higher prices and suppliers lower prices (Porter 1980). Furthermore, governance efficiencies (Dundas & Richardson 1980; Hill & Hoskisson 1987; Teece 1980) realised by adoption of the acquirer's governance system, will benefit the acquired company.

Since financial, collusive and governance synergies (if they exist) are available for exploitation by all acquirers, and operational synergies are available only to acquirers of target companies operating in the same revenue stream, this type of acquisition delivers greater benefit, according to Park (1995) and Miller (2006). They did not, however, consider the effects of domestic versus foreign market acquisition, where coinsurance theory (Michel & Shaked 1984) suggests diversification into foreign markets offers protection from domestic market industry and currency fluctuations. This proposes that during times of domestic industry or market downturn, multi-revenue streams or foreign market diversified companies may perform as well, if not out-perform, companies operating a single revenue stream purely within the domestic market.

Early attempts to verify that diversification within a single revenue stream delivers the best performance, utilised additional explanatory variables. Chatterjee (1986) and Lubatkin (1987) are examples of early studies that attempted to offer further explanation. Chatterjee (1986) sought to explain the determinants of performance difference across categories of diversification. Collusive and financial synergies were assumed to be available with all acquisitions, whilst operational synergies were available only with single revenue stream acquisition. Following the Fama et al. (1969) market model methodology, Chatterjee (1986) predicted shareholder gain using daily returns for 200 days prior to the acquisition announcement, and 50 days post announcement, in a random sample of 157 USA company acquisitions between 1969 and 1972. There was a statistically significant difference between single revenue stream and multi-revenue stream diversification performance, providing support for what has become known as relatedness theory (Miller 2006).

Lubatkin (1987) examined the relationship between diversification through acquisition and shareholder value using two samples covering the period 1948 to 1979. The first sample

consisted of a single acquisition within the study period made by each of 315 companies, the second, included all 1031 acquisitions made by those companies in the period. Two samples were utilised to remove bias by including merger-inactive companies. Shareholder return after acquisition was determined by calculating cumulative abnormal returns (CARs) for 60 months, commencing 67 months prior to acquisition, and return for 60 months commencing after 5 months from the acquisition. The exclusion of 12 months' data surrounding the acquisition was to eliminate possible 'noise' caused by short-term market uncertainty in the acquisition announcement and negotiation period. (Research using accounting based measures, such as ROA, is not subject to this type of limitation as it focuses on long-term effects.) Lubatkin's (1987) study indicated that shareholder value generally increased across all cases, with single revenue stream acquisition offering the greatest increase.

The literature identifies several sources for the inconsistent results obtained in attempts to explain revenue stream diversification and its association with company performance. Notable examples are management's inability to assimilate operations effectively, resulting in an administrative overhead negating any gain otherwise received from the acquisition (Park 1995), and expected scale economies being only partially realised in practice, if at all (Ilinitch & Zeithaml 1995; Kumar 2009). Krishnan, Krishnan and Lefanowicz (2009) examined the CARs of acquirers and major rivals, finding that shareholder price movement reflects potential scale economies at the time of announcement. This suggests that the market accurately perceives the value of available scale economies (assuming their realisation); therefore, market-based research may not accurately reflect the effect of an acquisition on performance. Bettis and Hall (1982) cite apparent industry effects as another explanation reporting that four of the best performing companies in their sample were members of the pharmaceutical industry and single revenue stream diversifiers; these skewed the results until removed from the sample. Bettis and Hall's (1982) findings suggest that an acquirer's overall industry performance may offer partial explanation for performance difference.

Another explanation is offered by the hubris theory of Roll (1986). This suggests that the acquiring company incorrectly values the target company and the resulting premium is merely a random error. Unlike relatedness theory (Miller 2006) that assumes rational profit-maximising behaviour by management, hubris theory (Roll 1986) in its extreme

form assumes no change in performance after acquisition from scale economies and irrational behaviour since rational management would detect a valuation error and not conclude such an acquisition. Consistent with relatedness theory (Miller 2006), the financial literature (e.g. Berkovitch & Narayanar 1993) found support for a moderate version of hubris theory where management act rationally in seeking performance gains, however, they simply make valuation errors. In such cases, whilst some scale economies after acquisition may be realised, the value of the combined company can be lower due to the error in valuation of the target company.

Managerialism theory (Amihud & Lev 1981; Seth 1990; Xu 2012), originally described by Marris (1964), differs from hubris in that managers of an acquirer knowingly pay above the determined market value of the target company. The motive for this may be informed by the contrasting agency (Jensen & Meckling 1976) and stewardship theories (Davis, Schoorman & Donaldson 1997; Donaldson & Davis 1991). In this context, agency theory suggests company management do not always act in the best interests of shareholders. Managers are unable to mitigate their personal risk, such as loss of position or professional reputation, hence, it follows from the application of portfolio theory, that multiple cash flows reduce the systematic risk (the sensitivity of a company's returns to overall market returns) (Amit &Livnat 1988) and in turn, management risk. Martin's (2012) survey of 200 executives may offer further support for agency theory in that only 32 percent of respondents said the major objective of their company's future acquisition strategy will be to increase market share in an existing market or product. In contrast, the main argument of stewardship theory is that management are committed to a common goal and thereby address inadequate performance (Fox & Hamilton 1994). With a sample of 100 foreign market acquisitions from 1981–1990 in which the acquirer owned less than 50% of the target company, Seth, Song and Petit (2000) deductively tested for presence of hubris and managerialism using the market model. Acquirer CARs were, calculated between 70 and 11 days prior to acquisition for multiple bids, and between 10 days prior to and 10 days after the acquisition announcement for single bids. Seth, Song and Petit's (2000) results indicate that there is significant change in return after acquisition for the acquirer and that the similarity between revenue streams of the acquirer and target explains the majority of positive gains in foreign market acquisitions. Negative returns were explained by managerialism rather than hubris, but Seth, Song and Petit (2000) called for additional research to confirm the differences between domestic and foreign-market acquisition.

Haleblian and Finkelstein (1999) found a U-shaped relationship between organisation acquisition experience and performance after acquisition for a sample of 449 acquisitions. They concluded that this suggests that relatively inexperienced acquirers (after making their first acquisition) inappropriately generalise their acquisition experience to subsequent dissimilar acquisitions, while more experienced acquirers appropriately discriminate between acquisitions, recognising the uniqueness. An explanation offered in the finance literature (Bergman & Jenter 2007) relates to managerial options compensation; Fung, Jo and Tsai (2009) demonstrated that stock options provide managers with incentives that may lead to what they termed "perverse" acquisitions. Ozkan (2012) found evidence of this phenomenon with a sample of UK acquisitions where CEO compensation was higher in foreign market acquisition cases. Other researchers (Amburgey, Kelly & Barnett 1993; Peng & Fang 2010) showed that managers simply repeat prior experience.

Butler's (2003) meta-analysis compared qualitative findings of the acquisition effect in the business consulting literature. In line with the majority of academic research on the subject, Butler found that executives considered the acquisition successful, yet less than 50% were financially successful. Bert, Macdonald and Herd (2003) listed reasons for acquisition failure as: under-communication, unrealistic or unclear financial and synergy expectations, too many compromises in the resulting organisation model, lack of a "master plan", insufficient momentum, lack of executive management commitment, unclear strategic concept, and IT issues being addressed too late. Cherim and Tafaghod (2012, p5) found that tensions between the acquiring company management and acquired company management played a role in *amplifying the challenges*". Little academic research exists on outcomes of the effects of failed acquisitions; this may be due to a reluctance of executive management to discuss failures, wishing to protect their professional standing.

In the next section, management's acquisition motives are explored along with the external influence of regulatory constraint that may lead to revenue stream diversification or foreign market acquisition. Also considered (as special cases) are acquisitions involving technology-intensive companies where asset-seeking the latest R&D provides a motive for acquisition.

2.5   Acquisition Motives

Management's motives behind undertaking acquisitions can be broadly categorised as revenue growth and risk mitigation and are examined in the next section.

2.5.1   Revenue Growth and Purely Financial Motives

Arguably, the most common motive for acquisition is revenue growth, where companies seek to extend existing market share and take advantage of new market opportunities in domestic or foreign economies. Profit margins may be greater in alternate markets if the domestic market is saturated or declining. Company acquisition may be necessary for suppliers to establish new operations quickly or retain its business following a major customer's relocation. When Ford built its new production plant for the 'BA' Falcon car in Melbourne, several of its suppliers quickly established operations in close proximity to meet contractual obligations. Small trucks delivered parts direct to the production line, virtually eliminating inventory and reducing warehousing, damage, transport and packaging costs (Porter 2002). Access to factory and warehousing facilities may only be available through acquisition of the company owning them. Similarly, acquisition may enable a company to take advantage of the latest production technology quickly to maintain competitiveness. This extends to the motive for acquisition in foreign markets where the latest technology may not be available in the domestic market, or existing union agreements restrict or prevent the use of newer technology (Pearson 2006).   Through acquisition, companies may ensure continued supply of otherwise unavailable vital resources or enable the sourcing of low-cost components to meet intense price competition in the product market; this may also reduce, or even halt the supply to competitors.

Expediency is another motive for companies to set up operations in proximity to a cheaper workforce; a recent Australian example is Air International Thermal Systems' relocation of its car air-conditioner manufacturing to Thailand (Air-International 2010). Modern communications technology and ease of transportation mean proximity is a lesser consideration. However, the risk of down time from extended periods of equipment failure in more remote locations, operating within differing time zones, cultural and language barriers can offset the reduced labour cost.

Governments and public authorities often demand that companies demonstrate local content before awarding large contracts because they are sensitive to public opinion and are fearful of political backlash. Companies may make acquisitions and quickly establish local operations to satisfy such requirements. Governments may provide incentives in terms of tax-free operation, low interest loans and control over the local workforce to attract foreign-market company investment. Foreign investment injects capital into the local economy and may increase technology, expertise and export prospects, but it can be unpopular with the electorate and unions. There are also risks for companies in general dealing with foreign governments; they are at the mercy of local regulations, for example, the protectionist policies of China (Li & Tang 2010). Companies have experienced the rejection of international safety certificates, had license applications denied, suffered restrictions on profit repatriation, have been required to purchase locally made capital equipment and experienced bans on joint ventures, all of which may reduce return on capital investment (Abboushi 2000). Companies perceive greater risk in dealing with non-democratic systems and the risk increases when negotiation is required with multiple governments (Arvind 2003). A drop in the currency of the target market also provides a motive for acquisition. When the currency of a country experiences a strong devaluation relative to the currency of the foreign investor, its local assets become attractive investment opportunities; this may motivate companies to pursue foreign market acquisition simply to take advantage of the bargain but also introduces the risk that profits will reduce when the currency of the target country appreciates or the currency of the investing country depreciates.

Palich, Carini and Seaman (2000) replicated and extended Bettis and Hall's (1982) research using a sample of Fortune 500 companies; they assessed differences in performance after acquisition using ROA for the period 1985–1989. Like Bettis and Hall (1982), they found single revenue stream diversification delivered better performance than multi-stream diversification. Palich, Carini and Seaman (2000), in an extension of the work of Bettis and Hall (1982), tested support for international impediments theory, which considers market and production impediments in foreign market acquisition, including customisation of market promotion (often required due to unique customer preferences) (Galbraith & Kay 1986; Levitt 1983) and unrealised expected scale economies from centralised production (Porter 1985). Cultural differences may also inhibit the utilisation of like technologies, or reduce their effectiveness (Porter 1990), as can management

practices that have been observed to vary around the world (Porter 1990; Schneider & De Meyer 1991). Palich, Carini and Seaman (2000) included foreign market diversification, company size, debt level, and revenue stream diversification in foreign market acquisition in their study. Differences in ROA, return on sales (ROS), market returns (market-to-book value), and total risk for single and multi-revenue stream diversification were tested using multivariate analysis of covariance (MANCOVA). This analysis demonstrated no significant differences for single or multi-revenue stream diversification, although company size and level of debt emerged as significant factors in performance after acquisition. The findings provide support for international impediments theory, demonstrating that whilst single revenue stream acquisition in the domestic market may lead to greater performance after acquisition than multi-revenue stream acquisition, this generalisation may not transfer to foreign market cases.

Acquisition motives that can be categorised as purely financial are bankruptcy, tax avoidance and cost of capital reduction. The economics literature (Jensen & Meckling 1976) suggests acquisition justification exists when there is a probability of bankruptcy since the risk is reduced and debt capacity increases after acquisition. Makamson (2010) found investors of failed businesses used the reverse takeover (an acquisition of a publicly traded firm by a private business) to provide an exit strategy in order to sell shares and raise capital. Since interest charges are tax deductible, the company that borrows to fund an acquisition may reduce its tax liability. Unless there is a significant probability of bankruptcy or tax liability reduction, it is likely the financial benefit of acquisition is minimal once the associated costs are considered. Acquisition may increase a company's market power, thereby reducing its cost of capital (Chatterjee 1986; Singh & Montgomery 1987).

Bondholders may benefit from acquisition because assets of acquired businesses offer co-insurance (Higgins & Schall 1975). Amit and Livnat (1988) speculated that if the total operating cash flows after acquisition remain unchanged and bondholder post-acquisition wealth increases, there must be a decrease in shareholder value.

The next sections discuss regulatory constraints and technology intensity as motives for management to execute multi-revenue stream or foreign market acquisition.

2.5.1.1 Regulatory Constraint and Technology Intensity

In today's business environment, companies face considerable regulatory constraint due to government attempts to promote competition; this is more prevalent in specific industries such as banking, gaming, telecommunications and utilities. Whilst the diversification literature has largely ignored the issue of regulatory constraint, its importance is clear in the finance literature (Campa & Hernando 2004). Australian gaming company Tabcorp suffered integration delays after acquisition due to legislative restrictions; this is one example in which the cost reduction from expected synergistic gains was not realised as scheduled (AAP 2006). The ACCC administer Section 50 of the Australian Trade Practices Act (Commonwealth 1974) which lists the factors that the commission considers relevant in its determination on acquisition submissions. These factors include issues relevant to authorisation (exemption) and enforceable undertakings (ACCC 1999, 2008). A section 50 breach occurs if an acquisition is assessed as likely to substantially lessen competition in a market for goods or services in a state or territory of Australia. This implies any company demonstrating significant market power would not receive approval for any domestic acquisition in the same revenue stream, hence regulation can be an influence on acquisition strategy choice.

In assessment of anti-competitive behaviour, the ACCC follows the process depicted in Figure 2.1 (ACCC 1999, p21), where each stage requires the collection and analysis of additional and increasingly complex data. At any stage, it may rule that an acquisition will reduce competition and hence oppose the proposal. The first step requires defining of the market in which the company would operate in terms of its product, functional, geographic and time dimensions. Market power is assessed to determine if the acquisition will give the four (or fewer) largest companies (CR4) a combined market share of 75 per cent or more and whether the merged company will supply at least 15 per cent of the relevant market. If either outcome is likely, or if after acquisition the company will supply 40 per cent or more of the market, the commission will consider the submission further to determine its probable effect on competition. These thresholds reflect concerns about the potential exercise of coordinated market power and unilateral market power. Next, consideration of the level and nature of import competition establishes whether imports provide, or are likely to provide, a competitive constraint on the company post acquisition — in particular, whether import competition will be adequate to prevent the exercise of

domestic market power after acquisition. Where import competition is not considered, i.e. an effective competitive market, further consideration is required to assess the likelihood of new entrants establishing themselves in the market on a sufficient scale, within a reasonable period of time, to inhibit the exercise of market power by the acquiring company. Without a likely outcome of effective entry by other competitors, indicators of market structure and conduct that impinge on the likely competitive impact of an acquisition are considered.
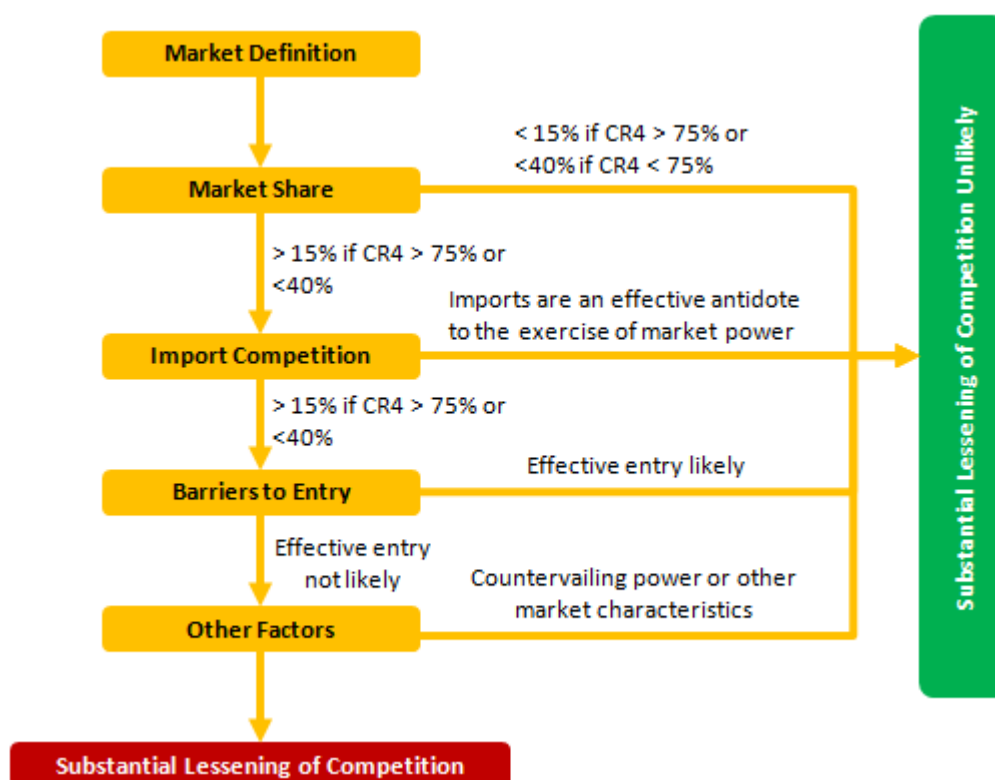
Figure 2.1: The ACCC's Substantial Lessening of Competition Determination Process

If the market has low barriers to new entry, the threat of competition is likely to constrain incumbent companies to behave in a manner consistent with competitive market outcomes. If there are significant barriers to the entry of new suppliers, an increase in market concentration to levels above the ACCC's thresholds, in the absence of significant import competition, is likely to give rise to a substantial lessening of competition. To the commission, barriers to entry are any features of a market that place an efficient prospective entrant at a significant disadvantage compared with incumbent companies. These may consist of sunk costs, legal or regulatory barriers, access to scarce resources

enjoyed by incumbent companies, economies of scale and scope, product differentiation and brand loyalty and the threat of retaliatory action by incumbents. Sunk costs are those unrecoverable on exit, creating a risk of entry; the extent depends on factors including source of capital, market development status in terms of equipment rental, and requirements for investment in advertising and promotion. Legal and regulatory barriers including licensing requirements, planning or environmental controls and industry standards may directly limit the number of competitors in a market, or may add to the sunk costs of entry through specific capital requirements. Only the first step in the ACCC's determination process utilises quantified tests, therefore it is impractical for any research to consider subsequent steps in its market dominance categorisation. It is also assumed that company management act rationally and utilise these criteria in their own viability assessments prior to submitting acquisition proposals.

In consideration of the present study's generalisability, worldwide differences in merger and acquisition regulation were required. Canadian merger law, policy and enforcement guidelines (Green 1993) employ a CR4 threshold of 65 per cent, with a company's market share threshold at 10 per cent after acquisition, and a single company market share threshold of 35 per cent. The United States Department of Justice and Federal Trade Commission's Horizontal Merger Guidelines (Meuller 1993) employ the Herfindahl-Hirschman Index (HHI) instead of the CR4, and they examine proposed acquisitions in which the post-acquisition CR4 would be above 75 per cent and single company market share 35 per cent. The New Zealand Commerce Commission's Guidelines employ a 40 per cent market share threshold under a dominance test (ACCC 1999).

Whilst strategic management researchers have largely ignored the impact of regulatory constraint on acquisition strategy, its importance has been demonstrated empirically in the finance literature. Campa and Hernando (2004) considered 262 acquisitions by companies in the European Union for the period 1998–2000, with domestic acquisitions representing 69% of the sample. Regression analysis utilising the CAPM model, with β (see Mullins (1982) for an overview)calculated using data from 150 days prior to announcement, demonstrated a positive and significant cumulative abnormal return to target companies ranging from nearly 4% (t–1, t+1) to around 9% (t-30, t+30). They noted there is no single definition of a regulated industry as, at some level, all economic activity is regulated. Arbitrarily, they considered mineral industries, primary metal industries, transportation,

communication, electricity, gas, sanitary services and financial institutions as regulated industries in all member countries. Specifically, these industries correspond to two-digit Standard Industry Codes (SIC) (OSHA 2006): codes 10, metal ores and associated mining; 13, oil and gas; 33, metal smelting and fabrication; 40, rail; 44–45, sea and air transport; 48, telecommunication and TV broadcasting; 49, utilities; 60–61, banking and credit; and 80, medical. Campa and Hernando (2004) found that acquisitions in industries previously under government control, or still heavily regulated, generated lower value than the same announcements in unregulated industries. This low value creation in regulated industries became significantly negative when the merger involved two companies from different countries, primarily due to the lower positive return that shareholders of the target firm enjoyed upon the announcement of the merger. Campa and Hernando's (2004) findings have implications for prior research with a suggestion of the use of incomplete models, since, if a company's performance partially reflects its industry membership, it may also reflect the regulatory constraint of the industry.

Tsai and Wang (2008) examined the relationship between external technology acquisition and company performance for a sample of 341 Taiwanese electronics manufacturing industry members, for the period 1998 to 2002. Ordinary Least Squares (OLS) analysis using a dummy variable showed external technology acquisition did not provide a significant contribution to company performance. However, the positive impact of external technology acquisition on performance increased with the level of internal R&D effort. In contrast, Saji and Mishra (2012) found a positive relationship between technology acquisition and performance after acquisition. Suggesting a technology asset acquisition motive, Ruckman (2009) found a decrease in R&D intensity after acquisition for single revenue stream acquirers and an increase in multi-revenue stream acquirers. Arnand and Delios (2002) observed that technology-intensive industries have attracted disproportionate shares of foreign investment in the United States – a country with high R&D intensity levels. Similarly, industry specific studies (Shan & Song 1997) demonstrated that the probability of American biotechnology company acquisitions by foreign companies increases with the number of patents held. These findings suggest that technology-intensive industry members are more likely to execute foreign market acquisition to asset-seek upstream and downstream capabilities. Upstream capabilities include R&D activities (Caves 1996) to achieve or maintain competitive technological advantage and downstream capabilities include advertising and distribution (Anand &

Delios 2002). The presence of hard-to-copy capabilities and resources indicates a structurally attractive industry, hence high cost barriers to entry and an association with high profits (Porter 1980, 1981). The availability of technology-intensive industry targets offering the latest technology, advertising or distribution in the local market may be limited; therefore, normally risk-averse member companies of technology-intensive industries are also likely to execute foreign market acquisitions in the same revenue-stream when opportunities do not exist in the domestic market. This phenomenon may be more prevalent in countries, such as Australia, that exhibit R&D intensities lower than the Organisation for Economic Co-operation and Development (OECD) average (Tunny 2010).

The next section considers risk mitigation (as opposed to direct performance growth).

2.5.1.2   Risk Reduction

The definition of risk in financial theory differs to that in strategic management theory. To the former risk is "the probabilistic distribution of future market returns", and to the latter "subjective judgment of the personal and organisational consequences that may result from a specific decision or action" according to Bettis (1983 p.413). The acquisition literature defines three categories of risk reduction; systematic risk, unsystematic risk and total risk, with the latter representing the sum of unsystematic and systematic risk. Generally represented as beta (β), systematic risk is the sensitivity of a company's returns to overall market returns; it is a statistical measure of the relationship between two time series (Sharpe 1964). Unlike unsystematic risk, it cannot be highly mitigated as it reflects risks including overall economy changes and legal and regulatory constraints, tax and industrial relations.

The majority of the early research centred on systematic and management's own risk reduction as a motive for multi-revenue stream acquisition, with argument informed by portfolio and agency theories. Portfolio theory (Markowitz 1959) postulates that investors are easily able to mitigate themselves from systematic risk by holding a portfolio of stocks. As a result they gain no benefit from companies who similarly diversify with a portfolio of businesses: estimates indicate that holding a portfolio of 15 to 20 stocks is sufficient to achieve market performance (Bettis & Weeks 1987). In contrast, Amit and Livnat

(1988)argued that companies could benefit from multiple cash flows as these would reduce operating risk. In agency theory (Jensen & Meckling 1976),it is assumed that two parties to a relationship maximise their own interests, therefore in this context, company management do not always act in the interests of their shareholders. Managers are unable to diversify their personal risks (such as loss of position or professional reputation in capital markets), therefore, they have a tendency to execute multi-revenue stream acquisition in order to mitigate their employment risk (Amihud & Lev 1981).

Research has demonstrated that high levels of systematic risk are associated with multi-revenue stream acquisition. Montgomery and Singh (1984), utilising the market model, examined the relationship between diversification strategies and systematic risk. Using a subset of Rumelt's (1974) categories for diversification strategy for acquisitions, spanning the period 1973 to 1978, they conducted an ANOVA test with β compiled by a commercial source. Utilising a weighted market share index as an indicator of monopoly (market) power and depreciation to sales ratio for capital intensity, Montgomery and Singh (1984) noted that because monopoly power and capital intensity are multidimensional, proxies are difficult to find. Their results supported the association of higher systematic risk with low levels of monopoly power and high debt position, with no support found for the association between capital intensity and diversification categories. The systematic risk of multi-revenue stream diversification (using Rumelt's (1974) classification) was significantly higher than the average market risk, with debt position and low monopoly power appearing to contribute to this situation. The remaining Rumelt (1974) diversification categories approximated the average market risk. Three arguments suggest multi-revenue stream acquirers experience above average systematic risk from low monopoly power, low capital intensity and high debt position. Subrahmanyam & Thomadakis (1980) argued that acquirers diversifying into new revenue streams lack skills and knowledge in the new industry, which may put them at a competitive disadvantage, hence it is logical to assume that they would exhibit low monopoly power until industry knowledge increases. Regulatory constraint is more likely to prevent them simply acquiring a monopolistic position. It is also logical to assume low levels of capital intensity (the amount of capital per unit of labour input) since vertical integration is unlikely, therefore multi-revenue stream acquirers are unable to benefit from economies of scale. This also suggests a tendency for short-term return as opposed to long-term positioning requiring greater capital investment. Since the bargaining power of larger

companies typically means they experience reduced cost of debt, they are likely to increase their debt position thereby increasing systematic risk from market exposure.

Barton (1988) also examined the relationship between diversification strategy and systematic risk, extending the research of Montgomery and Singh (1984). Prior research, he noted, found a positive association between systematic risk variance with diversification category but it was unclear why the relationship existed. Barton (1988) utilised Rumelt's (1974) categories of diversification strategy and sample, plus an additional 143 acquisitions with independent variables of capital intensity, monopoly power and financial leverage. Since data was readily available, Barton (1988) used ROA performance as a proxy for monopoly power, whilst noting it does not proxy in all market situations and that ROA can also be influenced by market efficiency. An analysis of covariance (ANCOVA) model assessed differences in relationships among categories of strategy. Dummy variables for each strategy type were included plus interaction terms for all financial variables multiplied by the dummy variables, resulting in a total of twenty variables where the interactive terms added explanatory weight ($P < 0.05$). The results demonstrated a higher positive relationship between multi-revenue stream diversification and systematic risk than with other strategies, and that control of the financial context and the relationship between financial variables and systematic risk were dependent on a company's diversification strategy.

Lubatkin and Rogers (1989) extended the research further by examining systematic risk and return as a two dimensional construct with the Capital Asset Pricing Model (CAPM) using a multivariate analysis of variance (MANOVA) to simultaneously account for corporate diversification on risk and return. They noted that prior research had not considered the trade-offs between risk and return, adding that execution of an acquisition strategy can achieve objectives that may result in a decrease in risk and return. This would not create value for shareholders but does for risk-averse advisors of shareholders. ANOVA and Scheffé multiple range models were utilised to test the importance of the two dependent variables, and Chi square tests compared the distribution of strategy types across the range of the company's performance. Rumelt's (1974) categorisation of diversification strategy and sample of companies was utilised with additions covering the 1950s and 1960s, as this avoided the turbulent periods of the 1970s to mid-1980s resulting from the US energy crisis. This suggests that the proposed models were not considered

generalisable across differing market conditions. The final 40 to 60 months of each decade of study were included as they were considered sufficient to capture the long-term strategy effects. Lubatkin and Rogers (1989) noted that many company events are expected to contain information about company strategy, however, many contain extraneous event information. They claimed this did not invalidate the use of the CAPM a or β variables as these were captured systematically within large samples, to the extent that a strategy effect was measurable. The findings compliment those of Montgomery and Singh (1984) and Barton (1988), indicating that execution of constrained acquisition type strategies (Rumelt 1982) can achieve a reduction in risk that shareholders cannot achieve by themselves.

Unsystematic risk is unique to the individual company and is independent of the risk that affects all companies in a portfolio (Lintner 1965). Examples include fire in the company's manufacturing plant, targeted extortion and labour strike. Portfolio theory (Markowitz 1959) suggests that investors can mitigate unsystematic risk through diversification of their portfolio; 15 to 20 stocks will all but eliminate this risk (Bettis 1983). It is logical to assume, therefore, that investors do not a consider unsystematic risk during their valuation of a company, and in turn suggests company management would not be concerned with this type of risk. In contrast, behavioural-based theory within risk literature (Merkley 2001) hypothesizes that investors make judgments from within their own frame of reference that can include quality assessment of company management.

Strategic management literature explains changes in risk exposure from less tangible sources. Single revenue stream acquisitions provide for further specialisation through intellectual property gains, like product extension, manufacturing and distribution not available with multi-revenue acquisitions (Lubatkin 1983). This in turn leads to reduced costs and scale and scope economies (Levitt 1983) where gains are achieved through increased monopoly power by influencing cost of inputs or outputs (Moyer & Chatfield 1983). Another source of risk is the exploitation of multi-point competition that occurs when rival companies compete in more than one industry; industry linking occurs from actions in an industry that may have impacts in another (Porter 1985). Williamson (1975) speculated that better placed company management are able to allocate capital with least risk for maximum return compared to external capital suppliers with limited company information.

Lubatkin et al. (2003) state that compared with other risk types, such as CAPM's β, total risk is more closely aligned with the assumptions of strategic management that recognises risks are unique to each company. Empirical research within the finance literature (Bar-Yosef & Brown 1977) and management literature (Bellamy & Lewin 1992; Bettis & Weeks 1987) has demonstrated that a company's total risk changes upon announcement of a proposed acquisition.

2.5.2   Market Cycle and Trend

Previous researchers (Barton 1988; Lubatkin & Rogers 1989) observed differing economic conditions during the period of their investigations. Lubatkin and Chatterjee (1991) suggested this phenomenon offers partial explanation for result inconsistencies and that no prior diversification research had considered the macro-economic condition. It is logical to assume investors adjust their expectations of risk and return as these conditions change. Therefore it is important to distinguish between trend and cycle. The study of Lubatkin and Chatterjee (1991) tested the hypothetical relationship between shareholder return and diversification strategy across three market cycle types in contiguous periods. In this context, trend is the long-term direction of an economic time series, such as Gross Domestic Product (GDP) or the Australian Stock Exchange (ASX) All Ordinaries Index. A cycle is a fluctuation in the long-term trend that may overstate (bull market), understate (bear market) or follow a trend (stable market). For example, investors and management are likely to be more risk averse in a bear market than a bull market due to uncertainty and perception of limited growth opportunity.

During a bear market, companies face reduced cash flow, fewer growth opportunities and uncertainty of future cash return. With potential returns carrying a higher amount of risk in this environment, more heavily discounted returns are expected. This in turn reduces the market value of a company and raises its cost of capital, leading to reduced investment from risk-averse management. In this environment, it is logical to expect management to diversify business into multiple revenue streams to mitigate their risk (Lubatkin & Chatterjee 1991; Lubatkin & O'Neill 1988). Nevertheless, they may also execute single revenue stream acquisition in a foreign market for protection against the macro-economic climate. Each cyclical period influences investors differently. During a bull market, shareholders are less risk-averse advocating growth strategies for added return.

Conversely, in a bear market environment shareholders become sceptical of growth strategies and are hence more risk-averse and more likely to scrutinise management. Stable markets, those that follow the trend, are a mid-range position between bull and bear markets and are inherently less uncertain. The supply of inputs and demand for outputs are more predictable in a stable market, therefore more accurate forecasting is possible.

Applying a subset of Rumelt's (1974) diversification strategy classification, Lubatkin and Chatterjee (1991) created five categories of acquisition: single business, dominant vertical, constrained, linked and unrelated. Using a model of risk and return, estimated over the final 150 days of a cycle as the dependent variable, they tested a sample spanning 1968–1980 utilising acquisition data from prior research. Trend, market cycle, capital intensity, leverage and size were included as independent variables. Their intent was to add control for longitudinal patterns that may be present, in addition to the known cyclical patterns. Three nominal categories of bull, bear and stable represented the types of market cycle. Nine examples were identified, constituting three of each cycle for the period under investigation. Capital intensity, previously shown to correlate significantly with Rumelt's (1982) diversification categories (Barton 1988), was represented by the ratio of average value of fixed net assets to total book assets for the reporting year. Leverage was derived from the book value of a company's long term debt divided by the book value of its total assets for the reporting year, whilst size was represented by total assets as reported for the year most closely matching the last month of the cycle. MANCOVA indicated that investors appeared to value low-risk companies during the period of study, a period they considered to be turbulent with increasing inflation and decreasing growth opportunities. Lubatkin and Chatterjee's (1991) results demonstrated strong support for differences in shareholder return over strategy categories and cyclical periods. A series of logistic regressions contrasted the effects of strategy within and across cycles: findings indicated that the levels of systematic risk and abnormal return for both bull and bear markets were not significantly different, holding other influences constant. Related strategies were found to be significantly associated with higher levels of capital intensity, lower levels of leverage and lower levels of risk, irrespective of market cycle. Suggesting that investors are not concerned with strategy type, Jensen's alpha (Jensen 1969) was found not to discriminate between single or multi-revenue stream acquisition in either bull or stable markets although, during bear cycles, alphas were significantly higher for single stream acquisitions than multi-stream acquisitions.

The research of Lubatkin and O'Neil (1988) analysed mergers between companies of value in excess of USD10 million, which had been listed on the New York Stock Exchange (NYSE) for 67 months prior to the acquisition month and had not participated in another acquisition for at least 6 years prior to the merger. The sample included 80 bear market and 134 bull market acquisitions, and the research found that the acquiring company's abnormal return increased significantly more in a bull market. Only multi-revenue stream acquisitions increased the shareholder value of the acquiring company in bear markets. Horizontal acquisitions produced insignificant returns in bull markets and, regardless of market context, single and multi-revenue stream acquisitions produced similar returns.

A methodological issue arises with the inclusion of trend and cycle where the event horizon must be small to capture the cycle effect. For example, Lubatkin and Chatterjee (1991) used 150 days in their analysis whereas companies tend to embark on a strategy of multiple acquisitions across longer periods. Unless performance after acquisition is measured in terms of years thereby allowing extraneous events to be included, the acquisition impact may not be fully captured.

2.5.3   Pre-Acquisition Characteristics

A small body of literature has evolved concerning the influence of a company's characteristics before acquisition on its performance after acquisition. Some researchers (Bettis 1981; Bettis & Hall 1982; Christensen & Montgomery 1981; Lecraw 1984) have speculated that a company's industry performance prior to acquisition may influence its performance afterwards. In an attempt to show that single revenue stream diversification delivered better performance than multi-revenue stream diversification, Bettis and Hall (1982) observed that the four best performing companies in their sample were members of the same industry. Whilst this suggests industry performance is a factor for consideration, these companies skewed the expected results and were therefore removed from their sample. Similarly, Philips (1976) speculated that a company's performance prior to acquisition may influence its performance after acquisition.

Park (2002; 2003) considered the influence of industry and company performance before acquisition on performance after acquisition using a sample of US domestic acquisitions

greater than USD10 million from the period 1974 to 1979. He hypothesised that management's motive for single revenue stream versus multi-revenue stream diversification was influenced by the pre-acquisition performance of their company, where managers of high-performing companies are more risk-averse than managers of low-performing companies. He based this assumption on the application of prospect theory (Kahneman & Tversky 1979; March & Shapira 1987; Trepel, Fox & Poldrack 2005) which suggests that decisions are made without advance knowledge of their consequences, therefore, the perceived level of risk is dependent on the level of subject knowledge of the individual. MacCrimmon and Wehrung (1986; 1990) offer empirical support for this assumption, finding that individuals in positive environments are more risk-averse than those in negative environments. If managers of high-performing companies are risk-averse, they are likely to adopt a conservative approach to acquisition and since they are likely to have greater knowledge of their industry, execute single revenue stream acquisition. Similarly, they are likely to possess a greater knowledge of their domestic market and are hence more likely to execute domestic acquisition in preference to acquisition in a foreign market.

Industry structures evolve from internal and external influences creating differing levels of rivalry and collective profitability. Economists (Porter 1981) have adopted the term *structurally attractive* to represent an industry with high-profits that is generally associated with high entry costs (for example, the mining industry). Following Rumelt (1974) and Weston and Mansinchica (1971), Park (2003) postulated that since a structurally unattractive industry is associated with low profits, management is more likely to execute acquisition in an another revenue stream to improve prospects. Conversely, management of companies in structurally attractive industries are more likely to execute acquisition in the same revenue stream in an attempt to maintain the market position. However, Park (2003) did not consider acquisitions made in foreign markets, which, following coinsurance theory (Michel & Shaked 1984), may offer some protection against domestic industry downturn and local currency devaluation. Therefore, management of structurally unattractive industries may choose to execute foreign market acquisition if they perceive domestic acquisition to be a riskier proposition or if the foreign market appears more attractive in terms of industry performance and currency exchange. Management of structurally attractive industries may execute foreign market acquisition when

opportunities to increase their revenue stream do not exist in the local market or regulatory constraints prevent them creating a monopolistic position in the domestic market.

As this research extends the work of Park (2003), this review includes hypothesised relationships, analysis technique and detailed examination of the utilised variables for possible reuse in this study. Park's (2003) analysis utilised logistic regression with acquisition strategy as the dependent variable and industry and company performance prior to acquisition (measured as three-year average returns for all companies in an industry and three-year average profitability prior to acquisition) as independent variables. Industry and company performance were converted to profitability premium measures (Rumelt 1977) to eliminate fluctuations in general economic variability. The tested models included diversification extent (number of revenue streams) prior to acquisition, resource availability, company size and total risk as control variables. The diversification extent variable was proxied by counting the number of industry groups from which the company reported revenue for the year prior to acquisition (Amburgey & Miner 1992). Park claimed that resource availability (the resource capability above that required to complete the work) was positively related to risk-taking behaviour since resources are available to quickly take mitigating actions upon risk realisation and the legitimacy of risk-taking is less likely to be questioned (Singh 1986). Park (2003) hypothesised multi-revenue stream acquisition to be riskier than single revenue stream acquisition, therefore, resource availability was more positively related to multi-revenue stream acquisition. Resource availability was measured by summing the z scores of current assets divided by current liabilities and current total equity divided by total long-term debt. Company size prior to acquisition was postulated to be positively associated with acquisition made in the same revenue stream, as organisational complexity and formalisation tends to increase with company size creating resistance to change (Wiersema & Bantel 1993). Following prior research (Hall & Weiss 1967), company size was measured as the reciprocal of the natural logarithm of the acquirer's assets one year prior to acquisition. Since high risk was hypothesised to be associated with acquisition in another revenue stream, pre-acquisition risk, the variation of return prior to acquisition, was also included. This was measured by "accounting determined risk," that is, the variance of ROA for the three years prior to acquisition.

Park (2003) found that a company's performance after acquisition was significantly and positively associated with its performance before acquisition, suggesting the use of incomplete models by prior relatedness research (Miller 2006) that did not include control for performance prior to acquisition. Further, companies executing acquisition in the same primary revenue stream were more profitable within their industry and members of more profitable industries prior to acquisition. The diversification extent (number of revenue streams) prior to acquisition was significantly and negatively related to the choice of acquisition in the same revenue stream against acquisition in another revenue stream. This showed that companies were likely to repeat their prior acquisition behaviour, with companies that made single revenue stream acquisition in the past making another acquisition in the same revenue stream, and with prior multi-revenue stream acquirers repeating this behaviour. Park (2003) also demonstrated a positive relationship between company size before acquisition and acquisition in the same revenue stream, and a negative relationship between risk before acquisition and acquisition in the same revenue stream. Resource availability before acquisition was found to be positively related to multi-revenue stream acquisition, but not statistically significant.

2.6   Summary

This chapter reviewed diversification and related literature in order to facilitate statement of the research problem. Shortcomings from both a knowledge and methodological perspective were identified in the literature, and the review provided a basis for enhancement of both testable and replicable findings of prior research. The identification of a substantial body of work on diversification also demonstrated the relevance and significance of the topic within the strategic management community.

The review first provided background to the problem then identified two main streams of diversification performance research within the strategic management field. In this context, diversification is resultant of acquisition as opposed to organic growth. These attempted to establish a link between diversification of revenue streams and performance after acquisition. The most dominant stream, *event studies*, employed market based performance measures typically involving cross sectional time-event studies. The second

stream, *existing business*, employed accounting based performance measures in consideration of the relationships between diversification strategy and economic performance. Recent meta-analyses indicate that models remain incomplete with a 35-year record of inconsistent results. Due to the cross-sectional nature of these studies it remains unclear whether the acquisition strategy influenced performance, or vice versa. The majority of earlier studies did not consider foreign market acquisition; research that is more recent suggests reduced performance with an acquisition made in a foreign market from production, technology, market and cognitive operational impediments whilst evidence also suggests performance protection against industry and currency cycle fluctuations. In addition, the review found that industry specific attributes, including regulatory constraint and technology intensity, may have partially explained performance differences. A small research stream was identified that offered an alternative explanation for performance difference suggesting that a company's performance after acquisition may be a reflection of its performance before acquisition in domestic acquisition cases.

The next chapter develops a conceptual framework for the research, prior to formulation of hypotheses, in order to examine the attributes of a company prior to acquisition that explain that company's performance after acquisition.

Chapter 3

CONCEPTUAL FRAMEWORK

3.1   Introduction

Reichel and Ramey (1987) described a conceptual framework as a set of broad ideas and principles taken from relevant fields of enquiry used to structure a subsequent presentation; Guba and Lincoln's (1989) definition is of conceptual framework as a research tool intended to assist a researcher to develop awareness and understanding of the situation under scrutiny, and to communicate this. Subject to scrutiny and testing, the framework itself is reviewed and reformed after any research. In the research described in this thesis, a framework was utilised as a tool to support the research and assist the researcher to make meaning of subsequent findings, thereby creating a starting point for reflection about the research and its context. It also aided identification of variables influential to the research, provided determination of why these variables are important, indicated how they should be utilised to solve the research problem (Sekaran 1992) and derived hypotheses for later testing. The conceptual framework was informed by a metacognitive approach (Jonassen 1996) from review of the existing body of literature leading to development of the framework, followed by research design. The limitations of the framework were also considered, key among them the experiences and biases of the developer (Smyth 2004) and data collection, where all applicable data might not be analysed (Miles & Huberman 1994).

3.2   Relationship Model

Development of the framework evolved from identification of acquisition strategies categorised as *related* and *unrelated*. The former involves acquisition of a target company primarily operating lines-of-businesses related by revenue stream to that of the acquirer. The latter involves acquisition of a target company primarily operating lines-of-business unrelated by revenue stream to that of the acquirer. This led to identification of a major body of research, which hypothesises that acquisition in the same revenue stream leads to superior performance from operational synergies not available to acquirers of target companies in an unrelated revenue stream.

Two main research streams were identified: *event studies* and *existing business*. Both seek to explain performance differences for categories of diversification through introduction of moderating effects to the relatedness theory (Miller 2006) model, with event studies typically utilising market-based measures whilst existing business studies use accounting-based measures. Evidence from recent meta-analyses (King et al. 2004; Palich, Cardinal & Miller 2000) indicates that the models remain incomplete and that, at best, only limited support for a relationship between revenue stream diversification and performance after acquisition has been demonstrated. Key theories and findings explaining inconsistent results include hubris (Roll 1986), managerialism (Amihud & Lev 1981; Marris 1964; Seth 1990), international impediments (Palich, Carini & Seaman 2000), market cycle (Lubatkin & Chatterjee 1991), alliance level before acquisition (Zaheer, Hernandez & Banerjee 2010), payment type (Datta, Pinches & Narayanan 1992; Travlos 1987, Barbopoulos & Sudarsanam 2012), due diligence (Wangerin 2011) and pre-acquisition performance (Park 2003). As noted previously, the hubris theory postulates that management incorrectly values the target and unknowingly pays above the market rate, whereas managerialism postulates that this occurs knowingly. International impediments theory posits that relatedness theory (Miller 2006) cannot be generalised to foreign-market acquisition due to market and production impediments that are not present in the domestic market. Market cycle theory suggests the general economic climate partially contributes to performance after acquisition, with acquisition in another revenue stream delivering superior performance in bear (downward moving) markets. Alliance level theory asserts that a decrease in performance exists after acquisition in foreign market cases when the

acquiring and target company have a hostile relationship. Payment type research has demonstrated that acquisitions made using cash payments result in superior performance compared to those made with stock. Park (2003) found that a company's performance after acquisition in domestic cases was a partial reflection of its industry and company performance before acquisition.

Considered next, management's motives for acquisition were broadly categorised as growth, pure financial and risk mitigation. The purpose of growth is to extend or mitigate against otherwise declining operations of the company for performance gain by acquisition. Pure financial motives include bankruptcy avoidance (Jensen & Meckling 1976), cost of capital reduction from increase in monopoly (market) power (Chatterjee 1986; Singh & Montgomery 1987) and bondholder benefits (Higgins & Schall 1975). The final category, risk mitigation, applies agency theory (Jensen & Meckling 1976) that postulates two parties to a relationship maximise their own interests. In this context, through execution of acquisition into other revenue-streams, management may mitigate their personal risk exposure, such as loss of position or professional reputation. A reduction of systematic risk is anticipated from multiple cash flows as informed by portfolio theory (Markowitz 1959), based on the premise "do not put all of your eggs in one basket."

With particular emphasis on providing a motive for foreign-market acquisition, special cases of high technology industry membership and regulatory constraint were included in the present study. Asset seeking, high-technology industry members may execute foreign-market acquisition to acquire the latest technology in order to maintain competitive advantage (Tsai & Wang 2008). Government regulation may force market dominant companies to execute foreign-market acquisition in the same revenue-stream. Another motive for foreign-market acquisition is informed by coinsurance theory within finance literature (Michel & Shaked 1984). This postulates mitigation against revenue cycle fluctuations, for example industry market cycle and currency.

Lastly, following Park (2003), consideration is made of the influence of pre-acquisition industry and company performance on post-acquisition domestic performance. Prospect theory (Kahneman & Tversky 1979; March & Shapira 1987; Trepel, Fox & Poldrack 2005) advocates that decisions are made without advance knowledge of their

consequences. Therefore, the perceived level of risk is dependent on the level of knowledge that the individual possesses on the subject. Applying this, management of high-performing companies before acquisition are more risk averse than management of low-performing companies, hence execute acquisition in the same revenue stream.

3.3   Hypotheses

3.3.1   Hypotheses Definitions

This section provides the theoretical argument with the support of prior empirical research which has lead to the development of hypotheses. The current research examined eight hypothetical models with the first replicating prior research in demonstration of support for relatedness theory (Miller 2006), using a recent sample of Australian listed company acquisitions. This was included to demonstrate appropriateness of the data and appropriate methodology application. Subsequent hypotheses examine models of pre-acquisition and post-acquisition company performance. These include characteristics of company and industry performance, acquisition size, organisational model, total risk and regulatory constraint. This analysis is intended to demonstrate the methodological limitations of prior research by addition of appropriate controls and alternate models and provide causal explanation for company performance difference for categories of diversification by acquisition.

3.3.2   Hypothesis 1 – Relatedness Theory

Using a recent sample of acquisitions by Australian listed companies acquisitions, this hypothetical model replicates earlier research, attempting to demonstrate support for relatedness theory. The existing business research stream utilising accounting based measures (like this research), provides more consistent support for relatedness theory than research using time-event studies (Amit & Livnat 1988; Bettis 1981; Bettis & Hall 1982; Christensen & Montgomery 1981; Rumelt 1974; 1982). The purpose of this replication of research was two-fold. First, to demonstrate relatedness theory support using a recent sample from differing economic times, thereby indicating generalisability and sample integrity. Second, it provides a baseline for later elimination through demonstration of an incomplete model.

Relatedness theory (Miller 2006) hypothesises that when a company takes controlling interest in another company in the same primary industry, comparatively better performance is achieved than that of an acquisition from another industry. The performance gain is attributed to resulting synergistic alignment where, the literature suggests, operational synergies may only be available to acquirers of a target company operating in the same revenue stream. Operational synergies are purported to occur with scale economies, that is, where the cost of joint production is less than that of individual production and output synergies, such as R&D, manufacturing, marketing and distribution, may be realised through consolidation of businesses (Chatterjee & Lubatkin 1990; Rumelt 1974; Salter & Weinhold 1978). Consumers may also see value from interoperability and ease of support when a company offers complementary products (Porter 1985). Financial synergies, such as the purchasing power of raw materials or products, in turn create a better competitive position. Likewise, market power, or even monopoly power, of a consolidated company may also improve its long-term competitive position within its chosen market (Porter 1985). This may result from the size of the company in that it may be a deterrent for any potential entrant into the industry. Cheaper access to capital (Grossman & Stiglitz 1976) and cross subsidisation of product and predatory pricing may be available to enhance market share and ultimately profitability (Amit & Livnat 1988; Bettis 1981; Chatterjee & Lubatkin 1990; Rumelt 1974). Therefore, to demonstrate suitability of data and appropriate application of the methodology in replication of previous research:

Hypothesis 1:   Companies demonstrating high post-acquisition ROA are more likely to have executed acquisition in the same revenue stream.

3.3.3   Hypothesis 2 – Pre-Acquisition Performance and Acquisition Strategy

This hypothesis considers the motives of management for domestic as opposed to foreign-market acquisition execution, based on the pre-acquisition performance of the company.

Park (2003) speculated that a company's pre-acquisition performance affects both its ability and motive to pursue an acquisition since a company has no motive to pursue

acquisition opportunities when that company is profitable and has good prospects. In contrast, Grant, Jammine and Thomas (1988) found that high-performing companies pursued more acquisitions than low-performing equivalents. This led Park (2003) to consider risk taking behaviour, using prospect theory as a possible explanation for the effect of pre-acquisition performance on the motive of management to execute acquisition in the same revenue stream versus an unrelated revenue stream. Prospect theory (Kahneman & Tversky 1979; MacCrimmon & Wehrung 1986; 1990; March & Shapira 1987; Trepel, Fox & Poldrack 2005) hypothesises decisions are made without advance knowledge of their consequences, therefore the perceived level of risk is dependent on the level of knowledge that the individual has on the subject. This in turn, suggests individuals in positive environments are more risk averse compared to those in negative environments who are more risk accepting. It is logical to assume that company management possess greater knowledge about their industry in terms of market, technology, and directional development in contrast to other industries (Govindarajan 1989; Gupta 1984) and likewise a greater level of knowledge about their domestic market. It follows that managers are more risk averse in high profit companies than are their counterparts in lower-profit companies as simply they have more to lose. Therefore, they would perceive acquisition in the same revenue stream as less risky than acquisition in an unrelated revenue stream, given their industry knowledge. This leads to the conclusion that managers in high-profit companies are more likely to execute acquisition in the same revenue stream as opposed to acquisition in an unrelated revenue stream, with the reverse true for lower-profit companies. Motives for acquisition, however, will almost certainly differ when company management execute foreign-market acquisition strategies.

Hisey and Caves (1985) argued that risk mitigation is the key motive for pursuing foreign-market acquisition in the same revenue stream because the risk averse manager still faces the same industry risks in the domestic market. Grant (2003) speculated that motives for pursuing foreign market acquisitions include exploitation of intangible assets that may include technological know-how, R&D, brand name ownership and managerial competences. Such assets are generally associated with superior performance, as opposed to risk reduction, and would appear to be industry dependent. As did Park (2003), this research assumed that managers possess greater knowledge about their industry compared with other industries and acquisition into another revenue stream may represent a greater strategic change, therefore they perceive acquisition as less risky. Added to this it also

follows that they possess greater knowledge about the domestic market and will hence perceive foreign-market acquisition as more risky. Given this argument, management of high-performing companies will be risk averse as they have more to lose. It follows that they are more likely to execute domestic acquisition in their industry as opposed to another industry or into a foreign-market. Conversely management of low-performing companies with less to lose, will be more risk accepting and therefore more likely to execute domestic market acquisition in another industry or in a foreign market, hence:

Hypothesis 2:   a) Companies demonstrating high pre-acquisition ROA are more likely to execute domestic-market acquisition within the same revenue-stream.

b) Companies demonstrating low pre-acquisition ROA are more likely to execute domestic-market acquisition into other revenue-streams.

3.3.4   Hypothesis 3 –Post-Acquisition Company ROA and Foreign-Market Acquisition

In contradiction of the speculation above in hypotheses 2a and 2b, where performance before acquisition influences the choice of executed strategy and thus performance after acquisition, hypothesis 3 speculates that performance after acquisition is an in-part reflection of industry and company ROA prior to acquisition (Park 2003). Further, a decrease in performance exists in foreign-market acquisition cases, as a result of operational impediments.

One stream of research has examined the influence of company performance on diversification (Grant, Jammine & Thomas 1988; Weston & Mansinchica 1971) whilst others (Christensen & Montgomery 1981; Lecraw 1984; Schmalensee 1989) speculated on the influence of industry performance on diversification. Rumelt (1982) first replicated, then extended his earlier research (Rumelt 1974) using a larger sample and adding control for industry effect. The results showed that approximately 21% of variance between diversification strategies was attributable to industry effect. Bettis (1981) found that companies who are members of structurally attractive industries tend to be more profitable prior to acquisition, leading him to speculate that they are more likely to pursue acquisition

in the same revenue stream. Park (2003) examined the influence of performance before acquisition, finding a significant positive relationship between industry and company performance before acquisition and performance after acquisition in domestic acquisition cases.

Finance literature has demonstrated empirical support for comparatively lower performance after foreign-market acquisition. Dennis, Dennis and Yost (2002) attribute this phenomenon to increased costs whilst Moeller and Schlingemann (2005), to the level of shareholder rights and regulatory constraint in the target country. Strategic management literature has attempted, using international impediments theory (Palich, Carini & Seaman 2000), to explain a post-acquisition foreign-market reduction of performance as a result of market, production and cognitive impediments not present in the domestic market. Market impediments include customisation of promotion that is often required due to unique customer preferences in differing markets (Galbraith & Kay 1986; Levitt 1983). Production impediments include unrealised expected scale economies from centralised production (Porter 1985) and cultural differences that may inhibit like technologies being utilised or reduce their effectiveness (Porter 1990). Cognitive impediments include alliance level (Zaheer, Hernandez & Banerjee 2010) and differences in management practices that have been observed to vary around the world (Porter 1990; Schneider & De Meyer 1991).

If performance before acquisition is a significant contributor to performance after acquisition in domestic acquisitions (Park 2003) and a foreign-market reduction in ROA applies (Denis, Denis & Yost 2002; Moeller & Schlingemann 2005) it can therefore be hypothesised:

Hypothesis 3: Companies demonstrating high pre-acquisition ROA executing domestic acquisition demonstrate higher post-acquisition ROA than foreign-market acquisition equivalents.

3.3.5　Hypothesis 4 – Structurally Attractive Industries, Lines of Business and Pre-Acquisition ROA

Hypothesis 4 considers a company's pre-acquisition organisational model and its industry membership as opposed to the executed acquisition strategy of hypothesis 2. Previous research has considered the executed strategy or the extent of diversification, not the change in extent of diversification. A diversified company with foreign-market operations executing a related domestic type acquisition, for example, may reduce its exposure to foreign-markets markets but it is most likely to retain its "foreign-market diversified operations" status.

Industry structures evolve from both internal and external influences creating different levels of rivalry and profitability. Industry structure, described in terms of its key attributes, may include concentration and entry barriers, of which advertising, R&D and capital intensities are determinates. This is because such factors affect, amongst others, economies of scale, capital requirements, product differentiation and switching costs of the industry. Industry structure therefore influences not only the collective profitability of member companies, but also the collective behaviour. It follows that the attractiveness of the industry is therefore a reflection of its average profitability (Porter 1981).

Associated with high performance, a structurally attractive industry is also typically associated with high average advertising, R&D and capital intensities. Resulting from investments integral to the industry, member companies are more likely to have developed substantial capabilities and resources that may include patents, image, branding, marketing, supply chain or production expertise and technologies that are integral to the industry. Replication due to high costs and delivery within reasonable time limits are entry barriers to competition leading to high profit. Structurally attractive industries therefore indicate the presence of hard-to-copy capabilities and resources (Porter 1980). It is logical to assume that management of structurally attractive industries are motivated to retain single line-of-business operations to mitigate prospects of otherwise potentially reduced profits. It also follows that companies in structurally unattractive industries would be more prone to diversify operations, accepting more risk (Porter 1987).

Rumelt (1974)postulated that a key method to mitigate against exposure to declining profits within an industry, is through diversification. Therefore, management in a low-profit or structurally unattractive industry have a strong motive to improve the sustainability of the company by diversification into one or more other industries through acquisition or organic growth. Lecraw (1984) found that companies tend to pursue unrelated acquisition only when their existing capabilities are obsolete or insufficient to take advantage of synergistic opportunities. Companies in unattractive industries are not likely to execute unrelated foreign-market acquisition, since unrelated domestic acquisition offers less risk. The assumption here is that industry structures are comparable throughout the world and possible inducements for management would not provide sufficient gain to offset the risk. Influences include foreign Government incentives or revenue cycle smoothing as suggested by coinsurance theory (Michel & Shaked 1984) by way of currency fluctuation protection.

To summarise, since structurally attractive industries indicate the presence of hard-to-copy capabilities and resources (Porter 1980) they are associated with high profits. Diversification indicates mitigation against exposure to declining business within an industry (Rumelt 1974). Market, production and cognitive impediments result in a foreign-market operation discount (Denis, Denis & Yost 2002; Moeller & Schlingemann 2005). Therefore, single revenue-stream operational models are expected to produce higher performance and foreign-market operations are expected to produce lower profits compared to domestic models, thus:

Hypothesis 4: Single revenue stream companies operating solely domestically, who are members of structurally attractive industries, demonstrate higher pre-acquisition ROA than diversified lines of business or foreign-market operation equivalents.

3.3.6 Hypothesis 5 – Lines of Business, Regulatory Constraint and Post-Acquisition ROA

In contrast to hypothesis 4 that considers the extent of diversification before acquisition on performance before acquisition, hypothesis 5 considers the influence on performance after acquisition and speculates that unregulated industry member companies would

demonstrate higher performance after acquisition. Regulatory constraint imposed by Governments limits acquisition options in the domestic market, particularly acquisition in the same revenue stream. This may force establishment of foreign-market operations where, following hypothesis 3, reduced performance is expected.

Hypothesis 3, following Park (2003), asserts a positive relationship between acquisition industry and company performance before acquisition and performance after acquisition in domestic acquisition cases. Hypothesis 4 speculates that industry structure influences not only the collective profitability of member companies but also their collective behaviour, therefore the attractiveness of the industry is a reflection of its average profitability (Porter 1981). Structurally attractive industries indicate the presence of hard-to-copy capabilities and resources hence, demonstrate significant barriers to entry (Porter 1980). Whilst acquisition into another revenue stream may increase collusive market power, the specific market power decreases as the company becomes more highly diversified. The rationale, resources in this case are widely dispersed hence cannot be concentrated to a single market (Park 1995). With this lack of commitment, the diversified company is unlikely to establish key competitive positions in its individual markets leading to low performance. Management of incumbent member companies are therefore motivated to single revenue stream operations to mitigate potential negative impacts of reduced profit prospects from diversification.

In today's environment, companies face greater regulatory constraints in Government attempts to create a competitive market within specific target industries. Whilst no clear definition exists, these typically include banking, gaming, telecommunications, and utilities (Campa & Hernando 2004). Regulatory constraint may prevent members of these industries from executing acquisitions in the same revenue stream within the domestic market. The Australian Competition and Consumer Commission (ACCC) administer section 50 of the Australian Trade Practices Act (Commonwealth 1974). A breach occurs where an acquisition would have the effect, or be likely to have the effect, of substantially lessening competition in a significant market for goods or services in a state or territory of Australia. Market dominant members of structurally attractive industries are therefore more likely to operate related foreign-market operations. Whilst strategic management literature has largely ignored the impact of regulatory constraint on acquisition strategy, finance literature has empirically demonstrated its importance. Campa and Hernando

(2004) found that acquisitions in industries previously under Government control, or still heavily regulated, generated lower performance after acquisition than equivalents in unregulated industries. Hypothesis 3, following international impediments theory (Palich, Carini & Seaman 2000), speculates that a foreign-market reduction of profit as market (Galbraith & Kay 1986; Levitt 1983), production (Porter 1985), cultural (Porter 1990) and cognitive impediments (Porter 1990; Schneider & De Meyer 1991) exist with this type of diversification not otherwise present in the domestic market.

Since regulatory bodies consider the post-acquisition market share of any proposed acquisition, it follows that company management will also make the same consideration before executing an acquisition. Market dominant companies are therefore more likely to operate a single revenue stream model in foreign markets. They have little motive to operate multi-revenue stream models in foreign markets since they can achieve the same in the domestic market. As regulated industries are also structurally attractive, they are associated with high profits. Market, cultural and cognitive impediments suggest a foreign-market reduction of profit. Therefore, it can be hypothesised:

Hypothesis 5: Pre-acquisition unregulated single revenue-stream model companies operating solely in the domestic market demonstrate higher post-acquisition ROA than diversified revenue-stream or foreign-market operation equivalents.

3.3.7   Hypotheses 6a and 6b –Pre-Acquisition ROA, Market Dominance and Industry Membership

Hypotheses 6a and 6b propose that industry type membership influences the choice of strategy executed. Hypothesis 6a speculates high-performing, market dominant, regulated industry members are more likely to execute foreign-market acquisition. As the size of acquisition increases, domestic market opportunity reduces and regulatory constraint may prevent execution of domestic acquisition in the same revenue stream.

Extending Park (2003), hypothesis 2 considers management's risk taking behaviour using prospect theory (Kahneman & Tversky 1979; MacCrimmon & Wehrung 1986; 1990; March & Shapira 1987; Trepel, Fox & Poldrack 2005) as the possible explanation for the

effect of pre-acquisition performance on motive to execute acquisition in the same revenue stream or in an unrelated revenue stream. This advocates that individuals in positive environments are more risk averse compared to those in negative environments, who are more risk accepting. An assumption was made that company management possess greater knowledge about their industry in terms of market, technology and directional development in contrast to other industries (Govindarajan 1989; Gupta 1984) and likewise, a greater level of knowledge about their domestic market. Managers are more risk averse in high profit companies than are their counterparts in lower-profit companies as they have more to lose. It follows that given their industry and market knowledge they perceive domestic acquisition in the same industry to be the least risky compared with acquisition into another industry or foreign market.

Hypothesis 5 speculates that market dominant members of structurally attractive industries are more likely to operate a post-acquisition, single revenue-stream organisational model in foreign markets. This is because these industries are typically associated with regulatory constraint preventing members from executing acquisition within the same revenue stream in the domestic market. Given that there is no motive to execute foreign-market acquisition in another revenue stream, since the same can be achieved in the domestic market with less risk and regulatory constraint likely to prevent market dominant acquisition in the domestic market, it can be hypothesised:

Hypothesis 6a: Companies demonstrating high pre-acquisition ROA, market dominance and that are members of a regulated industry executing large acquisitions, are more likely to execute a foreign-market acquisition in the same revenue stream.

Hypothesis 6b speculates that high performing, market dominant and technology intensive industry members are more likely to execute foreign-market acquisition. Limited opportunities are expected to exist in the Australian domestic market for the acquisition of latest technology.

It has been observed (Anand & Delios 2002) that technology intensive industries have attracted disproportionate shares of foreign investment in America. Prior research (Shan & Song 1997) has demonstrated that the probability of an American biotechnology company

being acquired by a foreign company increases with the number of patents held. Such findings suggest that a technology intensive company is more likely to execute foreign-market acquisition to asset seek upstream capabilities, like R&D activities, in order to achieve or maintain competitive technological advantage (Caves 1996; Georgopoulos 2008; Tsai & Wang 2008). Members of structurally attractive industries are likely to be risk averse in order to protect the status quo, therefore executing domestic acquisition in the same revenue stream as foreign-market acquisition is considered riskier due to lack of country-specific knowledge of the target company by the acquirer. However, the availability of targets offering the latest technology, advertising or distribution in the local market may be limited. Therefore, normally risk averse member companies of technology-intensive industries are also likely to pursue foreign-market acquisitions in their primary revenue stream when opportunities do not exist in the domestic market, hence:

Hypothesis 6b: Companies that demonstrate high pre-acquisition ROA, market dominance and are members of a technology intensive industry executing large acquisitions are more likely to execute foreign-market acquisition within their primary revenue stream.

3.3.8 Hypothesis 7 –Pre-Acquisition Total Risk and Post-Acquisition ROA

Hypothesis 7 asserts that companies demonstrating high levels of pre-acquisition total risk demonstrate low levels of post-acquisition performance.

Prior research (Amit & Livnat 1988; Park 2003) associated high levels of pre-acquisition risk with diversification into multiple industries, where multiple cash flows after acquisition are expected to reduce operating risk. Following Park (2003), this research hypothesises that behaviour informed by agency theory (Jensen & Meckling 1976) is likely to prevail when company risk is high. In this context, management may attempt to maximise their interest through risk mitigating acquisition into other revenue streams. As they are likely to possess greater knowledge of the local market, it also follows that companies have no significant motive to execute foreign-market acquisition into new revenue streams as they can execute the same in the domestic market with similar, if not

less, risk. However, management are able to mitigate themselves against revenue cycle risk with foreign-market acquisition, in this case, currency fluctuation as suggested by coinsurance theory (Michel & Shaked 1984).

Since relatedness theory (Miller 2006) hypothesises lower performance after acquisition from acquisition into an unrelated industry, where the expected operational synergies associated with acquisition in the same industry are not available it follows high levels of pre-acquisition total risk as associated with lower performance after acquisition, therefore:

Hypothesis 7:   Companies demonstrating high total risk levels before acquisition demonstrate low performance after acquisition

3.3.9   Hypothesis 8 –Post-Acquisition Total Risk and Post-Acquisition ROA

Hypothesis 8 speculates that risk reduction is a key motive for acquisition leading to an increase in performance after acquisition.

Risk reduction has been argued as a motive for acquisition (Hill & Hansen 1991; Hill & Snell 1988). Portfolio theory is based on the premise of not "putting all your eggs in one basket" implying that a reduction of systematic risk occurs from diversification due to multiple cash flows. As investors are easily able to shield themselves from this risk by simply holding a portfolio of stocks, they gain little benefit from companies who create the same via acquisition into other industries (Markowitz 1959). However, Lubatkin (1983) identifies two benefits related to the ownership of future cash flows that cannot be duplicated with investor diversification. The first comes from the lender's willingness to lend more, and at better terms, to a combined company than it would to the two individual entities (Lewellen, 1971). This may have an impact on performance in terms of taxable benefits, if debt funds are "cheaper" than equity funds, borrowing will increase the value of the equity. The second relates to the decreased importance of bankruptcy cost as the probability of default on debt payments is reduced (Higgens & Schall, 1975). Other benefits include exploitation of multi-point competition and management capital allocation. The former occurs when rival companies compete in more than one industry, and where industry linking occurs from actions in one that may have impacts in another

(Porter 1985). Management capital allocation contends that better positioned executive management can allocate capital with the least risk for maximum return, compared to external capital suppliers with limited information supply. Possible use of complementary products from individual businesses may also add consumer value by using a single supplier (Porter 1985) and reduce risk in the supply chain from the resulting control. Cheaper access to capital (Grossman & Stiglitz 1976), cross subsidisation of product and predatory pricing may be available to enhance market share and ultimately profitability (Amit & Livnat 1988; Bettis 1981; Chatterjee & Lubatkin 1990; Rumelt 1974). They are, therefore, more likely to increase the revenue stream that, in turn, reduces risk (Williamson 1975) hence:

Hypothesis 8: After acquisition, high performing companies demonstrate lower levels of post-acquisition total risk.

3.4   Conclusion

This chapter defined a conceptual framework to guide research and assist the researcher in the interpretation of subsequent findings, forming a starting point for reflection about the research and its context. Development of a framework followed a metacognitive approach (Jonassen 1996) based on a review of the relevant literature. Hypothesis formulation ensued to facilitate later testing; the first hypothesis postulates an association between revenue-stream diversification extent and company performance. This hypothesis intends to demonstrate support for a model commonly used by relatedness theory (Miller 2006) researchers that could be eliminated later with the addition of extra pre-acquisition control variables. Subsequent hypotheses were developed to examine the characteristics of executed strategy, industry membership, regulatory constraint, market dominance and total risk against performance before and after acquisition.

The next chapter details the variables and methodology employed in the research.

Chapter 4

METHODOLOGY & RESEARCH DESIGN

4.1   Introduction

Yin (1989 p.134) defined research design as simply "an action plan for getting from here to there" whilst Blaikie (2000) suggests that the main objective of designing the research prior to commencement is to ensure design decisions are explicit. Blaikie added that other objectives include consistency of the design with the selected ontological and epistemological assumptions, and to enable evaluation of individual design elements and the overall research design, prior to research commencement. This chapter provides description and justification of the research paradigm and the overall plan of the research study. It also includes identification of the data collection method, the data sample, data analysis procedures and discussion of ethical considerations.

4.2   Paradigm Description and Justification

This research followed the deductive research paradigm with logic informed by critical rationalism. Unlike the inductive strategy that consists of generalisations derived by induction from data, deductive research commences with data collection and is followed by data analysis, leading to temporary acceptance or rejection of a theory. Similarities exist with the retroductive strategy, in which an observed regularity follows construction of a hypothetical model of an explanatory structure or mechanism.

Blaikie (2000) credits Popper (1959) as the founding father of the deductive strategy and critical rationalism. Debate rages in the literature (Faludi 1986) over whether Popper was (as he was often labelled) a positivist, a categorisation he reportedly rejected. One explanation for the confusion may be that induction and deduction share positivism's ontological assumption that social phenomena exist independently of observer and social actors. Deduction attempts to overcome the deficiencies of positivism being a nomothetic method emphasising the importance of systematic protocol and technique. Central to deduction is the argument that observations do not provide a reliable foundation for scientific theory. In his later work, Popper (1969) contended that unbiased observation is impossible as observations are made within a frame of reference and from a point of view. Therefore, it is necessary to derive a tentative hypothetical answer from theoretical argument in order to inform the data-gathering direction. The aim of deduction is for the researcher to develop a theory that matches the phenomenon under study, that is, a theory that matches reality. However, since reality cannot be directly observed, according to Popper (1969), all that can be achieved, is a match of theory and data.

Whilst induction is the logic of positivism and retroduction (the logic of scientific realism), deduction is the logic of critical rationalism (according to Blaikie 2000). It shares aspects of positivism's ontological assumptions but rejects the epistemological assumptions. Deduction, in contrast to positivism, holds that data collection is selective and interpreted by the observer, and nature and social life consist of patterns of events (Blaikie 2000). The aim of science is to discover such uniformities because they correspond to the descriptions of observed states of affairs. The use of the senses is rejected as a secure foundation for scientific theories. There is no distinction between observational and theoretical statements in critical rationalism; rather, observations are theory-dependent and occur within a "horizon of expectations". That is, collecting data involves some use of theory, since it occurs in expectation of what exists and how it behaves. New knowledge is the result of deductive reasoning with theories developed to explain observations rather than being derived from them. Popper (1969) argued that the refutation of proposed theories is the aim of science, as opposed to looking for confirmatory evidence to support a generalisation. The search for truth is elusive because there is no way of knowing it has been attained. This is because there is no way of knowing the absolute truth; only false theories can be eliminated. In this way, theories are provisionally accepted but subject to

ongoing critical evaluation. False theories are refuted by demonstrating that data do not fit (Blaikie 2000; Gill & Johnson 2002).

The key steps of the deductive strategy commence with the researcher deciding which concepts are important representations of the theory or problem under investigation. Similarity and difference identification enable us to select and order our conceptual impressions of the world (Gill & Johnson 2002). From this, a tentative theoretical proposition is formed from an idea, conjecture or one or more hypotheses linking two or more abstract concepts together in a causal chain (Gill & Johnson 2002; Popper 1959). Using previously accepted hypotheses or conditions under which they are expected to be upheld, deduction of one or more conclusions follows. Examination of the logic and resulting conclusions and comparing them with existing theories then facilitates verification of an advance in understanding. Subsequent collection of appropriate data enables a conclusion test through observation or experimentation. If the data are not consistent with the conclusion the theory is false and must be rejected, otherwise it is temporarily corroborated.

Blaikie (2000) highlighted a major criticism of critical rationalism and deduction in noting that observations are interpretations and reality cannot be observed directly. It is unclear how theories can be established confidently and refuted conclusively. An unrefuted theory that is tentatively accepted requires some inductive support, yet there is no direction as to where tentative theories originate or how they should be constructed. Chance discoveries require science to be less logical; creativity is stifled by logic. Acceptance of theories involves social and psychological processes in addition to a logical process (Blaikie 2000).

4.3   Justification

This research replicates and extends the work of previous researchers in an established stream. To ensure successful replication and demonstrate that previous models are incomplete, it is logical to utilise the same paradigm and analytical techniques. This approach was taken after reviewing diversification management literature in chapter 2. Table 4.1 lists key previous studies on diversification, their research paradigm and main

analytical methods. Due to the cross-sectional nature of the majority of these studies (examination of performance after an acquisition) it remains unclear whether an acquisition influences performance or vice versa.

Table 4.1: Prior Research Paradigm and Analysis Methods

Research	Research Paradigm	Analysis Technique
Bettis (1981)	Deductive	Multiple Regression
Rumelt (1982)	Deductive	Multiple Regression
Bettis and Hall (1982)	Deductive	Regression
Grant (1987)	Deductive	Multiple Regression
Barton (1988)	Deductive	ANOVA
Montgomery and Singh (1984)	Deductive	ANOVA
Montgomery (1985)	Deductive	Multiple Regression
Lubatkin and Rogers (1989)	Deductive	MANOVA
Lubatkin and Chatterjee (1991)	Deductive	Multiple Regression
Rumelt (1991)	Deductive	Multiple Regression
Park (1995)	Deductive	Multiple Regression
Seth (2000)	Deductive	Regression
Park (2002)	Deductive	Logit Regression
Park (2003)	Deductive	Multiple Regression
Uddin & Boateng (2009)	Deductive	Univariate
This Study	Deductive	Multiple Regression

4.4   Variables

This section describes the variables used in the testing of this study's hypotheses. The research described in this thesis is essentially an extension of the research of Park (2003), so an attempt has been made to reuse his, and other commonly used variables, where justified. The meta-analysis performed by King et al. (2004) found only one third of all variables were used in two or more studies. *Pre-acquisition resource availability* was the

only variable used by Park (and found to be statistically insignificant) which could not be included in this analysis due to unavailability of data in the Australian market.

4.4.1   Control Variables

4.4.1.1 Organisational Model

Amburgey and Miner (1992), and later Park (2003), found a company is likely to replicate or extend previous strategic activity. It follows that if a company has pursued acquisitions related to its revenue streams in the past, it is more likely to do so in the future, with the same also true for companies that have pursued acquisitions not related to their revenue stream. Since this research considered the change in organisational model because of acquisition, it distinguishes between the organisational model before acquisition and the organisational model after acquisition. Two categories of organisational model, adapted from Rumelt's (1982) diversification extent classifications were utilised:

- *Single*, where at least 95% of business revenues were functionally related by production or distribution prior to acquisition; and,
- *Diversified* (conglomerate), where multiple unrelated lines of revenue were identified with any one contributing at least 5% of the revenue.

Since the current research considers both domestic and foreign market acquisitions, this geographic distinction was included within Rumelt's (1982) classifications for both categories.   Dummy variables, determined from a company's Global Industry Classification Standard (GICS; AspectHuntley 2007a) for the year prior and year following acquisition for each organisational model were coded as:

- *Pre-Acquisition Single Domestic*;
- *Post-Acquisition Single Domestic*;
- *Pre-Acquisition Diversified Domestic*;
- *Post-Acquisition Diversified Domestic*;
- *Pre-Acquisition Single Foreign-Market*;
- *Post-Acquisition Single Foreign-Market*;
- *Pre-Acquisition Diversified Foreign-Market*; and
- *Post-Acquisition Diversified Foreign-Market*.

Determination of these categories was made primarily by examining market revenue segmentation by product and geographic region, using the Aspect Huntley DatAnalysis database (AspectHuntley 2007a) with supplementary data sourced from individual company annual reports. Random verification of the Aspect Huntley DatAnalysis (AspectHuntley 2007a) database accuracy was undertaken by examining the source Australian Stock Exchange (ASX) announcements, company annual reports and (as a last resort) company web-sites.

4.4.1.2 Pre-Acquisition Company Size

Chatterjee and Wernerfelt (1991) showed that the larger a company, the more likely it was to execute acquisition in another revenue stream, whilst Wiersema and Bantel (1993) found the reverse. Regulatory constraint, local market R&D intensity and organisational complexity may offer an explanation for this inconsistency. It is logical to assume that, as company size increases so does its organisational complexity, largely due to structural elaboration and formalisation of planning, control and resource allocation systems (Quinn & Cameron 1983). However, this in turn, may create greater resistance to change. Similar to Park (2003), the current research considers that this phenomenon is likely to occur with diversified operational models, in particular foreign-market diversified operational models, since operating synergies that could simplify organisational complexity are only available in single revenue stream operations. It is assumed that acquisition in the same revenue stream would require change at all levels within all business units to achieve the expected synergies, whereas operations largely remain unintegrated with acquisition in unrelated revenue streams. Like Park (2003) and others (Bettis 1981; Hall & Weiss 1967), pre-acquisition company size was measured as the reciprocal of the natural logarithm of the acquiring company's asset value one year prior to acquisition.

4.4.1.3 Acquisition Size

Prior research has largely ignored the influence of acquisition size on performance after acquisition. Some (Amburgey & Miner 1992; Park 2003; Weston, Smith & Shrieves 1972) excluded acquisitions of less than USD10 million, deeming an insignificant post-acquisition performance impact. However, multiple smaller acquisitions in the same timeframe are likely to influence post-acquisition performance in a similar manner to a single larger acquisition, hence this study includes cases in which multiple acquisitions

exceeded AUD10 million in a single financial year. Acquisition size may have an impact on the performance of the acquiring company for several reasons. Comparatively large-scale acquisition may bring the acquirer's management greater power, increased salary and social recognition (Firth 1980) and scale economy benefits should be greater (Sudarsanam 2003). Uddin and Boateng (2009) suggest that this may lead to managerialism or hubris where the effect is proportional to performance after acquisition. Assuming the realisation of synergistic benefits suggested by relatedness theory (Miller 2006), integration of a small-scale acquisition is more likely to succeed as the level of complexity involved is lower (Ingham, Kran & Lovestam 1992). In contrast, large-scale acquisition may reduce the free cash flow of the acquirer which, in turn, may add benefits (Jensen 1986) and realise financial synergies (Myers & Majluf 1984). A multi-billion dollar company making a $10 million acquisition will register little impact on performance after acquisition, whilst a $100 million acquisition is likely to have a greater impact. Similar to pre-acquisition company size, post-acquisition size was calculated as the reciprocal of the natural logarithm of the average of total asset value for the two-year period after acquisition, minus the average of total asset value for the three-year period before acquisition.

4.4.1.4 Leverage

The degree to which an investor or business utilises borrowed money is commonly called financial leverage. Interest payments on debt are tax deductible, therefore the post-tax cost of debt reduces the average cost of capital for a company. In turn, this may lead to performance gain from cheaper access to increased working capital. Multiplying the increase in debt by the current corporate tax rate provides an approximation of the extra tax benefit. Montgomery and Singh's (1984) empirical findings showed that a company's leverage and percentage of capital structure debt increase after acquisition into an unrelated revenue stream. Similarly, Amit and Livnat (1988) measured a statistically significant positive correlation between pure financial diversification and leverage. They also found diversified companies (in particular, pure financial diversifiers) were characterised by higher financial leverage and had lower variability of cash flows making their systematic risk lower. Suggesting that management are prepared to increase risk from debt exposure and are able to access cheaper capital to fund acquisition, Morellec and Zhdanov (2008) found bidders with low leverage levels are more likely to win acquisition contests. In the current research it is assumed that financial leverage increases after

acquisition and is associated with diversification into new revenue streams. Following Park (2003) financial leverage is measured as the ratio of book value of debt to book value of equity.

4.4.1.5 Payment Type

The payment type utilised by an acquirer in company acquisition is limited to two methods, cash and issue of stock in the combined entity. Travlos (1987) suggested that when an acquiring company consider that a target company's stock is undervalued, they will use cash for payment, and when overvalued they will use their own stock. Ferris, Jayaraman and Sabherwal (2012) found that cash payment was associated with CEO overconfidence in foreign market acquisition cases. Since the stock in cash based acquisition can be considered to be undervalued, the post-acquisition stock performance of cash acquirers can be expected to be greater than acquirers using their own stock. This appears to be based on the premise that a company's stock achieves average market performance over time. Acquisition shareholder return was investigated by Bellamy and Lewin (1992) using Australian data, including control for effects arising from the payment type. All Australian listed company acquisitions were identified for the period January 1980 to July 1988. This yielded 81 cash offers, 52 share exchange and 77 combined payment types using daily data, after rejections for infrequent trading, conflicting events at the time of announcement and where the offer included convertible bonds or options. Without payment type control and using the entire sample of 210 acquisitions for the ten-day period either side of the announcement, no significant abnormal return was observed. However, with added control for cash offers, acquirers earned a positive mean abnormal return of 1.3% the day after the announcement and cumulative abnormal return of 0.84% for the 21 days around the announcement. Using monthly data for the month of announcement, a significant positive abnormal return of 3.77% was observed, and a cumulative positive abnormal return of 5.85% was observed for the period six months before and two months after the announcement. For share exchange offers, bidding companies earned a mean negative abnormal return of 2.97% on the day of announcement and 32.2% for the period from announcement to six months after. Hayward and Hambrick (1997) did not find any relationship between shareholder return and payment type, nor did King et al.'s (2004) meta-analysis, but Datta, Pinches and Narayanan (1992) did. If cash payment is an indication of undervaluation, it suggests that management are confident they can realise the market value with acquisition. Research to date has not accounted for cases

in which combined cash and shares are used. This research therefore included dummy variables representing payment types of:

- *Cash*, when the payment was made solely from cash or combination of cash and debt facility;

- *Stock*, when the payment was made solely by issue of shares in the acquiring company; and,

- *Cash and stock*, when the payment constituted a combination of cash or combination of cash and debt facility and stock in the acquiring company.

4.4.2   Excluded Control Variable

4.4.2.1 Market Cycle

Lubatkin and Chatterjee (1991) examined the relationship between shareholder return and diversification strategy, adding control variables to account for market cycle types; bull (upward trend), bear (downward trend) and flat (sideways trend). Previous researchers (Barton 1988; Lubatkin & Rogers 1989) had observed differing economic conditions during their periods of investigation that may have modified company behaviour. During a bear market, companies face reduced cash flow, fewer growth opportunities and uncertainty of future cash return. With the higher ratio of risk to return in this environment, more heavily discounted returns are expected. This in turn reduces the market value of a company and raises its cost of capital, leading to reduced investment from risk-averse management. Given such environments, it is logical to expect management to diversify into unrelated businesses to mitigate risk, if they diversify at all (Lubatkin & Chatterjee 1991; Lubatkin & O'Neill 1988). Like Lubatkin and O'Neil (1988), Lubatkin and Chatterjee found only unrelated type mergers increased shareholder value of the acquiring company in bear markets. This suggests that companies making acquisitions in the same industry are subject to the bear market performance of that industry, whilst under-market-performing companies acquire better performing companies in another industry, thereby increasing their performance.

A key research issue in acquisition literature is the measure of an economic cycle. A commonly used indicator of economic cycles is the Gross National Product (GNP), defined as "gross domestic product plus any income earned by Australian residents from

overseas sources, minus income earned by non-residents in the domestic market" (ASN 2005 p1).   Lubatkin and Chatterjee (1991) regard GNP as an inappropriate measure of economic activity because it is a lagging measure and acquisition-related research is based on expectations of future economic activity.   Both Gabish and Lorenz (1987) and Lubatkin and Chatterjee (1991) defined a cycle using the average direction of stock movement measured daily over a six-month period.   Following Park (2003), the present study utilised profitability premium measures (Rumelt 1977) — the difference between overall Australian market performance and the individual company performance for three years prior and two years after acquisition — as indicators of company performance.   As such, macro-economic climate conditions including market cycle trends were intrinsic to performance calculations and did not require separate control.

4.4.3   Independent Variables

4.4.3.1 Pre-Acquisition Industry Performance

As noted earlier, Christensen and Montgomery (1981) observed that the execution of a company acquisition strategy is affected not only by its performance before acquisition, but also by the performance of its primary industry.   Schmalensee (1989) showed that the industry effect accounted for 20% of variance in company returns and Rumelt (1982) showed that the industry effect explained approximately 21% of variance between diversification strategies.   As the majority of existing research utilised American company data, standard industry codes (SIC; OSHA 2006) were commonly utilised in industry category determination.   Stocks listed on the ASX are industry categorised using the GICS (AspectHuntley 2007b), allowing categorisation similar to existing research. Consequently, the present research included pre-acquisition industry performance measured as three-year average returns for the primary industry as designated by the GICS code of the company.

Park (2003) measured pre-acquisition primary industry performance using the three-year average return on assets (ROA) for all industrial companies in his sample, excluding those in utilities and the financial and transportation industries.   As most of the acquisitions in his sample were from the manufacturing or mining industries, he wanted to make the reference point as comparable as possible to the average performance of these industries.

The current study did not suffer this limitation as it utilised a sample of acquisitions across all industries; the industry average return was calculated from all ASX listed companies on the Aspect Huntley (2007b) FinAnalysis database. Industry category was determined from the GICS (Standard & Poors 2006) four digit classification of industry membership, with average return calculated for the three year period prior to acquisition.

With its origins in the financial economics literature (Fama, Fisher, Jensen & Roll 1969) the impact of an event is assessed in relation to the expected return in the absence of the event. As industry and company performance vary with the fluctuations in general economic conditions they must be considered in reference to general economic performance. Given that company performance also varies with the fluctuations in industry performance, it must be considered in reference to general industry performance. This assumes performance change reflects the future cash flow impacts of the event and, like all other measures, the change may reflect other extraneous events. All performance measures were therefore converted to profitability premium measures (Rumelt 1977). The industry performance premium for each year in question was calculated by first determining the average ROA of all ASX-listed member companies for the three financial years prior to acquisition. The difference between average return of member companies for a particular industry, that is those with the same four-digit GICS industry classification code, was then measured.

4.4.3.2 Pre-Acquisition Total Risk

Total risk is the sum of systematic and unsystematic risk. Systematic risk is a statistical measure of the relationship between two time series' representing the sensitivity of a company's returns to overall market returns. It cannot be highly mitigated as it reflects external risks including overall economic climate, legal and regulatory constraints and tax and industrial relations impositions. Unsystematic risk is unique to each company, being independent of the risk that affects all companies in a portfolio. Examples include fire in the company's manufacturing plant, targeted extortion and labour strike. Suggesting that risk reduction is a motive for acquisition, prior research has demonstrated empirically between companies exhibiting high levels of pre-acquisition risk and acquisition into unrelated revenue streams (Barton 1988; Lubatkin et al. 1989; Montgomery & Singh 1984) and that the risk profile of a company changes at the time of the acquisition announcement (Bettis 1983).

Lubatkin (2003) claimed that, in comparison to other methods of risk calculation, such as the capital asset pricing model (CAPM) β, the use of total risk is more closely aligned with the assumptions of strategic management that recognise risks are unique to every company. Bar-Yosef and Brown (1977) found that the CAPM β, generally calculated using an extended period, becomes unstable in the immediate period surrounding significant information release. This led them to consider a moving β; recalculation at the point of announcement. Bettis and Weeks (1987) highlighted the statistical issue of regression noise where R^2 values of 0.20 are common with a stationary or moving β. Like Park (2003), the current research utilises variance (standard deviation) on ROA for the three years prior to acquisition as a measure of "determined accounting risk".

4.4.3.3 Pre-Acquisition Industry Type—Regulated versus Unregulated

There is no common definition of a regulated industry, as all economic activity is regulated at some level. The researcher speculated that company return might be a partial reflection of industry type, regulated or otherwise. Government regulation enforces operational constraints and adds additional compliance overheads to which unregulated industry members are not subject. A positive relationship between unregulated performance and return was expected. Hence, the analysis included an ordinal variable, *Pre-Acquisition Industry Type – Unregulated vs. Regulated*. Following Campa and Hernando (2004) this research considered mineral industries, primary metal industries, transportation, communication, electricity, gas, sanitary services and financial institutions to be regulated. These were categorised using the GICS (Standard & Poors 2006) industry membership, specifically, codes 2540, 3510, 4010, 4020, 4030, 5010 and 5510 - See Table A.3 for definitions).

4.4.3.4 Pre-Acquisition Industry Type—Technology Intensive Industries

Adavikolanu & Korrapati (2009) found a negative relationship between company performance and technology intensive-acquisitions in the same industry, suggesting that acquirers typically failed to realise synergies. The finding of Adavikolanu and Korrapati (2009) is likely to hold in the Australian market where the availability of technology-intensive targets offering the latest technology may be limited. The current research, therefore, posits that technology asset-seeking companies are more likely to execute acquisitions in a foreign market. In order to capture these concepts, the model includes a

dummy variable representing pre-acquisition industry type – low vs. high technology. In the absence of an accepted definition of a technology-intensive industry, the following were categorised as technology-intensive: materials, capital goods, consumer durables and apparel, health care, information technology and telecommunication services industries (GICS industry codes 1510, 2010 and 2520, sector codes 35, 45 and 50(Standard & Poors 2006) - See Table A.3for definitions).

4.4.3.5 Acquisition Strategy

In general, researchers in this field have progressively reduced the number of Rumelt's (1974) diversification categories from the original nine. Lubatkin and O'Neil (1988), for example, utilised four categories: *horizontal*, denoting that companies share identical production and marketing technologies; *related*, designating companies with similar production and marketing technologies; *conglomerate*, denoting companies operating in unrelated areas of business; and *vertical*, indicating that the companies have a supplier to customer relationship. The last category is confusing in view of the fact that all companies have customer to supplier relationships. Other researchers (Amit & Livnat 1988; Lubatkin 1987; Park 2003) utilised two categories: *related*, for those companies functionally related by production or distribution prior to acquisition and selling non-competing products, and *unrelated* (conglomerate), representing the consolidation of two essentially unrelated companies.

As the present research includes control for domestic and foreign-market acquisition, corresponding categories for each are required, thereby doubling the number of categories used in most of the recent research. For example, Rumelt's (1982) *dominant constrained* category would be split into *domestic dominant constrained* and *foreign-market dominant constrained* in this research. Consideration of the number of categories in relation to available sample size was required to ensure meaningful results. Hair et al. (2006) recommended at least thirty observations of each category in multiple regression analysis to obtain acceptable statistical power. Therefore, extending the work of Park (2003), this research utilises acquisition categories of *related domestic, related foreign-market*, *unrelated domestic* and *unrelated foreign-market*. A *related domestic* acquisition is defined as an acquisition where acquirer and target derive 95% of their business revenues from the same source prior to acquisition and sell non-competing products with primary revenue sourced from the domestic market. *Unrelated domestic* captures the consolidation

of two essentially unrelated companies by industry revenue in the domestic market. Equivalent foreign-market acquisition categories were included as an added control.

4.4.4   Dependent Variable

The statistical models examined fell into two broad categories. The first considered associations between pre-acquisition performance and executed strategy, the second, associations between post-acquisition performance and pre-acquisition characteristics. *Pre-acquisition performance* was the dependent variable in the first model category, and *post-acquisition performance* in the second, with *pre-acquisition performance* included as an independent variable.

4.4.4.1   Pre-Acquisition Company Performance

Often termed "abnormal return" in the most recent studies in the literature, the impact of an event is measured as the difference between the estimated return in absence of the event and the actual return. The two main streams of acquisition research have utilised differing measures of abnormal return to examine the relationship between diversification strategy and company performance (Lubatkin & O'Neill 1988; Lubatkin et al. 1989; Montgomery & Singh 1984). The first stream calculated the difference between an index return and shareholder return, abnormal return was determined for periods ranging from a few days to multiple years. The second stream considered the relationships between diversification strategy categories and economic performance of existing businesses (Amit & Livnat 1988; Bettis 1981; Christensen & Montgomery 1981; Rumelt 1974; 1982). Accounting based performance measures were typically employed with ROA or return on investment (ROI) most commonly utilised.

Various measures of performance were considered for use in the research including financial performance, shareholder return and Jensen's alpha. Johnson, Natarajan and Rappaport (1985) evaluated six financial performance measures – least squares measures of compound asset growth, annual growth and compound equity growth in total shareholder equity, the ratio of market value to book value, net income total invested capital and return on equity – but found they are not direct measures of long term wealth creation. Schoenberg (2006) examined a sample of British acquisitions into foreign markets with four common measures of acquisitions performance: cumulative abnormal

returns, managerial assessment, divestment data and expert informant assessment. Independently, each of the measures indicated a mean acquisition success rate of 44–56% leading him to suggest that, in order to gain a holistic view, cumulative abnormal returns (CARs) need to be complemented with an appropriate post-acquisition performance measure. This study examines pre- and post-acquisition models using CARs based on ROA, enabling a holistic conclusion with a common measure. Johnson, Natarajan and Rappaport (1985) claimed that total rate of return to shareholders (share price appreciation plus dividends) is a simple direct measure of performance, stating, "A company's shares are likely to appreciate over time if the market expects management to earn a rate of return on new investment equal to or greater than the rate shareholders can expect to earn by investing in alternative identically risky investments" (Johnson, Natarajan and Rappaport 1985 p 53). Therefore, the share price movement is a measure of the market expectation by the management of a company to under- or out-perform the expected return, not a measure of the company performance. Lubatkin and Shrieves (1986) noted that results utilising market-based performance measures can vary according to the computational method (e.g. daily verses monthly) and the period considered for the event.

Prior research has demonstrated significant abnormal return variance at the time of acquisition announcement to the market as opposed to actual completion of acquisition (Bellamy & Lewin 1992). Figure 4.1 illustrates an example of this phenomenon in the impact of an acquisition announcement on the share price of Coles Myer. On 17 August 2006, Coles Myer announced "it had been approached on behalf of parties wishing to hold discussions regarding the company's ownership" (CML 2006 p1). Within three trading days, the share price had increased 18.4% suggesting that the market immediately re-values the company (the net present value of future cash flows). It also indicates that the market believes that the management of the acquiring company have access to more information, or are able to perform a more accurate valuation. They simply follow the lead of the acquirer, as the new stock price tends to reflect the initial bid offer. This in itself indicates an expectation that the acquirer will increase its offer in anticipation of counter bids from competitors and logically would attempt the acquisition for the lowest price. By the time of completion of the acquisition, which may be many months from the initial announcement, the market has valued the combined entity, it is, therefore, unclear at which point in time the event should be recorded. Krishnan, Krishnan and Lefanowicz (2009) compared the abnormal returns of acquirers and major rivals. Their results indicate a

strong positive association between acquirer abnormal market returns after acquisition announcement and post-acquisition return on sales (ROS) after acquisition for the combined entity. Krishnan, Krishnan and Lefanowicz's (2009) results also show a strong negative association between ROS after acquisition and the abnormal return of a major rival to the acquirer. This suggests that the market accurately perceives available synergies and assumes realisation of the acquisition. Schoenberg (2006) found no significant relationship between stock market reaction to acquisition announcement in terms of value after acquisition and the valuation of company management after acquisition. This finding suggests that not all information is freely available to investors and management; in this case, regarding implementation aspects. Market-based performance measurement may not, therefore, accurately reflect the strategy effect.
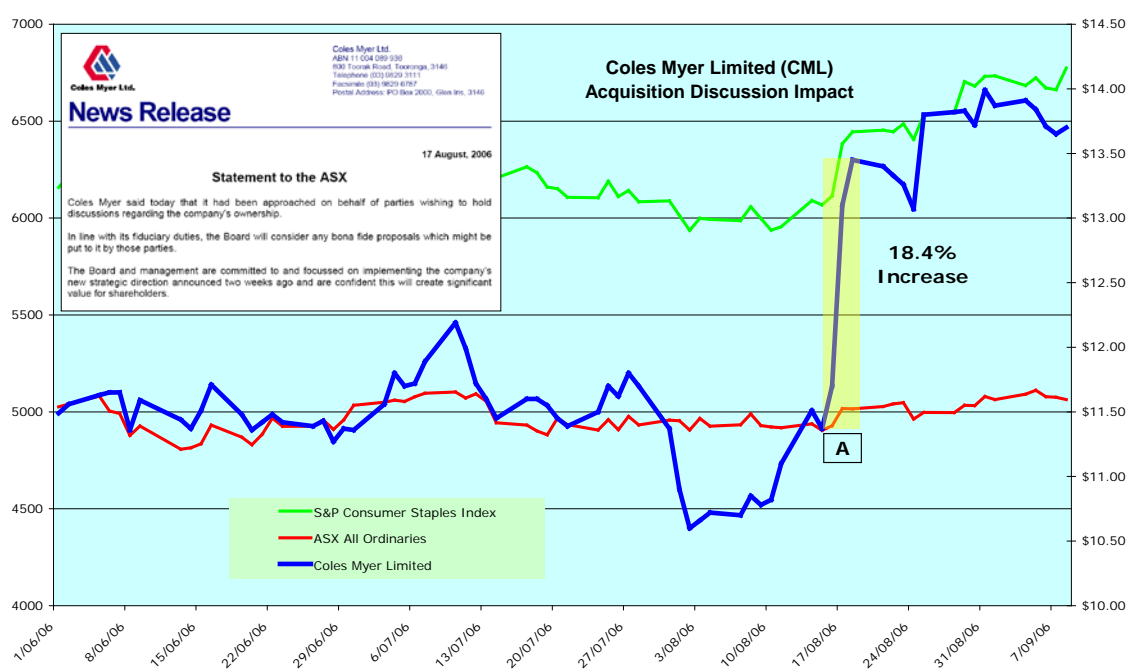
Figure 4.1: The Effect of the Coles Myer Acquisition Announcement on the Share Price

Jensen's alpha (Jensen 1969) is utilised by some authors in the strategic management research literature (Lubatkin & Rogers 1989) and is integral to the CAPM commonly used in finance literature. Jensen's alpha represents the ability of a company to under- or out-perform companies in an unmanaged portfolio that have a similar systematic risk. Strategies tend to emerge as a series of related events in which each event results in a reassessment of values as it becomes known in the public domain. The impact of such

events is expected to be captured by the alpha, thereby enabling measurement of market surprise against the overall industry trend. Bartholdy and Peare (2005) empirically tested both single factor CAPM and three factor Fama and French (1992) models finding the models performed best using five years of monthly data and equal-weighted indices as opposed to value-weighted indices but they only explained three and five per cent of difference in returns respectively. Using a sample of UK acquisitions, Fraser, Hamelink, Hoesli and MacGregor (2004) found that the CAPM model performs better on bear than bull markets. It is clear that current research has not identified a single accepted method of measuring performance.

Park (2003) measured pre-acquisition company performance using quarterly reported average ROA for the preceding three years; conversion into profitability premium measures accounted for general economic condition fluctuation (Rumelt 1977). Profitability premium adjusted ROA was used in the current research to facilitate direct comparison with prior studies (Bettis 1981; Bettis & Hall 1982; Christensen & Montgomery 1981; Michel & Hambrick 1992; Park 2002; 2003). As a key objective of this research, profitability premium adjusted ROA were also utilised. Park (2003) noted that in contrast to other performance measures, ROA also controls for the effect of differing financial structures. Similar to the industry performance premium, the company performance premium in any one year was measured as the average ROA for the company for the three financial years prior to acquisition, minus its member industry performance premium. Australian companies are not required to report quarterly results publicly therefore, this research utilised yearly ROA figures for the three-year period prior to acquisition.

4.4.4.2 Post-Acquisition Company Performance

Unlike the pre-acquisition equivalent, post-acquisition company performance was calculated for the two financial years after acquisition, as this was deemed sufficient time to capture the strategy effect. Park's earlier research (1995) examined company performance for the three year and five year periods after acquisition, however, a key requirement of the research conducted for the present study was use of the most recent acquisition data possible, as market operation changes over time. Bergh's (1997) investigation of post acquisition performance using two individual samples from 1977 and 1987 obtained differing results; he attributed this phenomenon to US regulatory changes in

the early to mid 1980s, including relaxation of antitrust enforcement, leading to an increase in global competition. Extended event periods also increase the risk of including other strategy effects and multiple extraneous events, thereby reducing the ability to attribute abnormal performance to the event in question (Lubatkin & Shrieves 1986).

4.5   Research Strategy

This section describes the research strategy used in this study, which has been adapted from the six stage model of Hair et al. (2006). Further details regarding validation and analysis techniques, sample size description and method of collection are discussed in subsequent sections.

Stage one defined the objective and research problem, selected the paradigm and technique and included a preliminary literature review to provide representation of the study relationships. Presentation of the research proposal followed and research committee approval was obtained. As this research utilised publicly available data, ethics committee approval was not required. Next, a thorough literature review was conducted to enable development of a conceptual model, specifying the dependent and independent concepts. In order to minimise the risk of omitting relevant concepts, this phase involved identification of ideas and topics of interest as opposed to specific measures. Selection of the multivariate technique followed, informed by the type of variables selected for analysis and the ability to transform variables where required. Next, variables were identified based on theoretical argument. Avoiding specification error concerning the omission and irrelevant inclusion of variables was a major consideration in the selection of technique. Hair et al. (2006) recommended inclusion of potentially irrelevant variables when doubt exists, as exclusion may seriously bias the results and negatively affect any interpretation. If there is no correlation, the included variables will simple reduce the overall predictive accuracy. If correlation exists between the original and potentially irrelevant variables, the effect of original variables becomes biased and the greater the correlation, the greater the bias. The estimated effect of original variables would, in this case, not only represent the actual effect but also that shared with the irrelevant variables, potentially leading to problems with statistical significance. "Measurement error refers to the degree to which

the variable is an accurate and consistent measure of the concept being measured" (Hair et al. 2006). Measurement error was also a major consideration in selection of the dependent variable in particular, as the multiple regression analysis technique has no direct means of correcting for known levels of measurement error.

Stage two involved research plan development and documentation. This included definition of minimum and desired sample sizes along with identification of special variable formulation to represent non-linear or interaction terms in the analysis.

Stage three consisted of the evaluation of underlying technique assumptions since all multivariate techniques rely on both conceptual and statistical assumptions. Conceptual issues included model formulation and relationship representation. Error term assumptions of multivariate normality, linearity and independence were satisfied along with equality of variances in the dependence relationship.

Assessment of the overall model fit, estimation of the multivariate models and generalisability occurred in stage four. This included assertion of statistical criteria acceptable levels, relationship identification, and test for practical significance. Estimation entailed selection of analysis options based on the characteristics of the data in this case, maximisation of fit to the data (rotation of factors or discriminant functions). Identification of outliers and influential observations confirmed any disproportionate influence from a single or small set of observations indicating instability or inability to generalise. Stage five involved interpretation of the variates. To provide empirical evidence of multivariate relationships that could be generalised, estimated coefficients for each variable were examined to assess their individual effects. Finally, in stage six, the researcher assessed the generalisability of the results to the total population.

The following sections provide detail on validation and analysis techniques, sample size and method of collection.

4.6   Statistical Validation Technique Selection

Multiple regression analysis was selected as the statistical analysis technique for the research. There are two main purposes of multiple regression; prediction of the dependent variable and assessment of the relationship between the dependent variable and the independent variables. The primary objective of this research was to enable prediction of the nominated dependent variable from the independent variables.   The secondary objective was to compare the independent variables to ascertain their relative predictive power. The analysis process weighted the independent variables forming the regression variate to denote their relative contribution in order to ensure the maximum level of prediction from the set (Hair et al. 2006). A key advantage of the multiple regression analysis technique is the maintenance of required statistical power levels and significance across a broad range of sample sizes. At the commencement of the research, the number of Australian acquisitions that occurred for the period of interest was unknown.

4.7   Model Validation

This section describes the techniques employed in model validation.

4.7.1   Endogeneity

Miller (2006) stated that alternate factors that may simultaneously determine diversification and performance, are sources of endogeneity (present when the error term from a regression model correlates with one of the independent variables). Redefinition of the independent variable as a second dependent variable in a system of equations, can correct for endogeneity.

4.7.2   Multicollinearity

Maximisation of independent variable predictive capability requires low multicollinearity with other independent variables and high correlation with the dependent variable. There is a trade-off between an increase in predictive power and potentially misleading regression models. The Statistical Package for the Social Sciences (SPSS; SPSS 2007)

descriptive statistics output was utilised to check for independent variables that correlated too highly with each other, that is, where $R > 0.9$.

Variance inflation factor (VIF) diagnostics were checked using the SPSS Collinearity Statistics section of the coefficients table output. The VIF indicates whether an independent variable has a strong linear relationship with another. SPSS provides both VIF and tolerance statistics, the latter represented as the reciprocal of the VIF. Checks included the largest VIF being less than 10 (Bowerman & O'Connell 1990; Myers 1986), average VIF substantially greater than 1 indicating bias (Bowerman & O'Connell 1990), tolerance below 0.2, indicating a potential problem (Menard 2001) and tolerance below 0.1 indicating a serious problem (Field 2005).

4.7.3   Overall Model Fit

From the SPSS model summary output, the overall model fit was determined from R, the multiple correlation coefficient between the independent and dependent variables, and R^2, the measure of variability in the outcome accounted for by the independent variables. This was supplemented with the SPSS Analysis of Variance (ANOVA) F-ratio output to determine if the model was significantly better at predicting results than simply using the mean as a "best guess."Since regression analysis assumes that errors are independent, a check was made using the Durbin-Watson (1950) statistic, where values between one and three indicate the assumption is likely to be met.

4.7.4   Contribution of Independent and Control Variables

Using the coefficients table output from SPSS, independent and control variables were checked for their contribution to predicting the dependent variable where values less than 0.05 indicated significance.

4.7.5   Influential Cases and Outliers

Tests for influential cases included a standardised residual check for values above three, Cook's distance for value above one, Mahalanobis distance for values above 15, absolute value of DFBeta greater than one and limit of acceptable values of the covariance ratio (Field 2005).

Outliers, defined as records with excessive (>20%) ROA in any financial year, were removed from the population to avoid unduly influencing the profitability premium calculations (see Table A.5). No acquisition cases were identified as outliers.

4.7.6 Regression Assumption Tests

Plots of standardised residuals and each of the independent variables against standardised predicted values of the dependent variable were checked visually. Curve plot patterns indicate violation of the assumption of linearity and funnel type patterns indicate violation of homogeneity of variance and linearity (Field 2005).

4.8 The Sample

4.8.1 Sample Size

At the commencement of the research, the number of Australian acquisitions in the period of interest was unknown. The sample size has a direct impact on the appropriateness and statistical power of the multiple regression technique. Less than 30 observations are not suitable for multiple regression analysis whereas, more than 1,000 observations tend to make the statistical significance tests overly sensitive. Almost any relationship will be statistically significant in these cases (Hair et al. 2006).

Table 4.2 below provides a summary of the population data and sample sizes used in prior research for comparative purposes. The key terms are defined below:

Population	The total number of companies in the defined population, that is, all ASX listed companies.
Population Sample	The number of companies in the population after initial filtering (this may exclude companies that did not exist for the entire period of interest, for example).
Sample Period	The data collection duration.
Sample	The number of companies selected from the population for analysis.

Table 4.2:Population and Sample Data Used in Prior Research and This Study

Research	Population (companies)	Population Sample	Sample Periods	Sample
Rumelt (1982)	500	273	4 x 5 years	203
Barton (1988)	500	276	5 years	276
Lubatkin and Rogers (1989)	391	144	Last 40-60 months of the decade	113
Amit and Livnat (1988)	400	400	Yearly 1977–1983	250
Bellamy and Lewin (1992)	All Listed	210 Daily 183 Monthly	1980–July 1988	210
Bergh (1997)	453 411	453 411	1977–1982 1987–1992	150 200
Arikan and McGahan (2010)	3,595	3,595	1988–1999	1,450
This Study	5,243	1,636	2002–2005	285

4.8.2   Power Levels

Power, for multiple regression, refers to the probability of detecting a regression coefficient at a specified significance or statistically significant level of R^2 for a specified sample.

4.9   Data Collection Method

This research utilised publicly available data, sourced from various databases with random accuracy cross-checking. Much of the prior research, for example Park (2003), is based on a Compustat sample of American data for the period 1974–1979. As the current study considered features that are more prevalent in today's markets, including regulatory constraint, technology intensity and foreign-market operations, a more recent sample was required. Data were collected for the Australian financial year, beginning 1 July, for the years 2000 through to 2007 (2007 was the most recent available year: publication of all required such data lags up to a year from financial year close). As this research included

post-acquisition performance for a two-year period as dependent variable, the 2005 financial year was the last year acquisitions could be considered.

Prior to collection of announcement data, utilising the Aspect Huntley FinAnalysis (2007b) database, financial data were collected for every company listed on the ASX including four digit GICS sector codes (Standard & Poors 2006), ROA for the financial years ending 2000 to 2007, and total asset value and company financial leverage for the financial years ending 2001 to 2007. It was necessary to collect data for all sector member companies to enable the average ROA for each financial year to be calculated within a four digit GICS sector. Care was taken to ensure the correct GICS code was utilised for the financial year of acquisition as a change in primary line-of-business leads to reassessment of the GICS code by Standard and Poors (2006). Sourced from the Aspect Huntley DatAnalysis (2007a) database, all ASX take-over and asset acquisition announcements were examined for the financial years ending 2003 to 2005. This provided a sample of 436 intent-to-make-a-take-over and 1,326 asset acquisition announcements. Take-over announcements typically indicate significantly sized mergers of one or more ASX listed companies. Acquisition announcements generally refer to assets, such as plant or real estate, but can also include company acquisition.

The researcher first identified and logged the take-over and asset acquisition announcements for the period under investigation using the search facility within the Aspect Huntley DatAnalysis database (AspectHuntley 2007a). Examination of each announcement followed to identify new acquisitions; this included identification of completion year, comparison against other announcements for duplicate identification, the country of major business activity and primary line-of-business of the target company. Whilst data were primarily sourced from the Aspect Huntley DatAnalysis database, confirmation data were sourced from ASX announcements, company annual reports and (as a last resort) company web-sites. Prior research has typically excluded any single acquisition less than USD10 million, but a company may complete multiple acquisitions exceeding this value within a year. Therefore, this research included cases in which the total value of acquisitions exceeded AUD10 million in any financial year (an example of this is ABC Learning Centre's acquisition of numerous kindergarten businesses within a single financial year (ABC 2002; 2003a; 2003b; 2003c; 2004)).

4.10 Data Preparation

From the list of 328 acquisitions identified for the financial years under examination, 94 were eliminated. The primary reason for exclusion was missing data. Another reason was longevity: some companies did not have recorded financial data for the entire sample period. As abnormal ROA calculations encompassed the three-year period before and two-year period after acquisition averages, companies must have been operational for this entire period, not just the financial year the acquisition was executed. Companies may also have been delisted in the year of acquisition, making financial data unavailable. If a company changed ASX listing details, for example, listing code or name during the period under question, data were utilised from both codes. If a change in industry classification (GICS code) occurred in the five-year window, the new code was utilised.

4.11 Categorical Variable Coding

Regression analysis assumes variables are continuous or categorical with only two categories. Therefore, the pre-acquisition and, where applicable, post-acquisition equivalent variables of industry technology and regulation type, acquisition strategy, organisational model and payment type were re-coded using dummy coding. For each variable, dummy variables were required for all categories minus one (Field 2005). For example, *payment type* had three categories: cash, stock and combination thereof. Two dummy variables were created representing the change from cash to stock and cash to combined cash and stock payment.

4.12 Multiple Regression Analysis Equations

This section details the multivariate regression equations used in test of each hypothesis.

4.12.1 Hypothesis 1 – Relatedness Theory

Hypothesis 1 replicated earlier research in an attempt to demonstrate support for relatedness theory (Miller 2006), using a recent sample of Australian data. This hypothesis proposes a positive relationship between company performance after acquisition and the commonality of revenue streams of the acquiring and target companies. It included *Post-Acquisition ROA* as the dependent variable and *Strategy Type - Related vs. Unrelated* as the independent variable to represent the two acquisition categories. Control was added for financial leverage and payment type, cash versus stock and cash versus combined cash and stock.

Equation 4.1 represents the multivariate regression analysis used to test hypothesis 1.

$$PostAcqROA_i \quad = \quad \alpha_i + B_1 StratTypeRelvsUnrel_i + B_2 PayType\text{-}CashvStock_i + \\ + B3Leverage_i$$

<div align="right">Equation 4.1</div>

This is where *PostAcqROA$_i$* represents the company ROA after acquisition for the ith company, dummy variable *StratTypeRelvsUnrel$_i$* represents the executed acquisition strategy categorised as *related* when 95% of the acquiring and target company's ROA are sourced from the same industry stream identified by the GICS code (ASX, 2005d) and *unrelated* for all others, for the ith company. Dummy variable *PayType-CashvStock$_i$* is the payment type, cash versus stock for the ith company and dummy variable *PayType-CashvCash&Stock$_i$* is the payment type, cash versus combined cash and stock for the ith company. *Leverage$_i$* is the financial leverage for the ith company.

4.12.2   Hypothesis 2 –Pre-Acquisition Company Performance and Acquisition Strategy

Hypothesis 2 extends earlier research suggesting there are after-acquisition performance differences between domestic and foreign-market acquisitions. It speculated a positive relationship between company performance before acquisition and *related* acquisition, with superior performance in domestic cases as informed by relatedness (Miller 2006) and international impediments theories (Palich, Carini & Seaman 2000). It included *Pre-Acquisition ROA* as the dependent variable and the dummy variables *Strategy Type - Related Domestic vs. Unrelated Domestic* and *Strategy Type - Related Domestic vs. Related Foreign-Market* acquisition strategies as independent variables. Commonly used control variables were added including *Financial Leverage*, along with the dummy variables *Payment Type - Cash vs. Stock* and *Payment Type - Cash vs. Combined Cash and Stock*.

Equation 4.2 represents the multivariate regression analysis used to test hypothesis 2.

$$PreAcqROA_i = \alpha_i + B_1 StratType\text{-}RelDomvUnrelDom_i +$$
$$B_2 StratType\text{-}RelDomvRelFor_i + B_3 PreAcqIndROA_i + B_4 PayType\text{-}CashvStock_i + B_5 PayType\text{-}CashvCash\&Stock_i + B_6 Leverage_i$$

Equation 4.2

This is where *PreAcqROA$_i$* is the pre-acquisition ROA for the ith company, dummy variable *StratType-RelDomvUnrelDom$_i$* is the executed strategy type, *related domestic* versus *unrelated domestic*, for the ith company representing the domestic acquisition categories and *RelDomvRelForeign$_i$* representing the equivalent in foreign-market acquisition cases, for the ith company. *PayType-CashvStock$_i$* represented the payment type, *cash* versus *stock* for the ith company and *PayType-CashvCash&Stock$_i$,* represented the payment type, *cash* versus the *combined cash and stock* type for the ith company. *Leverage$_i$* represents the financial leverage for the ith company.

4.12.3 Hypothesis 3 –Post-Acquisition Company ROA and Foreign-Market Strategy

In an extension of the above hypothesis that considered performance influences before acquisition on the executed strategy, hypothesis 3 speculates that performance after acquisition is an in-part reflection of industry and company performance before acquisition (Park 2003), and that a decrease in performance exists in foreign-market acquisition cases. It included *Post-Acquisition ROA* as the dependent variable and *Strategy Type - Related Domestic vs. Unrelated Domestic* and *Strategy Type - Related Domestic vs. Related Foreign-Market* acquisition as independent variables. *Pre-Acquisition Industry ROA* and *Pre-Acquisition Company ROA* were included as measure of performance before acquisition along with *Acquisition Size*. As with hypothesis 2, *PayType-CashvStock$_i$* represented the payment type, *cash* versus *stock* for the ith company and *PayType-CashvCash&Stock$_,$* represented the payment type, *cash* versus the *combined cash and stock* type for the ith company. *Leverage$_i$* represented the financial leverage for the ith company.

Equation 4.3 represents the multivariate regression analysis used to test hypothesis 3.

$$PostAcqROA_i = \alpha_i + B_1 StratType\text{-}RelDomvUnrelDom_i +$$
$$B_2 StratType\text{-}RelDomvRelFor_i + B_3 PreAcqROA_i +$$
$$B_4 PreAcqIndROA_i + B_5 AcqSize_i + B_6 PayType\text{-}CashvStock_i +$$
$$B_7 PayType\text{-}CashvCash\&Stock_i + B_8 Leverage_i$$

Equation 4.3

This is where *PostAcqROA$_i$* represents the post-acquisition ROA for the ith company; dummy variable *StratType-RelDomvUnrelDom$_i$* represents the acquisition strategy categories of *related domestic* and *unrelated domestic*, for the ith company and dummy variable *RelDomvRelForeign$_i$* represents the acquisition strategy categories of *related domestic* and *related foreign-market*, for the ith company. *PreAcqROA$_i$* is the pre-acquisition ROA for the ith company, *PreAcqIndROA$_i$* is the pre-acquisition industry ROA for the ith company and *AcquisitionSize$_i$* is the size of acquisition for the ith company. *PayType-CashvStock$_i$* represents the payment type categories of *cash* and *stock* for the ith company and *PayType-CashvCash&Stock* represents the payment type categories of *cash*

and *combined cash and stock* for the ith company. *Leverage$_i$* represents the financial leverage for the ith company.

4.12.4   Hypothesis 4 – Structurally Attractive Industries, Lines of Business and Pre-Acquisition ROA

Hypothesis 4 considers the organisational model (in terms of diversification) before acquisition of the company as opposed to the executed strategy in hypothesis 1. It includes *Pre-Acquisition ROA* as the dependent variable and *Pre-Acquisition Organisational Model – Single Domestic vs. Diversified Domestic* and *Pre-Acquisition Organisational Model – Single Domestic vs. Diversified Foreign-Market* as independent variables. Control variables include *Pre-Acquisition Industry ROA*, *Pre-Acquisition Total Risk* and *Pre-Acquisition Company Size*.

Equation 4.4 represents the multivariate regression analysis used to test hypothesis 4.

$$PreAcqROA_i = \alpha_i + B_1 PreAcqOrgModel\text{-}SingleDomvDivDom_i +$$
$$B_2 PreAcqOrgModel\text{-}SingleDomvSingleFor_i +$$
$$B_3 PreAcqOrgModel\text{-}SingleDomvDivFor_i + B_4 PreAcqIndROA_i +$$
$$B_5 PreAcqTotRisk_i + B_6 PreAcqCompSize_i$$

Equation 4.4

This is where *PreAcqROA$_i$* represents the pre-acquisition ROA for the ith company and dummy variable *PreAcqOrgModel-SingleDomvDivDom$_i$* represents the pre-acquisition organisational model, single revenue-stream domestic operations versus diversified revenue-stream domestic operations, for the ith company. Dummy variable *PreAcqOrgModel-SingleDomvSingleFor$_i$* represents the pre-acquisition organisational model, single revenue-stream domestic operations versus single revenue-stream foreign-market operations, for the ith company. Dummy variable *PreAcqOrgModel-DivDomvDivDom$_i$* represents the pre-acquisition organisational model, single revenue-stream domestic operations versus diversified revenue-stream foreign-market operations, for the ith company. *PreAcqIndROA$_i$* represents the industry ROA prior to acquisition for

the ith company, *PreAcqTotRisk$_i$* represents the risk before acquisition for the ith company and *PreAcqCompSize$_i$* represents the pre-acquisition company size for the ith company.

4.12.5   Hypothesis 5 – Lines of Business, Regulatory Constraint and Post-Acquisition ROA

In contrast to hypothesis 4 that considered the diversification extent on performance before acquisition, hypothesis 5 considers the diversification extent on performance after acquisition.   It also speculates that unregulated industries would demonstrate higher performance after acquisition as the regulatory constraint imposed by Governments might limit acquisition options in the same revenue stream within the domestic market.   It includes *Post-Acquisition ROA* as the dependent variable, *Pre-Acquisition Company ROA* and *Pre-Acquisition Industry ROA* along with *Pre-Acquisition Industry Type - Regulated vs. Unregulated* as independent variables and the pre-acquisition organisational model variables used in the test of hypothesis 4, as independent variables.   Control variables of financial leverage and payment type represented in equation 4.5 retain the same representation in this equation.

Equation 4.5 represents the multivariate regression analysis used to test hypothesis 5.

$$PostAcqROA_i \quad = \quad \alpha_i + B_1PreAcqCompROA_i + B_2PreAcqIndROA_i +$$
$$B_3PreAcqIndType_i + B_4PreAcqOrgModel\text{-}SingleDomvDivDom_i +$$
$$B_5PreAcqOrgModel\text{-}SingleDomvSingleFor_i +$$
$$B_6PreAcqOrgModel\text{-}SingleDomvDivFor_i +$$
$$B_7PayType\text{-}CashvStock_i + B_8PayType\text{-}CashvCash\&Stock_i +$$
$$B_9Leverage_i$$

Equation 4.5

where *PostAcqROA$_i$* represents the post-acquisition ROA for the ith company, *PreAcqCompROA$_i$* represents the pre-acquisition Company ROA for the ith company and *PreAcqIndROA$_i$* represents the pre-acquisition industry ROA for the ith company. Dummy variable *PreAcqIndType$_i$* represents the pre-acquisition industry type, regulated versus

unregulated, for the ith company and the pre-acquisition organisational model, financial leverage and payment type representations used in equation 4.5 are also included.

4.12.6 Hypotheses 6a and 6b–Pre-Acquisition ROA, Market Dominance and Industry Membership

Hypotheses 6a and 6b speculate that industry type membership influences the choice of strategy executed. Hypothesis 6a speculates that high performing, market dominant, regulated industry members are more likely to execute foreign-market acquisition. As the size of acquisition increases opportunities in the domestic market are reduced and regulatory constraint may prevent execution of domestic acquisition in the same revenue stream. It includes *Pre-Acquisition ROA* as the dependent variable, *Pre-Acquisition Industry ROA*, *Pre-Acquisition Company Size*, *Acquisition Size* and dummy variable *Pre-Acquisition Industry Type - Regulated vs. Unregulated* as independents. Strategy type variables represented in equation 4.2 and control variables of financial leverage and payment type represented in equation 4.3 retain the same representation in this equation.

Equation 4.6 represents the multivariate regression analysis used to test hypothesis 6a.

$$
\begin{aligned}
PreAcqROA_i \quad = \quad & \alpha_i + B_1 PreAcqIndROA_i + B_2 PreAcqCompSize_i + B_3 AcqSize_i + \\
& B_4 PreAcqIndType_i + B_5 StratType\text{-}RelDomvUnrelDom_i + \\
& B_6 StratType\text{-}RelDomvRelFor_i + B_7 PayType\text{-}CashvStock_i + \\
& B_8 PayType\text{-}CashvCash\&Stock_i + B_9 Leverage_i
\end{aligned}
$$

Equation 4.6

where *PreAcqROA$_i$* represents the company ROA before acquisition for the ith company, *PreAcqIndROA$_i$* represents the pre-acquisition industry ROA for the ith company, *PreAcqCompSize$_i$* represents the pre-acquisition size of the company and *AcqSize$_i$* represents the size of acquisition. Dummy variable *PreAcqIndType$_i$* represents the pre-acquisition industry type, regulated or unregulated, for the ith company whilst strategy type and payment type variable variants have the same representation as in equation 4.6.

Hypothesis 6b speculates that high performing, market-dominant, technology industry members are more likely to execute foreign-market acquisition since limited opportunities are expected to exist in the Australian domestic market for the acquisition of the latest technology. It includes *Pre-Acquisition ROA* as the dependent variable, *Pre-Acquisition Industry ROA*, *Pre-Acquisition Company Size*, *Acquisition Size* and dummy variable *Pre-Acquisition Industry Type - Low vs. High Technology* as independents. Strategy type variables represented in equation 4.2 and control variables of financial leverage and payment type represented in equation 4.3 retain the same representation in this equation.

Equation 4.7 represents the multivariate regression analysis used to test hypothesis 6b.

$$
\begin{aligned}
PreAcqROA_i \quad = \quad & \alpha_i + B_1 PreAcqCompSize_i + B_2 PreAcqIndType\text{-}LowvsHighTech_i + \\
& B_3 AcqSize_i + B_4 StratType\text{-}RelDomvUnrelDom_i + B_5 StratType\text{-} \\
& RelDomvRelFor_i + B_6 PreAcqIndROA_i + B_7 PreAcqTotalRisk_i + \\
& B_8 PayType\text{-}CashvStock_i + B_9 PayType\text{-}CashvCash\&Stock_i + \\
& B_{10} Leverage_i
\end{aligned}
$$

<div align="right">Equation 4.7</div>

where *PreAcqROA$_i$* represents the pre-acquisition ROA for the ith company, *PreAcqIndROA$_i$* represents the pre-acquisition industry ROA for the ith company, *PreAcqCompSize$_i$* represents the pre-acquisition size of the company and *AcqSize$_i$* is the size of acquisition. Dummy variable *PreAcqIndType$_i$* represents the pre-acquisition industry type, low technology versus high technology, for the ith company. Strategy type variables represented in equation 4.2 and control variables of financial leverage and payment type represented in equation 4.3 retain the same representation in this equation.

4.12.7   Hypothesis 7 –Pre-Acquisition Total Risk and Post-Acquisition ROA

Hypothesis 7 speculates that companies demonstrating high levels of total risk before acquisition demonstrate low levels of performance after acquisition. It includes *Post-Acquisition ROA* as the dependent variable, *Pre-Acquisition Total Risk*, *Pre-Acquisition Company ROA* and *Pre-Acquisition Industry ROA*, *Acquisition Size* and *Pre-Acquisition*

Industry Type - Regulated vs. Unregulated as independents. Strategy type variables as used in the test of hypothesis 2 and control variables representing financial leverage and payment type variants as used in test of hypothesis 3 are also included.

Equation 4.8 represents the multivariate regression analysis used to test hypothesis 7.

$$PostAcqROA_i = \alpha_i + B_1PreAcqTotRisk_i + B_2PreAcqCompROA_i +$$
$$B_3PreAcqIndROA_i + B_4AcqSize_i + B_5PreAcqIndType_i +$$
$$B_6StratType\text{-}RelDomvUnrelDom_i +$$
$$B_7StratType\text{-}RelDomvRelFor_i + B_8PayType\text{-}CashvStock_i +$$
$$B_9PayType\text{-}CashvCash\&Stock_i + B_{10}Leverage_i$$

Equation 4.8

where $PostAcqROA_i$ is the post-acquisition ROA for the ith company, $PreAcqTotRisk_i$ is the pre-acquisition total risk for the ith company, $PreAcqCompROA_i$ is the pre-acquisition Company ROA for the ith company and $PreAcqIndROA_i$ is the pre-acquisition industry ROA for the ith company. $AcquisitionSize_i$ is the acquisition size for the ith company and dummy variable $PreAcqIndType_i$ is the pre-acquisition industry type, regulated versus unregulated, for the ith company. Strategy type variables represented in equation 4.2 and control variables of financial leverage and payment type represented in equation 4.3 retain the same representation in this equation.

4.12.8   Hypothesis 8 – Post-Acquisition Total Risk and Post-Acquisition ROA

Hypothesis 8 speculates that risk reduction is a key motive for acquisition leading to an increase in performance after acquisition.

It includes *Post-Acquisition ROA* as the dependent variable, *Post-Acquisition Total Risk* and *Post-Acquisition Industry ROA* as independent variables, with *Acquisition size* and a dummy variable *Pre-Acquisition Industry Type - Regulated vs. Unregulated* as independents. All other variables are of the dummy type, including $PostAcqOrgModel\text{-}SingleDomvDivDom_i$ that represents the organisational model after acquisition of single revenue-stream domestic operations versus diversified revenue-stream domestic

operations, for the ith company. *PostAcqOrgModel-SingleDomvDivDom$_i$* represents the organisational model acquisition of single revenue-stream domestic operations versus multi-revenue-stream domestic operations, for the ith company. *PostAcqOrgModel-SingleDomvSingleFor$_i$* represents the organisational model after acquisition of single revenue-stream domestic operations versus single revenue-stream foreign-market operations, for the ith company. *PostAcqOrgModel-DivDomvDivDom$_i$* represented the organisational model after acquisition of single revenue-stream domestic operations versus multi-revenue-stream foreign-market operations, for the ith company.

Equation 4.9 represents the multivariate regression analysis used to test hypothesis 8.

$$PostAcqROA_i = \alpha_i + B_1 PostAcqTotRisk_i + B_2 PostAcqIndROA_i +$$
$$B_3 PostAcqOrgModel\text{-}SingleDomvDivDom_i +$$
$$B_4 PostAcqOrgModel\text{-}SingleDomvSingleFor_i +$$
$$B_5 PostOrgModel\text{-}SingleDomvDivFor_i$$

<div align="right">Equation 4.9</div>

This is where *PostAcqROA$_i$* is the ROA after acquisition for the ith company, *PreAcqTotRisk$_i$* is the *total risk* before acquisition for the ith company and *PostAcqIndROA$_i$* is the industry ROA after acquisition for the ith company. Dummy variables include *PostAcqOrgModel-SingleDomvSingleFor$_i$* and *PostAcqOrgModel-DivDomvDivDom$_i$*. The variable *PostAcqOrgModel-SingleDomvSingleFor$_i$* represents the post-acquisition organisational model, single revenue-stream domestic operations versus single revenue-stream foreign-market operations, for the ith company. *PostAcqOrgModel-DivDomvDivDom$_i$* represents the organisational model after acquisition, single revenue-stream domestic operations versus diversified revenue-stream foreign-market operations, for the ith company.

4.13 Ethical Considerations

As this research utilised publicly available data, none of which was of a personal nature, no ethical issues were identified and exemption from the ethics approval process was granted by the RMIT University Ethics Committee.

4.14 Summary

This chapter first defined variables, including commonly utilised controls. As this research was intended as an extension of the work of Park (2002; 2003), like variables were utilised where possible to create a baseline for extension. Key additions include control for acquisition size, foreign-market acquisition, technology intensive industries and regulatory constraint. In cases of foreign-market acquisition, the expectation of a decrease in performance from market, production and cognitive impediments not present in the domestic market, led to inclusion of an appropriate control. Special cases of technology intensive industries and regulatory constraint, suggesting member companies were more likely to execute foreign-market acquisition, also led to control inclusion. Described next, with justification for their use, were the employed method and analysis technique that included recognition of the issues and assumptions of the multiple regression analysis technique. This research utilised the most recent set of Australian data that required manual data collection of listed company acquisitions; the process for this was outlined prior to description of the multiple regression analysis models used to test each hypothesis.

The next chapter presents the findings of the research and includes the means, standard deviations and bivariate correlations, followed by the results of the multiple regression analysis, before discussion on each of the models.

Chapter 5

RESULTS

5.1   Introduction

This chapter presents the results of the research including descriptive statistics, bivariate correlations and results of multiple regression analyses. For each hypothesis, a short background summary is followed by evidence that the assumptions of multiple regression analysis have been met. Following preliminary findings from the bivariate correlations (presented first as they apply to multiple models) the results of the multiple regression analyses are presented. The subsequent chapter provides discussion of the models and their theoretical implications.

5.2   Results

5.2.1   Descriptive Results

Examination of the sample population identified 17 outliers that were excluded from all models, as listed in Appendix A.5. A population of 2,306 Australian Stock Exchange (ASX) listed companies represented the total number of listed companies registering returns for the period 2000–2006. From these, 18 cases were omitted from the analysis as they introduced skewed market, industry and abnormal return performance metrics. Of the remaining population, the minimum ROA percentage was –1,870% and maximum ROA percentage, 1,609%, whereas of the excluded cases, the minimum percentage was –

80,504% and maximum percentage 24,240%. Investigation of each case, using annual reports and ASX announcements to verify the data obtained from the Aspect Huntley database did not provide explanation for the extremes of ROA. None of the excluded cases contained an acquisition during the period under question.

For the Australian fiscal years 2002 through to 2005, 446 acquisitions were executed, with 234 useable in the analysis. Common reasons for exclusion included the combined value of all acquisitions in a fiscal year being less than AUD10 million and data unavailability. The latter includes cases in which a company did not report returns for the three years before or two years after acquisition, or all required data was not available to facilitate analysis (for example, private company acquisition as private companies are not required to disclose the financial data required by the study).

This research considered three models: the pre-acquisition organisation, the executed strategy and the post-acquisition organisational model. Of the usable sample, the pre-acquisition operational model included 52 cases (22% of the sample) classified as *single domestic*, 29 (12%) *diversified domestic*, 98 (42%) *single foreign-market* and 55 cases (24%) classified as *diversified foreign-market*. The executed strategy model included 215 cases (92%) classified as *related* and 19 (8%) *unrelated*. Of the cases classified as related, 150 (64%) were domestic and 84 (36%) were foreign-market acquisitions. The post-acquisition operational model included 38 cases (16%) classified as *single revenue-stream domestic*, 27 (12%) *multi-revenue-stream domestic*, 101 (43%) *single revenue-stream foreign-market* and 68 (29%) classified as *multi-revenue-stream foreign-market*. These figures represent the change in organisational model category as a result of acquisition as – 14 (–27%) for *single revenue-stream domestic*, –2 (–7%) for *multi-revenue-stream domestic*, 3 (3%) for *single revenue-stream foreign-market* and 13 (24%) for *multi-revenue-stream domestic* classifications.

Table 5.1 presents the preliminary findings of means, standard deviations and bivariate correlations with key relationships discussed below. Maximisation of independent variable predictive capability requires low multicollinearity with other independent variables and high correlation with the dependent variable. There is a trade-off between an increase in predictive power and potentially misleading regression models, therefore the descriptive statistics output was utilised to check for independent variables that correlated

too highly with each other, that is, where r > 0.9. The largest correlation was between *Pre-Acquisition Organisational Model – Single Domestic vs. Diversified Domestic* and *Post-Acquisition Organisational Model – Single Domestic vs. Diversified Domestic* (r = 0.96, p < 0.001).   This was followed by *Pre-Acquisition Organisational Model – Single Domestic vs. Diversified Foreign-Market* and *Post-Acquisition Organisational Model – Single Domestic vs. Diversified Foreign Market* (r = 0.92, p < 0.001).   These high correlations can be anticipated as the variables simply reflect the organisational model before and after acquisition; none of the multiple regression models tested included both variables. Another correlation above the threshold was between *Pre-Acquisition Company Size* and *Acquisition Siz*e (r = 0.94, p < 0.001). The high r value was expected in view of the fact that larger companies are likely to execute larger acquisitions, however, no model analysed utilised both these variables. The next largest correlation, r = –0.78 (p < 0.001) was between *Strategy Type – Related vs. Unrelated* and *Strategy – Related Domestic vs. Unrelated Domestic*. The former was used in the replication analysis for consistency with prior research and the latter includes geographic control.

Post-Acquisition ROA showed a positive correlation with *Pre-Acquisition ROA* (r = 0.59 at p < 0.001), *Pre-Acquisition Industry ROA* (r = 0.47 at p < 0.001) and *Post-Acquisition Industry ROA* (r = 0.43 at p < 0.001). *Pre-Acquisition ROA* correlated positively with *Pre-Acquisition Industry ROA* (r = 0.25 at p < 0.001) and *Post-Acquisition Industry ROA* (r = 0.26 at p < 0.001).   As expected, this suggests that a relationship exists between industry performance and a company's performance within that industry, and performance after acquisition relates to performance before acquisition. *Post-Acquisition ROA* also correlated positively with *Acquisition Size* (r = 0.40 at p < 0.001), *Pre-Acquisition Total Risk* (r = 0.30 at p < 0.001), *Post-Acquisition Total Risk* (r = 0.51 at p < 0.001), *Pre-Acquisition Company Size* (r = 0.46 at p < 0.001) and *Pre-Acquisition Industry – Low vs. High Technology* (r = 0.44 at p < 0.001). This suggests that larger, low-technology content companies executing domestic market acquisition in the same revenue stream, who demonstrate high levels of total risk, may be associated with greater returns. *Strategy – Related Domestic vs. Related Foreign-Market* was negatively associated (r = –0.18 at p < 0.01) whilst *Strategy – Related Domestic vs. Unrelated Foreign-Market* was positively related (r = 0.24 at p < 0.001). This suggests that foreign-market acquisition in the same revenue stream may be associated with higher performance, and foreign-market acquisition in an unrelated revenue stream may be associated with lower performance

when compared to domestic acquisition in the same revenue stream. The pre- and post-acquisition organisation model variables show that a decrease in company performance exists with foreign-market operations. Acquisitions funded by cash payment, as opposed to stock payment, may also be associated with higher performance as indicated by the connection between *Pre-Acquisition Performance* ($r = 0.24$ at $p < 0.001$) and *Post-Acquisition Performance* ($r = 0.21$ at $p < 0.01$). *Post-Acquisition Total Risk* was positively associated with *Strategy – Related Domestic vs. Related Foreign-Market* ($r = 0.22$ at $p < 0.001$) and *Payment Type – Cash vs. Stock* ($r = 0.18$ at $p < 0.01$). This suggests that high levels of total risk may be associated with domestic acquisition in the same revenue stream compared with foreign-market acquisition in the same revenue stream, and cash payment compared to stock-based payment. *Post Acquisition Total Risk* was also positively correlated with *Pre Acquisition ROA* ($r = 0.45$ at $p < 0.001$), *Pre-Acquisition Company Size* ($r = 0.59$ at $p < 0.001$) and *Acquisition Size* ($r = 0.55$ at $p < 0.001$) suggest high performing large companies execute large-scale acquisition and demonstrate high levels of *total risk* after acquisition. *Pre-Acquisition Industry ROA* was negatively associated with *Pre-Acquisition Industry – Low vs. High Technology* ($r = –0.68$ at $p < 0.001$) and *Strategy – Related Domestic vs. Related Foreign-Market* ($r = –0.26$ at $p < 0.001$). This suggests that technology intensive industries and foreign-market acquisitions in the same revenue stream are associated with higher performance. *Pre-Acquisition Leverage* was only found to be associated with *Pre-Acquisition Company Size* ($r = –0.18$ at $p < 0.01$). Various ordinal variables demonstrated high correlations with each other. For example, *Pre-Acquisition Industry – Low vs. High Technology* correlated with *Payment Type – Cash vs. Stock* ($r = 0.33$ at $p < 0.001$).

Table 5.1: Means, Standard Deviations and Bivariate Correlations

Variables	Mean	Std. Dev.	1	2	3	4	5	6	7	8	9
1. Post-Acquisition ROA	−0.03	0.20	1.00								
2. Post-Acquisition Total Risk	0.03	0.07	0.51***	1.00							
3. Pre-Acquisition ROA	−0.03	0.22	0.59***	0.45***	1.00						
4. Pre-Acquisition Industry ROA	−0.01	0.11	0.47***	−0.15*	0.25***	1.00					
5. Pre-Acquisition Total Risk	0.06	0.21	0.30***	0.44***	0.79***	0.01	1.00				
6. Pre-Acquisition Leverage	2.04	2.10	−0.07	−0.03	−0.11	0.02	−0.10	1.00			
7. Pre-Acquisition Company Size	0.05	0.01	0.46***	0.59***	0.43***	−0.11	0.42***	−0.13*	1.00		
8. Acquisition Size	0.05	0.01	0.40***	0.55***	0.46***	−0.07	0.47***	−0.10	0.94***	1.00	
9. Pre-Acquisition Industry – Low vs. High Tech	0.30	0.46	0.44***	0.04	0.33***	−0.68***	−0.07	−0.02	0.05	0.00	1.00
10. Pre-Acquisition Industry Type –Unregulated vs. Regulated	0.30	0.46	0.10	−0.01	0.03	0.07	0.00	0.00	−0.07	0.17*	−0.07
11. Pre-Acquisition Organisational Model – Single Domestic vs. Diversified Domestic	0.12	0.33	0.04	0.06	0.01	0.09	0.05	0.08	0.13*	−0.11	0.19**
12. Pre-Acquisition Organisational Model – Single Domestic vs. Single Foreign-Market	0.42	0.49	−0.13*	−0.06	0.00	−0.05	0.04	0.05	−0.15*	0.16*	−0.14*
13. Pre-Acquisition Organisational Model – Single Domestic vs. Diversified Foreign-Market	0.24	0.42	−0.02	−0.06	−0.05	−0.04	−0.02	−0.08	−0.13*	0.04	−0.17**
14. Strategy – Related Domestic vs. Unrelated Domestic	0.05	0.22	0.00	0.02	0.02	0.06	0.03	0.00	0.05	0.00	0.05
15. Strategy – Related Domestic vs. Related Foreign-Market	0.33	0.47	−0.18**	0.00	−0.06	−0.26***	0.04	0.09	−0.16*	0.07	−0.17**
16. Strategy – Related Domestic vs. Unrelated Foreign-Market	0.03	0.17	0.24***	0.22**	0.27***	0.08	0.25***	−0.08	0.15*	−0.02	0.13
17. Post-Acquisition Organisational Model – Single Domestic vs. Diversified Domestic	0.12	0.32	0.08	0.06	−0.05	0.09	0.00	0.09	0.11	−0.11	0.16*
18. Post-Acquisition Organisational Model – Single Domestic vs. Single Foreign-Market	0.43	0.50	−0.09	0.03	0.00	−0.09	0.05	0.06	−0.09	0.12	−0.09
19. Post-Acquisition Organisational Model – Single Domestic vs. Diversified Foreign-Market	0.29	0.46	−0.05	−0.08	−0.03	0.00	0.00	−0.09	−0.10	0.04	−0.13*
20. Cash vs. Stock	0.23	0.42	0.21**	0.18**	0.24***	0.02	0.21**	−0.09	0.32***	−0.11	0.33***
21. Cash vs. Cash & Stock	0.21	0.40	0.04	0.07	−0.01	0.04	0.00	0.02	0.08	−0.11	0.12
22. Strategy Type – Related vs. Unrelated	0.92	0.27	−0.15*	−0.16*	−0.18**	−0.10	−0.18**	0.05	−0.14*	−0.08	−0.12
23. Post-Acquisition Industry ROA	−0.02	0.16	0.43***	−0.11	0.26***	0.68***	0.01	0.04	−0.06	−0.05	−0.61***

Columns 10-22 continued from above:

	10	11	12	13	14	15	16	17	18	19	20	21	22
10. *Pre-Acquisition Industry Type –Unregulated vs. Regulated*	1.00												
11. *Pre-Acquisition Organisational Model – Single Domestic vs. Diversified Domestic*	–0.02	1.00											
12. *Pre-Acquisition Organisational Model – Single Domestic vs. Single Foreign-Market*	–0.05	–0.32***	1.00										
13. *Pre-Acquisition Organisational Model – Single Domestic vs. Diversified Foreign-Market*	–0.10	–0.21**	–0.47***	1.00									
14. *Strategy – Related Domestic vs. Unrelated Domestic*	0.10	0.03	–0.12	–0.08	1.00								
15. *Strategy – Related Domestic vs. Related Foreign-Market*	–0.09	–0.24***	0.31***	0.06	–0.16*	1.00							
16. *Strategy – Related Domestic vs. Unrelated Foreign-Market*	0.05	0.01	–0.10	0.14*	–0.04	–0.12	1.00						
17. *Post-Acquisition Organisational Model – Single Domestic vs. Diversified Domestic*	0.00	0.96***	–0.31***	–0.20**	0.04	–0.25***	–0.06	1.00					
18. *Post-Acquisition Organisational Model – Single Domestic vs. Single Foreign-Market*	–0.07	–0.33***	0.92***	–0.48***	–0.20**	0.40***	–0.15*	–0.31***	1.00				
19. *Post-Acquisition Organisational Model – Single Domestic vs. Diversified Foreign-Market*	–0.05	–0.18**	–0.49***	0.87***	0.28***	0.00	0.27***	–0.23***	–0.56***	1.00			
20. *Payment Type Cash vs. Stock*	0.04	0.26***	–0.16*	–0.14*	–0.04	–0.19**	0.08	0.25***	–0.17**	–0.10	1.00		
21. *Payment Type Cash vs. Cash & Stock*	0.01	–0.06	–0.02	–0.08	0.03	–0.11	0.04	–0.05	–0.04	–0.05	–0.28***	1.00	
22. *Strategy Type – Related vs. Unrelated*	–0.11	–0.03	0.16*	–0.02	–0.78***	0.21**	–0.59***	0.01	0.26***	–0.40***	–0.02	–0.04	1.00
23. *Post-Acquisition Industry ROA*	–0.15*	0.12	–0.09	0.03	0.05	–0.16*	0.06	0.10	–0.11	0.06	–0.03	0.02	–0.08

N = 234

* $p < 0.05$

** $p < 0.01$

*** $p < 0.001$

5.2.2 Multiple Regression Analysis

Following the results of the tests of general assumption, this section presents the results of the multiple regression analysis (conducted using SPSS version 16) for each of the hypothesised models.

5.2.2.1 Multiple Regression Assumptions

Multiple regression assumption checks enable confirmation or refutation of validity (Berry 1993). All variables used in the analysis were either quantitative, being continuous and unbounded, or categorical, limited to two categories. Further, all variables had variance in value and there was no perfect linear relationship between two or more predictors. Also, no two variables had a correlation greater than 0.9 (See Table 5.1). Plot examination of the standardised residuals against the standardised predicted values detected no heteroscedasticity or non-linearity. The histogram and normal probability plots demonstrated normalised distribution and residual partial plots of each independent and control variable generally identified no unduly influential cases. None of the variables in any model had substantial correlation ($r > 0.9$) suggesting absence of multicollinearity. Further confirmation was provided by the variance inflation factor (VIF) where no VIF value approached the value of 10 (Myers 1986). Assumptions of homoscedasticity, independent error correlation and normally distributed errors are presented with the results of each model.

5.2.2.2 Hypothesis 1 –Post-Acquisition Company ROA and Acquisition Strategy

The testing of hypothesis 1 (repeated below for clarity) using a recent sample of Australian acquisitions, replicates earlier research examining the relationship between company performance after acquisition and the difference in acquiring and target company revenue streams. As noted earlier, relatedness theory (Miller 2006) suggests superior performance after acquisition where the revenue streams are closely related as operational synergies deliver scale economies that are only available in these cases.

Hypothesis 1:   Companies demonstrating high post-acquisition ROA are more likely to have executed acquisition in the same revenue stream.

Table 5.2 illustrates the results of the regression analysis performed to test hypothesis 1. It shows a significant negative relationship ($b = –0.14$, $p < 0.05$) between *Pre-Acquisition*

Performance and *Strategy Type – Related vs. Unrelated*, thereby supporting hypothesis 1. The highly significant positive relationship ($b = 0.20$, $p < 0.01$) between *Pre-Acquisition Performance* and *Payment Type – Cash vs. Stock* suggests, in contrast to expectation, that superior performance after acquisition is associated with acquisition funded by stock. *Pre-Acquisition Leverage* was not significant, suggesting debt level is not a factor. The model is highly significant ($p < 0.01$) but only accounts for 5% of variance.

Table 5.2: Regression Analysis – Acquirer and Target Company Revenue Stream Relatedness and Post-Acquisition Company ROA

Variables	B	t
Strategy Type – Related vs. Unrelated	–0.14	–2.19[*]
Payment Type – Cash vs. Stock	0.20	3.12[**]
Pre-Acquisition Leverage	–0.04	–0.63
Constant		1.66
R^2	0.06	
ΔR^2	0.05	
F	5.28[**]	
Df	3, 230	

[*] $p < 0.05$

[**] $p < 0.01$

[***] $p < 0.001$

One tailed hypothesised effects

Dependent Variable: Post-Acquisition Company ROA

Examination of the residual statistics summary table identified eight cases with standardised residuals less than minus two or greater than two, that is, within the accepted 5% tolerance for 234 cases. Four cases had standardised residuals greater than three. Further investigation revealed none had a Cook's distance (Cook & Weisberg 1982) greater than one and none had a Mahalanobis distance (Barnett & Lewis 1978) greater than 20, suggesting these were not influential cases in the model. To determine if any one case would influence the regression

parameters, the DFBeta and covariance ratio statistics were also examined. With the DFBeta, no case demonstrated a value greater than one and all cases were greater than minus one. With the covariance ratio statistics, one case fell outside the upper and lower limits of 1.04 and 0.92, but retesting excluding this case showed that it did not influence the model. Using the population (as opposed to the sample) to determine an indication of variance in dependent variables, the adjusted SPSS-generated R^2 value from Wherry's equation (Field 2005) of 0.05 was cross-validated manually using Stein's formula (Stevens 1992), providing an R^2 value of 0.03, approximating the result of SPSS. The Durbin-Watson statistic of 1.44 being greater than one and less than three indicates that the assumption of independent errors is tenable (Field 2005). The average VIF was 1.01 (Bowerman & O'Connell 1990) with tolerance of 0.99 (Field 2005; Menard 2001).

5.2.2.3 Hypothesis 2 –Pre-Acquisition Company ROA and Acquisition Strategy

The testing of hypothesis 2 (replicated below for clarity) extends earlier research by examining the effects of differences in domestic and foreign-market performance before acquisition on the acquisition strategy as suggested by relatedness (Miller 2006) and international impediments (Palich, Carini & Seaman 2000)theories.

Hypothesis 2:   a) Companies demonstrating high pre-acquisition ROA are more likely to execute domestic-market acquisition within the same revenue-stream.

b) Companies demonstrating low pre-acquisition ROA are more likely to execute domestic-market acquisition into other revenue-streams.

Table 5.3 demonstrates that this hypothesis is unsupported with the correlation between *Strategy Type – Related Domestic vs. Unrelated Domestic* and *Strategy Type – Related Domestic vs. Related Foreign-Market* found to be non-significant. Unexpectedly, this finding suggests that a company's performance before acquisition does not influence management's choice of acquisition strategy. It should be noted that the sample contained insufficient cases of unrelated foreign-market acquisition to determine statistical significance. Hair et al. (2006) recommended at least thirty observations of each category in multiple regression analysis to obtain acceptable statistical power. Since only 24% of the 19 cases of foreign-market

acquisition into an unrelated revenue-stream resulted in organisational model change the period required to capture a sufficient number of cases would be 24 years. Market conditions are likely to change over this extended period making results questionable and availability of data for the Australian market suggest this is not feasible. The highly significant positive relationship (b= 0.27, $p < 0.001$) with *Pre-Acquisition Industry ROA* suggests company performance strongly reflects its industry performance. As with hypothesis 1, *Payment Type – Cash vs. Stock* is highly significant (b= 0.26, $p < 0.001$), associating higher pre-acquisition performance with acquisition funded by stock. As observed for hypothesis 1, *Pre-Acquisition Leverage* was not a significant predictor, suggesting debt level is not a factor. The model is highly significant ($p < 0.001$) but only accounts for 12% of total data variance.

Examination of the SPSS summary table of residual statistics identified nine cases with standardised residuals less than minus two or greater than two, that is, within the accepted 5% tolerance for 234 cases. Five cases had standardised residuals greater than three. Further investigation revealed that none had a Cook's distance (Cook & Weisberg 1982) greater than one and none had a Mahalanobis distance (Barnett & Lewis 1978) greater than 20, suggesting that these were not influential cases in the model. Two cases demonstrated a DFBeta value greater than one; all cases were greater than minus one and three cases fell outside the covariance ratio upper and lower limits of 1.08 and 0.92, respectively. Retesting excluding these cases showed that they did not influence the model. As an indication of variance in the dependent variables, had the model been derived from the population as opposed to the sample, the adjusted SPSS generated R^2 value from Wherry's equation (Field 2005) of 0.12 was cross-validated using Stein's formula (Stevens 1992) providing an R^2 value of 0.09, close to that of SPSS. The Durbin-Watson statistic of 1.68 being greater than one and less than three indicates the assumption of independent errors is tenable (Field 2005). The average VIF was 1.1 (Bowerman & O'Connell 1990) and the VIF tolerance was 0.91 (Field 2005; Menard 2001).

Table 5.3:   Regression Analysis – Acquisition Strategy and Pre-AcquisitionCompany ROA

Variables	B	t
Strategy Type – Related Domestic vs. Unrelated Domestic	0.03	0.42
Strategy Type – Related Domestic vs. Related Foreign-Market	0.08	1.18
Pre-Acquisition Industry ROA	0.27	4.18***
Payment Type – Cash vs. Stock	0.26	3.98***
Payment Type – Cash vs. Cash & Stock	0.06	0.94
Pre-Acquisition Leverage	–0.10	–1.62
Constant		–2.26*
R^2	0.14	
ΔR^2	0.12	
F	6.06***	
Df	6,227	

* $p < 0.05$

** $p < 0.01$

*** $p < 0.001$

        One tailed hypothesised effects

        Dependent Variable: Pre-Acquisition Company ROA

5.2.2.4 Hypothesis 3 –Post-Acquisition Company ROA and Foreign-Market Acquisition

Hypothesis 3 (replicated below for clarity) speculated that high performing pre-acquisition companies experience a reduction in performance when undertaking foreign-market acquisition compared to domestic-market acquisition.

Hypothesis 3: Companies demonstrating high pre-acquisition ROA executing domestic acquisition demonstrate higher post-acquisition ROA than foreign-market acquisition equivalents.

Table 5.4 demonstrates that the hypothesis was unsupported with no significant relationship being found between *Strategy Type – Related Domestic vs. Unrelated Domestic* and *Strategy Type – Related Domestic vs. Related Foreign-Market*. The highly positive significant relationships with *Pre-Acquisition Company ROA* ($b = 0.36$, $p < 0.001$) and *Pre-Acquisition Industry ROA* ($b = 0.40$, $p < 0.001$) suggest that a company's performance after acquisition largely reflects the performance of both the industry and the company before acquisition. Also highly significant was *Acquisition Size* ($b = 0.26$, $p < 0.001$), which suggests acquisitions of larger companies are associated with better performance after acquisition. Unlike prior hypotheses, *Payment Type – Cash vs. Stock* was not significant. Similar to prior hypotheses, *Pre-Acquisition Leverage* was also not significant, suggesting debt level is not a factor. The model is highly significant ($p < 0.001$) accounting for 49% of variance.

Table 5.4:   Regression Analysis – Post-Acquisition ROA and Foreign-Market Discount

Variables	B	t
Strategy Type – Related Domestic vs. Unrelated Domestic	-0.05	-1.08
Strategy Type – Related Domestic vs. Related Foreign-Market	0.00	-0.19
Pre-Acquisition ROA	0.36	6.43***
Pre-Acquisition Industry ROA	0.40	7.68***
Acquisition Size	0.26	4.42***
Payment Type – Cash vs. Stock	0.02	0.46
Payment Type – Cash vs. Cash & Stock	0.10	0.20
Pre-Acquisition Leverage	0.00	-0.16
Constant		-4.49***
R^2	0.51	
ΔR^2	0.49	
F	29.47***	
Df	8,225	

* $p < 0.05$

** $p < 0.01$

*** $p < 0.001$

One tailed hypothesised effects

Dependent Variable: Post-Acquisition Company ROA

Examination of the summary table of residual statistics identified eleven cases with standardised residuals less than minus two or greater than two, that is, within the accepted 5% tolerance for 234 cases. Four cases had standardised residuals greater than three. Further investigation revealed that none had a Cook's distance (Cook & Weisberg 1982) greater than

one however, two had a Mahalanobis distance (Barnett & Lewis 1978) greater than 20 suggesting these may be influential cases in the model. One case demonstrated a DFBeta value greater than one, and all cases were greater than minus one. No cases fell outside the covariance ratio upper and lower limits of 4.15 and –2.15, respectively. Re-examination of the model excluding these cases demonstrated they were not influential to the statistical outcome. As an indication of variance in dependent variables, had the model been derived from the population as opposed to the sample, the adjusted SPSS generated R^2 value from Wherry's equation (Field 2005) of 0.51 was cross-validated using Stein's formula (Stevens 1992), providing an R^2 value close to that of the 0.47 obtained by SPSS. The Durbin-Watson statistic of 1.70, being greater than one and less than three, indicates that the assumption of independent errors is tenable (Field 2005). The average VIF was 1.26 (Bowerman & O'Connell 1990) and the VIF tolerance was 0.79 (Field 2005; Menard 2001).

5.2.2.5 Hypothesis 4 – Structurally Attractive Industries, Lines of Business and Pre-Acquisition ROA

Hypothesis 4 (replicated below for clarity) considered the pre-acquisition organisational model of the company as opposed to the executed strategy in hypothesis 1. Previous research considered the executed strategy or the extent of diversification, not the change in diversification extent. A diversified company with foreign-market operations executing a related domestic acquisition, for example, may reduce its exposure to foreign markets but most likely retains its classification as a diversified company with foreign-market operations.

Hypothesis 4:   Single revenue stream companies operating solely domestically, who are members of structurally attractive industries, demonstrate higher pre-acquisition ROA than diversified lines of business or foreign-market operation equivalents.

Table 5.5 demonstrates that the data did not support the hypothesis with pre-acquisition organisational model variants all proving non-significant suggesting, in contradiction to relatedness theory (Miller 2006), that the organisational model does not contribute to performance. The highly significant positive relationship with *Pre-Acquisition Industry ROA* ($b = 0.27$, $p < 0.001$), like hypothesis 3, suggests that a company's performance before

acquisition partially reflects its industry performance. Similarly, *Pre-Acquisition Total Risk* was highly significant ($b = 0.72$, $p < 0.001$) suggesting high performance results from, executing high-risk strategies. *Company Size* ($b = 0.16$, $p < 0.001$) was also highly significant, suggesting that larger companies are associated with superior levels of performance after acquisition. The model is highly significant ($p < 0.001$) and accounts for 70% of total variance.

Table 5.5: **Regression Analysis –Pre-AcquisitionCompnay ROA and Pre-Acquisition Revenue Streams**

Variables	B	t
Pre-Acquisition Organisational Model – Single Domestic vs. Diversified Domestic	–0.10	–2.33
Pre-Acquisition Organisational Model – Single Domestic vs. Single Foreign-Market	–0.05	–1.01
Pre-Acquisition Organisational Model – Single Domestic vs. Diversified Foreign-Market	–0.05	–1.09
Pre-Acquisition Industry ROA	0.27	7.29[***]
Pre-Acquisition Total Risk	0.72	18.00[***]
Pre-Acquisition Company Size	0.16	3.72[***]
Constant		–4.19[***]
R^2	0.71	
ΔR^2	0.70	
F	91.99[***]	
Df	6, 227	

[*] $p < 0.05$

[**] $p < 0.01$

[***] $p < 0.001$

One tailed hypothesized effects

Dependent Variable: Pre-Acquisition Company ROA

Residual statistics summary table examination, identified fourteen cases with standardised residuals less than minus two or greater than two, that is, just outside the accepted 5% tolerance for 234 cases. One case had standardised residuals greater than three but further investigation revealed it did not have a Cook's distance (Cook & Weisberg 1982) greater than one. Three cases had a Mahalanobis distance (Barnett & Lewis 1978) greater than 20 suggesting these may be influential in the model; re-examination of the model excluding these cases demonstrated they were not influential to the statistical outcome. No cases exhibited a DFBeta value greater than one whilst one case was less than minus one. One case fell outside the covariance ratio upper and lower limits of 4.11 and –2.11, respectively. Re-examination of the model excluding these cases demonstrated they were not influential to the statistical outcome. As an indication of variance in the dependent variable, had the model been derived from the population as opposed to the sample, the adjusted SPSS generated R^2 value from Wherry's equation (Field 2005) of 0.69 was cross-validated using Stein's formula (Stevens 1992) providing an R^2 value close to that of SPSS's 0.71. The Durbin-Watson statistic of 1.42, being greater than one and less than three, indicates that the assumption of independent errors is tenable (Field 2005). The average VIF was 1.42 (Bowerman & O'Connell 1990) and the VIF tolerance was 0.70 (Field 2005; Menard 2001).

5.2.2.6 Hypothesis 5 – Lines of Business, Regulatory Constraint and Post-Acquisition ROA

In contrast to hypothesis 4 which addressed the influence of the extent of diversification before acquisition on performance before acquisition, hypothesis 5 (replicated below) considered the influence on performance after acquisition. It also included control for industry type, regulated vs. unregulated, speculating a reduction of performance associated with governmental constraints of regulated industries.

Hypothesis 5:   Pre-acquisition unregulated single revenue-stream model companies operating solely in the domestic market demonstrate higher post-acquisition ROA than diversified revenue-stream or foreign-market operation equivalents.

Table 5.6 demonstrates partial support for the hypothesis with *Pre-Acquisition Organisational Model – Single Domestic vs. Single Foreign-Market* proven to be significant ($b = -0.14$, $p < 0.05$). This suggests reduced performance in the foreign market as posited by international impediments theory (Palich, Carini & Seaman 2000). However, *Pre-Acquisition Industry Type – Unregulated vs. Regulated* was not significant, suggesting that government regulation does not constrain performance. The highly significant positive relationships with *Pre-Acquisition Industry ROA* ($b = 0.48$, $p < 0.001$) and *Pre-Acquisition Industry ROA* ($b = 0.34$, $p < 0.001$) suggest that company performance after acquisition largely reflects company and industry performance before acquisition. Like hypotheses 3, *Payment Type – Cash vs. Stock* and *Pre-Acquisition Leverage* were not significant, suggesting payment type and debt level are not influential factors. The model is highly significant ($p < 0.001$) and accounts for 46% of total variance.

Table 5.6: **Regression Analysis –Post-Acquisition ROA and Pre-Acquisition Revenue Streams**

Variables	B	t
Pre-Acquisition Company ROA	0.48	9.16[***]
Pre-Acquisition Industry ROA	0.34	6.82[***]
Pre-Acquisition Industry Type – Unregulated vs. Regulated	0.04	0.80
Pre-Acquisition Organisational Model – Single Domestic vs. Diversified Domestic	–0.06	–1.09
Pre-Acquisition Organisational Model – Single Domestic vs. Single Foreign-Market	–0.14	–2.08[*]
Pre-Acquisition Organisational Model – Single Domestic vs. Diversified Foreign-Market	–0.04	–0.62
Payment Type – Cash vs. Stock	0.09	1.58
Payment Type – Cash vs. Cash & Stock	0.05	1.01
Pre-Acquisition Leverage	0.00	–0.09
Constant		0.16
R^2	0.48	
ΔR^2	0.46	
F	23.06[***]	
Df	9, 224	

[*] $p < 0.05$

[**] $p < 0.01$

[***] $p < 0.001$

One tailed hypothesized effects

Dependent Variable: Post-Acquisition Company ROA

5.2.2.7 Hypothesis 6 –Pre-Acquisition ROA, Market Dominance and Industry Membership

Hypothesis 6a (replicated below for clarity) proposed that high performing, market dominant, regulated industry members were more likely to execute foreign-market acquisition as the size of acquisition increased.

Hypothesis 6a: Companies demonstrating high pre-acquisition ROA, market dominance and are members of a regulated industry executing large acquisitions are more likely to execute a foreign-market acquisition in the same revenue-stream.

Table 5.7 demonstrates partial support of the hypothesis with *Pre-Acquisition Company Size* demonstrating a significant positive association ($b = 0.23$, $p < 0.05$) suggesting that market dominance is a factor. *Pre-Acquisition Industry Type – Unregulated vs. Regulated*, *Acquisition Size* and *Strategy Type* were not significant. *Pre-Acquisition* Industry ROA ($b = 0.27$, $p < 0.001$) and *Pre-Acquisition Total Risk* ($b = 0.72$, $p < 0.001$) were highly significant. The model is highly significant overall ($p < 0.001$) and accounts for 69% of variance.

Examination of the residual statistics summary table identified five cases with standardised residuals less than minus two or greater than two, that is, within the accepted 5% tolerance for 234 cases. Three cases had standardised residuals greater than three. None had a Cook's distance (Cook & Weisberg 1982) greater than one but two had a Mahalanobis distance (Barnett & Lewis 1978) greater than 20, suggesting that these were possibly influential cases. Running the model without these cases demonstrated they were not influential to the statistical outcome. Five cases demonstrated a DFBeta value greater than one, and one case was less than minus one; no cases fell outside the covariance ratio upper and lower limits of 4.18 and –2.18, respectively. Re-examination of the model excluding the DFBeta limit-breaking cases demonstrated they were not influential to the statistical outcome. As an indication of variance in the dependent variable, had the model been derived from the population as opposed to the sample, the adjusted SPSS generated R^2 value from Wherry's equation (Field 2005) of 0.69 was cross-validated using Stein's formula (Stevens 1992) providing an R^2 value close to that of SPSS's 0.71. The Durbin-Watson statistic of 1.54,

being greater than one and less than three, indicates the assumption of independent errors is tenable (Field 2005). The average VIF was 2.97 (Bowerman & O'Connell 1990) and the VIF tolerance was 0.34 (Field 2005; Menard 2001).

Table 5.7: **Regression Analysis –Pre-AcquisitionCompany ROA, Market Dominance and Regulated Industry Membership**

Variables	B	t
Pre-Acquisition Company Size	0.23	2.08[*]
Pre-Acquisition Industry Type – Unregulated vs. Regulated	0.03	0.71
Acquisition Size	–0.09	–0.75
Strategy Type – Related Domestic vs. Unrelated Domestic	–0.02	–0.55
Strategy Type – Related Domestic vs. Related Cross–Border	0.01	0.24
Pre-Acquisition Industry ROA	0.27	6.91[***]
Pre-Acquisition Total Risk	0.72	17.06[***]
Payment Type – Cash vs. Stock	0.04	0.95
Payment Type – Cash vs. Cash & Stock	0.00	–0.24
Pre-Acquisition Leverage	–0.02	–0.59
Constant		–4.43[***]
R^2	0.71	
ΔR^2	0.69	
F	53.53[***]	
Df	10,223	

[*] $p < 0.05$

[**] $p < 0.01$

[***] $p < 0.001$

One tailed hypothesized effects

Dependent Variable: Pre-Acquisition Company ROA

It was assumed that few opportunities exist in the Australian domestic market (compared to countries with high levels of R&D intensity) for acquisition of companies in order to obtain the latest technology. Therefore, hypothesis 6b (replicated below for clarity) speculated high performing, market dominant, technology industry members were more likely to execute foreign-market acquisition.

Hypothesis 6b: Companies demonstrating high pre-acquisition ROA, market dominance and are members of a technology intensive industry executing large acquisitions are more likely to execute foreign-market acquisition within their primary revenue stream.

Table 5.8 demonstrates partial support for the hypothesis with *Pre-Acquisition Company Size* ($b = 0.26$, $p < 0.05$) found to be significant. *Pre-Acquisition Industry Type – Low vs. High Technical Intensity* was highly significant, however the relationship was negative, suggesting that low technical intensity was associated with high levels of performance. *Strategy Type – Related Domestic vs. Unrelated Domestic*, *Strategy Type – Related Domestic vs. Related Foreign-Market* and *Acquisition Size* were not significant. *Pre-Acquisition Industry ROA* was significant ($b = 0.12$, $p < 0.05$) and *Pre-Acquisition Total Risk* was highly significant ($b = –0.28$, $p < 0.001$).

Table 5.8:   Regression Analysis –Pre-Acquisition ROA, Market Dominance and Technology Industry Membership

Variables	B	t
Pre-Acquisition Company Size	0.26	2.43[*]
Pre-Acquisition Industry Type – Low vs. High Technical Intensity	–0.21	–4.22[***]
Acquisition Size	–0.12	–1.10
Strategy Type – Related Domestic vs. Unrelated Domestic	–0.02	–0.46
Strategy Type – Related Domestic vs. Related Foreign-Market	–0.02	–0.53
Pre-Acquisition Industry ROA	0.12	2.41[*]
Pre-Acquisition Total Risk	0.71	17.59[***]
Payment Type – Cash vs. Stock	0.02	0.60
Payment Type – Cash vs. Cash & Stock	–0.03	–0.67
Pre-Acquisition Leverage	–0.02	–0.58
Constant		–3.77[***]
R^2	0.73	
ΔR^2	0.72	
F	59.39[***]	
Df	10,223	

[*] $p < 0.05$

[**] $p < 0.01$

[***] $p < 0.001$

One tailed hypothesized effects

Dependent Variable: Pre-Acquisition Company ROA

Examination of the residual statistics summary table identified five cases with standardised residuals less than minus two or greater than two, that is, within the accepted 5% tolerance for 234 cases. Further investigation revealed one had a Cook's distance (Cook & Weisberg 1982)

greater than one and five had a Mahalanobis distance (Barnett & Lewis 1978) greater than 20, indicating that these were potentially influential cases. Re-modelling, without these cases, demonstrated that they were not influential to the statistical outcome. Five cases demonstrated a DFBeta value greater than one, and one case was less than minus one, whilst no cases fell outside the covariance ratio upper and lower limits of 4.11 and –2.11, respectively. Re-examination of the model excluding the DFBeta limit-breaking cases demonstrated that they did not influence the statistical outcome. As indication of the variance in the dependent variable, had the model been derived from the population as opposed to the sample, the adjusted SPSS generated R^2 value from Wherry's equation (Field 2005) of 0.71 was cross-validated using Stein's formula (Stevens 1992) providing an R^2 value close to that of SPSS's 0.73. The average VIF was 3.18 (Bowerman & O'Connell 1990) and the VIF tolerance was 0.31 (Field 2005; Menard 2001).

5.2.2.8   Hypothesis 7 –Pre-Acquisition Total Risk and Post-Acquisition ROA

Hypothesis 7 (replicated below), speculated that companies with high total risk levels prior to acquisition experience lower performance after acquisition.

Hypothesis 7:   Companies demonstrating high total risk levels before acquisition demonstrate low performance after acquisition.

Table 5.9 shows that the hypothesis was supported with a highly significant negative association with *Pre-Acquisition Total Risk* ($b = –0.36$, $p < 0.001$). Highly significant control variables included *Pre-Acquisition ROA* ($b = 0.64$, $p > 0.001$), *Pre-Acquisition Industry ROA* ($b = 0.34$, $p < 0.001$) and *Acquisition Size* ($b = 0.31$, $p < 0.001$). These results suggest that high performing attractive industry members executing large-scale acquisition are associated with high performance after acquisition. The model is highly significant ($p < 0.001$) accounting for 54% of total variance.

Table 5.9:   Regression Analysis – Pre-Acquisition Total Risk and Post-Acquisition ROA

Variables	B	t
Pre-Acquisition Total Risk	–0.36	–4.64[***]
Pre-Acquisition Company ROA	0.64	7.87[***]
Pre-Acquisition Industry ROA	0.34	6.64[***]
Acquisition Size	0.31	5.45[***]
Pre-Acquisition Industry Type – Unregulated vs. Regulated	0.08	1.70
Strategy Type – Related Domestic vs. Unrelated Domestic	–0.05	–1.10
Strategy Type – Related Domestic vs. Related Foreign-Market	0.02	0.41
Payment Type – Cash vs. Stock	0.02	0.37
Payment Type – Cash vs. Cash & Stock	0.01	0.14
Pre-Acquisition Leverage	0.00	–0.19
Constant		–5.31[***]
R^2	0.56	
ΔR^2	0.54	
F	28.40[***]	
Df	10, 223	

[*] $p < 0.05$

[**] $p < 0.01$

[***] $p < 0.001$

One tailed hypothesized effects

Dependent Variable: Post-Acquisition Company ROA

Examination of the summary table of residual statistics identified seven cases with standardised residuals less than minus two or greater than two, that is, within the accepted 5% tolerance for 234 cases. Four cases had standardised residuals greater than three whilst none had a Cook's distance (Cook & Weisberg 1982) greater than one or a Mahalanobis distance (Barnett & Lewis 1978) greater than 20, suggesting these were not influential cases. Five cases demonstrated a DFBeta value greater than one, and one case was less than minus one; no cases fell outside the covariance ratio upper and lower limits of 4.20 and –2.20, respectively. Re-examination of the model excluding the DFBeta limit-breaking cases demonstrated they did not influence the statistical outcome. As indication of variance in the dependent variable, had the model been derived from the population as opposed to the sample, the adjusted SPSS generated R^2 value from Wherry's equation (Field 2005) of 0.53 was cross-validated using Stein's formula (Stevens 1992) providing an R^2 value close to that of the 0.56 obtained by SPSS. The Durbin-Watson statistic of 1.59, being greater than one and less than three, indicates that the assumption of independent errors is tenable (Field 2005). The F-Statistic of 29.56 indicates that the model is significantly better at predicting the outcome than using the mean as a 'best guess'. The average VIF was 1.62 (Bowerman & O'Connell 1990) and the VIF tolerance was 0.62 (Field 2005; Menard 2001).

5.2.2.9   Hypothesis 8 –Pre Acquisition Total Risk and Post-Acquisition ROA

Hypothesis 8 (replicated below for clarity) proposed that risk reduction was a key motive for acquisition leading to performance increase.

Hypothesis 8:   After acquisition, high performing companies demonstrate lower levels of post-acquisition total risk.

Table 5.10 demonstrates that this hypothesis was not supported, with a highly significant association between *Post-Acquisition Total Risk* ($b = 0.57$, $p < 0.001$) and performance. The highly significant *Post-Acquisition Industry ROA* ($b = 0.50$, $p < 0.001$) association suggests that company performance partially reflects its member industry performance. The significant negative associations with *Post-Acquisition Organisational Model – Single Domestic vs. Single Foreign-Market* ($b = –0.15$, $p > 0.05$) and *Post-Acquisition Organisational Model – Single Domestic vs. Diversified Foreign-Market* ($b = –0.14$, $p > 0.05$)

suggest a reduction of performance with acquisition into a foreign-market. The model is highly significant ($p < 0.001$) accounting for 51% of the total variance.

Examination of the residual statistics summary table identified eleven cases with standardised residuals less than minus two or greater than two. Two cases had standardised residuals greater than three. Further investigation revealed none of these outliers had a Cook's distance (Cook & Weisberg 1982) greater than one but one had a Mahalanobis distance (Barnett & Lewis 1978) greater than 20, suggesting that this case may unduly influence the model. One case demonstrated a DFBeta value greater than one, and all cases were greater than minus one. No cases fell outside the covariance ratio upper and lower limits of 4.08 and –2.08, respectively. Re-examination of the model excluding the case with Mahalanobis distance greater than 20 and DFBeta value greater than one, demonstrated that they were not influential to the statistical outcome. As indication of variance in the dependent variable had the model been derived from the population as opposed to the sample, the adjusted SPSS generated R^2 value from Wherry's equation (Field 2005) of 0.51 was cross-validated using Stein's formula (Stevens 1992) providing an R^2 value close to that of SPSS's 0.52. The Durbin-Watson statistic of 1.60, being greater than one and less than three, indicates that the assumption of independent errors is tenable (Field 2005). The average VIF was 1.53 (Bowerman & O'Connell 1990) and the VIF tolerance was 0.65 (Field 2005; Menard 2001).

Table 5.10: **Regression Analysis – Post-Acquistition Total Risk and Post-Acquistition ROA**

Variables	B	T
Post-Acquisition Total Risk	0.57	12.20[***]
Post-Acquisition Industry ROA	0.50	10.64[***]
Post-Acquisition Organisational Model – Single Domestic vs. Diversified Domestic	–0.09	–1.60
Post-Acquisition Organisational Model – Single Domestic vs. Single Foreign-Market	–0.15	–2.28[*]
Post-Acquisition Organisational Model – Single Domestic vs. Diversified Foreign-Market	–0.14	–2.14[*]
Constant		–0.90
R^2	0.52	
ΔR^2	0.51	
F	49.10[***]	
Df	5, 228	

[*]	$p < 0.05$
[**]	$p < 0.01$
[***]	$p < 0.001$
	One tailed hypothesized effects
	Dependent Variable: Post-Acquisition Company ROA

5.2.3   Conclusion

This chapter has presented descriptive statistics, bivariate correlations and the results of the multiple regression analyses (Table 5.11 provides a summary) for each hypothesis. The key finding of the results shows that relatedness theory (2006) is supported until models are extended to include pre-acquisition performance, at which time the executed strategy is no

longer significant. The next chapter provides discussion of the analysis and the implications for future research and practice for each hypothesis, both individually and holistically.

Table 5.11: Regression Analysis Summary

	Hypothesis	Result
1	Companies demonstrating high Post-Acquisition ROA are more likely to have executed acquisition in the same revenue stream.	Supported
2	a) Companies demonstrating high pre-acquisition ROA are more likely to execute domestic-market acquisition within the same revenue-stream.	Unsupported – Strategy type not significant
	b) Companies demonstrating low pre-acquisition ROA are more likely to execute domestic-market acquisition into other revenue-streams.	Unsupported – Strategy type not significant
3	Companies demonstrating high pre-acquisition ROA executing domestic acquisition demonstrate higher post-acquisition ROA than foreign-market acquisition equivalents.	Unsupported – Strategy type not significant
4	Single revenue stream companies operating solely domestically, who are members of structurally attractive industries, demonstrate higher pre-acquisition ROA than diversified lines of business or foreign-market operation equivalents.	Unsupported – Organisational model variants not significant
5	Pre-acquisition unregulated single revenue-stream model companies operating solely in the domestic market demonstrate higher post-acquisition ROA than diversified revenue-stream or foreign-market operation equivalents.	Partially supported – *Pre-Acquisition Industry Type* insignificant. *Pre-Acquisition Organisational Model – Single Domestic vs. Diversified Domestic and Single Domestic vs. Diversified foreign-market* not significant. *Pre-Acquisition Organisational Model – Single Domestic vs. Single foreign-market* significant

Hypothesis	Result
6 a) Companies demonstrating high pre-acquisition ROA, market dominance and are members of a regulated industry executing large acquisitions are more likely to execute a foreign-market acquisition in the same revenue-stream.	Partially supported – *Pre-Acquisition Company Size* significant. *Pre-Acquisition Industry Type – Unregulated vs. Regulated*, *Acquisition Size*, *Strategy Type – Related Domestic vs. Unrelated Domestic* and *Strategy Type – Related Domestic vs. Related Foreign-Market* not significant.
b) Companies demonstrating high pre-acquisition ROA, market dominance and are members of a technology intensive industry executing large acquisitions are more likely to execute foreign-market acquisition within their primary revenue stream.	Partially supported – *Pre-Acquisition Company Size* and *Pre-Acquisition Industry Type – Low vs. High Technical Intensity* significant. *Strategy Type – Related Domestic vs. Unrelated Domestic* and *Strategy Type – Related Domestic vs. Related Foreign-Market* not significant.
7 Companies demonstrating high total risk levels before acquisition demonstrate low performance after acquisition.	Supported – *Pre-Acquisition Total Risk* negatively significant
8 After acquisition, high performing companies demonstrate lower levels of post-acquisition total risk.	Unsupported – *Post-Acquisition Total Risk* positively significant

Chapter 6

DISCUSSION

6.1   Introduction

This chapter provides a brief introduction to the testing of each hypothesis, followed by discussion of the results as tabled in chapter 5. Each hypothesis is discussed individually first and then holistically, where the theoretical implication of the test results are considered. The discussion commences with the replication of previous analyses that show support for relatedness theory (Miller 2006). The premise of the majority of prior studies is that operational synergies available in cases of single revenue-stream acquisition lead to superior performance. Subsequent discussion of the findings of the present study identifies methodological faults and questionable assumptions of earlier studies, suggesting previous models were incomplete. Practical implications of the research are discussed in the next chapter.

6.2   Hypothesised Model Discussion

6.2.1   Post-Acquisition ROA and Acquisition Strategy

Hypothesis 1 (replicated below for clarity) asserts a positive relationship between company performance after acquisition and the extent of the commonality between the acquiring company's revenue stream and that of the target company (termed relatedness theory by

Miller (2006)). Testing with data from a recent sample of Australian listed companies showed consistency with prior research in support of the hypothesis.

Hypothesis 2: Companies demonstrating high post-acquisition ROA are more likely to have executed acquisition in the same revenue stream.

Palich, Carini and Seaman's (2000) results showed that relatedness theory (Miller 2006) does not apply in foreign-market acquisition cases. They attributed this phenomenon to market, production and cognitive impediments not present in the domestic market. Most acquisition studies have not differentiated between domestic and foreign-market acquisition; as a result, the differences attributable to foreign-market acquisition are unclear and are examined in this study. Since the majority of earlier research (particularly from the 1970s and 1980s) originated from the USA, the failure to differentiate between domestic and foreign-markets this omission may be attributable to the availability of acquisition related data within the USA domestic market. Compared with the modern market, fewer regulatory constraints gave market dominant companies the freedom to execute domestic-market acquisition in the same revenue stream. The USA is also a country with high levels of R&D (Anand and Delios, 2002) therefore companies are less likely to use acquisition in foreign markets to acquire the latest technology. Management of US-based companies may simply not have had any motive to execute foreign-market acquisition hence the focus of studies on the domestic market. The current study showed 36% of Australian listed companies operated in foreign markets during the period in question, hence making it an important inclusion in this study. Testing of hypothesis 1 (that did not include foreign-market control) demonstrated support for relatedness theory; testing of models that included foreign-market control demonstrated a reduction in performance for companies establishing such operations. This decline appears to be time-limited suggesting managers experience a "learning curve" when entering a foreign market.

This model included the commonly utilised control variables *Payment Type – Cash vs. Stock* and *Pre-Acquisition Leverage*: a significant positive relationship was found between the former and *Pre-Acquisition Company Performance*, but not with the latter. Early research on this topic demonstrated that cash payment acquisition was associated with superior performance after acquisition compared to acquisitions funded by stock (Datta,

Pinches & Narayanan 1992), whilst a later meta-analysis found no association (King et al. 2004). Travlos (1987) proposed that if the acquirer considers the target's stock to be undervalued (suggesting a performance increase after acquisition) it will use cash, and if overvalued, stock; the result from the test of this hypothesis could be interpreted as suggesting the reverse, or reflecting management's confidence level in the projected performance of its own stock.

Montgomery and Singh (1984) found unrelated diversified companies have more debt in capital structures, and Amit and Livnat (1988) found a positive relationship between pure financial diversification and leverage. In contrast, the current study found no statistical relationship between company performance and leverage after acquisition. Further research (beyond the scope of this thesis) is required to explain this finding.

6.2.2 Pre-Acquisition Company ROA and Acquisition Strategy

Park (2003) assumed that managers of high performing companies would attempt to protect their market position, as they are more risk averse than their low-performing equivalents. Therefore, high performing companies are more likely to execute acquisition within the primary revenue stream due to their greater level of understanding of that stream compared with other streams. However, like most prior researchers, Park (2003) did not consider differences in performance between domestic and foreign-market acquisitions and utilised a Compustat USA acquisition sample for the period 1974–1979. As discussed above, acquisition opportunities may have existed in the US domestic market and with the absence of regulatory constraint during the 1970s compared with today, so there was little motive to execute foreign-market acquisition, hence the distinction between domestic and foreign-market acquisition was not a consideration of Park.

Later research (Palich, Carini & Seaman 2000) found relatedness theory (Miller 2006) did not apply to foreign-market acquisition cases due to market, production and cognitive impediments not present in the domestic market. Hypothesis 2 (reproduced below for clarity) represents an extension of Park's (2003) hypothesis proposing that managers know more about their local market so are likely to view foreign-market acquisition as riskier. High-performing companies were expected to execute domestic-market acquisition within their primary revenue stream and low-performing companies, acquisition in another

revenue-stream or a foreign market to improve their position against a declining industry or mitigate against macro-economic cycle effects, including currency fluctuations.

Hypothesis 2:   a) Companies demonstrating high pre-acquisition ROA are more likely to execute domestic-market acquisition within the same revenue-stream.

b) Companies demonstrating low pre-acquisition ROA are more likely to execute domestic-market acquisition into other revenue-streams.

The sample of 234 acquisitions used in the present study included too few cases of foreign-market acquisition into unrelated revenue-streams to obtain a statistically significant result. This low prevalence of foreign-market acquisition into other revenue-streams suggests there is very little motive to execute this type of acquisition as acquisition into alternate revenue-streams can be achieved in the local market with less risk. The results did not provide support for the hypothesis, suggesting that there is no relationship between management's choice of executed strategy and their company's performance before acquisition. Rumelt (1982) found that the industry effect accounted for 21% of variance in company return; Schmalensee (1989) found it explained 20% of the variance. Consistent with these findings, in the present work *Pre-Acquisition Industry ROA* was strongly positively associated with *Pre-Acquisition ROA* indicating that the ROA of a company is a partial reflection of the ROA of its industry. Similar to hypothesis 1, control variables of *Payment Type – Cash vs. Stock* and *Payment Type – Cash vs. Cash & Stock* (Datta, Pinches & Narayanan 1992; Travlos 1987) and *Pre-Acquisition Leverage* (Amit & Livnat 1988; Montgomery & Singh 1984) were included. However, additional control was added for a combined cash and stock type payment. Prior research commonly included control for cash or stock payment types but 21% of acquisition payments in the sample used a combination. As with hypothesis 1, *Payment Type – Cash vs. Stock* was significantly and positively associated with *Post Acquisition Performance* whilst *Pre-Acquisition Leverage* was not significantly associated. *Payment Type – Cash vs. Stock & Cash* was also a non-significant predictor.

6.2.3   Post-Acquisition Company ROA and Foreign-Market Strategy

Hypothesis 3 (replicated below for clarity), seeking to extend research by Park (2003) asserted that high-performing companies before acquisition experience a decrease in performance after acquisition in foreign-market cases when compared with domestic acquisition in the same revenue-stream.

Hypothesis 3:   Companies demonstrating high pre-acquisition ROA executing domestic acquisition demonstrate higher post-acquisition ROA than foreign-market acquisition equivalents.

Hypothesis 1, replicating prior research, tested acquisition strategies categorised as *related* and *unrelated* representing the relationship of the acquiring company's revenue-stream to that of the target company. Testing demonstrated an association between *related* acquisition and high performance levels after acquisition. However, with the addition of domestic and foreign-market strategy control to each of the categories, pre-acquisition performance control and acquisition size in this model, the strategy type was not significant. Rather, a highly significant association between industry and company performance before acquisition with performance after acquisition supports Park's (2003) findings. In addition, the control variables *Payment Type – Cash vs. Stock*, *Payment Type – Cash vs. Stock & Cash* and *Financial Leverage* were found not to contribute to the explanation for the differences in performance after acquisition. Prior research has largely ignored the influence of acquisition size on performance after acquisition. A $10 million acquisition is most likely to have little impact on the performance of a multi-billion dollar company, whilst the same acquisition made by a $50 million company is likely to have greater impact. The strong positive association between acquisition size and performance after acquisition suggests support for the monopolistic hypothesis, which conjectures that economies of scale and scope (Levitt 1983) are available from the influencing of input or output costs (Moyer & Chatfield 1983). Other benefits may be gained from exploitation of multi-point competition when rival companies compete in more than one industry. Industries may also become linked so that actions in one impact others (Porter 1985).

6.2.4 Pre-Acquisition Organisational Structure

The dominant stream of empirical research (the *event-based* research) examined the relationship between diversification strategy as a single event and company performance (Lubatkin & O'Neill 1988; Lubatkin et al. 1989; Montgomery & Singh 1984). The next most prevalent stream (the *existing-business* research) considered the relationships between diversification categories and economic performance of existing businesses (Amit & Livnat 1988; Bettis 1981; Bettis & Hall 1982; Christensen & Montgomery 1981; Rumelt 1974; 1982). By comparison with *event-based* studies, *existing-business* studies more consistently support the hypothesis that diversification within the primary revenue-stream delivers better performance.

Hypothesis 4 (replicated below for clarity) considered the influence of company performance before acquisition (as opposed to the executed strategy in hypothesis 2) on a company's operational model before acquisition.

Hypothesis 4: Single revenue stream companies operating solely domestically, who are members of structurally attractive industries, demonstrate higher pre-acquisition ROA than diversified lines of business or foreign-market operation equivalents.

A company with diversified foreign-market operations executing a domestic acquisition strategy in the same revenue-stream was able to maintain its study categorisation as a diversified foreign-market operation unless more than 95% of its post-acquisition revenue originated in the domestic market. A single revenue-stream company operating only in the domestic market executing a foreign-market acquisition, changed category if 5% or more of its revenue originated from foreign-market markets after acquisition. As for hypothesis 2, company performance before acquisition was strongly associated with its industry performance, indicating a company's performance is a partial reflection of its industry performance. Company performance before acquisition was insignificant as a predictor of organisational model type, therefore relatedness (Miller 2006) and international impediments (Michel & Shaked 1984) theories were not supported.

A company's total risk level before acquisition was a highly significant predictor of company performance before acquisition. Prior studies have speculated that an association exists between high levels of total risk and single revenue-stream operational models as informed by portfolio theory's (Markowitz 1959) premise of "putting all your eggs in one basket". However, since the organisational model type before acquisition was not a predictor of company performance in the current research, alternative sources of total risk are suggested. Whilst the source remains unclear, large companies can use their bargaining power to reduce the cost of debt, enticing managers to increase their debt position, thereby increasing systematic risk from market exposure (Montgomery & Singh 1984). Adding to this argument, the highly significant association between company size before acquisition and company performance lends support for the monopolistic hypothesis where scale and scope economies (Levitt 1983), the influencing of input or output costs (Moyer & Chatfield 1983), multi-point competition and industry linking (Porter 1985) may be exploited.

6.2.5   Regulatory Constraint Effect on Acquisition Strategy

Hypothesis 5 (replicated below for clarity) addressed the effect of regulation and organisational structure on performance after acquisition. It included the proposition that members of unregulated industries experience better performance after acquisition as members of regulated industries are constrained by government attempts to maintain freely competitive markets. Such constraints limit the options for related acquisition in the domestic market, forcing members of regulated industries to execute foreign-market acquisition for which international impediments theory (Michel & Shaked 1984) suggests a reduction of performance.

Hypothesis 5:   Pre-acquisition unregulated single revenue-stream model companies operating solely in the domestic market demonstrate higher post-acquisition ROA than diversified revenue-stream or foreign-market operation equivalents.

Consistent with hypothesis 3, performance after acquisition was strongly and positively associated with company and industry performance before acquisition. Campa and Hernando (2004) found acquisitions in government-controlled or regulated industries

generated lower performance after acquisition than unregulated industries; this became lower again with foreign-market acquisition. In contrast, this study found the industry type, unregulated versus regulated, was found not to be a significant predictor of performance suggesting government controls do not influence performance. Companies demonstrating single revenue-stream operations in foreign-markets before acquisition experienced reduced performance compared to those operating solely in the domestic market in line with international impediments theory (Michel & Shaked 1984). Consistent with hypothesis 3, controls of payment type and financial leverage were not found to be predictors of performance.

6.2.6   Regulated Industries and Foreign-Market Acquisition

Hypothesis 6a (replicated below for clarity) stated that high-performing, market dominant, regulated industry members executing large-scale acquisition were more likely to execute foreign-market acquisition than a combination of low-performing, non-market dominant or unregulated industry members. If the company size after acquisition is likely to exceed the ACCC's market share thresholds, the proposed acquisition is likely to be rejected therefore company management would be more likely to execute foreign-market acquisition.

Hypothesis 6a: Companies demonstrating high pre-acquisition ROA, market dominance and that are members of a regulated industry executing large acquisitions are more likely to execute a foreign-market acquisition in the same revenue-stream.

As with hypotheses 2 and 4, industry performance before acquisition was a highly significant predictor of company performance before acquisition. Industry type (unregulated versus regulated) and acquisition size were not significant suggesting either that opportunities exist in the domestic market for large-scale acquisition or that companies execute acquisition into alternate revenue streams in preference to the same revenue stream. As predictors of company performance before acquisition, company size was significant and total risk was highly significant, whilst the acquisition strategy type (into the same revenue-stream versus an alternate revenue stream) was not significant. The results obtained from testing of hypothesis 6a do not support Park's (2003) contention that the executed strategy type reflects the risk-taking behaviour of management, such that

high-performing companies are expected to execute acquisition in their revenue-stream. Rather, the data support the monopolistic hypothesis (Levitt 1983) which states that companies are able to increase performance through cost savings from increased bargaining power.

6.2.7   Technology Intensive Industries

Hypothesis 6b (replicated below for clarity) stated that high-performing, market-dominant, high-technology industry members were more likely to execute large-scale foreign-market acquisition than a combination of low-performing, non-market dominant or low-technology industry members.

Hypothesis 6b: Companies demonstrating high pre-acquisition ROA, market dominance and are members of a technology intensive industry executing large acquisitions are more likely to execute foreign-market acquisition within their primary revenue stream.

Testing this hypothesis produced findings that replicated those obtained by testing hypothesis 6a, except that a significant negative relationship was detected between technology industry membership and performance before acquisition, suggesting high performance was associated with low technical intensity. One explanation for this may be the recent strong worldwide demand for natural resources such as metal ore, coal and gas, which together represent 43% of Australian total exports by value (DIISR 2009). Another explanation may be that the GICS coding does not accurately reflect the technology content of companies. Due to low R&D intensity in the Australian market, technology intensive companies were expected to execute foreign-market acquisition; however, examination of the sample reveals technology intensive acquisitions were executed in the domestic market during the study period. Examples included the Australian Pharmaceutical Industries 2002 acquisition of Zuellig, the Commander Communications Limited 2002 acquisition of Centari and the Media World Communications 2003 acquisition of Adams Platform group (see appendix A.3 for details). Further research is required to explain the availability of technology intensive acquisition targets in the domestic market despite low R&D levels.

6.2.8   High Pre-Acquisition Total Risk and Post-Acquisition Performance

Hypothesis 7 (replicated below for clarity) speculated that companies demonstrating holding high levels of pre-acquisition total risk experience low levels of performance after acquisition.

Hypothesis 7:   Companies demonstrating high total risk levels before acquisition demonstrate low performance after acquisition.

The negative, highly significant pre-acquisition total risk relationship suggests that high levels of performance after acquisition are associated with low levels of total risk before acquisition. It remains unclear from this model whether an increase in total risk contributes to performance after acquisition. Consistent with hypotheses 3 and 5, company and industry performance before acquisition were highly significant. Prior research has demonstrated, that high levels of risk before acquisition are associated with diversification into alternate revenue-streams (Barton 1988; Lubatkin et al. 1989; Montgomery & Singh 1984). Following hypothesis 3 and Park (2003), this model showed that the executed strategy becomes non-significant with the addition of company performance before acquisition. Consistent with hypothesis 3, the size of acquisition was highly influential suggesting that larger scale acquisition increases performance that again further provides support for the monopolistic hypothesis (Levitt 1983; Moyer & Chatfield 1983; Porter 1985).

6.2.9   Post-Acquisition Total Risk and Performance

Hypothesis 8 (replicated below for clarity) asserted that risk reduction was a key motive for acquisition where high levels of performance after acquisition were associated with low levels of risk.

Hypothesis 8:   After acquisition, high performing companies demonstrate lower levels of post-acquisition total risk.

The total risk level after acquisition was highly significantly and positively associated with company performance after acquisition. Industry performance was found to be a highly significant predictor of performance after acquisition. Significant negative associations for companies with single or multi-revenue-stream foreign-market operations and performance after acquisition suggests a foreign-market performance reduction. This result is in line with international impediments theory (Palich, Carini & Seaman 2000), that suggests the existence of foreign-market cognitive impediments but contradicts revenue cycle protection(for example, industry and currency) protection as suggested by coinsurance theory (Michel & Shaked 1984).

6.3   Theoretical Implications

This section considers the findings as a whole and their theoretical implications. Pre-acquisition and post-acquisition operational models are discussed next, along with additional findings providing partial explanation for performance after acquisition. Finally, the motive of risk reduction and impact on performance after acquisition is discussed.

6.3.1   Inconsistent Results from Prior Research

Testing hypothesis 1 provided support for relatedness theory (Miller 2006) by demonstrating that acquisition into the same revenue-stream positively influenced performance after acquisition with a recent sample of Australian listed company acquisitions. The negative association measured between performance after acquisition and acquisition into alternate revenue streams was consistent with the meta analysis of King, Dalton, Daily and Covin (2004), but not with that of Palich, Cardinal and Miller (2000).

Various explanations (as detailed in section 2.4) have been offered for the inconsistency in the results of previous diversification research including the partial or non-realisation of expected synergies (Ilinitch & Zeithaml 1995), company management's failure to consider the administrative cost of alignment (Park 1995), extent of acquirer and target hostility

(Zaheer, Hernandez & Banerjee 2010), incorrect target valuation (Roll 1986) and intentionally paying above market value (Amihud & Lev 1981; Seth 1990). Contrasting stewardship (Davis, Schoorman & Donaldson 1997; Donaldson & Davis 1991) and agency (Jensen & Meckling 1976) theories offer insight into the myriad of explanations. Stewardship suggests management collectively work towards the common goal of improving performance, whilst agency theory holds that in a relationship a party maximises its own interest. In this context, company management may intend to sustain or improve their company's market position through acquisition, but be incapable of delivering the synergistic benefits. Evidence also suggests they simply repeat prior behaviour (Amburgey, Kelly & Barnett 1993; Peng & Fang 2010). Agency theory suggests that management may not always act in the best interests of their shareholders. The literature finds evidence of two scenarios where management may exhibit this behaviour; personal risk mitigation and stock options. Acquisition into other revenue streams provides a mechanism to reduce a company's systematic risk that in-turn mitigates management's personal risk (Amit & Livnat 1988). Possession of stock options may provide management incentive for "perverse" acquisitions (Fung, Jo & Tsai 2009).

Whilst the test of hypothesis 1 in replication of previous studies supported relatedness theory (Miller 2006), it did not include foreign-market acquisition or pre-acquisition performance control. Recent researchers including Park (2003), continue to utilise variants of Rumelt's (1974) US domestic acquisitions data set from the 1970s, yet the modern market is very different thanks to deregulation and globalisation (for example, 36% of companies in this research exhibited foreign-market operations). As discussed earlier, two seemingly contradicting theories, international impediments (Palich, Carini & Seaman 2000) and coinsurance (Michel & Shaked 1984), suggest protection from revenue cycle fluctuations and a reduction in performance in the foreign-market from production, market and cognitive impediments not present in the domestic market. Park (2003) used prospect theory (March & Shapira 1987) to argue that managers in high performing companies are more risk-averse than low performing equivalents. Since they are likely to possess greater knowledge about their incumbent industry in terms of product, market, technology and ways of conducting businesses (Govindarajan 1989; Gupta 1984) they perceive related acquisition to be less risky. Similarly this researcher assumed that domestic acquisition would be perceived as less risky than foreign-market acquisition since managers are likely to possess greater knowledge about their domestic market.

Prior acquisitions-based research has largely examined diversification of existing business or the effect of the executed acquisition strategy to explain performance differences. This study considered the effect of acquisition strategy and change in diversification extent on performance, controlling for geographic differences in both cases. Hypothesis 2 concerned the association between executed strategy type and pre-acquisition performance but hypothesis testing found no significant relationship. This finding was reinforced by the outcomes of modelling conducted to test hypotheses 6a and 6b, which also found no relationship, despite added control for regulated industry and technology membership. In the sample of 234 acquisitions, there were insufficient unrelated foreign-market cases to obtain a statistically significant result; this suggests there is very little motive to execute this type of acquisition since acquisition into other revenue streams can be achieved in the local market with less risk. This research contends that the change in diversification extent should be utilised in acquisition studies since diversification extent may change as a result of the strategy executed (for example, a company categorised as a single revenue-stream foreign-market diversifier making a domestic-market acquisition in the same revenue-stream will be most likely to retain the same category). Hypothesis 4 addressed the influence of the organisational model on performance before acquisition but testing found no significant relationship. In contrast, results from the testing of hypothesis 5, which focused on performance after acquisition, suggest that companies operating a foreign-market single revenue-stream model before acquisition experience a decrease in performance after acquisition. Adding further explanation, the hypothesis 8 test results suggest that companies with high total-risk levels and those operating a foreign-market operational model after acquisition, experience a performance decline irrespective of the number of revenue-streams. Combined, the findings discussed above imply the existence of an interim reduction of performance after acquisition for companies with no prior foreign-market single revenue-stream operations and companies demonstrating high levels of total risk after acquisition. In turn, this provides time limited support for international impediments theory (Palich, Carini & Seaman 2000) with a decrease in foreign-market performance resultant of market, production and cognitive impediments not present in the domestic market and suggests that management's prior foreign-market experience is a factor.

The next section discusses the control variables utilised in the present study, with subsequent discussion offering an alternate explanation for performance difference after acquisition that may also explain the inconsistent results of prior studies.

6.3.2 Commonly Utilised Controls

This research included the commonly utilised variables of financial leverage and payment type. The degree of utilisation of borrowed money is commonly called financial leverage. The post-acquisition tax cost of debt reduces the average cost of capital for a company given that interest payments on debt are tax deductible. Prior research demonstrated that revenue-stream diversified (Lubatkin & Chatterjee 1991; Montgomery & Singh 1984) and pure financially diversified companies (Amit & Livnat 1988) had more debt in capital structures. Other researchers (Mansi & Reeb 2002) reported that the negative relationship between company performance and acquisition into other revenue-streams becomes insignificant when control was added for leverage and risk. Morellec and Zhdanov (2008) found the leverage of acquirers is below the industry average but increases after acquisition. Following prior research (Lubatkin & O'Neill 1987), leverage was calculated in this study as the book value of a company's long term debt divided by the book value of its assets for the year of acquisition. Inclusion of leverage in six of the nine hypothetical models (1, 2, 3, 5, 6a, 6b and 7) allowed it to be tested against before and after acquisition scenarios. Leverage was not shown to be significant in any model, suggesting this is not an attribute that explains company performance before or after acquisition. Further research (beyond the scope of this thesis) is required to explain this finding.

The payment type utilised by an acquirer is limited to two methods, cash and issue of stock in the combined entity, where cash may be a combination of cash reserves and debt facility. Finance literature (Travlos 1987) suggests that if the acquirer considers the target undervalued it will use cash and if overvalued, stock. The performance of cash acquirers after acquisition can, therefore, be expected to be greater than that of acquirers utilising stock. Bellamy and Lewin (1992) studied Australian acquisitions for the period 1980 to 1988 and found a negative abnormal stock return of 32.2% for the six month post acquisition period for stock based payment; Datta, Pinches and Narayanan (1992) obtained similar results. In contrast, Hayward and Hambrick (1997) failed to find a relationship, nor did King et al. (2004). Analysis with respect to hypothesis 1 replicated prior research

by adding control for payment type of cash versus stock, whereas analysis related to hypotheses 2, 5, 6a, 6b and 7 extended this with control for a combined payment type of cash and stock. Of the 234 acquisitions used in the analysis, 56% were paid for in cash, 23% stock and 21% a combination of stock and cash. The analysis conducted for hypothesis 1 demonstrated a significant positive relationship between performance after acquisition and payment type, cash versus stock. Contrary to earlier findings, this suggests that stock based payment was associated with high performance after acquisition; however, with inclusion of combined cash and stock payment type in later models (2, 3, 4, 6 and 7), the significance of the association disappeared.

6.3.3   Company and Acquisition Size

Prior research has largely ignored the influence of acquisition size on company performance after acquisition. It seems logical that a $10 million acquisition by a multi-billion dollar company will have little impact on its performance after the acquisition, whilst a billion dollar acquisition made by a similar value company is will have greater impact. Prior research suggests the size of acquisition is an important consideration with Lubatkin and O'Neil (1987) finding that only moderate sized, single-stream acquisition provided an increase in performance after acquisition.

This study found a highly significant positive relationships between acquisition size and performance after acquisition (hypotheses 3 and 7) without finding a relationship between the revenue-stream diversification and performance. This suggests support for the monopolistic hypothesis where the scale-economies are available from an increase in purchasing and selling power. Nevertheless, acquisition size was an insignificant predictor in pre-acquisition performance models (hypotheses 6a and 6b). It can be assumed that high-performing companies have greater free capital reserves or access to cheaper debt facilities, therefore execute larger acquisition; however the findings reported in this thesis suggest this is not the case, or as Park (2003) suggests, managers are risk averse, hence, do not wish to risk their company's market status. They may also execute smaller acquisitions, motivated by the perceived need to appear to be taking some action to improve or retain their company's position.

6.3.4   Total Risk

On the basis of portfolio theory (Markowitz 1959) the researcher hypothesised that managers who diversify into multiple revenue-streams also reduce total risk; it follows that, single revenue-stream companies demonstrate higher levels of total risk. Applying the same argument, the greater the diversification into new revenue streams the more likely the company will be to exhibit market performance, hence high performance is associated with high total risk. In line with this argument, the analysis for hypothesis 4 showed that high levels of total risk before acquisition were associated with high levels of performance before acquisition and the model constructed to test hypothesis 8 showed the same for performance after acquisition. Testing of hypothesis 7 confirmed the existence of a significant negative relationship between total risk before acquisition and company performance after acquisition that in turn suggests that companies who increase total risk with acquisition, also increase performance. Since revenue-stream diversification was not found to be a predictor of post acquisition performance, alternative sources for this risk increase must exist; debt increase is one possibility. Larger companies are likely to obtain access to cheaper capital post-acquisition, thereby increasing their debt position and in turn their financial risk.

6.3.5   Pre-Acquisition Company and Industry Performance Reflection

Earlier research almost exclusively attempted to explain performance differences using relatedness theory (Miller 2006), whilst later research pursued alternate rationales. Colombo, Conca, Buongiorno & Gnan (2007) showed that managerial resource redeployment – as opposed to the executed acquisition strategy type – has the strongest effect on performance. Park (2003) demonstrated that company performance after acquisition was largely a reflection both of its industry and of company performance before acquisition in domestic cases; Rumelt (1982) and Schmalensee (1989) found that industry effect accounted for 20 and 21 percent of variance in company returns respectively. Consistent with previous findings, this research found a highly significant association between industry performance and company performance in pre- and post-acquisition cases, showing that company performance is a partial reflection of industry performance. Similarly, this research detected highly significant associations between company performance before and after acquisition for a recent sample of Australian domestic and foreign-market acquisitions. Given the executed strategy was not significant

in all models, it appears that company performance is largely a reflection of industry and company performance before acquisition, even when control is added for the size of the acquisition relative to the company. Furthermore, this finding suggests generalisability, with results holding across differing market conditions and geographical boundaries.

6.3.6   Monopoly Power

This research, following Quinn and Cameron (1983), assumed that organisational complexity increases with company size due to structural elaboration and formalisation of planning, control and resource allocation systems. In extension of Park (2003), the phenomenon was considered more likely to occur with companies that diversify into multiple revenue-streams and with companies that diversify into foreign-markets since operational integration is largely only available with single-revenue stream domestic-market acquisition. The findings of the current study, however, include a highly significant positive relationship between company performance before acquisition and size, indicating support for relatedness theory (2006); excepting single revenue-stream foreign-market operational models, all operational model categories were not found to be predictors of company performance. Whilst the findings may suggest support for relatedness theory in single revenue-stream foreign-market cases, if operational synergies are available, then they are likely to be more difficult to achieve than in domestic cases (Palich, Carini & Seaman 2000). Monopoly power may offer an explanation as to how a company's size can improve its competitive position (Porter 1985); literature identifies sources that include cheaper access to capital (Grossman & Stiglitz 1976), cross subsidisation of product pricing (Amit & Livnat 1988; Bettis 1981; Chatterjee & Lubatkin 1990; Rumelt 1974) and ability to dictate prices (Chatterjee 1986; Lubatkin 1983; Porter 1980). Chatterjee (1986), Chatterjee and Lubatkin (1990) and Singh and Montgomery (1987) argued that lowering the cost of capital can be exploited irrespective of operational model. The weaker performance experienced after acquisition in foreign-market cases may be due to reduced opportunities for cost of capital exploitation and price control than those which exist within domestic markets, especially since the company may not enjoy the same monopolistic position in the foreign market.

6.4   Summary

This study first replicated prior research, producing results in support of relatedness theory (Miller 2006) using a recent set of Australian listed company acquisitions. In replication and extension of Park (2003) this study examined company performance before and after acquisition, adding control for domestic and foreign-market variants. The replication research suggests generalisability across different market conditions and geographical boundaries. Unlike prior research which examined performance impacts of an executed strategy or diversification extent, this research examined performance before and after acquisition, along with executed strategy and change in organisational model. Testing of these models suggested the executed strategy type and organisational model, measured by diversification extent, are largely not significant predictors of performance after acquisition.   Foreign-market models are the exception where interim reductions in performance following acquisition are experienced.   Performance after acquisition is largely a reflection of performance before acquisition and a company's performance is largely a reflection of its industry performance. The association between acquisition and company size with performance before and after acquisition suggests support for the monopolistic hypothesis (Porter 1995) whilst the presence of a foreign-market decreased performance suggests reduced scope and scale economies offered by the hypothesis. Testing of models before and after acquisition confirmed the hypothesised positive performance association with total risk. Since the diversification extent (hypothesised to be associated with total risk) was not found to be a predictor of performance, debt capacity was a suggested source. Commonly utilised controls of financial leverage and payment type were found to be insignificant contributors to models once pre-acquisition company performance was added.

To conclude the thesis, strengths, limitations and practical implications of the study are discussed in the next chapter along with recommendations for future research on this topic.

Chapter 7

CONCLUSION

7.1   Introduction

This chapter discusses the strengths, limitations and practical implications of the study and includes suggestions for future research. Discussion of the strengths highlights the study's contribution (summarised in table 7.1) to an established research stream through employment of a widely accepted research paradigm and quantitative analysis to produce findings that indicate incomplete model utilisation by prior research. Discussion of limitations largely concerns ontological and epistemological criticisms of the deductive paradigm and availability of data.

7.2   Study Strengths

Key strengths of this study relate to the research paradigm, application of a longitudinal study using recent publicly available data and identification of incomplete models utilised in earlier studies. This study utilised the deductive research paradigm and multiple regression analysis technique, both of which are well proven in many fields of research, particularly strategic management research. The study first replicated prior research demonstrating support for relatedness theory (Miller 2006). This suggests that it is the relationship between the revenue-streams of the acquirer and the target that largely explains the difference in performance after acquisition. Replicating prior research

established a baseline, suggesting the method and sample were appropriate and the results were generalisable, and made it possible to identify shortcomings in previous research. Identified shortcomings included methodological issues with the cross-sectional analysis method and failure to account for; differences between domestic and foreign-market acquisition, acquisition size relative to company size, technology content and regulatory constraint. Following an emerging stream of acquisitions related research, the researcher extended the work of Park (2003) by utilising recent data, adding variables to represent foreign-market acquisition, acquisition size and change in organisational model in pre- and post-acquisition models. The researcher also examined the influence of regulatory and technological intensity on the motive of company management to execute domestic or foreign market acquisition and the associated performance difference. Some recent research, for example Park (2003), utilised a sample of USA acquisitions from the 1970s. Modern conditions of industry deregulation and globalisation suggest that market conditions are now very different. This research utilised a recent sample of all Australian listed company acquisitions, unlike some prior research (e.g. Bettis and Hall 1982; Park 2003) that excluded entire industries or the best performing companies that otherwise would have skewed results. Data collection spanned six financial years, 2000 to 2006, resulting in 285 usable acquisitions, providing an ideal sample size for multiple regression analysis with the number of utilised variables (Field 2005). Data collection for three years prior and two years following an acquisition event enabled average abnormal return calculations (i.e. before and after acquisition performance) to span multiple financial years. This ensured capture of the strategy effect in post-acquisition performance calculations and that major economic-impacting extraneous events (e.g. 9/11, tsunamis and severe acute respiratory syndrome (SARS)) did not unduly influence the determination of this performance. King et al. (2004) suggested one reason acquisition research had progressed slower than would be expected was an observed low rate of variable reuse; in recognition of this pitfall, this research included commonly utilised control variables such as payment type and financial leverage. Observation of acquisition payment method within the sample suggested that prior studies incorrectly categorised the payment type as stock or cash; 21% of acquisitions in the sample were funded by a combination of stock and cash, suggesting the presence of a third category.

Most previous studies did not consider performance difference after acquisition in foreign-market cases but those that did produced seemingly contrasting results, suggesting a

reduction in performance in foreign markets resulting from operational impediments (Palich, Carini & Seaman 2000) and performance protection from domestic market and currency cycle fluctuations (Michel & Shaked 1984). Of the companies studied for this thesis, 36% were involved in foreign-market operations and model test results demonstrated a performance decrease after acquisition for companies establishing foreign-market operations. Prior research considered the effect of acquisition on performance or the difference in performance measured against revenue-stream diversification in isolation, whereas this study considered the change in revenue-stream diversification model because of acquisition. For example, a company executing a domestic-market acquisition may already receive a significant portion of its revenue from foreign-market operations therefore would be likely to retain its categorisation. Unlike most prior research, this study therefore included variables to control for acquisition and company size. Inclusion of such controls in models is important given that a $10 million acquisition is most likely to have much less impact on a multi-billion dollar company's performance after acquisition compared to the same acquisition made by a $50 million company. Table 7.1 below summarises the contribution of the study.

Table 7.1**: Study Contribution Summary**

Contribution Category	Contributions
Extension of Park (2003)	- Utilisation of a recent set of acquisition data - Examines differences between domestic and foreign-market acquisition. - Performance was positively associated with total risk. - Regulated industry membership was not found to influence post-acquisition performance. - A performance discount can be expected with foreign-market acquisition of high technology industry members .
Relatedness theory (Miller 2006) support	- Support for relatedness theory using recent data. - The relatedness of the business streams is insignificant once pre-acquisition performance control is included. - Established an association between company size and performance. - An interim performance discount can be expected with the

Contribution Category	Contributions
	establishment of foreign-market operations.
Methodological issues	• Considered the change in organisational model as a result of acquisition as opposed to strategy type. • Examined performance before and after acquisition, • Models included the relative size of the acquisition target to the acquirer. • Categorisation of combined cash and stock payment type.
Control variables	• Financial leverage and payment type were found to be insignificant contributors.

7.3   Study Limitations

Limitations of the study can be broadly categorised as methodological and data related. Opponents of critical rationalism and its deductive research strategy suggest several key limitations. Reality cannot be observed directly since observations are interpretations, therefore, regularities cannot be established confidently nor theories refuted conclusively. There is no defined origin or process for theory construction within the paradigm and an unrefuted theory requires some inductive support for it to be accepted. Emphasising a logical process stifles creativity greatly reducing chance discoveries and confines the conclusion to a dichotomous (true/false) answer. In addition to logical processes, theory acceptance or rejection requires social and psychological processes (Blaikie 2000; Pawson 1989; Salmon 1988).

The research was limited to company acquisition made by Australian publicly listed companies due to the unavailability of data preventing the inclusion of diversification through organic change, asset acquisition (as opposed to assuming control of a target company) and private company (not stock-exchange listed) acquisitions. In addition, no distinction between a merger or acquisition was made as no single definition exists. Whilst the term *acquisition* is sometimes used to refer to a hostile takeover and *merger* to the friendly joining of forces (Kumar 2009), Peaks, Arbogast and O'Keefe (2009) provided

examples showing that what management claimed were mergers, were in reality, acquisitions, suggesting that inclusion of variables to control differentiation would be prone to categorisation error.

Whilst Australia may be classified as a quasi-oligopolistic market place, the findings of this Australian-focused research can be generalised to any other similar economy. Direct application in (for example) French, Chinese, Middle Eastern and African markets may not be possible.

The accuracy of identification of industry membership may be a limitation; the GICS classification (Standard & Poors 2006) was utilised under the assumption that a consistent method of classification was applied throughout the period under investigation, but this may not be the case, leading to a company being wrongly classified. Incorrect classification may have influence on an industry average cumulative abnormal return (CAR).

As with most Western style markets, Australian companies are not required to report financial position by individual revenue-stream. Such data would enable model extension down to the organisational unit level, potentially offering further causal explanation for differences in company performance after acquisition and ensuring consistency in diversification extent and geographic operational status categorisation. This study determined status from examination of market revenue segmentation by product and geographic region using the Aspect Huntley DatAnalysis database (AspectHuntley 2007a) with supplementary data sourced from individual company annual reports. The period selected for study, 2000 to 2006, reflects the current macroeconomic climate and includes significant events, such as 9/11, Tsunamis and SARS, that adversely impacted global market performance suggesting results are reliable across differing market conditions. However, the selected performance measurement periods before and after acquisition may not fully capture these events or strategy affects.

Return on assets (ROA) was selected as the measure of performance for consistency with prior research. Studies using this measure report results that support relatedness theory with greater consistency (Miller 2006), however, ROA may not capture the full effect of

acquisition on a company. Lubatkin and Rogers (1989), for example, used a two-dimensional construct of shareholder return and total risk.

Performance and associated calculations encompassed the three-year period before and two-year period after acquisition; it was assumed that this period was sufficient to capture the performance impacts of the executed strategy and influence of extraneous events. Partial capture may not provide accurate results that in turn lead to incorrect conclusions.

7.4   Practical Implications of the Results

The information generated by this study is valuable for investors, company boards and management. It resolves some of the confusion present in the literature, in terms of seemingly conflicting theories and a history of inconsistent results, and verifies the relationships between acquisition strategy, revenue-stream diversification and performance. Stewardship theory contends that company boards and management operate cohesively in an attempt to achieve common goals and that investors see little benefit in company diversification into new revenue-streams; therefore, there is no motive for management to execute acquisition into unrelated revenue-streams. Nevertheless, managers can utilise this type of acquisition to mitigate their personal risk. Managers of companies in below-market-performing industries may also use acquisition to enter new revenue-streams as a mechanism of increasing performance.

Earlier studies generally examined the performance impacts of acquisition in the domestic market, attributing any differences to revenue-stream diversification. In contrast, this study examined the influence of diversification extent on performance before acquisition and the performance impact from change in the extent of diversification. Changes in the extent of diversification were determined by the impact of the executed acquisition strategy type, itself categorised by the relationship with extent and geographic operational mode. Where applicable, each model included commonly utilised controls of financial leverage (the debt to equity ratio) and payment type (stock, cash or the combination thereof). With the introduction of pre-acquisition industry and company performance variables into models, revenue-stream diversification, executed acquisition strategy type,

financial leverage and payment type variables became non-significant. This suggests that the relationship of revenue-streams, debt and method of payment are not predictors of performance after acquisition, rather, a company's post-acquisition performance is largely a reflection of its performance before acquisition.

Variables that were hypothesised to offer partial causal explanation for performance after acquisition were characteristics of company and acquisition size, total risk, regulated industry membership and technology intensity. The influences of company and acquisition size on executed strategy and post-acquisition performance have largely been ignored in the literature; this study demonstrated that high-performing companies are more likely to execute large-scale foreign-market acquisition and experience a short-term reduction in performance after acquisition. This suggests the presence of time-limited operational impediments that may include local market knowledge, differences in production processes and cultural differences that impede technology transfer. Management should therefore consider the risks involved with foreign-market acquisition and plan mitigating actions in order to minimise performance decline. In addition, this study found that larger companies and large-scale acquisition were associated with superior performance after acquisition, measured by total assets.

As the relationship of acquirer to target company revenue-streams was not a predictor of post-acquisition performance, the exercising of monopoly power may improve the long-term competitive position through capital cost reduction, cross product subsidisation, predatory pricing and the ability to dictate prices. This suggests that management should therefore utilise acquisition to increase their company's monopoly power in the chosen market. However in the case of domestic market acquisition, the ACCC in administering Section 50 of the Australian Trade Practices Act may determine a breach would occur if they assess an acquisition is likely to substantially lessen competition in a market for goods or services in a state or territory of Australia. In such cases the acquirer would be prevented from completing the proposed acquisition. Similar applies with comparable regulatory bodies in western style markets where, for example, the New Zealand Commerce Commission and United States Department of Justice and Federal Trade Commission may make similar determinations. It should be noted that whilst further consideration may be undertaken, the ACCC assessment considers whether the four (or fewer) largest companies (CR4) will represent a combined market share of 75 per cent or

more and whether the merged company will supply at least 15 per cent of the relevant market. If either outcome is likely, or if after acquisition the company will supply 40 per cent or more of the market, the commission will consider the submission further. Even in markets that may be considered quasi oligopolistic such as Australia, the thresholds utilised by the ACCC may still offer significant opportunity for companies to improve their monopolistic position.

This study found industry membership type (regulated versus unregulated) was not a predictor of post-acquisition performance, suggesting this should not be a consideration for management when considering potential acquisition targets. This study also characterised technology intensive industries as high-performing, associating them with high cost barriers to entry from hard-to-copy capabilities and resources. It also assumed that limited opportunities exist in the Australian domestic market for the acquisition of the latest technology, due to low levels of R&D intensity. Therefore, it was hypothesised that high performing technology industry members were more likely to execute foreign-market acquisition; however, low technology intensive companies were found to be significantly associated with high performance. The worldwide natural resource demand may be a partial explanation for this finding as high performing low technology industries dominate Australia's exports (DIISR 2009), but further research, beyond the scope of this study, is required to provide causal explanation of the association.

Assuming high risk from "putting all your eggs in one basket", this study hypothesised that single revenue-stream operations are associated with high risk and the greater the diversification, the more likely a company will be to demonstrate market performance; therefore, high-performing companies are associated with high risk. Whilst high risk was found to be a predictor of performance, diversification extent was not, thereby suggesting an alternative source. Since a company is likely to increase the size of its assets as a consequence of acquisition, it may obtain access to cheaper capital, which in itself, increases performance; increasing debt provides capital for further growth and accordingly increases total risk.

Investors may find greater opportunity for investment return in diversification of revenue-streams or foreign-market acquisition cases in the longer term. In many cases, the stock market responds immediately upon announcement of an acquisition. Often the share price

of the acquirer increases, but to a level below the offer price, whilst the target company's share price increases to the offer price. This phenomenon may indicate that shareholders perceive the target company to be overvalued, or have a lack of faith in the ability of company management to deliver expected synergistic benefits. However, since the target's share price increases to reflect the acquirers offer, it indicates the market's confidence that the acquirer has valued the target accurately assuming it has access to information not in the public domain allowing a more accurate determination of value. Investor opportunities exist during discounting and recovery periods, for example, the announcement of Telstra's AUD4 billion acquisition of Hong Kong based PCCW (TLS 2002) appeared to be the trigger for an eventual 24% decrease in share price. The decrease occurred against an overall upward market trend (See Figure 7.1); a four-month recovery yielded an approximate 21% gain from the lowest price recorded after the announcement was released.

To summarise, the key findings discussed in this section suggest that management wishing to increase company performance should execute domestic acquisition to achieve a monopoly position and increase total risk. Further research is required to determine the period of reduced performance following foreign-market acquisition identified by the study, and to confirm the sources of total risk that lead to performance growth.
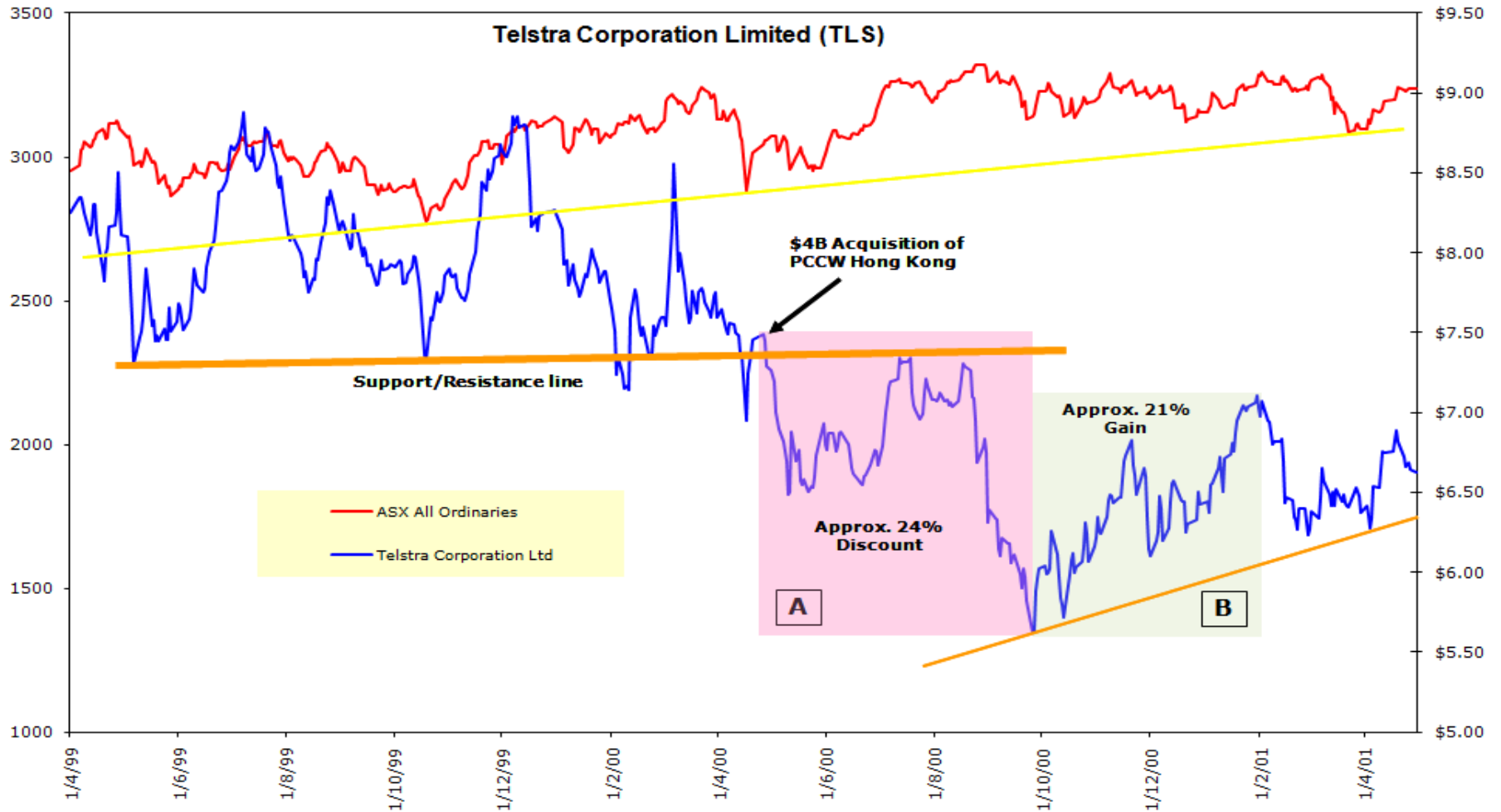
Figure 7.1: Telstra Share Price and PCCW Acquisition

7.5 Future Research

This study demonstrated partial support for international impediments theory (Palich, Carini & Seaman 2000) by measuring a significant decrease in performance after acquisition for companies with single revenue-stream foreign-market operations or high levels of risk. However, models examining performance before acquisition did not demonstrate reduced performance for companies with foreign-market operations suggesting that impediments are time-limited. Further research is required to explain this phenomenon. Whereas this study considered the change in a company's individual total risk, the addition of industry and geographic market risk control to models could be beneficial. For example, Bai and Green (2010) showed consistent risk levels within a country but found variance between countries whilst Chollete, de la Peña & Lu (2011) suggest there is low risk in the G5 countries and even less in East Asia compared with other major economic zones. Assuming a positive relationship between risk and performance, it follows that geographic diversification into G5 and East Asia countries in this instance will deliver better performance. Further research is required to test this hypothesis.

The appropriateness of the acquisition effect measure and the period of measurement to ensure capture of this effect, requires further investigation. The performance measure utilised, ROA, whilst used frequently in previous research, may not capture all facets of performance and there is no accepted definition of performance in the strategic management literature. The performance impact may not be immediately apparent after acquisition and longer event periods may introduce extraneous event noise into the results. Performance growth or retention may not be the only motive for acquisition; for example, this research hypothesised that risk reduction is another motive that may not affect performance. Measures other than ROA should be considered to capture the acquisition effect; Lubatkin and Rogers (1989), for example, utilised a construct of performance and risk as a dependent variable. Following Park (2003), this study defined performance before acquisition as the average ROA for the three-year period prior to acquisition and performance after acquisition for the two financial years after acquisition, assuming these periods to be optimum for effect capture and not influenced by extraneous events. Further

research should test the results presented here using different event-horizon periods. One option may be utilisation of a variable period since companies tend to execute multiple acquisitions in close succession. Arikan and McGahan (2006) found no difference in performance after the third acquisition in a sequence. Therefore, instead of focusing on a single acquisition, performance measurement could be determined before and after the acquisition group.

This study included commonly utilised controls and sought further causal explanation for diversification performance difference with the introduction of foreign-market, regulatory and technology intensive industry membership control. Whilst performance after acquisition was found to largely reflect industry and company performance before acquisition, more research is required to identify additional moderating variables. This study demonstrated that the commonly utilised variables of payment type and financial leverage became insignificant predictors of performance once pre-acquisition performance control was added to models. Prior research has evaluated the influence of numerous moderating effects; these models should be re-examined with the inclusion of pre-acquisition performance control.

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APPENDICES

A.1 Data Collection Statistics

For reference, the following table provides various metrics relating to data collection and analysis.

Table A.1: Data Collection Metrics

Metric	Value
Total number of ASX listed company acquisition related announcements reviewed for the period 1st July 2002 to 30th June 2005 sourced from the Aspect Huntley DatAnalysis database (AspectHuntley 2007a).	5,243
Total number of ASX listed company acquisitions for the period 1st July 2002 to 30th June 2005. This was produced by removing duplicate announcements for the same acquisition along with any incomplete acquisitions from the above.	1,636
Total number of usable ASX listed company acquisition cases used in the analysis. Produced by removing duplicate acquisitions in the same financial year for any single company plus, any single acquisition less than $10 million from the above. Where a company made multiple acquisitions in the same financial year totalling at least $10 million the last acquisition was included.	285

A.2 ASX Acquisition Analysis Data

The following table lists Australian Stock Exchange (ASX) listed completed company acquisitions included in the analysis for the period in question, the Australian financial years, July 2002 to June 2005. A company may make multiple announcements relating to a single acquisition throughout negotiations, a single entry per acquisition is included for clarity. As this research was concerned with the acquirer's Return on Asset (ROA) in the financial years post acquisition, the completion date was utilised as event trigger.

Data was primarily sourced from the Aspect Huntley DatAnalysis (AspectHuntley 2007a) database as a source for ASX announcements. Supplementary data was sourced from company annual reports and as a last resort, web site. To preserve integrity, the source remains largely unchanged therefore, spelling and grammatical errors are preserved.

The table is presented in ASX three digit company code order and includes the following data:

Column	Description
Acq ASX	The three-digit ASX code of the acquiring company.
Acquirer	The name of the acquiring company from the announcement. It should be noted that under the ASX listing rules companies may change their name or ASX code. The code and name of the company at acquisition completion was utilised.
Announcement Date	The date the successful acquisition completion announcement was released to the market.
Announcement Title	The title of the announcement as it appears on the ASX announcement.
Country	The origin of the main revenue stream of the target company
$M	The value of the acquisition in millions of dollars
Payment Type	The type of payment made by the acquirer, either cash for a pure cash transaction, stock where issue of shares in the acquiring company are used or cash/stock where a combination of both are used.
Target	The name of the target company taken from the announcement.
Acquirer lines of business	The main lines of business of the acquiring company at the time of announcement.
Target lines of business	The main lines of business of the target company at the time of announcement.

A.3   ASX Acquisition Announcements for the Financial Years 2002-2005

The following table lists the ASX sourced announcements for Australian financial years 2002 to 2005. Text is directly reproduced from each announcement therefore may contain spelling or grammatical errors.

Table A.2: ASX Acquisition Announcements for the Financial Years 2002–2005

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Indcor Limited	28/10/04	Purchases US Ethanol Plant	US	Stock	ABUS LLC	Development of global biofuels opportunities particularly in Australia and the United States of America	Ethanol Plant
ABB Grain Limited	21/05/03	ABB Acquire Grain Trader Jossco	Australia	Cash	Josso Group	Marketing and trading of agricultural commodities, the handling and storage of grain and other bulk commodities, the provision of financial products to growers, and malt manufacture and marketing	Agricultural commodity trading group with both import and export operations in Australia and NZ

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
ABB Grain Limited	5/03/04	Container purchase enhances ABB Ops/Appendix 3B	Australia	Cash /Stock	Professional Grain Services Pty Ltd	Marketing and trading of agricultural commodities, the handling and storage of grain and other bulk commodities, the provision of financial products to growers, and malt manufacture and marketing	Export of containerised grain
Adelaide Brighton Limited	19/06/03	Acquisition of C&M Brick and Rocla Pavers and Masonry	Australia	Cash	Rockla Pty Ltd	Manufacture and distribution of cement, and cementitious products, lime, ready mixed concrete, aggregates, sand and concrete products	Supplies concrete blocks, pavers and retaining walls to the construction industry
A.B.C. Learning Centres Limited	10/04/03	Acquire all the issued capital of the company	Australia	Stock	FutureOne Limited	Provision of childcare services and education	Provision of childcare and computer based training services
A.B.C. Learning Centres Limited	9/09/04	Merger Presentation	Australia	Stock	Peppercorn Management Group	Provision of childcare services and education	Childcare

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Adelaide Bank	28/04/05	Presentation to Investors re Acquisition	Australia	Cash /Stock	JBWere Equity Finance Pty Ltd	The provision of the provision of mortgage loans for home buyers, business lending, margin lending, savings and investment facilities, third party processing and the sale of insurance policies	Financing
Australian Gaslight Company	2/07/02	AGL to acquire Pulse Energy	Australia	Cash /Stock	Pulse Energy	The sale of gas & electricity; ownership and operation of natural gas and electricity distribution networks and operation of natural gas transmission pipelines; extraction & sale of LPG; power generation and energy processing infrastructure; investments in international energy businesses; realisation of property and property-related assets; investments in telecommunications enterprises	Electricity Retail
Atlas Group Holdings	1/06/04	Southward Acquisition Completed	NZ	Cash	Southward Engineering Co Limited	Manufacture, secondary processing and distribution of specialty metal products	Manufacturer of steel tube and automotive exhaust systems in New Zealand

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Alinta Limited	23/04/04	Completion of Duke Acquisition	Australia	Cash /Stock	Duke Energy	Operation of electricity and gas distribution systems	Energy Infrastructure
Alesco Corporation Limited	4/04/03	Acquires Robinson for NZ$31 Million	NZ	Cash	Robinson Industries Limited	Wholesale distribution company operating in three business units - automotive parts, building products and earthmoving tyres	Manufacturer and distributor of kitchen range hoods, laundry tubs and ironing centres in New Zealand and Australia.
Alesco Corporation Limited	29/01/03	Acquisition of Biolab Limited	NZ	Cash	Biolab Limited	Wholesale distribution company operating in three business units - automotive parts, building products and earthmoving tyres	Distributor of scientific equipment and consumables in Australia and NZ
Alesco Corporation Limited	24/05/04	To acquire B&D Doors & Openers	Australia	Stock	B&D Garage Door Openers	Wholesale distribution company operating in three business units - automotive parts, building products and earthmoving tyres	Manufacturer and marketer of garage doors and automatic openers for residential applications in Australia and New Zealand.

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Alesco Corporation Limited	20/01/05	Acquisition of Dominator Garage Door Business in New Zealand	NZ	Cash	Dominator Garage Door	Wholesale distribution company operating in three business units - automotive parts, building products and earthmoving tyres	Garage doors and openers
Amcor	3/06/03	Expands PET operations in Latin America with $115M acquisition	Brazil	Cash	Aloca latin America PET	Amcor produces a broad range of plastic, fibre, PET and metal packaging products, and offers packaging-related services	PET container producer, primarily carbonated soft drink and bottled water containers
Amcor	21/08/03	Acquisition of Rexam's Healthcare Flexibles Packaging Ops	US	Cash	Rexam Healthcare Flexibles	Amcor produces a broad range of plastic, fibre, PET and metal packaging products, and offers packaging-related services	Flexible packaging for the healthcare industry

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
ANZ Limited	24/10/03	ANZ agrees to acquire National Bank of New Zealand	NZ	Stock	National Bank of New Zealand	General banking, mortgage lending, leasing, hire purchase and general finance, international and investment banking, nominee and custodian services, executor and trustee services, life insurance and funds management activities through the ING Australia Limited (INGA) joint venture	Banking
A.P. Eagers Limited	23/04/04	Acquisition	Australia	Cash /Stock	City Automotive Group Pty Ltd	Selling of new and used motor vehicles, the distribution of parts and accessories, the provision of service, finance, leasing, and extended warranty for motor vehicles	Operates the motor vehicle dealership businesses of City Mitsubishi, City Subaru and City Peugeot
AP Eagers Limited	5/04/05	Acquisition of Bridge Autos Darwin	Australia	Cash	Bridge Autos Pty Ltd	Selling of new and used motor vehicles, the distribution of parts and accessories, the provision of service, finance, leasing, and extended warranty for motor vehicles	Toyota car dealership

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Australian Pharmaceutical Industries Limited	3/09/02	API Buys Australian & New Zealand Operations of Zuellig	Australia	Stock	Zuellig	Wholesale distribution of pharmaceutical and allied products; - retail operations of the brands Priceline, Priceline Pharmacy, House and Price Attack; - manufacture of pharmaceutical medicines and consumer toiletries; - the distribution of pharmaceutical	Pharmaceutical distribution and retail pharmacy services as well as the manufacturing of over the counter medicines, toiletries and pharmaceutical medicine
Australian Pharmaceutical Industries	6/09/04	Acquisition of New Price Retail	Australia	Cash /Stock	New Price Retail	Wholesale distribution of pharmaceutical and allied products; - retail operations of the brands Priceline, Priceline Pharmacy, House and Price Attack; - manufacture of pharmaceutical medicines and consumer toiletries; - the distribution of pharmaceutical	Pharmaceutical manufacturing, distribution and retail

Acquirer	Announ-cement Date	Announcem ent Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
AWB Limited	29/08/03	AWB Acquires Landmark from Wesfarmers	Australia	Stock	Wesfarmers Landmark	Rural services provider and wheat managers and marketers. Operations include Pool Management Services, Rural Services, Finance and Risk Management Products, Grain Acquisition and Trading and Supply Chain and Other Investments	Supplier of agricultural inputs and provider of a broad range of other rural products and services
AXA	19/07/02	Acquires Ipac Securities Ltd	Australia	Cash	Ipac Securities	Provision of wealth management and financial protection advice, products and services	Financial planning and advice
B Digital Limited	28/10/03	Acquisition of DigiPlus	Australia	Cash /Stock	DigiPlus Investments Limited	Sale of mobile telephone handsets and telecommunication services to consumers in Australia	Offers consumers competitive local, national, international and mobile phone calls, as well as internet access. Targeted Australia and New Zealand's ethnic communities,

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Billabong International Limited	5/01/04	Acquisition	US	Cash	Honolua Surf Company	Wholesaling and retailing of surf, skate and snow apparel and accessories, and the licensing of the Billabong Group trademarks to specified regions of the world	Apparel brand and its 19-store retail network
Billabong International Limited	30/09/04	Acquisition	Australia	Cash	Palmers Surf Company	Wholesaling and retailing of surf, skate and snow apparel and accessories, and the licensing of the Billabong Group trademarks to specified regions of the world	Surf Clothing / Equipment Manufacture / Retail
Prime Infrastructure Group	22/02/05	Global Wind Partners acquisition	Spain	Cash	Olivo Wind Farms	Identifies, acquires, manages, enhances and reviews a portfolio of infrastructure assets according to its acquisition and investment criteria	Wind Farms
Prime Infrastructure Group	27/10/04	Takeover Offer for Powerco declared unconditional	Australia	Cash /Stock	Powerco	Identifies, acquires, manages, enhances and reviews a portfolio of utilities and transport infrastructure assets	Electricity and gas network utility
Consolidated Gaming Corporation Limited	22/01/03	Acquisition of Tasman Investments Inc	US	Stock	Tasman Investments Inc	Operation of licensed sports betting operations	A licensed and fully regulated online sports betting business located in Antigua

Acquirer	Announ -cement Date	Announcem ent Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Bendigo Bank	27/04/05	Bendigo Bank Acquires Cash flow Finance Firm	Australia	Cash	Oxford Funding Pty Ltd	Provision of a range of banking and other financial services, including retail banking, business banking and commercial finance, funds management, treasury and foreign exchange services (including trade finance), superannuation and trustee services	Cash flow Financing
BHP Billiton Limited	8/03/05	BHP BIlliton-US$7.3 Billion Cash Offer for WMC Resources	Australia	Cash	WMC Resources	Oil and natural gas exploration, production and development in Australia, the United Kingdom, the United States, Algeria, Trinidad and Tobago and Pakistan. We group our petroleum assets for reporting purposes into the following regions: Australia/Asia, Am	Mining, processing and marketing of minerals, metals and fertilizers, and exploration for minerals

Acquirer	Announ-cement Date	Announcem ent Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Brickworks Limited	4/03/03	Acquire all the issued capital of the company	Australia	Cash	Bristile Limited	The manufacture of building products, property realisation and investment	The manufacture and distribution of building materials, including clay bricks, pavers and internal block; clay and concrete roofing tiles; concrete masonry products; clay mining operations; the operation of a bulk transport and storage business; and investments
Brickworks Limited	1/06/05	Moves Into Timber with Acquisition	Australia	Stock	Auswest Timbers Pty Ltd	The manufacture of building products, property realisation and investment	Timber Sawmilling
Boral Limited	7/02/03	Acquires Largest Independent Brick Distributor in USA	US	Cash	Franklin Industries limited	Manufacture and supply of building and construction materials in Australia, the USA and Asia	Brick Distributor

Acquirer	Announ-cement Date	Announcem ent Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Boral Limited	18/12/03	Acquisition of Smith's Premix in Queensland	Australia	Cash	Smith's Premix	Manufacture and supply of building and construction materials in Australia, the USA and Asia	Producer of concrete including quarry, sand and gravel
Boral Limited	16/12/03	Acquire all the issued capital of the company	Australia	Cash /Stock	Adelaide Brighton Limited	Manufacture and supply of building and construction materials in Australia, the USA and Asia	Manufacture and distribution of cement, and cementitious products, lime, ready mixed concrete, aggregates, sand and concrete products
Boral Limited	14/09/04	Acquires Concrete Quarry &Concrete Masonry Businesses	US	Cash	Ready Mixed Concrete	Manufacture and supply of building and construction materials in Australia, the USA and Asia	Ready Mix Concrete
BeMaX Resources NL	3/12/02	Completion of Acquisition of Probo Mining Ltd/Appendi x 3B	Australia	Cash /Stock	Probo Mining Limited	Mineral exploration, development of mineral tenements, mining mineral sands, processing mineral sands and sale of separated mineral sands products	Mineral Sands Mining

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Bone Medical Limited	2/06/04	Acquisition of Bone Limited	UK	Cash	Bone Limited	Development of new biopharmaceutical treatments for bone and joint disorders, with a particular focus on osteoporosis and arthritis	Biopharmaceutical bone therapies development
Bone Medical Limited	23/08/04	Settlement on acquisition of Bone Limited	Australia	Stock	Bone Limited	Development of new biopharmaceutical treatments for bone and joint disorders, with a particular focus on osteoporosis and arthritis	Development of new biopharmaceutical treatments for bone and joint disorders, with a particular focus on osteoporosis and arthritis
Boom Logistics Limited	31/01/05	Acquisition of Brambles Bowen Basin Cranes Queensland	Australia	Cash	Brambles Bowen Cranes	The provision of lifting solutions	Lifting solutions to customers predominantly involved in mining, and maintenance related activities
Boom Logistics Limited	9/09/04	Placement & Acquisition	Australia	Stock	Bowers Heavy Haulage	The provision of lifting solutions	Heavy Haulage

Acquirer	Announ-cement Date	Announcem ent Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Bank of Queensland	16/06/03	BOQ Negotiates ATM Solutions Australasia Buy-Out	Australia	Cash	ATM Solutions Australia	Provision of financial services	Developer and operator of ATM technology
Bank of Queensland	8/10/03	Completes purchase of UFJ Finance Australia	Australia	Cash /Stock	UFJ Finance Australia Limited	Provision of financial services	International equipment finance
Bank of Queensland	15/08/03	To Buy $1 Billion Equipment Finance Business	Australia	Cash	UFJ Finance Limited	Provision of financial services	Provides equipment and vendor financing solutions to a range of clients in Australia and New Zealand
Burns, Philp & Company Limited	13/12/02	Acquire all issued ordinary shares in the company	Australia	Cash	Goodman Fielder Ltd	Manufacture, marketing and distribution of food ingredients and consumer branded food products, including yeast, bakery ingredients, herbs and spices, bread, snack foods, breakfast cereals, edible oils and meal components	Manufacture, marketing and distribution of food ingredients and consumer branded food, beverage and related products

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Burns Philp	15/10/02	Fleischmann's Yeast & Industrial Bakery Ingredients Business	Brazil	Cash	Kraft Foods Bakery Ingredients	Manufacture, marketing and distribution of food ingredients and consumer branded food products, including yeast, bakery ingredients, herbs and spices, bread, snack foods, breakfast cereals, edible oils and meal components	Industrial bakery ingredients
Australian Overseas Resources	8/11/02	Takeover of Banque Technology Systems PLC	UK	Stock	Banque Technology PLC	Investment, development and marketing of smart card based security access control systems	Developer and manufacturer of software, firmware and hardware for the biometric smartcard
Brazin Limited	3/12/04	Brazin acquires Dusk	Australia	Cash	Dusk Group	Retailing women's lingerie, sleepwear and swimwear; Retail of compact discs and DVDs; Also a designer and marketer of women's surf wear	Retailer of high quality, gift home wares which includes candles, candle accessories, body lotions & soaps, glass and metalware

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Bison Limited	10/02/04	Indicative timetable for the proposed acquisitions	Australia	Stock	UniQuest Pty Ltd	Investment and trading activities	main technology commercialisation and consulting company of the University of Queensland
Constellation Brands	4/11/04	To acquire The Robert Mondavi Corporation	US	Cash	Robert Mondavi Corporation	Wine & Beer producer/marketer	Wine & Beer producer/marketer
Coca Cola Amatil Limited	29/04/03	Acquire all the issued Capital of the company	Australia	Cash	Neverfail Spring water Limited	The manufacture, distribution and marketing of carbonated soft drinks, still and mineral waters, fruit juices, coffee and other alcohol-free beverages; the processing and marketing of fruit, vegetables and other food products	Sourcing, bottling and direct delivery of spring water to domestic and corporate customers

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Coca-Cola Amatil	1/11/02	Acquisition of Rio Beverages to Proceed	NZ	Cash	Rio Beverages	The manufacture, distribution and marketing of carbonated soft drinks, still and mineral waters, fruit juices, coffee and other alcohol-free beverages; the processing and marketing of fruit, vegetables and other food products	Fruit juice and other soft drink beverage bottling and distribution
Coca-Cola Amatil	2/07/02	Acquires Pacific Beverages Australia	Australia	Cash /Stock	Pacific Beverages	The manufacture, distribution and marketing of carbonated soft drinks, still and mineral waters, fruit juices, coffee and other alcohol-free beverages; the processing and marketing of fruit, vegetables and other food products	Manufacture, marketing and distribution of fruit juices, cordials and other beverages
Coca-Cola Amatil Limited	23/11/04	Acquisition of Quirks Refrigeration	Australia	Cash	Quirk's Refrigeration	The manufacture, distribution and marketing of carbonated soft drinks, mineral waters, fruit juices and other alcohol-free beverages	Rental and service of commercial refrigeration
Coca-Cola Amatil Limited	3/11/04	Completes Crusta Fruit Juice Purchase	Australia	Cash	Crusta Fruit Juice	The manufacture, distribution and marketing of carbonated soft drinks, mineral waters, fruit juices and other alcohol-free beverages	Fruit Juice producer

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
CircleCom Limited	18/12/03	Proposed acquisition of 100% of KLW Wood Products SDN BHD	Singapore	Stock	KLW Holdings Limited	Investment holding	Manufacture and supply of doors, door frames, mouldings and floorings. The company is a downstream manufacturer converting sawn timber into doors and components.
Commander Communications	24/03/03	Major Telecommunications Acquisition	Australia	Cash /Stock	RSL.COM	To market, sell, rent and maintain business communications systems and products, the provision of IT hardware and software services, the provision of data and Internet solutions, and the provision of voice and data networking services	Fixed wire voice and data telephony products and wholesale telecommunication services to other telecommunication providers that do not have their own switching infrastructure

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Commander Communications	26/07/02	To acquire Centari & Leading Position in Data Market	Australia	Cash	Centari	To market, sell, rent and maintain business communications systems and products, the provision of IT hardware and software services, the provision of data and Internet solutions, and the provision of voice and data networking services	A national IT product and services provider based in Sydney, Melbourne, Brisbane, Adelaide, Perth and Canberra. Centari specialises in the provision of computer infrastructure solutions and services to medium sized businesses, government and education, comp
Commander Communications	10/11/04	Acquires major telephone systems master distributor	Australia	Stock	LSP Communications Pty Ltd	Market, sell, rent and maintain business communications systems and products, the provision of IT hardware and software services, the provision of data and Internet solutions, and the provision of voice and data networking services	Distributor of telephony equipment

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Commander Communications	19/08/04	Completes acquisition of Axon Group/Appendix 3B	Australia	Stock	Axon Group	To market, sell, rent and maintain business communications systems and products, the provision of IT hardware and software services, the provision of data and Internet solutions, and the provision of voice and data networking services	Independent IT product and services providers based in Sydney (Metropolitan Business Machines), Melbourne (Axon Computers), Adelaide (General Business Machines), Perth (PT Computer Professionals), and Canberra (Computerquest).
Centro Properties Group	7/07/03	MCS Acquisition	Australia	Cash /Stock	MCS Property	Property investment, management and development	Property including retail funds management
Consolidated Global Investments Limited	2/07/02	Acquires UKs Market Leading Calling Card Operator	UK	Cash /Stock	First National Telecommunications Group	Investment in the wholesale telecommunications sector	Prepaid calling card operations

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Coles Myer	26/05/03	Settlement of Theo's Liquor (NSW)	Australia	Stock	Theo's Liquor	Operation, ownership and development of retail stores; with its main line of business focused on food & liquor, and General Merchandise & Apparel	Liquor retailing
Coles Myer	17/12/02	Purchases Theos Liquor	Australia	Cash	Theo's Liquor	Operation, ownership and development of retail stores; with its main line of business focused on food & liquor, and General Merchandise & Apparel	Liquor retailing in NSW
Chiquita Brands Limited	3/02/05	Intention to Make Takeover Bid for EAC	Australia	Cash /Stock	East African Plantations Limited	The manufacturing, marketing and distribution of fruit, vegetables, juice and dried fruit and nuts within Australia and to export markets. Also the growing of bananas, mushrooms, blueberries, raspberries, carrots, grapes, citrus and other fruits, in Australia	Growing, packing and marketing of citrus fruit in the Pacific Rim, growing wine grapes for local wineries and horticultural property management

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Carter Holt Harvey Limited	16/10/02	Further Expansion in Australia with MDF Acquisition	Australia	Cash	Starwood Australia	Plantation forestry; sawmilling; the manufacture & merchandising of wood products & building materials; pulp, paper & tissue manufacturing; paper & tissue converting; paperboard & plastic packaging; paper & industrial products distribution; & the production of a range of building products	Medium Density Fibreboard (MDF) manufacture
Carter Holt Harvey Limited	21/06/04	To Purchase World-Class Chinese Panels Business	China	Cash	Plantation Timber Products	Plantation forestry; sawmilling; the manufacture & merchandising of wood products & building materials; pulp, paper & tissue manufacturing; paper & tissue converting; paperboard & plastic packaging; paper & industrial products distribution; & the production of a range of building products	Specialty MDF manufacturer

Acquirer	Announ-cement Date	Announcem ent Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
City Pacific Limited	18/02/05	Acquisition of Treasury Group	Australia	Stock	Treasury Group	Responsible Entity and manager of four registered schemes (City Pacific Mortgage Trust, City Pacific Income Fund, City Pacific Managed Fund and City Pacific Private Fund), property development and property and equipment financing	Commercial mortgage asset manager, structured financier and property syndicator
City Pacific Limited	17/12/04	Terrain takeover successful	Australia	Stock	Terrain Australia Limited	Responsible Entity and manager of four registered schemes (City Pacific Mortgage Trust, City Pacific Income Fund, City Pacific Managed Fund and City Pacific Private Fund), property development and property and equipment financing	Financial services and investment activities
Centro Properties Group	19/04/05	Successfully settles Kramont acquisition		Cash	Kramont	Property investment, property management, property development and funds management	Real Estate Trust

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Centro Properties Group	27/07/04	Centro & Prime To Merge		Cash	Prime Retail Group	Property investment, property management, property development and funds management.	Property investment, property management, property development and funds management.
Coates Hire	7/06/04	Acquisition of Dormer's Hire Assets	Australia	Cash	Dormer's Hire	Hire of equipment, servicing the construction, resource, civil engineering and contracting industries and a range of industrial, commercial and government organisations	Equipment hire in regional NSW
Coates Hire	7/04/04	Acquisition of Compressor Hire Services Business	Australia	Cash	Compressor Hire Services	Hire of equipment, servicing the construction, resource, civil engineering and contracting industries and a range of industrial, commercial and government organisations	Compressor and general equipment hire predominately located in Queensland
Coates Hire	19/03/04	Acquisition of assets and business of Millens Megarent	Australia	Cash	Millens Megarent	Hire of equipment, servicing the construction, resource, civil engineering and contracting industries and a range of industrial, commercial and government organisations	General equipment hire in Queensland

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Coates Hire	1/03/04	Acquisition of Mildura Hire Assets	Australia	Cash	Mildura Equipment Hire	Hire of equipment, servicing the construction, resource, civil engineering and contracting industries and a range of industrial, commercial and government organisations	General equipment hire in Mildura
Coates Hire	15/01/04	Acquisition of Mornington Plant Hire Assets	Australia	Cash	Mornington Plant Hire	Hire of equipment, servicing the construction, resource, civil engineering and contracting industries and a range of industrial, commercial and government organisations	General equipment hire in Mornington, Tasmania
Coates Hire	20/10/03	Acquisition of Powerwest	Australia	Cash	Powerwest	Hire of equipment, servicing the construction, resource, civil engineering and contracting industries and a range of industrial, commercial and government organisations	Pump, Generator and lighting tower hire in WA and Queensland
Coates Hire	19/09/03	Acquisition of WA Advanced Hire	Australia	Cash	WA Advanced Hire	Hire of equipment, servicing the construction, resource, civil engineering and contracting industries and a range of industrial, commercial and government organisations	Hire equipment to the mining industry based in Kalgoorlie

Acquirer	Announ -cement Date	Announcem ent Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Coates Hire	28/04/05	Acquisition of Allied Equipment Business	Australia	Cash /Stock	Allied Equipment	Hire of equipment, servicing the construction, resource, civil engineering and contracting industries and a range of industrial, commercial and government organisations	Provider of large earthmoving equipment, both through hire and sales
Cochlear Limited	4/03/05	Acquisition of Entific Medical Systems	Sweden	Cash	Entific Medical Systems	Manufacture and sale of Cochlear implant systems	Swedish based international medical device company that develops and markets hearing implants,
Conputersha re Limited	19/02/04	Acquires specialist stock plan management business	US	Cash	Transcentiv e Inc	The operation of Investor services; Plan services; Document services; Analytics and Shareholder Relationship Management services; Corporate and Technology services	Administration, sales and marketing, support and development and; provides solutions for equity plan administration and financial reporting.

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Conputershare Limited	3/02/04	Buys Pepper Technologies AG	Germany	Cash /Stock	Pepper Technologies AG	The operation of Investor services; Plan services; Document services; Analytics and Shareholder Relationship Management services; Corporate and Technology services	Relationship management
Conputershare Limited	15/10/03	To acquire Georgeson Shareholder Communications Inc	US	Cash	Georgeson Shareholder Communications Inc	The operation of Investor services; Plan services; Document services; Analytics and Shareholder Relationship Management services; Corporate and Technology services	Provides a suite of shareholder communications and strategic advisory services to corporations and mutual funds in the United States and around the world.
Conputershare Limited	21/10/04	Computershare to Acquire EquiServe	US	Cash	Equiserve	The operation of Investor services; Plan services; Document services; Analytics and Shareholder Relationship Management services; Corporate and Technology services	Share registry services

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Conputershare Limited	3/08/04	Strengthens Mutual Funds Services in North America	US	Cash	Alamo Direct Mail Services	The operation of Investor services; Plan services; Document services; Analytics and Shareholder Relationship Management services; Corporate and Technology services	Share Registry Services
Crane Group Limited	31/10/02	Acquires Smart Aluminium	Australia	Cash	Smart Aluminium	Manufacture and distribution of: plumbing and electrical supplies; plastic pipeline systems and supplies; cast and ductile iron pipe, fittings and valves; copper tube extrusions; copper and copper alloy sheet and strip, nickel alloy and coin blanks brass, copper and stainless steel tubing; stainless steel plate, sheet and coil; aluminium sheet and strip; and fasteners	Distributor of aluminium products and metals distribution including standard geometric shapes, security doors, commercial shopfronts and shower assemblies
CSL Limited	9/12/03	Acquisition of global plasma therapeutics bus. of Aventis Behring	US	Cash	Aventis Berrig	Research, development, manufacture, marketing and distribution of biopharmaceutical and allied products	Plasma therapeutics

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
CSR Group	10/07/02	Bid for Kiewit Materials	US	Cash	Kiewit	The manufacture and supply of building materials, with operations in Australia, Asia and New Zealand	US Aggregates producer
Charters Towers Gold	19/08/03	Bid for Great Mines	Australia	Stock	Great Mines	Exploration and development of the Charters Towers goldfield	Gold Exploration
Avon Resources Limited	29/09/04	Completion of CopperCo Acquisition & Capital Raising	Australia	Cash /Stock	CopperCo	Exploration of mineral tenements	Copper Producer
Entertainment World Limited	28/10/03	Heads of Agreement - Acquisition of Bridgepark Pty Ltd	Australia	Cash	Bridgepark Holdings Pty Ltd	The development of educational and tourism facilities and the production and distribution of educational products through multimedia; and studio recording facilities and artist development	Establishment of an international school and outward bound facility in the northern region of Tasmania

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Coventry Group	15/06/05	NZ Fastener Acquisition/ Automotive Business Unit Restructure	NZ	Cash	Am-Tech Fastenings & Components	Distribution and marketing of industrial and construction fasteners including bolts, nuts and screws, and general industrial products; distribution, design and installation of lubrication and hydraulic fluid systems, hose and fittings products; importation, distribution and marketing of hardware, components and finished products to the domestic and commercial furniture, cabinet making, joinery and shop fitting industries; office chair components. Distribution and marketing of automotive parts and accessories, tools, workshop equipment; mining and general industrial consumables; and specialised transport and heavy haulage products. Manufacture and application of asphalt, road profiling and maintenance, manufacture and spraying of bituminous products for road construction and environmental protection and treatment of recreational and coloured surfaces. Manufacture and distribution of automotive and	NZ based fastener distribution

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Helm Corporation Limited	25/07/02	Major Acquisition	Israel	Stock	Denx medical technology Co	Development, marketing and sale of computer-based market-oriented solutions for dental practice and training	Educational and clinical software application developer for the dentistry industry
Downer EDI Limited	24/03/03	Acquires CPG Corporation Pte Ltd from Temasek Holdings Pte Ltd	Singapore	Cash	CPG Corporation Pte Ltd	Multi-disciplinary, multi-national supplier of select engineering services, operating chiefly in the infrastructure, energy and resource sectors and infrastructure management services to the mining, power, rail, resource, road and telecommunications sector	Facilities management, project management and engineering consultancy companies,
Dragon Mining	9/10/03	Agreement Concluded for Acquisition. of Precious Metals Assets	Finland	Cash /Stock	Outokumpu	Gold mining in Sweden :- Exploration, evaluation and development of gold project in Europe	Precious metals mining predominately in Finland
Burban Roodepoort Deep Limited	11/10/02	Announcement from Crown Gold Recoveries Pty Ltd	SA	Cash	East Rand Propriety Mines Limited	Gold mining and production	Gold mining

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
DCA Group Limited	29/10/02	Completes Acquisition of I-Med	Australia	Cash /Stock	I-Med	The ownership and operation of aged care facilities	110 diagnostic imaging practices
DCA Group Limited	7/06/04	DCA to Acquire MIA for $700 Million	Australia	Stock	MIA Group Limited	The ownership and operation of aged care facilities and medical diagnostic imaging	Diagnostic Medical Imaging
Equity Trustees	24/03/03	Implements superannuation strategy	Australia	Cash	Wealthpac	The provision of services as trustee, executor, administrator, attorney and agent, tax agent, custodian, fiduciary and agency services, funds management and superannuation	Master Trust including employer superannuation, group insurance pool, Pooled Superannuation Trust Public Eligible Rollover Fund
Evans and Tate Limited	2/07/04	Acquisition completes ETW's own National Wine Dist Network	Australia	Cash	Wine Source	Viticulture, winemaking, marketing, distribution and also involved in contract wine processing, contract wine supply and wine trading	Australian wine distributor
Excel Coal Limited	15/09/04	Acquires Wambo Minority	Australia	Cash /Stock	Wambo Coal Pty Ltd	Investing in and managing coal mines in New South Wales, Queensland and Venezuela	Coal Mining

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Fletcher Building	18/09/02	Acquisition of Major Australian Building Products Group	Australia	Cash /Stock	The Laminex Group	Building products and distribution, concrete, steel construction, property and housing	Production, marketing and distribution of decorative surfaces in Australia and New Zealand
Fletcher Building	19/08/03	Acquisition of Tasman Building Products Pty Ltd	Australia	Stock	Tasman Building Products	Building products and distribution, concrete, steel construction, property and housing	Operations in Australia and New Zealand and USA. Manufacturer of metal roofing tiles and glass wool products in Australia and; New Zealand manufacturer of glass wool insulation. Also manufacturers stainless steel sinks and raised flooring in Australasia

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Flectcher Building	1/03/05	Acquisition of Amatek Holdings Limited	Australia	Cash	Amatek Holdings Limited	Building products and distribution, concrete, steel construction, property and housing	Comprising four Australian building products businesses: Rocla Pipeline Products (a national supplier of steel reinforced concrete pipes and precast products), Rocla Quarry Products (a regional operator of sand quarries) and Stramit.
Fletcher Building	11/11/04	Acquisition of Malaysian Roofing Tiles Business	Malaysia	Cash	Malaysian Roofing Industries	Building products and distribution, concrete, steel construction, property and housing	Roofing Tile manufacture
Fosters Group Limited	19/12/02	CUB to Acquire Bulmer Australia	UK	Cash	HP Bulmer	The production and marketing of alcoholic beverages	Cider Brewer and distributor in UK, NZ and Australia

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
FKP Limited	7/11/03	Acquire all the issue capital of the company	Australia	Cash	Forest Place Group Limited	Development and management of retirement villages; investment in, and management of, retail, commercial and industrial property; development for resale of land, residential, retail, commercial and industrial property; commercial, industrial and residential	The development, ownership and operation of retirement villages and an aged care facility (nursing home)
Flight Centre Limited	7/03/03	Acquisition of Britanic Travel & Non-renounceable Offer	UK	Stock	Britanic Travel Limited	Selling of international and domestic travel	Travel Agency
Felix Resources	26/10/04	Proposed Acquisition of White Mining Limited	Australia	Stock	White Mining Limited	Principal activities are acquiring and developing coal resource related projects	Coal production and development

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Foodland Associated Limited	4/09/02	To acquire Foodlink Food Service Business	Australia	Cash	Foodlink Food Service	Supermarket operator. Wholesale warehousing and distribution of groceries, chilled and frozen foods, liquor and general merchandise and food service operations. Ownership and management of shopping centres and supermarkets	Supplier to the food service industry
Fisher & Paykel	10/10/03	To acquire Farmers Finance	NZ	Cash	Farmers Holdings Limited	Appliance manufacturer, distributor and marketer, and financial services in New Zealand	Operating the Finance and Farmers Credit Card businesses.
Fisher & Paykel Limited	11/10/04	Buys Appliance Company in US	US	Cash	Dynamic Cooking Systems	Appliance manufacturer, distributor and marketer, and financial services in New Zealand	White goods manufacture/distribution
Funtastic Limited	7/10/02	To Expand through Acquisition of Major Competitor	Australia	Stock	JNH Australia Pty Ltd	Wholesale, marketing, licensing and distribution of products: including children's toys, bags, stationery, infant, confectionery, footwear, hobby products, and publishing, home ware, apparel, DVD products and computer games	Toy Manufacturer and distributor

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
John Fairfax Holdings Limited	14/04/03	Reaches Agreement to Purchase INL's NZ Publishing Business	NZ	Cash /Stock	INL NZ Publishing	News, information and entertainment publishing and advertising sales in newspaper, magazine and electronic formats	General Printers including 2 metropolitan newspapers, 2 Sunday newspapers, 7 regional dailies and 53 community publications
John Fairfax Holdings Limited	29/09/03	Acquire all the issued capital of the company	Australia	Cash	Text Media Group Limited	News, information and entertainment publishing and advertising sales in newspaper, magazine and electronic formats	Holding investments in and the management of a group of publishing companies that include magazine mastheads and brands, media service businesses and book publishing
Gale Pacific Limited	9/07/02	Additional Information on Recent Acquisition	Australia	Cash	Visy Industries Ltd - fabrics	Manufacture and exporting of advanced polymer fabrics and related products	Fabric coating manufacturing unit

Acquirer	Announ -cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Greens Foods Limited	2/03/05	Off Market Takeover Offer - Lowan Australia	Australia	Cash	Lowan Australia Limited	Manufacturing, packaging, importing, and distribution of consumer foods and pet food products	Manufacturing, packaging and wholesaling of products including breakfast cereals, dried fruit, nuts, yoghurts and other dairy products, snacks and confectionery
Gribbles Limited	3/07/03	Trading & Acquisition Update	NZ	Cash	Northland & Alpha Scientific	The principal activities of The Gribbles Group are the provision of laboratory analysis and related services covering medical, veterinary, environmental and industrial samples and the provision of radiology and medical services	General and veterinary pathology, environmental and water testing, analysis of food, plant and animal products and soil and fertilizer testing
Gunns Limited	25/03/03	Asset Acquisition	Australia	Cash /Stock	Tamar Ridge Wines	Forest management and development, milling, processing, merchandising and export of wood products, merchandising of hardware and building supplies, and management of forestry	Wine Producer

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Gunns Limited	8/07/04	Asset acquisition - West Australian sawmilling business	Australia	Cash	Sotico Pty Ltd	Forest management and development, milling, processing, merchandising and export of wood products, merchandising of hardware and building supplies, management of forestry and vineyard based managed investment schemes, wine production and sale and construction	Sawmilling
Guinness Peat Group (Australia) Pty Limited	4/09/02	Acquire all the issued ordinary and option capital of the company	Australia	Cash	MEM Group Limited	Investment holding company	Investment in listed companies
Guinness Peat Group	9/07/02	Ryland Group plc	UK	Cash	Ryland Group	Investment holding company	Sale, distribution and servicing of new and used cars and commercial vehicles plus parts and accessories in the UK

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
GPT Management Limited	4/04/03	To acquire Hamilton Island Resort	Australia	Cash	Hamilton Island Limited	Investment in income producing retail, commercial, hotel, industrial, office parks and residential including senior housing properties; development of retail, commercial, industrial and office park properties; residential property development; property trust management; property management; fund management; and hotel management	Large scale tourist resort and residential community
Great Southern Plantations	16/02/05	To acquire Sylvatech Ltd & Assets of Environinvest Ltd	Tiwi	Cash	Sylvatech Limited	Identifying & purchasing suitable farming land for the establishment of Eucalyptus plantations; packaging of land for leasing or granting rights to Growers pursuant to registered Managed Investment Scheme based prospectuses; attracting Growers, raising fu	Development and management of forestry projects on the Tiwi Islands
Gazel Corporation Limited	27/11/03	Acquires Davenport Group		Cash	Davenport Underwear Group	Design, manufacture, importation, wholesale and retail of well known branded apparel and accessories	Underwear manufacturer

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Hanson	17/04/03	To acquire US aggregates producer for $152.0 million	US	Cash	Better Materials Corporation	Heavy building materials company with operations in the UK, North America, continental Europe and South East Asia	Producer of construction materials in both western Pennsylvania and eastern Pennsylvania southern New Jersey operating operates six crushed stone quarries, five sand and gravel quarries, seven asphalt giant
Hanson Limited	2/12/02	European bolt-on Acquisitions totally 47.7m pounds	UK	Cash	Marshalls Flooring & Small Lots (Mix-It) Ltd	Heavy building materials company with operations in the UK, North America, continental Europe and South East Asia	Building supply product manufacture
Hanson	2/03/04	To acquire US brick manufacturer for $40.4M	US	Cash	Athens Brick Co	Heavy building materials company with operations in the UK, North America, continental Europe and South East Asia	Produces facing brick used in residential and commercial construction from two plants in Texas and one in western Louisiana

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Hansens PLC	24/06/05	Acquisitions & Disposals Announcement	US	Cash	Mission Valley Rock Company	Heavy building materials company with operations in the UK, North America, continental Europe and South East Asia	Aggregates quarrying and sand distribution
Hansens PLC	24/06/05	Acquisitions & Disposals Announcement	US	Cash	Berkley Ready Mix Company	Heavy building materials company with operations in the UK, North America, continental Europe and South East Asia	Ready Mix Concrete
Hansens PLC	24/06/05	Acquisitions & Disposals Announcement	US	Cash	Berkely Asphalt Company	Heavy building materials company with operations in the UK, North America, continental Europe and South East Asia	Asphalt Plants
Hansens PLC	24/06/05	Acquisitions & Disposals Announcement	US	Cash	Sherman Pipe	Heavy building materials company with operations in the UK, North America, continental Europe and South East Asia	Concrete pipe and pre-cast concrete products
Hansens PLC	8/03/05	Acquires Thermalite from Etex for Pds120m	UK	Cash	Thermalite	Heavy building materials company with operations in the UK, North America, continental Europe and South East Asia	Manufacturer and supplier of aircrete lightweight concrete blocks,

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Hansens PLC	5/01/05	Hanson acquires Marshalls' Clay Products division	UK	Cash	Marshalls Clay Products Pty Ltd	Heavy building materials company with operations in the UK, North America, continental Europe and South East Asia	Manufacturer of clay bricks and pavers
Hills Industries Limited	23/02/05	Acquires remaining 50% in Orrcon Limited	Australia	Cash	Orrcon	Electronic Security and Entertainment, Building and Industrial Products and Home and Hardware Products	Tube manufacture and welding
HomeLeisure Limited	3/11/03	Acquisition - Central Station Group	Australia	Cash /Stock	Central Station Group	Import and distribution of giftware products; Import, production and distribution of music CD's, and music and film DVD's; and Import and distribution of house wares and consumer plastic moulded products for garden, home storage and laundry, as well as a range of food storage coolers	Creator and supplier of dance music products in Australia and New Zealand

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Homeloans Limited	31/01/03	Acquisition Finalised	Australia	Cash	Access Home Loans Group	Mortgage origination; management of home loan mortgages for a number of financiers; funding of mortgages through the residential Mortgage Trust (RMT).	Home Loan financing
Healthscope Limited	20/10/04	Acquire all the issued capital of the company	Australia	Cash	Gribbles Group Limited (The)	Provision of healthcare services, through the ownership and management of hospitals and the provision of diagnostic services (pathology).	The principal activities of The Gribbles Group are the provision of laboratory analysis and related services covering medical, veterinary, environmental and industrial samples and the provision of radiology and medical services

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Healthscope Limited	22/12/04	Extension & Compulsory Acquisition notices for GGL	Australia	Cash /Stock	Gribbles Group Limited	Provision of healthcare services, through the ownership and management of hospitals and the provision of diagnostic services (pathology)	Provision of laboratory analysis and related services covering medical, veterinary, environmental and industrial samples and the provision of radiology and medical services
Insurance Australia Group	18/10/02	Acquisition of CGU's & NZI's Australian & NZ operations	Australia		CGU and NZI	The underwriting of general insurance, retirement services, other corporate services and investing activities	General Insurance

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
IBA Health	28/06/05	Monet Technologies Acquisition	Australia	Cash/ Stock	Monet Technologies	The development and licensing of computer software and the supply of services to the health industry.	Supplier of administrative and clinical systems and radiology information system (RIS) to corporatised, multidisciplinary medical centres and radiology practices
IINet Limited	16/09/03	Acquisition of iHug	Australia	Cash /Stock	iHug	Provision of internet and telephony services in Australia and New Zealand	Internet Service Provider
IINet Limited	15/02/05	IINet to Acquire OzEmail	Australia	Cash	Ozemail	Provision of internet and telephony services in Australia and New Zealand	Provision of internet and telephony services in Australia
Iluka	1/11/02	Completion of acquisition of Basin Minerals Limited	Australia	Stock	Basin Minerals	Exploration, mining, concentration and separation of mineral sands, production of ilmenite, rutile, synthetic rutile and other titaniferous concentrates, zircon and coal and sales of these products throughout the world	Mineral Sands Mining

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
InterOil Corporation	29/04/04	Acquires BP's Distribution Business in PNG	PNG	Cash	BP Papua New Guinea Limited	Development of a commercial oil refinery in PNG and interests in several Petroleum Prospecting Licences in PNG	Asset portfolio comprises 3 terminals, 7 depots and over 40 retail sites.
Investa Properties Limited	26/05/03	Acquire all the issued units of the Trust	Australia	Cash /Stock	Principal Office Fund	Investment in commercial property, funds and property management and property development	Investment in commercial office buildings in Australia
Investa Property Group	22/12/04	Acquisition of CPG Australia - Presentation	Australia	Stock	CPG Australia Pty Ltd	Investment in commercial property, funds and property management and property development	Property development and contract housing
Integrated Workforce Limited	5/09/02	Acquisition of Total Marine Services/Preliminary Final/Presentation	Australia	Stock	Total Marine Services Limited	The recruitment and supply of casual and permanent personnel to the industrial and commercial sectors, construction, development and maintenance industries and general harbour services, and the provision of contract maintenance and facilities management	Provider of maritime personnel, vessels and services principally to the Oil and Gas industry

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
IWL Limited	15/01/03	Acquire all the issued capital of the company	Australia	Cash /Stock	Sanford Limited	The provision of wholesale broking solutions, retail online broking, advisory software, portfolio solutions, and independent investment research	The provision of online financial services, consisting of stockbroking, the delivery of financial and information services to the stockbroking and investment advisory industries; and the provision of information technology services
Jackgreen Limited	21/06/04	To Acquire Electricity Retailer Jackgreen	Australia	Stock	Jackgreen (International) Ltd	Licensed retailer of electricity, and property development, financing and resale	Electricity Retail
P&H Rural Limited	5/11/02	Acquires Lindsay Brothers Transport	Australia	Cash /Stock	Lindsay Brothers Transport	Transportation of refrigerated and general freight, and merchandising of rural supplies	Refrigerated Transport

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Lighting Corporation Limited	1/07/02	Completes Sylvania Lighting acquisition	Australia	Cash	Sylvania International Ltd	The distribution and sale of electrical products	Distributor of lamps, lighting fixtures and allied products with operations in Australia and NZ
Legalco	3/11/04	BH Shelf Acquisition	Australia	Cash	BH Shelf Companies Pty Ltd	Service provider to organisations in the financial and professional services sectors, include: provision of licensed information from various authorities such as land title offices and ASIC, attendance to the settlement, stamping and registration of property	Business online searching
Lend Lease Corporation	23/06/05	To acquire leading UK Urban Regeneration Specialist	UK	Cash	Crosby Group	Retail and Communities: comprising retail property management, asset management and development; the Communities business is involved in the development of large scale urban communities, including Senior Living; Investment Management: providing real estate	Identifying, planning and regenerating brown-field sites for mixed-use residential, commercial and retail

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Lemarne Corporation Limited	15/10/03	Acquire all the issued capital of the company	Australia	Stock	Lemvest Limited	Manufacture and distribution of fibre reinforced plastic products. Manufacture and international sale of electronics and electrical components and sub-assemblies. Sale and distribution of ISDN/ADSL access products, filters, telephone accessories and voice	The manufacture and international sale of electronic and electrical components and sub assemblies; the manufacture of perforated metal, metal cabinet manufacture and sheet metal work; the manufacture of polyurethane screening systems.
Lion Nathan	2/09/02	Lion Nathan adds to its premium wine portfolio	NZ	Cash	Wither Hills	Production, marketing and distribution of premium alcoholic beverages. Its principal operations are in Australia and New Zealand, however some of its beer and wine brands are distributed globally	Wine producer

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Macquarie Bank	3/06/04	Macquarie Bank Group Intention To Acquire RG Capital Radio	Australia	Cash	Regional Media Limited	Investment banking, commercial banking and retail financial services in Australia and selected financial services offshore	Operates 36 predominantly music-based radio stations in 20 regional markets in New South Wales, Queensland, Victoria and Tasmania
Macquarie Bank	30/04/04	To Acquire US Airport Services Company	US	Cash	Executive Air Support	Investment banking, commercial banking and retail financial services in Australia and selected financial services offshore	Airport services company that owns and operates a network of ten Fixed Based Operations businesses (FBOs) in the United States
Macquarie Bank Limited	13/10/03	To acquire Sweden's Arlanda Express Airport Rail Link for $76m	Sweden	Cash	A-Train	Investment banking, commercial banking and retail financial services in Australia and selected financial services offshore	Operator of the Arlanda Express, a high speed dedicated rail link between Stockholm's main international and domestic airport at Arlanda and Stockholm Central Station

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Macquarie Bank Limited	2/10/03	Acquires UK's South-East Water Plc for $A948M	UK	Cash	South East Water	Investment banking, commercial banking and retail financial services in Australia and selected financial services offshore	Supplies 400 million litres of water per day to approximately 1.5 million people in the South East of England
Macquarie Bank Limited	22/03/05	Intent to acquire Canadian Aged Care Provider	Canada	Cash	Leisureworld	Investment banking, commercial banking and retail financial services in Australia and selected financial services offshore	Aged Care facility management
Macquarie Bank Group	20/08/04	Formal approval for acquisition of RG Capital Group		Stock	RG Capital Radio	Investment banking, commercial banking and retail financial services in Australia and selected financial services offshore	Operates 36 predominantly music-based radio stations in 20 regional markets in New South Wales, Queensland, Victoria and Tasmania

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Macquarie Bank Group	2/08/04	Finalises Purchase of Asian Broking Business	Hong Kong	Cash	ING Asian Cash Equities	Investment banking, commercial banking and retail financial services in Australia and selected financial services offshore.	Cash equity sales, facilitation trading, execution, research and equity capital markets businesses in 10 countries
Macquarie Bank	2/07/04	Completes acquisition of US energy assets	US	Cash /Stock	Thermal Chicago Corporation	Investment banking, commercial banking and retail financial services in Australia and selected financial services offshore	Chilled water to customers from a centralised plant via underground piping for cooling purposes.
Macarthur Cook Limited	23/12/03	Completes acquisition of the mgmt of National Aust Mortgage Fund	Australia	Cash	National Australia Mortgage Fund	Specialist real estate investment manager	Mortgage Funds Management
Macarthur Cook Limited	7/11/03	Major Acquisition & New Strategic Shareholder	Australia	Cash	National Australia Mortgage Fund	Specialist real estate investment manager	Property mortgage fund manager

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
McPherson's Limited	1/07/03	Acquisition of Cork Asia Pacific - Completion	Australia	Cash /Stock	Cork Asia Pacific	Importer, exporter and marketer of kitchen knives, scissors, cutlery, kitchen utensils, glassware, hair, beauty and personal care products. It is also a printer of a wide range of products including quality books, paperbacks and loose leaf products	Branded beauty care and hair care products
McPherson's Limited	14/10/04	Acquires Two Market Leaders for $86million	Australia	Cash	Multix Pty Ltd	Importer, exporter and marketer of kitchen knives, scissors, cutlery, kitchen utensils, glassware, hair, beauty and personal care products. It is also a printer of a wide range of products including quality books, paperbacks and loose leaf products	Markets products in the household plastic bags, wraps and foil

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
McPherson's Limited	14/10/04	Acquires Two Market Leaders for $86million	Australia	Cash	Accantia	Importer, exporter and marketer of kitchen knives, scissors, cutlery, kitchen utensils, glassware, hair, beauty and personal care products. It is also a printer of a wide range of products including quality books, paperbacks and loose leaf products	Markets personal care products including cotton products (balls, tips and pads) and facial and baby wipes in Australia.
MFS Limited	1/04/05	Finalise Purchase of Peppers Leisure Ltd	Australia	Cash	Peppers Leisure Limited	Funds management of listed and unlisted investment vehicles in the finance, property, equity and investment sectors; the facilitation of finance principally in the non-conforming or mezzanine sectors and hotel/resort operation.	Owner and operator of retreats and resorts
MFS Limited	27/01/05	MFS Limited & Breakfree announce merger	Australia	Stock	Breakfree Limited	Funds management of listed and unlisted investment vehicles in the finance, property, equity and investment sectors; the facilitation of finance principally in the non-conforming or mezzanine sectors and hotel/resort operation.	Branded product and destination focused holiday products to both the retail and wholesale holiday markets and the operation of management and letting rights

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
MFS Group	18/11/04	MFS Leveraged Inv. Group & MFS Group Ltd to Merge	Australia	Stock	MFS Leveraged Investment Group	The funds management of listed and unlisted investment vehicles in the finance, property, equity and investment sectors; the facilitation of finance principally in the non-conforming or mezzanine sectors and usually backed by real property security.	Leveraged Investment Trust
The Mirvac Group	27/08/02	Acquire all the issued units of the Trust	Australia	Stock	Colonial First State Property Trust Group	Property investment and management, hotel ownership and management, and property development	Investment in Australian industrial, retail and office properties
McGuigan Simeon Wines	9/09/03	McGuigan Simeon to buy Miranda Wines	Australia	Cash /Stock	Miranda Wines Holdings	Wine making, wine marketing, vineyard management and development	Owns and operates wineries in Victoria's King Valley, South Australia's Barossa Valley and NSW's Riverina.
MIA Group Limited	6/09/02	Acquisition of Radiation Oncology Associates P/L	Australia	Cash	Radiation Oncology Associates Pty Ltd	Own, operate, acquire and integrate diagnostic imaging and other health practices	Radiation Oncology, providing cancer treatment services

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Macquarie Leisure Trust Group	7/12/04	Agreement to Acquire Bowl Australia	Australia	Cash	Bowl Australia Pty Limited	Property investment and the provision of specialist management services to the leisure market	Development and operation of bowling facilities
Macquarie Leisure Trust	18/10/04	Acquires AMF Bowling Centres	Australia	Stock	AMF Bowling Centres	Property investment and the provision of specialist management services to the leisure market	Indoor bowling centre operator
Macquarie Office Trust	30/09/04	Compulsory Acquisition Notice for PAO	US	Cash /Stock	Principal America Office Trust	Property investment in Australia and the US	US Property
Macquarie Office Trust	28/07/04	Acquire all the issued capital of the company	Australia	Cash	Principal America Office Trust	Property investment in Australia	Property Trust investing in prime US office buildings through an Australian Trust
Sun Capital Group Limited	9/06/04	Heads of Agreement signed for Major Acquisition	Australia	Stock	Protech Qld Pty Ltd	The marketing and distribution of consumer based products	Sale of celebrity branded consumer products into retail stores

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Werrie Gold Limited	29/10/02	Share Purchase Agreement - Media World Broadcasting Ltd	Australia	Stock	Media World Broadcasting Limited	Gold mining and production	Provider of DVD quality video transmission across standard telephone line
Media World Communications	1/10/03	Execution of agreement to acquire the Adams Platform group	Australia	Cash /Stock	Adams Platform Group	Provider of media content distribution and services	Developer of AP Technology that enables, video compression with superior quality at significantly better ratios than those achieved by any existing technologies
Multiplex Limited	24/11/04	Multiplex Group - Merger with Ronin Property Group	Australia	Cash /Stock	Ronin Property Group	Property Development, Construction, Facilities and Infrastructure Management and Property Funds Management	Property funds management

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
MYOB Limited	2/08/04	Court Orders Approving Merger	Australia	Stock	Solution 6	Development and publishing of software and the provision of services for small and medium enterprises and accounting practices	Design, installation and support of customised integrated hardware and software solutions including ecommerce solutions
National Australia Bank	14/04/05	MLC to Acquire Remaining Interests in HKMLC Holdings Ltd	Hong Kong	Cash	HKLMC Holdings Limited	Banking services, credit and access card facilities, leasing, housing and general finance, international banking, investment banking, wealth management, funds management, life insurance, and custodian, trustee and nominee services	Joint venture holding company
NCM Holdings Limited	8/03/05	Proposed Acquisition of Chandler MacLeod & Forstaff	Australia	Cash	Forstaff	Market Research, Debt Collection	Recruitment Agency
NCML Holdings Limited	8/03/05	Proposed Acquisition of Chandler MacLeod & Forstaff	Australia	Cash	Chandler Macleod	Market Research, Debt Collection	Recruitment Agency

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Newmont Mining Corporation	4/12/02	To acquire all the issued ordinary and option capital	Australia	Cash	Otter Gold Mines Limited	Gold production, exploration for gold and acquisition of gold properties	Mining, processing and sale of gold and silver; and exploration for gold and other economic minerals
National Hire Group Limited	1/11/04	To Acquire Cat Rental Store Business in WA & Allight / Placement	Australia	Stock	Cat Rental Store	Equipment hire - tools, elevating platforms, toilets and de-watering	Hire stores
Nuplex Industries Limited	19/10/04	Acquisition of the Coatings Resins Group of Akzo Nobel NV	Netherlands	Stock	Akzo Nobel NV	Provider of specialty construction materials, functional flooring systems to industry and commerce, and lightweight cladding systems to residential and commercial construction	Resins coatings manufacture

Acquirer	Announ -cement Date	Announcem ent Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Nufarm Limited	28/08/02	To Acquire Crop Care Business	Australia	Cash	Crop Care Australasia	Manufactures and supplies a range of products used by farmers to protect crops from damage caused by weeds, pests and disease. Nufarm also operates two chlor alkali plants and produces a small range of industrial chemicals, mostly by-products of the company's core crop protection manufacturing activity	Manufactures and supplies crop protection products for both the Australian and New Zealand markets
News Limited	23/08/02	Completes Acquisition of WPWR-TV in Chicago	US	Cash	WPWR-TV	Filmed entertainment, television, direct broadcast satellite television, cable network programming, magazines and inserts, newspapers and book publishing	TV Station and broadcaster
OAMPS Limited	20/05/03	Expands Parramatta with York Insurance Brokers	Australia	Cash /Stock	York Insurance Brokers	Insurance broking, insurance underwriting, underwriting agency operations, premium funding, financial services, and as a licensed dealer in securities and the trusteeship of a public offer superannuation fund	General Insurance brokers located in Bankstown

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Origin Energy Limited.	19/07/02	To acquire CitiPower electricity retail business	Australia	Cash	CitiPower	Operates energy businesses including: Exploration and production of oil and gas, electricity generation, wholesale and retail sale of electricity and gas, and investment in, and the management of, utility infrastructure	Electricity Retail
Origin Energy Limited.	11/03/04	Acquires Remaining 50% Interest in Rockgas	NZ	Cash	Rockgas Limited	Operates energy businesses including: Exploration and production of oil and gas, electricity generation, wholesale and retail sale of electricity and gas, and investment in, and the management of, utility infrastructure	LPG Distributor
Origin Energy Limited.	11/07/03	Acquire all the issued capital of the company	Australia	Cash	Oil Company of Australia Limited	Operates energy businesses including: Exploration and production of oil and gas, electricity generation, wholesale and retail sale of electricity and gas, and investment in, and the management of, utility infrastructure	Oil and gas exploration and development, production and sale of natural gas, oil and liquefied petroleum gas

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Orica Limited	23/09/02	ORI Grows Chemicals Trading Business Through Acquisition	Australia	Cash	Fernz Speciality Chemical Trading	Manufacture and distribution of mining products and services, fertilisers, consumer products, chemical products and chemical services	Distribution of chemicals in Australia and NZ
Orica Limited	27/04/04	Presentation re Acquisition of Bronson & Jacobs Pty Ltd	Australia	Cash	Bronson & Jacobs Pty Ltd	Manufacture and distribution of mining products and services, fertilisers, consumer products, chemical products and chemical services	Speciality food and fine chemicals distributor operating in 8 countries
Orica	30/07/03	Indian Acquisitions	India	Cash	Indian Explosives Co Limited	Manufacture and distribution of mining products and services, fertilisers, consumer products, chemical products and chemical services	Commercial explosives and initiating systems

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Orica	21/07/03	Chemnet Acquisition Reinforces Building on Strength Strategy	Australia	Cash	Qenos	Manufacture and distribution of mining products and services, fertilisers, consumer products, chemical products and chemical services	Operates in the engineering plastic market and also has formulating capability supplying the automotive and building industries, 'white goods' manufacturing and food packaging.
Orica Limited	21/03/05	Acquires Aluminates Chemical Industries	Australia	Cash	Aluminates Chemical Industries	Manufacture and distribution of mining products and services, fertilisers, consumer products, chemical products and chemical services	Manufacturer and distributor of an extensive range of chemicals and services to the water treatment and pulp & paper industries in southern Australia.
Orica Limited	21/01/05	Acquires Keith Harris Flavours & Fragrances	Australia	Cash	Keith Harris Flavours and Fragrances	Manufacture and distribution of mining products and services, fertilisers, consumer products, chemical products and chemical services	Manufacturer and supplier of flavours, fragrances and colour additives to the food, beverage, cosmetic and industrial industries

Acquirer	Announ-cement Date	Announcem ent Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Orica Limited	8/11/04	Acquires Specialty Food Ingredients Distributor	Australia	Cash	Woods & Woods	Manufacture and distribution of mining products and services, fertilisers, consumer products, chemical products and chemical services	Speciality Foods producer and distributor
Orica Limited	18/08/04	Presentation re Acquisition of Marplex Group		Cash	Marplex Group	Manufacture and distribution of mining products and services, fertilisers, consumer products, chemical products and chemical services	Chemicals Manufacturer/Distrib utor
Steel and Tube Holdings	2/04/03	Acquisition of Hurricane Wire Products Ltd completed	Australia	Cash	Hurricane Wire Products	Mining, steel manufacture, and steel and metal products distribution	Manufacturer of wire products
Pacifica Group Limited	1/08/03	Acquires Italian Brake Business	Italy	Cash	Automotive Products Italia	Manufacture and supply of brake systems and technologies to automotive manufacturers in Australia, North America, Europe and Asia	High volume drum brake and park brake manufacturer

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Publishing and Broadcasting Limited	27/04/04	Acquire all the issued capital of the company	Australia	Cash	Burswood Limited	Television production and broadcasting; magazine publishing and distribution; gaming and entertainment: and investment in the internet, pay television, and other media and entertainment sectors	Operation of the Burswood complex, comprising the Casino, Hotel, Convention Centre, Theatre and Dome and the development of land held for resale
Pancontinental Oil & Gas NL	23/02/05	Proposed Acquisition of Afrex Limited	Australia	Stock	Afrex Limited	Exploration for oil and gas	Gas and Oil Exploration
Placer Dome Asia Pacific	9/07/03	Placer Dome Acquires East African Gold Mines Limited	Africa	Cash	East African Gold Mines	Gold mining and mineral exploration	Gold Mining
Pacific Hydro Limited	20/04/04	Completes purchase of Hydro Assets in Chile	Chilean	Cash /Stock	Codelco - Coya and Pangal	Acquisition, development, construction and operation of electricity assets	Hydro power generation

Acquirer	Announ-cement Date	Announcem ent Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Primelife Corporation Limited	17/11/04	Acquire all the issued capital of the company	Australia	Stock	Aevum Limited	Management, marketing and development of senior living facilities	Operation, management and development of retirement villages and aged care facilities
Primelife Corporation Limited	17/11/04	Proposed Acquisition of Aevum Limited	Australia	Stock	Aevum Limited	Continuing management, marketing and development of senior living facilities	Retirement village operator
Promina Group	27/08/04	Completion of AutoSure Acquisition		Cash	Autosure	The provision of general insurance and financial services. The underwriting of general and life insurance and the investment and administration of insurance and non-insurance funds	Motor vehicle and consumer goods warranty and credit insurance
PMP Limited	4/11/04	PMP Acquires McPhersons Directory Printing Business	Australia	Cash	McPhersons Enterprises Pty Ltd	Pre-media, commercial printing, book printing, letterbox delivery, target marketing and magazine distribution	Directory Printing

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Promentum Limited	13/12/04	Promentum to Acquire PMPs Sheet Fed Printing Business	Australia	Stock	PMP Limited	Commercial Printing	Commercial Printing
Paperlinx	9/09/03	Purchase Agreement Signed for Buhrmann Paper Merchant	Europe	Cash /Stock	Buhrman NV	Commercial Printing	Paper Merchant
Primary Health Care	13/12/04	Health Communication Network Ltd	Australia	Stock	Health Communication Network Ltd	A service company for medical, para-medical and related services; a day-care surgery operator; a provider of pathology services; and a provider of health technology	Clinical and practice management software to GPs and specialists as well as online reference content for hospitals

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
pSivida Limited	2/06/04	pSivida Acquires 100% of pSiMedica	UK	Stock	pSiMedica Limited	Research and development of drug delivery products in the healthcare sector, initially in ophthalmology and oncology; patent maintenance	Development and commercialisation of nano-structured porous silicon (BioSilicon™) in biocompatible and biodegradable forms for use in human and animal healthcare
PowerTel Limited	22/12/03	Acquisition of Request Broadband	Australia	Stock	Request Broadband	The provision of business telecommunications services to the corporate, wholesale and small-medium enterprise markets in Australia	Supplier of telecommunication broadband services
QBE Insurance Group Limited	28/11/03	QBE Acquires Ensign Motor Business	UK	Stock	Ensign Motor	Underwriting general insurance and reinsurance risks, management of Lloyd's syndicates and investment management.	Commercial motor business insurance underwriter
QBE Insurance	1/03/05	Acquisitions in Latin America and Europe	Columbia	Cash	Central de Seguros	Underwriting general insurance and reinsurance risks, management of Lloyd's syndicates and investment management.	Annual group life, personal accident, property, liability and motor insurance

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
QBE Insurance	1/03/05	Acquisitions in Latin America and Europe	UK	Cash	Greenhill Underwriting Group	Underwriting general insurance and reinsurance risks, management of Lloyd's syndicates and investment management.	Property and liability insurance for the London market
Queensland Cotton	27/10/03	Queensland Cotton Expands Into the Pulse Industry	Australia	Cash	Mt Tyson Seeds Pty Ltd	The provision of integrated services to the cotton industry as well as the trading of pulse crops	Darling Downs pulse (legumes)
QRSciences Holdings Limited	21/04/05	QRSciences Holdings Limited Completes Compulsory Takeover	Australia	Stock	QR Sciences	Management of QR Sciences Limited	Designer, developer and direct manufacturer of systems, sub-systems, components and software for security related applications
Ramsay Healthcare	14/04/05	Acquires Affinity Health	Australia	Stock	Affinity Health	Owning and operating of private hospitals	Hospital owner and operator

Acquirer	Announ-cement Date	Announcem ent Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Ross Human Directions	28/06/04	Acquisition of Spherion Group in Asia Pacific	US	Cash /Stock	Spherion Group Asia Pacific	Provision of contract, temporary and permanent job placements, technology consulting and management solutions, managed training solutions, and also business process outsourcing	IT Technology, human resource outsourcing and top-tier recruitment with operations in 11 locations in Australia, Hong Kong, New Zealand and Singapore
Ross Human Directions	6/07/04	Acquisition of Spherion - Presentation	Australia	Cash /Stock	Spherion Asian Pacific Pty Ltd	Provision of contract, temporary and permanent job placements, technology consulting and management solutions, managed training solutions, and also business process outsourcing	IT Recruitment, Training and Consulting
Ridley Corporation Limited	26/07/04	Press Release: Sweetlix Acquisition	US	Cash	Sweetlix LLC	Production and marketing of stockfeed and animal feed supplements and the production of crude salt, salt refining and marketing	Animal nutrition manufacture/distribu tion
Reckon Limited	22/12/03	Acquires Advanced Professional Solutions	UK	Cash /Stock	Advanced Professional Solutions	Develops, localises, distributes and provides after-sales technical support for the QuickBooks and Quicken Personal range of accounting software	Providers of practice management software solutions

Acquirer	Announ-cement Date	Announcem ent Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
ResMed Inc	6/05/05	To Acquire Saime SA	France	Cash	Saime SA	Design, manufacture and distribution of medical equipment for treating and diagnosing sleep disordered breathing	Developer and distributor of ventilation products in France and Germany.
Resolute Mining	13/01/04	Acquires Ravenswood Gold Ops from Xstrata for US$45m	Australia	Cash	Carpentaria Gold Pty Ltd	Gold mining :- Prospecting and exploration for minerals	Gold mining
SAI Global Limited	13/05/05	SAI Global Makes Strategic Trans-Atlantic Acquisition	UK	Cash	Easy I Holdings Limited	Publishing and distributing Australian and International Standards and a range of related publications; providing standards and business improvement related training and consulting services to Australian and international clients; providing product and ma	Delivery of standards and regulatory compliance solutions

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
SAI Global Limited	2/02/05	Acquires North American Certification Company	US	Cash	CRS Registrars Inc	Publishing and distributing Australian and International Standards and a range of related publications; providing standards and business improvement related training and consulting services to Australian and international clients; providing product and ma	Quality Management and Environmental Management Registrar
Sydney Aquarium Limited	6/07/04	Acquisition of Sydney SkyTour & SkyWalk	Australia	Cash /Stock	Sydney Tower Observation Pty Ltd	Management and operation of the Sydney Aquarium, the Manly Oceanworld and OzTrek	Sydney Tower tourist attraction
Southern Cross Broadcasting (Australia) Limited	15/12/03		Australia	Cash	Southern Star Group Limited	Operation of commercial television and radio stations	Film and television program production, distribution of programs for theatrical, television, cable and pay TV broadcasting, and the licensing of rights to characters

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Southern Cross Broadcasting	16/03/05	To acquire Satellite Music Australia	Australia	Cash	Satellite Music Australia	The operation of commercial television and radio stations	Supplier of subscription music providing 30 channels of music to pay TV operators and smaller retail customers, as well as customised music with advertising content to larger retail chains.
Seven Network Limited	12/07/04	Pacific Publications acquires Murdoch Magazines	Australia	Stock	Murdoch Magazines	Commercial television stations and investments; through Melbourne Stadiums Limited and Medallion Club (Melbourne) in the Telstra Dome in Melbourne and through Pacific Magazines in magazine publishing	Publishing

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Stockland Trust Management Limited	28/05/03	Acquire all the issued Capital of the Trust	Australia	Cash /Stock	Resource Mining Corporation Limited	Investment in income producing retail, commercial, industrial and office park properties, development of retail properties, residential property development, property trust management, property management, and hotel management	Mineral exploration in Australia and overseas
Stockland Trust Group	9/12/04	To acquire Lensworth	Australia	Stock	Lensworth	Investment in income producing retail, commercial, industrial and office park properties, development of retail properties, residential property development, property trust management, property management, and hotel management	Property Development
Singapore Telecommu nications	31/03/05	Optus acquires Reef Networks Pty Ltd	Australia	Cash	Reef Networks	Operation and provision of telecommunications systems and services and investment holding	Fibre optic cable network stretching between Brisbane and Cairns in Queensland

Acquirer	Announ-cement Date	Announcem ent Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Sonic Healthcare Limited	22/06/04	Acquire 66.67% of each shareholders holding	Australia	Cash /Stock	Independent Practitioner Network Ltd	Provision of medical diagnostic services	Provision of administrative services and facilities to medical practitioners
Sonic Healthcare Limited	6/04/04	Expands into Germany	Germany	Cash	Schottdorf Group	Provision of medical diagnostic services	Operates a network of pathology laboratories
Sonic Healthcare Limited	8/07/03	Acquires Omnilabs Limited	UK	Cash	Omnilabs Limited	Provision of medical diagnostic services	Pathology, histopathology and cytology businesses
Sonic Healthcare Limited	9/07/04	Notice of Despatch of Proportional Takeover Offers	Australia	Stock	Independent Practitioner Network Limited	Provision of medical diagnostic services	Provision of administrative services and facilities to medical practitioners

Acquirer	Announ -cement Date	Announcem ent Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Select Harvests	3/06/03	Expands into Health Food	Australia	Cash	Merimam Group	Processing, packaging, marketing and distribution of edible nuts, dried fruits, seeds, and a range of natural health foods, and The growing, processing and sale of almonds to the food industry from company owned almond orchards, the provision of management services to external owners of almond orchards, including orchard development, tree supply, farm management, land rental and irrigation infrastructure, and the marketing and selling of almonds on behalf of external investors	Manufacturer of health foods, cooking ingredients and mueslis
Sigma Company Limited	15/04/03	Sigma to Acquire Herron Pharmaceutic als	Australia	Cash	Herron Pharmaceuti cals	Manufacture, marketing and wholesale distribution of pharmaceutical and allied products through the pharmacy and grocery channels and the provision of services to rental pharmacists	Manufacture and distributor of a range of pharmaceutical and natural healthcare products

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
SKYCITY Entertainment Group	10/05/05	Acquires Remaining Shareholding in SKYCITY Hamilton	Australia	Cash	SKYCITY Hamilton	Entertainment, leisure and recreation	Gaming and entertainment centre located in central Hamilton
Skilled Engineering Limited	18/02/04	Acquires Aust leading nursing agency network/Strong H/Y result	Australia	Cash/Stock	Origin Healthcare Holdings	Provision of supplementary trades and professional labour, maintenance services, project management, healthcare professionals, customer contact solutions and trainee and apprenticeship management	Operates a nursing agency network which places casual nursing staff in healthcare institutions such as hospitals and aged-care facilities.
Salmat Limited	6/12/04	Acquires Salesforce	Australia	Cash	Salesforce Australia Pty Ltd	Business Process Outsourcing (Document Management and Data Solutions); Targeted Media (Customer Targeting and Delivery); Customer Contact Solutions (Call Centre Operations)	Call centre and direct sales

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
So Natural Foods Limited	22/03/05	Acquisition of Brunswick Seafood Brand	Australia	Stock	Brunswick Seafood	Manufacture and distribution of long life soy and other beverages; manufacture, distribution and marketing of natural foods; distribution and marketing canned seafood and ; distribution and marketing low GI energy waters	Supplier of house brand sardine and salmon products
S P Telemedia Limited	30/11/04	Completes Comindico Acquisition	Australia	Stock	Comindico Holdings Pty Ltd	Telecommunications carrier; Sale of retail telecommunication products and services; and Commercial television station	IP based network capable of carrying voice data and video
SP Telemedia Limited	2/08/04	Completes Acquisition of NBN Television	Australia	Stock	NBN Television	Sale of retail telecommunication products and services	Commercial television station

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
AAV Limited	30/10/03	Acquisition of Staging Connections Pty Ltd & Placement	Australia	Cash /Stock	Staging Connections Pty Ltd	Meds Manufacturing and Digital Media Services	Provision of audio visual and staging services for the conference and exhibition markets. Staging Connections provides the equipment, creativity, technical know-how and service for corporate presentations, product launches, promotions, conferences, television

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Service Stream Limited	20/01/05	55% growth in revenues with latest acquisition	Australia	Cash	Pracom Limited	Installation, maintenance, technology and outsource services to tier one customers predominantly in the telecommunications industry, covering customer assistance, field force management and technical service and support	Installation, maintenance, technology and outsource services to tier one customers predominantly in the telecommunications industry, covering customer assistance, field force management and technical service and support
Mayne Group Limited	5/06/03	Acquires Gippsland Pathology Service	Australia	Cash	Gippsland Pathology Group	Diagnostic and wellness products and services through its pathology, imaging, medical centres, pharmacy services and consumer divisions	Pathology

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Mayne Group Limited	27/02/03	To acquire Queensland Diagnostic Imaging	Australia	Cash	Queensland Diagnostic Imaging	Diagnostic and wellness products and services through its pathology, imaging, medical centres, pharmacy services and consumer divisions	Focuses on providing higher modality services, including funded MRls, and has a combination of hospital and comprehensive community sites
Mayne Group Limited	3/05/04	Acquires specialist pharmaceutical manufacturing bus in Europe	Germany	Cash	Wasserburger Arzneimittelwerk	Diagnostic and wellness products and services through its pathology, imaging, medical centres, pharmacy services and consumer divisions	Inject able pharmaceutical manufacturing
Mayne Group Limited	26/08/03	To acquire worldwide paclitaxel business	US	Cash	NAPro Biotherapeutics Inc	Diagnostic and wellness products and services through its pathology, imaging, medical centres, pharmacy services and consumer divisions	Cancer chemotherapy treatment developer

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Mayne Group Limited	25/02/05	Mayne expands UK Aseptic Manufacturing Services	Australia	Cash	Intra-Tech Healthcare Limited	Diagnostic and wellness products and services through its pathology, imaging, medical centres, pharmacy services and consumer divisions	Manufacture (compound) primarily chemotherapy and total parental nutrition products for supply to the UK National Health Service
Tabcorp Holdings Limited	23/02/04	Acquire all the issued capital of the company	Australia	Cash /Stock	TAB Limited	Provision of leisure and entertainment services	Wagering, gaming and broadcasting
Tabcorp Holdings Limited	8/09/04	Compulsory Acquisition of outstanding TAB Limited Shares	Australia	Cash /Stock	TAB Limited	Provision of leisure and entertainment services (particularly in relation to gambling and hospitality).	Wagering, gaming and broadcasting

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Telecom	2/09/04	Confirms purchase of Computerland NZ	NZ	Cash	Computerland NZ	Principal supplier of local, national and international telecommunications services from New Zealand including cellular, directories, leased circuits, mobile radio, paging, data communications, and the distribution of telecommunications equipment	IT infrastructure support services and total technology solutions from consultation, design and development through to implementation
Ten Holdings Limited	24/09/04	Eye Corp acquires 100% of Eye Shop	Australia	Cash	Eye Shop	Operation of commercial television licences TEN-10 (Sydney), ATV-10 (Melbourne), TVQ-10 (Brisbane), ADS-10 (Adelaide) and NEW-10 (Perth), and out-of-home advertising	Out-of-home advertising
Travel Holdings Limited	1/03/04	Acquisition of Pacific International Business	Australia	Stock	Pacific International Hotels Group	Management of hotels, and ownership and management of a golf course club house together with the management of a golf course	Owner and operator of 14 existing hotel and serviced apartment properties with a further 6 in construction
Telstra Corporation Limited	1/07/02	Obtains full ownership of Hong Kong CSL Limited	Hong Kong	Cash	CSL Limited	Telecommunications services for domestic and international customers	Mobile Telecommunications supplier

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Telstra Corporation Limited	8/03/04	Sensis acquisition of the Trading Post Group	Australia	Cash	Trading Post Group	Telecommunications services for domestic and international customers	Classified advertising, operating twenty two popular print publications, five complementary online sites and two automotive inserts
Telstra Corporation Limited	6/09/04	Secures Damovo Australia for $64.3 million	Australia	Cash	Damovo Australia	Telecommunications services for domestic and international customers	National multi-vendor CPE maintenance provider covering leading CPE brands
Toll Holdings Limited	1/11/02	Acquires Mayne Express	Australia	Cash	Critical Express	Local freight distribution; Interstate freight forwarding by road, rail and sea; Container packing and unpacking; Warehousing, storage and distribution and recycling	Express courier messenger services, air & road freight and mail room management

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Ticor Limited	16/12/02	Acquire all the issued capital of the company	Australia	Cash	Magnetic Minerals Limited	Mining and concentration of titanium mineral ores and the marketing of titanium minerals and zircon, operation of a synthetic rutile facility and the marketing of synthetic rutile and operation of a titanium dioxide pigment plant and sale of TiO2 pigments	Acquisition and exploration of mineral tenements prospective for Mineral Sands in the Perth Basin of Western Australia
Transfield Services	10/02/05	Transfield Services buys specialist service group	Australia	Cash	Broadspectrum	The provision of operations and maintenance outsourcing services to industries such as power, rail, oil and gas, petrochemicals, water utilities and telecommunications in Australia and New Zealand; Infrastructure ownership and management	Instrumentation, electrical and mechanical service group

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Transfield Services	1/07/04	Completes Acquisition of Serco Group NZ Ltd	NZ	Cash	Serco Group NZ Ltd	The provision of operations and maintenance outsourcing services to industries such as power, rail, oil and gas, petrochemicals, water utilities and telecommunications in Australia and New Zealand; Infrastructure ownership and management	Serco New Zealand provides a range of property and Asset management services to Government, local authorities, traffic and the commercial sector
Transfield Services	1/07/04	Completes Acquisition of Serco Group NZ Ltd	NZ	Cash	Serco Group NZ Ltd	The provision of operations and maintenance outsourcing services to industries such as power, rail, oil and gas, petrochemicals, water utilities and telecommunications in Australia and New Zealand; Infrastructure ownership and management	New Zealand Property and Asset Management industry (including traffic control)

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
TZ Limited	8/01/04	Completion of Acquisition	US	Stock	TZ Incorporated	Development and licensing of intellectual property particularly, Providing a full service capability in product development, engineering services, injection moulding tooling and small production run manufacturing through PDT. Additionally, a significant electronic and software engineering capability has been established	development of intelligent fastening and enabling technology
United Group	27/08/02	Expands Services Business with Acquisition of KFPW	Australia	Cash	KFPW	Operations in mechanical and electrical engineering, fabrication, manufacturing, maintenance, construction and business process outsourcing including property services, to the infrastructure and resource sectors	Property and procurement business process outsourcing. Based in Melbourne, it provides services to State ,and Federal Government departments and private enterprise.

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
UNiTAB Limited	9/12/04	Agreements to Acquire Gaming Businesses	Australia	Stock	Maxgaming, DMS & Maxvision	Race wagering and sports wagering, fixed odds betting and provision of broadcasting services associated with racing	Centralised monitoring system business, the jackpot services business and gaming machine field services
Waterco Limited	18/03/05	Strengthens N American Operations with $10.3M acquisition	Canada	Cash	Focus Temp International	Wholesale, export and manufacture of equipment and accessories in the swimming pool, spa pool, spa bath, rural pump and water treatment industries; - Manufacture and sale of solar heating systems for swimming pools and pre-heat industrial solar systems; -	Swimming pool heat pumps, and Baker Hydro Filtrations
Westpac	26/08/02	Joins Wealth Management Major League with BT Financial Group Acquisition	Australia	Cash	BT Financial Group	The provision of financial services including lending, deposit taking, payments services, investment portfolio management and advice, insurance services, leasing, general finance, foreign exchange and money market services	Retail funds manager

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Westfield Group	30/09/04	Submits cash bid proposal for owner of Chelsfield in UK	UK	Cash	Chelsfield	The Group is a vertically integrated, shopping centre group undertaking ownership, development, design, construction, funds/asset management, property management, leasing and marketing activities	Shopping Centre Owner
Wesfarmers Limited	3/06/03	Acquisition of Edward Lumley Holdings	Australia	Cash	Edward Lumely Holdings	Retailing of home and garden improvement products and building materials; coal mining and production; gas processing and distribution; industrial and safety products distribution; fertilisers and chemicals manufacture; rail transport; and investment	General and life insurance businesses including associated finance and IT activities in Australia, NZ, UK and Ireland

Acquirer	Announ -cement Date	Announcem ent Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
Westfield Trust.	20/05/03	Acquire all the issued units of the Trust	Australia	Cash	AMP Shopping Centre Trust	Ownership and expansion of major shopping centres	Invest in quality regional shopping centres located in major regional areas around Australia. The portfolio aims to provide a growing district profile and capital growth while maintaining a geographically diversified investment portfolio to minimise risk
Investor Group	16/10/02	Completion of Acquisition of Williams Hatchman & Kean	Australia	Cash /Stock	Williams Hatchman & Kean	Business and financial services encompassing accounting, taxation, audit and assurance, estate planning, corporate and business advisory, wealth management, financial planning, superannuation advice, risk insurance and finance broking services	Financial Planning

Acquirer	Announ-cement Date	Announcement Title	Country	Payment Type	Target	Acquiring Company's Lines of Business	Target Company's Lines of Business
WMC Resources	9/12/02	Acquires Corridor Sands	Mozambique	Cash/Stock	Corridor Sands	Mining, processing and marketing of minerals, metals and fertilizers, and exploration for minerals	Titanium Dioxide mineral sand mining
Woolworths Limited	25/05/05	Acquisition of Foodland NZ Business plus 22 Aust stores	NZ	Cash/Stock	Foodland NZ	Food, liquor, petrol, general merchandise, and consumer electronics retailing through chain store operations, together with hotel, gaming and entertainment operations	Supermarkets
Zylotech Limited	26/06/02	Proposes to acquire all the issued capital	Australia	Stock	Sonacom Limited	The ongoing development and commercialisation of the EYELINK IP Smart Cam based video surveillance range of products together with the commercialisation of the EYELINK TV ComsLink set top box range of products; The development of acoustic sonobuoys.	Development and commercialisation of marine monitoring and surveillance products and systems

A.4 Acquisition Data Coding

For each acquisition identified in table A.2 coding was required to identify the two and four digit Global Industry Classification Standard (GICS) code (Standard & Poors 2006), before and after company acquisition. Table A.3 lists the Standard and Poors GICS sector and industry coding used.

Table A.3: GICS Codes

GICS Sector	Sector Abbreviation	GICS 2 digit Sector Code	GICS Industry	Industry Abbreviation	GICS 4 digit Industry Code
Energy	E	10	Energy	E	1010
Materials	M	15	Materials	M	1510
Industrials	I	20	Capital Goods	CG	2010
			Commercial Services and Supplies	CSS	2020
			Transportation	T	2030
Consumer Discretionary	CD	25	Automobiles and Components	AC	2510
			Consumer Durables and Apparel	CDA	2520
			Consumer Services	CS	2530
			Media	M	2540
			Retailing	R	2550
Consumer Staples	CS	30	Food and Staples Retailing	FSR	3010
			Food, Beverage and Tobacco	FBT	3020
			Household and Personal Products	HPP	3030
Health Care	HC	35	Health Care Equipment and Services	HC	3510
			Pharmaceuticals, Biotechnology and Life Sciences	PBLS	3520
Financials	F	40	Banks	B	4010
			Diversified Financials	DF	4020
			Insurance	I	4030
			Real Estate	RE	4040
Information Technology	IT	45	Software and Services	SS	4510
			Technology Hardware and Equipment	THE	4520
			Semiconductors and Semiconductor Equipment	SSE	4530
Telecommunication Services	TS	50	Telecommunication Services	TS	5010
Utilities	U	55	Utilities	U	5510

A.5 Outliers

The following table lists outliers removed from the profitability premium calculations due to unexplained excessive (>20%) ROA within a year that otherwise skewed results. None of the companies listed below executed an acquisition during the period under question.

Table A.4: Outliers Removed from the Analysis

Company	ROA							
	2000	2001	2002	2003	2004	2005	2006	2007
ACX	-0.067	0.064	0.046	0.037	-0.117	0.156	56.163	
AUT	0.059	-0.146	-69.188		-0.180	-0.117	-0.050	-0.146
BLE	-0.692	-0.076	-0.168	-0.075	-44.798	-1.211	-1.008	
BLR	-0.111	-0.057	-0.022	-805.040	-35.100	21.100	-0.195	-0.055
CCI	-0.635	-1.520	0.284	-79.536	-0.549	-0.149	-0.385	-0.160
ESI	0.045	0.096	0.068	-0.187	-0.590	-202.467	-0.441	-4.100
IMI	-0.099	-0.452	-0.983	-152.640	-0.588	-1.925	-0.925	-0.858
MHL	-0.715	-11.382	-15.888	-0.116	-595.982	-1.099	-0.273	-0.325
NAE	-0.272	-6.429			242.406	0.616	-0.698	-0.107
REO				0.258	0.209	-4.035	173.878	-0.137
RTL				-0.014	-0.241	-0.499	-1.690	-20.626
SBL					-0.129	-1.149	-46.627	0.247
SSC	-0.051	-1.814	-0.186	-74.451				-0.104
TLZ		-14.381	-5.741	126.101		-0.719	-0.056	-0.055
TNC	0.017	-1.135	-7.920	-0.468	-0.379	-3.635	-122.197	0.164
VCL	-0.522	-1.262	-0.152	-27.794	-0.161	10.904	-0.293	
WCP	0.039	-0.019	-0.180	-0.451	-30.781	-0.075	-0.153	-0.165