

**Australian Takeovers:  
The Evidence  
1972-1985**

**Steven Bishop  
Peter Dodd  
R.R. Officer**



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# Foreword

Leigh Masel

I am both honoured and delighted to write these few prefatory words, which I hope will explain the importance of this monograph.

As a former Chairman of the National Companies and Securities Commission, I am conscious of the time, energy and resources that the Commission, in its first five years, devoted to promoting policies that sought to achieve efficiency and, at the same time, public confidence in the securities markets. In large public companies where shareholdings are fragmented and dispersed, the separation of management and ownership has tended to diminish the power of shareholders over directors and professional management. As a matter of conscious policy, therefore, the Commission believed that the rights of a shareholder would be enhanced by giving him the opportunity to rely upon an agency lying outside the corporation itself and its professional management — the public securities markets. It seemed important to the Commission, at that time, that if competition and efficiency were to be accorded at least equal status with public confidence in the operation of those markets, the most appropriate climate for decision making for investors should be established and that, in particular, securities markets would perform their time-honoured function as 'markets for information'.

Stock markets are also regarded as 'markets for control'. As a result of takeovers, shareholders in target companies are likely to receive benefits in the form of high stock prices. It is the ability of investors to gain increased returns that attracts them to the stock markets. As investors are both directly and indirectly the principal source for the transfer of savings to the securities markets, the inducement of high returns brings benefits to society in the form of increased investment opportunities.

All this may now seem commonplace, but it should be emphasised that, until 1980, corporate regulation in Australia had been largely influenced by the form of regulation then prevailing in the United Kingdom. In the period of state-by-state legislation (which was the norm prior to the establishment of the cooperative scheme for companies and securities in 1980), the Corporate Affairs Offices had no mandate to administer legislation in accordance with such concepts as market efficiency or to pursue objectives as to how the securities markets might function in the context of a mixed economy.

It may be asked why, prior to 1980, such concepts as market efficiency (as distinct from investor protection), were not the cornerstone of debate.

There were two reasons for this. The first was that, at that point of time, the Australian legal system had not yet fully developed a separate field of law called 'securities regulation'. In particular, the regulation of takeovers was typically regarded as part of 'company law' and the style of regulation tended to rely almost entirely on the institutionalisation of duties and obligations imposed on those who were concerned with the administration of corporate entities.

The second reason (and one that is most relevant to the policy monograph now presented by Bishop, Dodd and Officer) is that there was a complete absence of any comprehensive database that might be used for research on the economic consequences of takeovers. In the absence of any such database, there is a grave danger that the debate on such an important theme as takeovers will become miscued and policy will be misdirected. The adoption of relevant policies in the area of securities regulation and, in particular, regulation of takeovers, cannot be over-emphasised. Regulation should be based upon the need to stimulate the capital formation processes — that is to say, to stimulate the accumulation, aggregation and transfer of savings and investment in economic activities in preference to consumption. Capital is a scarce resource and governments, therefore, should be concerned that it should be allocated efficiently among alternative users by the market process. Legislation and the legal processes are merely policy instruments designed to achieve specific objectives. They should not be regarded as ends in themselves.

The authors have worked patiently and thoroughly, and are to be congratulated on producing a first-class study. I commend it not only to those in the security industry and management groups, but also to those who are interested in the formulation of policy in this very important area.

**Melbourne  
March, 1987**



# Executive Summary

1. Takeovers are essential elements of a competitive business environment. They help to allocate capital to its most productive uses.
2. Research on takeovers in the United States has influenced the US Securities and Exchange Commission to adopt a more 'hands-off' approach to regulating takeovers.
3. The Australian literature on takeovers is relatively sparse. Therefore, a major objective of this study is to develop a comprehensive database of takeovers in Australia. Such a database is a prerequisite for research on the economic consequences of takeovers, which in turn can be used in forming policy as it has been in the US.
4. The second major objective of this study is to use the large database to analyse the effects of takeovers in Australia on shareholders.
5. There are two main schools of thought on takeovers: the pro-takeover theories and the anti-takeover theories.
6. The pro-takeover view sees acquiring firms as prime movers in the market for corporate control. By acting to maximise their own share value, they promote efficient use of company assets and maximise resource value in the economy.
7. Most anti-takeover arguments stem from the 'managerial theory' of takeovers. The managerial theory assumes that managers act to maximise their own expected utility, but unlike the pro-takeover theory it also assumes that competitive forces in the market are not strong enough to protect shareholders from managements pursuing takeovers for their own self-interest.
8. The database developed for this study includes information on over 1400 takeover bids covering the period January 1972 through June 1985. Distribution rights to the database information are owned by the Centre for Independent Studies.
9. The relationship between takeovers and value creation is at the centre of the debate. Takeovers undoubtedly cause share prices to go up, but some critics doubt that any real value is created.

10. Share prices are based on estimates of the stream of future profits expected to be earned by a firm. The success of the stock market in forming unbiased share prices depends greatly upon the nature of competition in that market.
11. If there is vigorous rivalry among stock market participants for information on more accurate estimates of future company performance, the resulting share prices at any point in time are likely to be unbiased estimates of the underlying real value.
12. This study is based on capital market valuations of firms (share prices) rather than accounting numbers, because of the many problems associated with comparing accounting numbers between firms.
13. In order to isolate the effect of a takeover from all the other effects on a firm's share price, in this study the changes in a firm's share price are separated into two components: the change generated by market-wide events, and the residual change, specific to that firm, which is assumed to be caused by the takeover.
14. These residual changes for firms involved in takeovers are combined and accumulated over the period from three years before the takeover offer to two years after the offer. These composite returns are termed the Cumulative Abnormal Return, or CAR ('abnormal' meaning that portion of the total return not caused by market-wide events).
15. The CARs are presented in both tables and graphs for all firms involved in takeovers, bidding firms only (successful, unsuccessful, and withdrawn), and target firms only (successful, unsuccessful and withdrawn).
16. The results show that on average shareholders gain considerably when they own shares of companies involved in takeover transactions. Shareholders of target firms gain most, but shareholders of bidding firms also gain.
17. In the case of partial takeover offers, returns to target firm shareholders who either accepted or refused the partial offer are presented, along with returns to bidding companies' shareholders.

18. The results show that, in general, partial takeovers are value-increasing transactions. On average, target shareholders benefit from the offers, and bidder shareholders do not lose.
19. The public policy implications of these results indicate that restrictions on the market for corporate takeovers will be costly to the Australian economy.
20. The clear economic benefits of takeovers suggest that reforms should enhance the incentives for firms to engage in takeover activity, not reduce them.



## Chapter 1

# Introduction

No single corporate activity has been the subject of more public attention in Australia in the past two years than takeovers. Recent attempts to acquire control of BHP, Australia's largest company, have magnified the attention on takeovers and many casual observers have assumed that such activity is a relatively recent phenomenon. This is incorrect.

As discussed in the earlier study in this series (Dodd and Officer, 1986), takeovers of public companies are essential elements of the corporate economy. Many of Australia's most successful firms have achieved much of their growth by acquiring other companies. In general these acquisition programs involved absorbing relatively smaller firms into a larger group. As well as offering avenues for growth for the acquiring firms, acquisitions have frequently provided a ready exit for individual entrepreneurs who have steered their firms through birth and infancy.

It appears however that relatively larger companies are now being targeted for acquisition. According to popular belief, corporate boards and managements of a number of Australia's largest public companies have devoted much time to planning their tactical responses to unwanted takeover bids.

Although takeovers, as essential elements of a competitive business environment, should not be unusual transactions, individual acquisition proposals continue to dominate the headlines in the financial press. Moreover, discussions on the general economic merits of takeovers invariably reduce to arguments on the specifics of individual cases.

It is not surprising that financial analysts and reporters focus on particular takeover transactions. The success of a company's strategic redirection is triggered by the acquisition of another company. As with other strategic investment decisions, such as building to expand existing plant capacity or disposing of or developing particular lines of business, takeovers utilise substantial amounts of shareholders' and borrowed capital. The sheer magnitude of the financial commitment and the

strategic significance of takeovers focus the investment community's attention on the managements of the firms involved. The success of companies in creating wealth for their shareholders is a function of the success of their major investment decisions. The primary function of capital markets is to allocate capital to finance potentially profitable investments. Companies compete for investment capital and the critical evaluation of management decision making is a crucial element of the market's analysis. The perceived ability of management to successfully initiate and carry out major investment decisions is critical to the market's assessment of the company's value.

Corporate managements are constantly seeking investments that create value by earning returns greater than the opportunity cost of the capital employed. Their performance is continually evaluated by the capital market, but it is usually difficult to finely pinpoint, from the outside, the timing of major decisions implicit in the overall management strategy. Takeovers, however, are exceptions. No single investment decision is more fully disclosed to and discussed by the market. Attention is applied equally to the target company, and the standard presumption of those monitoring the firms is that the acquiring management has discovered a better strategy for utilising the target's existing asset base. This is often viewed as a severe criticism of the target management. It is no surprise then, that managements find uninvited takeover offers more than a nuisance.

The prospect of being under the market microscope can be daunting. There has been a hue and cry of unprecedented proportions from management groups and their supporters, as well as from others associated with public companies, against uninvited takeover offers. This has led to a strong lobby for legislative reform restricting and even prohibiting corporate takeovers. The essence of the indictment is that takeovers are not investment decisions based on sound economic analysis, and that rather than creating value they cause overall damage to the economy. The strength of the lobby has culminated in a public policy debate that heightened with the attempted takeover of BHP. Some legislative action has been taken and the National Companies and Securities Commission (NCSC), through statements and addresses of its personnel as well as its enquiries and investigations, has ensured a continuing debate.

The current debate is probably the most intense public discussion of takeovers Australia has experienced, but the topic has not been ignored by governments in the past. The legislation governing takeovers has increased manyfold over the past 20 years. In particular, the anti-competitive potential of takeovers has been emphasised in discussions leading to amendments to the Trade Practices Act. There is a clear recognition in economic theory that monopoly power (i.e. lack of competition) leads to a misallocation of resources, and that taking over

rival firms is one way to reduce competition. The issue of takeovers and competition policy has been extensively argued in the Trade Practices context, although there is only a limited amount of Australian case law on the subject. While it is true that a takeover that eliminates the existing competition in a particular product market **can** lead to monopoly behaviour, this does not necessarily happen. Before assuming that a high level of concentration in an industry, perhaps resulting from takeovers, leads to monopoly power, it must be shown that potential as well as existing competition has been eliminated. Excessive profits are likely to attract potential new entrants, and in the absence of effective barriers to entry, such as government regulation and protection, the existence of only a few competitors does not necessarily equate with a lack of competition.

Interestingly, the competition policy aspects of takeovers have not been the major issue in the current debate, at least until the recent acquisitions among media enterprises. The many legislative remedies that have been proposed relate more to companies legislation and focus mainly on the actions of managements and boards of directors in relation to the interests of shareholders and others with contractual relationships to the company. This is not to say that competition policy has been absent from the debate. Indeed, the public policy discussions on takeovers are notable for the variety of economic ills that are perceived to motivate or result from takeovers.

The concern with the company law aspects of takeovers has also been prevalent in the past. The sections of the companies legislation that relate to takeovers have grown from approximately three pages in the 1961 legislation to over 150 pages by 1981.

It is well to note that recent concern with public policy on takeovers is not restricted to Australia. Similar debates have emerged in New Zealand, the United Kingdom and United States in the past three years. The legislative histories relating to takeovers vary across these countries, as do some of the specific aspects of the current controversies. However, the basic theme of the debate seems to be whether or not takeovers create value and increase economic efficiency and wealth. This study provides evidence on this issue.

# Why Study Takeovers?

Jarrell et al. (1986) provides an excellent summary of the recent US policy debate on takeovers. They note that there has been a significant shift in the attitude to takeovers by those responsible for promulgating the regulations on companies and securities, and they argue persuasively that this shift has been driven very much by the accumulation of evidence from many studies of the effects of takeovers. As the evidence has mounted in a consistent pattern, there has been a wider recognition of the role that such studies can play in policy formulation. This recognition is illustrated by the resources devoted to such research by the United States Securities and Exchange Commission (SEC) via its Office of the Chief Economist. It is apparent that the studies of that office, together with many others from the academic community, influenced the policy adopted by the SEC when it announced in January 1986 that it would follow a 'hands-off' approach to regulating takeovers.

The SEC decided not to introduce any of the number of regulatory proposals to restrict takeovers that had been promoted in the public debate. This is not to say that the SEC agreed that the current regulatory framework governing takeovers in the US is optimal. Indeed, Jarrell points out that the debate is continuing with mounting pressure on the SEC to go further and remove much of the existing regulation. Equally, the opponents of the unencumbered market for corporate control continue to press for further restrictive regulation. However, the January 1986 SEC action was a landmark decision that attenuated much of the debate on takeover regulation in the US. It was a clear signal of the changed regulatory approach being adopted by the SEC and of the influence of research on this new policy. Jarrell and his colleagues (1986) summarise the impact of this research in the US as follows:

Only in the 1980s has the accumulated weight of economic evidence been sufficient to break the cycle of increased takeover activity leading to new unproven anti-takeover theories and ultimately new regulation. While the future path of legal



precedent remains somewhat unclear in the state courts, there is a noticeable trend at all levels of policy-making towards relying on the market and shareholder judgement to adequately police the market for corporate control.

The US experience is of particular interest to the current study as it highlights the potential policy importance of research analysing the economic effects of takeovers. This importance has been recognised outside the US; the bodies responsible for securities regulation in Australia, New Zealand, and more recently the United Kingdom, have all in their own ways supported the call for an appraisal of the economic consequences of takeovers. While such analysis alone will not decide the policy adopted, a rigorously developed body of evidence can be a reliable base for evaluating alternative arguments on takeovers. In particular, such evidence enables a more confident refutation of the competing hypotheses that are the basis for proposals to change the regulations governing takeovers.

In Australia the NCSC has argued that the available evidence is insufficient to evaluate the policy alternatives and has co-sponsored its own study (with the Australian Institute of Management) which has now been published (McDougall and Round, 1986). It seems bold to conclude that the existing evidence was not relevant to the policy debate, particularly when the most rigorous study, that by Walter (1984), reached conclusions very similar to the well-accepted US research. To be sure the evidence in the Walter study did not relate to takeovers in the most recent ten years, but nonetheless it should not have been dismissed.

Nevertheless, it is true that the Australian literature on takeovers is relatively sparse. Although initiated before the NCSC-AIM-sponsored study was published, the research presented here was similarly motivated by the lack of an up-to-date and broad-based study of takeovers in Australia. This motive is unchanged by the publication of the NCSC-AIM study, which did not attempt to provide the depth of analysis offered here.

A major objective of the current study is to develop a comprehensive database of takeovers in Australia. Such a database is a prerequisite for research on the economic consequences of takeovers, which in turn can be utilised in the policy deliberations as it has been in the US. It will also facilitate research at both an academic and a commercial level. The more aggregated data will allow pervasive factors associated with takeovers to be identified, and will overcome the difficulties of carrying out research with the limited information in specific case histories. The problems of drawing general inferences from case study analysis are obvious. A comprehensive, broader-based data

set allows us to extend the more limited analysis that hitherto has been relied upon in designing and implementing takeover policies.

Takeovers represent major investment decisions for acquiring companies. They involve relatively large amounts of capital. Managements, investors, creditors, employees and other parties contracting with the company are vitally interested in such decisions, and capital markets assess their value. Takeovers and acquisitions are now commonly included as a major topic in management and finance courses at universities and colleges. It is surprising then that so little research has been devoted to the study of takeovers in Australia. One valid reason for this dearth is the lack of a comprehensive database of takeover transactions. Through this study we hope to fill some of that void by making such a database available for further research and commercial use.

The second major objective of this study is to utilise the large database to empirically analyse the effect of takeovers in Australia on shareholders, and thereby to increase the body of available evidence that can be incorporated into the policy analysis. Interestingly the evidence described here is very similar to that found in the US studies, including those by the Office of the Chief Economist of the SEC, which have been so widely incorporated into the public policy on takeovers adopted in the United States. The evidence is clear that takeovers in aggregate in Australia over the period studied (1972–1985 inclusive) have resulted in substantial increases in the value of the corporate economy.

## Chapter 3

# Pro-Takeover versus Anti-Takeover Theories

Although there is no reliable historical record of the economic effects of takeovers over the past ten or more years, the investment community has well recognised that substantial gains accrue to investors lucky or skilled enough to include companies targeted for takeover in their portfolios. Precise figures will be presented later, but it is apparent that most takeover bids are made at a premium above the pre-offer share price.

Moreover, payment of these premiums to target firm shareholders has focused attention on the acquiring firms, and in particular on companies seen to be active in the takeover business. At issue is whether these companies are wasting capital by paying 'too much' for their acquisitions. Some companies such as Boral, James Hardie, CSR, Pacific Dunlop, Pioneer Sugar, and others have a long history of growth by acquisition. But there is another set of firms that has more recently been actively expanding through takeovers. These 'corporate raiders' are seen to be following a different strategy from the older group of acquirers. The very connotation of 'raider' implies that they are more involved in 'stealing' assets than in creating value through combinations of complementary organisations.

Implicit in the differentiation of raiders is the notion that some takeovers are motivated by 'good' intentions and others by 'bad'. Presumably the identity of the target is not crucial — if it is taken over by a raider then the transaction is illegitimate; and if it is taken over by a non-raider the transaction is legitimate.

We address later the question of whether or not takeovers by raiders can be distinguished empirically from other takeovers. However, some broad measure of the performance of raiders and other bidders can be seen in Tables 1a, 1b and 1c. In Table 1a the firms that are commonly named in the press as 'corporate raiders' are identified and their takeover activity and investment performance are presented. In Table 1b the top

Table 1a  
**Investment Performance and Takeover Activity:  
The Case of the 'Raiders'**

Firm	10-year Annualised Return (%) (1975-1985)	Number of Bids Launched (1972-1985)
Adelaide Steamship	53.6	23
Bell Group	56.8	12
Bond Corporation	50.3	10
Elders	30.8	10
F.A.I.	52.2	4
Industrial Equity	60.5	57
News Corporation	46.9	2*

\*Overseas bids not included.

Table 1b  
**Investment Performance and Takeover Activity:  
The Case of the Top 16 Performing Firms  
(1975-1985)**

Firm	10-year Annualised Return (%)	Number of Bids Launched
Consolidated Exp	81.8	0
Southern Cross Exp	70.0	0
Crusader Ltd	65.3	1
Sundowner Min	61.2	0
Industrial Equity	60.5	57
Santos Ltd	59.3	3
Keywest Investments	59.3	1
Timber Holdings	56.9	2
W.A. Worst	56.9	3
Bell Group	56.8	12
Adelaide Steamship	53.6	23
Mount Carrington	53.4	0
Koitaki	52.9	1
Myer Realty	52.6	0
Petroleum Securities	52.2	1
F.A.I.	52.2	4

Table 1c  
**Investment Performance and Takeover Activity:  
The Case of the Most Frequently Bidding Firms  
(1975-1985)**

Firm	10-year Annualised Return (%)	Number of Bids Launched
Aust. National Industries	22.8	10
Adelaide Steamship	53.6	23
Bell Group	56.8	12
Bond Corporation	50.3	10
Boral	24.0	12
Burns Philp	15.2	17
Clyde Industries	30.4	9
Elders	30.8	10
Industrial Equity	60.5	57
Pioneer Concrete	28.7	9

16 performing companies in terms of investment returns (i.e. capital gains plus dividends) of all publicly traded companies on the database of the Centre for Research in Finance at the Australian Graduate School of Management (which includes all firms listed on the Sydney Stock Exchange) are isolated and their takeover activity presented. Table 1c shows the investment performance of the firms most active in takeovers.

The overall perception is that there is a significant association between investment return and takeover activity. These results are preliminary but suggestive. The relationship is investigated in greater detail below.

### **Efficient Use of Assets**

The economic role played by raiders is at the heart of the takeover controversy. In some sense the polarisation of the controversy is characterised by people's views on the raiders. The pro-takeover view, which was promoted in our earlier study in this series, sees these firms as prime movers in the market for corporate control whose activities promote efficient use of company assets.<sup>1</sup> Where incumbent

<sup>1</sup>The relatively brief discussion here of the argument of the pro-takeover theory is taken from the earlier study in this series, which presents a more complete discussion of the issues and the analysis supporting that view. See Dodd and Officer (1986).

management is unable to extract the most out of assets a takeover or transfer of corporate control may be necessary to ensure that the assets finish up yielding their potential.

Clearly, a change in corporate control through a takeover is not the only mechanism by which resources are allocated more efficiently within the economy. It may be on balance that takeovers are much less important than these other mechanisms. But in circumstances where there is an entrenched management with a diverse shareholding, a takeover or the threat of a takeover may be the only way to persuade management to act in the interests of shareholders.

It would be a mistake, however, to believe that the justification or reason for most takeovers is that the incumbent management is not acting in the interests of the shareholders. The view that the only purpose for the market for corporate control is as an ultimate disciplinary measure against incompetent management is too extreme. Management need not be incompetent in some absolute sense, nor the board of directors neglectful of shareholders' interest, for takeovers to perform a useful, economically important role. Replacing one management team with another that is more effective in running a company is clearly beneficial to shareholders and promotes the efficient allocation of resources within the economy. Such a change does not imply that the previous management was incompetent or the board derelict in its duty; it simply implies that there was a more effective team available. A piece of machinery that is operating quite well may be replaced with a new and more efficient piece of equipment to the benefit of a company; in the same way management can be replaced.

In a dynamic corporate world, managers are constantly seeking new investment opportunities with expected profits greater than existing investments or greater than the return they could get from the capital market as portfolio investors. Competition among managements for the control of corporate assets promotes efficient modes of production and distribution, eliminating processes and organisational structures that are less efficient. Reconditioning, restructuring and replacing real assets such as buildings and equipment occurs constantly throughout the economy. If a property developer believes that a piece of land could be more successfully utilised by a particular development than it is by the use the current owner is making of it, a trade will generally occur, typically of land for money, and both parties will gain.

### **Maximising Resource Value**

A common cry from those who are critical of takeovers is that most of the companies targeted for acquisition are not in a state of decline, and thus the takeover is not justified on any 'failing-firm' criterion. Clearly this is true, but the fundamental objective of corporate management is to

maximise the value of the resources under its control, not to merely maintain their value.

Many critics of takeovers are willing to accept free and unregulated trade in real assets but bridle at the notion of trade in the control of bundles of assets (i.e. firms). Of course, companies are more than just collections of real assets. A crucial component of their value lies in the organisational structure and human capital necessary to produce the output for the firm from its assets. However, all these components, the organisational structure, the real assets, and the control of those assets, should be susceptible to change or replacement by a more effective or efficient entity. Economic growth and the equitable distribution of wealth is unlikely to occur unless the existing stock of wealth is put to its most valuable use.

Over time companies move through a variety of organisational structures as the relevant technology changes. This maturation process is ongoing and there is competition and internal pressure for management to adapt and renovate the design of the organisational apparatus that drives the real production side of the firm. The speed and efficiency with which management adapts to the various phases of a company's life cycle, from the entrepreneurial beginning through its growth and expansion, will influence its success in the market. If change is not implemented expeditiously, the firm will suffer a decline.

Where incumbent management is slow to adapt or does not have the skills necessary to manage in the new circumstances, the takeover market allows an alternative management to implement the necessary changes. The replacement does not necessarily reflect poorly on the incumbent management, whose skills will be more highly valued elsewhere in the economy. Nevertheless, it is understandable that the incumbents see their replacement as an indictment of their personal ability and therefore vigorously resist the pressure for change.

### **Secondary Market for Control**

This life cycle view of companies also explains why physical assets as well as organisational structure and human assets are often redeployed inside and outside the company. This is a normal aspect of commerce directed at maintaining and increasing economic efficiency and wealth. It raises few objections except when it follows a takeover by a corporate raider and is given the emotive label 'asset stripping'. Much of this activity occurs in the absence of takeovers and it is important to recognise that leveraged management buyouts, spinoffs, and divestitures are just as much a part of the market for corporate control as takeovers. The same economic principles apply.

The takeover market is a secondary market for the control of a company (in contrast to a primary market, where capital is raised by the company from the public, typically by way of a prospectus). In the same way that secondary markets for assets generally allow for the transfer of those assets to more effective uses, so does the market for corporate control enable bundles of assets, or firms, to be put to more effective uses. Often, the assets of the firm that has been taken over are not left intact on acquisition; in this case it is the redeployment of those assets that increases the value of the firm and makes the takeover worthwhile. However, it is a mistake to confuse the redeployment of assets with the destruction of assets. Too often, critics of takeovers apparently believe that as a result of the takeover there will be fewer real assets available for society's use. This is wrong. Why would an acquiring company destroy assets that it has paid money for? Further, why would it pay more for those assets than they were worth to the former owners — the shareholders of the acquired company — unless it expected to be able to utilise or redeploy those assets in a manner that would give them greater value?

Even if, with hindsight, a takeover is judged to be unsuccessful, the real assets of the company are usually still available to be put back to their original use. If they are not, the penalty suffered by those responsible for making the bad takeover will be far greater than if they are. In short, there are penalties for taking over assets where the expectation that the assets could be utilised more effectively is wrong, and the greater the error in expectations, the greater the penalty. An entrepreneur who makes a number of mediocre but not disastrous takeovers will slowly lose resources and therefore the ability to acquire new companies, i.e. more assets; whereas an entrepreneur involved in a disastrous takeover will lose significant sums of money and in all probability will not have (be given) the opportunity to undertake further takeovers. The same arguments apply to entrepreneurs making mediocre investment decisions in the primary market for assets, i.e. internal expansion decisions.

The pro-takeover theory does not indicate that each and every takeover will prove to be a good decision. There is evidence indicating that acquiring firms after a takeover have not always realised the gains that management expected to accrue from the takeovers. Should this be surprising? Of course not. All major investment decisions involve uncertainties. A well-researched investment proposal is expected to increase the value of the firm, but there can never be a guarantee. After the fact, many managements may come to rue their investment decisions.

Nonetheless, the overriding implication of the pro-takeover theory is that these transactions are value increasing. This is precisely the same principle that governs transactions of assets in any market



economy. On average, the combined value of two firms after an acquisition will be greater than the sum of the pre-acquisition values of those firms; alternatively, the value of the combined entity will be greater than if the entities were kept separate. The implication that the combined post-acquisition value is greater than the sum of the pre-acquisition values is testable, but the implication that the value of the combined entities is greater than the value of the separate entities after the acquisition is not, although they are clearly related. In these circumstances, it seems reasonable to infer that if the post-acquisition value is greater than the sum of the pre-acquisition values, then the two entities' value will be greater than the sum of the values of the single entities would have been, and that takeovers create value. This is no different from inferring that if the value of a firm has increased after an internal expansion program then the value of the firm is higher than it would have been without the expansion.

The notion that takeovers create value by reallocating control of company assets to more efficient uses has been widely challenged. The heat of the controversy over the appropriate public policy reflects the intensity of the opposing views. In our earlier study (Dodd and Officer, 1986) we enumerated and criticised many of the opposing views. That criticism did not offer evidence for confident refutation of those views but exposed the premises on which they rest.

### **The 'Managerial Theory' of Takeovers**

Most anti-takeover arguments come under the 'managerial theory' of takeovers. Although the specifics of the arguments vary, the underlying premise is that takeovers result from the desire of company managements to increase the size of their companies.

The managerial theory is clearly enunciated by Mueller (1980), who also presents results of studies from various countries that purport to show that acquiring firms do not earn higher profits from their acquisitions and that takeover decisions are not motivated by expectations of value creation. There is a growing acceptance of this managerial view, reflected for example in the conclusions (but not the results) of the recent NCSC-AIM-sponsored study of Australian takeovers. The anti-takeover view is not restricted to the academic literature. Foster (1986) provides this entertaining excerpt from the 1981 Annual Report of Berkshire Hathaway, a large US company:

We suspect three motivations — usually unspoken — to be, singly or in combination, the important ones in most high-premium takeovers:

- (1) leaders, business or otherwise, seldom are deficient in animal spirits and often relish increased activity and

challenge. At Berkshire, the corporate pulse never beats faster than when an acquisition is in prospect.

- (2) most organizations, business or otherwise, measure themselves, are measured by others, and compensate their managers far more by the yardstick of size than by any other yardstick. (Ask a *fortune* 500 manager where his corporation stands on that famous list and, invariably, the number responded will be from the list ranked by size of sales: he may well not even know where his corporation places on the list *fortune* just as faithfully compiles ranking the same 500 corporations by profitability.)
- (3) Many managements apparently were overexposed in impressionable childhood years to the story in which the imprisoned handsome prince is released from a toad's body by a kiss from a beautiful princess. Consequently, they are certain their managerial kiss will do wonders for the profitability of Company T (target).

Such optimism is essential. Absent that rosy view, why else should the shareholders of company A (acquisitor) want to own an interest in T at the 2X takeover cost rather than at the X market price they would pay if they made direct purchases on their own? In other words, investors can always buy toads at the going price for toads. If investors instead bankroll princesses who wish to pay double for the right to kiss the toad, those kisses had better pack some real dynamite. We've observed many kisses but very few miracles. Nevertheless, many managerial princesses remain serenely confident about the future potency of their kisses — even after their corporate backyards are knee-deep in unresponsive toads.

The basic premise of the managerial or anti-takeover theory is not, as is sometimes implied, that managements act in their own self-interest. Indeed the economic theory underlying the pro-takeover efficiency view relies on the assumption that individuals act to maximise their expected utility. The critical difference is that the managerial theory assumes that market constraints arising out of competition are ineffective in curbing managements' desires to maximise their own utility at the expense of shareholders' interests or are unable to develop methods for equating the two sets of interests. It presupposes conflict rather than value-increasing cooperation.

The managerial theory in its many versions has a very clear and distinct prediction: takeovers do not create value. This hypothesis is at the core of the controversy surrounding takeovers in Australia. Its proponents argue that takeovers, and especially takeovers by raiders, are

acts of piracy that do not enhance overall economic wealth and more likely diminish it.

Whether the evidence supports this contention is the subject of the research reported below.

# The Historical Record on Takeovers in Australia

## I. THE CIS TAKEOVER DATABASE

As noted above, one of the primary objectives of this study is to develop a comprehensive database of takeover offers in Australia. Without such a record, research into takeovers has been restricted to fragmented samples and case-by-case analysis. The database described here is available for analysis by both academic and commercial organisations.<sup>1</sup>

In developing a database it is essential that the sample be free from bias. There are many sources of such bias and an obvious one that has affected a number of earlier studies of takeovers is the inclusion of only successful bids, i.e. takeover offers that have resulted in a transfer of corporate control. Consistent with the economic theory of takeovers discussed above, the threat of takeover is often sufficient to induce incumbent management to introduce new value-increasing investment decisions. There is no doubt that the share buying of corporate raiders who specialise in searching out takeover opportunities makes incumbent management rush to self-evaluation. Often the mere taking of a position by a raider or an unsuccessful takeover attempt triggers substantial internal reorganisation of personnel and restructuring of real assets. Similarly, the market often expects a subsequent successful offer to follow an unsuccessful bid. In any of these situations the changes in target company activities lead to a reassessment of its value. By

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<sup>1</sup>The database was designed, developed and prepared by Steve Bishop and Peter Dodd. The work was financially supported by the Centre for Independent Studies, which owns the distribution rights to the database.

ignoring unsuccessful takeover attempts, any study of the economic effect of takeovers will seriously underestimate the benefits of an active market for corporate control.

Other possible biases include restricting the sample to particular types of firms, e.g. the very largest firms in the economy, or restricting it to particular time periods, or restricting it to firms making only one bid in a given time period. In each case conclusions and general implications drawn would have to be cautiously interpreted because of the probability of results being specific only to that particular sample.

With these concerns in mind the CIS Takeover Database was derived from a large set of takeover offers irrespective of their outcomes. The period covered by the database is January 1972 through June 1985. The primary source of offer details was the Sydney Stock Exchange publication *Current Offers*, which lists all offers for ordinary shares involving firms listed on that stock exchange. This primary source provided basic details of the firms involved and the timing of the offers. However, to complete the database in a form suitable for rigorous analysis much more information was required.

Using the company files of the Sydney Stock Exchange, together with a library search of back issues of the *Australian Financial Review* and other newspapers and periodicals, the basic offer data were augmented. However, even that failed to produce sufficient information to satisfactorily complete the database. The final source of information on takeover offers was the results of a questionnaire mailed to individual companies on the Sydney Stock Exchange takeover offer list for whom data elements had not been found.

Although not every piece of information sought was found for each and every firm in the file, the lengthy process of data collection has produced a database with rich potential for both academic and commercial study. The basic data items include:

- the names of the target and bidder firm;
- the date of the initial public announcement of the offer;
- the price offered and any revisions in that price;
- the percentage of issued shares sought in the offer;
- the incumbent target management's initial recommendation;
- the percentage of issued shares held by the bidder prior to the offer;
- the closing date of the offer;
- the form of consideration offered;
- the details of any competing bids or any revisions of the original bid;
- the outcome of the offer in terms of the percentage of shares held after the close of the offer; and
- the date at which the outcome was publicly known.

The most difficult items to collect definitively were the outcome of the offer and the date at which that outcome was publicly known. In a number of cases the target continued to be listed as a separate firm and it has not been possible to decide whether or not the bidding firm acquired enough shares in the transaction to effectively transfer control.

The sample includes offers for listed target firms as well as offers by listed bidders for unlisted target firms. It therefore includes some transactions where the bidder or the target firm were not listed. It includes only information pertinent to the takeover transactions. Other relevant information on the financial characteristics of the firms involved is not included as it is readily available in existing databases such as those provided by the Centre for Research in Finance at the Australian Graduate School of Management.

For purposes of the empirical analysis carried out below each takeover offer in the CIS Takeover Database was classified as to its outcome using the following rule: If the offer was not withdrawn and the bidder held over 50 per cent of the target company's issued shares after the closing date (and did not hold over 50 per cent prior to the bid), the offer was defined as **successful**. If the offer was not withdrawn and the bidder held less than 50 per cent after the closing date the offer was defined as **unsuccessful**. It is recognised that this definition may lead to misclassification, especially when bidders are able to achieve effective operating control of the target with less than 50 per cent of the issued shares. However, the limited availability of data and the cost-effectiveness of further investigation do not warrant a case-by-case analysis to decide whether or not operating control was transferred.

## II. THE STATISTICS ON TAKEOVERS

Before proceeding with the analysis of the economic effects of takeovers we use the database to present an overall description of the takeover activity in Australia over the past 15 or so years.

### **Takeover Activity**

First, it is useful to consider the overall pattern of takeover activity. It is frequently asserted that economic theory has an inadequate or no explanation for takeovers at an aggregate level. There are a significant number of issues relating to takeovers yet to be resolved, but it is wrong to assume that there is no explanation of overall takeover activity.

'Waves' of takeover activity have been noted for many years in the economics literature. These waves appear to transcend national boundaries. The first episode of intense merger activity in the United States was observed early in the 20th century, the second in the 1920s, another in the late 1960s, and more recently we have seen another wave

of takeovers in the 1980s. The 1980s wave appeared to start early in the decade, then slacken off slightly, but it has proceeded with renewed intensity in the mid-1980s. A similar pattern can be observed in Australia although the analysis contained in this paper only commenced in 1972.

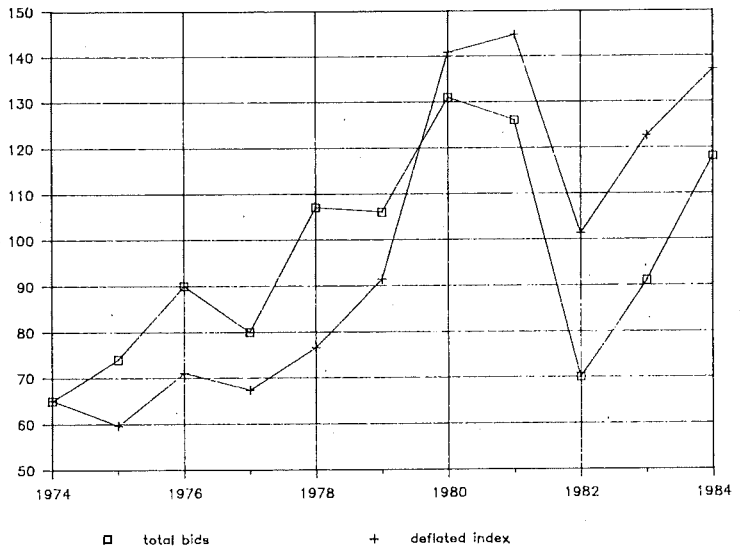
In theory, the motivation underlying a takeover is to increase company profitability, but this does not explain why there should be 'cyclical' movements in takeovers. Tobin (1969) advanced a theory that when the market value of a firm's assets is greater than the replacement cost of those assets there will be an incentive to invest in more of those assets. Tobin's measure has become known as the  $q$ -ratio ( $q$  = market capitalisation of all the firm's assets divided by the replacement cost of those assets in the market for physical assets). A related implication of Tobin's theory is that firms whose  $q$ -values are higher than the  $q$ -values of firms with similar assets would be inclined to take over the other firms, i.e.  $q^B > q^T$  where  $B$  is the bidding firm and  $T$  the target firm. No Australian evidence on  $q$ -values is available as yet, but in a recent US study Hasbrouck (1985) reports that target companies are characterised by low  $q$ -values. Such a theory is consistent with synergy as the driving mechanism for takeovers — but it does not explain why these differential valuations should go in waves.

The relationship between the number of takeover offers and the deflated (by the consumer price index) Statex Actuaries Accounting Index) is depicted in Figure 1 for the period 1974-1984. Clearly, there is a close relationship between the rises of the stock market and the number of takeovers. This evidence is consistent with that found overseas and reported in Melicher et al. (1983).

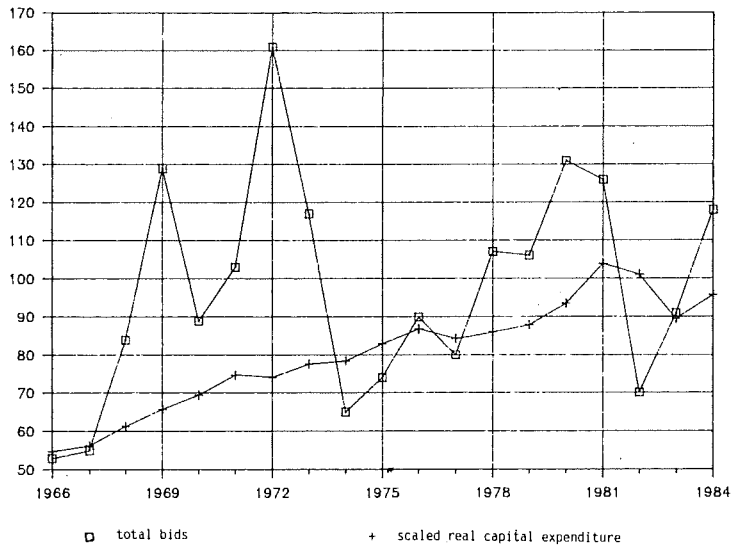
There are a number of possible explanations for the relationship between the state of the share market and the number of takeovers. The one we prefer, on analytical grounds, is that periods of stock market 'boom' are periods of optimism for investment. Firms are generally looking to increase their investment by either internal or external (takeovers) means. The expanded demand for real goods in the economy, which created the boom in stock prices, induces an increase in productive investment by companies. As well as investing in new plant and equipment, companies also focus on alternative uses of existing asset bases. The expanded demand for new assets will be correlated with an increased demand for existing assets in place. At the margin, the returns from investing in the primary market must be equal to the returns from investing in the secondary market (i.e. by takeover). They are responses to the same economic forces. The increased opportunities for economies of scale from the expected expansion in demand at the product market level will create opportunities for synergies.

A detailed analysis of this issue is not possible with the data available; however, the relationship depicted in Figure 2 between

**Figure 1**  
**Total Number of Takeover Bids and Deflated Statex**



**Figure 2**  
**Total Number of Takeover Bids and Scaled Real Gross Capital Expenditure**





takeovers and real capital expenditure offers preliminary support for this explanation.

### Number of Takeover Offers

The detailed statistics from the CIS Takeover Database are presented in Tables 2 through 9. As can be seen in Table 2, over 1300 firms were

Table 2  
Frequency of Takeover Activity

Year	Number of Bids Made	Number of Firms Targeted
1972	198	177
1973	117	104
1974	65	57
1975	74	65
1976	90	88
1977	80	78
1978	107	98
1979	106	93
1980	132	129
1981	126	117
1982	70	67
1983	94	85
1984	118	99
1985 (half year)	65	53
TOTAL	1442	1310

the subject of takeover offers from January 1972 through June 1985. This represents about 12 per cent of the firms listed on the Sydney Stock Exchange during this period.

The year-by-year analysis reveals a great deal of variation in the number of bids made each year over the sample period, with 1972 being the peak year. Even so, at least 5 per cent of the total listed firms were subject to takeover bids each year. This reinforces the earlier point that takeover activity is a pervasive element of the corporate economy and that there is a constant search for opportunities to create wealth by redeploying corporate assets.

## Size

Tables 3 and 4 present summary data on the relative size of the firms involved in takeovers. Measuring size as the market value of the outstanding shares at a date six months before the first public announcement of the takeover offer, the median target company has a market value of approximately \$5.3 million while the median bidding firm has a market value of approximately \$29.3 million. Over the entire period January 1972–June 1985, bidding firms are on average approximately six times larger than target firms. It is also interesting to note in Table 3 that the aggregate market value of targeted firms reached as much as 12 per cent of the total value of listed firms in general, but over the entire period the proportion is much smaller.

Table 3  
**Relative Value of Firms Involved in Takeovers**

Year	Aggregate Target Value as %age of Total Stock Mkt Value	Aggregate Bidder Value as %age of Total Stock Mkt Value
1975	0.6	9.8
1976	1.1	18.3
1977	3.0	11.5
1978	3.8	9.1
1979	7.6	35.9
1980	3.1	14.7
1981	10.9	25.8
1982	4.9	13.4
1983	9.1	27.0
1984	11.9	19.1

## Consideration and Outcome

One of the data items available on the database is the form of consideration or payment used in the takeover bid. As can be seen in Table 5, a large majority of takeover offers are for cash. The use of shares as consideration appears to have diminished over the past few years. This is consistent with the popular belief that takeovers are primarily funded from debt, but without a more thorough analysis of the changes in proportions of debt and equity capital, any such inference

Table 4  
Market Values of Firms Involved in Takeovers  
(\$,000)

Year	Mean	Median	First Quartile	Third Quartile
<i>TARGETS</i>				
1974	2 253	1 333	587	2 786
1975	3 465	1 213	513	3 865
1976	5 201	2 027	850	5 196
1977	6 181	2 166	1 188	6 918
1978	9 664	3 076	1 416	6 474
1979	17 175	5 000	2 040	20 210
1980	34 223	5 600	1 330	26 585
1981	25 047	10 179	3 646	25 608
1982	25 689	8 712	4 990	28 889
1983	84 840	9 126	3 344	22 855
1984	35 482	12 106	3 275	23 704
<i>BIDDERS</i>				
1974	10 185	4 098	1 817	10 269
1975	39 012	13 141	4 233	37 535
1976	46 848	17 272	5 060	47 846
1977	38 889	11 019	6 281	34 075
1978	56 752	15 572	8 000	52 266
1979	108 054	57 986	18 848	129 095
1980	148 559	66 824	11 472	156 144
1981	114 519	101 778	21 753	150 896
1982	106 775	45 058	11 486	115 333
1983	178 153	81 144	19 336	164 478
1984	214 137	43 781	11 061	276 671

must be made with caution. Debt funding for takeovers may well be a short-term facility and conditional on the completion of the transaction. It may be paid off quickly or replaced with alternate sources of equity capital. This is often achieved through the sale of assets that are worth more in uses outside of the firm and are no longer central to the proposed investment strategy.

The most difficult data item to collect was the outcome of the offer. At one extreme, when the bidding firm acquires such a large proportion of the outstanding shares that the target is subsequently delisted from the exchange, there is little doubt that the offer is successful in transferring control. On the other hand, there are many bids where the target remains

Table 5  
**Form of Payment Used in Offers**

Year	Cash	Shares	Both	Either
1972	134	50	3	11
1973	85	26	1	5
1974	37	23	0	5
1975	58	8	1	7
1976	66	20	3	2
1977	69	9	1	1
1978	92	10	0	5
1979	79	18	4	5
1980	112	12	1	7
1981	98	8	2	18
1982	58	7	1	4
1983	80	6	0	8
1984	100	10	0	8
1985	55	7	0	2
TOTAL	1123	214	17	88

listed as a separate entity, but the bidder has acquired sufficient shares to enable it to dictate decision making in the target firm. In these cases the bid was categorised as successful if the bidder held over 50 per cent of the target company's issued shares after the closing date of the bid. Similar problems emerged with the unsuccessful classification. Where the bid was withdrawn or where there is sufficient evidence to indicate that the bidding firm did not acquire enough shares (through the offer) to gain operating control of the target, those offers are clearly unsuccessful. There remain however a large number of offers where the information available was insufficient to determine the outcome of the bid.

Of the total of 1442 offers in the sample period, there are 338 cases where the outcome is unknown. As can be seen in Table 6, of the remaining 1104 offers, 768 were successful, 142 unsuccessful, and 194 withdrawn. Ignoring the unknown category, it appears that bidders were successful in gaining control in over 70 per cent of the takeover offers made. This is consistent with findings of Walter (1984), who reported a success rate of 67 per cent for takeovers in the period 1966-1972.

Table 6 also indicates that in 149 cases the initial bid for the target attracted at least one competing bid from a different bidder. Information about multiple bids undertaken by a bidder is provided in Table 7. These numbers indicate that 193 firms made two or more takeover bids during

the time period January 1972–June 1985, and 33 made more than five offers.

Table 6  
**Outcome of Takeover Offers**

Year	Suc- cessful	Unsuc- cessful	With- drawn	Unknown	No. of Bids	Competing
1972	92	10	42	54	198	21
1973	56	7	19	35	117	13
1974	25	6	9	25	65	8
1975	40	9	7	18	74	9
1976	62	5	12	11	90	2
1977	45	6	14	15	80	2
1978	64	7	15	21	107	9
1979	56	5	24	21	106	5
1980	52	5	11	64	132	9
1981	73	21	10	22	126	13
1982	51	13	5	1	70	3
1983	51	20	10	13	94	24
1984	62	21	10	25	118	19
1985	39	7	6	13	65	12
TOTAL	768	142	194	338	1442	149

Table 7  
**Frequency of Bidding Firm Activity**

Number of Bids Made by the Same Bidder	Number of Firms
51+	1
21–50	1
11–20	3
6–10	18
5	20
4	24
3	36
2	90

## **Premiums**

The offer price in a takeover bid is generally higher than the pre-offer share price, but there is a great deal of confusion about the size and variation of this premium. Folklore has it that a minimum premium of around 25 per cent must be offered to attract target shareholders. The economic principles behind this rule are not obvious and there is no evidence supporting it. As is discussed below, the value of the target firm is the discounted value of the future cash flows expected to be earned by the firm. It follows that the premium offered will be related to the incremental cashflows expected to be created by the merging of the two firms, and the proportional incremental cashflows will vary from target to target.

The premium is a lower bound on the per share value that the bidder expects to create by the takeover. It is the proportion of the created value going to the target shareholders. This proportion depends on the source of the gains and the competition for those gains, e.g. are the gains more specific to the target or the bidder, and can alternative bidders achieve almost the same value. There is no reason to expect that premiums are uniform across takeovers or that the minimum is anything other than zero.

Data on premiums offered in takeovers are summarised in Tables 8a through 8d. The premium is measured as the difference between the offer price and the price three months before the offer, expressed as a percentage of the pre-offer price. The three-month lead-time is used because there is reason to believe that in many instances the market anticipates the offer before it is actually announced. Since the market often capitalises the increased probability of an offer over the months prior to the public announcement, it will usually be in the bidder's interest to acquire as many shares as possible in the share market before launching the bid and signalling its intentions. Such a holding often allows a bidder to earn a return on its investment in searching out potential targets even when its bid is defeated by a competing acquirer. (The Companies Act requires disclosure of substantial shareholding positions.) This revision in share price reduces the offer premium observed at the announcement and understates the takeover premiums paid. Of course there will be some cases where the market does not anticipate the offer and in fact the share price may have actually declined over the three months before the offer. However, we believe that the three-month period is more likely to provide a better estimate of the offer premiums than the use of a share price immediately before the offer is announced.

As can be seen in Table 8a, there is a great deal of variation in the size of the premium both within and across years. The number of bids

Table 8a  
**Premiums Offered in All Cash Takeover Bids (%)**

Year	Mean	Median	First Quartile	Third Quartile
1974	37	17	0	46
1975	64	50	33	87
1976	50	47	21	77
1977	69	51	28	85
1978	49	37	20	70
1979	52	42	27	70
1980	53	46	22	69
1981	44	31	6	59
1982	31	23	7	53
1983	44	39	24	63
1984	40	32	20	52
1985	35	27	15	45

*Note:* Premium is defined as the difference between the offer price and the price three months before the offer, expressed as a percentage of the pre-offer price.

Table 8b  
**Premiums Offered in Successful Cash Takeover Bids (%)**

Year	Mean	Median	First Quartile	Third Quartile
1974	25	18	-1	65
1975	80	63	44	129
1976	52	49	22	76
1977	79	54	36	82
1978	56	40	18	92
1979	59	42	31	84
1980	63	56	29	74
1981	51	30	10	64
1982	29	25	8	53
1983	48	46	19	69
1984	48	34	22	60
1985	34	29	16	46

Table 8c  
**Premiums Offered in Unsuccessful Cash Takeover  
Bids (%)**

Year	Mean	Median	First Quartile	Third Quartile
1974	31	31	20	41
1975	59	42	13	103
1976	24	49	28	175
1977	27	33	-2	51
1978	16	16	11	21
1979	64	47	35	111
1980	33	13	-7	93
1981	27	35	9	49
1982	54	21	-3	59
1983	38	34	25	42
1984	32	26	22	45
1985	55	33	15	71

Table 8d  
**Premiums Offered in Withdrawn Cash Takeover Bids  
(%)**

Year	Mean	Median	First Quartile	Third Quartile
1974	9	9	5	10
1975	40	56	-18	83
1976	41	36	-9	94
1977	55	46	16	90
1978	36	34	12	64
1979	39	38	13	63
1980	84	68	55	100
1981	40	44	23	57
1982	7	36	-63	48
1983	32	32	10	48
1984	30	41	4	51
1985	25	21	7	44



varies year by year, but even so the premiums offered are quite dispersed. Another interesting feature is that the range of premiums in successful takeovers (Table 8b) is not obviously different from that in offers that were unsuccessful (Table 8c) or withdrawn (Table 8d) — indeed, there are years where the average premium in successful bids is lower.

### **Length of Offers**

The final descriptive statistic presented is the time taken to complete takeover offers. This is defined as the number of days from initial announcement until the outcome is publicly resolved. The results are presented in Tables 9a through 9d, which show a good deal of variation both within and across years. Interestingly, the time to complete takeover offers appears to have fallen in recent years. This is surprising given that the apparent intention of regulatory changes introduced in the Companies (Acquisition of Shares) Act 1981 was to delay the process and give target shareholders more time to consider their alternatives.

Table 9a  
**Time Taken to Complete All Takeover Offers  
(calendar days)**

Year	Mean	Median
1972	69	74
1973	124	101
1974	166	71
1975	154	112
1976	137	113
1977	147	90
1978	130	123
1979	118	101
1980	136	79
1981	99	93
1982	132	90
1983	128	87
1984	109	83
1985	142	81

Table 9b  
**Time Taken to Complete Successful Takeover Offers  
(calendar days)**

Year	Mean	Median
1972	90	79
1973	107	85
1974	84	83
1975	120	112
1976	122	106
1977	107	95
1978	141	111
1979	119	108
1980	96	81
1981	103	98
1982	85	69
1983	89	77
1984	94	74
1985	89	81

Table 9c  
**Time Unsuccessful Takeover Offers Were Open  
(calendar days)**

Year	Mean	Median
1972	113	72
1973	118	127
1974	82	83
1975	146	101
1976	129	81
1977	116	96
1978	93	84
1979	51	39
1980	124	113
1981	100	88
1982	117	107
1983	87	78
1984	65	54
1985	63	49

Table 9d  
**Time Withdrawn Takeover Offers Were Open  
(calendar days)**

Year	Mean	Median
1972	39	32
1973	81	54
1974	55	20
1975	48	43
1976	76	31
1977	35	29
1978	72	44
1979	69	43
1980	38	24
1981	30	15
1982	49	29
1983	69	55
1984	64	29
1985	48	46

# Takeovers and Value Creation

Many different groups can be affected by a takeover including shareholders, employees, customers, creditors and competitors. It is not possible to measure accurately the effects on all these groups. As we point out in the earlier study in this series, most groups rationally protect themselves before the fact through the terms of their written or implied contracts with the company. These contracts are designed to ensure that the property rights of the parties are not usurped by the company's actions. Of course, some parties will inevitably be made worse off whenever there is any significant change in the firm's operations. For example, some customers may prefer that a particular product line not be terminated; some employees may prefer not to lose their jobs even though they receive compensation. Such concerns are not restricted to takeovers. The issues in any case are whether the aggregate benefits outweigh the costs and whether the original contracts are adhered to.

In a public company, the shareholders contract to bear the residual risk of any unforeseen costs and benefits accruing to the company. In a takeover, the shareholders stand to lose or benefit if it affects the value of the firm. In a competitive business environment, investment decisions are aimed at increasing shareholder wealth.

The thrust of the anti-takeover theories is that shareholders do not gain from these transactions nor are they intended to. Unconstrained corporate managements are perceived as using invested shareholder capital to satisfy their own desires for growth and influence, merely paying lip-service to shareholder interests.

It is sensible then to measure initially the effects of takeovers by focusing on shareholders. Any overall adverse effects on other groups can be included as second-order considerations, notwithstanding that the analysis in our earlier study suggests that these groups are generally unlikely to be worse off.

## **I. MEASURING THE EFFECT OF TAKEOVERS ON SHAREHOLDERS**

There are two basic ways to examine the effect of takeovers on shareholders. One way is to examine the accounting records of companies before and after the takeover to see whether reported earnings, assets and other variables respond positively to the effect of the takeover. The other is to examine dividends and capital gains accruing to the shareholders that can be attributed to the takeover.

### **Accounting Numbers**

There are a number of problems in using accounting numbers to examine the effect of takeovers.

- (i) The full effect of a takeover on reported accounting earnings may take some years to appear, so that the accounting returns would have to be examined for an extended period after the takeover. Moreover, because the effect of a takeover is likely to occur after different intervals for different firms, any aggregation of the effects is likely to be diluted, making it more difficult to identify.
- (ii) Accounting practices vary enormously between companies. Even companies in the same industry operating under the same accounting standards can adopt accounting methods that lead to significant differences in reported earnings. Aggregating the effects of a variety of accounting practices on companies involved in takeovers will lead to ambiguity and possible bias.
- (iii) Any bias in reported accounting numbers, particularly earnings, is not necessarily self-correcting. There is no obvious arbitrage strategy that can be adopted by shareholders and other investors if it is perceived that reported accounting earnings are consistently biased relative to the 'true' earnings. Shareholders cannot trade accounting numbers. On the other hand, any bias, as soon as it was detected, would be corrected in sharemarket prices. Thus capital market rates of return are unbiased but accounting numbers could be significantly biased. This does not imply that accounting numbers are useless; indeed they are the main source of information for sharemarket investors. But it is the relative changes in a company's reported earnings that are important to investors when assessing the share price of a company, not the absolute level of accounting income.

- (iv) Companies that pay a premium in a takeover relative to the target company's net tangible asset backing report that premium as 'goodwill' in the asset account. Under existing accounting standards, such goodwill must be written off through the Profit and Loss Statement within 20 years. Moreover, the company will usually write up the value of other assets. Consequently the reported earnings of the company after the takeover may be artificially low, and the ratio of accounting earnings divided by net tangible assets after a takeover is likely to be a biased measure of the true rate of return.

While many studies of takeovers have used accounting data, these problems have severely limited the usefulness of the evidence compiled and their results are an unsatisfactory estimate of the effects of takeovers. In general, accounting rates of return are inadequate measures of economic values.

Ultimately shareholders' wealth is measured by the value of their claims to the company's cashflows. Given the above difficulties in interpreting accounting measures, the more widely accepted method among economists for estimating the effects of takeovers is to concentrate directly on the value of the shareholders' claims, i.e. the shares.

### **The Relationship between Share Price and Value**

When private or unlisted public companies or partnerships are bought and sold, the price paid is a function of the stream of future profits expected to be earned by that firm and the discount rates that are appropriate to value that stream.

In the context of public listed companies and the stock market, the only major distinction is that usually shares are traded and prices set without the total organisation being bought and sold. The issue of whether stock prices are reliable measures of a firm's value is really one of whether the stock market, on a day-to-day or minute-to-minute basis, produces share prices that are unbiased estimates of the underlying real value of the companies whose shares are traded.

The success of the stock market in forming unbiased share prices depends greatly upon the nature of competition in that market. If there is vigorous rivalry among stock market participants for information on more accurate estimates of future company performance, the resulting prices at any point in time are likely to be unbiased estimates of the underlying real value.

If stock market participants, on average, or more precisely at the margin, are rational and compete for better information on the future

performance of companies, the ruling stock price will be the best estimate of the value of a company. However, information on the future expectations of companies is constantly being produced and traded on, and stock prices are therefore constantly changing.

Those who doubt that the value of an asset reflects its future benefits or income must explain why fixed interest securities such as treasury notes, government bonds and the like are consistently priced according to the expected income from holding the security, i.e. according to the principles of present value. What is the inherent difference, other than their relative risk, between fixed interest securities and share market securities that would require them to be valued on a different basis? Professional sharemarket investors consistently choose next year's profit as the most informative single future company statistic. This is consistent with the underlying link between share prices and economic performance that is implied in the theory of valuation.

The use of share prices as measures of economic value is sometimes misunderstood by those without economic training. A frequently quoted anti-takeover argument is that these transactions merely shuffle paper in the form of shares with no real benefits in terms of the use of the underlying assets. Any gains in share prices do not represent real gains and therefore cannot be evidence of the economic effects of takeovers.

The notion that the securities, representing claims to the assets, can be divorced from the assets, reflects a failure to understand the logic of the balance sheet. The trade in securities is a trade in the title to assets. Profits made from such a trade represent profits from trade in real assets.

### **Profits and Value**

The critics of profits made from a trade in securities imply criticism of profits made from capital gains, whereas they would undoubtedly accept as reasonable profits made from an increase in operating income. The issue boils down to the principle of valuation. The value of an asset reflects the expected future benefits that asset will produce. Therefore a capital gain reflects changes in expected future benefits.

What could cause the change in expected income (benefits) and therefore the change in value? In a takeover, if the future income of the entity is expected to rise as a result of actions taken by the acquirer, then perhaps the criticism of 'paper profits' would dissipate. Such action could include taking overt steps to move the company into more profitable activities, or forcing the incumbent management to release information leading to a change in expectations about existing activities. From an economic point of view one action is inherently no more desirable than the other, other things being equal. Undervalued assets can cause resources to be misallocated just as much as inefficient production processes.

One of the factors that undoubtedly makes sceptics suspicious of the link between real values and share prices is the large variability in those prices. For any company, the share price varies day by day and some see this as evidence that share prices cannot be linked to underlying real asset values. The problem, however, is not that share prices fluctuate, but that these people believe that a firm has a relatively constant real value. For example, they believe that if a balance sheet for the company were produced on a daily basis, there would not be the same fluctuation in the reported asset values as appears in the related stock price.

If accounting balance sheets were prepared daily, according to generally accepted accounting principles, then there probably **would be** less variation in accounting-based asset values than in share prices. But this does not mean that share prices do not reflect real asset values while accounting-based balance sheets do. The problem lies with accounting balance sheets, not share prices. There are several reasons why accounting-based values do not reflect real asset values and cannot therefore represent the market value of a firm.

First, the assets that are reported in the balance sheet are generally valued on a cost basis and are not adjusted for changes in their market price. If equivalent assets were traded on a day-to-day basis then there would undoubtedly be variations in their prices that would not be reported in the balance sheet.

Second, the accounting balance sheet reports a total value for the firm by summing the reported values of the individual assets. Even if the individual values did reflect the market value of the assets, the sum of these values would still not reflect the market value of the company as a whole. This is because the value of a company is determined by how profitable the assets are when combined together as a firm. A successful company will always be worth more than the sum of the individual values of its real assets. If it is not then it would pay the owners to liquidate, or it would pay a management team that could successfully combine the assets and create value to step in and take over the firm.

An important point to recognise is that accounting is not, nor is it intended to be, a forward-looking process. It reports the historical record, not the expectations of the future profitability of companies.

### **Behaviour of Investors**

Many criticisms of stock prices as measures of firm value involve notions of either irrational behaviour on the part of investors or of misleading information that investors cannot detect. While it is no doubt true that some investors behave irrationally and others are fooled by misleading information, this does not mean that stock prices observed in the market are biased or not related to real asset values.



Prices are set at the margin, and the issue is really whether there are sufficient investors, who are rational and able to spend resources evaluating information, to ensure that the prices that rule are not driven by irrationality or foolishness. If there are, irrationality and foolishness will be severely penalised.

### **The Relationship between Accounting Numbers and Stock Prices**

Much of the debate on stock prices and real values revolves around the nature of the information used by market participants when setting prices. As noted above, accounting data are a primary source of information on company performance, yet traditional accounting procedures do not provide numbers that are market values of firms. However, it does not follow that these numbers are useless or misleading. Sophisticated market participants who invest large amounts to back their judgments on firm values utilise a variety of sources of information in addition to the accounting reports. There is voluminous research on the question of whether the stock market is fooled by accounting numbers. The most comprehensive recent coverage of these issues is in Foster (1986), which is a widely used textbook on financial statement analysis. There is overwhelming evidence that stock prices are, on average, set rationally and that the competition for information on firm values is fierce.

This evidence shows that changes in stock prices are related to reported earnings figures. However, the results indicate that the stock market anticipates much of the reported earnings before the public release of the annual or half-yearly report. It is clear that the market uses more than reported accounting numbers when valuing companies. Moreover, the evidence is that the market is not fooled by changes in reported earnings that are a result solely of accounting procedures and not of the firm's underlying economic performance. Large institutions, brokers and others employ teams of analysts who focus on particular companies and industries, and there is a great deal of evaluation of the information released by companies, including the accounting reports. The view that stock market participants mechanically translate reported accounting earnings into stock price multiples is naive. Apart from failing to appreciate the obvious incentives for these investors to accurately evaluate company disclosures, this view is not supported by evidence accumulated over the past several decades.

Those who believe that share prices do not reflect economic values rarely attempt to explain what in fact they believe stock prices are based on, or why corporate managers continue to act as though their firm's performance is reflected in share prices, or why annual changes in stock prices are strongly correlated with the subsequent announced earnings of

companies, or why analysts and professional investors spend huge sums trying to forecast these earnings accurately and trade on their expectations, or why legions of investors continue to invest in professionally managed investment vehicles, or why governments, businesses and others look to the share market as a leading indicator of the economy.

The preferred method of measuring the effect of takeovers on shareholders, then, is through capital market rates of return after adjusting for capital changes such as stock splits, bonus issues and rights issues and adding any cash distribution such as dividends to capital changes. This is in fact the direct measure of the change in wealth to an investor holding the shares during the takeover offer.

### **Capital Market Rates of Return**

Major investments such as takeovers are expected to produce sufficient cashflows over the life of the investment to earn a rate of return at least equivalent to what could be earned from equivalent risk-class investment elsewhere in the capital market. The value created by an investment is determined by the excess of the expected cashflows over that benchmark. As with other asset markets, that value is recognized in advance of the investment running its course and producing the cashflows. Where it is discovered that a new use of an existing building is expected to generate lease income over and above what could be earned on equivalent investments, and higher than previously expected, the market price of that building will be adjusted upon news of the new use. And so it is with share prices: the increased value expected to be created by an investment is impounded into the price of the shares when the market learns of the investment. Share markets and other asset markets are forward looking. The capital gains recorded when profitable investments are made reflect the value expected to be created by those decisions.

It is the forward-looking nature of the share market that is a major advantage of using capital market rates of return to measure changes in value. The methodology is not without its potential problems, however, and care must be taken in the use and interpretation of the results. Share prices reflect the expectations of future cash flows, and any change in expected future benefits are capitalised into the current share price. This implies that current shareholders are able to obtain the benefit of capital appreciation in their shares due to higher expected profits. However, it is always possible that the expected benefits of a takeover will not be realised. In these circumstances the share price would overvalue the benefit of a takeover relative to what would be the price if the stock market knew in advance that these benefits were not going to accrue. The converse is also true; the benefit of a takeover may be underestimated in the share price. In short, we cannot be sure that the

change in share price that capitalises the expectations of the effect of a takeover will accurately reflect the true eventual effects of the takeover on the fortunes of a company and its shareholders. However, competition among investors for information on the expected returns to a takeover will result in the current price being the best guess of the company's value after the investment, i.e. an unbiased estimate. Investors prepared to back their judgment on the correct value will trade until the market price reflects the value they put on the shares.

While the share returns (i.e. increased value) of a specific company undergoing a specific takeover may turn out after the fact to be wrong, we would not expect any consistent bias in returns across all such companies. By this it is meant that share market prices and the capital market rates of return estimated from these prices will be unbiased estimates of the future benefits arising as a result of takeovers. Should any bias develop, then there is an opportunity for investors to capitalise on that bias by adopting profitable trading strategies. The effect of such trading strategies would eliminate the bias. While it is possible to criticise the market's expectation, criticism is cheap when not backed by investment dollars. Across a large sample of independent takeover offers (at different points in time and involving different firms), the statistical law of large numbers ensures that measurement errors, i.e. errors in expectations that do not have any consistent bias, will cancel each other out.

The use of capital market rates of return to assess the economic effects of takeovers has none of the disadvantages listed above for accounting numbers and is the superior method of analysis.

## **II. A SUITABLE CONTROL**

In any scientific study it is necessary to establish a suitable control against which the symptoms or effects under study can be assessed. What we are concerned with is isolating the effect of takeovers on the value of companies from all the other effects of non-takeover events on company performance. One method of approaching this problem would be to adopt a control firm so that every firm that has undergone a takeover, either as a target or a bidding firm, would have assigned to it a firm that is similar but has not undergone a takeover. Any difference in the share price performance, i.e. return, of the two firms around the time of the takeover would be assumed to be the effect of the takeover.

The problem with this approach is finding a firm that is similar. The fact that one firm is involved in the takeover and the other is not itself indicates substantial differences between the firms apart from the mere fact of the involvement in a takeover. We cannot confidently assume that the observed difference in share returns is due solely to the takeover if there is some other non-trivial difference between the firms.

For example, a firm that has a cash surplus or borrowing potential but only limited opportunities for internal investment, e.g. plant expansion, is likely to expand its operations by external investments, i.e. takeover. The converse is true for a firm that does have internal growth potential. The two firms may be equally good investments with identical returns. A comparison between the two firms would suggest that the takeover did not benefit the firm that grew by external investment, but such an inference would be wrong because that firm did not have the opportunity to grow by internal investment.

The choice of expansion by direct investment or by indirect investment (takeovers) itself suggests that the specialist skills employed within each class of firm are different. If one class of firm performed consistently better than the other, then one would expect a change of strategy for the poorer performing firm, i.e. at the margin both should be performing equally well. The abnormal performance of each class can vary randomly through time, but on an *ex ante* basis the expected returns to both will be the same.

In general, we would not expect external investment to be a consistently superior strategy to internal investment. It depends on the circumstances facing companies. If takeovers were a superior investment strategy then we would expect companies to enter the takeover game until the rewards were diminished and the returns were consistent with alternative forms of investment. The converse is also true.

Therefore the use of a matching firm control is hazardous because of the difficulty in finding a firm that could have and should have grown by takeover but did not, and was identical to the firm involved in the takeover in all other respects.

An alternative approach is to recognise that most of the non-takeover effects that contaminate the share returns around the time of the takeover will be events that affect many other firms in the market at the same time. For any firm being analysed, the return in any month  $t$  (i.e. capital gain plus dividend earned by that firm in that month) can be assumed to consist of two components. One is the return that is due to events that affect all firms in the market, i.e. the market-wide component ( $r_{mt}$ ). The other component is the remainder or residual ( $u_t$ ) of the share returns in month  $t$  that is due to events specific to that firm. Algebraically this can be stated as

$$\text{return} = r_{mt} + u_t$$

Events that generate the market-wide component of returns include changes in the state of the economy or in government policy. As noted earlier, it is widely recognised that the change in the market portfolio of all stocks is a leading indicator or barometer of the economy's health.

The media regularly cite changes in those indexes when assessing the impact of a change in policy or a major economic development.

However, for a large sample of firms subject to takeover offers it is unlikely that any other pervasive event would be coincident. For some firms non-market-wide events might cause increases in the share price, and for others non-market-wide events might cause share price falls. If we can be confident that, a priori, takeover offer announcements are not consistently associated with other known events, the law of large numbers allows us to infer that the average residual return across a sample of target or bidder firms is an unbiased estimate of the takeover effect. If the takeover news comes out over several months the residual returns of that firm for those months can be accumulated by eliminating the market-wide component in each month. We will have more to say about this in our discussion of the results.

Note also that the month of interest (i.e. the month when the takeover is announced) will be a different calendar month for different firms. Suppose for instance that firm A was the subject of a bid in January 1978 and firm B was the subject of a bid in October 1981. The change in shareholder wealth associated with the takeover offers would be found by summing or averaging the residual return (i.e. removing the market effect) of the first firm in January 1978 and the residual return for the second firm in October 1981. Although they are returns taken from different calendar periods, the assumption is that after taking account of the market-wide effect in each calendar month the residual returns are due solely to the takeover offers.

As an illustration suppose that:

return to share A in January 1978 = 25%  
return to share B in October 1981 = 31%  
return to the overall market in January 1978 = 8%  
return to the overall market in October 1981 = 4%

Therefore,

residual return to share A in January 1978 = 25% - 8% = 17%  
residual return to share B in October 1981 = 31% - 4% = 27%

If these two firms made up the entire sample of takeover targets, the average residual return would be 22 per cent. This would be the estimate of the average value created for takeover targets. The assumption is that this return is what shareholders of the target firms received **because of the takeover offer**, and that it is over and above the return they would otherwise have earned in common with shareholders of all other firms. If the market-wide component is not eliminated, the estimated

returns to takeovers will be overstated when the market return during the time of the bid is positive and understated when it is negative.

The important point is that part of the total return to the shares in the month under question is not solely due to the takeover offer. The methodology recognises that there is a market-wide component in all share returns. This phenomenon has been widely documented in many studies. The use of a model of share returns that adjusts for market-wide factors in some way is the predominant method in empirical financial research that uses stock price data.

When the period of interest is more than one month, the average residual returns for each month are accumulated. For example, suppose the average residual returns over a three-month period were:

February	10%
March	20%
April	-5%

The Cumulative Average Residual return (CAR) over the three-month period is defined as:

$$(1 + .1) (1 + .2) (1 - .05) - 1 = 25.4\%^1$$

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<sup>1</sup>The results presented in the next chapter are calculated using continuously compounded rates of return.

## Chapter 6

# The Evidence

The objective of this research is to estimate the value to shareholders created by takeover offers. As we noted when describing the CIS Takeover Database, there are a number of possible outcomes for any given offer. To assess the overall value created by takeovers it is essential that all of these outcomes be included in the analysis. If the study included only those offers that resulted in a transfer of control, it would be subject to a severe selection bias. Not all offers are so successful, and the probability of success is one piece of information that is used by the market when assessing the value created by the offer. In discussing the results we will provide a breakdown by outcome for both target and bidding company.

The results are shown first as a graph of the cumulated average residual returns (CARs). These graphs start accumulating the residual or abnormal returns from the period 36 months before the announcement of a takeover. The announcement month is shown as zero, so that the month three years before the takeover is designated -36, similarly +4 indicates four months after the announcement date.

The announcement date is when it is assumed that the takeover is publicly announced. In many cases the imminent announcement of a takeover is anticipated and the market tends to react before the formal announcement. Further, the probability that the takeover will be successful is usually less than one at the announcement date. This means that it is not surprising to see the CARs rise after the announcement date as the probability that the takeover will be successful comes closer to certainty for a specific takeover or select group such as the successful takeover group. However, we would not expect it for the whole class of bidding or target firms since this would imply that the market guessed incorrectly on average and that investors could earn positive abnormal returns by trading on the announcement of an offer. If the stock market is characterised by rational expectation, we would expect that such obvious profit opportunities would be eliminated quickly. Where the CARs flatten out in the graphs it means that there

is no longer positive accumulation of abnormal returns. The abnormal returns are approaching zero, which is expected for the market as a whole. Note also that the graphs are an average of the market reaction to takeovers. For individual takeovers the market reaction is not as smooth as is depicted in the graphs. The graphs do, however, depict the typical or average market reaction to takeover announcements. The graph shows the average performance of a strategy of someone buying the shares of all firms in the category being analysed 36 months before the announcement of a takeover offer and holding the shares for 24 months after the offer.

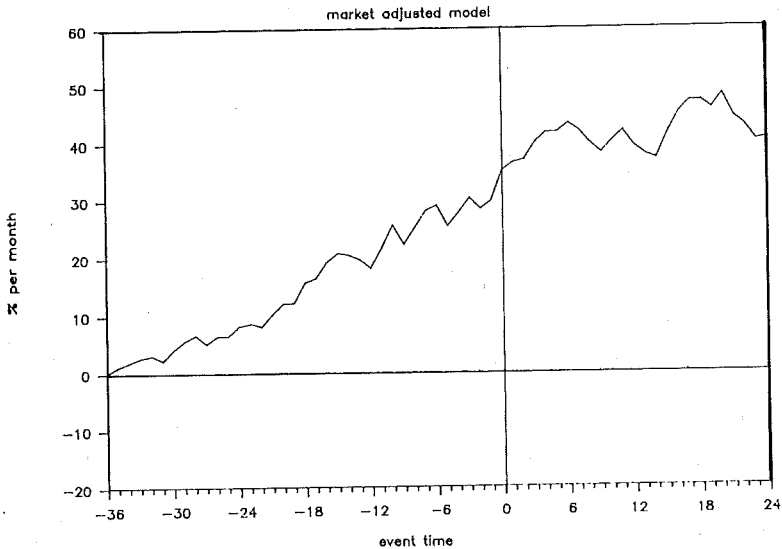
The second set of results consists of tables describing in more detail the distributional properties of the CARs at particular time intervals. That is, the graph of the CARs is the mean or average return and the tables give an indication of the representativeness of that mean. Because of uncertainty about the properties of the distributions of these CARs the distributions are described by the mean, median, first quartile, third quartile, number of positive abnormal returns, and number of negative abnormal returns instead of formal significance tests of the returns. We believe that the information provided should enable the reader to clearly assess whether or not takeovers have benefited a particular shareholder group whose abnormal returns are described by the tables. (Note that in the tables the number of companies in particular time intervals varies slightly. This is because some firms do not trade in every month.)

Perhaps the most succinct and significant representation of the overall evidence is presented in Figure 3, which depicts the performance of a value-weighted portfolio of all sample firms engaged in takeover activity. As noted earlier, bidding firms are, on average, much larger than targets. To account for this size discrepancy and to ensure that the results are not overstated by that discrepancy, the abnormal returns to all bidders and all targets are weighted by their relative market capitalisation and then aggregated. This value-weighting reflects the proportion of overall economic wealth to shareholders represented by each firm: if the dollar gains to one set of shareholders (e.g. targets) were exactly offset by the dollar losses to another (e.g. bidders), the graph would be flat and approximately equal to zero. But this is not the case. Such a portfolio earns large positive abnormal returns from takeover offers. The graph traces the average change in wealth of shareholders of firms engaged in takeover offers, and it is clear that around the time of the offer this wealth is significantly increased.

The CAR in Figure 3 is measured over the 61-month period -36 through +24. Although it is interesting to consider the valuation changes occurring over this entire five-year period, it cannot be argued that the CAR so depicted measures the value created by takeovers. There is good reason to believe that the market impounds the expectation of a



Figure 3  
Returns to a Value-Weighted Portfolio of All  
Sample Firms Engaged In Takeover Activity



takeover before the month of public announcement, month zero, but not as early as three years prior. It is quite common for the bidding firm to acquire shares of the target before announcing the takeover offer. These substantial shareholding positions have to be declared, and in another study Bishop (1986) presents evidence that the target shares are bid up at that time. For this reason we use the seven-month period  $-3$  through  $+3$  as the period during which the market reaction to the takeover is recorded. No doubt there are cases where the offer has not been decided even three months after the announcement and other cases where the market reacts to the increased probability of takeover before month  $-3$ . However, on average, it seems reasonable to assume that the seven-month period captures the market reaction to offers in general.

For the entire sample of bidders and targets, once again weighted by the relative market capitalisations of the firms, the average residual or abnormal return over the period  $-3$  through  $+3$  is 6.3 per cent, i.e. approximately 13 per cent abnormal return on a per annum basis. Translating this into dollars, the total value created by takeover offers as measured by the change in the residual values of the outstanding shares of the firms involved is **\$7.2 billion** for the offers in the CIS Takeover Database. Not including gains due to market-wide phenomena, the combined wealth of the shareholders of target and bidder firms increased by this amount around the time of the offers.

The evidence on takeovers in Australia is consistent with the economic theory presented in our earlier study, and takeovers are on

average value-increasing transactions (Dodd and Officer, 1986). The arguments of the anti-takeover theories are not supported by the data. It is clear that takeovers do **not** benefit one group of shareholders at the direct cost of another.

These results are analysed in more detail in Table 10, where the total dollar value created in takeover offers is presented for each year in the period 1974 through 1984. Note that in four of the eleven years the wealth change is negative, and that the number of offers per year varies substantially over this period. The negative observations reinforce the earlier point that pro-takeover theory does not say that each and every transaction will be successful in creating value: some investments are losers, but on average the gains are substantial. Interestingly, even after adjusting for the different size of target and bidder firms, more of the dollar value created is won by the target shareholders. Bidder firms nevertheless have also benefited from the takeover activity. Table 10 also presents the evidence for the subsample of takeover transactions where both the bidder and target firms were listed at the time of the offer. The sample is smaller, as is the total wealth created, but again it is clear that takeovers create value: **\$6.4 billion** worth.

It should also be noted that these results are not driven by very large gains in a few transactions. When the 5 per cent of offers with the largest gains and largest losses (the outliers) are excluded, the total value created is \$6.5 billion.

The overall evidence is that takeovers have resulted in increases in shareholders' wealth; we will now look more closely at the results to see

Table 10  
**Dollar Value of Wealth Created in Takeovers**  
**(\$,000)**

Year	Target	Bidder	Total	<u>Both Firms Listed</u>		
				Target	Bidder	Total
1974	9 147	-10 934	-1 787	3 174	-20 156	-16 982
1975	3 020	91 324	94 344	-57 214	14 812	-42 402
1976	34 735	-26 243	8 492	74 091	-4 532	69 559
1977	91 324	-48 972	42 352	71 723	-78 123	-6 400
1978	-12 734	-143 876	-156 610	-22 367	-131 456	-153 823
1979	189 537	-10 656	178 881	224 146	-4 325	219 821
1980	148 697	819 832	968 529	1 679 822	457 329	2 137 151
1981	1 324 361	113 161	1 437 522	40 981	53 675	94 656
1982	296 203	-86 523	209 680	23 266	-92 356	-69 090
1983	846 556	1 697 632	2 544 188	2 002 131	1 024 566	3 026 697
1984	1 264 567	570 588	1 835 155	274 338	823 329	1 097 667
TOTAL	4 195 413	2 965 333	7 160 746	4 314 091	2 042 763	6 356 854

how the various outcomes have affected shareholders of bidding and target firms.

### **Takeovers and Bidding Companies**

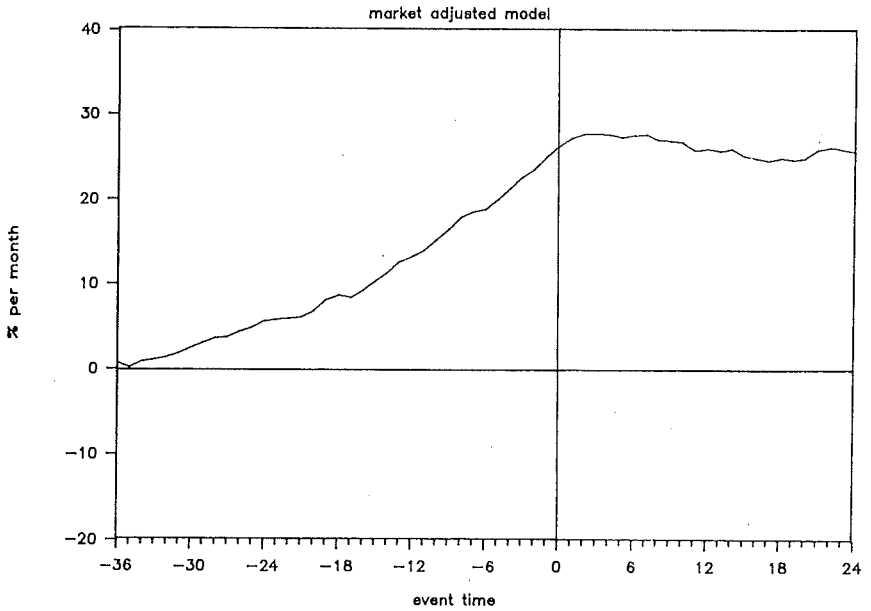
Figure 4 shows the cumulative abnormal returns to shareholders of all bidding companies from three years before the formal announcement of the company's takeover offer through two years after the announcement. The CARs for all the bidding companies accumulate to about 25 per cent. The graph shows that approximately two months after the formal announcement there are no further abnormal returns, on average, to the bidding companies, and the increased wealth associated with the offers has been fully impounded into the share prices by then and the value created is permanent.

Because it is unlikely that a takeover would have been anticipated a full three years before it was announced, the almost monotonic increase in these CARs over the three-year period would suggest that bidding companies are typically companies that have been doing well. To some extent, this confounds the actual effect of the takeover on a bidding company. However, as we might expect, once a company has made a bid and therefore clearly identified itself as being a company with the capacity to earn abnormal returns, the effect of the bid is impounded into the share price and the company no longer earns abnormal returns. If the abnormal returns were to continue after this date there would be a clear strategy open to investors to invest in bidding companies after their bids were announced to earn abnormal returns. The fact that the abnormal returns do not continue after the completion of the takeover offer indicates that such a strategy would not yield abnormal returns, and therefore the market is efficient (or rational) with respect to the information surrounding a takeover offer.

Table 11 describes the CARs over specific time periods for all bidding companies. The first column in the table shows the CAR from three years before the announcement through one year before the announcement. On average, bidding companies over this two-year period had CARs of around 12 per cent, and the CAR was positive for over 60 per cent of the firms. The worst-performing 25 per cent of the bidding companies had less than -15 per cent average abnormal return; the top 25 per cent had greater than 45 per cent average abnormal return. Further, there were about 60 per cent more companies with positive CARs over this period than there were with negative CARs. Overall, it would be reasonable to conclude that from three years before an announcement of a takeover to one year before the announcement bidding firms experienced, on average, positive abnormal returns.

Similar interpretations can be made for the second and third columns of Table 11 where the CARs are examined for the twelve months before

**Figure 4**  
**Cumulative Abnormal Return**  
**All Bidding Firms**



**Table 11**  
**The Returns to Shareholders of All Bidding Firms**  
**(CARs Over Specific Time Intervals)**

	Period of the Cumulative Abnormal Return Relative to the Takeover Announcement Month (Month 0)			
	-36 through -11	-11 through 0	+1 through +2	-3 through +3
Mean	12.6	12.1	1.4	6.0
Median	12.4	10.8	0.7	5.2
25th percentile	-15.2	-7.9	-6.2	-10.0
75th percentile	45.9	33.1	8.7	21.5
No. +ive CARs	468	468	397	465
No. -ive CARs	295	295	353	315

the announcement up to and including the announcement month and from the announcement month through two months after the announcement. The final column looks at the abnormal returns three months before the announcement month through three months after. This seven-month period probably captures most of the information surrounding a takeover that is relevant to a bidding company. The results indicate that, on average, shareholders of bidding firms benefit from a takeover. As expected, not all bids create wealth, but over 60 per cent of the sample experienced positive abnormal returns during the seven months around the offer.

**Successful bidding companies.** Figure 5 depicts the CARs of shares of bidding companies that were successful in gaining control of the target company, i.e. those that finished with at least 50 per cent of the issued shares of the target company. The pattern of CARs is very similar to the sample of all bidding companies and the same points made with respect to that sample are relevant.

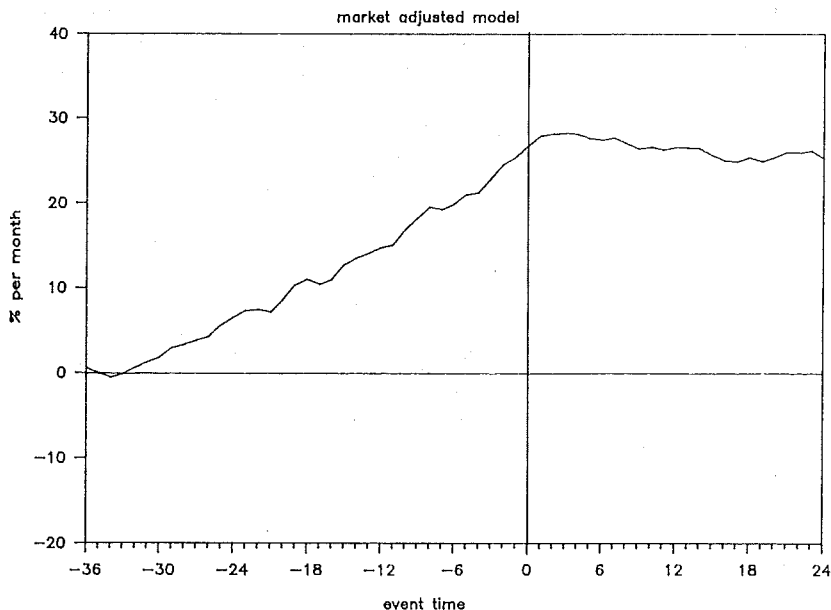
Table 12 describes the CARs over specific time intervals for successful bidding companies. The results are broadly similar to those for all bidding companies and the conclusions remain much the same: in general, shareholders of successful bidding companies earn abnormal returns and these returns can be associated with the takeover. Again, over 60 per cent of firms record positive abnormal returns over the seven months around the offer date.

**Unsuccessful bidding companies.** Unsuccessful bidding companies are those that made a bid but were unable to acquire 50 per cent of the target company's issued shares. We could expect that a significant proportion of such companies would become locked into the target company's share register but without control. We would expect the market to review adversely such performance, which should result in abnormal losses and a consequential downturn in the cumulative abnormal returns.

Figure 6a depicts the CAR behaviour of the shares of unsuccessful bidding companies. In contrast to the above expectations, the CARs continue to increase after the announcement month for about six months and then appear to plateau. The graph suggests that the market goes on revaluing, upwards, the unsuccessful bidding firms after the offer has been resolved.

Table 13 shows the results of the CARs for unsuccessful bidding companies over specific time intervals. It is clear from these results, particularly the first column, that unsuccessful bidding firms are firms that have large positive abnormal returns well before the takeover offer. This could reflect the fact that many of these firms, and in fact bidders in general, make a succession of takeover offers. Thus the value of earlier bids is reflected in the pre-offer returns. Also, it should be noted that the

**Figure 5**  
**Cumulative Abnormal Returns**  
**Successful Bidding Firms**



**Table 12**  
**The Returns to Shareholders of Successful Bidding**  
**Firms (CARs Over Specific Time Intervals)**

	Period of the Cumulative Abnormal Return Relative to the Takeover Announcement Month (Month 0)			
	-36 through -11	-11 through 0	+1 through +2	-3 through +3
Mean	11.8	12.1	1.6	7.9
Median	9.9	10.5	1.3	7.5
25th percentile	-18.5	-7.9	-5.6	-8.4
75th percentile	45.2	32.4	7.7	22.6
No. +ive CARs	208	238	202	236
No. -ive CARs	154	132	161	133

Figure 6a  
 Cumulative Abnormal Returns  
 Unsuccessful Bidding Firms

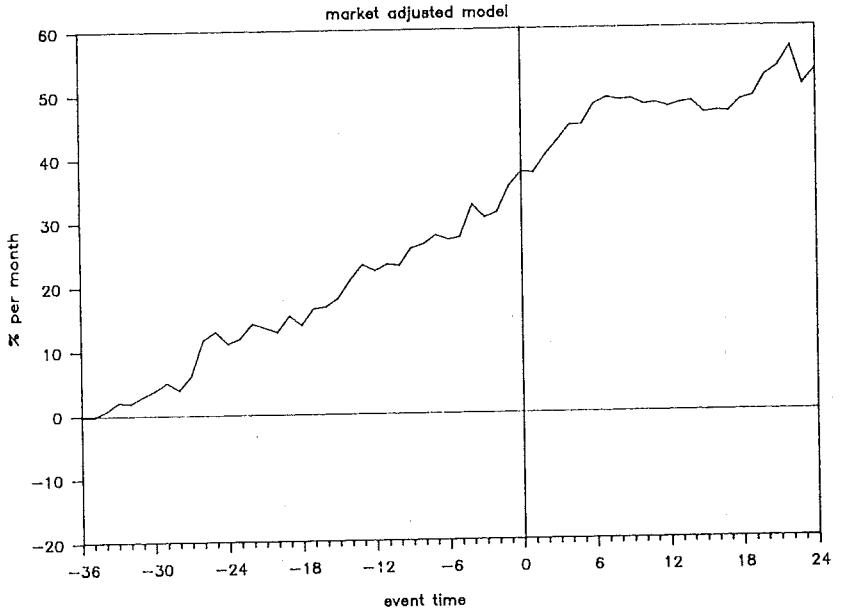
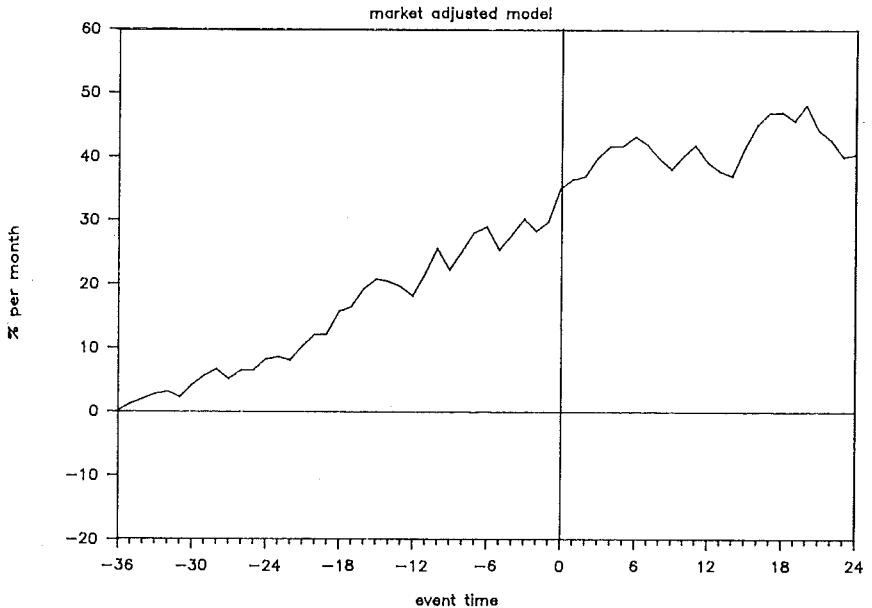


Table 13  
 The Returns to Shareholders of Unsuccessful  
 Bidding Firms (CARs Over Specific Time Intervals)

	Period of the Cumulative Abnormal Return Relative to the Takeover Announcement Month (Month 0)			
	-36 through -11	-11 through 0	+1 through +2	-3 through +3
Mean	21.8	14.8	2.5	10.0
Median	20.1	15.1	-0.7	6.5
25th percentile	-3.9	-4.4	-8.7	-4.5
75th percentile	52.9	30.2	13.1	23.0
No. +ive CARs	64	59	37	58
No. -ive CARs	25	30	44	30

Figure 6b  
Cumulative Abnormal Returns  
Unsuccessful Bidding Firms (outcome date)



number of firms in this category (about 80) is much smaller than in other categories.

The table also indicates the significant increase in abnormal returns after the announcement date. An explanation of this apparently anomalous behaviour is that unsuccessful bidding firms, although unsuccessful in transferring control, still finish with a block of the target shares. Subsequently they may be bought out of their holding at a higher price than their offer price. In effect, these firms are successful 'greenmailers'.

A number of companies, such as IEL Limited, have a history of making takeover offers and then being bought out at a considerable profit. When an unsuccessful bidder is bought out by a white knight, the profit on that transaction is impounded into the share price when the sale is made. The continuously increasing returns after the offer in Figure 6a could be a result of averaging across the sample where the buy-out transactions occur at different points relative to the initial takeover announcement.

The term 'greenmail' has negative connotations and in the US there has been a fierce controversy over the propriety of these transactions. 'Greenmail' strictly refers to transactions where a potential bidder acquires, either by a partial offer or in the market, a non-controlling



block of a target's shares, and then threatens in one way or another to make a full bid unless the target or a friendly white knight buys out the block at a profit.

In the Australian context, companies are not allowed to repurchase their own shares, and 'greenmail' has referred more to the buying out of a block by a company friendly to the target or another bidding firm. Even so the economic role of firms who take a substantial shareholding is contentious. Many see it as a non-productive exercise that unfairly pressures and distracts incumbent managements from their pursuit of sound investment decisions.

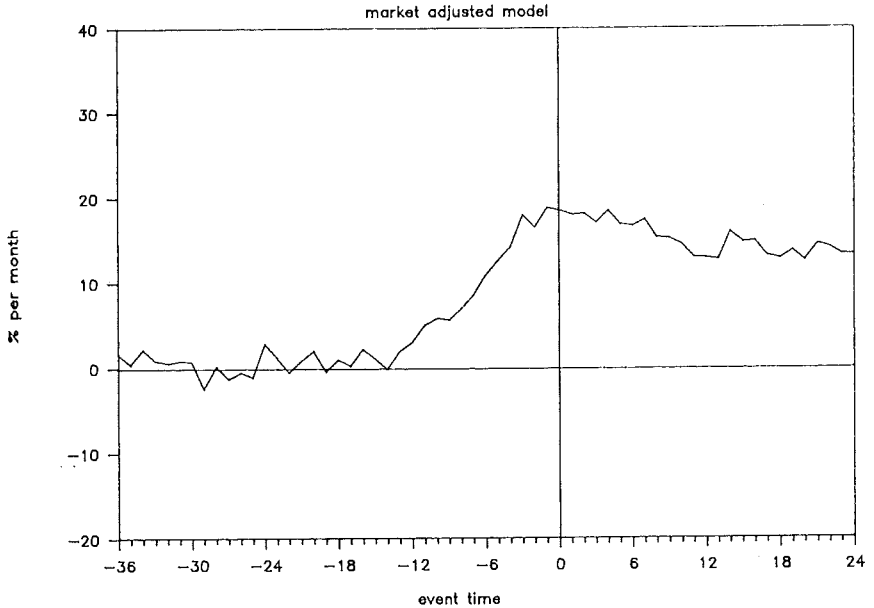
The problem of greenmail is not the efforts of the bidder or purchaser of a block to make a profit from the transaction, but the subsequent use of shareholders' funds by the target or the friendly white knight to prevent control being transferred. Indeed, the taking of a position by the initial bidder can be a fundamentally important and valuable element of the market for corporate control. (This point is elaborated in the earlier study in this series. See Dodd and Officer, 1986.)

These firms may well use new and different production/investment strategies that give them a comparative advantage in identifying potential target firms with value-creating opportunities. Although they would be willing to acquire control of the target, there may be other firms who could better implement a new investment strategy and create even greater value. The returns to the initial bidder for successfully identifying the value-creating opportunity come from trading any target shares acquired to a competing bidder. Even if a competing bid does not emerge immediately, the target has been publicly identified and a subsequent bid could be expected in the not too distant future. This target identification process is crucial if corporate assets are to be channelled to their most valuable uses. For this reason, greenmail must be carefully evaluated as a policy issue and the incentives of firms identifying targets must not be inhibited.

**Withdrawn offers.** Returning to the post-announcement positive abnormal returns to unsuccessful bidders, it is important to recognize that these are not the only bidders who fail to transfer control. For the sample of transactions in Table 13 unsuccessful bidders are defined as those who initiate a bid that runs its course and who at the close of the offer have less than 50 per cent of the target's issued shares. Another group of unsuccessful bids are those that are withdrawn before the offer closes. In these cases the bidder acquires no target shares in the offer and in this sense there could be quite different outcomes from the unsuccessful bids discussed above.

The results for shareholders of bidders making withdrawn offers are shown in Figure 7 and Table 14. For these firms the abnormal returns leading up to the offer are considerably less than for the other categories

**Figure 7**  
**Cumulative Abnormal Returns**  
**Bidding Firms that Withdrew Their Bids**



**Table 14**  
**The Returns to Shareholders of Bidding Firms That**  
**Withdrew Their Bids**  
**(CARs Over Specific Time Intervals)**

	Period of the Cumulative Abnormal Return Relative to the Takeover Announcement Month (Month 0)			
	-36 through -11	-11 through 0	+1 through +2	-3 through +3
Mean	8.7	16.1	-1.5	1.8
Median	18.5	20.1	0.0	3.3
25th percentile	-10.4	-6.3	-9.8	-19.2
75th percentile	45.6	40.4	5.9	16.1
No. +ive CARs	84	90	60	74
No. -ive CARs	43	39	64	56

of bidding firms. However, over 70 per cent of these firms earn positive returns over the three years before the offer.

There is a smaller positive revaluation over the seven months around the offer, but again over 56 per cent of firms experience positive abnormal returns. After the offer it appears that the market revises its estimate and these firms suffer small negative returns. This post-offer decline is in contrast to the earlier results of unsuccessful bidders who did not withdraw their offers. This result is consistent with the greenmail arguments above if it can be assumed that bidders in withdrawn offers have not accumulated target shares during the offer.

These results on withdrawn bids suggest an explanation of the post-offer positive abnormal returns observed earlier for unsuccessful bidders. After the initial announcement of an offer there are a number of possible outcomes. At that point in time, the market does not know which offers will be successful, which will be withdrawn and which will be unsuccessful. Further, the unsuccessful offer could result in a buying out of a block (as in the 'greenmail' discussion above) or a situation where the bidder is left with a non-controlling block that does not enable a subsequent transfer of control. The eventual outcome of the offer is known only at a date subsequent to the initial announcement. The classification of bids as unsuccessful in Figure 6 and Table 13 is in fact an *ex post* selection, which is analogous to selecting Saturday race winners or losers on Sunday morning.

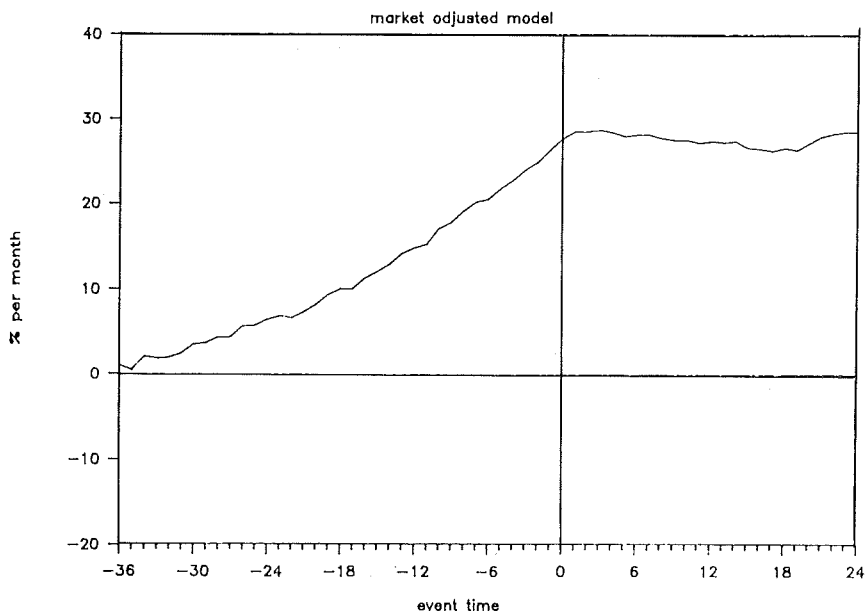
In Figure 6b, the returns to unsuccessful bidders are reconsidered, focusing on the outcome date rather than the initial announcement date. While there is still some positive abnormal return after the outcome date, the upward drift apparent in Figure 6a is less apparent.

Earlier we discussed the economic role played by the so-called 'corporate raiders', or firms that are active in the takeover market. It was hypothesised that the managements of these companies have specialist skills in searching for and identifying value-creating opportunities in firms that can be redirected and restructured. It is interesting then to see whether takeover offers by these firms are evaluated differently from those of firms that engage less frequently in takeovers.

The results are presented in Tables 15a and 15b and Figures 8 and 9. The sample of bidders in the CIS Takeover Database is divided into those that made only one offer during the sample time period and those that made more than one offer. This classification was used since the definition of a 'raider' is subjective and the economic arguments presented earlier relate to firms that are active in the takeover market.

As can be seen in Figures 8 and 9, both groups earn positive returns around the time of the offer but it appears that the single bidder sample is not revalued as much as the multiple bidders. The single bidder group includes those whose only bid was withdrawn as well as those whose only bid was completed successfully or unsuccessfully. It could be

**Figure 8**  
**Cumulative Abnormal Returns**  
**Multiple Bidders**



**Table 15a**  
**The Returns to Shareholders of Bidding Firms Making**  
**More Than One Takeover Offer**  
**(CARs Over Specific Time Intervals)**

	Period of the Cumulative Abnormal Return Relative to the Takeover Announcement Month (Month 0)			
	-36 through -11	-11 through 0	+1 through +2	-3 through +3
Mean	13.5	11.4	0.64	5.2
Median	13.2	9.7	0.65	5.1
25th percentile	-15.6	-8.7	-6.3	-10.2
75th percentile	47.5	32.1	8.2	19.8
No. +ive CARs	384	420	330	388
No. -ive CARs	256	227	298	262

Figure 9  
Cumulative Abnormal Returns  
Single Bidders

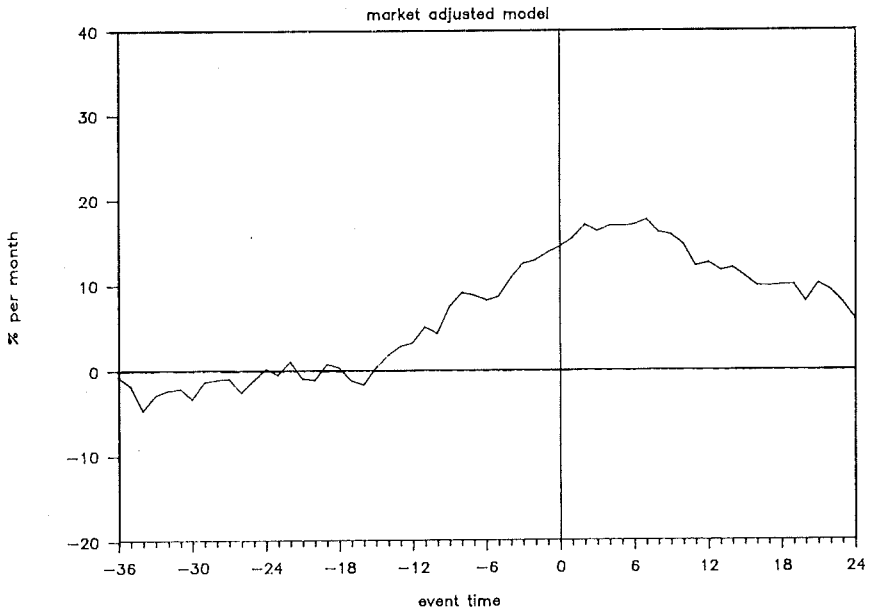


Table 15b  
The Returns to Shareholders of Bidding Firms Making  
Only One Takeover Offer  
(CARs Over Specific Time Intervals)

	Period of the Cumulative Abnormal Return Relative to the Takeover Announcement Month (Month 0)			
	-36 through -11	-11 through 0	+1 through +2	-3 through +3
Mean	4.6	9.8	2.3	4.9
Median	9.5	11.0	0.6	1.9
25th percentile	-20.7	-9.1	-6.3	-13.4
75th percentile	35.6	34.4	10.8	23.0
No. +ive CARs	99	111	88	96
No. -ive CARs	67	64	77	77

expected that this group of single bidders includes those firms that tried the expansion-by-takeover route but found they had no comparative advantage in that business. To the extent that successful takeover strategists continue in the takeover market, the single bidder group can be expected to fare poorly relative to the multiple bidder group. The results are consistent with this reasoning. However, a detailed analysis of the dynamic aspects of takeover strategies has not been undertaken. Such an extended analysis of raiders and other firms active in the takeover market is the subject of further ongoing research.

**Summary of the effect of takeovers on bidding firm shareholders.** The major findings of the study of bidding firms are:

- takeover offers are made after the firms have experienced abnormally high returns in the previous 36 months.
- in the large majority of cases the announcement of an offer is associated with increases in share prices and the shareholders of bidding firms benefit from the proposed acquisitions.

Expansion via takeover is a strategy premised on the same parameters and cost-benefit calculus as strategies of internal expansion. The objective is to maximise expected firm value. The results here indicate that on average these expectations are confirmed by the capital market. This evidence is inconsistent with the anti-takeover theories and supports the economic view of takeovers promoted in the earlier study in this series.

### **Takeovers and Target Companies**

Figure 10 depicts the behaviour of CARs for all target companies in the sample (approximately 900 companies). The results indicate that most of the large positive abnormal returns occur in the six-month period prior to and including the month of the offer announcement. The CARs peak at about 30 per cent and there is little doubt that target shareholders earn large positive returns. There is some revision in the market's estimation of the value of target shares after the announcement of a takeover in that the CAR tends to fall. The reason for this will be explained when the behaviour of withdrawn bids is examined. Even allowing for this decline, it is clear that target shareholders are major winners in takeovers.

Table 16 confirms the general impressions derived from Figure 10. Nearly all the abnormal returns to the portfolio of target companies are achieved over the seven-month period from three months before the target has received its offer to three months after. The results unambiguously indicate high returns to target company shareholders.

Figure 10  
 Cumulative Abnormal Returns  
 All Target Firms

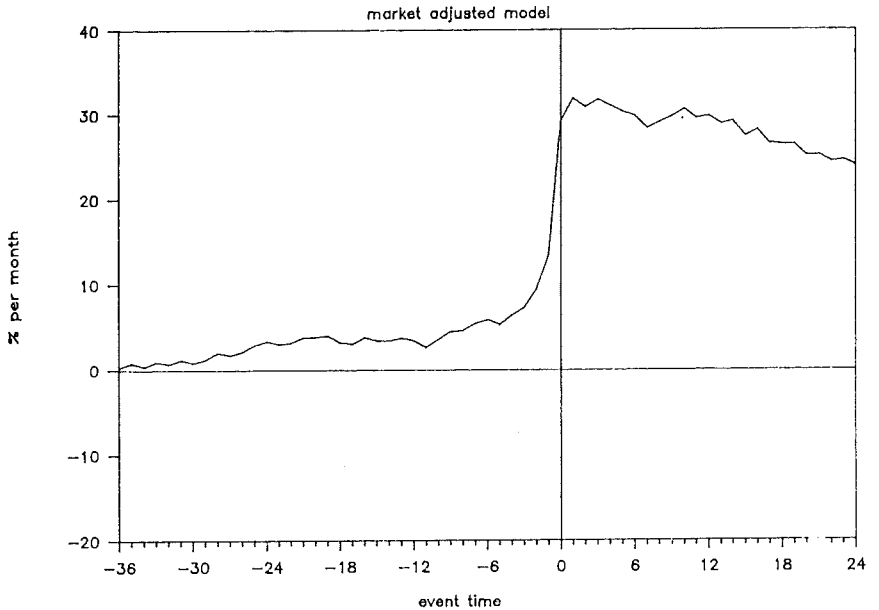


Table 16  
 The Returns to Shareholders of All Target Firms  
 (CARs Over Specific Time Intervals)

	Period of the Cumulative Abnormal Return Relative to the Takeover Announcement Month (Month 0)			
	-36 through -11	-11 through -7	-6 through +1	-3 through +3
Mean	2.0	1.7	22.2	21.0
Median	3.9	0.1	20.8	16.7
25th percentile	-26.3	-12.4	0.9	0.3
75th percentile	33.5	13.5	43.2	39.6
No. +ive CARs	436	388	626	638
No. -ive CARs	384	382	207	207

On average they earn about 20 per cent positive abnormal return over this period. This is hardly surprising given the high premiums observed in the earlier discussion of the CIS Takeover Database.

The sample of target companies does not, on average, display abnormally poor performance over the three years before the offers were made. Table 16 shows that slightly more than half of the target firms earned positive abnormal returns over the period -36 through -7. On average the targets were not firms experiencing severe financial difficulties. However, a more detailed analysis than that provided here might investigate whether takeovers of targets in financial trouble are based on different value-creating strategies than takeovers of healthy targets. A troubled firm may require a radically different production/investment plan or a change of management to realise its potential, as opposed to cases where complementarity of the target's activities with the bidder's is the primary motive for the takeover.

**Successful target companies.** Successful target companies are those in which the offerer company takes its shareholding to greater than 50 per cent during the offer. The pattern of the CARs for successful target companies (Figure 11) broadly reflects the pattern of returns for the total sample of target companies as described in Figure 10. Table 17 confirms the results. Shareholders of target companies that are subject to a successful bid for more than 50 per cent of their issued equity capital earn significant abnormal returns.

Note that Figure 11 does not continue for the full 24 months after announcement. In the large majority of cases of successful takeovers the target firm is delisted when the bidder acquires most of the outstanding shares. Some target firms remain listed after a transfer of control, especially when the offer is a partial takeover bid. These transactions will be discussed in detail later. The graph of successful targets is truncated at month +10 as the sample of successful target firms still listed is significantly smaller than the number represented by the graph at the time of the announcement.

Note that not all targets generate positive abnormal returns. This is important since many people are of the opinion that there is a minimum premium (reflected in the positive abnormal returns) that has to be offered in takeovers to attract target shareholders. In the limit, the price offered has to be no greater than the value of the target to the next best bidder. Since the initiating bidder does not know this price, and because regulations have unfortunately allowed competing bidders to free-ride on the valuable search efforts of raiders and others, the average offer price is significantly greater than the average pre-offer price. As pointed out in the earlier study, this has benefited those shareholders of target firms who are fortunate enough to still receive a bid, but this is at the expense of those unfortunate shareholders who would have been targeted but for



Figure 11  
**Cumulative Abnormal Returns  
 Successful Target Firms**

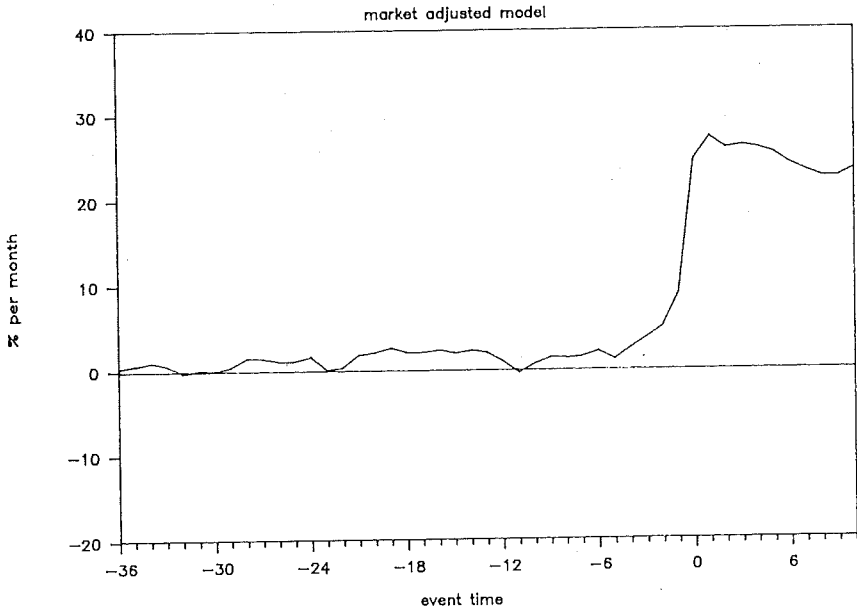


Table 17  
**The Returns to Shareholders of Successful Target  
 Firms (CARs Over Specific Time Intervals)**

	Period of the Cumulative Abnormal Return Relative to the Takeover Announcement Month (Month 0)			
	-36 through -11	-11 through -7	-6 through +1	-3 through +3
Mean	-0.4	0.4	21.9	20.1
Median	2.4	-0.3	21.3	16.5
25th percentile	-27.2	-12.7	2.2	0.5
75th percentile	32.4	12.2	43.1	39.3
No. +ive CARs	240	216	362	360
No. -ive CARs	220	221	108	113

the cost, including time delays, associated with the regulatory framework as it currently exists.

If subsequent to the announcement information is revealed that substantially alters the value expected to be created in the takeover, target shareholders will bear some of this risk.

**Unsuccessful target companies.** Companies that were targeted for a takeover but in which the bidding company obtained less than 50 per cent of the issued equity capital show abnormal returns not dissimilar to those of targets where the bidding company was successful in gaining 50 per cent of the issued capital. From Figure 12 it appears that target companies where the offerer was unsuccessful in gaining control do not suffer in terms of the valuation placed on them by the share market. Table 18 confirms these results.

This is consistent with a number of possible explanations. One is that the offer, even though it did not effect a change of control, triggered a change in the target firm's investment strategy and that the market estimates this new strategy will increase future profitability. Alternatively, the permanent increase in the value of the target could reflect the market's expectation of another successful takeover bid now that the target has been identified as an avenue for potential value creation. Of the 118 unsuccessful targets, 57 were subject to a subsequent takeover offer and 42 of these were successful. Further, the bid may have caused valuable information about the target company to be released to the market, thus causing the revaluation.

Whether the revaluation reflects a forthcoming bid, a change in incumbent policy, or the release of information about the target, this evidence still strongly endorses the economic theory that takeovers are vehicles for value enhancement.

**Withdrawn bids: Target companies.** Figure 13 depicts the pattern of CARs of target companies who had the bid for their shares withdrawn by the offerer company. The graph indicates that these companies were performing abnormally well before the offerer made the bid — or, more accurately, before the capital market anticipated a bid from the offerer company. The results are confirmed by Table 19.

There is also evidence that the market downwardly revises its value of such target companies, although the price does not fall back to the pre-offer level. CARs decline slightly in the months following a withdrawn bid, possibly reflecting a change in the expectation that such companies are going to be subject to another bid. Note that these firms generally remain listed over the 24 months after the offer. Recalling the earlier Figure 10 for all targets, it is now clear that the decline in that graph in the post-offer period is due to the inclusion of withdrawn bids. Since successful targets that are delisted soon after the offer are not included in Figure 10 for most of the post-offer period, this period is not representative of takeover offers in general.

Figure 12  
**Cumulative Abnormal Returns  
 Unsuccessful Target Firms**

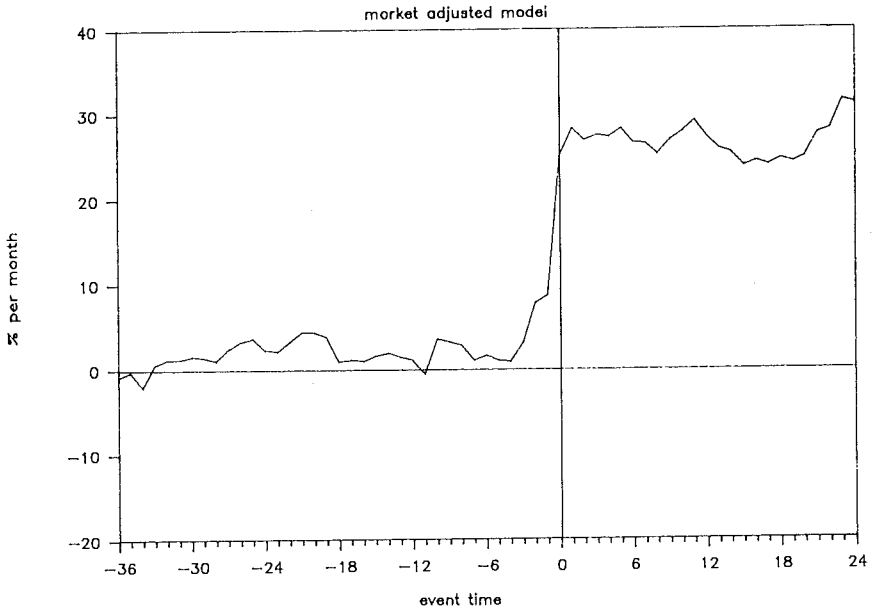


Table 18  
**The Returns to Shareholders of Unsuccessful Target  
 Firms (CARs Over Specific Time Intervals)**

	Period of the Cumulative Abnormal Return Relative to the Takeover Announcement Month (Month 0)			
	-36 through -11	-11 through -7	-6 through +1	-3 through +3
Mean	-0.3	-0.1	22.6	21.8
Median	0.4	0.8	19.4	17.7
25th percentile	-29.7	-15.9	-2.3	0.4
75th percentile	26.5	10.9	42.8	35.2
No. +ive CARs	39	35	59	67
No. -ive CARs	37	34	22	15

Figure 13  
**Cumulative Abnormal Returns**  
**Target Firms Whose Bid Was Withdrawn**

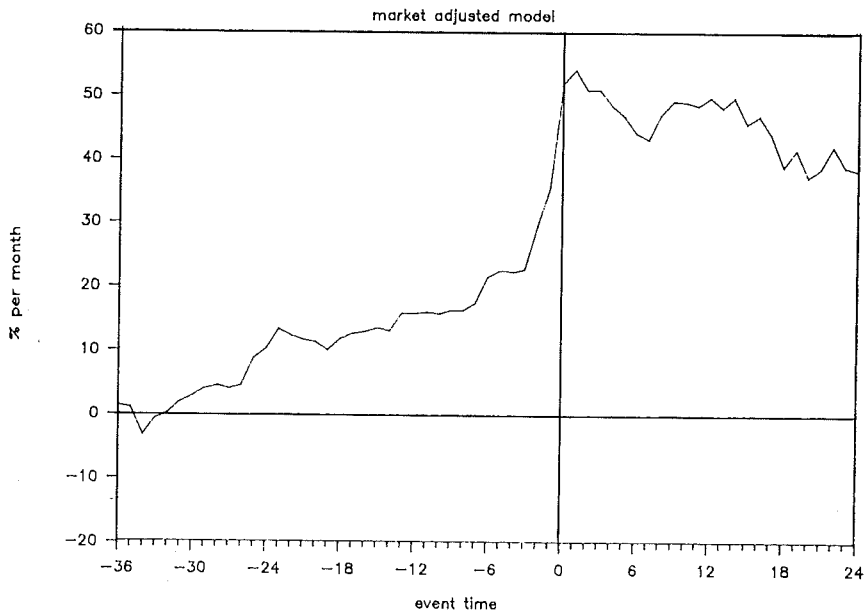


Table 19  
**The Returns to Shareholders of Target Firms Whose Bid Was Withdrawn (CARs Over Specific Time Intervals)**

	Period of the Cumulative Abnormal Return Relative to the Takeover Announcement Month (Month 0)			
	-36 through -11	-11 through -7	-6 through +1	-3 through +3
Mean	12.0	1.2	30.5	23.3
Median	12.9	0.7	30.5	18.0
25th percentile	-19.4	-12.3	4.4	3.6
75th percentile	44.1	13.0	50.4	44.0
No. +ive CARs	58	50	82	81
No. -ive CARs	42	43	20	23

## **Partial Takeovers**

One of the interesting developments in takeover activity in recent years has been the increasing use of partial offers, i.e. offers for enough outstanding target shares to transfer control, but not for all shares.

Partial offers have been a central issue in the public policy debate. There are two specific complaints about partial takeovers. First, there is typically a premium paid for the shareholding that bestows control of a company. Unregulated partial takeovers often result in this control premium being paid to only a select group of shareholders. The complaint is that all shareholders should receive the control premium.

The second complaint is that there is a coercive feature in a partial takeover that can present shareholders with a problem known in the economics literature as the 'prisoner's dilemma'. Shareholders may find the overall partial offer unattractive because they do not want to be minority shareholders at the completion of the partial takeover. However, if a shareholder does not accept the partial offer but others do, so that the partial takeover is successful, the shareholder has missed out on receiving the attractive offer price for part of the shares held. Shareholders with no confidence in the actions of other shareholders will accept a partial bid even though it may not be in their best interests or indeed the best interests of the other shareholders. This 'prisoner's dilemma' is described and illustrated in the earlier monograph in this series (Dodd and Officer, 1986). The essence of the illustration is as follows.

Consider a \$1.30 offer for 50 per cent of a company whose shares have been selling for \$1.00. Let us assume that the value of the firm is expected to fall to \$0.60 per share if the offer is successful. This may be due to an expectation that the acquirer will manage the firm in a way that is detrimental to the original shareholders. Thus shareholders face the prospect of receiving \$1.30 for half of their shares while the balance will be worth \$0.60 if the offer is successful. This yields an average share value of \$0.95 — less than their pre-offer position when their shares were worth \$1.00. Acting as a cohesive group, shareholders would reject the bid. However, individually each shareholder faces the 'prisoner's dilemma'.

If an individual shareholder rejects the offer but enough of the other shareholders accept to enable the offerer to achieve control, the shareholder has missed out on the offer of \$1.30. Now all of the shares held have declined in value from \$1.00 to \$0.60 each. This compares unfavourably with the blended value of \$0.95 that the accepting shareholders receive. Being unsure that other shareholders will reject the offer, the 'best' course of action for individual shareholders is to accept the \$1.30 offer. Thus they are coerced into accepting an offer that

decreases the total value of their investment from \$1.00 per share to the equivalent of \$0.95 per share.

A competitive market for corporate control is sufficient to alleviate concern about the coercive nature of partial bids. Competition among bidders ensures that the offer price in a partial bid is forced high enough to prevent shareholders experiencing a decline in the value of their investment through accepting the offer. In terms of the example above, if the offer price is less than \$1.40, it would be profitable for another bidder to enter the quest for the target. Symbolically this means

$$[X * P_o + (1 - X) * P_A] > P_B$$

blended offer value > pre-bid price

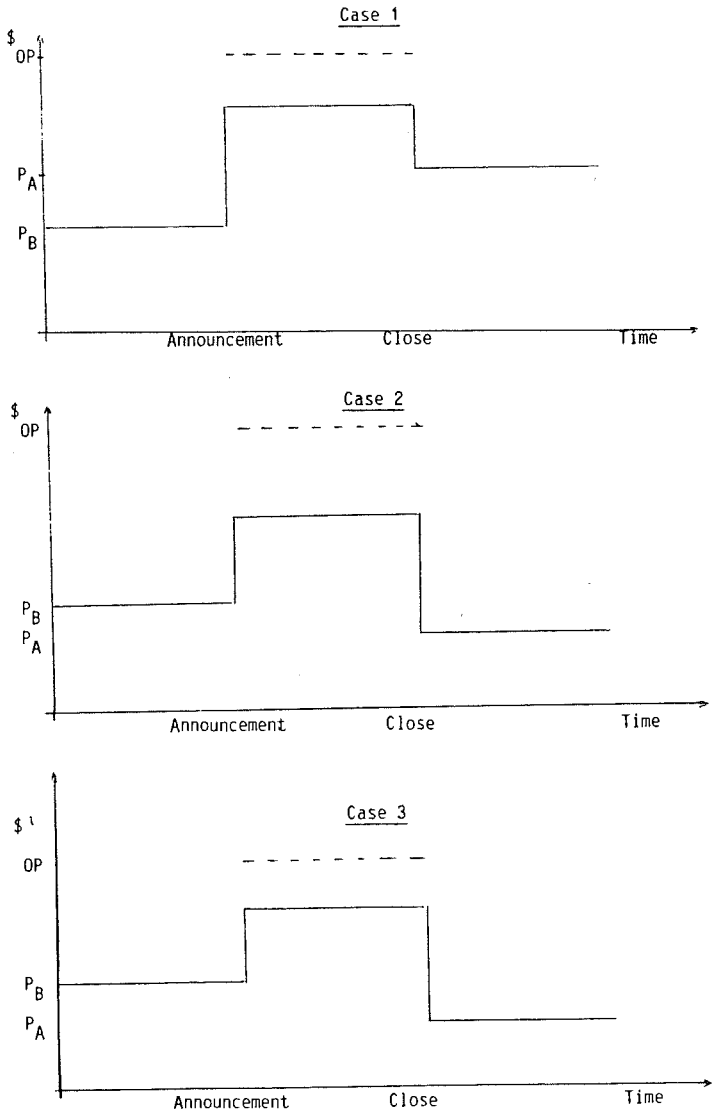
where  $X$  is the proportion of shares bought by the bidding company;  $P_o$  is the offer price;  $P_A$  is the after-takeover price of the remaining shares; and  $P_B$  is the price of the shares before the bid was contemplated.

The blended value on the left-hand side of this relationship would be less than the right-hand side if partial takeovers were coercive. Opponents of partial takeovers have argued that this is indeed the case, and partial takeovers have been subjected to increased regulation in response to such arguments. In this study we present evidence on this coercive argument.

Actual returns to shareholders in partial takeover offers made in the period from May 1974 to July 1985 were computed according to the above relationship of blended offer value and post-offer price to assess whether shareholders were worse off after the offer. (Since the returns are computed over a single defined period rather than accumulated to form a Cumulative Abnormal Return, they are discrete rather than continuously compounded returns.) Before turning to these results, we present some further analysis to assist in the interpretation of the results and discuss some descriptive details of partial offers.

Figure 14 depicts three different possible market price reactions for target companies surrounding a successfully completed partial takeover offer. Each includes the three important phases of the offer process: phase one is the period prior to the offer, phase two is the period during which the offer remains open, and phase three is the period after the offer closes. Case 1 describes the predicted behaviour of the price of a firm subject to a partial takeover offer in a competitive market. The offer price ( $P_o$ ) will be above the pre-offer price ( $P_B$ ). When the offer is announced, the market price of the target firm should rise to a level below the offer price but above the expected post-bid price,  $P_A$ . Immediately after the close of the offer the market price should fall to that price  $P_A$ . Note that in Case 1 the expected price after the offer is

Figure 14  
Behaviour of Share Price During Phases of  
Partial Offer



higher than the pre-offer price. This implies a positive return to a strategy of holding shares for the period commencing before the announcement of the bid until after the close of the bid and not accepting the offer. This return, however, will be lower than that from accepting the offer.

In Case 2 the expected price after the close of the offer is below the pre-offer level. This implies that the offerer is expected to manage the firm to the detriment of the original shareholders, and therefore a hold strategy results in a loss or a negative return. If this happened in a competitive market for corporate control, the offerer would be forced to offer a premium high enough to compensate shareholders for the expected loss on the shares that were not acquired in the bid. The blended return to shareholders who accepted the offer would be positive, but the holding period return to anyone forgoing the offer would be negative.

The third case depicted in Figure 14 is the scenario under which shareholders fare badly. Shareholder strategies of either accepting the offer or holding the shares and not accepting the offer both yield a negative return. The price after the offer is expected to be below the pre-offer price, meaning that the offerer is expected to manage the firm to the detriment of the original shareholders. Furthermore, the offer price is not high enough to compensate for this expected loss on the shares not acquired. It is this latter point that distinguishes the last two cases.

The alternative scenarios can be summarised as follows:

Case	blended return	hold return	consistent with
1	positive	positive	competition (either actual or anticipated) and no wealth transfer from target shareholders
2	positive	negative	competition (either actual or anticipated) and wealth transfer that is compensated by a high enough offer price
3	negative	negative	coercive and uncompensated wealth transfer



**The Evidence.** Before presenting the blended and holding strategy returns we present some descriptive details extracted from the CIS Takeover Database. These details cover a period beginning January 1972.

There are two striking observations to be made from the information in Tables 20 and 21. First, there are relatively few partial takeover offers. Although increasing in popularity in recent years, they are still small in number relative to full offers. Over the period covered by the database there are 171 partial offers, representing approximately 12 per cent of all offers.

Table 20  
**Number of Partial Takeover Offers by Year**

Year	Partial	Full
1972	35	163
1973	17	100
1974	6	59
1975	6	68
1976	4	86
1977	5	75
1978	10	97
1979	7	99
1980	7	125
1981	10	116
1982	16	54
1983	12	82
1984	24	94
1985 (half year)	12	53
<b>TOTAL</b>	<b>171</b>	<b>1271</b>

The second striking observation about partial takeover offers is their apparent lack of success. Over the total period examined only 30 per cent of partial bids resulted in the bidder receiving acceptances greater than the proportion sought or within 5 per cent of that figure. This success rate is less than half that of full bids and it is still well below the success rate for full takeover offers after the the introduction of the Companies (Acquisition of Shares) Act (CASA) in 1981. These results indicate that such bids are not coercive and do not cause a stampede of shareholders to accept partial takeover offers. In fact they suggest that it is more difficult to mount a successful partial takeover offer than a full takeover offer. While partial offers competing with full offers were

excluded from the returns reported below, it is also of interest to note that in only one such case was the partial offer successful. Thus it does not appear that partial offers have a competitive edge over full offers.

Table 21  
**Partial Bids by Outcome (%)**

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Successful	30
Unsuccessful	23
Withdrawn	27
Outcome unknown	20
	100
	===
<i>Partial Bids after CASA</i>	
<i>(July 1981–June 1985)</i>	
Successful	40
Unsuccessful	34
Withdrawn	16
Outcome unknown	10
	100
	===

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The remaining results summarise the returns to shareholders subjected to partial offers. These are based on the blended returns discussed above with one important modification: they have been adjusted for general market-wide share price movements during the period. Thus they can be read as returns over and above the return experienced by the market as a whole and are therefore consistent with the results for all offers presented above. Returns were calculated for various periods but those reported generally cover a period commencing three months before the announcement of the offer and ending one month after the month in which the offer closed (-3,+1). The blended return calculation required price data for both before ( $P_B$ ) and after ( $P_A$ ) the offer, and this information was available only after 1974. Consequently returns are not computed for partial takeovers in the 1972–1973 period.

Non-trading of target firms in the months around the offers meant that returns could not be computed in many cases. The data set was further reduced by the exclusion of offers involving an exchange of shares and cases where there was a competing full offer or where the

partial offer either changed to or from a full offer during the originally announced period of the offer.

The blended return is the weighted sum of the offer price on the shares acquired and the post-offer market prices on the remaining shares. The proportion of shares acquired under the offer is the *pro-rata* value: a *pro-rata* value of 0 means that no shares were accepted by the offerer. In this case the blended return simply becomes the return from a hold strategy where shareholders tender none of their shares to the offer. The return earned by a hold strategy is defined for any investment period as being equal to the capital gain earned plus any dividends received. This is adjusted for the returns to the market as a whole. A *pro-rata* of 0 occurs whenever the partial offer is withdrawn or when minimum acceptance conditions are not met and all shares offered are returned. Where the *pro-rata* is 1, the offerer accepts all shares offered. Here the blended return is equal to the offer premium (adjusted for the market return). When the *pro-rata* value is between 0 and 1, it means that more than the desired number of shares are offered and the offerer uses the *pro-rata* provisions to apportion acceptances.

Partial offers made prior to CASA were of three types: proportional offers, *pro-rata* offers, or offers to buy up to some proportion of issued shares by standing in the market. Very few of the proportional offers made prior to CASA (and for which we know the outcome and have price data available) appear to have been successfully completed.

It is apparent that partial takeover offers are, on average, wealth-increasing transactions for target shareholders. As reported in Table 22a, these shareholders enjoyed an average return of 23.5 per cent over and above the market return for the offer period; the median return was 19.6 per cent. Furthermore, the return earned by a hold strategy over the course of the offer was 13.7 per cent (median 10.4 per cent). These results are **inconsistent** with the idea that partial takeover offers coerce shareholders into accepting an offer that decreases the value of their investment. In fact the opposite is the case. The original shareholders gain whether they accept the offer or just sit it out and do nothing — generally an irrational strategy in these circumstances.

The average premium was 35.8 per cent, measured relative to the target share price approximately three months prior to the announcement of the partial offer. When measured relative to the end of the month immediately prior to the announcement of the offer, the premium was 30.3 per cent. The consistency in the average suggests that most of the price rise in response to the offer occurs in the month of the offer, i.e. the offer is generally a surprise to the market, although some leakage is evident.

The overall results presented above are broken into subgroups according to the value of the *pro-rata* term. Clearly this is a classification scheme generated by hindsight since shareholders do not

know the pro-rata acceptance rate until the offer has closed. These results are presented in Tables 22b through 22d.

Table 22a  
**Partial Takeovers**  
**Blended Return and Holding Period Return (%)**  
**All Partial Offers**  
(returns are adjusted for general market movements)

	Blended Return		Hold Return	
	(-3,+1)	(-3,+3)	(-3,+1)	(-3,+3)
Mean	23.5	20.9	13.7	8.8
Median	19.6	12.5	10.4	-1.3
Standard Deviation	37.8	46.9	35.6	47.1
Observations	47	44	47	44
No. Positive	39	30	29	20
No. Negative	8	14	18	24

*Note:* (-3,+1) refers to the period commencing three months prior to the announcement of the offer and ending one month after the closing date of the offer.

The subgroup most pertinent to the argument against partial takeovers is the successful takeover offer group (Table 22b). This group has been defined here to be those offers that invoked a pro-rating of acceptances. If partials coerced shareholders into accepting value-decreasing offers, it should be evident for this group since these are the offers that coerced the most shareholders into acceptance. Only 19 of the 56 partial offers fell into this category. Not only is this small number inconsistent with partial takeover offers being coercive, but it does mean that results will be sensitive to the descriptive statistic used to summarise them. For this reason we dwell a little more on both the post-CASA period and more statistics.

The blended return was positive for 16 of the 18 takeovers for which price data were available. The average return was 32.9 per cent for this group. This return is an average of the premium offered and the return on a hold strategy. The average premium was 42.4 per cent and the average holding period return was 15.9 per cent. These averages were computed based on the share price three months prior to the offer; those based on the share price one month prior were 27.5 per cent and 6.4 per cent. These differences are apparently caused by some leakage of

Table 22b  
**Partial Takeovers**  
**Blended Return and Holding Period Return (%)**  
**Partial Offers That Prorated Acceptances**  
 (returns are adjusted for general market movements)

	<u>Blended Return</u>		<u>Hold Return</u>	
	(-3,+1)	(-3,+3)	(-3,+1)	(-3,+3)
Mean	32.9	30.6	15.9	12.2
Median	14.4	8.6	-2.4	-7.4
Standard Deviation	39.7	49.8	40.4	55.7
Observations	18	18	18	18
No. Positive	16	15	7	7
No. Negative	2	3	11	11

Table 22c  
**Partial Takeovers**  
**Blended Return and Holding Period Return (%)**  
**Partial Offers That Accepted All Shares Offered**  
 (returns are adjusted for general market movements)

	<u>Blended Return</u>		<u>Hold Return</u>	
	(-3,+1)	(-3,+3)	(-3,+1)	(-3,+3)
Mean	39.8	39.3	24.0	19.7
Median	33.5	32.6	26.3	14.4
Standard Deviation	27.0	28.9	25.5	28.9
Observations	10	10	10	10
No. Positive	10	9	9	7
No. Negative	0	1	1	3

Table 22d  
**Partial Takeovers**  
**Blended Return and Holding Period Return (%)**  
**Partial Offers Where No Shares Were Accepted**  
 (returns are adjusted for general market movements)

	<u>Blended Return</u>		<u>Hold Return</u>	
	(-3,+1)	(-3,+3)	(-3,+1)	(-3,+3)
Mean	6.1	-1.7		
Median	10.0	-6.3	as	as
Standard Deviation	35.4	46.0	for	for
Observations	19	16	blended	blended
No. Positive	13	6	return	return
No. Negative	6	10		

information about the offers prior to their formal announcement. There appears to be more information leakage for this group than for the sample in total.

Several aspects of these results are worthy of further comment. First, both the blended and the hold returns are positive. This fits the picture in Figure 14(1), which illustrates the pricing behaviour predicted by a competitive market for partial takeovers and no expectation of deleterious activities by the acquirer. Second, the hold return is sensitive to the summary statistic used to describe it. The median hold return is -2.4 per cent, with seven positive and eleven negative returns in the 18 computed. Given that the blended return has a positive median of 14.4 per cent (and positive in 16 of 18 cases), it appears that some of the offers may have fallen into the situation described by Figure 14(2). Third, there is little change in either the average blended or the hold return when measured to three months after the closing month of the offer rather than to one month after. This implies that there were no further surprises after the outcome was known.

In twelve cases the offerer retained all shares offered but did not gain sufficient acceptances to employ pro-rating (the pro-rata = 1 subgroup, Table 22c). Fewer of these cases met the requirement that there be a traded price in the relevant months. When offering shares, this group of shareholders experienced an average return of 39.8 per cent. The average hold return was 24.0 per cent and the target firm shares were valued more highly after the offer than before. In these cases the offerer did not achieve control and there was an expectation that either the offer had stimulated incumbent management to lift its game or that another offer for control would be made after the partial bid closed.

The third subgroup reported is the pro-rata = 0 group (Table 22d). In these cases the offer was withdrawn or the minimum acceptance conditions were not met and the offerer did not accept any shares offered under the conditions of the offer. This means that the blended return and the hold return are the same. For the 19 (of a possible 25) targets with available price information, the average return was 6.1 per cent. This fell to -1.7 per cent when measured over a period ending three months after the closing month rather than one month after. The offer premium was 28.3 per cent, which compares relatively unfavourably with the 42.2 per cent that the pro-rata recipients experienced. Nevertheless, it still well above the pre-offer price.

The Companies (Acquisition of Shares) Act 1980 (CASA) explicitly permitted the use of pro-rating for allocating acceptances in a partial takeover offer. This feature of the Act has recently been changed to permit only proportional offers, i.e. the pro-rata to be used by the offerer is announced prior to the offer and applies to all shareholders accepting the offer. The Companies and Securities Law Review Committee (CSLRC) stated that the change was required 'to reduce

significantly the coercive pressures on shareholders that may exist under pro-rata bids' (CSLRC Report to Ministerial Council on Partial Takeover Bids, August 1985). The implication of this statement, and indeed of the arguments of the opponents of partial takeovers, is that the CASA fostered coercive bids. Consequently, the post-CASA period, beginning 1 July 1981, is singled out for further examination.

Table 23a reports the blended and hold strategy returns for all post-CASA partial offers in the CIS Takeover Database. There were 34 such offers but not all met the data requirements of the study. The average blended return was 20.5 per cent over the period  $(-3,+1)$  and 18.6 per cent over the period  $(-3,+3)$ . Of the 32 offers with price data, 28 had positive blended returns and four negative. Thus, on average the partial takeover offers were value-increasing events for the target shareholders. The average premium included in the blended return was 29.5 per cent. The average hold return was a positive 9.2 per cent with 18 of the 32 observations being positive. This is consistent with the picture presented in Figure 14(1) above.

Of the 34 partial bids only 14 employed the pro-rata provisions. As stated earlier, this is in itself inconsistent with the coercion argument. The average blended return to this subgroup of partial offers reported in Table 23b was 23.1 per cent over the  $(-3,+1)$  period and 19.6 per cent over the  $(-3,+3)$  period. This includes an average offer premium of 32.7 per cent. Of the 14 prorated offers, 13 had positive blended returns. It appears, therefore, that accepting these offers was a value-increasing course of action.

The hold strategy return presents an interesting result. Although the average return was 5.9 per cent, only four of the 14 takeovers yielded a positive return. This result, combined with the result above, could suggest that market participants perceived some value-decreasing activities by the offerer but these are more than compensated for in the premium payment. However the sample size is too small for us to draw strong inferences in this area especially since the negative returns are generally quite small.

In nine cases the offerer retained all shares offered. These are cases where the acceptance level was not high enough to use the pro-rata provisions. The average blended return for the eight cases that met the data requirements was 33.7 per cent over the  $(-3,+1)$  period and 32.3 per cent over the  $(-3,+3)$  period (Table 23c). In all of these cases the return was positive. The hold strategy return was also positive. Seven of the eight cases experienced positive returns for an average of 18.8 per cent. This return declined to 10.9 per cent over the subsequent two months. The latter outcome may be due to the non-appearance of either a revised or subsequent offer, the expectation of which was fuelled by the acceptance of those shares offered during the bid.

Table 23a  
**Partial Takeovers**  
**Blended Return and Holding Period Return (%)**  
**All Partial Offers After CASA**  
 (returns are adjusted for general market movements)

	Blended Return		Hold Return	
	(-3,+1)	(-3,+3)	(-3,+1)	(-3,+3)
Mean	20.5	18.6	9.2	5.7
Median	14.4	12.5	9.2	-1.3
Standard Deviation	29.6	39.7	31.1	45.5
Observations	32	32	32	32
No. Positive	28	24	18	14
No. Negative	4	8	14	18

*Note:* (-3,+1) refers to the period commencing three months prior to the announcement of the offer and ending one month after the closing date of the offer.

Table 23b  
**Partial Takeovers**  
**Blended Return and Holding Period Return (%)**  
**Partial Offers After CASA That Prorated Acceptances**  
 (returns are adjusted for general market movements)

	Blended Return		Hold Return	
	(-3,+1)	(-3,+3)	(-3,+1)	(-3,+3)
Mean	23.1	19.6	5.9	2.5
Median	11.7	7.8	-4.8	-8.1
Standard Deviation	27.2	40.9	33.4	55.7
Observations	14	14	14	14
No. Positive	13	12	4	4
No. Negative	1	2	10	10

Targets that were subjects of an offer that led to no acceptances showed a pattern of returns similar to that described earlier for the total period (1974-1985). Overall these shareholders experienced an average positive return of 6.4 per cent in the (-3,+1) period (Table 23d) with seven of the ten offers with price data experiencing positive returns.

**Partial takeovers and bidding companies.** The computed average return to the shareholders of bidding companies, over and above



Table 23c  
**Partial Takeovers**  
**Blended Return and Holding Period Return (%)**  
**Partial Offers After CASA That Accepted All Shares**  
**Offered**  
 (returns are adjusted for general market movements)

	Blended Return		Hold Return	
	(-3,+1)	(-3,+3)	(-3,+1)	(-3,+3)
Mean	33.7	32.3	18.8	10.9
Median	29.6	27.1	18.1	11.5
Standard Deviation	22.6	25.0	24.2	23.0
Observations	8	8	8	8
No. Positive	8	7	7	5
No. Negative	0	1	1	3

Table 23d  
**Partial Takeovers**  
**Blended Return and Holding Period Return (%)**  
**Partial Offers After CASA Where No Shares Were**  
**Accepted**  
 (returns are adjusted for general market movements)

	Blended Return		Hold Return	
	(-3,+1)	(-3,+3)	(-3,+1)	(-3,+3)
Mean	6.4	6.1		
Median	10.0	5.2	as	as
Standard Deviation	34.1	46.8	for	for
Observations	10	10	blended	blended
No. Positive	7	5	returns	returns
No. Negative	3	5		

general market movements, turns out to be quite dispersed. Averages are sensitive to outliers; consequently results are reported both including and excluding an outlier. This sensitivity is due to both the variability in the computed returns and the small numbers of observations available. One bidding company, J.N. Taylor Holdings Ltd., experienced a 426.5 per cent increase in market capitalisation over and above general market movements in the period surrounding its partial bid. This large return can clearly influence the average return reported for bidding firms. It is possible, of course, for 'large' negative returns to occur as well so that

there is a danger of introducing bias into the results by removing outliers.

The returns to shareholders of bidding companies for which data were available are reported in Table 24. Overall it appears that shareholders of bidding companies did not lose wealth around the time of the partial takeover bids. They experienced an average return of 11.5 per cent in excess of general market movements over the period (-3,+1). This falls to 5.3 per cent if the outlier mentioned above is removed. The median return is less affected by the outlier: 4.7 per cent with the outlier included and 3.0 per cent without it. The effect of the outlier is much more dramatic over the (-3,+3) period, where the average return is 25.3 per cent with it included and 9.3 per cent with it excluded.

Table 24  
**Partial Takeovers**  
**Returns to Bidding Companies' Shareholders (%)**  
(returns are adjusted for general market movements)

	(-3,+1)		(-3,+3)	
	with outlier	without outlier	with outlier	without outlier
Mean	11.5	5.3	25.3	9.3
Median	4.7	3.0	16.2	13.0
Standard Deviation	43.4	30.2	91.4	41.5
Observations	27	26	26	25
No. Positive	15	14	16	15
No. Negative	12	12	10	10

While these average reported returns are positive, 15 of the 27 observations were positive and twelve were negative. The returns were also widely dispersed, as is evident by the size of the standard deviation. These statistics suggest that, overall, the wealth of bidder shareholders is not reduced by a partial takeover bid.

Subgroups of these bidding companies were formed on the same basis that the subgroups of target companies were formed above, i.e. according to the value of the pro-rata term. These results are not reported here due to the small numbers in each subgroup and the consequent sensitivity of the results to outliers.

**Summary of evidence on partial takeovers.** The results presented here lead us to conclude that partial takeover offers are, in general, value-increasing transactions. Despite concerns that partial offers may harm shareholders, it is clear that, on average, target

shareholders benefit from these offers. Bidder shareholders do not lose from the offer, which when combined with the gain to target shareholders is evidence of the wealth-increasing effect of takeovers. The concerns as registered in the Companies and Securities Law Review Committee Report are not apparent in the evidence and the case for regulation restricting partial takeovers remains to be proven.

# Conclusion

The evidence presented in this study lends strong support to the pro-takeover theory presented in the earlier study in this series. Large increases in shareholders' wealth are generally associated with takeovers. This evidence is consistent with the view that takeovers, on average, lead to more profitable uses of company assets, and as such they play a vital role in the capital allocation process.

The results of this study are in agreement with the vast amount of accumulated evidence in the United States. Jensen and Ruback (1983) review many studies of corporate acquisitions and conclude that the persistent finding across many different samples and time periods is that the combined wealth of shareholders of firms engaged in acquisitions is increased by those transactions. As noted earlier, the consistency and strength of these results have placed great pressure on opponents of takeovers to substantiate their claims of harmful consequences from takeovers and greatly influenced the regulatory stance of the Securities and Exchange Commission.

The evidence in the current study is also consistent with and similar to the results of Walter (1984), who studied takeovers in Australia in an earlier period, as well as the New Zealand findings presented by Emanuel (1986). Those studies also concluded that takeovers are value-creating transactions. Together the studies present the most rigorous and methodologically sound studies of takeovers in Australia and New Zealand to date, covering approximately the last 25 years of transactions.

The public policy implications of these results indicate that efforts to restrict or reduce the level or frequency of takeovers will be costly to the Australian economy. Whatever ills are believed to associate with takeovers, the economic benefits are so large that there is a strong onus on critics to identify substantial economic costs to support their proposals for reform. Moreover, the clear economic benefits generated by takeovers suggest that reforms are better aimed at ensuring that the incentives for firms engaging in takeovers are enhanced and not reduced.

# References

- Bishop, S. (1986), 'Substantial shareholder notices and equity returns', Working Paper 86-022, Australian Graduate School of Management, September.
- Companies and Securities Law Review Committee (1985), *Report to Ministerial Council on Partial Takeover Bids*, August.
- Dodd, P. and R.R. Officer (1986), *Corporate Control, Economic Efficiency and Shareholder Justice*, Centre for Independent Studies, Sydney.
- Emanuel, D. (1986), 'Takeover announcements and share price reactions: New Zealand evidence 1968-1985', paper presented at the conference *Takeovers and Corporate Control: Towards a New Regulatory Environment*, June, Auckland.
- Foster, G. (1986), *Financial Statement Analysis*, Prentice-Hall, New Jersey.
- Hasbrouck, J. (1985), 'The characteristics of takeover targets', *Journal of Banking and Finance*, vol. 9.
- Jarrell, G., A. Poulsen, and J. Pound (1986), 'Regulating hostile takeover activity: An interpretive history of the US experience', paper presented at the conference *Takeovers and Corporate Control: Towards a New Regulatory Environment*, June, Auckland and Sydney.
- Jensen, M.C. and R.S. Ruback (1983), 'The market for corporate control: The scientific evidence', *Journal of Financial Economics*, vol. 11.
- McDougall, F.M. and D.K. Round (1986), 'The determinants and effects of corporate takeovers in Australia, 1970-1981', in *The Effects of Mergers and Takeovers in Australia*, Australian Institute of Management (Victoria) and National Companies and Securities Commission, Information Australia.
- Melicher, R., J. Ledolter and L. D'Antonio (1983), 'A time series analysis of aggregate merger activity', *Review of Economics and Statistics*.
- Mueller, D.C. (ed.) (1980), *The Determinants and Effects of Mergers*, Oelgeschlager, Gunn & Hain, Cambridge, Mass.
- Tobin, J. (1969), 'A general equilibrium approach to monetary theory', *Journal of Money, Credit and Banking*, vol. 1.
- Walter, T.S. (1984), 'Australian takeovers: Capital market efficiency and shareholder risk and return', *Australian Journal of Management*, vol. 9 (June).

