Target CEO Turnover and Acquiring Shareholders' Returns in the Fourth M&A Wave in the UK

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Declaration

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

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Abstract

This research provides an up-to-date perspective on the impact of the fourth M&A wave in the UK, on the target CEOs and the acquiring shareholder wealth around the takeover announcement. The novelty of this study stems from the characteristics of the recent M&A activities. Beyond being the most important M&As waves in history, recent M&As are characterized by many interesting features such as the large cross-border takeovers, the use of equity as opposed to debt as in the 1980s and a preference for friendly, strategically motivated deals instead of hostile financially motivated deals. Another distinctive feature of recent years is the increased focus on improving internal corporate governance mechanisms in order to maximise firm value. In addressing of these characteristics, we distinguish between cross-border and domestic deals, takeovers on the rising side (the takeover active period) and the slumping side (the takeover less active period) of the M&A wave. Both univariate tests and multivariate tests are employed in our empirical study.

We find a significant negative relation between the probability of post-takeover target CEO turnover and pre-takeover performance in the full samples. This indicates the disciplinary function of UK takeovers in the recent M&A wave. Such a relation only exists on the rising side of the M&A wave, implying that such disciplinary takeovers are confined only to the active period. However, a lower CEO turnover follows cross-border takeovers, indicating that the local CEO's experience and knowledge of the business and of the environment appear to be valuable to foreign acquirers. There is some evidence to point that better governance, such as greater blockholder ownership and a greater proportion of non-executive, lowers the probability of CEO turnover in the takeover active period. The results are similar to findings by Kini et al. (2004) suggesting that takeovers play less of a disciplinary role in the more recent M&A wave and act as a court of last resort when other governance mechanisms are weak.

Focusing on the short-term return, we find significant losses for acquiring firms around the takeover announcement. The losses mainly existed in UK domestic takeovers, while the returns for foreign acquirers are not significantly different form zero. Legal difference and culture difference are positively associated with the gains of acquiring firms. Moreover, we find no relationship between acquirer's returns and the intensity of M&A. High-tech takeovers brought lower abnormal returns to acquiring firms than non-high-tech takeovers, which is even worse after the crash of global IT industry in 2000. Further, we find that the acquiring firms have better returns, when target firms have post-takeover CEO turnover, a greater proportion of non-executive and a lower blockholder ownership. The results indicate the significant influence of the target governance on acquirer's gains.

Chapter 1 Introduction

1.1 Objective of the research

Companies view mergers and acquisitions (M&A) as one of several important means to achieve certain strategic and business objectives. Billions of dollars are invested in making acquisitions. The transactions are always significant not only to the companies, but also to many other constituencies, such as shareholders and managers. This research observes the impact of the corporate control market on target CEOs and the wealth of acquiring shareholders in mergers or acquisitions of UK target firms between 1998 and 2002.

This study is an update UK study on the M&A cycle and it is the first to address the distinctive features in the fourth M&A wave in the UK. The UK wave pattern is almost consistent with those of US takeovers, which go back to the 1890s. The early M&A waves were characterized respectively as: the monopoly wave during 1890-1905, the oligopoly wave in the 1920s, the growth wave in the 1960s, the "greed" wave in the 1980s, and the globalisation wave in the 1990s (Jovanovic and Rousseau (2002), Sudarsanam (2003)). The active merger movement in the UK can be traced back to the 1960s, and UK waves share similar features with US waves. The fourth M&A wave in the late 1990s had distinctive features, such as dominant friendly deals, increased international transactions and high-tech takeovers. These characteristics made the recent M&A wave very special and worthy of further investigation.

This research investigates controversial issues in M&A activities. The special characteristics of the fourth UK M&A wave make these issues more interesting. One question is to what extent the market for corporate control, that is takeovers, serves

as an effective external disciplinary mechanism to remove poorly-performing target managers who are not able or not willing to maximize shareholders' interests. The conflict between managers and shareholders is known as the agency problem. Several mechanisms have been suggested to decrease such agency problems, when managers pursue their own interests instead of looking after their shareholders and improving the firms' value. This is especially so when internal mechanisms have failed to discipline ineffective managers, and the corporate takeovers are considered as "a court of last resort" to replace such managers (Jensen (1986)). This study examines the effect of the market for corporate control on target CEOs and even traces the change of CEOs career following takeovers for two years.

Another inconclusive issue in the literature is the impact of takeovers on the wealth of acquirers' shareholders. The major gain of target shareholders is unambiguous, as the acquisition premium is paid to target shareholders to abandon their ownership. But the sizes of returns to the acquiring firm are very disputable. Empirical research shows mixed results for the wealth effect to acquiring shareholders. Some receive a small positive abnormal announcement return (Franks and Harris (1989), Moeller and Schlingemann (2005)), while other studies observe zero or negative announcement returns (Schwert (2000)). In the recent M&A wave, the "new economy" bubble in the 1990s brought excitement into M&A activities. Whether acquiring shareholders can benefit is a very appealing research theme. In particular, this study considers the effect of internal corporate control mechanisms on the wealth of acquiring shareholders.

Research on M&A activities has been carried out for decades. Such research documents the characteristics of M&A activities from various dimensions, such as the motives for takeovers, the effects of takeovers, etc. However, there are only a dozen studies that look at the corporate control market, which may be due to the

limitation of data. Research shows low survival rates of target managers following takeovers, but these studies normally suffer a very small sample which reduces replication. Further, no research considers the effect of target manager departure and the later career development of these target managers following takeovers. When considering the relation between post-takeover CEO turnover of target firms and pre-takeover performance, few studies look at both accounting and market-based performance measures which provide different perspectives on target performance.

Moreover, acquiring shareholders' gains remain controversial, although hundreds of papers research the effect of takeovers on shareholder wealth. Especially in the recent M&A wave with many distinctive characteristics, international transactions are becoming essential. But there is an absence of an updated empirical work in this area. As far as we know, no research looks at international takeovers into the UK and related issues, such as the effect of legal system and cultural differences. These issues have become non-negligible nowadays. Additionally, the "new economy", due to the boom of the internet and the telecommunications industries in the 1990s, pushed the M&A wave to a new high. But few researchers have studied the difference of each stage of the M&A wave, which may have many implications for the latest investment. Also, the effect of well-developed internal corporate governance is seldom examined empirically under the consideration of the context of M&A, which is incompatible with the fast improvement of corporate governance in recent years.

1.2 Features of this research

To address these gaps in the literature, we use both univariate and multivariate tests to examine the impact of the recent UK corporate takeover market on target CEOs and acquiring shareholders' wealth. This research has the following features.

Firstly, unlike previous studies, this study comprehensively collects and investigates thoroughly potential determinants of target CEOs departure and acquiring shareholders' wealth. These determinants are grouped into four sections: CEO characteristics, target governance characteristics, target firms' and acquiring firms' characteristics. This research attempts to identify the significant determinants related to target CEO departure and acquiring shareholders' wealth.

Secondly, this study focuses on mergers or acquisitions of UK target firms that occurred from 1998 and 2002. It is distinguished from previous studies because we consider major features of the fourth UK M&A wave. In the recent wave of the 1990s, both the number and total transaction value were much higher than ever before. During the period of 1993-2002, about 32,000 total completed M&A deals are recorded for the UK (Thomson Financial Securities Data). The value of M&A deals in the UK rose from a mere $36 billion in 1993 to $415 billion in 2000 before the market crashed. There were several multi-billion-dollar deals during the boom. In addition, international transactions grew dramatically and they accounted for more than one-third in the recent M&A wave. Cross-border takeovers have distinctive characteristics, compared to domestic takeovers. The new markets open more opportunities, the high technologies allow firms to improve and extend their product, and international clients increase their market scales. Some of the largest international deals in history were done during that period. In 1999, UK mobile telephone company Vodafone undertook a hostile acquisition of the German telecom company Mannesmann with a total transaction value of over $202 billion. Meanwhile, cross-border transactions face greater difficulties in view of severe information asymmetry in the takeover process, serious lack of experience in the new market and more complex integration across different cultural backgrounds. Vodafone wrote off several billion dollars to take account of impaired goodwill two years later after the completion of the takeover. Under the consideration of the

increasing importance of international transactions in the recent M&A wave, we construct a comparison between cross-border takeovers and domestic takeovers. Acquiring firms from 15 different countries are examined and the legal system and cultural problems in international transactions are also investigated in order to provide insight into the effects of international takeovers.

Thirdly, few studies attend to the different effects of each stage of the M&A wave. In the recent M&A wave, the environments were dominated by friendly and strategically-oriented takeovers. In the 1990s, more than 90% of M&A deals occurred as friendly takeovers. Coincident with industries' technology shocks, the stock market was booming with high technology, media and telecoms in the late 1990s. More than 40% of worldwide merger deals occurred in the high-tech section in 2000. It is argued that high M&A activity is correlated with the high stock market period (Maksimovic and Philips (2001), Jovanovic and Rousseau (2001), Crook (1995, 1996)). The general high market valuation makes stock payment more popular in this period. Meanwhile, managerial hubris is normally more serious in such high stock markets, which coincides with high takeover markets (Key (1997), Tse and Soufani (2001)). The fourth M&A wave in the UK reached a peak in 2000. The "new economy" bubble in the stock markets burst, resulting in a dramatic decline in M&A activities. During the period 2000-2002, the total number of deals and the total value of deals decreased by 37% and 70% respectively. In particular, the high-tech takeovers especially in the media and telecoms shrank significantly. Corporate equity lost attractiveness as the payment in transactions. The whole market seemed to cool down, and managers of companies and shareholders seemed to be more rational following the collapse. Hence, these distinct features in different stages of the M&A wave could have significant impacts on takeovers. This study focuses on the difference between the rising-side takeovers and the slumping-side takeovers in the M&A wave, which is the first time these have been attempted for a UK M&A study.

Fourthly, internal corporate governance mechanisms have been well developed in the 1990s (Kini et al. (2004)). A series of reports[1] in the UK have demonstrated increased focus on improving internal corporate governance mechanisms in order to maximise firm value. The target board, larger blockholders and non-executive directors (outsiders) have to start playing more important roles in monitoring managers of companies and aligning the interests of the managers to those of the shareholders. But few studies take this issue into account. Ignorance of corporate governance may lead to missing an important piece of research in M&A. Therefore, we investigate the influence of these improved corporate governance mechanisms in the takeover market.

1.3 Summary of main findings

This study extends the literature on corporate takeovers by examining the recent UK takeover market. The main focuses are the disciplinary role of recent takeover activities in the UK and their effect on acquiring shareholders' wealth. The novelty of this study stems from the special features of the fourth M&A wave. The research carried out in this thesis leads to a number of main findings, which may be summarized as follows:

The disciplinary role of takeovers

- The disciplinary function of the UK takeover market is indicated by the significant negative relationship we find between post-takeover target CEO turnover and pre-takeover target performance. Our results are consistent with the findings of Martin and McConnell (1991), and Denis et al. (1997) in the US takeover market. We also find that such a negative turnover-performance

[1] Cadbury Report (1992), Greenbury Report (1995), Hampel Report (1998), Turnbull (1999) and Higgs Report (2003)

relationship exists in both cross-border and domestic takeovers. In particular, such a turnover-performance relation is discovered in the active takeover period of Jan 1998-May 2000. This result suggests that UK disciplinary takeovers are more operative in the intensive periods of a M&A wave, which is in line with the study of Mikkelson and Partch (1997) for the US merger wave.

- Compared with domestic takeovers, a lower target CEO turnover rate follows cross-border takeovers, 52.24% vs. 65.33% in one year after the takeover announcement. This indicates that target CEOs may be more valued in international transactions. Foreign acquiring firms face more challenges and more difficulties than domestic acquirers, so that they have to take advantage of target CEOs for their special knowledge of the local business and local environment. Such target CEOs are more likely to be retained in the new firms. The negative effect of cross-border takeovers on target CEOs are statistically significant, especially during the later period of June 2000-Dec 2002 when international takeovers were more active.

- We find that cultural differences play an important role in cross-border takeovers. Four different dimensions of Hofstede's index provide evidence that acquiring firms from masculine countries are more likely to maintain target CEOs. Those masculine acquirers are more stressed by the competition and performance, so they may need target CEOs to help the integration of the target. This is observed mainly in the less active takeover period.

- Alternative target corporate governance mechanisms are found to have no significant influence for the whole sample in the context of corporate takeovers. However, in the less active takeover periods, blockholder ownership and the proportion of non-executives on target boards have a significant negative

relation with post-takeover target CEO turnover. This indicates that corporate takeovers substitute blockholders and non-executives of target firms to discipline the inefficient target CEOs.

- Some CEO characteristics and deal characteristics are significantly associated with target CEO turnover following takeovers. For example, CEO duality reduces the likelihood of CEO turnover because of the large influence of such a CEO with the joined title and the responsibility of company CEO and chairman. Stock payment also has a negative relation with CEO turnover, because stock payment may provide more security to target CEOs. But hostile takeovers are followed by higher target CEO turnover, which suggests that hostile takeovers are still play a disciplining role in the recent takeover market.

The announcement effect on the acquiring shareholders' wealth

- For the whole sample, acquiring firms have a significant negative announcement abnormal return of -0.92%, and losses accumulate to -3.88% over the period of (-30, +30) around the takeover announcement. Our results are consistent with previous studies by Sudarsanam, Holl and Salami (1996) and Draper and Paudyal (1999) that acquiring firms have a small but significant negative return about the takeover announcement.

- UK domestic acquiring firms suffer a significant loss of -6.31% over (-30, +30) around the takeover announcement, which is significantly lower than that for foreign acquiring firms over the same period. Multiple regressions show a significant positive relation between cross-border takeovers and acquirers' returns around the takeover announcement. This provides partial support for the

existence of imperfections in markets, which give multinational firms an advantage of international diversification over local firms.

- We find no significant relation between the intensity of M&A activities and acquirers' returns around the takeover announcement. However, the CAARs of acquirers over (-10, -1) are significantly lower on the rising side than on the slumping side of the merger wave. This suggests that the market reactions shortly prior to announcement were affected by the M&A activity eras. This result is in line with the argument of Jensen (2004) that overvaluation in the boom market may encourage managers to make takeovers that may not create profit in the future, which lead to acquiring shareholders' losses.

- In line with the positive impact of cross-border takeovers, "legal difference" and "culture difference" have a positive association with the gain of acquiring firms. Foreign markets seem to be more confident of the benefit of better investor protection supplied by the Scandinavian and Germanic civil law system and of the learning benefits provided by the culture differences. Such significance appears on the slumping side of the M&A wave which was more dominated by international transactions than the rising side.

- Target governance has a significant influence on acquirers' gains, especially on the slumping side of the M&A wave. When the rumours or news about target CEO departure came out around the takeover announcement, acquiring firms had better abnormal returns. This indicates that market reactions are more positive to disciplinary takeovers than to those without target CEO departure. The proportion of non-executives on target boards is positively related to acquirers' returns, suggesting that effective monitoring by outsiders leads to a good deal. But target blockholders' ownership has a negative association with

acquirers' returns. High premia asked for by large target blockholders may lead to losses for acquiring firms.

- Takeovers in high-tech industries brought lower abnormal returns to acquiring firms than those in non-high-tech industries. Such a situation became worse after the crash of the global IT industry in 2000. Considering the high risk and uncertain future of high technology, it is understandable that markets have less confidence. In line with previous studies, stock payment is positively associated with acquirers' gain, while multiple bidders and higher premium is negatively related to acquirers' returns around the announcement. This suggests that a higher offer price bid up by multiple bidders and higher premium lead to worse returns to acquiring firms.

- A significant positive relationship is found between target pre-takeover performance and acquirers' returns around takeover announcements. Better-performing targets may increase market confidence about such takeovers. Moreover, growth acquiring firms have significantly better announcement returns than value acquiring firms. This indicates that markets are more likely to support growth acquiring firms and have positive reactions to their takeovers.

1.4 A guide to the thesis

As mentioned earlier, the issues concerning target post-takeover CEO turnover and the wealth effects on acquiring shareholders in the recent UK M&A wave provide the focus of the present thesis. It is organised into the following chapters.

Chapter 2 reviews the theoretical background of corporate governance in the takeover contest, followed by a literature review on target CEO turnover in both the

US and UK takeover market. Some shortcomings in previous studies encourage us to improve research on the disciplinary role of takeovers. Moreover, the hypotheses are developed to clarify the relationship between post-takeover target CEO turnover and its potential determinants.

Chapter 3 provides empirical tests of the effect of recent M&A activities on target CEOs. As the M&A boom at the end of the 1990s was part and parcel of globalization, target CEOs are traced separately following cross-border and domestic takeovers. The potential determinants and their relationships with the probability of post-takeover target CEO turnover are compared in the context of cross-border and domestic takeovers. We observe many significant differences between international and domestic transactions. Meanwhile, this chapter contrasts characteristics of target firms with and without CEO turnover.

Chapter 4 looks further into the features of the fourth M&A wave in the UK and compares target CEO turnover following takeovers on the rising side and following those on the slumping side of the recent M&A wave. It highlights the change in the disciplinary role of takeovers with the intensity of takeover activities. Also, the potential determinants of target CEO turnover are compared in two different takeover periods, suggesting that different determinants are significantly related to the likelihood of target CEO departure.

Chapter 5 presents the literature review on abnormal returns for both target and acquiring shareholders, especially short-term returns to acquiring firms around the takeover announcement. It shows the inconclusive nature of the evidence on acquirers' returns. Moreover, the chapter reviews the common methodologies and statistical tests in event studies. It notes the best performance of the market model and the advantages of both parametric and non-parametric statistical tests.

Chapter 6 examines the abnormal returns to acquiring firms around the takeover announcement. The wealth effects on foreign acquirers and domestic acquirers are distinguished. Additionally, the investigation is carried out on how the acquiring shareholders wealth effects vary according to deal characteristics, target corporate governance characteristics, and target and acquiring firm characteristics.

Chapter 7 compares acquirers' returns around the announcement of takeovers occurring in the rising side with those on the slumping side of the M&A wave. The investigation takes account of the effect of the economic boom and the collapse of the stock market in 2000, which was coincident with the intensity of takeovers. The comparison of two eras of takeover activities runs through the whole analysis.

In conclusion, Chapter 8 summarizes the contributions of this study and the findings of this research. Further, this study suggests a number of interesting avenues for further research in international takeovers and M&A waves.

Chapter 2 Discipline Takeovers & Target CEO Post-takeover Turnover

2.1 Introduction

Many financial economists argue that takeovers serve as a useful external control mechanism for removing inefficient managers who cannot or will not maximize shareholders' interests (Jensen (1988), Weisbach (1993), Frank et al. (2001)). To some, takeovers are an important method of correcting managerial failure. Jensen (1986) suggests that the corporate takeover "serves as a court of last resort... when the corporation's internal controls and board level control mechanisms are low, clumsy or deficient."

Compared with previous M&A waves, the recent M&A activities are characterized by many interesting features, such as large cross-border takeovers, the use of equity as opposed to debt in the 1980s, and a preference for friendly, strategically motivated deals instead of hostile financially motivated deals. In such an environment, the issue is the extent to which recent takeovers still play a disciplining role. We attempt to answer this question in the context of the recent UK takeover market over the period 1998 to 2002. Additionally, the recent M&A wave reached a peak in 2000 with the boom of "new economic" bubble optimism and it slumped with the subsequent stock market collapse. A further question is, therefore, whether the rising (active) and slumping (less active) M&A periods affect the disciplinary function of takeovers.

Specifically, we identify potential determinants that significantly affect CEOs' turnover and compare them in the different context of domestic and cross-border takeovers, the rising side and the slumping side of the M&A wave. Compared with previous studies on takeover markets, this study includes a comprehensive list of factors that might have an effect on the post-takeover CEO turnover of target firms. These factors represent the CEO's personal characteristics, target governance characteristics, deal characteristics and target firm characteristics.

Furthermore, some researchers argue that corporate governance mechanisms are more developed in recent years (Kini et al. (1995, 2004)). Our study provides a comparative assessment of the managerial disciplining provided by three principal parties suggested by the literature, namely blockholders, the target board, and debtholders of target firms. Weir and Jones (1999) suggest that "If the internal mechanism fails.... then the final external governance sanction, namely the market for corporate control, comes into play." Thus, the question is whether internal or alternative mechanisms come to play a disciplinary role when takeovers occurred. The relationship between post-takeover CEO departure and three target corporate governance mechanisms is tested in the context of the UK takeovers market in the following chapters.

In this chapter, we review the relevant literature in section 2.2. Section 2.3 provides our hypotheses. The conclusion is in section 2.4.

2. 2 Literature Review

Literature on the theoretical background is reviewed in the first section. Then, we review empirical evidence on target post-takeover CEO turnover, in both the US and the UK.

2.2.1 Theoretical background

Jensen and Smith (1985) argue that the modern corporation is "a legal entity that serves as a nexus for a complex set of explicit and implicit contracts among disparate individuals". In the theoretical profit-making firm, the goal of managers is assumed to maximize the returns on wealth that shareholders invested, so that the most important contract is between the shareholders who risk their wealth in the firm and the managers. Thus, managers are acting as agents for shareholders. Fama and Jensen (1983) suggest that, for the financial economist, this relationship creates efficient management, because it allows for specialization: the shareholder specializes in risk-bearing, while the managers specialize in the management function. However, when

managers act in their own interest rather than in the interests of shareholders, a conflict between managers and shareholders arises. Since Jensen and Meckling (1979), researchers find that the employment of management impedes shareholder wealth maximization because the best interests of managers may differ from the best interests of shareholders. Many studies have discovered the potential for this conflict, and it is known as the agency problem.

Several mechanisms are suggested in the literature to reduce these agency problems. In general, the parties disciplining management of a poorly performing firm are divided into the internal and external control mechanisms. Normally, internal mechanisms include large blockholders and the nonexecutive directors (outsiders). In addition, there is the managerial shareholding. If a substantial proportion of the wealth of executive managers consists of shares in a company, this may lead them to have incentives which are congruent to those of shareholders. So it is helpful to mitigate the agency problem in the firm. In addition, concentrated shareholdings by large shareholders, and in particular blockholders and institutions, can increase managerial monitoring and so such shareholders may replace management when the firm's performance is poor. Moreover, nonexecutive directors, i.e., outside directors, may act on the shareholders' behalf and remove the managers who perform poorly in their view.

For external mechanisms, creditors, the managerial labour market and the market for corporate control may play an external disciplining role. The disciplining of management in poorly performing firms may take place, when there is financial distress, requiring equity issues and capital restructures (Frank et al. (2001)). The labour market for managers can motivate managers to improve their reputation among prospective employers (Agrawal and Knoeber (1996)). This not only creates a powerful disciplinary force on poorly performing managers, but has a significant negative effect on the future careers of these managers. Finally, another important external disciplinary mechanism is takeovers. Bidders may discipline the management of the acquired firm.

Poorly performing firms may be valued below their potential in the marketplace and individual shareholders have difficulty in replacing inefficient managers. These firms may become attractive targets for bidders. In the process of a takeover, the conflict between shareholders and managers is exceedingly high. Target firms' managers may be faced with a conflict of interest between their responsibilities and their own potential career and wealth changes. In the case that a bid offer is in the best interests of their shareholders, managers may find themselves unemployed if the bid is successful. In fact, high rates of management turnover after a takeover are well documented in the literature. Thus, problems arise.

Following Berle and Means (1932), Manne (1965) introduced the theory of the market for corporate control. Manne views takeover as a useful mechanism for encouraging managers to pursue shareholders' wealth maximization strategies. According to Manne, corporate control is a valuable asset actively traded on a market. The operation of this market depends upon the link between a firm's share price and the performance of its management. Poor performance relative to some benchmark causes a firm's share price to fall below its value under efficient management, allowing a transfer of control by encouraging takeover bids from prospective new management teams. Later, a series of papers by Jensen and Meckling (1976), Fama (1980) and Fama and Jensen (1983) refined this theory. In a disciplinary takeover, the acquirer obviously believes that internal control mechanisms have failed to effectively monitor top management. From time to time, the takeover market provides additional discipline to management. Agrawal and Knoeber (1996) view takeover activity as one of seven mechanisms to control agency problems between managers and shareholders. According to Jensen (1986), "when the corporation's internal controls and board level control mechanisms are slow, clumsy or deficient", or when other mechanisms fail to influence managerial performance, the external market for corporate control comes into play and acts as a "court of last resort" to replace ineffective management. Hirshleifer and Thakor (1994) suggest that the takeover market serves as a substitute for internal control mechanisms in applying discipline to ineffective management. The takeover process itself has been considered as a mechanism for resolving owner-manager conflicts. The takeover

market provides a source of external discipline to target CEOs which substitutes for another discipline. Through this mechanism, takeovers of inefficiently managed companies (or companies in which non-value-maximising behaviour dominated) would result in the replacement of the CEO and lead to a more efficient use of the target firm's resources.

2.2.2 Empirical Evidence on CEO Turnover

If takeovers perform a disciplining role on target CEOs, we would expect that following takeovers a significant proportion of CEOs depart their companies. A number of studies have investigated whether this departure occurs. We review US studies, followed by studies for the UK.

2.2.2.1 US Studies

Walsh (1988) investigates the effects of mergers and acquisitions on the top management of target firms after takeovers. He examines a relatively small sample of 55 takeover bids that occurred between 1975 and 1979, and finds a one-year top executive departure rate of 25%. This increases to 59% by the time the target company has been combined with the acquiring company for five years. Walsh (1989) increases his sample to 102 US target companies and finds a similar top manager post-takeover turnover rate. Walsh and Ellwood (1991) test the relationship between the target firm's performance history and its subsequent top management turnover by using a same sample of 102 US target firms. Their results show that the target firm top management turnover rate is higher than the control group, but there is no relationship between targets' previous stock performances and their subsequent top management turnover. In these studies, Walsh uses a survey to collect data about target management, which reduces his research sample size. Moreover, Walsh and Kosnik (1993) collected data on target firms involved in takeovers between 1979 and 1983. Their research data concerned competitors of these target firms and a control group of firms matched by size of sales. The analysis provides only minor support for the discipline function of takeovers, which happened only among target firms

with histories of sustained poor performance. But their conclusion is only based on a small sample of 59 target firms.

Based on a larger sample of 253 takeovers, Martin and McConnell (1991) examine the role of corporate takeovers in disciplining top managers of poorly performing target firms over the time period of 1958-1984. They find a high turnover rate of 41.9% for the targets' top executives in the year following a successful tender offer and 19% during the second post-takeover year, which is much higher than that prior to the takeover. By using two measures of corporate performance, the traditional market model and industry-adjusted returns, their results show that firms with post-takeover top manager turnover were significantly under-performing other firms in their industries prior to takeovers as well as other target firms with no post-takeover change in the top executive.

Agrawal and Walking (1994) sample 182 *Forbes 800* firms that became targets over the period 1980 to 1986, both successful and unsuccessful. They find a 55% unemployment rate for the target executives (over the 3-year period surrounding the bid), which is similar to the turnover rate in Martin and McConnell (1991) who analyze targets of successful tender-offer bids. The unemployment rate for the nontarget sample is only 30% over the same 3-year period. The unemployment rate is higher in successful acquisitions than in unsuccessful bids, 65% vs. 44%.

Kini, Kracaw and Mian (1995) investigate 244 successful tender offers announced between 1958 and 1984. They find a significant increase in CEO turnover occurs following successful takeovers, from 29.9% before takeovers to 57.8% in the three-year post-takeover period. In addition, they test the relation between corporate takeovers and the board of directors to discipline top managers. Their results show an inverse relation between post-takeover CEO turnover and pre-takeover market-related performance. Such a relationship is concentrated in targets with inside-dominated boards of directors, compared with outsider-dominated boards of directors.

Ghosh and Ruland (1998) study 212 acquisitions over the period 1981 to 1988. The

mean turnover rate of target firms' top executives is 29.10% following acquisitions. Moreover, they investigate how managers' preferences affect the payment for corporate takeover. A strong positive association between target managerial ownership of target firms and the likelihood of stock transaction suggests that target managers are more likely to retain jobs in new firms, when they receive stock payment.

Harford (2003) studied a sample of 1,091 directors from boards of 91 *Fortune 1000* firms receiving takeover bids between 1988 and 1991. The fraction of CEO turnover is 73% in his samples, which is lower than other insider directors (81%), and outsider directors (90%). He finds that, following completed offers, target CEOs hold fewer directorships in the future than the control group. There is no significant relation between CEO turnover and the firm's performance in his sample.

Hartzell et al. (2004) analyse benefits received by target CEOs in a sample of 311 completed US acquisitions between 1995 and 1997. They find that 57% of target CEOs join the board of directors of the buyer. When CEOs do not become officers in the combined firm, they obtain approximately $5 million in additional cash pay. Their results show a very large incidence of job losses for target CEOs and survival rates for CEOs remaining with the acquirer are quite low, with annual turnover roughly three times the non-merger rate observed in the literature.

Based on a sample of 279 takeovers, Kini et al. (2004) compare the US takeover market over two periods: 1979 to 1988 and 1989 to 1998. 46% of target CEOs departed the new combined firm after takeover in the earlier period. The CEO turnover rate increases to 60% in the later period. They find a weakly significant negative relation between the probability of post-takeover CEO turnover and pre-takeover performance during the earlier sample period. The results suggest that the role of the takeover market as a performance-related discipline has changed from the 1980s to the 1990s.

2.2.2.2 UK Studies

Kennedy and Limmack (1996) examine a sample of 274 UK target firms involved in takeover bids from 1980 to 1989. They report a CEO post-takeover departure rate of 40.14% in the 12 months after the completion day and of 25.7% in the second year after the takeover. These are both much higher than the turnover rate prior to takeovers. In their sample, target firms with CEO turnover in the first two years after a bid experienced lower returns prior to the takeover than those targets without post-takeover CEO turnover. This provides some support for the disciplinary function of takeovers on non-wealth maximizing management.

Franks and Mayer (1996) focus on the disciplining function of hostile takeovers in the UK over the period 1985 to 1986. Of the 80 hostile bids, a 90% departure rate for all executives follows 31 UK successful hostile takeovers, and 50% of the directors resigned after 34 accepted bids. By using four measures of pre-bid financial performance (share price returns, changes in dividends per share, cash flow rate of return on assets and Tobin's Q ratio), they find little evidence of poor performance of target firms prior to bids. Thus, they conclude that hostile takeovers do not perform the function of disciplining ineffective target management.

Dahya and Powell (1998) investigate the impact that 262 successful hostile and friendly takeovers have on the rates of top management changes for UK target firms. The rate of top executive departures is 54.5% in the 12-month post-takeover period for hostile targets and it is nearly triple that for friendly targets. In addition, all hostile targets experienced at least one executive change following the first bid, while only 76% of the friendly targets experienced a director resignation. Following hostile takeovers, acquiring companies seem to perform a greater degree of disciplining at all levels compared to friendly takeovers.

Weir and Jones (1999) compare director turnover in 74 acquired UK public limited companies during the period 1991 to 1994 and 74 matched non-acquired firms. Their results show that the acquired firms experienced a significantly greater average

turnover of directors than did the non-acquired firms. Moreover, they find weak evidence that acquired firms performed poorly prior to takeovers by using after-tax profit margin.

Some argue that, even among firms that are not taken over, corporate takeover activities can play a role in the discipline of ineffective management in poorly performing firms. For instance, Denis and Denis (1995) find that takeover-related pressures often cause the forced resignation of top management and lead to improvements in performance. Mikkelson and Partch (1997) compare top management turnover in unacquired firms in two five-year periods: the active takeover market of 1984-1988 and the less active market of 1989-1993. They find that turnover frequency is much higher in the active takeover years than that in the less active period. Furthermore, they find a significant relation between top management turnover and firm performance in the period of active takeover. Moreover, Denis and Kruse (2000) examine the incidence of disciplinary events by comparing active (1985-1988) and less active (1989-1992) takeover periods. They document a significant decline in the frequency of nonroutine turnover of top officer from the active to the less active takeover period (42% to 31%). These results suggest that takeover activities affect the intensity of managerial discipline.

In summary, there is a relatively large percentage of job losses for target top management following takeovers in both US and UK target firms. The annual turnover rates of target top managements are generally higher than the normal (non-merger-related) rate observed in the literature. Few target CEOs became top executives in the acquiring firms, and survival rates for target CEOs who remained within the acquirer are quite low. Some papers even show that the vast majority of target CEOs who exited the firm did not obtain further employment (Hardford (2003)).

2.2.2.3 The Shortcomings of Previous Studies

There is some research that examines the impact of M&A on target management

following takeovers, but previous studies have some shortcomings. Firstly, the sample sizes in some papers are small. In the study of Walsh (1988), the sample included 55 takeover cases. Especially, for UK studies, Franks and Mayer (1996) studied 80 hostile takeovers in 1985 and 1986. Weir and Jones (1999) examined 74 target firms between 1991 and 1994. Generally, the small sample might not be representative.

Secondly, very few papers consider personal details about CEOs and their later career change following takeovers. Actually, such an investigation would provide more information about the effect of takeovers on target managers. Also, the intensity of M&A activities may affect the disciplinary role of takeovers (Mikkelson and Partch (1997)), but little research has studied the impact of merger cycles. As far as we know, no UK research has been done in these fields.

Thirdly, the research time period in the latest study is the end of the 1990s (Kini et al. 2004) for US studies. For UK studies, the latest research period is the middle of the 1990s, e.g. 1991-1994 in the study of Weir and Jones (1999). The evidence from some studies (Kini et al. 2004) shows that the disciplinary role of takeovers changes over time. In particular, the recent M&A wave reached a peak in 2000 and had very distinctive features. For example, the increasing international transactions face a much more complex situation than domestic transactions, which may affect the disciplinary role of takeovers. The study of the corporate control market needs more up-to-date research, especially for the current role of takeovers in the UK.

Fourth, most papers measure target performance using either capital market returns or accounting ratios. But different measures provide a different perspective of target performance. Only one measurement may not present a whole perception of target performance. For a comprehensive investigation, it is better to employ both approaches to get a better picture of company performance.

Fifth, the data sources vary in early studies. The series of papers by Walsh (1988, 1989, and 1991) employ surveys to get the information about target managers. The

use of a survey is still a controversial methodology in financial research. Although surveys have high coverage and good ease of access, it suffers a low response rate and high likelihood of bias. More reliable data sources should be used.

According to the above literature review, there are obvious gaps in UK studies. This thesis tries to improve these issues later in the empirical study.

2.3 Hypotheses

From the literature, we understand that some factors may be related to CEO turnover. These factors are divided into four groups: CEO characteristics, target governance characteristics, deal characteristics and target firm characteristics. In this section, we review the relation between CEO turnover and these factors, and then develop our hypotheses.

2.3.1 CEO Characteristics

a_1. CEO Age

Ha_1: The target company's CEO turnover is related to the CEO's age.

The strong relationship between CEO turnover and her/his age is recorded in some previous studies (Weisbach (1988), Murphy and Zimmerman (1993), Goyal and Park (2002)). In general, the experience and reputation of a CEO grows with his/her age. After the takeover, in particular cross-border M&A, the benefit that a CEO may bring into the new company might reduce the possibility of the CEO's forced departure. Harford (2003) examines the effect of takeovers on board directors of US target firms from 1988 to 1991. He finds a significant positive relationship between CEO age and the possibility of remaining on the surviving board after takeover. His results show that an older director has a greater chance of surviving after a takeover event than a younger director. We suppose that CEOs with richer work experience are less likely to be replaced. Work experience is positively related to a CEO's age,

so that the possibility of CEO turnover would negatively relate to a CEO's age. Hence, CEO age is included as a variable in our analysis.

However, another situation is that CEO turnover may be caused by her/his reaching retirement age. Then a positive relation between CEO turnover and her/his age exists. In the study of Mikkelson and Partch (1997) on post-takeover managerial turnover, pooled logistic regressions show a significant and positive relation between CEO turnover and CEO age > 59. Goyal and Park (2002) investigate CEO turnover rate by using a sample of 455 CEO turnovers from 1992 to 1996. In logistic regressions explaining CEO turnover rate, they find the coefficients on CEO age and the dummy for CEO ages of 63 to 65 are positive and statistically significant at least at the 1% level. These results might suggest that the probability of CEO turnover increases when CEO age is near the normal retirement age.

a_2: CEO-Founder

Ha_2: The target company's CEO turnover is related to whether the CEO was the founder of that target firm.

There are some cases in which the CEO of a target firm is the founder of the firm. After years of development, the organization has achieved a level of complexity and its larger size may require a change in top management to help their further expansion. Sometimes, such firms also face the problem of no obvious family executive succession. Some founding CEOs decide to sell their firms. However, founding CEOs have a good knowledge of the firm and a specific expertise that might be valuable to the acquiring firm.

In the study of Denis and Sarin (1999), 13% of CEOs are founders of firms in their samples. Denis et al. (1997) document the nonroutine top executive turnover in 1,394 US firms over the period of 1985-1988 and 6.1% of top executives are firms' founders. He finds an insignificant relationship between the probabilities of top executive turnover and if a top executive is a member of the founding family.

According to the theory, the relationship between the CEO being a founder and the probability of his/her departure may be positive or negative.

a_3: CEO Tenure

Ha_3: The target company's CEO turnover is related to the CEO's tenure.

Most previous studies use tenure to measure the years that a CEO had held his position. A significant relationship between CEO turnover and tenure is documented in the literature. But the results of studies which relate CEO turnover and tenure to his/her tenure are mixed.

On the one hand, CEO tenure could affect CEO turnover negatively, since the tenure of a CEO is usually used in the literature as one of the measures of a CEO's experience. CEOs with the company longer have detailed knowledge of the nature of the business. In particular, for the foreign acquiring company, the good knowledge in both the UK business environment and target business might benefit their need for integrating the new firm. Therefore, such CEOs are more likely to keep their seat in the new firm, which suggests that CEO turnover is negatively related to a CEO's years with the company. Moreover, Salancik and Meindl (1984) argue that CEOs with longer tenure could have established a power base over time, indicating the negative relationship between CEO turnover and CEO tenure.

On the other hand, the longer tenure may indicate that a CEO is close to her/his retirement. CEOs with long tenure may feel more associated with the management style with the target firms than those with less tenure, so that it is more likely that they are less satisfied with the new or changed process in the new firm. In such a case, CEO turnover would be positively related with CEO tenure. Goyal and Park (2002) test the relation between CEO leadership and CEO turnover rate, and CEO tenure is included as a control variable. Their logistic analysis shows a strong positive relation between CEO tenure and CEO turnover at 1% level of statistical significance. Using a sample of Italian target firms, Brunello et al. (2003) find a

significant positive effect of CEO tenure on the probability of CEO post-takeover turnover at the 10% significance level.

However, some studies do not find a significant relation between CEO tenure and CEO turnover. Denis et al. (1997) examine the rate of nonroutine top executive turnover in 1,394 US firms. Their logistic models show that CEO tenure is not significantly negatively related with the probability of CEO turnover. The study of Harford (2003) shows that "years as director" has a negative impact on the probability that a director will remain on the surviving board in the new merged firm. But this regression result is also not statistically significant.

Previous studies show mixed results about the impact of CEO tenure on CEO turnover. Therefore, we expect either a positive or a negative relationship between CEO tenure and the probability of CEO departure.

a_4: CEO reputation

Ha_4: The target company's CEO turnover is related to the CEO's reputation.

To some extent, the experience and stature of a CEO could be marked by his/her reputation identified by the number of additional board appointments which he/she holds. A higher reputation index for a CEO provides his/her expertise as a corporate leader, which is supported in the literature. Some researchers even use a proxy for the reputation of directors to characterize the quality of each firm's board. For example, when directors hold multiple outside directorships, shareholders of target firms receive a larger premium in tender offers (Cotter et al. (1997)) and acquiring firms receive relatively higher returns in M&As (Brown and Maloney (1999)). Therefore, a CEO with a good reputation would be more likely to be retained in the new company.

Shivdasani (1993) studies boards and their role in corporate governance by using the takeover market during the takeover wave of the 1980s. One of his findings is that the firm would be less likely to be acquired in a hostile takeover, when outside

directors have more additional directorships. The interpretation of this finding is that better management of the company shows a higher quality of directors. These directors would be asked to be on more boards, which is considered as higher reputation. These directors even decrease their firm's likelihood of becoming a takeover target by doing good jobs as directors.

From another popular view, however, the attention a CEO pays to the firm may reduce with a higher number of additional directorships that the CEO holds in other companies. By doing a poor job, such CEOs may increase the likelihood that their firm becomes a takeover target. Thus, the replacement of their job is a predictable result. This indicates a positive correlation between CEO turnover and CEO reputation. However, Ferris et al. (2003) do not find any evidence that inadequate management or poor corporate performances are caused by multiple directorships. In the study of Kini et al. (2004) on US target firms over the period 1979 to 1998, each director in the target firm's board held an average 1.05 additional directorships. The average additional directorship held by all CEOs is 1.34, which is higher than 0.59 for inside directors and 1.11 for outside directors. They study the board reputation, and their logistic models show no significant relation between board reputation and post-takeover CEO turnover.

The implications of multiple directorships are still debatable, and the relationship between CEO reputation and CEO turnover may be positive or negative. We follow the previous evidence and use the number of multiple directorships as a proxy to test how the reputation of the CEO affects CEO turnover.

2.3.2. Target Governance characteristics:

b_1: CEO Duality

Hb_1: The target company's CEO turnover is related to CEO duality.

Most previous research associates lack of board independence with CEO duality.

Jensen (1993), and Fama and Jensen (1983) point out that internal control systems fail if the CEO holds the position of Chairman of the board. Following the logic of corporate control, CEO duality may lead to a lack of board independence. The board cannot effectively perform its functions that includes monitoring and firing CEOs. According to Jensen (1993, p866), CEO duality makes it "extremely difficult for the board to respond early to failure in its top management." Several corporate governance activists have also held a similar view about the combination of the CEO and chairman responsibilities (Fama and Jensen (1983), Kini et al. (2004)). In such cases, takeover may play a role in disciplining the ineffective management of target firms. Therefore, such CEOs with combined titles are more likely to be removed after takeovers. This suggests a positive relationship between post-acquisition CEO turnover and CEO duality. However, the combination of CEO and Chairman may strengthen the leadership of a target CEO. It may increase the power of CEOs, which leads to more predominance in the negotiation. They may negotiate for their own benefit including a job in the new firm. Hence, CEO duality may be negatively related to post-takeover CEO turnover.

Most previous research studies the relationship between the duality of CEOs and the internal control mechanism and finds a significant positive effect of CEO duality on CEO turnover (Fama and Jensen (1983), Jensen (1993), Brickley et al. (1997), Goyal and Park (2002) and Kini et al. (2004)). Goyal and Park (2002) study the relation between board leadership structure and CEO turnover by using a sample of 455 CEO turnovers from 1992 to 1996. They find that CEO duality has a significant positive effect on CEO turnover. Moreover, CEO turnover is significantly less sensitive to firm performance in firms with combined CEO-Chairman titles than in firms with separate titles. The likelihood of CEO turnover with separate titles is double that of those with combined positions, when stock return declines by one standard deviation.

Kini et al. (2004) compare the US takeover market during 1979-1988 and 1989-1998. They find that a significantly positive relation exists between the likelihood of CEO turnover and duality for the period 1989 to 1998, while no significant relation is found for the earlier period. So the sensitivity of CEO turnover to duality is

significantly different over the two time periods. Moreover, Franks et al. (2001) examine the corporate control market in the UK from 1988 to 1993. Their pooled logistic regressions show no evidence that the separation of CEO and Chairman has an influence on executive board turnover.

However, Hillier et al. (2003) examine forced CEO turnovers in a sample of UK firms between 1993 and 1998. They find that splitting the function of CEO and Chairman significantly increases the likelihood of CEO turnover, suggesting a negative relationship between CEO duality and CEO turnover.

Overall, in the hypothesis of the theory and evidence, the relationship between CEO duality and the probability of CEO turnover may be positive or negative.

b_2: CEO ownership

Hb_2: The target company's CEO turnover is negatively related to the fraction of company shares owned by the CEO.

The potential conflicts of interests between top management and shareholders are created by the separation of ownership and control of the firm. Boards with significant managerial ownership are more likely to align the interests of the two groups (Core et al. (1999)). Such managers with significant company shareholdings are more likely to behave in the interests of shareholders (Rosenstein and Wyatt (1997)). DeAngelo and DeAngelo (1985) argue that shareholders benefit if managers are encouraged to have firm-specific capital. Furthermore, Franks and Mayer (2001) suggest that "concentrated ownership may be more effective", when the company is in the hands of principals than it is with agents. This means that the agency problem is moderated by the supervision of the CEO holding a high fraction of a company's shares. This would lead to better performance and even decrease the probability of a takeover. However, equity ownership can insulate a CEO from the internal monitoring efforts by increasing her/his power. Managerial ownership is likely to be correlated with the power of the top executive through the voting control (Denis et al.

(1997)). Increases in managerial ownership may make it more difficult to remove a CEO from the company. To the acquiring firm, it will be costly to remove them. This implies a negative ownership effect on the CEO turnover.

Previous empirical studies show strong evidence of the relationship between CEO ownership and CEO turnover. Using a sample of UK firms, Hillier et al. (2003) find a strong negative relation between the likelihood of forced CEO turnover and CEO ownership. In addition, Brunello et al. (2003) test a sample of 60 Italian firms over the period 1988-1996. Their findings show a significant negative relationship between CEO turnover and CEO ownership. In the study by Kini et al. (2004) of a sample of US target firms subject to successful tender offers, their logistic regressions show a significant and negative coefficient on CEO ownership. This indicates that the likelihood of CEO turnover is low in target firms in which the CEO owns a large proportion of the firm's shares.

Moreover, Denis et al. (1995, 1997) test the relation between the ownership structure of target firms and top executive turnover using a sample of US firms. They find that after controlling of poor stock performance, the ownership by officers and directors is significantly and negatively related to the probability of top executive turnover. This indicates that greater ownership increases a CEO's ability to retain his/her position. Mikkelson and Partch (1997) examine managerial turnover in the US takeover market during 1984 to 1993. They find that directors' and officers' stakes have a significant and negative relationship with CEO turnover. However, Goyal and Park (2002) examine CEO turnover amongst a US sample over the period 1992-1996, and focus on the officers and directors who own above 25% of shares of the company. They find a non-significant negative effect of ownership on CEO turnover.

According to the theory and evidence, we expect a negative relationship between CEO ownership and post-takeover CEO turnover.

b_3: Blockholder ownership

Hb_3: The target company's CEO turnover is negatively related to the percentage ownership by blockholders.

Some previous studies have documented that the existence of blockholders acts to discipline the management of poorly performing firms (Shleifer and Vishny (1986), Denis et al. (1997) and Franks et al. (2001)). In general, blockholders are expected to align the interests of shareholders and monitor the performance of the CEO. They adjust inappropriate decisions the CEO makes, which may lead to better performance. Franks et al. (2001) list the shareholders, in particular large shareholders, as an important disciplinary mechanism for removing management in poorly performing companies. Denis et al. (1997) argue that blockholders and institutions that own amounts of the firm's equity may reduce the degree of entrenchment. Thus, blockholders may intervene directly and replace ineffective management. Such a disciplinary function would be more effective when blockholders have a larger fraction of a company's shares. Thus, the higher the blockholder ownership, the lower the CEO turnover rate.

However, the evidence on the effect of blockholder ownership on CEO turnover is mixed. In the takeover market, Kini et al. (2004) find a significant negative relationship between blockholder ownership and CEO turnover, and such a relationship is relatively strong in the 1980s when takeover activities were relatively active. But Brunello et al. (2003) find an insignificant negative impact of the largest shareholder, and the second largest shareholder on the probability of CEO turnover in Italian takeovers. More recent research on the UK capital market by Franks et al. (2001) tests five disciplinary mechanisms. Their results show that holders of substantial share blocks exert little discipline. Goyal and Park (2002) find that the ownership by institutions and by blockholders is insignificantly positively related to CEO turnover.

Overall, we expect that the ownership of target firms' blockholders have negative effect on CEO turnover.

b_4: Board size

Hb_4: The target company's CEO turnover is positively related to the size of the target board.

Previous works by Denis et al. (1997), Franks et al. (2001) and Kini et al. (2004) consider the board as an internal monitoring mechanism. Following Core et al. (1999), the effectiveness of monitoring by the board of directors can be measured by some characteristics of the board. Previous literature gives us a picture that board size affects the corporate management. Jensen (1993) and Yermack (1996) argue that larger boards are less effective at monitoring and disciplining managers, which leads to the case that the CEO has more influence on a larger board. Hermalin and Weisbach (2001) suggest that a larger board might make some free-riding problems worse. Yermack (1996) and Eisenberg et al. (1998) find that the board size has a significantly negative effect on Tobin's q, after controlling for other variables that are likely to affect q. The idea is that agency problems increase with the size of the board. If the board gets to be too big, the board becomes more symbolic and less effective at monitoring management. The CEO in such a board is more likely to be removed following the takeover. Thus, the size of the board of directors is expected to be associated with the effectiveness of board monitoring.

Based on a sample of US companies, Yermack (1996) and Wu (2000) analyze the effect of board size on the relationship between CEO turnover and firm performance. Both find a significant negative relationship. Their results suggest that firms with smaller boards have a stronger turnover-performance relation to firms with larger boards, which is consistent with smaller boards being more effective at monitoring CEOs than larger boards.

Moreover, Mikkelson and Partch (1997) compare the US takeover market in a takeover active period (1984-1988) with a less active period (1989-1993). They find that the board size decreased slightly in the later period, and the rate of CEO turnover also reduced from 39.2% to 34.4%. This indicates that takeovers play a disciplinary role, when a board is relatively weak. However, pooled logic regression results show no significant relation between board size and CEO turnover of target firms.

On the whole, we expect that the size of target board has a positive relationship with CEO turnover.

b_5: Board composition

Hb_5: The target company's CEO turnover is related to the proportion of outsiders in the board.

Another characteristic of a board is its composition. Core et al. (1999) suggest that a board's composition could measure the effectiveness of monitoring management. Outside directors are expected to act in shareholders' interests and monitor the performance of top management. Although we know little about the incentive of board directors, some shareholder activists consistently advise that the board should consist of more outside independent directors. Jensen (1986) suggests that the takeover market would have less of a role as a disciplinary device, when the board is dominated by outside directors. More outsider directors may result in more effective internal control. However, recent popular discussion holds the passive view on outside directors. Some researchers argue that outside directors may become less effective as they hold "too many" directorships (Shivdasani (1993), Core et al. (1999)). In such cases, the internal control is presumably weak. To substitute for less effective internal discipline exerted by outside directors, the takeover market provides a source of external discipline.

Some studies research the disciplinary function of outsider directors, but there are mixed results on the relationship between the composition of the board and CEO

turnover. Kini et al. (1995) examine the relation between corporate takeovers and the board of directors as an alternative control mechanism to discipline top management. They find a significant inverse CEO turnover-performance relation for target firms with inside-dominated boards of directors, but no significant relation for target firms with outside-dominated boards. The current study of Kini et al. (2004) finds that the probability of post-takeover CEO turnover is significantly and negatively related to the proportion of outside board directors of target firms, indicating that the probability of CEO turnover is higher when the target board is less dominated by outside directors.

However, Weisbach (1988) and Denis et al. (1997) do not find a relation between CEO turnover and performance in firms with outside-dominated boards. Mikkelson and Partch (1997) compare the active and less active takeover period. Their analysis uncovers no reliable relation between management turnover and board composition. By using a sample of UK firms, Franks at al. (2001) find little evidence about the relationship between CEO turnover and the proportion of nonexecutives on the board of firms.

In general, our hypothesis is that post-takeover CEO turnover is related to the proportion of outsiders but their relationship may be positive or negative.

2.3.3 Deal characteristics:

c_1: Cross-border/domestic takeover

Hc_1: Target companies' CEO turnover rate is likely to be different between domestic M&As and cross-border M&As.

The literature presents some hypotheses for the cross-border effect. While cross-border takeovers have many of the same influences and motivations as domestic takeovers, they present some opportunities that are different from domestic takeovers. The acquirer benefits from valuable opportunities like increased market

diversification and favourable government policies (Moeller & Schlingemann (2005)). Meanwhile, the prospect of takeover by firms in other countries may cause an increase in the level of competition in the market for corporate control. Some researchers argue that the possibility of an overseas acquiring firm could lead to an increase in hubris and agency problems resulting in culture clashes and lower bidder returns (Roll (1986), Denis et al. (2002), Moeller & Schlingemann (2005)). But some features of cross-border takeovers may protect current top management from being removed. In a cross-border deal, the transmission of information becomes more difficult. Thus, the information asymmetry might make an acquiring firm more dependent on the management of target firms. Moreover, a less well developed capital market in the country of the acquiring firm, a different legal system and cultural differences make cross-border management more difficult. Target firms' CEOs have good experience in the domestic environment, and their skills and firm-specific knowledge might match well with the needs of the buyer. Thus, these CEOs are more likely to be retained after takeovers. Hence, the turnover rate of target CEOs might be lower in cross-border takeovers than in domestic takeovers. Some researchers point out that the acquiring firms' intention is often to acquire and successfully integrate a team of skillful managers (Pitts (1976), Walsh (1988)). Indeed, the managerial skills of the target firm's CEO may be a key attraction of the merger.

However, some foreign acquiring firms may strengthen their control of target firms, so that they prefer using their own managers instead of target CEOs. Harford (2003) examines the directorship change of board directors after the takeover. In his regression model, he finds that bids from foreign firms have a significant negative impact on the survival rate of the board of the new merged firm for both inside and outside directors. It means that a director has a lower probability of remaining in the new board after cross-border takeovers than those directors that experienced a domestic takeover. Therefore, we expect that the CEO turnover rate may be different following cross-border takeovers than following domestic takeovers.

c_2: Legal system difference

Hc_2: The target company's CEO turnover rate is likely to be different according to whether the acquiring firm comes from a country with a non-English common law system or if it comes from a country with an English common law system which is the same as the UK.

Cross-border transactions are much more complicated than domestic takeovers because countries differ in many ways. Countries have different economic, political and legal systems. A country's politics and law effectively regulate its business practice. When the economies of countries are at different stages, the education and skill levels of the populations differ significantly. All these differences can have major implications for international transactions. With the increase of cross-border takeovers, legal differences become a very significant issue in international transactions.

"The legal system of a country refers to the rules, or laws, that regulate behaviour along with processes by which the laws are enforced and through which redress for grievances is obtained"[2]. A country's law defines the rights and obligations of those involved in business transactions, sets up how business transactions are to be executed, and regulates business practice. Generally, UK target CEOs are more familiar with the legal system and government of the UK and they might even have their special network within this society. Therefore, the acquiring firms from different legal systems are more likely to keep target CEOs and expect them to manage local businesses and ensure corporate practices adhere to local environmental regulations.

However, La Porta et al. (2000, 2002) find that the characteristics of corporate governance vary with the nature of the legal system in the countries they sampled. Countries with English common law legal origins provide greater investor protection than other countries. Acquiring firms from English common law system may expect

[2] Fred Maidment, "International Business" p49, Mcgraw-Hill

that target CEOs' experience and knowledge would contribute to the combined business, so that they are more likely to retain target CEOs for the benefit of their investors. But those acquirers from countries with non-English common law may not have such a strong intention, which leads them to dismiss target CEOs. Hence, in such situations, a positive relationship between post-takeover CEO turnover and legal differences is expected.

As far as we know, no research has been done on the relation between legal system differences and post-takeover CEO turnover. This study will examine the impact of legal differences on the target CEOs following international transactions.

c_3: Cultural difference

The considerable importance of cultural effects in international business has long been acknowledged. Cultural issues have an impact on the cost, profit and risk of doing business in different countries, so that the operations and strategies of international companies would have different needs or requirements for their management. Management processes and practices need to vary according to culturally determined values. Perhaps the most famous study of how culture relates to values in the workplace was undertaken by Geert Hofstede (1980). His study is based on IBM, and this international organization enabled him to compare dimensions of culture across 40 countries. Hofstede (1980) propose that the national culture and value can be categorized based on four variables which affect the work environment and its management.

Hofstede's research has been criticized on a number of points: First, many countries have more than one culture, but Hofstede's results do not capture the distinction. Second, the research of Hofstede is based on questions asked of IBM employees, so the analysis of the answers may have been shaped by their own cultural biases and concerns. However, Hofstede's index tells us in a very general way about differences between cultures. Many of Hofstede's findings are consistent with standard Western stereotypes about culture differences (Hofstede and Hofstede (2005)). Hofstede's

classification of countries is often used in inter-country comparisons.

(1) Power Distance

$Hc_{3(1)}$: The turnover rate of target CEOs is likely to be higher if acquiring firms are from countries with a large power distance, than from countries with a lower power distance.

Power distance focuses on the degree of social equality, or inequality, between people within the society of a country, including their relationship with authority. It indicates the degrees of dependence relationship in a country. In large power distance countries, superiors and subordinates consider each other as existentially unequal. There is more dependence of subordinates upon a boss. Subordinates either prefer such dependence or reject it entirely. Centralization is popular, and the ideal boss is a benevolent autocrat. Privileges and status symbols for managers are both expected and popular. Acquiring firms from such large power distance countries would rely more on the high dependence between the boss and subordinates. This suggests that the acquiring firm will have a large influence in the new firm. Acquiring firms are more likely to replace target CEOs with managers from their own firms. In small power distance situations, subordinates and superiors consider each other as existentially equal. Hierarchy in an organization means an inequality of roles, established for convenience. There is limited dependence of subordinates on bosses and a preference for consultation. Decentralization is popular and the ideal boss is a resourceful democrat. In such an environment, roles may be changed, and acquiring firms may "consult" target CEOs more. So target CEOs are more likely to remain in the new firm.

(2) Individualism vs. Collectivism

$Hc_{3(2)}$: The turnover rate of target CEOs is likely to be higher if acquiring firms are from an individualist society than if they are from a collectivist society.

This dimension looks at the relationship between the individual and the group. In an individualist culture, organizations are more impersonal and work is organized in such a way that the self-interest and the employer's interest coincide. The relationship of employer-employee is a contract which is supposed to be based on mutual advantage. Management is management of individuals. Hiring and promotion decisions are supposed to be based on skills and rules only. Acquiring firms from individualist societies are more likely to classify target CEOs as a qualified or unqualified manager by their own skills or their contribution to companies. Hence, if CEOs were considered as ineffective managers, they are more likely to be replaced by acquiring firms. However, in a collectivist society, the relationship between employer and employee is perceived in moral terms, like a family link. Relationships prevail over tasks. Practices are based on loyalty, a sense of duty and group participation. Management is management of a group. The hiring process and promotion decisions always take the group into account. In such societies, acquiring companies would consider target CEOs as part of group. Ethnic and other in-group differences within the work group play a role in the integration process. As the main leader of the group, target CEOs have a relatively strong relation with other managers and workers, which increases their own value in the group. Thus, it often makes good sense to put people from the same ethnic background into one crew, and then target CEOs are more likely to be retained in the new firm.

(3) Masculinity vs. Femininity

$Hc_{3(3)}$: The turnover rate of target CEOs may be different according to whether acquiring firms are from a masculine society or from a feminine society.

This dimension focuses on the degree that a society reinforces, or does not reinforce, the traditional masculine work role. There is no relationship between the masculinity or femininity of a society's culture and the distribution of employment over men and women. In a feminine culture, the dominant values in society are caring for others. The manager is less visible, and always seeks a consensus. Problems are discussed by a group and solutions are sought. However, in a highly masculine culture,

dominant values are material success and progress. Organizations in masculine societies stress results. The masculine managers are assertive and decisive. Such a manager is always a sole decision-maker looking for facts rather than a group discussion. They stress equity, competition and performance. The usual resolution of conflicts is to fight them out. Compared with those in a feminine society, acquiring firms from the high masculine culture have strong character and are more likely to force target CEOs to leave after takeovers. Moreover, target CEOs in high masculine countries may be more "aggressive" and they may not be willing to serve the acquiring firms after takeovers. However, acquiring firms from highly masculine countries stress economic factors rather than welfare factors. Target CEOs have a special local knowledge and are more familiar with the operation of target firms, which may benefit the development of the new firm and improve its performance in the future. In such cases, acquiring firms are more likely to keep target CEOs after takeover.

(4) Uncertainty Avoidance

$Hc_{3(4)}$: The turnover rate of target CEOs is likely to be higher if acquiring firms are from a strong uncertainty avoiding society.

This dimension measures the extent to which different cultures encourage their members to accept ambiguity and tolerate uncertainty. In strong uncertainty avoiding societies, people consider job security, career patterns, and retirement benefit as very important issues. There are many formal laws and/or informal rules controlling the rights and duties of the employee and employer. Many internal rules and regulations control the work process. To reduce uncertainty in a new firm, acquiring firms in strong uncertainty avoiding countries may prefer to replace target CEOs. However, in countries with very weak uncertainty avoidance, rules are only established in cases of absolute necessity. People work hard only when it is needed, and they are not driven by an inner urge towards constant activity. The UK is one of the countries in which internal corporate governance is well developed. Target CEOs in the UK, a strong uncertainty avoiding society, may be under the stress of their duties and

responsibility and less likely to be ineffective, which increases their career security. Thus, target CEOs are more reliable and more likely to be retained in the new firm.

c_4: Related/unrelated takeover

Hc_4: Target companies' CEO turnover rate is likely to be higher following related M&As than following unrelated M&As.

While it is difficult to predict the relative turnover rates among all types of acquisition, it is likely that a CEO would face a lower probability of retention in related takeovers than in unrelated takeovers. In a related M&A, the acquiring firm's management team is already familiar with a target firms' business. As such, the acquiring firm can afford to lose many of the target firm's managers. They are more likely to replace the target CEO with their own manager to act as a liaison between the technical leadership in the target firm and their own leadership. Moreover, Walsh (1989) agues that "the acquiring company may feel that they can add value to the target company by replacing the target's management with their own skilled managers." However, the retention of the CEO may be crucial for a company when the acquiring firm is keen to diversify by acquisitions. This should be common in unrelated acquisitions, when the acquiring firm's management is unfamiliar with the target company's business. The acquiring firms might be more dependent upon a target's CEO and they cannot afford to lose the product and market experience of the target firm's CEO. A CEO's institutional leadership in the target firm would be helpful to increase the bidder's return. It is likely that the CEO would retain the target's top management in unrelated takeovers.

Drucker's (1981) predictions of widespread top management turnover may be more relevant to related acquisitions than unrelated acquisitions. The study of Walsh (1988) documents mixed results and does not significantly support the argument that top management turnover following a related M&A would be higher than the turnover following unrelated M&As. Walsh (1989) increased his sample and re-examined the hypothesis. The new results show that the management team turnover rate is 29.95%

for related M&As and 23.33% for unrelated M&As after the first year. The management turnover rate in related M&As is higher than that in unrelated M&As in the third and fourth year after the takeover was completed. But the difference is not significant.

c_5: High-technology

Hc_5: Target companies' CEO turnover rate is likely to be different between high-tech M&As and non-high-tech M&As.

High-tech firms always play a critical role in scientific discoveries and promoting technological advancement. On the one hand, the products of high technology significantly affect people's daily life and bring high-tech firms great profit. There is magnificent development of such companies, such as Microsoft. For these high-tech acquiring firms, takeover is often an effective approach to extend their business or reduce their cost. On the other hand, the efficiency gains make some high-tech firms very valuable and become attractive targets. So acquiring firms have been drawn to technology firms for the productivity gains they can provide and distinctive growth opportunities they can bring.

From the acquirer's perspective, purchasing a new technology firm can bring more advantages than trying to develop the technology internally. Due to the special knowledge of technology and particular management, CEOs of these high-tech firms would be more likely to be retained in the new firm. However, there are some cases where CEOs were the owner of a target firm. They may sell their companies to some bidders that offer a good price. Such CEOs are unlikely to stay in the new firm after takeovers.

As we know, no research has been done on the effect of high-tech takeovers on target CEOs following M&As. In this study, we will distinguish the high-tech takeovers from non-high-tech takeovers and study their impact.

c_6: Payment

Hc_6: The target company's CEO turnover rate is likely to be higher following cash payment than following stock payment.

Amihub et al. (1990) and Martin (1996) suggest that managers of acquiring firms avoid issuing stock that dilutes their ownership and increases the risk of them losing control. So they prefer cash payment. In such cases, the CEO of the target firm is more likely to be removed. Moreover, if it knows that the value of the target firm is less than the value of the cash offer, the target has an incentive to accept a cash offer. When the acquiring firm discovers that the target's value is not what it expected, the target's CEO is likely to depart (Walsh, 1989).

Hansen (1987) argues that a target company will prefer a stock transaction when its assets are of high value. A perception of a high-quality manager may contribute to the high valuation of these assets. As a result, one expects a lower CEO turnover rate following a stock deal. Moreover, Ghosh and Ruland (1998) suggest that the method of payment is determined by the target managers' preference for influence in the combined firm. In general, CEOs of target firms have considerable bargaining power in takeover negotiations. They can use their power to negotiate favourable terms, so that the link between the motivation to obtain influence in the combined firm, the method of payment, and their job retention exists. Previous studies show high management turnover following takeovers. Ownership in the combined firm after acquisitions, however, provides a form of unemployment insurance. When the target is acquired for stock, the CEO who owned the target firms' shares becomes influential in the combined firm. Thus, the CEO who desires to retain and have her/his influence in the combined firm will negotiate for stock and discourage cash offers. Therefore, one of determinants of payment is the CEO motivation to obtain influence in the combined firm after the takeover.

We expect that a CEO who desires continued employment would not be indifferent to the method of payment. In particular, a CEO who desires to retain his/her job will

negotiate for stock and discourage cash offers.

Walsh (1989) investigates the relation between the payment and the turnover rate of target top management. In the first year following takeovers, the turnover rate of top management with stock payment is higher than that with cash payment. But the situation is reversed in the second and third year after takeover. In particular, Ghosh and Ruland (1998) determine the relation between the method of payment for acquisitions, managerial ownership and executive job retention. They find that the managers of target firms are more likely to retain their jobs in combined firms when they receive stock rather than cash. Managers were found to lose their jobs following payment with stock in only 10% of the acquisitions.

c_7: Multiple bidders

Hc_7: The target company's CEO turnover rate is likely to be different following multiple bidders than following a single bidder.

Walsh (1989) argues that the existence of multiple bidders might show a consensus view of the target CEO's inefficiency, and so the possibility of CEO turnover would be higher when there are multiple bidders than when a CEO faces only one bidder. Following the logic of the corporate control market, if more than one buyer has recognized an inefficient management team, and expressed some interest in buying the target, and that target is eventually purchased, it is expected that the turnover rate among those managers will be higher than the turnover rate in a target company that has been subject to the M&As interest from one bidder.

However, when a target firm has a high threat of takeover, multiple bidders may play the role of a "white knight". In such an instance, the competition of bidders may make the CEO use her/his power to negotiate a high price and other personal benefits. Hence, the takeover pressure might be reduced for the CEO. Meanwhile, a CEO who desires to remain may accept an offer from the acquiring firm that gives her/him a job guarantee in the combined firm. So the auction may lead to a lower CEO

turnover rate.

Walsh (1989) tests the hypotheses that firms having higher target management turnover rate had experienced previous merger or acquisition interest. He finds that in the first year following takeovers, top manager turnover rate of targets with previous takeover interest is lower than targets without previous takeover interest. But the situation is reversed two years after takeovers. In a study by Harford (2003), the relation between multiple bidders and inside director retention was tested. The results show that auctions have an insignificant negative effect on the probability of inside director retention on the surviving board after takeovers.

c_8: Attitude

Hc_8: The target company's CEO turnover rate is higher following hostile takeovers than following friendly takeovers.

During the process of a negotiation, the negotiations can be characterized as friendly or hostile. Takeovers, especially hostile takeovers, are an important method of removing the inefficient management, although some argue that takeovers are a poor form of corporate governance. Some researchers argue that hostile takeovers create gains from replacing incumbent management, and friendly takeovers generate gains from strategies (Morck, Shleifer and Vishny (1988, 1989), Schwert (2000)). Hostile takeovers, in particular, serve as a useful external control mechanism for correcting target management failures (Martin and McConnell (1991), Ikenberry and Lakonishok (1993), Dahya and Powerll (1998)). A CEO of a target firm that expresses open hostility at the prospect of a takeover is unlikely to remain in the combined firm after the takeover. In contrast, a friendly takeover is often seen as creating synergies that make both the target firm and bidding firm better off. In order to increase returns to the acquiring firm, the CEO of the target firm may be retained for her/his managerial skills or other benefit to the combined firm. Due to the discipline function, we expect that CEO turnovers would more likely take place after hostile takeovers.

Several papers document that target management turnover increases following hostile takeovers. This suggests that hostile takeovers are more disciplinary than all friendly takeovers. Walsh's (1989) tests of US target firms show management turnover rate after hostile takeover is significantly higher than that after friendly takeovers. Hostile takeovers lead to 44.5% of management turnover, which is double the 24.49% turnover rate after friendly takeovers in the first year after the completion of M&As. Such a relationship continued until five years after the takeover. Martin and McConnell (1991) find similar results that hostile takeovers are associated with a greater degree of both top executive and top team forced departure rates compared to that of friendly takeovers.

Franks and Mayer (1996) examine hostile takeovers in the UK in 1985 and 1986. They find a forced restructuring of the target board following successful hostile takeovers, which led to 88% of inside directors resigning after the successful hostile takeover. Dahya and Powell (1998) investigate the UK takeover market from 1989 to 1992. They find that top managers are unlikely to remain in the target company following a hostile negotiation. In their sample, 19% experienced a change in top executives following successful hostile takeovers, while 15% of top executives are turned over after successful friendly takeovers. In addition, in the more recent studies of Harford (2003) and Kini et al (2004), evidence is found of a significant effect of hostile takeover on the post-takeover CEO turnover.

c_9: Premium

Hc_9: The target company's CEO turnover rate is likely to be higher following higher premium paid for the target company.

To acquire a firm, an acquiring firm pays a premium over the average market value of the target company's stock. The premium can be a small percentage of the "normal" value of the target firm or can sometimes be more than the "normal" value. If an acquiring firm pays a high premium for a target company, the target should have been much undervalued. Acquiring firms may be confident that the combined

firm could create high returns. Following the corporate control logic, some researchers argue that the target's top managers are ineffective or incompetent in such cases (Oviatt (1988), Walsh (1989)). As a consequence, target CEO turnover is likely to be high. Another case is that a high premium may be the result of negotiation. CEOs may negotiate a high premium for their own benefit, especially when they own a large proportion of target shares. Acquiring firms have to pay high premium for target shares owned by target CEOs. The payment of a high premium to managers who typically have some equity in the company might be a way of "buying-out" entrenched managers. In such an instance, a higher CEO turnover rate follows higher premium.

Walsh (1989) investigates the relation between management turnover rates and premium. In the first year after takeovers, higher turnover rates follow higher premium payments in takeovers. However, the study by Martin and McConnell (1991) doesn't show a significantly different premium between targets with and without top manager turnover. Their results show that higher premiums are not associated with high levels of top managerial changes. Moreover, Franks and Mayer (1996) examine hostile takeovers in the UK. Their results show that bid premium for targets with top managers' departure is 25.23%, which is almost the same as those without control change (25.25%). This suggests that the level of bid premium has no significant influence on target managers' turnover.

In our study, we would like to test the effect of the premium on CEO turnover in the recent UK M&A wave.

2.3.4 Target firm characteristics:

d_1: Size differential rate

Hd_1: Target company CEO turnover rates are related to size difference between the acquiring and target companies.

The size of the target relative to the size of the acquiring firm affects the CEO's job and even his/her expected influence in the combined company. After the takeover, the CEO in the target company may be less skilled when managing in a larger operational context. A very large company is likely to have more skilled managers on hand than a small company, so that it is relatively easy for it to replace a CEO in a smaller acquired company. We expect that the possibility of CEO turnover might increase as the relative size difference between the acquirer and target increases. However, if the target firm and the acquiring firm are of a similar size, they may have similar management resources. So the acquiring firm is more confident in replacing the target CEO with their own managers. In such a case, the probability of post-takeover CEO turnover is negative related to the size difference between the acquirer and the target.

Some previous studies show that the target management turnover rate differs between small and large target firms. Warner et al. (1988) find the relation between target management turnover and performance differs between larger and smaller target firms. In the study of the takeover market by Walsh (1989), the impact of asset size difference on the top management turnover rate is modest. The turnover rate associated with a bigger size difference is slightly higher than that associated with a smaller size difference two years after takeovers: 40.11% vs. 38.78% respectively. Denis et al. (1997) investigate top executive turnover in 1,394 US firms over the period 1985-1988. They find that a significant negative relationship exists between the logarithms of book value of target total assets and the probability of top executive turnover. The relationship between performance and turnover has some modest differences between small and large firms.

d_2: Pre-takeover performance

Hd_2: A target company's post-acquisition CEO turnover rate is likely to be high, if the target has a low pre-takeover performance.

One of the most socially acceptable motivations for M&A is to discipline entrenched

and inefficient top managers. If top managers engage in self-interested behaviour, their company's performance would diverge from its maximum potential. This underperformance is usually reflected in the stock value of the company and account ratios. In a series of papers (Asquith (1983), Bartley and Boardman (1986), Hasbrouck (1985)), the incompetence of managers is revealed through a series of decisions that adversely affected their company's performance. In such cases, the "external market for corporate control" is likely to offer the shareholders other management teams as alternatives to the incumbent management. Jarrell et al. (1988) argues that the "market for corporate control" is the competition among these management teams. As a consequence, the acquiring firm will be able to replace inefficient managers and put a target's assets to better use. Takeovers occur in part to replace managers who are not maximizing shareholder wealth. Thus, the negative relationship between target CEO turnover and pre-takeover performance is expected.

In studies by Coughlan and Schmidt (1985) and Warner et al. (1988), top management turnover is found to be inversely associated with the previous market-related performance of the firm. Further, Weisbach (1988) examines the cross-sectional differences between performance and turnover, and finds a strong negative relation between performance and CEO turnover.

Martin and McConnell (1991) examine the role of the US takeover market as an external source of performance-related discipline over top management. The results show that CEO turnover after takeovers is inversely related to pre-acquisition performance. Denis et al. (1997) investigate top executive turnover in US firms and find a significant negative relationship between pre-takeover performance and top executive turnover. When they consider the influence of managerial ownership on the performance-turnover relation, the results suggest that managerial ownership has a significant impact on the sensitivity of turnover to performance. Furthermore, in the study by Harford (2003) on board seat change of directors following takeovers, he finds that the target pre-bid operating performance has a significant positive impact on the probability that an inside director remains on the surviving board.

Franks et al. (2001) examine how UK capital markets discipline management from 1990 to 1992. They find a high level of board turnover in poorly performing firms. CEO turnover is much higher, compared with other board members. Regression results show a strong negative relationship between board turnover for four out of five measures of firm performance. However, the early study of Franks and Mayer (1996) finds no significant evidence of a relation between executive turnover following a takeover and target pre-acquisition performance, when investigating UK hostile takeovers in 1985 and 1986.

d3: Pre-takeover leverage

Hd_3: A target company's post-acquisition CEO turnover rate is likely to be high, if the target firm has a high level of capital leverage.

In addition to the threat of a takeover, there is still a degree of disciplinary pressure on the CEO. Jensen (1989) suggests that new loans or the restructuring of existing loans may make give creditors a relatively greater motivation for monitoring the management. Jensen (1993) and Agrawal and Knoeber (1996) argue that contractual commitments to debt-holders place external pressure on managers. These creditors play a role to monitor target CEOs. Franks et al. (2001) suggest that board turnover may be particularly high in a company where high leverage is combined with poor performance.

In a study of the modern industrial revolution and internal control systems, Jensen (1993) suggests that ineffective managers have to face external pressure from debtholders, which produces corporate control market competition. Gilson and Vetsuypens (1993) study 77 US listed firms that filed for bankrupt or privately restructured their debt to avoid bankruptcy from 1981 to 1987. Almost one-third of the CEOs in their sample were replaced. Their results indicate that the incumbent management has large personal loss when their companies are in financial distress.

Mikkelson and Partch (1997) examine management turnover of 240 US target firms

in takeovers that occurred in the period 1984 to 1993. Their results show that the ratio of liabilities to assets is significantly and positively related to CEO turnover in their sample. Franks et al. (2001) list the high leverage, combined with poor performance, as one disciplinary mechanism. They find that leverage increases as performance decreases in their sample of 243 firms. CEO turnover is higher in poor-performing companies in the highest quartile of capital leverage than those in the lowest quartile of capital leverage: 69.6% vs. 24.2% respectively. The regressions results show a significant relation between high leverage and executive board turnover. Hence, we expect that the CEO turnover might be likely higher when the target firm has high leverage.

Overall, our hypotheses on relationships between target CEO turnover and various determinants are summarized in Table 2.1.

Table 2.1 Summary of Determinants
Definition of the variables and their predicted the relation with CEO turnover

Variable	Description		Source	Relation with CEO turnover
AGE	Ages of CEOs		PWC	+/-
FOUNDER	Whether CEO was the founder of the target firm.		PWC	+/-
TENURE	The years since CEO joined target firm		PWC	+/-
REPUTATION	The number of additional board appointments held by CEO		PWC	+/-
DUALITY	CEO is also the Chairman of the board prior to the takeover announcement		PWC	+/-
CEO-OWN	The proportion of shares owned by CEO		PWC & DataStream	-
BLOCKHD	The percentage of equity owned by blockholders		PWC	-
SIZE-BOARD	The number of directors in the board of the target firm		PWC	+
NONEX	The proportion of non-executive directors in the board		PWC	+/-
CROSS	Whether the target was taken or acquired by foreign firm		SDC	+/-
LEGAL DIF	Whether acquirers were from countries with English common law system applied in UK		SDC	+/-
CULTURE DIF	Whether the big cultural difference exist between acquiring countries and target countries according to Hofstede's index	Power Distance	SDC	+
		Individualism vs. Collectivist		+
		Masculinity vs. Femininity		+/-
		Uncertainty Avoidance		+
RELAT	Whether the acquirer and target firm in the M&A are related		SDC	+
HIGH-TECH	Whether the takeover occurred in high-tech industries		SDC	+/-
STOCK	Whether the payment is stock, cash or a combination of cash and stock		SDC	-
MULTIPLE BID	Whether multiple bidders emerged (an auction)		SDC	+/-
HOSTILE	Whether the contest was classified as hostile or friendly		SDC	+
PREMIUM	The premium paid for the target firm		SDC	+
SIZE-DIF	The logarithms of the ratios of the asset of the target to the asset of the acquiring firm		SDC	+/-
PER-PERFORM1 (Accounting)	The accounting performance of target firm, such as average IAROA, IAROE and IACFM over year (-4,-1), (-3,-1), (-2,-1).		SDC	-
PER-PERFORM2 (Stock)	Average accumulative abnormal returns over period (-38, -3), (-26,-3), (-14, -3) month to the announcement month		DataStream	-
LEVERAGE	The ratio of Net debt / total assets and total debt / total assets		SDC	+

PWC: PriceWaterHouse Cooperate Register
SDC: Securities Data Corporation's (SDC) Global Mergers and Acquisitions database

2.4 Summary

Although there are many motivations for mergers and acquisitions, some argue that one motive is to remove ineffective target management and such takeovers play the role of "a court of last resort" (Jensen (1986)). Special features of the fourth M&A wave make this issue more interesting. Unlike other research, this study investigates UK target CEO turnover following takeovers from 1998 to 2002 and considers the characteristics of this period.

This chapter provides a brief review of the theory of corporate governance in the context of takeovers. The literature on CEO turnover has been reviewed for both the US and UK takeover markets. There are some shortcomings in previous studies, such as a very small sample, the ignorance of CEO personal characteristics and the post-takeover career change, only one aspect of the firm performance measurements, a controversial methodology, and a lack of the up-to-date research and so on. These gaps in the literature encourage us to improve the research in this field in later tests.

Moreover, the literature suggests that some factors may be related to CEO turnover. Based on previous studies, we develop hypotheses about the relationship between target post-takeover CEO turnover and various potential determinants. Later empirical tests will examine and identify determinants that significantly affect CEO turnover following takeovers.

Chapter 3 The Post-takeover Turnover of Target CEOs: A Comparison between Cross-border and Domestic Takeovers

3.1 Introduction:

Mergers and acquisitions (M&As) are generally considered as a means of disciplining managers who are not maximizing shareholder wealth (Jensen 1988, Denis and Denis 1995). Important value can be created from corporate takeovers following the replacement of ineffective target management. Consistent with this view, many studies find that target management turnover increases following completed takeovers and more often so in the case of underperforming targets (Martin and McConnell 1991, Mikkelson and Partch 1997).

The recent wave is the most important in value and numbers with over 20,000 deals worth more than 2 trillion US dollar in 2000 alone. In the UK, Sudarsanam (2003) reports some 2,675 deals with a value of £260 billion in 2000. The recent M&A wave had very distinctive features and the dominant environment in the takeover market was very friendly. Evidence shows that hostile takeovers were common in the 1980s (Franks and Mayer (1996)), whilst they were much less so in the late 1990s (Kini et al. (2004)). One might then expect that the disciplining effect of M&A on corporate management has changed. As far as we know, no research has been done in this field for the UK takeover market. By using the most recent data available, this study attempts to answer the questions: to which extent do recent takeovers still serve as the last court of disciplining the ineffective target managers and does the pre-takeover performance of target firms have significant effects on target CEO turnover.

A distinctive feature of the more recent M&A wave is the exponential growth of international transactions since the late 1990s. According to Financial Securities Data's Securities Data Corporation (SDC) Platinum™ Worldwide Mergers & Acquisitions Database, international deals account for one-third of the total value of the M&A market. Cross-border deals often differ from domestic deals. Cross-border deals allow firms to grow by opening up new markets, to acquire new technology to

better compete and to follow their clients as they too become more international. Cross-border deals, however, are very challenging given the lack of experience in these new markets and the complex integration of firms with different cultural backgrounds. Therefore, the impact of a cross-border deal on managerial turnover may differ from that of a domestic deal and so we distinguish between the impact of domestic and cross-border takeovers on CEO turnover.

Another feature of recent years is the increased focus on improving internal corporate governance mechanisms in order to maximise firm value. The UK with its Cadbury Report (1992), Greenbury Report (1995), Hampel Report (1998), Turnbull (1999) and Higgs Report (2003) has led the way. We look at the interaction between target CEO turnover in the UK takeover market and suggested internal corporate governance mechanisms such as board characteristics (duality, board size and outsiders), CEO ownership and blockholders ownership and examine if weaker governance leads to greater turnover.

We also identify other potential determinants of CEO turnover and compare them in the different context of domestic and cross-border takeovers. These additional factors are the CEO's personal characteristics, target governance characteristics, the deal characteristics and target firm characteristics.

Our study provides an up-to-date perspective on the mixed evidence on the disciplining role of the takeover market. Our sample consists of 217 successful domestic and cross-border corporate takeovers of UK targets over the period from 1998 to 2002. We find that domestic deals and cross-border deals turn out to be similar. Cross-border deals are slightly smaller and are more often paid for by cash. Nevertheless, both univariate and multivariate results show a significant negative relation between cross-border takeovers and post-takeover CEO turnover. The local CEO's experience and knowledge of the business and the environment appear to be valuable to foreign acquirers. Further, an insight into cultural differences is provided by using four different dimensions of Hofstede's index. We find a significant negative relationship between masculinity and the probability of post-takeover target

CEO turnover, which indicates that the advantage of target CEOs may be more valued by acquiring firms from high masculine countries. In addition, a CEOs' tenure, reputation, duality and being the target founder increase their chance of being retained in the new firm.

Using both accounting and market-based performance measures, we find that the probability of the post-takeover CEO turnover is inversely related to target pre-takeover performance. Our results are consistent with the findings of Martin and McConnell (1991), and Denis et al. (1997) who examine the management turnover-performance relation in US takeovers. They find a significant negative relation between management turnover and performance. Moreover, there is no evidence in our study that better target governance such as greater blockholder ownership and a greater proportion of non-executives leads to a lower probability of CEO turnover. This suggests that takeovers play a disciplinary role in the more recent M&A wave and act as a court of last resort when other governance mechanisms are weak, as suggested by Kini et al. (2004).

Some deal characteristics are related to CEO turnover in the whole sample. We find that CEOs are more likely to be retained in the new firm if payment by stock is employed in the M&A deals. Moreover, similar to most previous studies, there is a significant positive relation between hostile takeovers and post-takeover CEO turnover in the whole sample, indicating that hostile takeovers still play an important disciplinary role, although friendly takeovers are dominant in recent M&A activities.

This chapter is organized as follows. Section 3.2 introduces the data and methodology. Univariate tests results are presented in section 3.3. Also, we examine the relation between CEO turnover and target firm pre-takeover performance and leverage. Further, CEO turnover rates are examined for extreme quartiles of target firms' performances and target leverage. In section 3.4, we study the determinants of CEO turnover in a multivariate context. Section 3.5 shows robustness tests and section 3.6 comprises the conclusion to this chapter.

3.2 Data and Methodology

In this section, we describe the collection of the sample and the procedures for documenting CEO turnover subsequent to the takeover. We also track departed CEOs and document the career change of these CEOs after takeovers. Moreover, we describe four types of determinants of post-takeover CEO turnover, including CEO personal characteristics, target pre-takeover governance characteristics, deal characteristics and target firms characteristics.

3.2.1 Data

The sample used in this chapter consists only of completed M&As in which one public company (either foreign or UK domestic acquiring company) took over one UK public company and the initial announcement date was between 1st January 1998 and 31st December 2002 in the UK (during the fourth M&A wave). This M&A wave is generally considered to have started at the beginning of the 1990s. But there is a lack of historical information about target firms, especially information about CEOs before 1998. In addition, we trace the career change of target CEOs for two years after each takeover announcement. So the test window starts from 1998 and ends in 2002. The primary source for identifying individual deals is the *Securities Data Corporation's* (SDC) Global Mergers and Acquisitions database.

The sample is screened to include only completed M&A deals and the form of transactions which are merger, acquisition, or acquisition of majority interest. After the takeover, the acquirer must own 50%-100% of common shares of the target firm. To be included in the sample, the transaction value must exceed one million US dollars. The resulting list comprised 352 deals. Our data-screening criteria are similar to those in Martin and McConnell (1991) and Kini et al. (2004), with the exception that we require the availability of information about CEOs and the boards of target firms.

To be included in the sample, companies were required to be quoted on the London Stock Exchange throughout the takeover process, which allows us to collect data on their performance and relatively completed information about their CEOs. In order to track CEOs who may remain in acquiring firms, we selected public target companies taken over by public acquiring companies. However, for 122 takeovers, we lacked information on CEOs and target broads. As this information is crucial for our subsequent test, we had to drop these cases. Afterwards, there are 230 observations in our sample.

In order to have a more accurate data analysis, we removed outliers and transformed data in our sample. Kinnear and Gray (2000) suggest that it is better to have statistics that describe 95% of the data well than 100% of them badly. Due to data errors and "rare event syndrome", we deleted 13 observations which, for any variable, have a value more than four standard deviations above or below the mean. Thus, our final sample includes 217 takeovers completed M&As announced during the period from 1st January 1998 to 31st December 2002.

Moreover, in order to improve model fit, we transformed variables of target firms' pre-takeover performance and leverage as following:

$X' = \log(1+X)$, if $X \geq 0$

$X' = -\log(1-X)$, if $X < 0$

Both of X had highly skewed distribution.

3.2.2 Methodology:

We test determinants of post-takeover CEO turnover by using logistic regression, as logistic regression is more tolerant of the inclusion of qualitative variables such as gender (Kinnear & Gray (2000)). The logistic model in our study is:

$$L = \ln\left(\frac{P_i}{1-P_i}\right)^{3}$$

$$= \beta_1 + \beta_2 AGE + \beta_2 FOUNDER + \beta_3 TENURE + \beta_4 REPUTATION$$
$$+\beta_5 DUALITY + \beta_6 CEO-OWN + \beta_7 BLOCKHD + \beta_8 BOARD-SIZE + \beta_9 OUTSIDER$$
$$+\beta_{10} CROSS + \beta_{11} RELATED + \beta_{12}(HIGH-TECH) + \beta_{13}(CULTURAL-DIF)(LEGAL-DIF)^{\dagger}$$
$$+\beta_{14} STOCKPAY + \beta_{15} AUCTION + \beta_{16} HOSTILE + \beta_{17} PREMIUM + \beta_{18}(SIZE-DIF)$$
$$+\beta_{19} IAROA + \beta_{20} LEVERG + \beta_{21} CAR$$

AGE	the age of the target CEO
FOUNDER	an indicator that takes a value of 1 if the target CEO was a founder of the target firm, and is 0 otherwise
TENURE	the years since CEO joined the target firm
REPUTATION	the number of additional board appointments held by CEO
DUALITY	an indicator that is 1 for a firm where the CEO is also the chairman of the board prior to the takeover announcement, and is 0 otherwise
CEO-OWN	the proportion of shares owned by CEO
BLOCKHD	the percentage of equity owned by blockholders
BOARD-SIZE	the number of directors in the board of the target firm
OUTSIDER	the proportion of non-executive directors in the board
CROSS	an indicator that is 1 if the "acquirer nation code" of an acquiring firm in SDC is not UK, and is 0 otherwise
RELATED	an indicator that is 1 when the target and acquiring firms have same four or three-digit SIC, and is 0 otherwise
HIGH-TECH	an indicator that is 1 for firms involved in high-tech industries, and is 0 otherwise
CULTUAL-DIF	an indicator that is 1 for the big cultural difference between acquiring countries and target countries according to Hofstede's composite index, and is 0 otherwise
LEGAL-DIF	an indicator that is 1 if the acquiring firm was from a non-English common-law country, and is 0 otherwise
STOCKPAY	an indicator that is 1 if the acquiring firm paid the deal by stock, and is 0 otherwise
AUCTION	an indictor that takes a value of 1 if more than one bidder had an interest in the target firm, is 0 otherwise
HOSTILE	an indictor that is 1 if the takeover is a hostile takeover, and is 0 otherwise
PREMIUM	the premium paid for the target firm
SIZE-DIF	the logarithms of the ratios of the asset of the target to the asset of the acquiring firm
IAROA	the industry-adjusted ROA (IAROA)
LEVERG	the ratio of total debt to total asset
CAR	the market-adjusted cumulative abnormal return

†: As there is a high correlation between legal differences and cultural differences, so we put only one of such variables in each regression.

[3] We assign code numbers to the two categories: to those target firms with post-takeover CEO turnover, we assign P_i=1; and to those without post-takeover CEO turnover, we assign P_i=0.

3.2.3 Sample description

The annual distribution of takeovers in the sample is presented in Table 3.1. We classify a transaction as a domestic takeover if the acquiring firm's "Acquirers Nation Code" in SDC is the UK. Otherwise, the transaction is a cross-border takeover. Both M&As' deal numbers and deal values kept growing in the 1990s and reached a peak in 2000. Nearly one-third of the M&As took place in 2000, followed by a decrease towards the end of our sample period. Similar phenomena are also found in the total value and the average value of transactions. The total value of transactions reached $156,029 million in 2000, which is about 7 times the total value of 2002 ($21,269mil) and about 3 times the total value of 1998 ($50,318mil) or of 2001 ($46,987mil).

In subsequent tests, we divide the sample into two subsamples: domestic takeovers and cross-border takeovers. In the sample, 67 takeovers are cross-border transactions, which is about one-third of the whole sample. The country of origin of the various foreign acquirers is in Table 3.2, which shows that acquiring firms came from 15 different countries. Of 67 international transactions, 23 acquiring firms are US companies, which is more than one-third of total foreign acquirers. 8, 6 and 5 acquiring firms were from France, Republic of Ireland and Germany, respectively. The Table shows that the US still plays a main role in international takeovers in the UK.

Table 3.1

Distribution of 217 Target Firms of Successful Takeovers Announced between January 1998 and December 2002

The sample contains 217 target firms of successful takeovers in which the target firm was listed on the London Stock Exchange, and the target had data about its CEO and the board available in *Price Waterhouse Coopers Corporate register*. A takeover was classified as a domestic takeover if the acquiring firm's "Acquirer Nation Code" in SDC is UK. Otherwise, the transaction is a cross-border takeover.

Year	Total			Domestic Takeovers			Cross-border Takeovers		
	N (Percentage of Total for Each Year)[ϒ]	Total Value of Translation ($mil)	Means of Translation Value ($mil)	N (Percentage of Total for Each Year)[ϒ]	Total Value of Translation ($mil)	Means of Translation Value ($mil)	N (Percentage of Total for Each Year)[ϒ]	Total Value of Translation ($mil)	Means of Translation Value ($mil)
1998	39 (17.97)	50317.922	1290.203	22 (56.41)	30066.185	1366.645	17 (43.58)	20251.737	1191.279
1999	62 (28.57)	75717.773	1183.090	50 (80.65)	63735.966	1249.725	12 (19.35)	11981.807	921.677
2000	67 (30.88)	156028.836	2328.789	44 (65.67)	128090.993	2911.159	23 (34.33)	27937.843	1165.786
2001	31 (14.29)	46986.949	1515.708	21(67.74)	18125.462	863.117	10(32.26)	28861.487	2886.149
2002	18 (8.29)	21269.333	1181.630	13(72.22)	13570.473	1043.883	5 (27.78)	7698.860	1539.772
Total	217 (100%)	350320.813	1499.884	150 (69.12%)	253589.08	1486.9057	67 (30.88%)	96731.734	1540.9326

ϒ : Figures in brackets are the percentages of total for each year.

Table 3.2

Country classifications of 67 Target Firms in Cross-border Takeovers

According to "Acquirer Nation Code" in SDC, 67 foreign acquiring firms in the sample are classified into 15 different countries.

Countries	Frequency	Percent
Australia	4	5.97%
Bermuda	1	1.49%
Canada	1	1.49%
Denmark	3	4.48%
France	8	11.94%
Germany	5	7.46%
Greece	1	1.49%
Ireland-Rep	6	8.96%
Italy	2	2.99%
Netherlands	4	5.97%
Singapore	2	2.99%
South Africa	3	4.48%
Sweden	1	1.49%
Switzerland	3	4.48%
United States	23	34.33%
Total	67	100%

3.2.4 The Impact of Takeovers on target CEOs

- CEO Turnover

This study focuses on the turnover of CEOs because the CEO is the person in the company who is responsible for the main policy decisions of the company. The first task was to identify the CEO at the time of merger or acquisition of each of the target companies in our sample. The names of the target CEOs were found in *PriceWaterHouseCoopers Corporate Register*, *Directory of Directors* and *Thomson OneBanker* for the month related to the announcement month of the takeover. If no person in particular was named as the CEO in the target firm, we identify "Managing Director" playing the same role as the CEO of the company, following Kenney and Limmack (1996). Then we examine CEO turnover by attempting to find the CEO's name in the following annual report of the acquirer and by tracking press releases. CEO turnover is defined as the CEO leaving after the takeover announcement. We consider three time periods during which the CEO may depart. These are Year 0 (the

calendar year in which the takeover announcement was made), Year +1 (one year after the year of the announcement) and Year +2 (two years after the year of the announcement).

Table 3.3

Summary and Comparison on CEO Turnover for Target Firms in Domestic and Cross-border Takeovers

CEO post-turnover is an indicator variable that is 1 for the firms with CEO turnover over three time periods Year 0 ,Year +1, Year +2 following the announcement of the takeover, and is 0 otherwise. Panel A documents the cumulative turnover for Year 0, Year (0, +1), and Year (0, +2), while panel B reports the annual turnover for each year after the takeover announcement. The t-statistics and p-value are reported to test for differences in CEO post-turnover rate between the samples of domestic and cross-border takeovers.

Time period relative to takeover	**All sample (N=217)**		**Domestic takeovers (N=150)**		**Cross-border takeovers (N=67)**		
	Number of CEO Turnovers	% CEO turnover	Number of CEO Turnovers	% CEO turnover	Number of CEO Turnovers	% CEO turnover	Chi^2 (p-val)
Panel A Cumulative turnover							
Year 0	105	48.39%	76	50.67%	29	43.28%	1.011 (0.32)
Year +1	133	61.29%	98	65.33%	35	52.24%	3.347* (0.07)
Year +2	146	67.28%	104	69.33%	42	62.69%	0.929 (0.34)
Panel B Annual turnover							
Year 0	105	48.39%	76	50.67%	29	43.28%	1.011 (0.32)
Year +1	28	12.90%	22	14.67%	6	8.96%	1.344 (0.25)
Year +2	13	5.99%	6	4.00%	7	10.45%	3.419* (0.06)

*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$

Table 3.3 documents a summary of CEO turnover rates after the takeover announcement. Panel A reports the cumulative CEO turnover rate for three time periods. For the full sample, 48.39% of CEOs left target firms shortly after the announcement of takeovers, which is similar to 41.9% reported by Kennedy and Limmack (1996) for UK takeovers between 1980 and 1989. But it is much less than the 88% of inside directors that resigned after hostile takeovers in 1985 and 1986 in the study of Franks and Mayer (1996). After two years, the cumulative CEO departure rate increases to 67.28% in the full sample. Panel B reports the annual CEO turnover rates. Most CEOs left target firms by the end of the year of the announcement. The annual turnover rate decreased in the following two years, which was 12.90% in the first post-takeover year and 5.99% in the second post-takeover

year. These results are similar to those found in the literature. In the US, Hartzell et al. (2004) show retention of CEO's as executives at 57% shortly after and down to 34% by the end of Year 1. Martin and McConnell (1991) find a 41.9% turnover after Year 1. Bhagat and Jeffris (2002) find that the turnover of the top officers varies between 50% and 64 % after two years. Walsh (1988) reports a turnover rate of 59% five years after the deals. In the UK, Franks and Mayer (1996) find a 50% turnover of inside directors in the first two years. Kennedy and Limmack (1996) report a CEO turnover rate of 40.1% and 65.8% after one and two years, respectively. Dahya and Powell (1998) show that 47% of top executives depart within one year.

For domestic takeovers, 50.67% of CEOs departed target firms, while only 43.28% of CEOs left by the end of the year of the announcement in cross-border takeovers. After one year of the takeover announcement, 65.33% of CEOs departed from target firms following domestic takeovers, while only 52.24% of CEOs left after cross-border takeovers.

The difference is statistically significant and is consistent with our hypothesis that CEOs are more likely to remain after cross-border takeovers, indicating that the special experience of the target business and the knowledge of local culture secured their jobs in their new firms. Generally, the annual CEO turnover rate reported in Panel B declined in the following two years subsequent to takeover. A significant difference of post-takeover CEO turnover is found between domestic and cross-border takeovers in the second year after the takeover announcement. In the second year after the takeover announcement, there was a 10.45% CEO turnover rate following cross-border takeovers, while only 4% of CEOs left after domestic takeovers. This shows that more CEOs left two years after cross-border takeovers than domestic takeovers. This may be caused by the completion of integration or integration difficulties following takeovers.

- Career Changes of CEOs

We investigate the post-takeover career change of the CEO. According to Fama's

(1980) ex post settling-up hypothesis, the directorial labour market would penalize such CEOs by reducing their directorships following discipline takeovers, as they put their own welfare above that of shareholders of target firms. It would be hard for target CEOs who departed after takeovers to find a new director position in another company. However, CEOs who were retained in the new company could keep their directorships, as their experience and special knowledge may match requirements of the acquiring firms. Acquirers would take such CEOs' advantages and make them contribute to the integration and further success of the new firm.

Table 3.4
Frequency Distribution for Departures and Retentions of CEOs

This table reports that distribution of CEO departures and retentions two years after takeover announcements, and compares domestics and cross-border takeovers. Panel A documents 146 CEO departures and Panel B reports 71 CEO retentions in new firms after takeovers.

	All sample		**Domestic takeover**		**Cross-border takeover**	
	Number	% of sample	Number	% of sample	Number	% of sample
Panel A. 146 departures of CEOs						
Retirement	5	3.42%	5	4.81%	0	0.00%
Resignation[(1)]	23	15.75%	16	15.38%	7	16.67%
Departure to join other firm	76	52.05%	55	52.88%	21	50.00%
Death/Illness	0	0.00%	0	0.00%	0	0.00%
Fired, poor performance cited	0	0.00%	0	0.00%	0	0.00%
No reason given	42	28.77%	28	26.92%	14	33.33%
Total	146	100.00%	104	100.00%	42	100.00%
Panel B.71 retentions of CEOs						
Retained on other position in the new firm	6	8.45%	5	10.87%	1	4.00%
Promoted***	9	12.68%	1	2.17%	8	32.00%
Remained as CEO	37	52.11%	25	54.35%	12	48.00%
Joined the acquirer's board	19	26.76%	15	32.61%	4	16.00%
Total	71	100.00%	46	100.00%	25	100.00%

[(1)]: no evidence is found to suggest that CEO joined another company
*** indicates $p<0.01$, when we compare the difference of the promoted CEOs between following domestic takeovers and following cross-border takeovers.
Although the data in the table was measured as accurately as possible from the available data sources, it is likely that certain reasons for departure were not accurately recorded in the data sources used.

We tracked the careers of target CEOs for two years after takeovers. Table 3.4 reports the distribution of both departures and retentions of CEOs two years after each

takeover announcement. Out of the departed 146 CEOs in all samples, 3.42% of CEOs retired and 15.75% of CEOs resigned after takeovers. After leaving their target firms, 52.05% of CEOs found new positions in another firm. Thus, the directorial labour market did not totally negatively react to these departed CEOs. Out of the remaining 71 CEOs, 52.11% were retained as CEOs in the new firm and 26.76% of them joined the acquiring firms' board. A small number of the target CEOs played top leadership roles in the merged firm: 9 CEOs became Chairmen of the new firms and 37 served as new CEOs. Six target CEOs were retained in another position in the new firm. As our findings suggest, most retained CEOs still play an important role in the new firm. This suggests that acquiring firms expected target CEOs to make a major contribution after takeovers.

We also compared the situation following domestic and cross-border takeovers. A strong significant difference is found between the CEO promotion rate following domestic takeovers and that after cross-border takeovers. Eight CEOs were promoted to Chairman of the new firm following cross-border takeovers, while only one CEO became Chairman after domestic takeovers. This suggests that, especially following cross-border takeovers, foreign acquiring firms are more likely to attach importance to retained target CEOs.

3.2.5 Descriptive statistics

In this section, we describe the collection of determinants of the probability of CEO departure and provide descriptive statistics for them. They are divided into four parts: CEO characteristics, target governance characteristics, deal characteristics and target firm characteristics.

a. CEO Characteristics

We collected data on the CEO's age, tenure, reputation, ownership and whether the CEO was the founder of the target firm. Although information may be obtained on named senior managers, there is no readily available comprehensive resource of

information on directors' turnover for individual companies. Information on the characteristics of the CEOs and the board of directors was selected from *PriceWaterhouseCoopers Corporate Registers, annual reports*, *Datastream, Directory of Directors, the Financial Times*, and *news releases* from company web sites.

Table 3.5 reports summary statistics on the characteristics of the CEOs, target firm governance, deals and target firms at the end of the year prior to the year of the announcement. Statistics are presented for all samples and also split into domestic and cross-border takeovers. Panel A of the table describes the information about CEOs. The average age of the CEOs in all samples is 49.84 years, close to the 52.6 years which was the average CEO age in the study of Franks et al. (2001) for their UK samples. UK CEOs are younger than the mean of those CEOs in US studies by Allgood and Farrell (2000) (56.6) and Huson et al. (2001) (61.60).

The tenure of each CEO is used to measure the experience of the CEO in previous studies (Denis and Denis (1995), Goyal and Park (2002) and Harford (2003)). In our study, CEO tenure is measured as the number of years that the CEO was in the company until the year of the takeover. We argue that, for the CEO, the years with the company might provide a better indication of his/her knowledge of the company business than the years for which the person was the CEO. The average CEO tenure in our sample is 8.295 years, which is similar to the average directors' tenure reported by Harford (2003) (8.6 years) for a large sample of US corporations. Moreover, CEO tenure in the cross-border subsample is a little shorter than that of the domestic subsample (7.925 years vs. 8.460 years), but the difference is not statistically significant.

In general, the quality of each target firm's CEO could be characterized by the reputation of the CEO (Hermalin and Weisbach (2001), Kini et al (2004)). Following Shivdasani (1993), we measure the reputation of a CEO as the number of additional board appointments held by the CEO. The reputation of CEOs in all samples is 0.922, which is slightly lower than the 1.05 of US target samples in Kini et al. (2004) and

Table 3.5

Summary Statistics on CEO Characteristics, Target Governance Characteristics, Deal Characteristics and Target Firm Characteristics for 217 Target Firms of Successful Takeovers over the Period 1998 to 2002

Variables	All sample			Domestic Takeovers			Cross-Border Takeovers			
	Mean	Median	St.dev	Mean	Median	St.dev	Mean	Median	St.dev	t-stat/ chi^2 (p-val)
Panel A. CEO Characteristics										
Age	49.839	50.000	5.620	49.740	50.000	5.791	50.060	50.000	5.254	-0.39 (0.70)
Founder	0.083	0.000	0.276	0.080	0.000	0.272	0.090	0.000	0.288	*0.056 (0.81)*
Tenure	8.295	7.000	6.909	8.460	7.000	6.947	7.925	6.000	6.861	0.53 (0.60)
Reputation	0.922	0.000	1.407	1.013	0.000	1.475	0.716	0.000	1.229	1.44 (0.15)
Panel B. Target Governance Characteristics										
CEO Duality	0.101	0.000	0.303	0.107	0.000	0.310	0.090	0.000	0.288	*0.149 (0.70)*
CEO = Block holder	0.230	0.000	0.422	0.253	0.000	0.436	0.179	0.000	0.386	*1.439 (0.23)*
CEO Ownership	0.025	0.002	0.052	0.024	0.002	0.050	0.027	0.001	0.058	-0.49 (0.62)
Blockholder Ownership	0.462	0.478	0.215	0.468	0.477	0.222	0.449	0.479	0.200	0.58 (0.56)
Board Size	7.567	7.000	2.664	7.553	7.000	2.699	7.597	7.000	2.606	-0.11 (0.91)
Fraction of Non-executives	0.499	0.500	0.147	0.494	0.500	0.143	0.509	0.500	0.154	-0.69 (0.49)

Table 3.5 (continue)

Summary Statistics on CEO Characteristics, Target Governance Characteristics, Deal Characteristics and Target Firm Characteristics for 217 Target Firms of Successful Takeovers over the period 1998 to 2002

Variables	All sample			Domestic Takeovers			Cross-Border Takeovers			
	Mean	Median	St.dev	Mean	Median	St.dev	Mean	Median	St.dev	t-stat/ chi^2 (p-val)
Panel C. Deal Characteristics										
Cross-border	0.309	0.000	0.463							
Legal Difference	0.124	0.000	0.331	-	-	-	0.403	0.000	0.494	-
Culture Difference	0.144	0.000	0.351	-	-	-	0.478	0.000	0.503	-
Related	0.553	1.000	0.498	0.540	1.000	0.500	0.582	1.000	0.497	*0.332 (0.57)*
High-tech	0.253	0.000	0.436	0.227	0.000	0.420	0.313	0.000	0.467	*1.843 (0.18)*
Stock Payment	0.272	0.000	0.446	0.320	0.000	0.468	0.164	0.000	0.373	*5.68**(0.017)*
Cash Payment	0.175	0.000	0.381	0.120	0.000	0.326	0.299	0.000	0.461	*10.216***(0.001)*
Mixed Payment	0.553	1.000	0.498	0.560	1.000	0.498	0.537	1.000	0.502	*0.096 (0.756)*
Multiple bidders	0.069	0.000	0.254	0.053	0.000	0.225	0.104	0.000	0.308	*1.883 (0.17)*
Hostile	0.046	0.000	0.210	0.033	0.000	0.180	0.075	0.000	0.265	*1.796 (0.18)*
Premium	41.175	38.140	38.525	37.864	35.215	39.567	48.587	41.960	35.246	-1.91* (0.058)
Panel D. Target Firm Characteristics										
Target Total Asset ($mil)	3914.596	145.460	23752.069	4873.975	135.090	28459.196	1766.735	184.390	3331.741	0.89 (0.375)
Bidder Total Asset ($mil)	63451.828	1107.080	201331.921	73530.842	507.635	233761.361	40886.870	4045.890	92449.540	1.10 (0.271)
Size Difference	-0.762	-0.699	0.835	-0.658	-0.562	0.810	-0.994	-0.920	0.850	2.78***(0.006)

*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$

the 1.09 of Italian target firms in Brunello et al. (2003). Meanwhile, the average number of additional directorships held by CEOs is significantly higher in domestic takeovers than in cross-border takeovers (1.013 vs. 0.716).

b. Target Governance Characteristics

In terms of target governance, Panel B of Table 3.5 reports CEO duality, CEO ownership, whether or not the CEO was a blockholder, blockholders' ownership, board size, and board composition. Following the definition of previous studies (Goyal and Park (2002), Kini et al. (2004)), CEO duality refers to the circumstance where the CEO serves as the chairman of the board of directors simultaneously.

Previous studies associate duality with a lack of board independence or management entrenchment (Jensen (1993)). Our results show that only 10.1% of CEOs are also the chairman in target firms for all samples, which is close to 14.3% of companies with CEO duality in the study of Franks et al. (2001) for UK samples at the beginning of the 1990s. But it is much less than the frequency of CEO duality reported by Kini et al (2004) for US target firms, which was 80%.

We also collect ownership data for each CEO. Similar to Core et al. (1999), CEO ownership is measured as the percentage of shares owned by the CEO of the target firm. On average, CEOs in all samples held 2.5% of the shares of target firms, and CEOs in cross-border takeovers owned a little higher percentage than those in domestic takeovers (2.7% vs. 2.4%). However, it is much higher than the finding of Core et al. (1999) where the mean of CEO stock owning was found to be 1.5% for US firms at the beginning of the 1980s. Moreover, following UK company law (Hillern et al. (2003)), we classify CEOs who own 3% or above 3% of shares as blockholders. We found that 23% of CEOs are blockholders in our sample. The proportion of such CEOs in domestic takeovers is higher than that in cross-border takeovers (25.3% vs. 17.9%).

We collect the total proportion of shares owned by blockholders prior to the

announcement date of the takeover. As mentioned in Franks et al. (2001), the statutory disclosure threshold for outside shareholders was reduced to 3% from 1990[4]. All shareholdings greater than 3% are including in our samples. Panel B documents that, on average, blockholders own 46.2% of the shares of the target firms. It is much higher than the 16.97% of blockholdings reported by Kini et al. (2004) for the average US target firms from 1979 to 1998. Huson et al. (2001) report that the aggregate level of institutional equity holding is 43.9% in 1994 for US samples. This indicates that blockholdings increased dramatically and it may lead to a change of UK blockholders towards a more active role in recent years.

Another important internal control mechanism is the board. For each target firm, we collected data on the composition and information about the board of directors from *PriceWaterHouseCoopers Corporate Register*. We measure the board size by the number of board directors. Following Franks et al. (2001), outside directors (outsiders), nonexecutive directors, are defined as board members who are not full-time employees of the company. Inside directors (insiders), executive directors, are defined as board members who are full-time employees. Descriptive statistics relating to the average size of the target board is provided in Panel B of Table 5, which is 7.567. The board sizes in cross-border subsamples are a little bigger than that in domestic subsamples (7.597 vs. 7.553). By comparison, the study by Franks et al. (2001) documents 9.3 directors on the board for a UK sample at the beginning of the 1990s. Denis et al. (1997) and Hardford (2003) report 11 directors on the board of US target firms.

In terms of board composition, Panel B reports that the average fraction of nonexecutives is 49.9% of the target board. Franks et al. (2001) documents 39.8% nonexecutives on the board for their UK samples. The study by Denis et al. (1997) documents 47.3% of independent outsiders on the board and Hardford (2003) reports that outsiders account for 54% of the board, both based on the US takeover market. Thus, UK target firms have a similar composition to the average board of US target firms, while they have a relatively smaller average board size.

[4] The disclosure threshold in the United States is 5%. (Franks et al.(2001))

c. Deal Characteristics

We collected deal characteristics data for each of the target firms. *Thomson OneBanker* provides most data on the characteristics of deals, such as the acquirer nation, the payment, the number of bidders, the attitude of acquirers, and the premium prior to the announcements. Panel C of Table 3.5 presents descriptive statistics on deal characteristics. 67 out of 217 transactions are cross-border, which account for 30.87% of the whole samples in our study. When both the target firm and the acquiring firm have the same four-digit or three-digit primary SIC code, the deal is defined as a related M&As (McNeil et al. (2004)). For the full samples, 126 transactions took place in related industries, which is 55.3% of the full samples. Approximately 58.2% of deals are related in cross-border takeovers, which is higher than 54% related deals in domestic takeovers. The difference is not statistically significant.

For the cross-border takeovers, we identify the legal system of acquiring countries. Watson (1974) argues that laws in different countries are typically transplanted from a few legal families or traditions. In general, commercial laws come from two broad traditions: common law, which evolved in England, and civil law, which is Roman law in origin. Three main types of civil laws are in use around the world: French, German and Scandinavian civil law. The samples are divided into two groups: targets acquired by bidders from an English common law system and from a non-English common law system. Panel C shows that, for the whole sample, 12.4% targets were bid for by acquiring firms from non-English common law countries. The details of the distribution of acquiring nations laws involved cross-border takeovers is presented in Table 3.6. Amongst 67 cross-border takeovers, 40 acquiring firms were from countries with English common law, which is 59.70% of total international transactions. 27 acquiring firms were from the non-English-common-law countries, including 15 French-civil-law countries, 8 German-civil-law countries and 4 Scandinavian-civil-law countries.

Moreover, for the cross-border takeovers, culture difference is measured according to

Hofstede (1980). Different cultures in international business are summarized in four dimensions: power distance, uncertainty avoidance, individualism versus collectivism, and masculinity versus femininity. Following Conn et al (2005), we use a composite index based on four national culture dimensions. For each M&A transaction, we take the difference between the acquirer's country and the UK in each of the culture dimensions. The composite index is the summation of these four differences, which ranges from a low of 22 for the US to a high of 153 for Singapore, with a median of 28. We classify any country with a score of 28 or less as having a low cultural difference, and any country with a score of more than 28 as having a high cultural difference. Panel C of Table 3.5 shows that, for the cross-border takeovers, 47.8% of acquiring firms have a high cultural difference from the UK, which accounts for 14.4% of the whole sample.

Table 3.6
The distribution of acquirer nations' law involved 67cross-border takeovers according to legal system

Law		Acquirers Nations (N=15)	Num.	Percent
English common law (N=40)		Australia, Bermuda, Canada, Ireland-Rep, Singapore, South Africa, US	40	59.70%
Non-English common law (N=27)	French civil law	France, Greece, Italy, Northland	15	22.39%
	German civil law	Germany, Switzerland	8	11.94%
	Scandinavian civil law	Denmark, Sweden	4	5.97%
Total			67	100.00%

According to special high-tech classification codes provide by SDC, we identified high technology industries, which include areas in biotechnology, chemicals, computers, defence, electronics, communications, medical, and pharmaceuticals, among others. These industries cover a broad range of high-tech fields, but the common characteristic is that they reflect emerging industries that focus on the development of new and innovative technology within their respective areas. Since the focus is on the effects of technology takeovers, we define a high-tech takeover if either the acquiring firm or the target firm is in a high technology industry. Panel C of Table 3.5 shows that, in our sample, 25.3% of deals took place in high-tech

industries. In domestic takeovers, 22.7% of transactions were in high-tech industries. In cross-border takeovers, the percentage of high-tech takeovers was higher, and reaches 31.1%. But the difference in percentage from that in domestic takeovers is not significant.

We also collected details about deal payment for each of the transactions. We divided them into three groups: stock payment, cash payment and mixed payment. This division roughly coincides with three generally common payment methods in M&A transactions. For the whole sample, 55.3% of deals used mixed payment for the transactions, while 27.2% of deals employed stock payment. Cash payment was only used in 17.5% of deals. More cross-border transactions employed cash payment, compared with domestic takeovers (29.9% vs. 12.0%). The difference is statistically significant at the 1% level. This indicates that foreign companies are more likely to employ cash payment. Moreover, 32% of domestic takeovers were involved in stock payment in the transactions, which is significantly higher ($p<0.05$) than the 16.4% of deals using stock payment in cross-border takeovers.

Panel C provides details of the number of bidders. 15 out of 217 target firms faced more than one bidder in the process of takeovers, which only account for 6.9% of the full samples. 8 cases took place in domestic takeovers, and 7 cases were cross-border takeovers. Moreover, following the definitions of hostility in SDC, we classify a takeover as hostile if the target firm's management opposed the initial bid in the takeover contest. Panel C shows that only 4.6% of all samples was in hostile environments. Similar situations are found in domestic and cross-border takeovers, 3.3% and 7.5% respectively. Compared with 48% of hostile takeovers in the 1980s documented in the study of Kini et al. (2004), the takeover activities are friendlier in the 1990s. This indicates that friendly deals are dominant in the recent takeover market, which is consistent with the finding of Huson et al. (2001).

Panel C also reports the descriptive statistics on bid premia. For the full samples, the average bid premium four weeks prior to the takeover announcement is 41.175%, which is much higher than the 30% reported by Franks and Mayer (1996) for UK

hostile takeovers in 1985 and 1986. By comparison, Franks and Harris (1989) report bid premia of 42% for hostile takeovers in the US. Moreover, we observe the significantly different bid premium between domestic and cross-border takeovers. In domestic M&As, UK acquiring firms paid an average of 37.864% premium to the target firms, while the mean of the bid premia paid by foreign acquiring firms was 48.587% in cross-border takeovers. This significant difference indicates that the special circumstances of cross-border takeovers, such as information asymmetry, may lead to high premia.

d. Target Firm Characteristics

We collect the total asset values for each of the target firms and acquiring firms at the end of the year prior to the takeover announcement. Because the asset size distributions of the target and acquiring firms were skewed, following the previous studies by McNeil et al. (2004), Denis et al. (1997) and Warner et al. (1988), we calculate the size difference:

Size Difference = log (the target's asset / the acquirer's asset)

Panel D of Table 5 shows that the mean asset size of the target firms is $3914.596 million, while the mean acquiring firm asset size is $63451.828 million. The average size difference is -0.762. In addition, we observe that the average size difference in domestic takeovers is significantly smaller than that in cross-border takeovers at the 1% level (-0.658 vs. -0.994).

Turning to the measure of firm performance, we test target pre-takeover performance by using both accounting and capital market performance variables. Kini et al (2004 p1528) argues that "market-based performance measures are sensitive to the effect on the stock price of any change in market expectations of future performance over the performance window", while accounting measures present a more historical performance of target firms. So both accounting and market-based measures are employed in our tests.

- Accounting Performance

For the accounting performance, we employ the industry-adjusted ROA (IAROA), which is the ratio of net income to total assets. SDC and DataStream provide the data of accounting performance, such as ROA. Following most previous papers (Kini et al. (1995, 2004)), the IAROA are computed as the difference between the target accounting performance and the industry median level. The industry level is computed as the median accounting performance for the firm's industry, based on the target firm's four-digit primary SIC code. If we find less than three other firms in the industry at the four-digit SIC level, we match at the three-digit SIC level. The performance of each firm is measured for each year, from 1 year prior through 2 years prior to the year of the announcement of takeover (-2, -1). We then compute average performance over the interval -2 year through -1 year. This method is similar to that used in Brickley et al. (1999), Frank et al. (2001), Harford (2003), Kini et al (2004).

Panel A of Table 3.7 shows average means, medians and standard deviations of IAROA over the different intervals. Average IAROA decreases when the time interval is relatively near the announcement of takeovers. This indicates that the accounting performances of the target firms were getting worse prior to the takeover announcement. Average IAROA of target firms involved in cross-border takeovers was generally lower than that of target firms involved in domestic takeovers. But no significant difference was found.

- Stock Performance

In addition, we also use capital market variables to measure firm performance. The market benchmark, "FTSE ALL", is used to adjust stock market performance. The abnormal return for each target firm is the difference between the firm's monthly return and the monthly return on the market index "FTSE ALL".

In order to avoid the possibility of being affected by any event-related information, we use monthly data to measure the stock price performance up to 3 months prior to the takeover announcement (Kini et al. (1995, 2004)). For each target firm,

Table 3.7

Summary statistics on the pre-takeover performance and Leverage of 217 target firms

Variables	All sample			Domestic Takeovers			Cross-Border Takeovers			
	Mean (t-stat)$^{\Upsilon}$	Median	St.dev	Mean (t-stat)$^{\Upsilon}$	Median	St.dev	Mean (t-stat)$^{\Upsilon}$	Median	St.dev	t-stat (p-val)
Panel A. IAROA										
(Year -2, year -1)	3.272 (1.27)	-0.123	37.795	3.676 (1.24)	-0.205	36.313	2.334 (0.47)	0.450	40.931	0.24 (0.809)
Year -1	1.276 (0.75)	-0.350	25.272	1.537 (0.73)	-0.350	25.661	0.703 (0.24)	0.000	24.362	0.22 (0.823)
Panel B. Market-adjusted Cumulative Abnormal Return (CAR) (Monthly)										
-26 to -3	-0.357*** (-7.79)	-0.268	0.676	-0.360*** (-6.57)	-0.221	0.671	-0.350*** (-4.15)	-0.351	0.689	-0.10 (0.920)
-14 to -3	-0.184*** (-5.07)	-0.098	0.539	-0.175*** (-4.01)	-0.075	0.533	-0.208*** (-3.10)	-0.174	0.550	0.43 (0.668)
Panel C. Capital Leverage (Total Debt/Total Asset)										
(Year -2, year -1)	0.240*** (17.27)	0.220	0.206	0.234*** (13.80)	0.218	0.208	0.254*** (10.44)	0.231	0.199	-0.65 (0.514)
Year -1	0.231*** (16.11)	0.216	0.212	0.222*** (13.03)	0.185	0.209	0.254*** (9.48)	0.224	0.219	-0.10 (0.319)

Υ : The t-statistic test is to examine if the mean is equal to 0.

*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$

cumulative abnormal returns are calculated over T months to 3 months prior to the announcement of the takeover. For different numbers of month T, the test could produce cumulative returns over different time periods to the takeover announcement. In our study, we examine the stock performance of target firms over 1 year and over 2 years prior to (3 month before) the takeover announcement. Then, T equates to 14 and 26.

Panel B of Table 3.7 shows the summary statistics on stock performance. The means of cumulative abnormal returns were significantly negative across all time windows. The means of cumulative abnormal return in cross-border takeovers were lower than those in domestic takeovers, but no significant differences are found. The stock performance provides evidence that target firms underperformed prior to the takeover announcement.

- Leverage

To test the effect of target leverage on post-takeover CEO turnover, we collected leverage data for the target firms. Following Franks et al. (2001), we measured leverage by using the total debt to total asset ratio. *Thomson OneBanker* provides the data, such as net debt and total debt. The leverage of each firm was measured for each year, and the time period covers 2 years through 1 year prior to the year of the takeover announcement. Then we calculate the mean of leverage over the interval -2 years to -1 year.

Summary statistics on leverage are reported on panel C of Table 3.7. All ratios of total debt to total asset for target firms were significantly different from zero across all time windows. The capital leverages for target firms involved in cross-border takeovers were higher than that in domestic takeovers. But the differences are not statistically significant.

In summary, the above results show that, in our sample, the target firms in cross-border takeovers underperform more than those in domestic takeovers prior to the announcement. Moreover, in our sample, the target firms in domestic takeovers had

better capital leverage than those in cross-border takeover. The differences are not statistically significant and so we cannot infer these differences to the corresponding populations.

3.3 Univariate Tests Results

In this section, we compare the target firms with and without post-takeover CEO turnover with respect to CEO characteristics, target governance characteristics, deal characteristics and target firm characteristics prior to the announcement of the takeovers. The sample of 217 targets is divided into two subsamples. The first subsample includes 112 targets in which there is no post-takeover CEO turnover, while the second subsample includes 105 targets that have post-takeover CEO turnover. We compare the mean characteristics of the two subsamples. Table 3.8 reports the results for the full samples in the first set of three columns. The second and third sets of columns divide the full sample once more into domestic and cross-border takeovers. The t-statistics, Chi-square and p-values of the difference tests are calculated to determine if a difference in these characteristics exists between targets with and without CEO turnover.

3.3.1 CEO Characteristics

Panel A of Table 3.8 reports comparisons of subsample means with respect to pre-takeover CEO age, CEO tenure, CEO reputation and whether or not the CEO was the founder of the target firm. We perform a comparison of means tests to determine whether or not a significant difference exists between the target samples with or without post–takeover CEO turnover. A significant relationship was found between CEO turnover and dummies of whether the CEO was the founder. 12.5% of non-departed CEOs were founders of target firms, while 3.8% of departed CEOs were founders of target firms. The difference is statistically significant at the 5% level. To some extent this may indicate that a founding CEO has a good knowledge of the target firm and an expertise that might be valuable to the acquiring firm, so corporate takeover may be less likely to result in the removal of these CEOs. No significant relationship was found between CEO age, tenure, reputation and CEO turnover following the takeovers.

Table 3.8

Summary Statistics on Pre-takeover CEO Characteristics, Target Governance Characteristics, Deal Characteristics and Target Firm Characteristics, Split by Post-takeover CEO turnover for 217 Target Firms of Successful Takeover over 1998 to2002

Variables	All sample			Domestic takeovers			Cross-border takeovers		
	No CEO Turnover $^{\Omega}$ (N=112)	CEO Turnover$^{\Phi}$ (N=105)	t-stat/ *chi*^{2} (*p*-val)	No CEO Turnover$^{\Omega}$ (N=74)	CEO Turnover$^{\Phi}$ (N=76)	t-stat/ *chi*^{2} (*p*-val)	No CEO Turnover$^{\Omega}$ (N=38)	CEO Turnover$^{\Phi}$ (N=29)	t-stat/ *chi*^{2} (*p*-val)
Panel A. CEO Characteristics									
Age	49.589	50.105	-0.67 (0.501)	49.311	50.158	-0.90 (0.372)	50.132	49.966	0.13 (0.899)
Founder	0.125	0.038	*5.381**(0.020)*	0.108	0.053	*1.568 (0.211)*	0.158	0.000	*0.748 (0.387)*
Tenure	8.750	7.810	1.00 (0.317)	8.770	8.158	0.54 (0.591)	8.711	6.897	1.07 (0.287)
Reputation	0.955	0.886	0.36 (0.716)	1.108	0.921	0.78 (0.439)	0.658	0.793	-0.44 (0.659)
Panel B. Target Governance Characteristics									
CEO Duality	0.143	0.057	*4.370**(0.037)*	0.149	0.066	*2.701 (0.100)*	0.132	0.034	*1.902 (0.168)*
CEO = Block holder	0.241	0.219	*0.148 (0.700)*	0.270	0.237	*0.221 (0.638)*	0.184	0.172	*0.016 (0.901)*
CEO Ownership	0.026	0.023	0.46 (0.647)	0.026	0.021	0.59 (0.557)	0.027	0.028	-0.07 (0.947)
Block holder Ownership	0.452	0.474	-0.75 (0.451)	0.460	0.476	-0.46 (0.648)	0.436	0.467	-0.63(0.533)
Board Size	7.643	7.486	0.43 (0.665)	7.649	7.461	0.43 (0.671)	7.632	7.552	0.12 (0.902)
Fraction of Non executives	0.500	0.497	0.41 (0.886)	0.489	0.499	-0.40 (0.687)	0.521	0.493	0.73 (0.467)

Table 3.8 (Continue)

Summary Statistics on Pre-takeover CEO Characteristics, Target Governance Characteristics, Deal Characteristics and Target Firm Characteristics, Split by Post-takeover CEO Turnover for 217 Target Firms of Successful Takeover over 1998 to2002

Variables	All sample			Domestic takeovers			Cross-border takeovers		
	No CEO Turnover$^{\Omega}$ (N=112)	CEO Turnover$^{\Phi}$ (N=105)	t-stat/ chi^2 (p-val)	No CEO Turnover$^{\Omega}$ (N=74)	CEO Turnover$^{\Phi}$ (N=76)	t-stat/ chi^2 (p-val)	No CEO Turnover$^{\Omega}$ (N=38)	CEO Turnover$^{\Phi}$ (N=29)	t-stat/ chi^2 (p-val)
Panel C. Deal Characteristics									
Cross-border	0.339	0.276	*1.011 (0.315)*						
Legal Difference	0.143	0.105	*0.722 (0.396)*	-	-	-	0.421	0.379	*0.119 (0.730)*
Related	0.571	0.533	*0.318 (0.573)*	0.500	0.579	*0.941 (0.332)*	0.711	0.414	*5.953**(0.015)*
High-tech	0.259	0.248	*0.037 (0.848)*	0.270	0.184	*1.584 (0.208)*	0.237	0.414	*2.393 (0.122)*
Stock Payment	0.366	0.171	*10.371***(0.001)*	0.459	0.184	*13.054***(0.000)*	0.184	0.138	*0.257 (0.612)*
Cash Payment	0.098	0.257	*9.476***(0.002)*	0.027	0.211	*11.955***(0.001)*	0.237	0.379	*1.594 (0.207)*
Mixed Payment	0.536	0.571	*0.280 (0.597)*	0.514	0.605	*1.281 (0.258)*	0.579	0.483	*0.612 (0.434)*
Multiple bidders	0.054	0.086	*0.870 (0.351)*	0.027	0.079	*2.002 (0.157)*	0.105	0.103	*0.001 (0.981)*
Hostile	0.018	0.076	*4.195**(0.041)*	0.014	0.053	*1.781 (0.182)*	0.026	0.138	*2.967*(0.085)*
Premium	40.831	41.542	-0.14 (0.892)	34.760	40.887	-0.95 (0.345)	52.653	43.259	1.08 (0.283)
Panel D. Target Firm Characteristics									
Target Total Asset ($mil)	3781.600	4056.460	-0.08 (0.932)	4738.723	5005.667	-0.06 (0.954)	1917.728	1568.882	0.42 (0.674)
Bidder Total Asset ($mil)	44954.045	83182.796	-1.40 (0.163)	54479.454	92080.878	-0.98 (0.326)	26404.566	59863.683	-1.48 (0.143)
Size Difference	-0.723	-0.803	0.71 (0.480)	-0.641	-0.675	0.26 (0.799)	-0.883	-1.140	1.23 (0.222)

Ω: Figures are the mean of each variable, or the percentages of targets related to each variable, in those targets without CEO turnover following the takeover
Φ: Figures are the mean of each variable, or the percentages of targets related to each variable, in those targets with CEO turnover following the takeover
*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$

3.3.2 Target Governance Characteristics

The results for target governance characteristics are in panel B of Table 3.8. A significant difference is found between CEO duality and post-takeover CEO turnover. Among the remaining target CEOs, 14.3% of them were a Chairman of a target firm before takeovers. Only 5.7% of post-takeover departed CEOs were Chairmen in target firms prior to a takeover announcement. The difference is statistically significant at the 5% level. This indicates that the duality of a target CEO may strengthen his/her power, and help him or her to secure the CEO job in the new firm. No significant differences exist between takeovers with and without post-takeover CEO turnover as regards CEO ownership, whether or not the CEO is a blockholder, blockholder ownership, board size and the proportion of nonexecutives on the board.

3.3.3 Deal Characteristics

Panel C of Table 3.8 shows some interesting statistics on deal characteristics. For the full sample, 33.9% of target firms without post-takeover CEO turnover were involved in cross-border takeovers, while cross-border takeovers occurred in 27.6% of the targets with CEO turnover after the takeovers. This higher proportion of cross-border takeovers occurring for targets without, rather than with post-takeover CEO turnover indicates that the special features of cross-border takeovers may increase the value of the targets' CEOs and then reduce the CEOs turnover rate following the takeovers. But the difference is not statistically significant.

We also find that, in the full sample, slightly more than 50% of takeovers are related, regardless of whether or not there was CEO turnover afterwards. But only in cross-border takeovers, did the related takeovers occur more frequently in targets without, rather than targets with post-takeover CEO turnovers (71.1% vs. 41.4%). Such a negative association between related takeovers and post-takeover CEO turnover suggests that, although target firms were in related industries, foreign acquirers may prefer to retain target CEOs due to some uncertain issues in cross-border transactions and may expect the benefit that target CEOs could bring to the new firms.

Panel C of Table 3.8 also shows a significant relationship between payment and CEO turnover after takeovers. In the full sample, domestic and cross-border takeovers, stock payments were employed in a greater percentage of targets without than of targets with post-takeover CEO turnover (36.6% vs. 17.1%, 45.9% vs. 18.4%, 18.4% vs. 13.8% respectively). The differences are statistically significant at the 1% level for the full sample and domestic takeovers. In addition, for the full sample and domestic takeovers, we find that a greater percentage of target firms with post-takeover CEO turnover used cash payment than targets with no post-takeover CEO turnover (25.7% vs. 9.8%, 21.1% vs. 2.7% respectively). The findings indicate that stock payment may be the result of negotiation by CEOs who are keen to remain and receipt of stock tends to increase the opportunities for these CEOs to have continued employment in the new company. Such a significant difference was not observed for cross-border takeovers.

Moreover, we find that, for the full sample, a hostile attitude occurred more often in takeovers with post-takeover CEO turnover than in those without CEO turnover after takeover (7.6% vs. 1.8%), as shown in panel C. The difference is statistically significant at the 5% level. A similar significant difference exists in cross-border takeovers (13.8% vs. 2.6%). This result supports the traditional theory that hostile takeovers play a disciplining role (Martin and McConnell (1991), Dahya and Power (1998)), although hostile takeovers have declined dramatically since the 1990s.

In Panel C of Table 3.8, as regards high-tech takeovers, multiple bidders and premium, no significant difference in the frequency is found between targets with and without CEO turnover after the takeovers.

3.3.4 Target Firm Characteristics

As Panel D of Table 3.8 shows, there is no significant size difference between targets with and without post-takeover CEO turnover.

Also, we compare the average pre-takeover performance level over different time

windows for targets with and without CEO turnover after the takeover. The differences between the means are tested to determine whether a difference in pre-takeover performance exists between the two samples of targets. Panel A of Table 3.9 reports the results using IAROA. For each set of samples, although the means of IAROA for targets with post-takeover CEO turnover are consistently lower than those for targets without post-takeover CEO turnover over all performance windows for all samples, the differences are not statistically significant.

For stock performance, we calculate the mean of the cumulative abnormal returns and perform the difference between means tests for the subsamples with and without CEO turnover following takeovers. Panel B of Table 3.9 shows the results. For the full samples and domestic takeovers, there is strong evidence of significant negative stock performance for targets with and without post-takeover CEO turnover across all performance windows ($p<0.01$ or $p<0.05$). Furthermore, the stock performance for targets with post-takeover CEO turnover is worse than that for targets without post-takeover CEO turnover across all performance windows. Especially, for the full sample, a significant difference is found over the performance window -26 to -3 months at the 5% level. For cross-border takeovers, there is a highly significant negative stock performance for targets with post-takeover CEO turnover over both performance windows ($p<0.01$), and for targets without post-takeover CEO turnover over the window -26 to -3 months ($p<0.05$). For both domestic and cross-border takeovers, although targets with post-takeover CEO turnover underperformed the sample without post-takeover CEO turnover across all performance windows, the differences are insignificant.

Turning to the leverage of target firms, Panel C of Table 3.9 reports results of the turnover-leverage relation. For each set of samples, the mean of total debt/total assets for targets with and without post-takeover CEO turnover are significantly different from zero. But no significant difference is found between targets with and without post-takeover CEO turnover for each set of samples.

Table 3.9

Pre-takeover Performance and Leverage for 217 Target Firms of Successful Takeovers over the Period 1998 to 2002

Variables	All sample			Domestic Takeovers			Cross-Border Takeovers		
	No CEO Turnover N=112 (t-stat)$^{\tau}$	CEO Turnover N=105 (t-stat)$^{\tau}$	t-stat (p-val)	No CEO Turnover N=74 (t-stat)$^{\tau}$	CEO Turnover N=76 (t-stat)$^{\tau}$	t-stat (p-val)	No CEO Turnover N=38 (t-stat)$^{\tau}$	CEO Turnover N=29 (t-stat)$^{\tau}$	t-stat (p-val)
Panel A. IAROA									
IAROA (-2, -1)	4.239	2.220	0.39	7.597	-0.141	1.31	-2.300	8.405	-1.06
	(1.05)	(0.72)	(0.694)	(1.45)	(-0.05)	(0.193)	(-0.38)	(1.00)	(0.292)
IAROA (year -1)	1.769	0.757	0.29	3.813	-0.679	1.07	-2.210	4.520	-1.12
	(0.63)	(0.41)	(0.768)	(1.03)	(-0.34)	(0.285)	(-0.53)	(1.08)	(0.266)
Panel B. Market-adjusted Cumulative Abnormal Return (CAR) (Monthly)									
-26 to -3	-0.266***	-0.454***	2.06**	-0.282***	-0.435***	1.41	-0.234**	-0.501***	1.59
	(-4.27)	(-6.81)	(0.040)	(-3.52)	(-5.86)	(0.162)	(-2.40)	(-3.48)	(0.118)
-14 to -3	-0.161***	-0.211***	0.69	-0.181**	-0.168***	-0.15	-0.120	-0.324***	1.51
	(-2.96)	(-4.35)	(0.489)	(-2.60)	(-3.16)	(0.882)	(-1.41)	(-3.07)	(0.135)
Panel C. Capital Leverage (Total Debt/Total Asset)									
Year -2	0.233***	0.249***	-0.58	0.223***	0.246***	-0.67	0.252***	0.257***	-0.11
	(11.34)	(13.27)	(0.563)	(8.39)	(11.45)	(0.505)	(7.97)	(6.65)	(0.912)
Year -1	0.227***	0.237***	-0.35	0.208***	0.236***	-0.81	0.264***	0.241***	0.42
	(10.20)	(13.16)	(0.723)	(7.39)	(12.05)	(0.419)	(7.38)	(5.87)	(0.674)

$^{\tau}$: The t-statistic test is to examine if the mean is equal to 0.

*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$

3.3.5 CEO Turnover Rates for Extreme Quartiles of Performance and Leverage

To further examine, the impact of target pre-performance and pre-leverage on post-takeover CEO turnover, we conduct tests to gain an insight into the relation between CEO turnover and performance and leverage by comparing post-takeover CEO turnover rates in the lowest and highest performance and leverage quartiles.

We compare post-takeover CEO turnover rates in the lowest and highest performance quartiles. As Kini et al. (2004) suggest, such tests provide additional insight into the relation between post-takeover CEO turnover and pre-takeover performance. Table 3.10 contains a summary of the results.

Panel A presents the results of comparing post-takeover CEO turnover rates for extreme performance by using IAROA averaged over performance windows ranging from 2 years to 1 year prior to the year of the takeover. We find that post-takeover CEO turnover rates in the highest performance quartiles are lower than that in the lowest performance quartiles across all performance windows. For the full sample, the difference is statistically significant over the time window -2 years to -1 year and -1 year. For example, for the total sample measured by IAROA over the performance window -2 years to -1 year, 37.04% of target CEOs in the highest performance quartile experienced post-takeover turnover, while the turnover rate for the lowest performance quartile is 53.70%. The difference is 16.66%, and it is statistically significant at the 10% level. Such a situation is also found in domestic takeovers, and significant differences existed over the performance window -1 year. But there is no significant difference in cross-border takeovers.

Panel B of Table 3.10 presents stock performance. Again, for each set of samples, the rates of CEO turnover in the highest performance quartile are lower than that in the lowest performance quartile. But this finding is statistically significant only over the performance window –26 months to –3 months for the full sample where the rate of CEO turnover is 37.04% for the quartile with the highest average cumulative abnormal returns and 55.56% for the lowest quartile. Our results are similar to the

Table 3.10

Post-takeover Turnover Rates for 217 Target Firms of Successful Takeovers over 1998 to 2002 for Extreme Performance Quartiles

Time period relative to takeover	All sample			Domestic takeover			Cross-border takeover		
	Quartile 1 (highest)	Quartile 4 (Lowest)	Chi^2 (p-Value)	Quartile 1 (highest)	Quartile 4 (Lowest)	Chi^2 (p-Value)	Quartile 1 (highest)	Quartile 4 (Lowest)	Chi^2 (p-Value)
Panel A. CEO Turnover rate using IAROA as the performance metric									
IAROA (-2, -1)	37.04%	53.70%	3.026*(0.082)	39.47%	55.26%	1.900 (0.168)	35.29%	47.06%	0.486 (0.486)
IAROA (year -1)	33.33%	50.00%	3.086*(0.079)	34.21%	57.89%	4.290**(0.038)	29.41%	35.29%	0.134 (0.714)
Panel B. CEO Turnover rate using market-adjusted return (CAR) as the performance metric (Monthly)									
-26 to -3	37.04%	55.56%	3.724*(0.054)	36.84%	50.00%	1.339 (0.247)	35.29%	58.82%	1.889 (0.169)
-14 to -3	38.89%	50.00%	1.350 (0.245)	42.11%	50.00%	0.477 (0.490)	29.41%	52.94%	1.943 (0.163)
Panel C. CEO Turnover rate using Total Debt/Total Asset as the leverage metric									
Year -2	50.00%	38.89%	1.350 (0.245)	60.53%	39.47%	3.368*(0.066)	29.41%	35.29%	0.134 (0.714)
Year -1	51.85%	37.04%	2.400 (0.121)	63.16%	36.84%	5.263**(0.022)	29.41%	35.29%	0.134 (0.714)

*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$

findings of Franks et al. (2001) for UK companies in 1990. They find that CEO turnover is higher in the worst performance decile than in other better performance deciles, but the difference is not statistically significant. Mikkelson and Partch (1997) also find that the lowest quartile of performance is related to higher CEO turnover rate. But a significant difference is only found in the 1984-1988 period.

Taken together, the results presented in Table 3.10 reinforce our finding in Table 3.9 of univariate tests. For the full sample, post-takeover CEO turnover is weakly related to target pre-takeover performance ($p<0.10$), which is based on both IAROA and targets' stock performance prior to the takeover announcement. Meanwhile, for domestic takeovers, we find evidence for a statistically significant relation between post-takeover CEO turnover and accounting pre-takeover performance measured by IAROA. Collectively, the results of the univariate test indicate that, in recent years, performance-related discipline was exerted by the corporate takeover market, especially domestic takeovers.

Furthermore, we compare post-takeover CEO turnover rates in the lowest and highest leverage quartiles. These results, in Table 3.10, highlight the effect of the target pre-takeover leverage on post-takeover CEO turnover. Panel C reports the difference of post-takeover CEO turnover for extreme leverage quartiles based on total debt/total assets over the windows ranging from 1 to 2 years prior to the takeover year.

For the total sample and for domestic takeovers, post-takeover CEO turnover is higher for takeovers in the highest than those in the lowest leverage quartiles across all time windows. In particular, for domestic takeovers, the difference of CEO turnover rate is significant at the 5% and 10% levels. It indicates that the pre-takeover leverage is significantly positively related to post-takeover CEO turnover for domestic takeovers. The opposite situations are found in cross-border takeovers, but the differences are not statistically significant.

3.4 CEO Turnover and Various Determinants: Multivariate Tests

In this section, we examine the relation between post-takeover CEO turnover and various determinants in a set of multivariate tests. Logistic regressions are performed to estimate the significant determinants of CEO turnover. The function includes the following sets of independent variables: (1) CEO characteristics, (2) target governance characteristics, (3) deal characteristics, and (4) target firm characteristics.

We perform three sets of tests, each based on different samples: the full sample, domestic takeovers and cross-border takeovers. We trace the situation of post-takeover CEO turnover for about two years. For each set of tests, we test the relation between determinants and CEO turnover for different time periods, Y0 (the year in which the takeover announcement was made), Y+1 (one year after the year of the announcement) and Y+2 (two years after the year of the announcement). Meanwhile, we use pre-takeover performance and leverage over different time windows ranging from 1 to 2 years prior to the takeover year.

3.4.1 The Full Sample

Table 3.11 shows the results based on the full sample. For the CEO characteristics, we find that coefficients on whether the CEO was the founder are negative and significant at the 5% level for Y0 and Y+1. This shows that the probability of CEO turnover would be lower, when the CEO was the founder and his/her knowledge and experience may secure his/her job in the new firm. Two years after takeovers, the significance disappears, which indicates that the effect of whether the CEO was the founder was getting smaller. But for Y+2, coefficients on CEO reputation appear to be significantly negative. Those CEOs have more directorships would have a lower probability of leaving the firm. This is consistent with the finding of Shivdasani (1993).

For the target governance characteristics, we find that the coefficients on CEO duality are significantly negative ($p<0.05$ or $p<0.10$) in models for Y0. The results

suggest that the probability of post-takeover CEO turnover is lower when the CEO was also the Chairman of the board. This indicates that the double position of CEOs increases their power to negotiate their career in the new firm. Duality only has an effect shortly after the takeover announcement, as the significance disappears in the later years. The regressions also computed the parameter estimates for CEO ownership, blockholder ownership, board size and the proportion of outsiders. These parameter estimates are all insignificant, which indicates that no significant relationships exist between post-takeover CEO turnover and most target governance situations prior to the takeovers.

Moreover, we test the effect of deal characteristics on post-takeover CEO turnover. We find that the coefficients on the cross-border dummy are significant and negative ($p<0.10$ or $p<0.05$) in all regressions, which implies that the probability of CEO turnover is lower for target firms in cross-border takeovers. Even two year after the takeover announcement, the effect of cross-border takeovers still exists. The results of all regressions strongly support our previous results. The significant negative relation is consistent with the hypothesis that target CEOs are more likely to be retained after cross-border takeovers. Our results differ from those of Harford (2003), who find that both inside and outside directors are more likely to be removed after the target is taken privately or acquired by a foreign company for US samples.

Another significant deal characteristic is stock payment. The results of regressions for Y0 show significant negative coefficients ($p<0.05$), indicating that the probability of CEO turnover is lower when stock payment is used in takeovers. The negative relationship supports the results of the univariate tests. It is consistent with our hypothesis that a CEO who desires to remain would prefer stock payment instead of cash payment, and his ownership of shares in the new company may increase her/his influence in the combined company. Ghosh and Ruland (1998) also find that target managers are more likely to remain in the combined companies when they receive shares as payment.

Table 3.11

Logistic Models Relating Probability of CEO Turnover **Shortly(Y0), One Year(Y1), and Two Year(Y2)** after Takeover Announcement to CEO Characteristics, Target Governance Characteristics, Deal Characteristics and Target Firm Characteristics for **217** Targets of Successful Takeovers over the Period 1998 to 2002

Independent Variables	Models											
	Y0				**Y+1**				**Y+2**			
	-1 year		-2 years		-1 year		-2 years		-1 year		-2 years	
	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig
Constant	-0.06	(0.97)	-0.06	(0.97)	1.51	(0.40)	1.53	(0.40)	0.85	(0.64)	0.58	(0.75)
CEO Characteristics												
Age	0.03	(0.24)	0.03	(0.27)	0.02	(0.53)	0.02	(0.59)	0.01	(0.80)	0.01	(0.80)
Founder	-1.45**	(0.05)	-1.42*	(0.05)	-1.66**	(0.02)	-1.61**	(0.02)	-0.32	(0.62)	-0.33	(0.61)
Tenure	0.00	(0.90)	0.00	(0.94)	0.04	(0.16)	0.04	(0.17)	0.04	(0.17)	0.04	(0.18)
Reputation	0.06	(0.60)	0.07	(0.55)	-0.17	(0.15)	-0.16	(0.17)	-0.22*	(0.05)	-0.23*	(0.05)
Target Governance Characteristic												
Duality	-1.21**	(0.05)	-1.17*	(0.06)	-0.60	(0.29)	-0.57	(0.33)	-0.66	(0.24)	-0.63	(0.27)
CEO-Ownership	4.41	(0.21)	4.11	(0.24)	2.93	(0.42)	2.79	(0.43)	0.35	(0.92)	0.28	(0.94)
BlockholdersOwn	-0.07	(0.93)	-0.16	(0.84)	-0.44	(0.58)	-0.49	(0.55)	-0.68	(0.40)	-0.70	(0.40)
BoardSize	-0.04	(0.53)	-0.04	(0.54)	-0.07	(0.27)	-0.07	(0.26)	-0.04	(0.50)	-0.04	(0.48)
Outsiders	-1.01	(0.39)	-0.90	(0.44)	-0.99	(0.41)	-0.94	(0.44)	0.44	(0.72)	0.55	(0.66)
Deal Characteristics												
CrossBorder	-0.82*	(0.05)	-0.77*	(0.07)	-0.94**	(0.02)	-0.87**	(0.04)	-0.76*	(0.06)	-0.70*	(0.10)
Related	0.15	(0.62)	0.20	(0.52)	-0.09	(0.78)	-0.05	(0.88)	-0.08	(0.81)	-0.07	(0.84)
High-tech	-0.02	(0.97)	-0.15	(0.68)	-0.13	(0.73)	-0.30	(0.43)	0.06	(0.86)	-0.12	(0.76)
Legal Dif	0.20	(0.72)	0.15	(0.79)	0.40	(0.48)	0.34	(0.56)	0.97	(0.10)	0.94	(0.12)
Stockpay	-1.15**	(0.01)	-1.10**	(0.02)	-0.71	(0.14)	-0.65	(0.18)	0.01	(0.97)	0.11	(0.81)
Auction	0.35	(0.57)	0.42	(0.50)	0.68	(0.33)	0.79	(0.27)	0.98	(0.20)	1.19	(0.13)

Attitude	1.58*	(0.07)	1.44*	(0.10)	0.63	(0.48)	0.53	(0.55)	0.45	(0.61)	0.39	(0.66)
Premium	0.00	(0.95)	0.00	(0.87)	0.00	(0.47)	0.00	(0.55)	0.00	(0.80)	0.00	(0.89)
Target Firm Characteristics												
Size Dif	-0.14	(0.45)	-0.13	(0.48)	0.21	(0.26)	0.22	(0.24)	0.24	(0.22)	0.26	(0.19)
IAROA-1	-0.27*	(0.10)			-0.29*	(0.08)			-0.20	(0.24)		
IAROA-2			-0.16	(0.29)			-0.15	(0.32)			-0.07	(0.66)
Totdebt/asset-1	1.67	(0.45)			0.48	(0.84)			0.70	(0.77)		
Totdebt/asset-2			0.60	(0.79)			-0.20	(0.93)			1.24	(0.61)
CAR-1	-0.21	(0.82)			-1.69*	(0.09)			-1.64	(0.10)		
CAR-2			-1.36	(0.12)			-2.42***	(0.01)			-2.70***	(0.00)
Cox&Snell R^2	0.14		0.14		0.14		0.16		0.10		0.12	
Negelkerke R^2	0.19		0.19		0.19		0.21		0.14		0.17	

*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$

In logistic models, the dependent variable, CEO turnover, is an indicator that is 1 for firms with post-takeover CEO turnover, and is 0 otherwise. Three sets of tests are CEO turnover over different time periods, Y0 (the year in which the takeover announcement made), Y+1 (the year after the year of the announcement) and Y+2 (the second year after the year of the announcement). The independent variable age, is the age of the target CEO. Founder is also an indicator that takes a value of 1 if the target CEO was a founder of the target firm, and is 0 otherwise. Tenure is the years since the CEO joined the target firm. Reputation is the number of additional board appointments held by the CEO. Duality is an indicator that is 1 for a firm where the CEO is also the chairman of the board prior to the takeover announcement, and is 0 otherwise. CEO-Ownership is the proportion of shares owned by the CEO. Blockholder ownership is the percentage of equity owned by blockholders. Board size is the number of directors in the board of the target firm. Outsider is the proportion of non-executive directors in the board. Cross-border takes a value of 1 if the "acquirer nation code" of an acquiring firm in SDC is not UK, and is 0 otherwise. Related takeover is also an indicator that is 1 when the target and acquiring firms have same four or three-digit SIC, and is 0 otherwise. High-tech is an indicator that is 1 for firms involved in high-tech industries, and is 0 otherwise. Legal difference takes a value of 1 if the acquiring firm was from a non-English common-law country, and is 0 otherwise. Stock payment is an indicator that is 1 if the acquiring firm paid the deal by stock, and is 0 otherwise. Auction is an indictor that takes a value of 1 if more than one bidder had an interest in the target firm, is 0 otherwise. The indictor variable, attitude, is 1 if the takeover is a hostile takeover, and is 0 otherwise. Premium is the premium paid for the target firm. Size difference is the logarithms of the ratios of the asset of the target to the asset of the acquiring firm. Target firm performances are measured by the industry-adjusted ROA (IAROA) and stock performance (CAR) over 2 years and 1 year prior to the takeover announcement. Target firm leverages are measured by the total debt to total asset.

In addition, whether the acquisition was hostile shows a positive effect on target CEO turnover in the year of takeover announcement. When the takeover is hostile, the probability of CEO turnover would be high. The positive relation supports our hypothesis that hostile takeovers are more disciplinary than friendly takeovers. Our finding is consistent with the study of Walsh (1989), Martin and McConnell (1991), Franks and Mayer (1996), Dahya and Powell (1998), Harford (2003) and Kini et al (2004).

For pre-takeover performance and leverage of target firms, a negative significant coefficient ($p<0.05$) on IAROA was found for the -1 year. Average market-adjusted stock returns over two years prior to takeover showed a strong negative effect on CEO turnover one year and two years after takeovers. The significance is at the 1% level. It provides evidence that corporate takeovers discipline the ineffective management of target firms, especially when their success is measured by stock performance. Franks and Mayer (1996) found little evidence that pre-takeover performance is related to the control change of target firm for UK hostile takeovers in the middle of the 1980s.

3.4.2 Domestic takeovers

We re-estimate the logistic models presented in Table 3.11 based on UK domestic takeovers rather than the full samples. In re-estimating each model, the performance and leverage of target firms are tested over each of two relevant intervals.

Table 3.12 summarizes the results of logistic regressions based on the sample of domestic takeovers. For CEO characteristics, negative significant coefficients on CEO reputation are found in regressions for Y+1 ($p<0.10$) and Y+2 ($p<0.05$). This indicates that good reputation reduces the probability of CEO turnover, and the effect is getting stronger in the later years. The finding supports results gained from regressions based on the full samples. There is no significant relation between the probability of post-takeover CEO turnover and CEO age, tenure and whether the CEO was the founder.

For the target governance characteristics, we do not find a significant relation between any of the hypothesized determinants and post-takeover CEO turnover. For deal characteristics, all regressions in Y0 and Y+1 show a significant and negative coefficient on stock payment, which more clearly highlights the impact of the turnover-payment relation in the previous tests. This indicates that, for domestic takeovers, the probability of post-takeover CEO turnover is lower when stock payment is used in transactions.

For target firm characteristics, a positive significant coefficient on size difference is found in regressions for Y+1 and Y+2 ($p<0.10$). The smaller the size difference between the acquirer and the target, the more likely is the post-takeover CEO turnover.[5] This indicates that the target firm and the acquiring firm with similar sizes may have similar management resources. So the acquiring firm was more confident in replacing the target CEO with their own managers. This is more likely to happen in the later years, when the acquiring firm has become more familiar with the target firm's operations.

For target pre-takeover performance, the coefficient on CAR over -1 years through -2 is negative and significant in models for Y+1 and Y+2. This indicates a significant relationship between CEO turnover and poor pre-takeover performance measured by market-adjusted stock returns. These results suggest that some disciplining effect of corporate takeovers exists in domestic takeovers.

3.4.3 Cross-border Takeovers

In this section, we repeat the regressions for cross-border takeovers. Legal and cultural differences are crucial in international transactions. But there is a high correlation between legal differences and cultural differences, so we put only one of them in each set of regressions.

[5] We measure "size difference" between the acquiring firm and the target firm as the logarithm of the ratio of the two firms' total assets. So the larger is log(target/acquirer), the smaller is size difference, and then the higher is the post-takeover CEO turnover.

Table 3.12

Logistic Models Relating Probability of CEO Turnover **Shortly(Y0), One Year(Y1), and Two Year(Y2)** after **Domestic Takeover** Announcement to CEO Characteristics, Target Governance Characteristics, Deal Characteristics and Target Firm Characteristics for **150** Targets of Successful Takeovers over the Period 1998 to 2002

Independent Variables	Models											
	Y0				**Y1**				**Y2**			
	-1 year		-2 years		-1 year		-2 years		-1 year		-2 years	
	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig
CEO Characteristics												
Age	0.03	(0.38)	0.03	(0.43)	0.02	(0.51)	0.02	(0.61)	0.02	(0.56)	0.02	(0.69)
Founder	-0.41	(0.62)	-0.53	(0.52)	-1.11	(0.20)	-1.15	(0.18)	-0.76	(0.38)	-0.81	(0.35)
Tenure	-0.01	(0.87)	0.01	(0.81)	0.01	(0.73)	0.02	(0.55)	0.02	(0.66)	0.03	(0.45)
Reputation	0.00	(0.98)	0.01	(0.95)	-0.24*	(0.10)	-0.24*	(0.10)	-0.28**	(0.05)	-0.31**	(0.04)
Target Governance Characteristic												
Duality	-1.06	(0.15)	-1.06	(0.17)	-0.52	(0.49)	-0.54	(0.48)	-0.69	(0.35)	-0.71	(0.35)
CEO-Ownership	2.44	(0.59)	1.59	(0.72)	3.13	(0.51)	2.41	(0.61)	2.18	(0.64)	1.55	(0.74)
BlockholdersOwn	-0.35	(0.71)	-0.39	(0.68)	-0.75	(0.45)	-0.79	(0.43)	-1.08	(0.29)	-1.16	(0.28)
BoardSize	-0.02	(0.77)	-0.03	(0.74)	-0.05	(0.55)	-0.06	(0.48)	0.00	(0.98)	0.00	(0.99)
Outsiders	-0.33	(0.82)	0.06	(0.97)	-0.09	(0.95)	0.23	(0.88)	0.86	(0.58)	1.27	(0.42)
Deal Characteristics												
Related	0.50	(0.19)	0.54	(0.17)	0.15	(0.71)	0.19	(0.64)	0.04	(0.91)	0.04	(0.92)
Stockpay	-2.63***	(0.00)	-2.47***	(0.01)	-2.08**	(0.02)	-2.06**	(0.03)	-1.30	(0.10)	-1.28	(0.11)
Auction	0.24	(0.81)	0.73	(0.49)	0.89	(0.47)	1.60	(0.23)	0.79	(0.52)	1.48	(0.26)
Attitude	1.90	(0.14)	1.31	(0.29)	0.41	(0.74)	0.00	(1.00)	0.32	(0.80)	-0.01	(1.00)
Premium	0.01	(0.21)	0.01	(0.30)	0.01	(0.17)	0.01	(0.22)	0.01	(0.30)	0.01	(0.33)
High-tech	-0.54	(0.26)	-0.69	(0.16)	-0.69	(0.15)	-0.91	(0.07)	-0.62	(0.21)	-0.83	(0.11)

Target Firm Characteristics												
Size Difr	0.13	(0.61)	0.17	(0.49)	0.48*	(0.07)	0.51*	(0.06)	0.43*	(0.10)	0.49*	(0.07)
IAROA-2			-0.18	(0.33)			-0.05	(0.82)			0.00	(0.99)
IAROA-1	-0.31	(0.12)			-0.21	(0.31)			-0.11	(0.59)		
Totdebt/asset-2			1.84	(0.52)			1.28	(0.66)			2.81	(0.36)
Totdebt/asset-1	3.73	(0.19)			2.41	(0.43)			2.53	(0.44)		
CAR-2			-1.78	(0.13)			-2.87**	(0.03)			-3.41*	(0.01)
CAR-1	0.49	(0.70)			-1.23	(0.37)			-1.52	(0.27)		
Cox&Snell R^2	0.19		0.19		0.17		0.19		0.15		0.18	
Negelkerke R^2	0.25		0.26		0.24		0.27		0.21		0.26	

*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$

In logistic models, the dependent variable, CEO turnover, is an indicator that is 1 for firms with post-takeover CEO turnover, and is 0 otherwise. Three sets of tests are CEO turnover over different time periods, Y0 (the year in which the takeover announcement made), Y+1 (the year after the year of the announcement) and Y+2 (the second year after the year of the announcement). The independent variable age, is the age of the target CEO. Founder is also an indicator that takes a value of 1 if the target CEO was a founder of the target firm, and is 0 otherwise. Tenure is the years since the CEO joined the target firm. Reputation is the number of additional board appointments held by the CEO. Duality is an indicator that is 1 for a firm where the CEO is also the chairman of the board prior to the takeover announcement, and is 0 otherwise. CEO-Ownership is the proportion of shares owned by the CEO. Blockholder ownership is the percentage of equity owned by blockholders. Board size is the number of directors in the board of the target firm. Outsider is the proportion of non-executive directors in the board. Related takeover is also an indicator that is 1 when the target and acquiring firms have same four or three-digit SIC, and is 0 otherwise. High-tech is an indicator that is 1 for firms involved in high-tech industries, and is 0 otherwise. Legal difference takes a value of 1 if the acquiring firm was from a non-English common-law country, and is 0 otherwise. Stock payment is an indicator that is 1 if the acquiring firm paid the deal by stock, and is 0 otherwise. Auction is an indictor that takes a value of 1 if more than one bidder had an interest in the target firm, is 0 otherwise. The indictor variable, attitude, is 1 if the takeover is a hostile takeover, and is 0 otherwise. Premium is the premium paid for the target firm. Size difference is the logarithms of the ratios of the asset of the target to the asset of the acquiring firm. Target firm performances are measured by the industry-adjusted ROA (IAROA) and stock performance (CAR) over 2 years and 1 year prior to the takeover announcement. Target firm leverages are measured by the total debt to total asset.

Table 3.13

Logistic Models Relating Probability of CEO Turnover **Shortly(Y0), One Year(Y1), and Two Year(Y2)** after **Cross-border Takeover** Announcement to CEO Characteristics, Target Governance Characteristics, Deal Characteristics and Target Firm Characteristics for **67** Targets of Successful Takeovers over the Period 1998 to 2002

Independent Variables	Models											
	Y0				**Y1**				**Y2**			
	-1 year		-2 years		-1 year		-2 years		-1 year		-2 years	
	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig
CEO Characteristics												
Age	0.01	(0.92)	0.01	(0.94)	-0.05	(0.49)	-0.03	(0.67)	-0.10	(0.21)	-0.07	(0.33)
Founder	-23.05	(1.00)	-22.33	(1.00)	-3.60**	(0.05)	-2.55*	(0.08)	0.01	(1.00)	0.30	(0.81)
Tenure	0.00	(0.95)	-0.03	(0.60)	0.14*	(0.06)	0.09	(0.17)	0.17**	(0.04)	0.10	(0.17)
Reputation	0.25	(0.43)	0.34	(0.31)	0.22	(0.49)	0.21	(0.49)	0.14	(0.66)	0.15	(0.63)
Target Governance Characteristic												
Duality	-1.09	(0.47)	-0.76	(0.61)	0.27	(0.83)	0.45	(0.71)	0.52	(0.67)	0.59	(0.62)
CEO-Ownership	9.52	(0.28)	7.64	(0.39)	2.21	(0.76)	0.73	(0.92)	-1.04	(0.88)	-1.29	(0.84)
BlockholdersOwn	-0.24	(0.92)	-0.78	(0.73)	-1.54	(0.48)	-1.02	(0.60)	-2.09	(0.37)	-1.49	(0.48)
BoardSize	0.01	(0.94)	-0.02	(0.87)	0.03	(0.84)	0.00	(0.99)	0.01	(0.94)	-0.03	(0.85)
Outsiders	-2.96	(0.31)	-2.84	(0.34)	-2.89	(0.30)	-2.62	(0.34)	-0.59	(0.85)	-0.26	(0.93)
Deal Characteristics												
Related	-0.49	(0.50)	-0.45	(0.54)	-1.19	(0.12)	-1.13	(0.14)	-1.46**	(0.08)	-1.30	(0.10)
Stockpay	-0.45	(0.62)	-0.49	(0.61)	0.26	(0.76)	0.27	(0.75)	1.24	(0.17)	1.20	(0.17)
Auction	1.10	(0.43)	0.27	(0.84)	0.65	(0.62)	0.06	(0.96)	1.21	(0.40)	0.44	(0.74)
Attitude	2.52	(0.18)	2.19	(0.24)	2.06	(0.23)	1.71	(0.31)	1.62	(0.33)	1.26	(0.43)
Premium	-0.02*	(0.09)	-0.02	(0.18)	0.00	(0.68)	0.00	(0.86)	-0.01	(0.49)	0.00	(0.70)
High-tech	1.57*	(0.09)	1.17	(0.21)	1.01	(0.23)	0.75	(0.38)	1.59*	(0.09)	1.16	(0.20)
Legal Dif	0.22	(0.76)	0.21	(0.77)	0.53	(0.45)	0.45	(0.50)	1.16	(0.11)	1.03	(0.14)

Target Firm Characteristics												
Size Difr	-0.29	(0.51)	-0.39	(0.38)	0.25	(0.55)	0.11	(0.77)	0.57	(0.19)	0.43	(0.30)
IAROA-2			-0.18	(0.64)			-0.38	(0.26)			-0.31	(0.38)
IAROA-1	-0.79*	(0.09)			-0.82*	(0.06)			-0.80*	(0.09)		
Totdebt/asset-2			-4.18	(0.48)			-6.72	(0.22)			-5.10	(0.34)
Totdebt/asset-1	-4.57	(0.42)			-8.69	(0.12)			-8.59	(0.12)		
CAR-2			-1.99	(0.39)			-2.99	(0.13)			-2.63	(0.16)
CAR-1	0.36	(0.88)			-2.62	(0.24)			-2.47	(0.25)		
Cox&Snell R^2	0.34		0.33		0.29		0.26		0.28		0.25	
Negelkerke R^2	0.46		0.44		0.38		0.35		0.38		0.34	

*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$

In logistic models, the dependent variable, CEO turnover, is an indicator that is 1 for firms with post-takeover CEO turnover, and is 0 otherwise. Three sets of tests are CEO turnover over different time periods, Y0 (the year in which the takeover announcement made), Y+1 (the year after the year of the announcement) and Y+2 (the second year after the year of the announcement). The independent variable age, is the age of the target CEO. Founder is also an indicator that takes a value of 1 if the target CEO was a founder of the target firm, and is 0 otherwise. Tenure is the years since the CEO joined the target firm. Reputation is the number of additional board appointments held by the CEO. Duality is an indicator that is 1 for a firm where the CEO is also the chairman of the board prior to the takeover announcement, and is 0 otherwise. CEO-Ownership is the proportion of shares owned by the CEO. Blockholder ownership is the percentage of equity owned by blockholders. Board size is the number of directors in the board of the target firm. Outsider is the proportion of non-executive directors in the board. Related takeover is also an indicator that is 1 when the target and acquiring firms have same four or three-digit SIC, and is 0 otherwise. High-tech is an indicator that is 1 for firms involved in high-tech industries, and is 0 otherwise. Legal difference takes a value of 1 if the acquiring firm was from a non-English common-law country, and is 0 otherwise. Stock payment is an indicator that is 1 if the acquiring firm paid the deal by stock, and is 0 otherwise. Auction is an indictor that takes a value of 1 if more than one bidder had an interest in the target firm, is 0 otherwise. The indictor variable, attitude, is 1 if the takeover is a hostile takeover, and is 0 otherwise. Premium is the premium paid for the target firm. Size difference is the logarithms of the ratios of the asset of the target to the asset of the acquiring firm. Target firm performances are measured by the industry-adjusted ROA (IAROA) and stock performance (CAR) over 2 years and 1 year prior to the takeover announcement. Target firm leverages are measured by the total debt to total asset.

- Legal system variable included

Table 3.13 presents the results when legal system differences are included as a variable. For the CEO characteristics, the coefficients of whether the CEO was the founder are negative and significant in Y+1. This provides modest evidence that, in cross-border takeovers, the target founder has a greater chance to secure his/her job in the new firm than non-founders. Moreover, we find a positive relation between CEO tenure and post-takeover CEO turnover, when the performance variable that is included relates to 1 year prior to the takeover announcement. This is consistent with our hypothesis that the probability of CEO turnover increases with CEO tenure. CEOs with long tenure may feel more associated with the management style and process of their firm than those with less tenure, and they feel more dissatisfied with the new or changed process introduced by a new owner.

We find that the coefficients on the independent variables representing target governance characteristics are insignificant. For deal characteristics, the regression for Y+2 shows a significant and negative coefficient on related takeovers. This indicates that the probability of CEO turnover is lower two years after takeover, when takeovers take place in related industries. Moreover, we find that high-tech takeovers have a significant positive relation with CEO turnover in the year of takeover announcement and two years after takeovers. In high-tech international takeovers, target CEOs are more likely to be replaced.

In addition, we find that the coefficient on bid premium is negative and statistically significant in the regression for Y0 at the 10% level. This suggests that a higher bid premium is significantly related to a lower probability of post-takeover CEO turnover. The weak finding may be caused by a particular feature of cross-border takeovers--information asymmetry, whereby the acquiring firm was willing to pay a particularly high price to retain a CEO who has specific knowledge.

For target pre-takeover performance, the results show a significant negative relationship between post-takeover CEO turnover and IAROA one year prior to the

takeover. This is consistent with our hypothesis that the lower accounting performance, the higher CEO turnover.

- Culture difference variables included

One famous study of culture in international business was carried out by Greet Hofstede (1980). Hofstede isolated four dimensions that he claimed summarized different cultures: power distance, uncertainty avoidance, individualism versus collectivism, and masculinity versus femininity. Hofstede created an index score for each of these four dimensions that ranged from 0 to 100. A high score means high individualism, high power distance, high uncertainty avoidance, and high masculinity. Table 3.14 summarizes these data for 16 countries in our samples.

Table 3.14

Work-related values for 16 countries in our samples[6]

Acquirer Nation	Power Distance	Individualism	Masculinity	Uncertainty Avoidance
Australia	36	90	61	51
Bermuda	34	85	58	49
Canada	39	80	52	48
Denmark	18	74	16	23
France	68	71	43	86
Germany	35	67	66	65
Greece	60	35	57	112
Ireland-Rep	28	70	68	35
Italy	50	76	70	75
Netherlands	38	80	14	53
Singapore	74	20	48	8
South Africa	49	65	63	49
Sweden	31	71	5	29
Switzerland	34	68	70	58
United Kingdom	35	89	66	35
United States	40	91	62	46

For each of the four national cultural dimensions of Hofstede's index, we measure the cultural difference as the difference between the index score of the UK and that of the acquirer's country.

[6] Source: G. Hofstede, "Culture's Consequences" (1980) Sage Publication

We repeat regressions by replacing "culture difference" by four dimensions of Hofstede's index: individualism, masculinity, power distance, uncertainty avoidance. For each pair of columns relating to one culture dimension, the culture difference variable takes a value of that dimension. The results are shown in Table 3.15 for Y0, Table 3.16 for Y+1, and Table 3.17 for Y+2.

Essentially, the results are very similar to those gained by using "legal system". In Table 3.16, we find that the coefficients of masculinity (columns 3 and 4 of Table 3.16) are significantly negative at the 10% level for Y+1. Hence, the probability of CEO turnover is lower, if acquiring firms are from a masculine society. This may indicate that acquiring firms from high masculine countries might stress economic factors and mainly focus on the benefit that target CEOs could bring to new firms, and then target CEOs are more likely to be retained after takeover. However, the other culture indices are not significant in any regression. We infer that culture difference between the acquiring country and the UK, measured by power distance, individualism, uncertainty avoidance, has no effect on the probability of CEO departure.

In Table 3.16 and 3.17, we find significant negative coefficients on total debt/total asset over the time window -1 year. The significant negative relation between post-takeover CEO turnover and target pre-takeover leverage suggests the complexity of cross-border takeovers and leverage may be not the focus of foreign acquirers.

Table 3.15

Logistic Models Relating Probability of CEO Turnover **Shortly(Y0)** after **Cross-border** Takeover Announcement to CEO Characteristics, Target Governance Characteristics, Deal Characteristics and Target Firm Characteristics for **67** Targets of Successful Takeovers over the Period 1998 to 2002
(Hofstede's index were employed to measure "Culture Difference")

Independent Variables	Models							
	Individualism		Masculinity		Power distance		Uncertainty avoidance	
	-1 year	-2 years	-1 year	-2 years	-1 year	-2 years	-1 year	-2 years
	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.
CEO Characteristics								
Age	0.02	0.02	-0.01	-0.02	0.01	0.01	0.01	0.01
Founder	-23.32	-22.76	-22.97	-22.30	-23.24	-22.51	-23.12	-22.37
Tenure	0.00	-0.03	-0.02	-0.05	0.00	-0.03	0.00	-0.03
Reputation	0.22	0.31	0.27	0.37	0.23	0.33	0.23	0.32
Target Governance Characteristic								
Duality	-1.30	-1.14	-0.83	-0.43	-1.29	-0.94	-1.16	-0.85
CEO Own	10.51	9.32	9.70	7.99	10.24	8.21	9.63	7.69
Block Own	-0.49	-0.93	-0.11	-0.63	-0.44	-0.96	-0.36	-0.81
BoardSize	0.02	0.00	0.03	0.00	0.03	0.00	0.01	-0.03
Outsiders	-2.53	-2.26	-2.56	-2.29	-2.54	-2.54	-3.05	-3.06
Deal Characteristics								
Related	-0.48	-0.40	-0.33	-0.27	-0.53	-0.46	-0.47	-0.41
Stockpay	-0.49	-0.52	-0.49	-0.48	-0.37	-0.42	-0.47	-0.54
Auction	1.03	0.17	1.17	0.31	1.19	0.31	1.08	0.22
Attitude	2.30	1.94	2.55	2.34	2.60	2.21	2.41	2.06
Premium	-0.02*	-0.02	-0.02*	-0.02	-0.02*	-0.02	-0.02	-0.01
High-tech	1.43	0.97	1.49	1.05	1.51	1.12	1.59*	1.21
Culture Dif	0.01	0.02	-0.03	-0.03	-0.01	-0.01	0.00	0.01
Target Firm Characteristics								
Size Dif	-0.21	-0.30	-0.40	-0.51	-0.26	-0.38	-0.27	-0.37
IAROA-2		-0.11		-0.19		-0.18		-0.15
IAROA-1	-0.74		-0.77		-0.82*		-0.77	
Totdebt/asset-2		-4.44		-3.06		-4.58		-4.15
Totdebt/asset-1	-4.86		-3.63		-4.92		-4.73	
CAR-2		-2.13		-2.16		-2.12		-2.02
CAR-1	0.31		0.28		0.37		0.36	
-2 log likelihood	63.13	64.35	61.87	62.97	63.27	64.81	63.31	64.72
Cox&Snell R^2	0.34	0.33	0.35	0.34	0.34	0.32	0.34	0.33
Negelkerke R^2	0.46	0.44	0.48	0.46	0.46	0.44	0.46	0.44

*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$

Table 3.16

Logistic Models Relating Probability of CEO Turnover **One Year(Y+1)** after **Cross-border** Takeover Announcement to CEO Characteristics, Target Governance Characteristics, Deal Characteristics and Target Firm Characteristics for **67** Targets of Successful Takeovers over the Period 1998 to 2002
(Hofstede's index were employed to measure "Culture Difference")

Independent Variables	Models							
	Individualism		Masculinity		Power distance		Uncertainty avoidance	
	-1 year	-2 years	-1 year	-2 years	-1 year	-2 years	-1 year	-2 years
	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.
CEO Characteristics								
Age	-0.05	-0.03	-0.09	-0.06	-0.05	-0.03	-0.04	-0.02
Founder	-3.87**	-2.75*	-3.69**	-2.52*	-3.97**	-2.80*	-3.78**	-2.71*
Tenure	0.15**	0.10	0.16**	0.11	0.15**	0.10	0.14*	0.09
Reputation	0.18	0.20	0.27	0.27	0.18	0.20	0.17	0.18
Target Governance Characteristic								
Duality	0.17	0.38	0.47	0.72	0.03	0.27	0.09	0.26
CEO Own	2.42	0.72	1.93	0.19	2.89	1.13	2.76	1.26
Block Own	-1.83	-1.24	-1.92	-1.29	-1.74	-1.14	-1.72	-1.14
BoardSize	0.04	0.01	0.09	0.06	0.06	0.03	0.01	-0.02
Outsiders	-2.65	-2.41	-2.17	-1.95	-2.17	-1.99	-3.10	-3.00
Deal Characteristics								
Related	-1.19	-1.10	-1.06	-0.97	-1.20	-1.12	-1.11	-1.03
Stockpay	0.35	0.36	0.27	0.30	0.40	0.41	0.20	0.19
Auction	0.72	0.09	0.71	0.10	0.69	0.07	0.62	0.06
Attitude	1.95	1.64	2.32	1.93	2.01	1.71	1.76	1.45
Premium	0.00	0.00	-0.01	0.00	-0.01	0.00	0.00	0.00
High-tech	1.08	0.79	0.81	0.58	0.95	0.67	1.08	0.84
Culture Dif	-0.01	0.00	-0.04*	-0.04*	-0.01	-0.01	0.01	0.01
Target Firm Characteristics								
Size Difr	0.25	0.11	0.19	0.03	0.28	0.13	0.27	0.14
IAROA-2		-0.35		-0.39		-0.36		-0.32
IAROA-1	-0.82*		-0.84*		-0.83*		-0.76*	
Totdebt/asset-2		-7.49		-6.41		-7.32		-6.78
Totdebt/asset-1	-9.57*		-9.29		-9.42*		-8.79	
CAR-2		-3.11		-3.35		-3.12		-3.00
CAR-1	-2.50		-3.09		-2.53		-2.59	
-2 log likelihood	70.76	72.65	67.47	69.48	70.73	72.60	70.51	72.25
Cox&Snell R square	0.28	0.26	0.31	0.29	0.28	0.26	0.28	0.26
Negelkerke R square	0.37	0.35	0.42	0.39	0.37	0.35	0.38	0.35

*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$

Table 3.17

Logistic Models Relating Probability of CEO Turnover **Two Year(Y+2)** after **Cross-border** Takeover Announcement to CEO Characteristics, Target Governance Characteristics, Deal Characteristics and Target Firm Characteristics for **67** Targets of Successful Takeovers over the Period 1998 to 2002
(Hofstede's index were employed to measure "Culture Difference")

Independent Variables	Models							
	Individualism		Masculinity		Power distance		Uncertainty avoidance	
	-1 year	-2 years	-1 year	-2 years	-1 year	-2 years	-1 year	-2 years
	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.
CEO Characteristics								
Age	-0.10	-0.07	-0.11	-0.08	-0.10	-0.07	-0.08	-0.05
Founder	0.13	0.34	0.12	0.29	0.07	0.25	0.06	0.18
Tenure	0.18**	0.10	0.17**	0.11	0.17**	0.11	0.15**	0.09
Reputation	0.09	0.13	0.14	0.17	0.11	0.14	0.08	0.11
Target Governance Characteristic								
Duality	0.58	0.54	0.54	0.60	0.14	0.23	0.38	0.37
CEO Own	-1.90	-2.11	-1.52	-1.64	-1.13	-1.35	-1.38	-1.46
Block Own	-3.31	-2.31	-2.83	-2.04	-2.71	-1.93	-2.63	-1.84
BoardSize	0.02	-0.01	0.06	0.02	0.06	0.02	-0.01	-0.04
Outsiders	-0.42	0.05	0.62	0.71	1.20	1.26	-0.42	-0.39
Deal Characteristics								
Related	-1.61*	-1.33*	-1.37*	-1.14	-1.56*	-1.33*	-1.40*	-1.19
Stockpay	1.52*	1.44*	1.37	1.34	1.62*	1.57*	1.26	1.22
Auction	1.35	0.44	1.03	0.36	1.04	0.32	0.94	0.30
Attitude	1.51	1.19	1.43	1.24	1.52	1.28	1.09	0.91
Premium	-0.01	0.00	-0.01	0.00	-0.01	-0.01	-0.01	0.00
High-tech	2.06*	1.40	1.55	1.10	1.54	1.04	1.74*	1.30
Culture Dif	-0.02	-0.01	-0.02	-0.02	-0.02	-0.01	0.01	0.02
Target Firm Characteristics								
Size Difr	0.52	0.37	0.53	0.39	0.60	0.43	0.58	0.44
IAROA-2		-0.26		-0.23		-0.26		-0.20
IAROA-1	-0.86*		-0.73		-0.80*		-0.68	
Totdebt/asset-2		-7.04		-5.45		-6.17		-5.43
Totdebt/asset-1	-10.97*		-8.97		-9.42*		-8.64	
CAR-2		-2.95		-3.00		-3.01		-2.89
CAR-1	-2.21		-2.44		-2.31		-2.37	
-2 log likelihood	68.17	71.10	68.00	70.25	68.82	71.21	68.67	70.78
Cox&Snell R square	0.26	0.23	0.26	0.24	0.26	0.23	0.26	0.23
Negelkerke R square	0.36	0.31	0.36	0.33	0.35	0.31	0.35	0.32

*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$

3.4.4 Summary

Taken together, the results of Table 3.12, 3.13, 3.15, 3.16, 3.17 indicate that different factors affect post-takeover CEO turnover for each set of samples.

For the full samples, CEO reputation, whether the CEO is the target founder, CEO duality, dummies of cross-border takeovers, stock payment, pre-takeover IAROA and CAR are all *negatively* related to the possibility of post-takeover CEO turnover. Hostile takeovers still cause higher post-takeover CEO turnover. For domestic takeovers, the significant and *positive* determinant of CEO turnover is size difference, while CEO reputation, stock payment and CAR are significant and *negative* determinants. For cross-border takeovers, CEO tenure and high-tech takeovers have a *positive* relation with the probability of post-takeover CEO turnover. Related takeover, whether CEO was the founder, premium and pre-takeover IAROA have a significant and *negative* effect on CEO turnover.

A weakly significant turnover-performance relation is found in the full sample, domestic takeovers and cross-border takeovers. Hofstede's index gives us an insight into cultural differences. Acquiring firms from masculine countries are more likely to keep the target CEO for their benefit to the new firms.

3.5 Robustness test

When we measured pre-takeover accounting performance and leverage of target firms, IAROA and total debt/total asset were employed. Although IAROA and total debts/total assets are the main ratios to measure the performance and leverage for a firm, it is possible that other measures may give different results. In this section, we employ other ratios to conduct robustness tests. We also extend the time window to 4 years prior to the takeover announcement. For stock returns, the performance window is taken back to 38 months prior to the takeover announcement.

3.5.1 Pre-takeover performance

For accounting performance, we employ other two measures: (1) the industry-adjusted ROE, which is the ratio of net income to common equity; (2) the industry-adjusted cash flow margin (CFM), which is the ratio of cash flows to net sales.

Essentially, employing IAROE shows similar results to using IAROA. In univariate tests, for all the sample and domestic takeovers, we find significant negative IACFMs of target firms with post-takeover CEO turnover across all performance windows. This provides evidence that, prior to takeovers, the cash flows of target firms with post-takeover CEO turnover were significantly low. But there is no significant difference between targets with and without CEO turnover. Moreover, when the stock performance window is extended back to month -38, we find that, for cross-border takeovers, the stock performance for targets with post-takeover CEO turnover is worse than that for targets without post-takeover CEO turnover. In the multivariate tests, some regressions show a significant negative coefficient on IAROE and CAR. This supports the above test results of a weak performance-turnover relation.

3.5.2 Pre-takeover leverage

Turning to the leverage of target firms, the net debt to total asset ratio is used to do robustness tests. Univariate tests of CEO turnover rates for extreme quartiles show similar results to those using total debt/total asset. When the window of total debt/total asset was extended to 4 years prior to takeover announcement, for the total sample, post-takeover CEO turnover is significantly higher for takeovers in the highest versus those in the lowest leverage quartiles over the windows (-4, -1) and (-3, -1). This reinforces the previous results which show that target pre-takeover leverage positively affects the post-takeover CEO turnover.

3.6 Conclusion

The aim of eliminating inefficient target management is one of the motivations for corporate takeovers. We have studied the post-takeover turnover of CEOs in a sample of UK target companies. The novelty of this study stems from the characteristics of recent M&As of increasing international transactions and more developed alternative control mechanisms. This paper makes several distinctive contributes to the literature on the UK disciplining function of the corporate takeover market.

Firstly, our study provides new UK evidence concerning the disciplinary takeover market regarding the relation between post-takeover CEO turnover and pre-takeover performance over a more recent time period than existing studies: 1998 to 2002. Both accounting and market-based performance measures are employed in our tests. Analyzing the relation between various performance measures over four years and subsequent CEO turnover, we find a significantly negative relationship between post-takeover CEO turnover and pre-takeover performance measured by IAROA and stock performance. This is consistent with the findings of Martin and McConnell (1991), and Denis et al. (1997) for the US takeover market. This indicates that the disciplinary function of UK takeovers is operative in recent years.

Secondly, considering the dramatic growth of international transactions in recent M&A activities, our study examines the different impact of domestic and cross-border takeover on CEO turnover. In both univariate and multivariate tests, we find a significant negative relationship between cross-border takeovers and the likelihood of post-takeover CEO turnover. That is, a lower CEO turnover rate follows cross-border takeovers. This indicates that cross-border takeovers play a different role in disciplining managers in target firms or involve different motivations for the remaining target CEOs after takeovers. The differences of cultures, regulations and socioeconomic conditions may cause greater information asymmetries and integration difficulties. Thus, the foreign acquiring firms had to face more difficult environments than the UK acquirers. The benefit of target CEOs' experiences and

better knowledge of their target business may match the requirement of foreign acquiring firms. Then, such target CEOs are more likely to be retained in the new firm after cross-border takeovers.

Thirdly, we explicitly recognize potential determinants of CEO turnover in recent years. The results suggest CEO reputation and whether the CEO was the founder are negatively related to CEO turnover after takeovers. Moreover, CEO duality reduces the probability of CEO turnover for the full samples, which indicates that duality may increase CEO power to negotiate employment in the new company. For deal characteristics, stock payments have a significant negative impact on post-takeover CEO turnover. This suggests that stock payments may give more job security to target CEOs. Moreover, bid attitude is found to have a positive relationship with CEO turnover, which means that hostile takeovers are still playing a disciplining role in the recent takeover market.

Fourthly, legal and cultural differences are crucial factors in international transactions. We consider legal system differences and Hofstede's index to explain CEO turnover. This is a new approach in research on the takeover market. We find a significant negative relationship between masculinity and the probability of post-takeover CEO turnover, which suggests that foreign acquirers from masculine countries are more concerned with competition and performance and are more likely to retain a target CEO for their benefit to the new firm. This provides evidence of the important role of cultural differences in the disciplining takeover market.

Finally, we shed light on the interplay between corporate takeovers and other types of disciplinary mechanisms, such as the target board, blockholders and outsiders. No alternative mechanism is found to provide an effective substitute for corporate takeovers.

Chapter 4 The Post-takeover Turnover of Target CEOs: A Comparison between the Active and Less Active Takeover Periods

4.1 Introduction

It is well-known that mergers and acquisitions come in waves (Sudarsanam (2003)). So far, five obvious US M&A waves have been distinguished in the literature: the early 1900s, the 1920s, the 1960s, the 1980s and the 1990s. Each M&A wave had distinctive features: a "monopolisation wave" at the end of the 19th century; a "scale-economies wave" in the 1920s; a "decade of greed wave" in the 1980s; and a "globalisation wave" starting in the late 1990s (Jovanovic and Rousseau (2002)).

Of these M&A waves, the most recent wave has remarkable characteristics in terms of size and geographical dispersion. M&A activities in the UK hit levels similar to those experienced in the US. M&A activities picked up from the beginning of the 1990s and started slumping at the beginning of 2000s with the broken "new economic" bubble. This M&A wave tended to coincide with periods of high share prices and technological shocks: the internet and media development. With the collapse of the stock market in 2000, M&A activities declined dramatically. The period of increasing M&A activity (the rising side) and the period of decreasing M&A activity (the slumping side) have distinctive features, such as a reduction in the attractiveness of corporate equity as the currency for acquisitions and a decrease in high-tech takeovers (Economist, 2001). These features may affect the motives of bidders and have different effects on the managers of target firms.

In this chapter, we investigate whether the disciplinary function applied to target CEOs by the market for corporate control varies with variation in the level of takeover activities. We study a period from 1998 to 2002, which encompassed a rising of the M&A wave (active takeover period) Jan 1998-May 2000 and a slumping of the M&A wave (less active takeover period) June 2000-Dec 2002. We test whether the frequencies of post-takeover target CEO turnover differ, especially among extreme performing target firms, and whether the effectiveness of alternative

governance mechanisms differ between the two periods of different levels of M&A activities. This allows us to examine whether CEO disciplining by takeovers is associated with the intensity of takeover activity. We also compare target firms with and without CEO turnover. In addition, the potential determinants of CEO turnover in the up and down sides of the M&A wave have been investigated.

We find that the CEO turnover rate falls from 51.06% in the rising M&A wave to 43.42% in slumping side, but the difference is not statistically different. The decline in CEO turnover frequency occurred mainly amongst poorly performing target firms. Additionally, in the rising side of the M&A wave, the rate of CEO turnover among the quartile of target firms with the lowest performance is significantly higher than that for the quartile of target firms with the highest performance. Furthermore, we find a significant relation between post-takeover CEO turnover and pre-takeover performance measured by industry-adjusted ROA and market-adjusted stock returns. But such a relation is confined only to the rising side of the M&A wave, indicating that those disciplinary CEO turnovers are more likely to occur in the intensive period of the M&A wave.

Our results are consistent with the findings of Mikkelson and Partch (1997) who compare top management turnover during an active takeover market (1984-1988) and a less active takeover market (1989-1993). They find a decrease in top manager turnover frequency from the active to the less active period and a significant relation between turnover and firm performance only in the period of active takeovers. Moreover, Denis and Kruse (2000) examine managerial discipline during two similar time periods (1985-1988 and 1989-1992) and find a significant decline in the disciplinary events from the active to the less active takeover periods. Their findings show that the decline in takeover activities is associated with a decrease in disciplinary CEO turnover.

On the slumping side of the M&A wave, the probability of post-takeover CEO turnover has a weak but significant negative association with blockholder ownership and the percentage of nonexecutives on the board. This implies that there is less need

for takeover-related discipline for target firms, when a higher level of monitoring mechanisms indicated by blockholder ownership and nonexecutives exists. This finding is in line with the study of the US takeover market by Kini el at. (2004). The statistical significance of such relations is confined only to the slumping period of the M&A wave.

Finally, we find that the frequency of cross-border takeovers increases in the slumping M&A wave and is significantly negatively related to post-takeover CEO turnover. Further, on the slumping side, high-tech takeovers and the masculinity of acquiring countries have significant and negative associations with target CEO turnover following takeovers. By analyzing potential determinants of CEO turnover, we find different determinants in the two subperiods.

The rest of this chapter is organised as follows. In section 4.2, we provide the background to the recent M&A wave and analyze the possible effect of a decline in takeover activities on target CEO. Section 4.3 describes the data, the cut point and methodology. Also descriptive statistics on the determinants of post-takeover CEO turnover are provided in this section. Section 4.4 documents the univariate tests and we compare CEO turnover rates for extreme quartiles of target firm pre-takeover performance and leverage. The results of multivariate tests are reported in section 4.5. Section 4.6 shows robustness checks and further tests. The conclusion is in section 4.6.

4.2 Features of the recent M&A wave

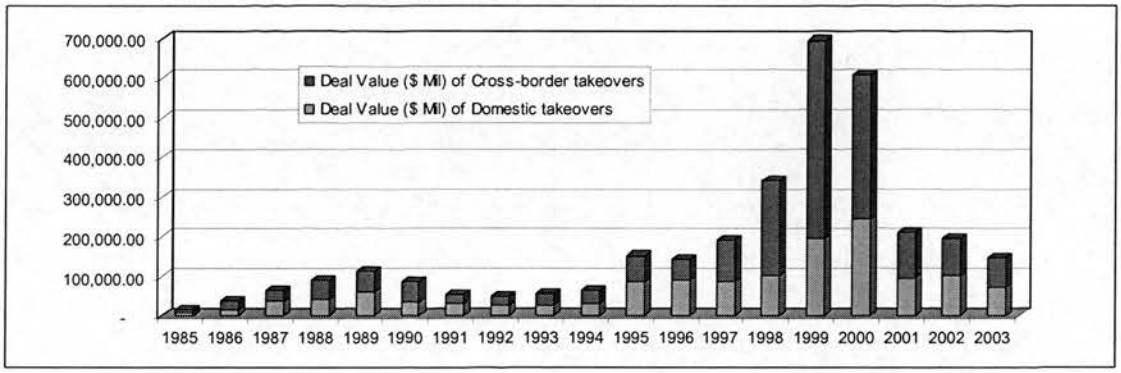
4.2.1 The recent M&A wave

One interesting phenomenon about M&A activity is that there are periods when takeovers are plentiful and other periods when merger activity is much lower. Empirically, Golbe and White (1993) observe the cyclical pattern of M&A activity. So far, three previous UK M&A waves have been examined in the literature

(Sudarsanam (2003)). The recent M&A wave started at the beginning of the 1990s and has remarkably different features, compared to previous waves.

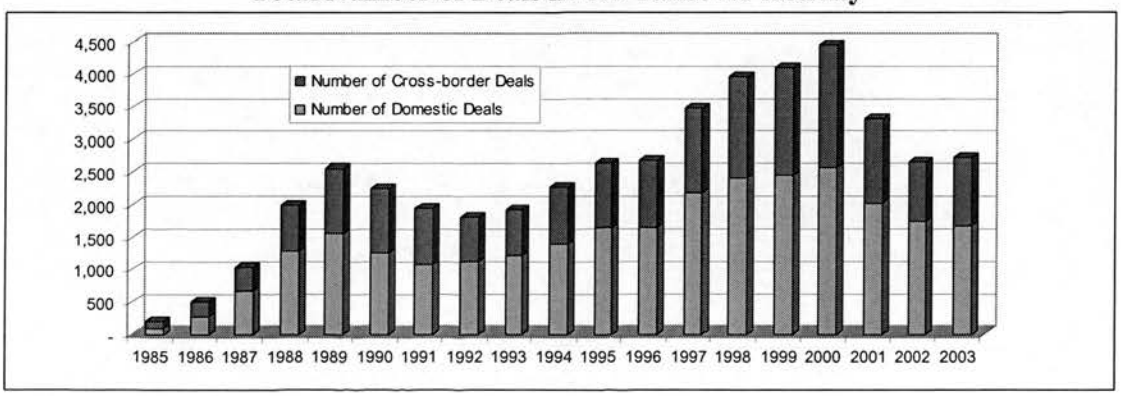
Firstly, M&A activity in this time period hit the highest number of deals and total transaction value in M&A history. According to the Thomson Financial Securities Data, in the period 1993-2002, there were 31,448 total completed M&A deals recorded for the UK, while only 6,471 such transactions took place during the last merger wave (1983-1989). This wave in the UK is impressive in transaction value as well, since its total value adds up to US$ 2.6 trillion (see Figure 4.1), more than eight times the combined total of the last wave.

Figure 4.1
Total Value of Deals (in US $ Million) in UK Takeover Activity



Source: Thomson Financial Securities Data

Figure 4.2
Total Number of Deals in UK Takeover Activity

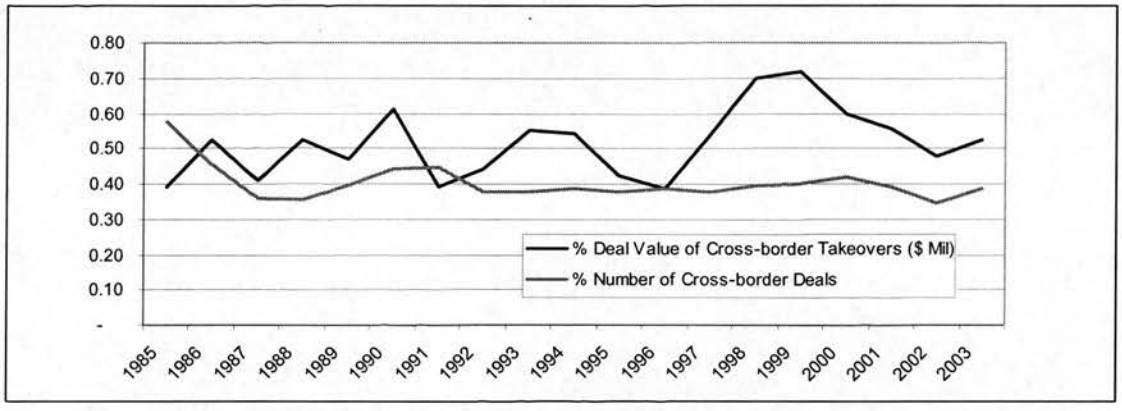


Source: Thomson Financial Securities Data

As showed in Figures 4.1 and 4.2, strong growth has taken place in the UK M&A market over the last twenty years. From the low level at the beginning of the 1980s, takeover activity increased and reached 2,548 deals in 1989. Following a slight decline, the recent M&A wave started with 1,807 deals in 1992, and more than doubled by 2000.

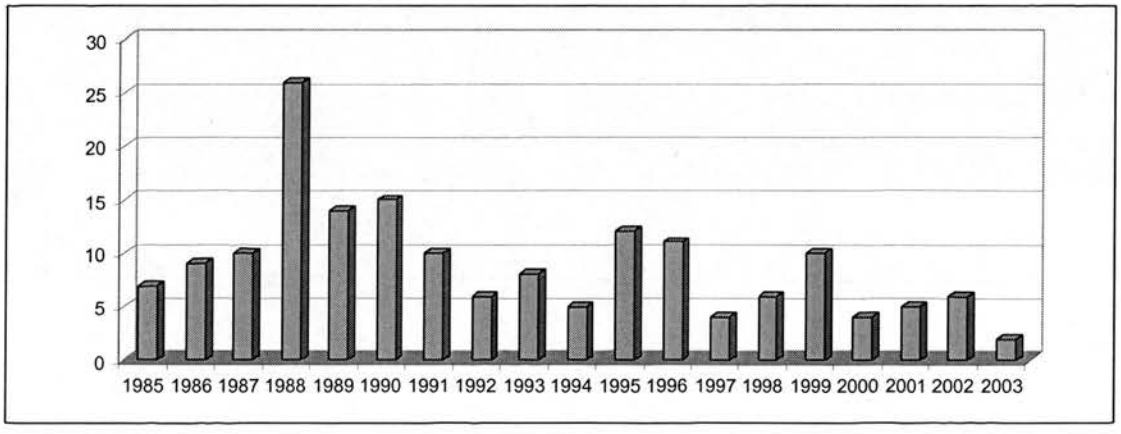
Secondly, in the M&As wave over the period 1993-2002, more than one-third were cross-border deals. Figure 4.3 illustrates that the value of the international transactions account for more than 70% of the total investment in M&A in 1999, having increased from 38% in 1996. The figures reflect the considerable impact of unprecedented deals, such as the acquisition of Mannesmann by Vodafone which involved US$ 202 billion in 1999.

Figure 4.3
The Proportion of Cross-border Takeovers in All UK Deals



Source: Thomson Financial Securities Data

Figure 4.4
The Number of UK Hostile Takeovers



Source: Thomson Financial Securities Data

In our sample from the UK takeover market from 1998 to 2002, the most active participants in the cross-border takeover market were from the US (34.33%), France (11.94%) and Republic of Ireland (8.96%) as shown in Table 3.2 of Chapter 3. These deals represented more than half of the total number of UK cross-border M&As over the period 1998 to 2002.

Thirdly, the remarkable feature of the fourth wave is the dramatic decrease in hostile takeovers. Figure 4.4 shows that, compared to the 1980s, the numbers of hostile bids fell in the 1990s significantly. Hence, friendly and strategy-oriented takeovers were dominant in this M&A wave.

Fourthly, some researchers suggest that the high M&A activities seem to be correlated with high market valuation (Maksimovic and Philips (2001), Jovanovic and Rousseau (2001)). In these high M&A activity or high stock market periods, firms tend to use stock as the payment in the transactions. Further, Rhodes-Kropf and Viswanathan (2004) find that stock deals were common in the high-flying high-technology sector where most takeovers involved securities. In the UK takeover market, the percentage of stock as the means of payment in deals was only 6.03% in 1990, while in 2000 the use of stock peaked at 10.96% (Thomson Financial Securities Data).

Fifth, a non-classical explanation of merger waves argues that the recent merger wave results from an industry's technological or regulatory shocks (Mitchell and Mulherin (1996) and Harford (2005)). In the late 1990s, the stock market was booming with high technology, media and telecoms (TMT). Takeover in this sector accounted for over 40% of worldwide mergers in 2000, with deals valued at more than $1.5 trillion (Economist.com).

4.2.2 The rising and slumping side of the M&A wave

The recent M&A wave came with high market valuation, technological shocks, deregulation and high capital liquidity. In the clustering period of the M&A wave,

the above features are very distinctive. Towards the end of 2000, the takeover market was entering a significant downturn. Not only had the number of deals gone down, but so also had the amount of "talking about" deals, a strong leading indicator of future activity. These blows have fallen especially hard on the once hot technology, media and telecoms (TMT) sector (Economist, 2001). The pace slowed in most industries, particularly after 11th September 2001. According to Bloomberg, in the two weeks after the attack, 20 US companies cancelled $15 billion-worth of mergers.

On the slumping side of the M&A wave, some of the features of the bubble years disappeared or became less influential. Share prices fell from the highs they reached in early 2000. This reduced the attractiveness of corporate equity as a currency with which to pay for acquisitions. Companies also seemed more intent this time on strategic, rather than financially motivated deals. Building on core strengths and buying into new geographic markets were common themes in the latest round of deals, whereas costly diversifications are little in evidence (The Economist 2001). Managers were less loaded up with share options, which reduced their temptation to chase deals that deliver a short-term pay-off at the cost of long-term value creation (Economist, 2005).

4.2.3 The possible effect of a decline in takeover activities on target firm CEOs

Previous research[7] shows that takeovers play an important role in disciplining ineffective managers in target firms. Particularly, the likelihood of management turnover increases with poor corporate performance. With the decrease in takeover activity, alternative governance mechanisms become relatively active and the disciplinary pressure from takeovers on target managers declines, and thus it leads to a decrease in CEO turnover. There are plausible arguments for and against this view.

[7] These studies include Walsh (1988), Walsh and Ellwood (1991), Martin and McConnel (1991), Kini et al. (1995, 2004), Denis and Kruse (2000) and Harford (2003).

One argument is that when the takeover market becomes less active, alternative mechanisms that control agency problems substitute for takeover activity, which play the role of monitoring managers of target firms. In addition to the threat of takeover, Franks, Mayer and Renneboog (2001) and Agrawal and Knoeber (1996) point out that managers face other pressures from blockholders, acquirers of new blocks, non-executive directors, debtholders, active investors, product market competition and initiatives in the legal and political sectors. In the studies of Gilson and Vetsuypens (1993) and Franks et al. (2001) on financially distressed firms, the increased managerial discipline is related to the high levels of financial leverage. Moreover, Kini et al. (2004) argue that, in a less active takeover market, there is greater shareholder and institutional investor activism and more evolved internal governance mechanisms. These substitutions potentially offset the reduced disciplinary pressure from the takeover market and then reduce the ineffectiveness of target CEOs. Hence, there is no significant difference in CEO turnover rate in the active and inactive takeover period.

The alternative argument is that alternative governance mechanisms are not as efficient as takeover activity. A "horse race" between principal competing parties in the study of Franks et al. (2001) shows that neither existing holders nor new purchasers of large share blocks exert much discipline. It is quite striking that, in their examination, nonexecutive directors and directors with large share stakes tend to entrench management by reducing board turnover in poorly performing firms. Jensen (1993) argues that alternatives to takeovers are not equally effective disciplinary mechanisms. He also cites the poor record of boards of directors in disciplining managers. Moreover, Denis and Denis (1995) find that disciplining CEO turnover tends to occur in coincidence with takeover-related events. For many firms, effective disciplinary pressures are applied in the takeover market. Thus, less CEO turnover is expected to occur in the less active takeover period.

4.3 Data and Methodology

4.3.1 Sample Selection

The sample selection criteria are the same as Chapter 3. Our sample consists of 217 completed takeovers announced between 1st January 1998 and 31st December 2002 in the UK, which is selected from the Global Mergers and Acquisitions database of *Securities Data Corporation's* (SDC).

4.3.2 The cut point of the rising side and the slumping side of the M&A wave

Generally speaking, the fourth UK M&A wave picked up at the beginning of the 1990s. In order to compare the rising side and the slumping side of this M&A wave, we have to find the point to divide the two periods.

We select all completed M&A deals that involved UK target firms between 1990 and 2005. According to the Thomson Financial Securities Data, 35,927 UK firms were recorded as being merged or acquired during this period. The total transaction value adds up to US$ 2,362 trillion. Figures 4.5 and 4.6 show the total number and total value of deals for each month between 1990 and 2005. As Figure 4.5 illustrates, M&A activities in the UK became especially numerous from 1993, and it was booming in March 1998 (352 completed deals), April 1999 (345 completed deals) and May 2000 (328 completed deals). It is also impressive in terms of transaction value involved, as depicted in Figure 4.6. Obviously, the total value of deals in this wave was up from 1994, and it reached a peak in January 2000 (US$ 93 trillion), May 2000 (US$ 76 trillion) and November 1999 (US$ 60 trillion). Table 7 in the appendix shows details of total number and total value of M&A for each month during 1990-2005.

Considering both the number and value of M&A deals, May 2000 was the most active month in the fourth UK M&A wave. Hence, we chose it as the cut point to compare the rising and slumping side of the wave. Meanwhile, the data in *National*

Statistics[8] shows a similar trend, where the value of M&A deals in the UK reach a peak in the second quarter of 2000. In our subsequent tests, the whole sample of M&A activity is divided into two subperiods: January 1998 to May 2000 and June 2000 to December 2002. Distinguishing between these two subperiods allows us to examine the impact of the intensity of takeover activity on the discipline function.

Figure 4.5 Total Number of M&As During 1990-2005

The Figure shows total number of deals in the UK for each month between 1990 and 2005 and Source is *Thomson Financial Securities Data*.

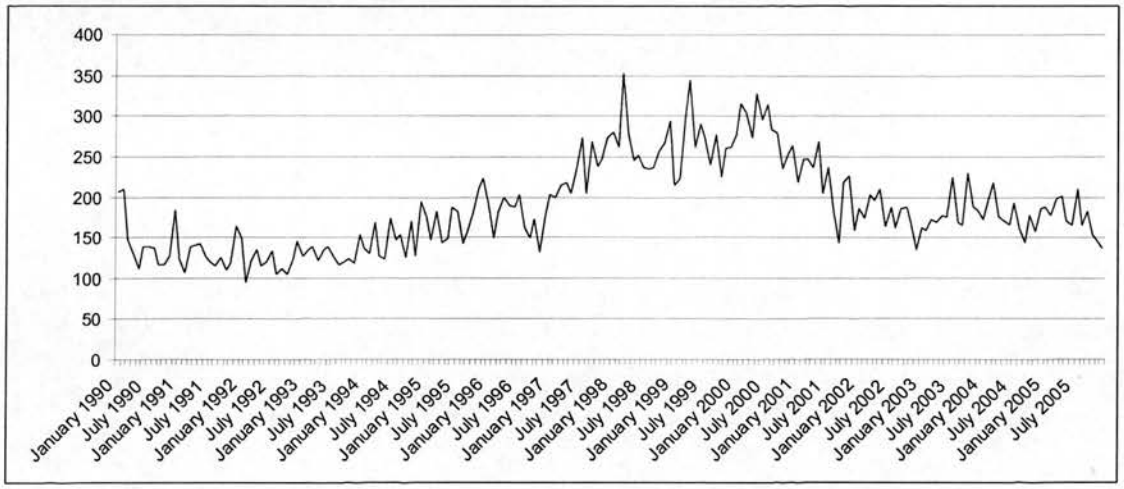
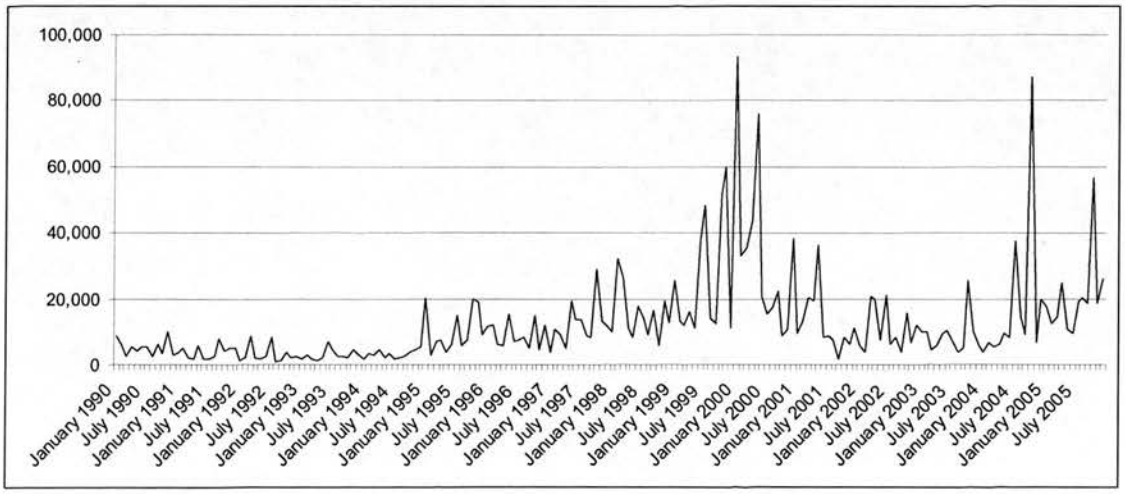


Figure 4.6 Total Values ($ million) of M&As During 1990-2005

This Figure shows total value of deals ($ million) in the UK for each month between 1990 and 2005 and Source is *Thomson Financial Securities Data*.



[8] www.statistics.gov.uk provides time-series of mergers and acquisitions data in UK and summary of cross-border mergers, acquisitions and disposals by UK companies and foreign companies in the UK. Data is yearly and quarterly.

4.3.3 Methodology

In this chapter, we employ the same methodology as in the last chapter. All determinants of post-takeover CEO turnover are divided into: CEO characteristics, target governance characteristics, deal characteristics and target firm characteristics. To examine the relation between these determinants and CEO turnover, we use univariate and multivariate tests. Logistic regression was employed to test the determinants of post-takeover CEO turnover in multivariate tests. We test whether the likelihood of target CEO turnover changes between Jan 1998-May 2000 and June 2000-Dec 2002, in particular for extremely performing target firms, and whether the relationship between performance and CEO turnover changes between the two time periods.

4.3.4 The Effect on target CEOs

4.3.4.1 Post-takeover CEO Turnover

Table 4.1 reports summary statistics on CEO turnover for 217 target firms, separated into the rising and slumping side of the M&A wave. Panel A documents the cumulative CEO turnover following takeover announcement. For the whole sample, nearly half of CEOs (48.39%) left by the end of the takeover announcement year. A higher rate of CEO turnover following takeovers was observed on the rising side than that on the slumping side: 51.06% versus 43.42%. In addition, the cumulative CEO turnover rate on both the rising and slumping side of the M&A wave generally increased over time but by different amounts. Two years after takeover announcement, 70.92% of target firms on the rising side had CEO turnover, and 60.53% on the slumping side. However, for each post-merger period, the difference in the turnover rate is non-statistically significant. This finding is consistent with the study of Mikkelson and Partch (1997), which recorded that CEO turnover is also higher in the more active takeover period (1984-1988), but not statistically different from the CEO turnover in the less active takeover period (1989-1993) in the US.

Table 4.1 Summary and Comparison of CEO Turnover for UK Target Firms in rising side and slumping side of M&A wave

CEO post-turnover is an indicator variable that is 1 for the firms with CEO turnover over three time periods Year 0 ,Year +1, Year +2 following the announcement of the takeover, and is 0 otherwise. Panel A documents the cumulative CEO turnover for Year 0, Year (0, +1), and Year (0, +2), while panel B reports the annual turnover for each year after the takeover announcement. The Chi-square and p-value are reported to test for differences in CEO post-turnover rate between the samples of rising-side and slumping-side takeovers.

Time period relative to takeover	All sample (N=217)		The rising side (N=141)		The slumping side (N=76)		
	Number of CEO turnover	% CEO turnover	Number of CEO Turnover	% CEO turnover	Number of CEO Turnover	% CEO turnover	Chi^2 (p-val)
Panel A Cumulative turnover							
Year 0	105	48.39%	72	51.06%	33	43.42%	1.155 (0.283)
Year +1	133	61.29%	92	65.25%	41	53.95%	2.658 (0.103)
Year +2	146	67.28%	100	70.92%	46	60.53%	2.424 (0.119)
Panel B Annual turnover							
Year 0	105	48.39%	72	51.06%	33	43.42%	1.155 (0.283)
Year +1	28	12.90%	20	14.18%	8	10.53%	0.588 (0.443)
Year +2	13	5.99%	8	5.67%	5	6.58%	0.072 (0.789)

*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$

Panel B of Table 4.1 documents annual CEO turnover rate, which has decreased over time. Most target firms experienced CEO turnover in Year 0. Afterwards, on the rising side takeovers, 14.18% target firms had CEO turnover rate in Year +1, and 5.67% in Year +2. A similar situation was observed in takeovers on the slumping side of the M&A wave. In Year +1, more target CEOs left new firms following takeovers on rising side of the M&A wave than that on the slump side (14.18% vs. 10.53%). The converse situation occurred in Year +2. But the difference in target CEO turnover rates between the rising side and slumping side takeovers is not statistically significant.

4.3.4.2 Post-takeover CEO Career Change

We traced the career change of target CEOs for two years. Table 4.2 documents the frequency distribution of departures and retentions of target CEOs. As shown in

Panel A, more CEOs retired following takeovers on the rising side than those on the slumping side: 4.00% versus 2.17%. Moreover, 13.00% of target CEOs resigned following takeovers on the rising side of the wave, as compared to 21.74% following slumping-side takeovers. In addition, more target CEOs joined other firms following rising-side takeovers than those on the slumping side: 53.00% versus 50.00%. We could not find a reason for 28.77% of CEO departures.

Table 4.2 Frequency Distribution for Departures and Retentions of CEOs

This table reports that distribution of CEO departures and retentions after takeovers, and compares takeovers in rising-side and slumping-side of the UK M&A wave. Panel A documents 146 CEO departures and Panel B reports 71 CEO retentions in new firm after takeovers.

	All sample		**The rising side**		**The slumping side**	
	Num.	% of sample	Num.	% of sample	Num.	% of sample
Panel A. 146 departures of CEOs						
Retirement	5	3.42%	4	4.00%	1	2.17%
Resignation[(1)]	23	15.75%	13	13.00%	10	21.74%
Departure to join other firm	76	52.05%	53	53.00%	23	50.00%
Death/Illness	0	0.00%	0	0.00%	0	0.00%
Fired, poor performance cited	0	0.00%	0	0.00%	0	0.00%
No reason given	42	28.77%	30	30.00%	12	26.09%
Total	146	100.00%	100	100.00%	46	100.00%
Panel B.71 retentions of CEOs						
Promoted	9	12.68%	7	17.07%	2	6.67%
Remained as CEO	37	52.11%	26	63.41%	11	36.67%
Joined the acquirer's board	19	26.76%	6	14.63%	13	43.33%
Retained in other position in the new firm	6	8.45%	2	4.88%	4	13.33%
Total	71	100.00%	41	100.00%	30	100.00%

[(1)]: no evidence is found to suggest that CEO joined another company
Although the data in the table was measured as accurately as possible from the available data sources, it is likely that certain reasons for departure were not accurately recorded in the data sources used.

Panel B of Table 4.2 shows the retention of target CEOs. Following takeovers on the rising side of the M&A wave, 63.41% of target CEOs remained as CEO in the new firm, which is much higher than 36.67% following the slumping-side takeovers. More target CEOs were promoted to Chairman after the rising-side takeovers than the slumping-side takeovers: 17.07% versus 6.67%. More target CEOs joined the acquirer's board or remained in other positions in the new firm following slumping-

side takeovers than following rising-side takeovers, 43.33% vs. 14.63%, and 13.33% vs. 4.88%, respectively. Our evidence shows that the remaining target CEOs played a relatively more important role following rising-side takeovers than those after slumping-side takeovers. This might be the result of strong negotiations of confident target CEOs in the clustering period of M&A activities. Alternatively, this might indicate that, in the clustering period of M&A activities, acquiring firms value target CEOs more highly, if they were to remain in the new firms.

4.3.5 Descriptive Statistics on Determinants of Post-takeover CEO turnover

In this section, we describe the determinants of post-takeover CEO turnover and compare them between takeovers in the rising M&A wave and those in the slumping M&A wave. Table 4.3 illustrates the summary statistics on CEO characteristics, target governance characteristics, deal characteristics and target firm characteristics for the 217 target firms divided into these two periods.

- CEO characteristics

Panel A describes the CEO age, whether the CEO was the founder, the CEO tenure and reputation. 8.3% of CEOs in the whole sample were the founders of target firms before takeovers. In the rising-side of M&A wave, 4.3% of target CEOs were founders, which is significantly lower than the 15.8% on the slumping side ($p<0.01$). This indicates that, after the high-tech boom period, founders might be more likely to sell their own firms than during the boom.

We also consider CEO reputation, measured as the additional directorships that CEOs held in other companies before takeovers. In our sample, the average number of additional board appointments held by target CEOs is 0.922. We also find a significant increase in CEO reputation over time. The average number of additional directorships of target CEOs increases from 0.794 on the rising side of the M&As wave to 1.158 on the slumping side ($p<0.10$). Our finding gives more evidence that the quality of target managers improved over time, which may have led to lower

CEO turnover later. Meanwhile, the mean CEO age and tenure decreased over the two time periods (50.326 to 48.934, 8.560 to 7.803), but the difference is not statistically significant.

- Target governance characteristics

Panel B of Table 4.3 reports CEO duality, whether the CEO was the blockholder, CEO ownership, blockholder ownership, target board size and the fraction of non-executives on the target board. As mentioned in the previous chapter, CEO duality refers to the circumstance that the CEO serves as Chairman of the board of a target firm.

Targets with CEO duality account for 10.1% of the whole sample. The incidence of CEO duality increased between the two time periods, the rising and slumping side of the M&A wave (from 7.8% to 14.5%), but it is not statistically significant. We also look at the ownership structure of target firms. In particular, we focus on the proportion of shares held by the CEO and blockholders. Those CEOs who own more than 3% of the shares of target firms are defined as blockholders, according to Franks et al. (2001). Panel B shows summary statistics on the ownership structure of target firms. On average, the CEO owns 2.5% of the shares of target firms and blockholders own 46.2%. Moreover, 23% of target CEOs were blockholders of target firms in our sample. We observe insignificant changes in CEO or blockholders' ownership between the rising side and the slumping side of the M&A wave.

In addition, we study the size and composition of the boards of target firms prior to the takeover announcement. As Panel B of Table 4.3 indicates, the average size of the target board is 7.567 directors, and there is no significant change between the two subperiods. In terms of board composition, the average percentage of non-executives on target boards is 49.9%. We find that it increases significantly from 48.3% in the rising side of the M&A wave to 52.8% in the slumping side. Thus, while there is no change in the average size of target boards, the composition of the average board does change towards an outside-dominated structure.

Table 4.3

Summary Statistics on CEO Characteristics, Target Governance Characteristics, Deal Characteristics and Target Firm Characteristics for 217 UK Target Firms of Successful Takeovers over the period 1998 to 2002

Variables	All sample			Jan 1998-May2000 N=141			June 2000-Dec 2002 N=76			
	Mean	Median	St.dev	Mean	Median	St.dev	Mean	Median	St.dev	t-stat/ chi^2 (*p*-val)
Panel A. CEO Characteristics										
Age	49.839	50.000	5.620	50.326	50.000	5.213	48.934	49.000	6.243	1.66 (0.10)
Founder	0.083	0.000	0.276	0.043	0.000	0.203	0.158	0.000	0.367	*8.00*** (0.01)*
Tenure	8.295	7.000	6.909	8.560	7.000	6.918	7.803	6.000	6.911	0.77 (0.44)
Reputation	0.922	0.000	1.407	0.794	0.000	1.344	1.158	1.000	1.497	-1.77* (0.08)
Panel B. Target Governance Characteristics										
CEO Duality	0.101	0.000	0.303	0.078	0.000	0.269	0.145	0.000	0.354	*2.41 (0.12)*
CEO = Block holder	0.230	0.000	0.422	0.234	0.000	0.425	0.224	0.000	0.419	*0.03 (0.87)*
CEO Ownership	0.025	0.002	0.052	0.025	0.002	0.050	0.024	0.001	0.057	0.22 (0.83)
Block holder Ownership	0.462	0.478	0.215	0.474	0.484	0.208	0.441	0.468	0.228	1.03 (0.30)
Board Size	7.567	7.000	2.664	7.730	7.000	2.754	7.263	7.000	2.479	1.27 (0.21)
Fraction of Non executives	0.499	0.500	0.147	0.483	0.500	0.147	0.528	0.500	0.143	-2.17** (0.03)

Table 4.3 (continue)

Summary Statistics on CEO Characteristics, Target Governance Characteristics, Deal Characteristics and Target Firm Characteristics for 217 Target Firms of Successful Takeovers over the period 1998 to 2002

Variables	All sample			Jan 1998-May2000 N=141			June 2000-Dec 2002 N=76			
	Mean	Median	St.dev	Mean	Median	St.dev	Mean	Median	St.dev	t-stat/ chi^2 (*p*-val)
Panel C. Deal Characteristics										
Cross-border	0.309	0.000	0.463	0.291	0.000	0.456	0.342	0.000	0.478	*0.58 (0.45)*
Related	0.553	1.000	0.498	0.496	0.000	0.502	0.658	1.000	0.478	*5.26** (0.02)*
High-tech	0.253	0.000	0.436	0.262	0.000	0.442	0.237	0.000	0.428	*0.11 (0.74)*
Legal Difference	0.124	0.000	0.331	0.113	0.000	0.318	0.145	0.000	0.354	*0.71 (0.40)*
Stock Payment	0.272	0.000	0.446	0.262	0.000	0.442	0.289	0.000	0.457	*0.63 (0.43)*
Cash Payment	0.175	0.000	0.381	0.163	0.000	0.371	0.197	0.000	0.401	*0.54 (0.46)*
Mixed Payment	0.553	1.000	0.498	0.574	1.000	0.496	0.513	1.000	0.503	*0.73(0.40)*
Multiple bidders	0.069	0.000	0.254	0.078	0.000	0.269	0.053	0.000	0.225	*0.74 (0.39)*
Hostile	0.046	0.000	0.210	0.057	0.000	0.232	0.026	0.000	0.161	*1.05 (0.31)*
Premium	41.175	38.140	38.525	41.782	39.740	35.790	40.049	35.670	43.375	0.30 (0.77)
Panel D. Target Firm Characteristics										
Target Total Asset ($mil)	3914.596	145.460	23752.069	4299.409	143.480	27494.272	3200.668	146.825	14591.422	0.38 (0.70)
Bidder Total Asset ($mil)	63451.828	1107.080	201331.921	85075.570	1611.230	240482.481	23334.094	681.585	79226.196	2.78***(0.01)
Size Difference	-0.762	-0.699	0.835	-0.824	-0.734	0.876	-0.647	-0.483	0.747	-1.57 (0.12)

*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$

This indicates that nonexecutives might become more influential of the governance in target firms, and then reduce target CEO turnover on the slumping side of the M&A wave.

- Deal characteristics

Panel C of Table 4.3 documents several deal characteristics. In our sample, 30.9% of takeovers are cross-border. There is an increase of the proportion of cross-border takeovers between the two subperiods (29.1% to 34.2%), although the difference is insignificant. Thus, our sample is consistent with the obvious trend of globalisation recorded repeatedly in the literature (Harford (2003), Moeller et al. (2005)). Moreover, 55.3% of the whole sample of M&A are related takeovers in the whole sample. The frequency of related takeover is found to have risen significantly, from 49.6% on the rising side of the M&A wave to 65.8% on the slumping side ($p<0.05$). Our study provides partial support that recent takeover activity is more strategic and focuses on the development of the core business, which is in line with studies by Martynova and Renneboog (2006).

Further, in our whole sample, 25.3% of takeovers took place in high-tech industries. There is a decrease on the proportion of high-tech takeovers over the two subperiods (26.2% to 23.7%). Although the difference is not statistically different, such a decrease still shows the influence of a collapse of the "new economics" bubble. We also find that 12.4% of takeovers in our sample involve a different national legal system. With the growing proportion of cross-border takeovers, the percentage of takeovers involving different legal systems has slightly increased from 11.3% to 14.5% over the two subperiods.

Payment is an important issue in each transaction. 27.2% of takeovers in our sample were paid by stock, which is much higher than the 17.5% of takeovers paid by cash. Such a phenomenon is consistent with the general literature (Shleifer and Vishny (2003), Martynova and Renneboog (2006)) on the popularity of stock payment when the stock market is booming and the takeover environment is friendly in the recent

M&A wave. 55.3% of deals in our sample employed mixed payment as the acquisition "currency". We observe no significant change in payment in takeovers between the rising side and the slumping side of the recent M&A wave.

Multiple bids are often considered as a consensus of ineffective management of a target (Walsh (1989)). Fewer multiple bidders appeared in takeovers on the slumping side than on the rising side of the recent M&A wave (5.3% vs. 7.8%), indicating the decline in the consensus of target CEO inefficiency. Meanwhile, over two subperiods, the proportion of hostile takeovers decreased from 5.7% to 2.6% and the mean transaction premium reduced from 41.782% to 40.049%. But the difference between the two time periods is not statistically significant in terms of these variables.

- Target firm characteristics

In this section, we look at target firm characteristics, including target total assets, bidder total assets, size difference betweens targets and bidders, pre-takeover target performance and pre-takeover target leverage.

Panel D of Table 4.3 shows that both the average of target total assets and the average of bidder total assets decreased from the rising period to the slumping period of the recent M&A wave ($4299mil to $3201mil, $85076mil to $23334mil respectively). The only significant difference appears in bidder total assets ($p<0.01$), which shows that big bidding firms played a very important role in the rise of M&A activity and may have pushed up the wave. But we don't find a significant size difference between the target and the bidder between the two subperiods.

Moreover, we examine both accounting and stock pre-takeover performance of each target firm. Table 4.4 illustrates the summary statistics of the pre-takeover accounting performance measured by the industry-adjusted ROA (IAROA), stock performance measured by market-adjusted return (CAR) and leverage measured by the total debt to total asset ratio for all 217 target firms.

Table 4.4

Summary statistics on the pre-takeover performance and leverage of 217 UK target firms over the period 1998 to 2002

Variables	All sample			Jan 1998-May2000 N=141			June 2000-Dec 2002 N=76			
	Mean	Median	St.dev	Mean	Median	St.dev	Mean	Median	St.dev	t-stat (p-val)
Panel A. IAROA										
IAROA (-2, -1)	3.272	-0.123	37.795	4.146	-0.590	32.767	1.622	2.540	45.680	0.43 (0.67)
IAROA (year -1)	1.276	-0.350	25.272	2.743	-0.070	24.151	-1.436	-0.985	27.030	1.13 (0.26)
Panel B. Cumulative Market-adjusted Return (CAR) (Monthly)										
-26 to -3	-0.357***	-0.268	0.676	-0.357	-0.292	0.605	-0.355	-0.230	0.793	-0.02 (0.98)
-14 to -3	-0.184***	-0.098	0.539	-0.171	-0.100	0.501	-0.211	-0.098	0.602	0.49 (0.62)
Panel C. Capital Leverage (Total Debt/Total Asset)										
Year -2	0.240***	0.220	0.206	0.261	0.228	0.222	0.202	0.209	0.163	2.24**(0.03)
Year -1	0.231***	0.216	0.212	0.243	0.217	0.228	0.212	0.214	0.179	1.11 (0.27)

*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$

Panel A of Table 4.4 shows the results using IAROA. The mean of IAROA of target firms in the early subperiod is higher than that in the later subperiod (4.146 vs.1.622, 2.743 vs. -1.436), but the difference is not statistically significant. Panel B also reports no significant difference in monthly cumulative market-adjusted returns between the two subperiods.

Panel C of Table 4.4 presents results for capital leverage using the ratio of total debt to total assets. We find that average total debt/total assets of target firms on the rising side of the M&A wave is significantly higher than that on the slumping side over leverage window of (Years -2 to Year -1), 0.261 vs. 0.202. Therefore, most target firms on the rising side of the recent M&A have more debt than those on the slumping side, which indicates that bidding firms in a booming economy are more likely to lighten the debt situation of target firms.

4.4 Univariate Tests

4.4.1 Targets with and without post-takeover CEO turnover

In this section, we compare the target firms with and without post-takeover CEO turnover with respect to the determinants of CEO turnover. Moreover, we test the mean of each variable to determine if a difference in these determinants exists between two samples of targets. Tables 4.5 and 4.6 report our results.

- CEO Characteristics

Panel A of Table 4.5 presents our findings on CEO characteristics. In the early subperiod of the rising M&A wave, we find that the average age of departed CEOs is statistically significantly higher than that of those who remained CEO (51.250 vs. 49.362). This indicates that, with an increase in M&A activity and the boom in the high-tech sector, younger CEOs were more likely to be valued and kept in the new firms after takeovers. We do not find this in the less active M&A period.

The percentage of CEO-founders is higher in target firms without than with post-takeover CEO turnover. Moreover, it is mainly on the rising side of the M&A wave, as, in this subsample, there is no CEO who was the founder of a target with post-takeover CEO turnover. This is not found in the falling part of the wave.

On the slumping side of the M&A wave, we find the tenure of remaining CEOs was significantly longer than that of those CEOs that departed after takeovers (9.140 vs 6.061). Our finding is consistent with Denis et al. (1997), Goyal and Park (2002). A long tenure is normally associated with rich experience and power established over time (Salancik and Meindl (1984)), which avoids the fate of departure, especially after the boosting of M&A activity.

- Target Governance Characteristics

Panel B of Table 4.5 shows results with respect to governance characteristics of target firms. The proportion of CEO duality is much higher in target firms without than with post-takeover CEO turnover in both subperiods (11.6% vs. 4.2%, 18.6% vs. 9.1% respectively). In contrast to the previous studies of Jensen (1993), Brickley et al. (1997), and Goyal and Park (2002), our finding suggests that the power of CEO-Chairman leadership may outweigh the ineffectiveness of CEO duality, and encourage CEOs to remain in the new firms.

In addition, a significant difference exists in blockholder ownership between targets with and without CEO turnover following takeovers on the slumping side of the recent M&A wave. Blockholders of targets without post-takeover CEO turnover own a higher percentage of target shares than those in targets with CEO turnover (45.9% vs. 41.8%). But no significant difference is found in takeovers on the rising of the wave. This indicates that, with the slump of M&A activity, blockholders owning a high proportion of the target's shares may be more effective at monitoring target managers, and so reduce the CEO turnover rate following takeovers. Consistent with the study of Denis et al. (1997), our finding shows that blockholders provide an efficient governance mechanism on the slumping side of the recent M&A wave.

Table 4.5

Summary Statistics on Pre-takeover CEO Characteristics, Target Governance Characteristics, Deal Characteristics and Target Firm Characteristics, Split by Post-takeover CEO turnover for 217 UK Target Firms of Successful Takeover from 1998 to2002

Variables	All sample			Jan 1998-May2000 N=141			June 2000-Dec 2002 N=76		
	No CEO Turnover (N=112)	CEO Turnover (N=105)	t-stat/ chi^2 (p-val)	No CEO Turnover (N=69)	CEO Turnover (N=72)	t-stat / chi^2 (p-val)	No CEO Turnover (N=43)	CEO Turnover (N=33)	t-stat / chi^2 (p-val)
Panel A. CEO Characteristics									
Age	49.589	50.105	-0.67 (0.501)	49.362	51.250	-2.17**(0.03)	49.953	47.606	1.65 (0.10)
Founder	0.125	0.038	*5.381**(0.020)*	0.087	0.000	*9.42***(0.00)*	0.186	0.121	*1.87 (0.17)*
Tenure	8.750	7.810	1.00 (0.317)	8.507	8.611	-0.09 (0.93)	9.140	6.061	2.09**(0.04)
Reputation	0.955	0.886	0.36 (0.716)	0.696	0.889	-0.85 (0.39)	1.372	0.879	1.49 (0.14)
Panel B. Target Governance Characteristics									
CEO Duality	0.143	0.057	*4.370**(0.037)*	0.116	0.042	*4.35**(0.04)*	0.186	0.091	*4.15**(0.04)*
CEO = Block holder	0.241	0.219	*0.148 (0.700)*	0.261	0.208	*0.70 (0.40)*	0.209	0.242	*0.26 (0.61)*
CEO Ownership	0.026	0.023	0.46 (0.647)	0.027	0.024	0.34 (0.74)	0.026	0.021	0.35 (0.73)
Block holder Ownership	0.452	0.474	-0.75 (0.451)	0.447	0.499	-1.49 (0.14)	0.459	0.418	2.60**(0.01)
Board Size	7.643	7.486	0.43 (0.665)	7.841	7.625	0.46 (0.64)	7.326	7.182	0.26 (0.80)
Fraction of Non executives	0.500	0.497	0.41 (0.886)	0.477	0.489	-0.48 (0.63)	0.537	0.515	0.66 (0.51)

Table 4.5 (Continued)

Summary Statistics on Pre-takeover CEO Characteristics, Target Governance Characteristics, Deal Characteristics and Target Firm Characteristics, Split by Post-takeover CEO Turnover for 217 Target Firms of Successful Takeover from 1998 to2002

Variables	All sample			Jan 1998-May2000 N=141			June 2000-Dec 2002 N=76		
	No CEO Turnover (N=112)	CEO Turnover (N=105)	No CEO Turnover (N=43)	No CEO Turnover (N=69)	CEO Turnover (N=72)	t-stat / chi^2 (*p*-val)	No CEO Turnover (N=43)	CEO Turnover (N=33)	t-stat/ chi^2 (*p*-val)
Panel C. Deal Characteristics									
Cross-border	0.339	0.276	*1.011 (0.315)*	0.261	0.319	*0.87 (0.35)*	0.465	0.182	*19.17***(0.00)*
Related	0.571	0.533	*0.318 (0.573)*	0.536	0.458	*1.45 (0.23)*	0.628	0.697	*1.10 (0.29)*
High-tech	0.259	0.248	*0.037 (0.848)*	0.246	0.278	*0.23 (0.63)*	0.279	0.182	*2.82*(0.09)*
Legal Difference	0.143	0.105	*0.722 (0.396)*	0.101	0.125	*0.44 (0.51)*	0.209	0.061	*9.63***(0.00)*
Stock Payment	0.366	0.171	*10.371***(0.001)*	0.348	0.181	*7.42***(0.01)*	0.395	0.152	*15.68***(0.00)*
Cash Payment	0.098	0.257	*9.476***(0.002)*	0.058	0.264	*14.88***(0.00)*	0.163	0.242	*2.00 (0.16)*
Mixed Payment	0.536	0.571	*0.280 (0.597)*	0.594	0.556	*0.18 (0.67)*	0.442	0.606	*5.79**(0.02)*
Multiple bidders	0.054	0.086	*0.870 (0.351)*	0.043	0.111	*3.53*(0.06)*	0.070	0.030	*1.68 (0.19)*
Hostile	0.018	0.076	*4.195**(0.041)*	0.014	0.097	*7.79***(0.01)*	0.023	0.030	*0.21 (0.65)*
Premium	40.831	41.542	-0.14 (0.892)	40.829	42.696	-0.31 (0.76)	40.834	39.026	0.19 (0.85)
Panel D. Target Firm Characteristics									
Target Total Asset ($mil)	3781.600	4056.460	-0.08 (0.932)	2831.234	5706.410	-0.63 (0.53)	5306.605	456.568	1.65 (0.11)
Bidder Total Asset ($mil)	44954.045	83182.796	-1.40 (0.163)	57686.797	111323.145	-1.35 (0.18)	24522.419	21785.670	0.15 (0.88)
Size Difference	-0.723	-0.803	0.71 (0.480)	-0.769	-0.876	0.73 (0.47)	-0.648	-0.645	-0.02 (0.98)

Ω: Figures are the mean of each variable, or the percentages of targets related to each variable, in those targets without CEO turnover following the takeover
Φ: Figures are the mean of each variable, or the percentages of targets related to each variable, in those targets with CEO turnover following the takeover
*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$

In terms of CEO ownership, whether the CEO was a blockholder, board size and composition, we do not find significant differences between targets with and without post-takeover CEO turnover for any set of the samples.

- Deal Characteristics

Panel C of Table 4.5 shows results on various deal characteristics. We find that, of targets with no post-takeover CEO turnover, the proportion that were cross-border takeovers increased from 26.1% on the rising wave to 46.5% on the slumping wave. The corresponding proportions of targets with post-takeover CEO turnover are 31.9% and 18.2% respectively and consequently show a decrease. Also, on the slumping side of the wave, 46.5% of target firms without post-takeover CEO turnover were involved in cross-border takeovers, which is significantly higher than the 18.2% of targets with CEO turnover following takeovers ($p<0.01$). As show above, cross-border takeovers were still growing, even when the M&A wave started going down. Foreign acquiring firms might further realise the experience and special knowledge of target CEOs and rely on them more, so that these target CEOs are more valued and more likely to be kept after takeovers. Further, we look at the effect of legal difference and find that, on the slumping side of the M&A wave, 20.9% of target firms without post-takeover CEO turnover were involved with acquirers from different national legal systems, while only 6.1% of targets with CEO turnover were so involved. The difference is statistically significant ($p<0.01$). It provides a deep insight that foreign acquiring firms need managers who are more familiar with the target's business and local environment.

Another interesting finding is a notable decline in the proportion of high-tech takeovers, for targets with post-takeover CEO turnover, from 27.8% on the rising M&A wave to 18.2% on the slumping side of the wave. The situation is contrary for targets without post-takeover CEO turnover. With respect to industries, acquiring firms might learn more lessons and be more cautious after the bubble burst in 2000, so that they might value target CEOs with special experience in high-tech industries more highly in the slumping period than the boom period. It shows that takeovers in

high-tech industries are associated with lower post-takeover CEO turnover rate. Further evidence is found that, on slumping side of the recent M&A wave, 27.9% of target firms without post-takeover CEO turnover were involved in high-tech takeovers, while 18.2% of targets with CEO turnover were high-tech takeovers. The difference is statistically significant ($p<0.10$). But for takeovers on the rising side of the wave, we do not find these significant differences.

In terms of payment, for the overall sample, we find significantly higher use of stock payment for targets without than those with post-takeover CEO turnover (36.6% vs. 17.1%). Such a significant difference also appears in the two subperiods, 34.8% vs. 18.1%, and 39.5% vs. 15.2%, respectively. The situation is the reverse for cash payment. Only 9.8% of target firms without post-takeover CEO turnover accept cash as the acquiring "currency", while cash payment was used for 25.7% of targets with CEO turnover following takeovers. When the sample is split, the significant difference is only confined to the rising side of the M&A wave (5.8% vs. 26.4%). Consistent with studies of Ghosh and Ruland (1998), stock payment is associated with a lower CEO turnover rate, and it may be the bargaining results of those CEOs who desire to retain their jobs and even keep their influence in the new firms. Cash payment may show the confidence of acquirers for the control of targets, and they also avoid issuing equity to dilute their ownership. For the mixed payment, significant difference appears only on the slumping side of the recent M&A wave and more targets with post-takeover CEO turnover accepted mixed payment than those without CEO turnover after takeovers (60.6% vs. 44.2%).

Moreover, we find a greater proportion of target firms with, than without, post-takeover CEO turnover received multiple bids. It is statistically significant in the rising M&A wave (11.1% vs. 4.3%), but not on the declining section of the wave. This suggests that the ineffectiveness of managers may be indicated by multiple bidders in the boom of the M&A wave (Walsh (1989)). In addition, for the whole sample, 7.6% of takeovers with post-takeover target CEO turnover were hostile, which is significantly higher than 1.8% of hostile takeovers which involved targets without CEO turnover afterwards. Such a situation is especially clear on the rising

side of the M&A wave, but not on the slumping stage of the wave. Thus, to some extent, hostile takeovers still discipline target CEOs, which is significant in the active M&A period.

- Target Firm Characteristics

Panel D of Table 4.5 shows target firms' total assets, bidders' total assets and their size difference. We find no significant difference between targets with and without CEO turnover, for each sample.

Table 4.6 presents comparisons of pre-takeover performance and leverage between the two parties. Panel A shows the results using industry-adjusted ROA (IAROA), but there is no significant difference between two samples of targets within each of the time periods.

Panel B of Table 4.6 reports our findings using market-adjusted return. The stock performances are significantly negative across most time windows for each sample, with the exception of targets without CEO turnover over -14 to -3 months in the slumping M&A wave. For the overall sample, the stock performance is significantly lower for targets with, than without, post-takeover CEO turnover for the performance window -26 to -3 month ($p<0.05$). When the whole sample is split, however, the inverse relationship is only found in takeovers on the rising side of the M&A wave. During the period January 1998 to May 2000, lower performance is significantly associated with CEO turnover for the performance window, -26 to -3 months ($p<0.10$). For the later period from May 2000 to December 2002, we find no significant relation between pre-takeover performance and post-takeover CEO turnover. This suggests that the disciplinary effect is confined to the rising side of the M&A wave.

Table 4.6

Pre-takeover Performance and Leverage for 217 UK Target Firms of Successful Takeovers over the period 1998 to 2002

Variables	All sample			Jan 1998-May2000 N=141			June 2000-Dec 2002 N=76		
	No CEO Turnover (N=112) ϒ	CEO Turnover (N=105) ϒ	t-stat (p-val)	No CEO Turnover (N=74) ϒ	CEO Turnover (N=76) ϒ	t-stat (p-val)	No CEO Turnover (N=38) ϒ	CEO Turnover (N=29) ϒ	t-stat (p-val)
Panel A. IAROA									
IAROA (-2, -1)	4.239 (1.05)	2.220 (0.72)	0.39(0.69)	8.450 (1.73*)	0.022 (0.01)	1.52 (0.13)	-2.518 (-0.36)	7.015 (0.88)	-0.90 (0.37)
IAROA (Y -1)	1.769 (0.63)	0.757 (0.41)	0.29 (0.77)	5.235 (1.43)	0.355 (0.19)	1.19 (0.24)	-3.792 (-0.87)	1.633 (0.38)	-0.88 (0.38)
Panel B. Cumulative Market-adjusted Return (CMAR) (Monthly)									
-26 to -3	-0.266 (-4.27***)	-0.454 (-6.81***)	2.06 (0.04**)	-0.263 (-3.64***)	-0.448 (-6.33***)	1.83 (0.07*)	-0.270 (-2.36**)	-0.466 (-3.17***)	1.05 (0.30)
-14 to -3	-0.161 (-2.96***)	-0.211 (-4.35***)	0.69 (0.49)	-0.180 (-2.70***)	-0.163 (-3.07***)	-0.20 (0.84)	-0.129 (-1.39)	-0.317 (-3.13***)	1.36 (0.18)
Panel C. Capital Leverage (Total Debt/Total Asset)									
Year -2	0.233 (11.34***)	0.249 (13.27***)	-0.58 (0.56)	0.257 (8.78***)	0.265 (11.15***)	-0.21 (0.83)	0.193 (7.82***)	0.213 (7.36***)	-0.52 (0.60)
Year -1	0.227 (10.20***)	0.237 (13.16***)	-0.35 (0.72)	0.239 (7.45***)	0.247 (11.30***)	-0.20 (0.84)	0.208 (7.72***)	0.217 (6.73***)	-0.21 (0.83)

ϒ : The t-statistic test is to examine if the mean is equal to 0.

*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$

Panel C Table 4.6 presents the results from leverage tests by using the ratio of total debt to total assets. For each sample, we find capital leverages are significantly different from zero across all time windows. Although the leverage of targets with post-takeover CEO turnover is higher than that for targets with no CEO turnover after takeover for all time windows, the difference is not statistically significant.

Overall, our results in Table 4.5 show some significant associations between post-takeover CEO turnover and determinants such as CEO age, CEO-founder, CEO duality, stock and cash payment, hostile takeovers in the rising M&A wave, and CEO tenure, CEO duality, blockholders ownership, cross-border takeovers, high-tech takeovers, legal difference, stock and mixed payment in the slumping M&A wave.

In addition, our results in Table 4.6 show that post-takeover CEO turnover is weakly associated with stock performance prior to takeover announcements only in the early subperiod, January 1998 to May 2000, but no significant association is found in the later subperiod. It provides modest support for the role of corporate takeovers as a source of discipline based on target stock performance in the boom period of M&A activities.

4.4.2 CEO Turnover Rates for Extreme Quartiles of Performance and Leverage

To add additional insight to the performance-turnover and leverage-turnover relation, we compare post-takeover CEO turnover rates in the lowest and highest performance quartiles and leverage quartiles.

- CEO Turnover Rates for Extreme Quartiles of Target Firm Pre-takeover Performance

In Panel A of Table 4.7, we compare post-takeover CEO turnover rates for extreme performance quartiles based on industry-adjusted ROA (IAROA) over performance windows 1 to 2 years prior to the year of takeover announcement. For each sample of target firms, post-takeover CEO turnover rates are lower for takeovers in the highest

than lowest performance quartiles across all performance windows. A significant difference exists for the full sample over performance windows of (-2, -1) and (Year -1), and for the rising M&A wave over the performance window of (Year -1). For example, on the rising side of the M&A wave over the performance window of (Year -1), the CEO turnover rate for the high performance quartile is 34.29% while the CEO turnover rate for the lowest performance quartile is 54.29%. The difference is about 20% and statistically significant.

Panel B of Table 4.7 shows similar results when using market-adjusted stock return as performance measures. In particular, for the full sample over performance window -26 to -3 months, the rate of CEO turnover is 37.04% for the highest quartile of stock performance, which is significantly lower than the 55.56% of the CEO turnover rate for the lowest performance quartile. But no significant difference is found in the two subperiods.

- CEO Turnover for Extreme Quartile of Target Firm Pre-takeover Leverage

Panel C of Table 4.7 presents results for the leverage-turnover relation using the ratio of total debts to total assets. Generally, for each sample across all leverage windows, the CEO turnover rate for the highest leverage quartile is higher than that for the lowest leverage quartile. The difference in turnover rates, however, is statistically significant only over -1 year leverage interval for the rising side of the recent M&A wave. Average CEO turnover rate is significantly higher among targets in the highest quartile of than that among targets in the lowest quartile of targets (57.14% vs. 37.14%).

Taken together, the results presented in Table 4.7 provide more evidence that, in the rising M&A wave, target performance-turnover and leverage-turnover relationships are weakly statistically significant. This indicates that takeover market applied weak discipline only in the boom of the recent M&A wave.

Table 4.7

Post-takeover Turnover Rates for 217 UK Target Firms of Successful Takeovers from 1998 to 2002 for Extreme Performance Quartiles

Time period relative to takeover	All sample			Jan 1998-May2000 N=141			June 2000-Dec 2002 N=76		
	Quartile 1 (highest)	Quartile 4 (Lowest)	Chi^2 (p-Value)	Quartile 1 (highest)	Quartile 4 (Lowest)	Chi^2 (p-Value)	Quartile 1 (highest)	Quartile 4 (Lowest)	Chi^2 (p-Value)
Panel A. CEO Turnover rate using IAROA as the performance metric									
IAROA (-2, -1)	37.04%	53.70%	3.026*(0.082)	37.14%	54.29%	2.07 (0.15)	42.11%	47.37%	0.11 (0.74)
IAROA (year -1)	33.33%	50.00%	3.086*(0.079)	34.29%	54.29%	2.84*(0.09)	31.58%	47.37%	0.99 (0.32)
Panel B. CEO Turnover rate using market-adjusted cumulative abnormal return (CAR) as the performance metric (Monthly)									
-26 to -3	37.04%	55.56%	3.724*(0.054)	40.00%	54.29%	1.43 (0.23)	31.58%	57.89%	2.66 (0.10)
-14 to -3	38.89%	50.00%	1.350 (0.245)	51.43%	51.43%	0.000 (1.000)	21.05%	42.11%	1.95 (0.16)
Panel C. CEO Turnover rate using Total Debt/Total Asset as the leverage metric									
Year -2	50.00%	38.89%	1.350 (0.245)	48.57%	37.14%	0.93 (0.33)	52.63%	36.84%	0.96 (0.33)
Year -1	51.85%	37.04%	2.400 (0.121)	57.14%	37.14%	2.81* (0.09)	47.37%	36.84%	0.43 (0.51)

*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$

4.5 CEO Turnover and Various Determinants: Multivariate Tests

In this section, we use multivariate tests to examine the relation between CEO turnover and various determinants. To test whether the disciplinary effects of takeovers are sensitive to changes in the intensity of takeover activity, we include a time dummy as a deal characteristic. The time dummy variable is equal to 1 for takeovers over the period January 1998 to May 2000, and equal to 0 for takeovers during the period June 2000 to December 2002. We employ logistic regressions to estimate the probability of CEO turnover as a function of the same four sets of independent variables as above: CEO characteristics, target governance characteristics, deal characteristics and target firm characteristics.

Three different sets of regressions are estimated, based on three different samples: the full sample (including the time dummy), takeovers on the rising side and the slumping side of recent M&A wave (excluding the time dummy). For each set of target firms, we test the relationships between the independent variables and post-takeover CEO turnover. To test whether the determinants may have different impacts on CEO turnover for different periods after takeovers, the dependent variable, CEO turnover, is modelled over different windows as before: Year 0 (the year of takeover announcement), Year +1 (one year after the year of the announcement) and Y+2 (two years after the year of the announcement). We also employ the same measures of target performance and leverage prior to the takeover announcement.

4.5.1 The Full Sample

- CEO turnover by the end of the year of takeover announcement (Y0)

Table 4.8 shows the results of our tests on the full sample, where we include the time dummy. The dependent variable in the first set of regressions is the probability of CEO turnover by the end of the year of the takeover announcement.

All of the results are almost qualitatively the same as the findings in Table 3.11 of Chapter 3, where the time dummy was not included. So the coefficients on CEO-founder are significant negative ($p<0.05$). This indicates that the probability of CEO turnover shortly after takeover announcement is lower if CEO was the founder of target firm. The coefficients on CEO duality are significant and negative ($p<0.05$ or $p<0.10$) in the first set of regressions. This implies that the probability of post-takeover turnover of the CEO is lower for targets with CEO duality. The coefficients of cross-border takeovers are significantly negative ($p<0.10$). Hence, when target firms are involved in cross-border takeovers, the probability of post-takeover CEO turnover is lower.

In addition, we find a significantly negative relation between post-takeover CEO turnover and stock payment in the transaction ($p<0.05$). Stock payment could reduce the possibility of CEO turnover after takeovers. The coefficients of takeover attitude are statistically significant and positive ($p<0.10$). For target pre-takeover performance, the coefficient is negative and significant in the regression by using IAROA one year prior to takeover announcement ($p<0.10$).

The coefficient of the time dummy is positive, but not statistically significant. This indicates that the intensity of M&A activities does not significantly affect the probability of post-takeover CEO turnover.

- CEO turnover one year after takeover announcement (Y+1)

The dependent variable in the second set of regressions in Table 4.8 is CEO turnover one year after takeover announcement. The results are again the same qualitatively as in Table 3.11 in Chapter 3. The coefficients of CEO-founder are significant and negative ($p<0.05$). It indicates that the influence of the founder may still exist one year later. The coefficients of cross-border and IAROA (-1 year) are significantly negative ($p<0.05$, $p<0.10$), which suggests they are negatively related to CEO turnover and have significant influence even in one year after the takeover announcement.

Table 4.8

Logistic Models Relating Probability of CEO Turnover **Shortly(Y0), One Year(Y+1), and Two Year(Y+2)** after Takeover Announcement to CEO Characteristics, Target Governance Characteristics, Deal Characteristics and Target Firm Characteristics for **217** Targets of Successful Takeovers over the period 1998 to 2002

Independent Variables	Models											
	Y0				**Y+1**				**Y+2**			
	-1 year		-2 years		-1 year		-2 years		-1 year		-2 years	
	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig
CEO Characteristics												
Age	0.032	(0.26)	0.031	(0.29)	0.015	(0.61)	0.014	(0.64)	0.001	(0.97)	0.003	(0.92)
Founder	-1.501**	(0.04)	-1.482**	(0.04)	-1.660**	(0.02)	-1.628**	(0.02)	-0.227	(0.73)	-0.253	(0.70)
Tenure	-0.003	(0.91)	-0.001	(0.96)	0.038	(0.16)	0.037	(0.17)	0.038	(0.18)	0.037	(0.19)
Reputation	0.062	(0.59)	0.073	(0.54)	-0.166	(0.16)	-0.158	(0.18)	-0.216*	(0.06)	-0.222*	(0.06)
Target Governance Characteristics												
Duality	-1.207**	(0.05)	-1.176*	(0.06)	-0.561	(0.33)	-0.544	(0.35)	-0.582	(0.30)	-0.580	(0.31)
CEO-Ownership	4.444	(0.21)	4.165	(0.24)	3.046	(0.40)	2.947	(0.41)	0.191	(0.96)	0.196	(0.96)
BlockholdersOwn	-0.066	(0.93)	-0.148	(0.85)	-0.510	(0.53)	-0.539	(0.51)	-0.759	(0.36)	-0.760	(0.36)
BoardSize	-0.038	(0.52)	-0.037	(0.54)	-0.075	(0.23)	-0.077	(0.22)	-0.052	(0.41)	-0.053	(0.40)
Outsiders	-0.973	(0.41)	-0.869	(0.46)	-0.853	(0.48)	-0.822	(0.50)	0.690	(0.58)	0.749	(0.55)
Deal Characteristics												
Time dummy	0.037	(0.91)	0.014	(0.97)	0.255	(0.46)	0.216	(0.54)	0.444	(0.20)	0.378	(0.29)
Cross-border	-0.767*	(0.07)	-0.718*	(0.09)	-1.006**	(0.02)	-0.937**	(0.03)	-0.759*	(0.07)	-0.694	(0.10)
Related	0.153	(0.62)	0.197	(0.53)	-0.062	(0.85)	-0.026	(0.94)	-0.032	(0.92)	-0.020	(0.95)
Stockpay	-1.145**	(0.02)	-1.097**	(0.02)	-0.789	(0.11)	-0.726	(0.14)	-0.071	(0.88)	0.031	(0.95)
Auction	0.345	(0.58)	0.416	(0.50)	0.676	(0.33)	0.796	(0.27)	0.946	(0.21)	1.188	(0.14)
Attitude	1.622*	(0.06)	1.473*	(0.09)	0.677	(0.44)	0.578	(0.52)	0.446	(0.62)	0.384	(0.67)
Premium	-0.001	(0.90)	-0.001	(0.82)	0.003	(0.50)	0.002	(0.58)	0.001	(0.83)	0.001	(0.91)
High-tech	-0.010	(0.98)	-0.144	(0.70)	-0.126	(0.74)	-0.287	(0.45)	0.035	(0.93)	-0.137	(0.72)

Legal Dif	0.169	(0.77)	0.111	(0.85)	0.468	(0.42)	0.395	(0.50)	1.012*	(0.09)	0.971	(0.11)
Target Firm Characteristics												
Size Difr	-0.138	(0.46)	-0.132	(0.49)	0.227	(0.24)	0.234	(0.23)	0.270	(0.17)	0.285	(0.15)
IAROA-1	-0.274*	(0.09)			-0.288*	(0.09)			-0.193	(0.26)		
IAROA-2			-0.157	(0.29)			-0.146	(0.35)			-0.052	(0.74)
Totdebt/asset-1	1.634	(0.47)			0.384	(0.87)			0.474	(0.84)		
Totdebt/asset-2			0.564	(0.81)			-0.370	(0.88)			0.932	(0.70)
CAR-1	-0.190	(0.84)			-1.693*	(0.09)			-1.703*	(0.09)		
CAR-2			-1.347	(0.12)			-2.402***	(0.01)			-2.720***	(0.00)
-2 log likelihood	149.939		151.794		146.648		142.590		143.802		138.779	
Cox&Snell R^2	0.276		0.266		0.223		0.245		0.170		0.199	
Negelkerke R^2	0.368		0.355		0.307		0.337		0.242		0.284	

*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$ (2-tail)

In logistic models, the dependent variable, CEO turnover, is an indicator that is 1 for firms with post-takeover CEO turnover, and is 0 otherwise. Three sets of tests are CEO turnover over different time periods, Y0 (the year in which the takeover announcement made), Y+1 (the year after the year of the announcement) and Y+2 (the second year after the year of the announcement). The independent variable age, is the age of the target CEO. Founder is also an indicator that takes a value of 1 if the target CEO was a founder of the target firm, and is 0 otherwise. Tenure is the years since the CEO joined the target firm. Reputation is the number of additional board appointments held by the CEO. Duality is an indicator that is 1 for a firm where the CEO is also the chairman of the board prior to the takeover announcement, and is 0 otherwise. CEO-Ownership is the proportion of shares owned by the CEO. Blockholder ownership is the percentage of equity owned by blockholders. Board size is the number of directors in the board of the target firm. Outsider is the proportion of non-executive directors in the board. Time dummy is a dummy variable that takes the value 1 if takeover is in the period of January 1998 to May 2000, and is 0 otherwise. Cross-border takes a value of 1 if the "acquirer nation code" of an acquiring firm in SDC is not UK, and is 0 otherwise. Related takeover is also an indicator that is 1 when the target and acquiring firms have same four or three-digit SIC, and is 0 otherwise. High-tech is an indicator that is 1 for firms involved in high-tech industries, and is 0 otherwise. Legal difference takes a value of 1 if the acquiring firm was from a non-English common-law country, and is 0 otherwise. Stock payment is an indicator that is 1 if the acquiring firm paid the deal by stock, and is 0 otherwise. Auction is an indictor that takes a value of 1 if more than one bidder had an interest in the target firm, is 0 otherwise. The indictor variable, attitude, is 1 if the takeover is a hostile takeover, and is 0 otherwise. Premium is the premium paid for the target firm. Size difference is the logarithms of the ratios of the asset of the target to the asset of the acquiring firm. Target firm performances are measured by the industry-adjusted ROA (IAROA) and stock performance (CAR) over 2 years and 1 year prior to the takeover announcement. Target firm leverages are measured by the total debt to total asset.

Moreover, in this set of regressions, we find that the coefficients on CAR are significant and negative ($p<0.01$, $p<0.10$), suggesting that stock performance significantly affects CEO turnover one year after the takeover announcement. Meanwhile, some significant coefficients appeared in first set disappear in this set, such as CEO duality, stock payment and attitude. But no significant effect of the time dummy is found.

- CEO turnover at two years after takeover announcement (Y+2)

The dependent variable in the third set of regressions in Table 4.8 is CEO turnover two years after takeover announcement. The results show that, even after two years, some coefficients on pre-takeover variables are still statistically significant. The coefficient of CEO reputation is significant and negative ($p<0.10$), which suggest that the higher CEO reputation, the lower the probability of CEO turnover. In addition, we no longer find a significant relation between CEO-founder and CEO turnover.

In the regression using target pre-takeover performance one year prior to takeover announcement, cross-border takeovers still have a weakly significant negative relation to CEO turnover. In this regression, we find a significant positive coefficient on legal difference, which indicates a positive relation between post-takeover CEO turnover and legal system difference. In addition, the coefficients on CAR are also significantly negative, which indicates that, two years after announcements, stock performance still has a negative influence on CEO turnover.

Taken together, the results reported in Table 4.8 are very similar to those in Table 3.11 of Chapter 3. Although we add the new variable "time dummy" to distinguish the effect of the rising and slumping side of the recent M&A wave, the coefficients are not statistically significant in any of the regressions. This suggests no significant relationship between post-takeover CEO turnover and the intensity of M&A activities.

4.5.2 Takeovers between January 1998 and May 2000

In this section, we re-estimate the logistic models presented in Table 4.8 using samples from the subperiod of January 1998 to May 2000. Table 4.9 summarizes the results of the logistic regressions.

The first set of results in Table 4.9 show the results related to CEO turnover on Y0. Once again, regressions indicates that the probability of post-takeover CEO turnover is lower for targets with CEO duality, stock payment in the transaction and pre-takeover accounting performance measured by IAROA (-1 year). Moreover, in each regression, the coefficients of CEO age are also significant and positive ($p<0.05$, $p<0.01$). This suggests that CEO age is significantly and positively related to the probability of CEO turnover. In this subperiod, older targets' CEOs have higher probability of departing. The coefficients on CEO ownership are also significant and positive ($p<0.05$, $p<0.10$), which means that higher CEO ownership of target shares is related to a higher probability of CEO turnover shortly after a takeover announcement. It may be the case that such CEOs sell their own shares and leave the target firms

In the second set of regressions relating to Year +1, we find similar results, that CEO age is significantly positively related to CEO turnover one year after announcement, and a significant negative association is found between the CEO turnover and CEO-founder, CEO duality, and IAROA (-1 year) and (-2 years). Moreover, the coefficients on auction and size difference are significant and positive ($p<0.05$). This indicates that the probability of CEO turnover one year after announcement is higher for targets involving multiple bidders and with a small size difference. Regressions in the third set, relating to Year +2, show similar results. CEO age, auction and size difference are all significantly positively related to CEO turnover two years after the takeover announcement, while CEO-founder and CEO duality have a significant negative association with CEO turnover two years following the takeover.

Table 4.9 The rising-side takeovers

Logistic Models Relating Probability of CEO Turnover **Shortly(Y0), One Year(Y1), and Two Year(Y2)** after Takeover Announcement to CEO Characteristics, Target Governance Characteristics, Deal Characteristics and Target Firm Characteristics for **141** Targets of Successful Takeovers over the period **1st January 1998 to 31st May 2000**

Independent Variables	Models											
	Y0				**Y+1**				**Y+2**			
	-1 year		-2 years		-1 year		-2 years		-1 year		-2 years	
	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig
CEO Characteristics												
Age	0.121***	(0.01)	0.104**	(0.02)	0.117**	(0.01)	0.102**	(0.03)	0.108**	(0.02)	0.102**	(0.03)
Founder	-22.350	(1.00)	-22.129	(1.00)	-3.360**	(0.01)	-3.430**	(0.01)	-2.493**	(0.04)	-2.495**	(0.04)
Tenure	0.046	(0.22)	0.048	(0.19)	0.053	(0.18)	0.061	(0.13)	0.037	(0.34)	0.048	(0.24)
Reputation	0.167	(0.32)	0.158	(0.35)	-0.183	(0.26)	-0.210	(0.21)	-0.160	(0.34)	-0.208	(0.23)
Target Governance Characteristics												
Duality	-2.566***	(0.01)	-2.213**	(0.02)	-1.751*	(0.05)	-1.614*	(0.07)	-1.877**	(0.03)	-1.896**	(0.03)
CEO-Ownership	10.493**	(0.05)	9.330*	(0.08)	8.059	(0.13)	7.781	(0.15)	7.165	(0.17)	7.482	(0.16)
BlockholdersOwn	1.376	(0.20)	0.995	(0.35)	-0.335	(0.76)	-0.513	(0.65)	-0.984	(0.38)	-1.147	(0.32)
BoardSize	-0.001	(0.99)	0.016	(0.84)	-0.059	(0.48)	-0.055	(0.51)	-0.049	(0.56)	-0.046	(0.58)
Outsiders	-1.533	(0.37)	-0.929	(0.57)	-0.054	(0.97)	0.407	(0.80)	1.353	(0.41)	1.721	(0.30)
Deal Characteristics												
Cross-border	-0.017	(0.98)	0.005	(0.99)	-0.599	(0.30)	-0.562	(0.34)	-0.423	(0.46)	-0.416	(0.49)
Related	-0.027	(0.95)	-0.031	(0.94)	0.022	(0.96)	0.013	(0.98)	0.116	(0.79)	0.066	(0.88)
Stockpay	-1.828**	(0.01)	-1.658**	(0.02)	-0.974	(0.17)	-0.910	(0.20)	-0.564	(0.43)	-0.503	(0.48)
Auction	1.212	(0.17)	1.065	(0.21)	2.531**	(0.05)	2.508**	(0.05)	2.092*	(0.10)	2.084*	(0.10)
Attitude	1.697	(0.18)	1.276	(0.30)	1.013	(0.42)	0.606	(0.63)	0.772	(0.54)	0.479	(0.70)
Premium	-0.006	(0.40)	-0.004	(0.52)	-0.003	(0.72)	-0.003	(0.69)	-0.003	(0.63)	-0.004	(0.61)
High-tech	0.331	(0.50)	0.182	(0.71)	-0.075	(0.88)	-0.275	(0.58)	0.016	(0.97)	-0.119	(0.82)

Legal Dif	-0.159	(0.84)	-0.237	(0.77)	0.143	(0.86)	0.175	(0.83)	0.077	(0.92)	0.119	(0.89)
Target Firm Characteristics												
Size Difr	-0.030	(0.90)	-0.022	(0.93)	0.506**	(0.05)	0.552**	(0.03)	0.365	(0.14)	0.427*	(0.09)
IAROA-1	-0.482*	(0.06)			-0.623**	(0.02)			-0.431	(0.11)		
IAROA-2			-0.384	(0.10)			-0.530**	(0.04)			-0.406	(0.12)
Totdebt/asset-1	2.949	(0.34)			1.192	(0.69)			0.556	(0.85)		
Totdebt/asset-2			0.793	(0.80)			0.955	(0.76)			2.620	(0.40)
CAR-1	2.170	(0.14)			0.113	(0.94)			-0.244	(0.87)		
CAR-2			-1.164	(0.39)			-2.309	(0.11)			-2.177	(0.13)
-2 log likelihood	149.939		151.794		146.648		142.590		143.802		138.779	
Cox&Snell R^2	0.276		0.266		0.223		0.245		0.170		0.199	
Negelkerke R^2	0.368		0.355		0.307		0.337		0.242		0.284	

*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$ (2-tail)

In logistic models, the dependent variable, CEO turnover, is an indicator that is 1 for firms with post-takeover CEO turnover, and is 0 otherwise. Three sets of tests are CEO turnover over different time periods, Y0 (the year in which the takeover announcement made), Y+1 (the year after the year of the announcement) and Y+2 (the second year after the year of the announcement). The independent variable age, is the age of the target CEO. Founder is also an indicator that takes a value of 1 if the target CEO was a founder of the target firm, and is 0 otherwise. Tenure is the years since the CEO joined the target firm. Reputation is the number of additional board appointments held by the CEO. Duality is an indicator that is 1 for a firm where the CEO is also the chairman of the board prior to the takeover announcement, and is 0 otherwise. CEO-Ownership is the proportion of shares owned by the CEO. Blockholder ownership is the percentage of equity owned by blockholders. Board size is the number of directors in the board of the target firm. Outsider is the proportion of non-executive directors in the board. Cross-border takes a value of 1 if the "acquirer nation code" of an acquiring firm in SDC is not UK, and is 0 otherwise. Related takeover is also an indicator that is 1 when the target and acquiring firms have same four or three-digit SIC, and is 0 otherwise. High-tech is an indicator that is 1 for firms involved in high-tech industries, and is 0 otherwise. Legal difference takes a value of 1 if the acquiring firm was from a non-English common-law country, and is 0 otherwise. Stock payment is an indicator that is 1 if the acquiring firm paid the deal by stock, and is 0 otherwise. Auction is an indictor that takes a value of 1 if more than one bidder had an interest in the target firm, is 0 otherwise. The indictor variable, attitude, is 1 if the takeover is a hostile takeover, and is 0 otherwise. Premium is the premium paid for the target firm. Size difference is the logarithms of the ratios of the asset of the target to the asset of the acquiring firm. Target firm performances are measured by the industry-adjusted ROA (IAROA) and stock performance (CAR) over 2 years and 1 year prior to the takeover announcement. Target firm leverages are measured by the total debt to total asset.

4.5.3 Takeovers between June 2000 and December 2002

In this section, we repeat our regressions using another subsample from the subperiod of June 2000 to December 2002. The results are presented in Table 4.10.

In the first set of regressions, more CEO characteristics appear statistically significant. Older CEOs, long tenure and high reputation are all associated with a low probability of CEO turnover shortly after takeover announcement. But on the rising side of the wave, these factors have the opposite but insignificant effect on post-takeover CEO turnover. CEO age is in contrast to the findings for the rising side of the wave where it has the opposite effect on post-takeover CEO turnover. The experience and stature of CEO are always represented by the CEO's age, tenure and reputation (Cotter et al. (1997), Kini et al. (2004)) and, in the falling part of the M&A wave, these factors decrease the probability of CEO turnover. This suggests that acquiring firms may value the knowledge of target CEOs more in the slumping M&A wave. Moreover, the coefficient on blockholders' ownership is significantly negative, when the regression includes target firms' performance two years prior to the takeover announcement. But it was not significant in the rising part of the wave. This suggests that, in the falling part of the wave, the higher the proportion of target shares owned by blockholders, the lower the probability of CEO turnover following takeovers. Thus, the internal governance mechanism, blockholders, appears to significantly monitor target management and lead to lower CEO turnover rate on the slumping side but not the rising side of the wave.

The results also show that CEO turnover is also lower for targets involved in cross-border takeovers, auctions and high-tech takeovers, which have no significant association with the probability of CEO turnover in the rising M&A wave. This suggests that, compared with the decreasing M&A activities on the slumping side of the wave, cross-border takeovers were dramatically growing and acquiring firms might need more help from target CEOs. Meanwhile, multiple bidders might provide more change to target CEOs to secure their job in the new firm. In high-tech

takeovers, acquiring firms might pay more attention to the advantage of target CEOs after the bubble burst.

Similar to the first set, the results in the second regression sets show that CEO age, CEO reputation and cross-border takeover are significantly negatively related to the probability of CEO turnover one year after the takeover announcement. Furthermore, the coefficient on outsiders is significant and negative when using pre-takeover performance two years prior to the announcement. This differs from the rising part of the wave. It implies that another internal governance mechanism, outsiders, becomes active and reduces the probability of CEO turnover following takeovers.

In the third set of regressions on the probability of CEO turnover two years after takeover announcement, we find similar results. CEO age, CEO reputation, cross-border takeovers and high-tech takeovers are significantly negatively related to CEO turnover. CEO-founder, CEO duality and legal difference have significant and positive association with CEO turnover.

Among three set of regressions, we find no significant effect of pre-takeover performance and leverage on CEO turnover. But the significant negative performance-turnover relationship is found in the rising M&A wave. This implies that a weak disciplining function of takeovers exists only in the rising side of the wave.

4.5.4 Summary

Comparing the two sets of regressions for the rising and slumping side of the M&A wave, we find that CEO age, CEO-founder, CEO duality and auction are inversely related to CEO turnover over different time windows. This indicates that, following the collapse of the stock market in 2000, acquiring firms might become more cautious and value the ability of target CEOs more than they did early in the rising period of the wave. Moreover, on the slumping side of the M&A wave, CEO tenure, CEO reputation, cross-border, high-tech and legal difference appear to have

Table 4.10 The Slumping-side takeovers

Logistic Models Relating Probability of CEO Turnover **Shortly(Y0), One Year(Y1), and Two Year(Y2)** after Takeover Announcement to CEO Characteristics, Target Governance Characteristics, Deal Characteristics and Target Firm Characteristics for **76** Targets of Successful Takeovers over the period **1st June 2000 to 31st December 2002**

Independent Variables	Models											
	Y0				**Y+1**				**Y+2**			
	-1 year		-2 years		-1 year		-2 years		-1 year		-2 years	
	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig
CEO Characteristics												
Age	-0.141**	(0.03)	-0.137**	(0.03)	-0.137**	(0.03)	-0.132**	(0.03)	-0.245***	(0.01)	-0.234***	(0.01)
Founder	-0.153	(0.89)	0.087	(0.94)	-0.898	(0.50)	-0.639	(0.59)	2.683*	(0.07)	2.540*	(0.07)
Tenure	-0.170**	(0.01)	-0.175***	(0.01)	-0.019	(0.75)	-0.040	(0.48)	0.003	(0.96)	-0.015	(0.82)
Reputation	-0.466*	(0.08)	-0.468*	(0.08)	-0.806***	(0.01)	-0.752***	(0.01)	-1.338***	(0.00)	-1.255***	(0.00)
Target Governance Characteristics												
Duality	0.483	(0.71)	0.654	(0.61)	1.498	(0.25)	1.587	(0.21)	3.007**	(0.05)	2.982**	(0.04)
CEO-Ownership	2.154	(0.77)	2.900	(0.69)	3.319	(0.64)	4.076	(0.55)	-1.827	(0.82)	-0.309	(0.97)
BlockholdersOwn	-2.919	(0.12)	-3.003*	(0.10)	-1.653	(0.39)	-1.960	(0.29)	-1.512	(0.51)	-1.958	(0.39)
BoardSize	0.057	(0.70)	0.052	(0.72)	-0.031	(0.84)	-0.027	(0.85)	0.126	(0.49)	0.123	(0.50)
Outsiders	-1.389	(0.65)	-2.401	(0.43)	-5.319	(0.10)	-5.910*	(0.07)	-0.302	(0.93)	-0.877	(0.79)
Deal Characteristics												
Cross-border	-2.716**	(0.01)	-2.569**	(0.02)	-3.148***	(0.01)	-2.742**	(0.01)	-2.450**	(0.02)	-2.201**	(0.03)
Related	0.361	(0.64)	0.282	(0.71)	-0.108	(0.89)	-0.246	(0.75)	-0.538	(0.54)	-0.563	(0.52)
Stockpay	-1.479	(0.17)	-1.526	(0.15)	-1.627	(0.16)	-1.376	(0.22)	0.312	(0.78)	0.424	(0.70)
Auction	-3.356*	(0.07)	-3.562*	(0.09)	-3.209	(0.10)	-2.960	(0.15)	-1.244	(0.38)	-0.792	(0.60)
Attitude	1.460	(0.61)	1.199	(0.65)	0.530	(0.92)	-0.131	(0.97)	-1.296	(0.65)	-2.146	(0.43)
Premium	0.000	(0.97)	0.002	(0.81)	0.004	(0.67)	0.007	(0.42)	0.008	(0.46)	0.009	(0.43)
High-tech	-1.947*	(0.06)	-1.724*	(0.07)	-1.595	(0.13)	-1.279	(0.18)	-1.856*	(0.07)	-1.761*	(0.09)

Legal Dif	1.415	(0.33)	1.135	(0.42)	2.429	(0.13)	1.700	(0.23)	3.628**	(0.02)	2.963**	(0.04)
Target Firm Characteristics												
Size Difr	-0.371	(0.46)	-0.215	(0.69)	-0.042	(0.93)	-0.065	(0.90)	0.596	(0.25)	0.530	(0.32)
IAROA-1	-0.313	(0.39)			-0.001	(1.00)			-0.130	(0.74)		
IAROA-2			-0.145	(0.62)			0.088	(0.76)			0.122	(0.70)
Totdebt/asset-1	2.331	(0.67)			-0.556	(0.92)			1.432	(0.81)		
Totdebt/asset-2			5.690	(0.35)			2.307	(0.71)			1.551	(0.81)
CAR-1	-1.794	(0.44)			-4.054	(0.13)			-3.115	(0.20)		
CAR-2			-0.376	(0.85)			-1.651	(0.41)			-2.309	(0.27)
-2 log likelihood	70.323		70.846		66.869		68.494		59.192		59.787	
Cox&Snell R^2	0.358		0.354		0.394		0.380		0.430		0.426	
Negelkerke R^2	0.481		0.475		0.526		0.508		0.583		0.577	

*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$ (2-tail)

In logistic models, the dependent variable, CEO turnover, is an indicator that is 1 for firms with post-takeover CEO turnover, and is 0 otherwise. Three sets of tests are CEO turnover over different time periods, Y0 (the year in which the takeover announcement made), Y+1 (the year after the year of the announcement) and Y+2 (the second year after the year of the announcement). The independent variable age, is the age of the target CEO. Founder is also an indicator that takes a value of 1 if the target CEO was a founder of the target firm, and is 0 otherwise. Tenure is the years since the CEO joined the target firm. Reputation is the number of additional board appointments held by the CEO. Duality is an indicator that is 1 for a firm where the CEO is also the chairman of the board prior to the takeover announcement, and is 0 otherwise. CEO-Ownership is the proportion of shares owned by the CEO. Blockholder ownership is the percentage of equity owned by blockholders. Board size is the number of directors in the board of the target firm. Outsider is the proportion of non-executive directors in the board. Cross-border takes a value of 1 if the "acquirer nation code" of an acquiring firm in SDC is not UK, and is 0 otherwise. Related takeover is also an indicator that is 1 when the target and acquiring firms have same four or three-digit SIC, and is 0 otherwise. High-tech is an indicator that is 1 for firms involved in high-tech industries, and is 0 otherwise. Legal difference takes a value of 1 if the acquiring firm was from a non-English common-law country, and is 0 otherwise. Stock payment is an indicator that is 1 if the acquiring firm paid the deal by stock, and is 0 otherwise. Auction is an indictor that takes a value of 1 if more than one bidder had an interest in the target firm, is 0 otherwise. The indictor variable, attitude, is 1 if the takeover is a hostile takeover, and is 0 otherwise. Premium is the premium paid for the target firm. Size difference is the logarithms of the ratios of the asset of the target to the asset of the acquiring firm. Target firm performances are measured by the industry-adjusted ROA (IAROA) and stock performance (CAR) over 2 years and 1 year prior to the takeover announcement. Target firm leverages are measured by the total debt to total asset.

significant effects on post-takeover CEO turnover. More governance variables, blockholders and outsiders, become significant on the slump side. This is consistent with the study of Huson et al. (2001) that other corporate governance mechanisms have been well developed in recent years, so that both of blockholders and outsiders have significant negative effects on post-takeover CEO turnover. In the whole sample, we find a significant negative relation between post-takeover CEO turnover and pre-takeover performance measured by IAROA and CAR. When the sample is split into two subperiods, however, such a performance-turnover relation is confined to the rising side of the M&A wave. No significant association between pre-takeover performance and post-takeover CEO turnover is found in the later period on the slumping side of the M&A wave. Collectively, our evidence indicates that the intensity of performance-related discipline exerted by the corporate takeovers has changed significantly over time, which is consistent with the argument of Kini et al. (2004).

4.6 Robustness Checks and Further Tests

4.6.1 Other Performance and Leverage Measurements

As in Chapter 3, we examine the robustness of our findings to alternative performance and leverage benchmarks, so that industry-adjusted ROE (IAROE) and industry-adjusted cash flow margin (IACFM) are employed to test accounting performance. For the leverage of target firms, we use the net debt to total asset ratio. Moreover, we extend the pre-takeover time windows beginning 4 years prior to takeover announcement for accounting performance and leverage, and 38 months prior to takeover announcement for stock performance.

Univariate tests show that, after extending performance windows, IAROA and CAR provide more evidence that pre-takeover stock performance is significantly better for targets without than with CEO turnover following takeovers during the rising M&A wave. Also, significantly lower CEO turnover rates is found for the highest performance quartile for IACFM in the slump side over (-3 year, -1 year), (-2 year, -

1 year) and CAR on the rising side over (-38 month, -3 month). Multiple regressions strengthen the previous results. Across the extended performance windows, the significant turnover-performance relations are found using IAROA and CAR in all samples and the rising M&A wave. But no such significant relations are found on the slumping side of the wave.

4.6.2 Hofstede's Index for Culture Difference

Following Chapter 3, we employ Hofstede's index to test culture difference and redo the multiple regressions by using four of Hofstede's indices of culture difference: individualism, masculinity, power distance and uncertainty avoidance.

The results are similar to those in section 4.5 in terms of the significance of determinants. In particular, for the whole sample, the coefficient on masculinity is significantly negative when testing CEO turnover one year after takeover announcement. It is consistent with the results in Chapter 3. Such an effect is found for the probability of CEO turnover shortly after and one year following takeover announcement on the slumping side of the M&A wave. Foreign acquiring firms' need for target CEOs' knowledge may increase with the growth of cross-border takeovers on the slumping period of the fourth wave. Generally, masculine acquiring firms are stressed by firm performance, and such foreign acquiring firms are more likely to value the benefit brought from target CEO and then keep the target CEO.

4.7 Conclusion

Our results show that a decline of UK takeover activities from Jan 1998-May 2000 to June 2000-Dec 2002 was accompanied by decreased post-takeover CEO turnover in UK public target firms. This study makes several contributions to the existing literature on the disciplinary role of UK corporate takeovers.

First, it provides new UK evidence regarding the relation between the probability of post-takeover CEO turnover and pre-takeover performance over the rising (active)

and slumping (less active) period of the fourth UK M&A wave. We find a weak but significantly negative relation between CEO turnover and performance on the rising part of the M&A wave, which is the active takeover period. This finding is consistent with the study of Mikkelson and Partch (1997), which reports the presence of a turnover-performance relation in the active takeover period of 1984-1988 and the absence of such a relation in the less active takeover period of 1989-1993 in the US. Hadlock and Lumer (1997) also report no relation between performance and top management turnover in the inactive takeover period of 1933-1941.

Second, we find new evidence concerning the interplay between corporate takeovers and other governance mechanisms as alternative disciplining mechanisms over different intensities of takeover activities. Consistent with the study of Kini et al. (2004) for US takeovers over the period 1979-1998, we provide evidence that corporate takeovers serve as a substitute disciplinary mechanism to blockholder ownership and the percentage of non-executives on the board, but only in the rising period of the M&A wave, Jan 1998 to May 2000.

Third, regarding special features of the recent M&A wave, we find that cross-border takeovers have a significant negative relation with post-takeover CEO turnover, especially in the more active international takeovers of the later period, Jun 2000 to Dec 2002. This suggests that target CEOs would be more likely to remain in the new firm following cross-border takeovers. A further insight shows that, in particular, post-takeover CEO turnover is significantly lower in high-tech takeovers or when acquirers are more masculine.

Finally, we provide a comprehensive analysis of potential determinants on CEO turnover over three time windows following takeover announcement (Y0, Y+1 and Y+2). On both the rising side and slumping side of the M&A wave, stock payment decreases the probability of post-takeover CEO turnover. It is not surprising that CEOs who desire to retain and influence the new firms would negotiate a stock payment. Some variables have the reverse relation with CEO turnover in the rising and slumping period, such as CEO age, CEO-founder, CEO duality and auction. This

suggests that the intensity of takeover activity may affect the relation between CEO turnover and these determinants.

In closing, we have not demonstrated that a decrease in takeover activity actually causes a decline in CEO turnover, although this is possible. The reduction in takeover activity and the changes of CEO turnover may be explained jointly by macroeconomic conditions. The slumping period of M&A waves includes a collapse of the stock market and slight recession, which could explain the change of sensitivity of CEO turnover to performance. Alternatively, after the "fever", managers may have been more rational and effective to increase firms' value.

Chapter 5 The Impact of Takeovers on Shareholders' Wealth of Acquiring Firms

5.1 Introduction

How do M&As affect shareholders' wealth? Answering this question may not be straight forward. Most studies examine the stock behaviour of firms either around takeover announcement or several years after the takeovers. Event literature written over the past several decades has become an important part of financial economics. In a corporate context, many event studies focus on announcement effects for a short-horizon. A unanimous conclusion of this aspect of empirical literature is that takeovers create value for the target and bidder shareholders combined, with the major gains accruing to the target shareholders (Franks et al. (1977), Firth (1979, 1980), Asquith (1983), Jensen and Ruback (1983), Jarrel et al. (1988)). This is a reasonable result considering the bidding firms must pay an acquisition premium to target shareholders for giving up their ownership.

However, empirical studies related to wealth effects for acquiring shareholders show inconclusive results. Some studies report that acquiring firms could have small positive abnormal announcement returns (Moeller and Schlingemann (2005), Franks and Harris (1989)), whereas about half of the studies find insignificant or zero announcement returns (Schwert (2000), Loderer and Martine (1990), Jensen and Ruback (1983)) and some reveal negative wealth effects for acquiring shareholders (Andrade et al. (2001), Mulherin and Boone (2000), Franks et al. (1991), Healy et al. (1992)). Gaining a better understanding in specific contexts and in the new period would be interesting.

Unlike the previous studies, this up-date research considers the features of the recent takeover wave and looks at the M&A wave cycle in the UK. This study aims to provide a new perspective on the existing literature by conducting two main comparisons: cross-border and domestic takeovers, and takeovers during the rising / slumping side of the recent M&A wave. The specific contexts and the new period

would provide a better understanding about the effect of M&As on acquiring shareholders' wealth. In this chapter, we review the literature on event studies relating to the acquiring shareholders' returns during takeover announcements and methodologies employed in most studies. We also develop hypotheses on the relationship between announcement abnormal returns and some possible determinants. In subsequent chapters, we present our empirical results.

The structure of this chapter is as follows. Our research motivation and research questions are provided in the next section. Section 5.3 summarises literature on the shareholder wealth effects around takeover announcements. In terms of features of the recent M&A waves, we focus on certain circumstances in international M&As and the intensity of M&A activities. A review of methodologies in event studies is also provided in this section. Section 5.4 shows the hypotheses on the relationship between announcement abnormal return and potential determinants. Section 5.5 provides the conclusion.

5.2 Research question

The impact of corporate takeovers on abnormal returns has been researched and analysed by many over the years. A few studies provide insights into the gains to the shareholders of both target and acquiring firms. There is a considerable contrast between the large share price returns of target firms and the frequently small returns of acquiring firms. The general consensus reached in most studies is that target shareholders have positive abnormal returns, while the evidence on wealth effects for acquiring firms are not conclusive. Some empirical tests suggest that the shareholders of acquirers realize abnormal returns immediately around the announcement day, while others exhibit negative wealth effects. Some revealed that the returns are insignificantly different from zero.

Nevertheless, very few studies have studied the relationship between M&A activities and the general economic conditions. Generally, all kinds of corporate activity and business decision are influenced by the overall economic circumstances. M&A

waves have always coincided with high stock market valuations (Crook (1996), Rhodes-Kropf and Viswanathan (2004), Shleifer and Vishny (2003)) and shocks to an industry's economic, technological, or regulatory environment (Mitchell and Mulherin (1996), Andrade et. al (2001)). The objective of this study is to add a new dimension to the view of the impact of M&As on shareholder wealth.

Compared to previous M&A waves, some distinguishing features of the UK fourth takeover market is that takeovers were large in size and very global (Goergen and Renneboog (2004), Cosh and Hughes (1996)). The value of cross-border acquisitions by UK firms had grown from $30m in 1995 to $209m in 1999. Moreover, cross-border mergers accounted for around 80% of FDI outflows in 2000[9]. Thus, instead of greenfield investments, mergers and acquisitions have become the predominant form of foreign direct investment (FDI) in the US, UK and continental Europe over the past decade (Goergen and Renneboog (2004), Gregory & McCorrison (2001)). FDI theory posits that imperfections exist which give multinational firms a competitive advantage over local firms. Kang (1993) suggests that cross-border acquisitions are expected to generate more wealth than domestic acquisitions, while Harris and Ravencraft (1991) argue that abnormal returns of targets in domestic acquisitions are not expected to differ from those of targets in cross-border takeovers provided that capital markets are not segmented internationally. Hence, our study would provide new evidence regarding the market returns of acquiring firms in the UK fourth M&A wave, which experienced a surge in international corporate activities in the context of general globalization of the world economy.

Although the fourth M&A wave was distinguished by the high number and value of deals, it experienced a slump that was coincident with the collapse of the "new economy bubble". For the UK, M&A activity during the 1990s was characterized by continual increases in both the number and the value of takeovers. The year 1999 was not only remarkable in terms of the total bid value ($694 billion) in the UK, but also in terms of the number of deals (4,087deals). But in the year 2002, both figures

[9] Data comes from World Investment report 2000: Cross-Border Mergers and Acquisitions and Development, UNCTAD (2000).

decreased substantially to $196 billion and 2,660 deals[10] respectively. The studies on the US and Europe by Shelton (2000), Martynova and Renneboog (2006) and Harford (2003) report that takeovers occurring at a later stage of the wave trigger lower abnormal returns to the bidders shareholders than those at the rising wave, while Tse and Soufani (2001) find no significant difference in the returns to the acquiring firms between the M&A active period and the less active period. Thus, we investigate the wealth effects for shareholders involved in takeovers in two different economic periods, which are characterised by a difference intensity of takeover activity in the UK.

Moreover, empirical evidence suggests that internal corporate governance mechanisms became prominent and relatively more effective in the late 1990s (Kini et al. (2004)). These corporate governance mechanisms have an important influence on corporate strategies, including the takeover of another company. Hence, these governance mechanisms might be important in explaining the abnormal behaviour at the announcement of a takeover. The common practice is to test whether board or ownership structure of a bidder can explain changes in bidder shareholder wealth, or whether target board or ownership characteristics can explain changes in target shareholder wealth during a takeover process (Constantinou and Constantinou (2003), Hermalin (2001), Cosh and Hughes (2001)). However, it is interesting that the cross-reaction effect between target governance and bidder shareholders wealth is often neglected. In this study, we try to investigate whether target governance can explain this effect.

Finally, we study several potential determinants, which may affect abnormal returns of bidder firms around the takeover announcement. These determinants are divided into four groups: deal characteristics, target governance characteristics, target and acquiring firm characteristics. We would like to identify the type of characteristics which make it more likely that a particular merger will generate or destroy shareholder value. In the following chapters, we test our hypotheses.

[10] Data is from Thomson Financial Securities Data.

5.3 Literature Review

5.3.1 Shareholder Returns Review

This section focuses on three specific issues: the evidence accumulated through event studies on the returns to shareholders of acquiring firms accruing around the takeover announcement; the acquiring shareholder returns following cross-border / domestic takeovers; and the return to acquiring shareholders following takeovers during the rising / slumping M&A wave.

5.3.1.1 Brief Review

Early empirical studies of mergers and acquisitions during the early 1970s applied comparative studies of firm performance to test for synergy in mergers and acquisitions. Mandelker (1974) applied the Fama and MacBeth (1973) methodology to examine the profitability of mergers. This is considered as the first modern treatment of the financial consequences of mergers, since completion dates are precisely determined and abnormal returns are calculated relative to a benchmark. Mandelker considers the time period from several months prior to the merger to several months following the merger, and finds that the acquiring firms earn a normal rate of return on the acquisitions. Following this pioneering study, researchers carried out extensive studies on the wealth effects of takeover activities throughout the entire acquisition process.

Most studies find that target firm shareholders, on average, experience negative abnormal returns from five to two years prior to the takeover announcement. In contrast, the vast majority of studies on the bidding firm shareholders earn significant positive abnormal returns from five to two years prior to the takeover announcement. Mandelker (1974) finds that the cumulative abnormal return (CAR) of bidding firms increased by 5.1% during the 30 month prior to merger. Asquith (1983) finds that the CAR for both successful and unsuccessful bidding firms has risen to 14.3% and 2.2% respectively from 48 months prior to the month of the takeover announcement.

Schipper and Thompson (1983) find that the increase in CAR from month -24 to the event month is over 20%. These results are consistent with the hypothesis that bidding firms have a good performance several years prior to the takeover bid. However, Firth (1980) found normal returns to bidding firms four or two years before the announcement of the takeover.

During the period of takeover announcement, there is striking evidence of large significant abnormal returns to the target firm shareholders. But the results for bidding firms are mixed. There are three groups of studies each with different results. One group finds that bidding firm shareholders earn a small but significant positive abnormal return on the announcement date of takeover proposal. Asquith, Bruner and Mullins (1983) report that average announcement date abnormal returns for all merger bids is 0.9% with a t-statistic of 4.68. Franks and Harris (1989) find that UK bidding firm shareholders earn significant positive abnormal returns in the month of takeover announcement. Similarly, Kennedy and Limmack (1996) find significant abnormal returns of 1.40% for UK bidder shareholders in the month of takeover announcement.

Another group argues that bidding firm stockholders experience a normal rate of return during the bid announcement date. Asquith (1983) reports little reaction on the announcement day of a merger bid for both successful and unsuccessful bidding firms. The two-day (day -1 and day 0) abnormal returns are 0.2% for successful bidding firms and 0.5% for unsuccessful bidding firms. Both are statistically insignificant. Bradley, Desai and Kim (1988) find an insignificant average CAR of 0.79% for a sample of 236 bidding firms from event day -5 to +5.

The third group of studies reveals a small but significant negative abnormal return at the announcement of the bid. Dodd (1980) finds a significant abnormal return of -0.4% at day -1 and -0.62% at day 0. Travlos (1987) reveals that in particular bidding firms choosing common stock financing had a negative effect on their common stock returns at the announcement. Significant abnormal returns are found on the day -1 (-0.78%) and on day 0 (-0.69%). Moreover, Sudarsanam, Holl and Salami (1996) find

that UK bidding firm shareholders suffer a significant negative abnormal return of -1.26% on the day of the merger proposal announcement. Another UK study of Draper and Paudyal (1999) observes a small but significant negative abnormal return, for bidder shareholders, of -0.82% (equally weighted) and -0.66% (value-weighted) on the announcement day of the merger proposal.

For post-acquisition performance, the issue is not unambiguous. A majority of studies, both in the UK and elsewhere, have documented a pattern of long-running significantly negative post acquisition returns to the shareholders of the bidding firms. The study by Franks and Harris (1989) examine a nearly exhaustive sample of 1,800 UK takeovers in the period 1955-1985, and they find that successful bidding firms suffer significant wealth loss with the CAR of –12.6% in the two-year period after the completion of the takeovers. By using six benchmarks, Gregory (1997) finds that the two years post-merger CARs of UK bidding companies are between -11.8% and -18% under these six different models, all of which are statistically significant.

5.3.1.2 Shareholder Returns Following Cross-border and Domestic Takeovers

A large number of studies have addressed the issue of M&As merely from a domestic point of view (Jensen and Ruback (1983), Jarrell, Brickley and Netter (1988) and Jenson (1988)). The literatures were reviewed in the previous section.

Cross-border takeovers have received more limited attention in the finance literature and most studies have considered the impact on target firms. Harris and Ravenscraft (1991) examine shareholders' wealth gains for 1,273 US target firms during 1970-1987 and compare the effect of acquisition made by foreign and by US firms. Their conclusion is that target shareholders are offered higher wealth gains by foreign firms than those by US firms over the window (day -3, day +1), which were 39.77% vs. 26.33%, respectively. In particular, Conn and Connell (1990) examine the returns to shareholders of firms involved in international transactions between American and British firms. Their results show that cumulative abnormal returns for targets acquired by UK firms are about 50% of those of targets acquired by US firms.

Some research has considered the impact of cross-border acquisitions on returns of acquiring firms. But the findings are mixed. Some studies discover significant positive returns to foreign acquirers. Cakici, Hessel, and Tandon (1996) examine shareholder wealth gains for 195 foreign firms that acquired US target firms during 1983-1992. Their results show that foreign acquirers have significant and positive abnormal returns of about 2% over (day -10, day +10), and no positive wealth effect for US bidders in the full sample. Choi and Tsai (2002) investigate the market reaction for 369 US firms acquiring foreign target firms during the period of 1992-2000. Their results show significantly positive CARs of 1.08% over the event window (day -1, day 0), and more significant positive CARs are found over three short-term intervals, (day -1, day 0), (day -1, day +1) and (day -1, day +5).

However, other research finds the acquiring firms suffer from significant loss in international transactions. Mathur et al. (1994) study 77 bidding firms from 10 countries during 1984-1988 and find that stockholders of foreign bidders earn significant, negative abnormal returns of -0.08% surrounding the announcement of acquisitions in the US. These negative abnormal returns increase to -1.80% over the 15 days after the announcement of acquisitions. Datta and Puia (1995) report negative cumulative stock returns implying that cross-border M&As may actually destroy value for US acquiring firms.

There are some studies that discover no significant wealth effects for foreign bidders over the announcement period. Doukas and Travlos (1988) examine foreign acquisitions from 1975 through 1983 and report a positive but insignificant announcement day return of 0.08% for a sample of 301 US firms. The study of Fatemi and Furtado (1988) investigate foreign acquisitions by US bidders and their results show no significant (day -1, day 0) window effects. Biswas et al. (1989) report insignificant announcement day returns for the 52 bidders that include 49 from the US and 3 from the UK. Servas and Zenner (1994) study the returns to 70 foreign bidders during the period 1979-1988 and report negative but insignificant abnormal returns for the (day -1, day 0) window. Kiymaz and Mukherjee (2000) study the wealth effects of US firms involved in international transactions during 1982-1991

and discover no significant wealth gains for US bidders.

Only a limited body of research provides empirical evidence on share returns for UK firms that engaged in cross-border takeovers. Based on a sample of 343 foreign acquisitions by UK firms over the period 1985-1994, Gregory and McCorriston (2001) investigate the performance of UK acquiring firms over the event window (day -3, day +1). Their results show that short-run returns are insignificantly different from zero irrespective of the locations of the acquisitions. Conn et al. (2003) examine the announcement share returns of 4,000 acquisitions by UK public firms during 1984-1998. In the acquisitions of cross-border public targets, abnormal returns are zero (insignificant CAR of -0.09) over the announcement period (day -1, day +1), while abnormal returns for acquiring domestic public targets are -0.99, which is statistically significant.

In terms of non-US countries, King (1993) investigates the abnormal returns of Japanese bidders for US companies and finds positive abnormal returns to the bidders. Corhay and Rad (2000) find weak significant positive abnormal returns for a sample of Dutch firms involved in cross-border takeovers. In terms of cross-country comparison, Eun et al. (1996) have shown that abnormal returns to bidding firms vary across countries, such as positive abnormal returns for Japanese acquiring firms but considerable negative returns for UK acquiring firms.

A clear conclusion is that economically large and statistically significant wealth gains are made by the shareholders of target firms, especially in international transactions. But reported returns to foreign acquiring firm shareholders at the time of bid announcements are very ambiguous.

5.3.1.3 Shareholder Returns Following the Rising-side and Slumping-side Takeovers of the M&A wave

Only a limited number of studies consider the characteristics of the prevailing economic activity period when assessing shareholders' gains in takeover.

A large sample of 2,194 transactions across European countries is studied by Martynova and Renneboog (2006). Three periods are examined: the beginning of the wave (1993-1996), the middle of the wave (1997-1999) and the slow period (2000-2001). They find that, in the 1997-99 period, the target firms' gains at the announcement day are the highest, which is about 10%. The differences between the targets' returns in the three periods are statistically significant. However, acquirers' gains experienced substantial decline subsequent to the M&A peak of 2000, from -1.30% in the 1997-99 period to -9.87% in the 2000-2001 period. They argue that, from the middle of 2000, the M&A market became bleak and the stock market declined, which made acquiring shareholders very pessimistic about future synergies of takeovers.

In another European M&A study by Goergen and Renneboog (2004), a sample of 142 deals was split into two periods: takeovers before 1999 and those in 1999-2000. They find a significant difference in terms of abnormal returns around the announcements for the target firms in the two periods. However, there is little difference in announcement reactions for acquiring firms prior to and after 1st January 1999.

Tse and Soufani (2001) investigate 124 takeovers in the UK between 1990 and 1996. They find a link between the wealth effects of shareholders and the prevailing economic condition by analyzing abnormal returns for shareholders in two different economic periods. For the target firms, the returns for hostile bids generated greater returns in the high merger activity era (1990-1993) than in the low merger activity era (1994-1996). The returns to friendly takeovers are fairly similar to each other. The abnormal return for friendly acquirers is 1.66% on the event month in the low merger activity era, while the acquirer return is 1.35% in the high merger activity era. The situation reversed in the three months following takeover announcement. But the patterns of abnormal returns for acquiring firms are relatively consistent for both eras.

Moeller and Schlingemann (2005) examine 4,430 acquisitions by US firms between 1985 and 1995. They compare the announcement day abnormal returns for cross-

border and domestic acquisitions that occurred during the period of 1985-1990 and 1990-1995. Domestic acquiring firms experienced significantly higher returns in the period 1990-1995 than in 1985-1990, 1.49% vs. 0.44%. No significant difference is found for cross-border acquirers in the two periods.

It seems that the abnormal returns for targets' shareholders have distinctive patterns for two periods with distinguishing economic conditions, the returns being positively correlated with aggregate economic activity. But for acquiring firm shareholders, we have to be more cautious in making the same claim, as the previous findings are much less conclusive.

5.3.2 Methodology Review

In this section, we provide an overview of event study methods. Although some serious limitations remain in long-term methods, short-term methodologies are relatively straightforward and trouble-free. Normally, two main issues are considered in event study methodology: choice of model and choice of significance tests.

5.3.2.1 Models in Event Study

An event study typically tries to examine the return behaviour for a sample of firms that experience a common type of event, such as the announcement of takeover or the announcement of a dividend. Let t = 0 represent the time of the event. For each sample security *i,* the abnormal return, AR_{it}, is the difference between the actual return R_{it} and the counter–factual expected return $R_{it}^{'}$, if the event had not occurred.

$$AR_{it} = R_{it} - R_{it}^{'}$$

The key is how we measure the expected return $R_{it}^{'}$. An increasing body of research has sought to measure abnormal returns in more reliable ways. A brief summary of previous literature is as follows:

- Market Model:

The Market Model is considered as the implication of the assumption of the two-parameter portfolio model. It is widely used in event studies, which research the adjustment of stock prices to an event. Most studies of mergers and acquisitions employ the market model to calculate abnormal returns (Dodd and Ruback (1977), Firth (1979), Malatesta (1983), Barnes (1984) with an added industry factor, Dodds and Quek (1985), Magenheim and Mueller (1988), Franks, Harris and Mayer (1988), Franks and Harris (1989), Limmack (1991)). The market model specifies the following linear relationship between security *i* returns and returns on a market portfolio.

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}$$

Where: R_{it} = the rate of return on security *i* over period of t,

R_{mt} = the rate of return on a value weighted (or equally weighted) market portfolio in time period t

α_i and β_i = security-specific parameters that vary from one security to another,

ε_{it} = the random disturbance term of security *i* at time t, and E(ε_{it})=0. In the market model, the effects of company-specific information should show up in this disturbance.

Under specific assumptions about the ε_{it} distribution, α_i and β_i can be estimated by least squares. They are calculated by regressing daily/monthly returns for security *i* on the daily/monthly returns of the market index for a period prior to the bid, which is unaffected by any information related to the bid. When we get the estimates $\hat{\alpha}_i$ and $\hat{\beta}_i$, we can calculate the abnormal returns as follows:

$$\hat{\varepsilon}_{it} = R_{it} - \hat{\alpha}_i - \hat{\beta}_i R_{mt}$$

Where:

$\hat{\varepsilon}_{it}$ = the residual or the abnormal performance of security *i* at time t.

- Fama-French Three-Factor Model

Over time, researchers have found that stock market β seems unable to explain the cross-sectional variation in average returns. Size, leverage, book-to-market equity (BE/ME), and earnings-price ratios (E/P) have all been found to help to explain the cross-section variation of expected returns.

Fama and French (1993) identify three common risk factors in stock returns: an overall market factor, factors related to firm size (ME) and book-to-market equity (BE/ME). They argue these three factors can explain the cross-section variation of returns better than others.

Based on empirical tests of Fama and French (1992, 1993), Fama and French (1993) state that: "Many continue to use the one-factor Sharpe-Lintner model to evaluate portfolio performance and to estimate the cost of capital, despite the lack of evidence that it is relevant. At a minimum, the results here and in Fama and French (1992) should help to break this common habit."

The Fama and French (1993) three-factor model is widely used in recent studies. The abnormal return based on this three-factor model is specified as follows:

$$\hat{\varepsilon}_{it} = R_{it} - \left[R_{ft} + \hat{\beta}_i \left(R_{mt} - R_{ft} \right) + \hat{\gamma}_i \left(SMB \right) + \hat{\delta}_i \left(HML \right) \right]$$

Where:

R_{mt} = the monthly return on a value-weighted market portfolio

SMB = the value-weighted return on small firms minus the value-weighted return in big firms (Small Minus Big)

HML = the value-weighted return on high book-to-market firms minus the value-weighted return on low book-to-market firms (High Minus Low)

- Size and Book-to-market Adjusted Method (reference portfolio approach)

Some studies do not use any specific model at all (Anderson and Mandelker (1993), Loughran and Vijh (1997), Rau and Vermaelen (1998)). Following the spirit of Fama

and French (1992, 1993, 1996), they calculate abnormal returns for each firm relative to its size and book-to-market benchmark. Thus, for each firm, the abnormal return is the difference between its daily/monthly return and that of its reference portfolio.

- Other Models

Other models used to calculate the AR are:

(1) CAPM: $\hat{\varepsilon}_{it} = R_{it} - [R_{ft} + \hat{\beta}_i (R_{mt} - R_{ft})]$

This is anther popular model to calculate the abnormal return. In studies of mergers and acquisitions, it is used by Langetieg (1978), Franks, Harris and Mayer (1988), Franks and Harris (1989), Gregory (1997). But Roll (1977) and Brown and Warner (1980, 1985) criticize the empirical CAPM as being computationally more complex and costly than the simpler market model and the mean adjusted return model but not superior in its performance.

(2) Mean Adjusted Return Model: $AR_{it} = R_{it} - \overline{R_i}$

This model is used by Lathey and Conn (1990) for merger studies, since the calculation is relatively simple.

(3) Market/Index Adjusted Return Model: $AR_{it} = R_{it} - R_{mt}$

This kind of model is to calculate abnormal returns adjusted by the market (where it is market model with $\hat{\alpha}_i$ constrained to zero and $\hat{\beta}_i$ constrained to 1) or some kind of index. It is also popular in merger studies (Langetieg (1978), Dodds and Quek (1985), Franks, Harris and Mayer (1988), Franks and Harris (1989), Limmack (1991), Franks, Harris and Titman (1991), Kennedy and Limmack (1996)). Gregory (1997) provides more complicated multi-index models, which use a form of post-event extended CAPM incorporating a small-companies effect. Gregory argues that these models have the advantage of showing that "beta risk and firm size are significant in explaining the cross-section of expected return".

- Multi-index model using equally-weighted smaller decile minus large decile returns (SML):

$$\hat{\varepsilon}_{it} = R_{it} - \left[R_{ft} + \hat{\beta}_i \left(R_{mt} - R_{ft} \right) + \hat{\gamma}_i \left(R_{st} - R_{lt} \right) \right]$$

where:

R_{st} = the return on an equally weighted portfolio of smaller firms in event month t;

R_{lt} = the return on an equally weighted portfolio of largest firms in event month t.

- Value weighted multi-index model using the Hoare-Govett Index as the measure of small firm performance:

$$\hat{\varepsilon}_{it} = R_{it} - \left[R_{ft} + \hat{\beta}_i \left(R_{mt} - R_{ft} \right) + \hat{\gamma}_i \left(R_{ht} - R_{mt} \right) \right]$$

where:

R_{ht} = the return on the Hoare-Govett Smaller firms index in event month t.

(4) Dimson-Marsh risk and size adjusted model (DM):

$$\hat{\varepsilon}_{it} = R_{it} - [R_{st} + \left(\hat{\beta}_i - \hat{\beta}_s \right) \left(R_{mt} - R_{ft} \right)]$$

where:

R_{st} = return on the size control portfolio in event month t;

$\hat{\beta}_s$ = CAPM beta of size control portfolio.

This model is used by Agrawal, Jaffe and Mandelker (1992), and Gregory (1997) in the studies of M&A.

(5) Simple size control portfolio (SS):

$$\hat{\varepsilon}_{it} = R_{it} - R_{st}$$

where:

R_{st} = return on the size control portfolio in event month t;

This model is provided by Gregory (1997). Meanwhile, he points out one weakness, in that it defines decile membership at the beginning of year market capitalisation, so

that decile membership cannot be adjusted accurately throughout the calendar year.

(6) Return across time and security method:

$$\hat{\varepsilon}_{it} = R_{it} - \left[R_{st} + \beta_t (R_{mt} - R_{ft}) \right]$$

where:

R_{st} = the equally-weighted return across all firms in the same size decile as firm i

Agrawal, Jaffe and Mandelker (1992), Loderer and Martin (1992) use this model to test abnormal returns.

Moreover, Franks, Harris and Titman (1991) provide a ten-factor model and an eight-portfolio model.

(7) The Carhart (1997) four-factor model

To our knowledge, the newest model of performance measurement is the Carhart (1997) four-factor model. It is motivated by the Fama-French three-factor model's limitation to explain cross-section variation in momentum-sorted portfolio returns. Based on the Fama-French three-factor model, Carhart constructs his four-factor model by adding the new factor capturing Jegadeesh and Timan's (1993) one-year momentum anomaly. He states that "it may be interpreted as a performance attribution model, where the coefficients and premia on the factor-mimicking portfolios indicate the proportion of mean return attributable to four elementary strategies: high versus low beta stocks, large versus small market capitalization stocks, value versus growth stocks, and one-year return momentum versus contrarian stocks." The model is:

$$R_{it} - R_{ft} = \alpha_{iT} + \beta_{iT}(R_{mt} - R_{ft}) + s_{iT} SMB_t + h_{iT} HML_t + p_{iT} PR1YR_t + \varepsilon_{it}$$

$$t = 1,2,....T$$

where R_{it}, SMB, HML are the same as the Fama-French three-factor model, $PR1YR$ is an equally weighed portfolio return of stocks with highest returns less an equally weighted portfolio return with lowest returns in month t-12 to t-2.

Merger event studies, like event studies in general, have used various return generating models to estimate firm abnormal returns after controlling for general market conditions. Each of these models is used to estimate the counter-factual return if the announcement of the acquisition had not been made. The earliest model is the simple, one-index market model. In the later studies, researchers find that more factors could help to explain the cross-section variation in expected return, such as size, leverage, book-to-market equity (BE/ME), and earnings-price ratios (E/P).

Some studies provide a review of some main event study methods and of research concerning them (Armitage (1995), Kothari et. al (2006)). After bringing together and comparing their performance, the market model is, generally, the best supported one in the sense that it is always at least as powerful as the best alternative, although the different models produce similar but not identical results. When examining short-run returns over several days surrounding an event, the market model seems to be sufficient in most of the studies (Armitage (1995)).

5.3.2.1 Significance Tests in Event Studies

For a given performance measure, such as AR or CAR, a test statistic is computed to test if it is significantly different from zero. A wide variety of approaches have been used to measure significance. We present some of these here. Generally, a significance test can be carried out in two main ways: one is to use a parametric test, the other is a non parametric test.

- Parametric test statistics

In parametric tests, the variable whose value is to be tested is assumed to have a parametric distribution. In this section, abnormal return (AR) and cumulative returns (CAR) are assumed to be estimated using the market model. Under the null hypothesis, H_0, that the event has no impact on the mean and variance of abnormal returns, the distribution of the sample abnormal returns in the event window is

assumed to be normal:

$$AR_{it} \sim \mathrm{N}\,(0, \sigma^2(AR_{it}))$$

The distribution of the cumulative abnormal returns from time τ_1 to time τ_2 under H_0 is

$$CAR_i(\tau_1, \tau_2) \sim \mathrm{N}\,(0, Var(CAR_i(\tau_1, \tau_2)))$$

For instance, the null hypothesis, H_0, for the CAR can be tested using

$$\frac{CAR(\tau_1, \tau_2)}{(Var(CAR(\tau_1, \tau_2)))^{1/2}}$$

Similar tests are for the AR. This is the basic approach. This distributional result is asymptotic with respect to the number of securities N and the length of time window L.

A variety of modifications to the basic approach presented above have been made. One general modification is to standardize abnormal returns using an estimator of the standard deviation. Brown and Warner (1980, 1985) provide more common approaches, which are used in most event studies. Armitage (1995) provides a review of some main event study methods and of research which has used them. He outlines three widely used methods of significant tests: the share time series method, the portfolio time series method and the cross-sectional method. The conclusion is that each method has different advantages in different circumstances.

The choice of significance tests depends mainly on the characteristics of market model errors. Hence, when choosing a method, certain issues should be considered, for example whether the model errors are cross-correlated or whether there is an event period where the error variance increases. According to Armitage (1995), one uses the portfolio time series method when errors are cross-correlated. The cross-sectional method is appropriate when there are no cross-correlated errors but there is an increase in variance in the event period. The share time series method with a t-test may be used when there are no cross-correlated errors and no increase in error variance.

- Non-parametric tests

The parametric tests typically assume that abnormal returns are normally distributed. Alternative approaches are available which are non-parametric in nature. These approaches are free of specific assumptions about the distribution of returns. Common nonparametric tests for event studies are the sign test and the rank test.

➢ Sign test

The sign test transforms a security's abnormal returns into sign values. It assumes that the probability of a positive abnormal return is equal to the probability of a negative abnormal return. Under the null hypothesis of a median AR equal to zero, in Corrado and Zivney (1992), the test statistic is constructed as:

$$\frac{1}{\sqrt{N}}\sum_{i=1}^{N} G_{it} / S(G)$$

the standard deviation $S(G) = \sqrt{\frac{1}{T}\sum_{t=1}^{T}(\frac{1}{\sqrt{N}}\sum_{i=1}^{N} G_{it})^2}$

where N is the number of securities, and G_{it} is the sign of the difference between AR_i and median (AR_i), which is +1, -1 or 0 for positive, negative, or zero values of AR_i respectively.

In MacKinlay (1997), the test statistic is

$$\left[\frac{N^+}{N} - 0.5\right]\frac{\sqrt{N}}{0.5}$$

where N^+ is the number of securities where the abnormal return is positive

N is the total number of securities

➢ Rank test

A shortcoming of the sign test is that it may not be a good specification if the AR_i distribution is skewed. Corrado (1989) proposes a non-parametric rank test. The framework is as follows.

Define K_{it} as the rank of the abnormal return of security i for event time period T. It is standardized by dividing by one plus the number of non-missing returns in time period T, which is shown as U_{it}. The test statistic for the null hypothesis of no abnormal return on event day 0 is

$$\frac{1}{N}\sum_{i=1}^{N}(U_{i0}-1/2)/S(U)$$

where the standard deviation $S(U)=\sqrt{\frac{1}{T}\sum_{t=1_1}^{T}\left(\frac{1}{\sqrt{N}}\sum_{i=1}^{N}(U_{it}-1/2)\right)^2}$

N is the number of securities

In the studies of Corrado and Zivney (1992) and Maynes and Rumsey (1993), the rank test is found to be more powerful than the sign test. Corrado argues that the superior advantage of the rank test is that there is no requirement that the share returns or market model errors are normally distributed.

It is rare to use these non-parametric tests in isolation and they are typically used in conjunction with the parametric tests. Thus, they provide a robustness check on the conclusions based on the parametric tests. Gampbell and Wasley (1993, 1996) even find that the rank test is more reliable and powerful than other standard parametric tests.

5.4 Hypothesis

In this section we develop the hypotheses about the relation between acquiring shoulders' return around the takeover announcement and various factors.

5.4.1 Deal Characteristics

a_1. Cross-border/domestic takeover

Ha_1: Acquiring shareholders' abnormal returns are more likely to be different around

the announcements of cross-border takeovers than around the announcements of domestic takeovers.

Given the trend of globalization of the world economy, one would expect that acquiring companies believe that the potential benefits of moving to an international operation would be greater than its cost. Theoretically, beyond the usual benefits that domestic takeovers may bring about, cross-border takeovers may lead to further benefit. Under certain international market conditions, shareholders may benefit from international corporate diversification through cross-border takeovers. One benefit may be lower risk and a lower cost of capital in partially segmented international capital markets (Davis (1991)). An international operation could increase operating efficiency by internalizing transactions within one company (Choi and Tsai (2002)). Moreover, to some extent, international markets for corporate control may be less competitive than domestic ones (Choi and Tsai (2002)), so there is a lower chance of overbidding and so potential for greater post-merger gains.

However, some argue that capital markets and the market for corporate control are not segmented internationally. Thus, one would not expect abnormal returns to shareholders to be systematically different in domestic and cross-border takeovers (Harris and Ravenscraft (1991), Danbolt (2004)). There is disagreement as to whether benefits extend to corporate diversification (Fatemi (1984), Michel and Shaked (1986)). In addition, the integration of cross-border takeovers is always challenging due to complex issues such as information asymmetries and culture differences, which may write off or reduce the potential gains. An increase in hubris and agency problems in cross-border takeovers could lead to culture clashes and lower bidder returns (Denis et al. (2002))

The existing evidence with regard to acquiring firms is limited and rather controversial. Hite et al. (1987) found that firms gain in acquisitions of US domestic divestitures. Gadad (1998) finds the evidence, with regard to UK acquiring firms in cross-border takeovers, to be inconclusive. Markides and Ittner (1994) and Cakici et al. (1996) find positive abnormal returns to acquiring shareholders in cross-border

acquisitions. On the other hand, Datta and Puia (1995), Waheed and Mathur (1995), Eun et al. (1996) and Danbolt (1995) report negative abnormal returns. Servaes and Zenner (1990, 1994) and Sudia (1992) find no abnormal returns.

a_2. Legal Differences

Ha_2: Acquiring shareholders are more likely to gain different abnormal returns around the announcements of takeovers from countries with a non-English common law system, than from those with a English common law.

Variations in the gains across acquiring countries occur in cross-border takeovers (Eun et al. (1996) and Cakici at al. (1996)). Martynova and Renneboog (2006) argue that differences in laws and their enforcement may explain some part of the variation. Corhay and Rad (2000) also find that the different legal and institutional regulations of the EU, compared with the US and the UK, influence the cross-country distribution of foreign acquisitions. This is consistent with recent work on how corporate governance varies between countries. In the study by La Porta et al. (2000, 2002), it is found that the characteristics of corporate governance vary with the nature of the legal system across countries. Those countries with English common law legal origins provide greater investor protection than do other countries. Thus, acquisitions from low to high investor protection countries may expect gains in efficiency, as stronger corporate governance standards of target firms may extend over acquiring firms with weaker standards. Correspondingly, the market may have a positive reaction to the acquisition from countries with low standards.

However, Demirguc-Kunt and Maksimovic (1998) argue that legal systems can affect firm financing and growth. Legal environment and takeover regulations are important determinants of takeover gains (Rossi and Volpin (2004)). The countries with strong investor protection and better legal environment may be associated with strong market confidence, which leads to better market reaction.

Some empirical studies research the effect of legal differences. Starks and Wei (2004)

find that the abnormal returns to acquiring shareholders are increasing in the quality of the home country corporate governance. Also, Martynova and Renneboog (2006) observe a significant positive announcement effect for acquiring firms that have a relatively strong legal origin, such as English, German and Scandinavian law, while abnormal returns to those acquiring firms with French legal origin are not different from zero.

a_3. Cultural Differences

Ha_3: Acquiring shareholders are more likely to gain different abnormal returns around the announcements of takeovers from countries with large cultural distances, than from those with small ones.

Many agree that national culture influences performance abroad. Some argue that cultural differences create organizational challenges that impede integration and increase acquisition costs (Cartwright and Price (2003), Hofstede (1980)). Differences between national cultures are known as cultural distance (Gomez-Mejia and Palich (1997)) between the acquired and acquiring firm. Such differences are the source of uncertainties that increase the cost of integration. Given their implicit nature, culture differences seem to go unidentified throughout the M&A process, and this causes target firms to take a longer time to reach their efficient state. Jemison and Sitkin (1986) report that higher levels of cultural distance are always associated with greater conflict over decisions. This suggests that the higher costs which are associated with greater cultural integration may lead to poorer performance.

On the other hand, others believe that differences between the national cultures of acquiring and acquired firms benefit the acquiring company by expanding the knowledge base available to establish distinctive competencies worldwide (Ghoshal (1987), Mayrhofer (2004)). Rather than emphasizing costs of cultural difference, the latter perspective emphasizes the learning benefits provided by cultural differences.

Studies of the relationship between cultural differences and acquisition performance

have produced conflicting findings. Morosini, Shane, and Singh (1998) found a significant positive relationship between cultural distance and post-acquisition performance both among the 52 companies in their study and in field interviews with managers. However, Conn et al. (2005) examine UK takeovers in foreign countries and find that the high levels of cultural difference cause significant losses to UK acquiring firms over 36 months after a takeover announcement. In Gomez-Mejia and Palich's (1997) study of performance in Fortune 500 firms between 1985 and 1994, it is found that neither culturally related nor culturally unrelated diversification were associated with firm performance.

a_4. Related/unrelated takeover

Ha_4: Acquiring shareholders' abnormal returns are more likely to be different around the announcements of related takeovers than around the announcements of unrelated takeovers.

Unrelated takeovers are normally expected to create operational and/or financial synergies by the way of risk diversification. However, Martynova and Renneboog (2006) argue that diversifying acquisitions are more likely to occur when bidding firms suffer from agency conflicts and free cash flow problems. Previous studies provide evidence that the aggressive management of such firms often acquires unrelated business for the purposes of empire building by expending shareholder value, or that managerial hubris leads bidding firms to over-pay for unrelated targets. Moreover, some disadvantages are always associated with diversified takeovers, such as bargaining problems within the firm (Rajan et al. (2000)), and rent-seeking behaviour by divisional managers (Scharfstein and Stein (2000)). These disadvantages of diversification may outweigh the expected gains from synergies and lead to wealth destruction for the shareholders of both acquiring and target firms.

There is less agreement about the benefit of diversification for target firms in empirical studies. In some studies, shareholders of acquirers have been found to benefit from diversification by unrelated takeovers (Solnik (1974), Davis (1991)).

Gregory and McCorriston (2005) find that abnormal returns in same-SIC takeovers are an insignificant -3.6% five years after takeovers, while unrelated takeovers with different principal SIC codes create a significant 21.8% abnormal return over the same period. But in a short-window study around the announcement, Martynova and Renneboog (2006) report that acquiring firms have significantly higher wealth effects in a business expansion within the core industry than that in business diversification: 0.63% vs. 0.36%, respectively. The share price of bidders engaged in intra-industry takeovers experience a significant run-up of 1.4% over the two-month period prior to the event day.

a_5. High-Technology

Ha_5: Acquiring shareholders' abnormal returns are more likely to be different around the announcements of high-tech takeovers than those of non-high-tech takeovers.

Since the 1990s, high-tech firms have become the new dynamic drivers in the economy, as the high technologies brought technological advancement, efficiency gains, and job growth. From mid-1994 to mid-1999, an information technology index[11] has increased twice as fast as the S&P 500[12]. M&A activities have increased with acquirers seeking the growth potential offered by high-tech firms. Compared with lower-growth firms, the distinct high-growth opportunities of high-tech takeovers are normally expected to create value for the acquiring firms. Moreover, Kohers and Kohers (2000) argue that the alliance with firms relating to high technologies may increase the competitiveness of the acquiring firms. Thus, merging with these attractive growth opportunities may lead to positive reactions from investors and shareholders of acquiring firms.

However, high-tech operations have an uncertain nature, and firms' value depend heavily on the future outcomes or developments in unproven, uncharted fields (Kohers and Kohers (2004)). Moreover, for some high-tech firms, higher cash flows are not expected in the near future, which makes such firms riskier than others in

[11] A capitalization-weighted index of 77 information technology companies within the S&P 500
[12] Business Week (14th June 1999)

M&As. These factors may lead to much speculation about the true worth of high tech firms. Such uncertainty in high-tech operations may make acquiring firms overpay for the growth prospects. In particular, investors and acquiring shareholders may be wary of the future merits of the takeover and whether the potential growth will be worth the cost (Kaplan (1989)). This may cause negative abnormal returns to acquiring firms.

Kohers and Kohers (2000) examine mergers in various high-tech areas between 1987 and 1996 and find significant and positive cumulative abnormal returns of 1.26% in the two days around takeover announcements. In particular, a high cumulative abnormal return of 1.58% is found after 1993. For long-term performance, Gao and Sudarsanam (2003) study UK high-tech acquisitions in the 1990s. Their finding is that high-tech acquisitions greatly underperform industry peers of similar size and book-to-market ratio by -6% one year after takeovers, and -37.72% three years after takeovers.

a_6. Payment

Ha_6: Acquiring shareholders are more likely to gain different abnormal returns around the announcements of takeovers with stock payments than around those with cash payments.

Method of payment is always considered as an important signal from a transaction. Martynova and Renneboog (2006) argue that it indicates the quality of the target firm or potential synergy value. If the offer consists of stock, the acquiring firms are signaling that they wish target shareholders to remain involved in the new firms and to share their risk. Alternatively, when the managers of an acquiring firm are convinced that the true value of their firm's shares are worth more than the current share price, they prefer to finance the deal with cash instead of equity. They plan to pay off the target shareholders so they do not share future value increase of the new firms. Hence, the market may interpret the payment as a signal about current managements' views about the under- or overvaluation of the firms. The share prices

of acquiring firms are expected to change upwards (downwards) when cash (equity) is offered.

However, some researchers argue that acquiring firms with excess cash always overbid for targets and destroy value (Goergen and Renneboog (2004)). Free cash flow is frequently used for managerial empire building (Servas (1991), Lang et al.(1991)). Moreover, given that most bidders have limited cash and liquid assets, cash offers generally require debt financing. As a consequence, high leveraged acquirers are constrained in their ability to issue debt and as a consequence use stock financing more frequently. Moreover, cash offer in M&As could bring about higher premiums when compared with share exchange. In other words, due to the existence of different tax treatments, the acquirer must pay a higher acquisition price in the case of cash offer to offset the tax burden of the target shareholders. This proposition has long been addressed and confirmed by earlier studies. In such cases, stock payment may bring higher acquiring returns than cash payment.

Empirical tests provide evidence which supports both arguments. The findings of Martynova and Renneboog (2006) show that the abnormal returns around takeover announcements for acquirers making cash payments are higher than those for announcements involving stock payments: 0.6% vs. 0.0%. Even six months after a takeover announcement, they find that cumulative average abnormal returns of cash-bids are not significantly different from zero (-0.9%), whereas those of equity-bids and mixed offers are significantly negative: -2.2% and -2.8% respectively. However, Goergen and Renneboog (2004) find that, over short and long windows from 4 days to 120 days around takeover announcements, the shareholders of acquiring firms gained more cumulative average abnormal returns in stock bids than in cash bids (2.57% vs. 0.9%, and 2.72% vs. -1.44%).

a_7. Multiple bidders

Ha_7: Acquiring shareholders are more likely to gain lower abnormal returns around the announcements of takeovers involving multiple bidders than around those

involving a singer bidder.

Competition among bidders may affect the gains to acquiring firm shareholders. Without competition between potential acquiring firms for a target firm, the acquirer should offer a price just high enough to obtain the number of shares the bidder desires. However, if alternative acquirers exist, one could expect to see the offer price bid up. Consequently, a larger share of the merger returns go to the target shareholders and a smaller share is kept by the successful acquirer (Jarrell and Poulsen (1989)).

Supporting this perspective, Bradley, Desai and Kim (1988) find significantly higher abnormal returns to target shareholders if multiple acquirers bid for a target. The returns to acquirer shareholders are significantly positive in single-bidder contests and insignificantly different from zero in multiple-bidder contests. Comparing tender offers in three decades during 1963-1986, Jarrell and Poulsen (1989) report that contested biddings have a significantly negative effect on the abnormal returns to acquiring firms around takeover announcements in the 1980s. This is similar to Bradley, Desai and Kim (1988) who argue that "white knight"-type bidders explain most of the negative average returns to acquirers they find in the 1980s.

a_8. Attitude

Ha_8: Acquiring shareholders' abnormal returns are more likely to be different around the announcements of hostile takeovers than around those of friendly takeovers.

The attitude towards the bid is also an important issue in M&As. The market has a different reaction to hostile and friendly bids. Hostile takeovers are evaluated positively, as the acquiring firm may be very confident about the potential synergy value. However, high offer prices usually occur in hostile transactions because of the "aggressive negotiation" between the management of the two firms (Tse and Soufani (2001)). Martynova and Renneboog (2006) argue that the market revises downward the acquirers' share price because of a fear of too high a premium which would not

be paid off by the potential synergy value.

Various studies separate an examination of the abnormal returns into friendly and hostile bids. Due to acquisition premia, the target shareholders gain in both cases. No conclusive finding is drawn for acquiring firms. Tes and Soufani (2001) evaluate the data of UK takeovers between 1990 and 1996. Comparing friendly and hostile takeovers, they discovered that the abnormal returns to acquiring firms in hostile transactions are higher than those in friendly ones, these being 3.28% and 1.66% in the month of takeover announcement. However, Martynova and Renneboog (2006) study the Europe takeover market over the period 1993-2001 and find that, on the event day, the share price endures a small negative price correction for acquiring firms involving hostile takeovers, while the announcement of a friendly takeover results in significantly positive abnormal returns of 0.8%.

a_9. Premium

Ha_9: Acquiring shareholders are more likely to gain lower abnormal returns around the announcements of takeovers with high premium than those with low premium.

The hubris hypothesis predicts that managers are usually overconfident, which leads to overpayments for target firms. This may cause the underperformance of acquiring firms following takeovers (Malmendier and Tate (2005)). Moeller and Schlingemann (2005) also suggest that lower bidder returns could be the result of higher premia required by the target's controlling shareholders to give up their shares. Thus, higher premia may lead the market to negatively react to the takeover announcement.

Moeller et al. (2005) compare the overpayment between large firms and small firms. They find that the mean premium for acquisitions by large firms is significantly higher than that for acquisitions by small firms. Specially, by measuring the overconfidence of managers, Malmendier and Tate (2005) find evidence that overconfident managers make more acquisitions and that abnormal returns are lower.

5.4.2 Target Governance Characteristics

b_1. Post-takeover CEO Departure

Hb_1: Acquiring shareholders' abnormal returns around the takeover announcement are related to the release of the news about the target CEOs' departure.

One of the functions of M&As is to discipline ineffective managers of target firms. Following this corporate governance logic (Denis and Denis (1995)), acquiring firms remove poorly performing managers of target firms following takeovers. It is an important step toward maximizing shareholder wealth, although it is still open to question whether management turnover leads to improved firm performance. Thus, if CEO departures from target firms are announced following takeover announcement, this argument suggests that the market reaction will be positive.

However, another important issue in the process of integration is employee resistance (Schoenberg and Seow (2005)). The change of ownership for target firms in M&As is, more often than not, associated with changes in the characteristics of the target firms. A clear sign of employee resistance is a high rate of staff turnover in target firms. Buono and Bowditch (1989) and Cartwright and Cooper (1996) report the negative employee reactions caused by such changes. Datta (1991) and Larsson and Finkelstein (1999) find that management style compatibility plays a key role in determining employee resistance. Studies on management style compatibility discover that differences in the philosophies, values and behaviour of the top management teams can lead to feelings of uncertainty and alienation amongst target firm managers (Cartwright and Cooper (1996)). In turn, it can result in employees reducing their commitment towards cooperation, which may lead to lower job performance and ultimately, to lower acquisition performance (Datta (1991)). In particular, in cross-border takeovers, acquiring firm executives may recognise that they lack the local market knowledge or the level of cultural understanding to manage the new firm effectively. This may motivate the acquirers to retain executives of target firms. Hence, the market is expected to have a negative reaction

to the departure of the target firm's CEO.

Few researchers examine the share price effects of top executive departure announcement in the context of takeovers. But some interesting and conflicting results are found in non-takeover contexts. Denis and Denis (1995) examine the nontakeover-related top management changes announced over the period 1985-1988. It is found that announcements of management changes are associated with abnormal returns that are significantly positive for those departures defined as forced resignations. Normal retirements appear to cause no market reaction. The UK study by Dayhya et al. (1998) finds that the market reacts positively to the news of 67 non-routine CEO or chairman departure announcements reported between 1989 and 1992. However, Debman and Lin (2002) examine 331 CEO departures from UK listed firms between 1990 and 1995 and find that the market reacts negatively to the announcement of their top executive departures.

b_2. Board Size

Hb_2: Acquiring shareholders' abnormal returns around the takeover announcement are positively related to the board size of target firms.

Since corporate strategies of a firm are formulated and implemented by the board of directors, it is possible that the characteristics of the board are directly related to the decision made and their outcomes. Jensen (1993) and Lipton and Lorsch (1992) suggest that large boards can be less effective than small boards. When boards get to be too big, agency problems increase and the board becomes more symbolic and less a part of the management process. Generally, this leads to deterioration in firm value and so the firm is more likely to become a target (Eisenberg et al. (1998)). When acquiring firms take over such firms, a positive market reaction is expected.

Kini et al. (1995) find that board size shrinks after successful tender offers for under-performing firms, which supports the argument that "reducing board size is a priority to improve troubled companies" made in the study by Yermack (1996). Yermack

(1996) examines the relation between Tobin's q and board size in a sample of US firms, after controlling for other variables that are likely affect q. The results suggest that there is a significant negative relation between board size and q. In line with his findings, Eisenberg et al. (1998) report that a similar pattern holds for a sample of small and midsize Finnish firms. This evidence shows that board size and firm value are negatively correlated. Constantinou and Constantinou (2003) examine the effect of board structure on UK bidder shareholders' wealth and find an inverse U shape relation between abnormal returns to acquirer shareholders and target board size. This suggests that the benefits from increased monitoring through larger boards are outweighed by problems associated with informational asymmetries.

b_3. Board Composition

Hb_3: Acquiring shareholders' abnormal returns around the takeover announcement are positively related to the proportion of outsiders on the target board.

Usually, board composition is another important feature of corporate governance. In the UK corporate boards normally have a mixture of executive (inside) and nonexecutive (outside) directors. According to Cosh and Hughes (1997), outsiders are usually employed for prestige, for their experience or contacts, or for their specialised knowledge. The reputation capital is the emphasis of outsiders because their payment and employment in a firm is positively related to their reputation (Fama (1980), Fama and Jensen (1983)). Target directors, in particular outsiders, have pecuniary incentives to promote shareholder interests. Hence, outsiders tend to be more objective in evaluating the costs and benefits of an acquisition decision. The more outsiders are on the board the higher the probability of a profitable rather than non-profitable acquisition. Outside directors are more likely to take decisions consistent with shareholder wealth maximization. This may lead to a positive market reaction.

Mixed empirical evidence regarding the board structure and takeovers has been provided. Cotter et al. (1997) find that, when a target board contains a majority of

outside directors, abnormal returns to the target are 20% higher than a similar firm with no majority of outside directors on its board. In contrast, Constantinou et al. (2003) find a negative and significant relationship between nonexecutive dominated target boards and target shareholder's wealth at the announcement of takeover bids.

An insignificant relationship between abnormal returns at the announcement and the fraction of independent nonexecutive directors on the acquirer's board is recorded in the study of Byrd and Hickman (1992). O'Sullivan and Wong (1998) also find that board composition in the UK has no significant effect on the outcome of takeover bids.

b_4 Blockholder Ownership

Hb_4: Acquiring shareholders' abnormal returns around the takeover announcement are related to the proportion of target shares owned by blockholders.

Blockholders are always considered as a corporate governance mechanism (McConnell and Servaes (1990), Duggal and Millar (1999)). Blockholders could serve as effective monitors of firm managers, so that they might act to alleviate agency problems. Further, blockholders could discourage poor decisions made by entrenched managers. However, other arguments hold that blockholders do not act as effective monitors. Pound (1988) argues that blockholders can make the problem of management entrenchment worse by endorsing incumbent managers. Also, Kohers and Kohers (2000) suggest that blockholders always have myopic investment objectives, which encourages them to sell the stock of an underperforming firm rather than to actively attempt to make value-enhancing changes through attentive monitoring. Moreover, blockholders could ask for a higher premium which leads to a reduced return to the acquiring firm.

In the study of Kohers and Kohers (2000) on high-tech takeovers, their results show that higher blockholder ownership is associated with lower abnormal returns over two days around takeovers for acquiring firms.

5.4.3 Target Firm Characteristics

c_1. Pre-takeover performance of Target Firms

Hc_1: Acquiring shareholders' abnormal returns around the takeover announcement are related to the pre-takeover performance of the target firms.

The motivations for takeover vary from the business extension to disciplining the target's ineffective managers. Acquiring firms target different firms for different reasons. Generally, a good accounting performance by a target firm shows the high quality of the firm, which may bring high operational synergy to acquirers (Goergen and Renneboog (2004)). In addition to the possibility of operational synergy, takeovers may offer the possibility of obtaining managerial synergy. This occurs if the acquiring firm has managerial ability that is superior to that of the target firm, where managerial performance is measured in terms of company performance prior to the takeover (Holl and Kyriazis (1997)). Hence, the market is more likely to have a positive reaction to such a takeover. However, if the pre-takeover performance of the target is a loss, then the market may doubt whether acquiring firms could improve this situation, which may lead to a negative market reaction around the takeover announcement.

The findings in the study of Goergen and Renneboog (2004) show a weak positive relation between target pre-takeover performance (measured by the return on equity) and the short-term abnormal returns to target firms, while no significant association is found for abnormal returns to acquiring firms.

c_2. Pre-takeover Leverage of Target Firms

Hc_2: Acquiring shareholders' abnormal returns around the takeover announcement are related to the pre-takeover leverage of the target firms.

Previous studies show that debt can mitigate agency problems between stockholders

and managers (Jensen (1986, 1989), Harris and Raviv (1990)). Debt holders have a legal standing to review managerial decisions and to have management replaced through the courts if the firm is insolvent (Betker (1995)). Harris and Raviv (1990) argue that debt increases managerial work effort and then leads to better decisions (Maloney et al. (1993)). Thus, the announcement of an acquisition of a target firm with a reasonable amount of debt may be a good signal of the quality of the target firm. The market reaction may be positive. However, some argue that if the target firm has a high level of debt, the market may doubt the ability of acquiring firms that repay these debts in the future. In this situation, the announcement returns for acquirers may be negative.

Maloney et al. (1993) examine mergers (1962-1982) and acquisitions (1982-1986) and find higher announcement returns to acquirers with higher leverage. Moeller and Schlingemann (2005) investigate acquisitions from 1980-2001 and find no significant effect of leverage measured by the firm's total debt over its market value. In addition, Goergen and Renneboog (2004) report that financial distress (interest coverage) does not have any influence on the abnormal returns of the acquiring firm around the takeover announcement.

c_3. Market-to-book Ratios of Target Firms

Hc_3: Acquiring shareholders' abnormal returns around the takeover announcement are related to the market-to-book ratios of target firms.

Fama and French (1992) suggest that firm size and book-to-market ratio combine to explain a large proportion of the variation in average stock return. The ratio of book-to-market is one important variable to show the growth opportunity of the firm. Generally, a target with a high market-to-book ratio has a relatively strong growth potential (Rau and Vermaelen (1998), Kohers and Kohers (2000)). Such firms may be able to provide substantial growth benefit to bidders, once the target is given access to the financial support or other resources of an acquiring firm. Thus, the market may perceive that the growth opportunities of acquirers that take over growth targets (with high market-to-book ratio) are more valuable than those of acquirers

acquiring value targets (with low market-to-book). Hence better market reactions are expected. In contrast, some argue that the acquisition of value-firms leads to higher bidder and target returns. The nature of high risk and the uncertain future of growth targets may make the market less confident. Plus, the market is anxious that the acquirer will overpay for the growth target. These would lead to lower market reactions.

In empirical tests, Rau and Vermaelen (1998) find that the acquisition of firms with low market-to-book ratios generates relatively high abnormal returns for the acquiring shareholders, whereas the acquisition of firms with high market-to-book ratios generates substantial negative abnormal returns. Moreover, Goergen and Renneboog (2004) find that market-to-book ratios of targets are significantly and negatively related to abnormal returns to acquiring shareholders around takeover announcements.

5.4.4 Bidding Firm Characteristics

d_1. Market-to-book Ratios of Acquiring Firms

Hd_1: Acquiring shareholders' abnormal returns around the takeover announcement are related to the market-to-book ratios of acquiring firms.

As mentioned above, the market-to-book ratio is considered as an important issue that can explain the main variation in average stock return (Fama and French (1992)). The potential growth opportunity of a firm may be shown by the market-to-book ratio. Acquiring firms with high market-to-book ratios are mainly growing and eager to extend themselves. Mergers and acquisitions are an important strategy. Compared with other ways, taking over other firms can quickly extend a firm's market and/or reduce its supply costs. Acquisitions could bring better returns to the acquiring firm, especially the growth acquiring firm, when a takeover is announced.

Some previous studies argue that growth acquirers suffer from hubris and consequently overpay for their target (Sudarsanam and Mahate (2003), Rau and

Vermaelen (1998)). The high bid price and weak foundation may not bring the synergy they expected. For the value acquiring firms, their strong core businesses make the market more confident about their takeover. Thus, markets may react more positively to takeovers by value acquiring firms than to those by growth acquirers.

Conn et al. (2005) examine the UK takeover market and find that value acquirers outperform growth acquirers in the announcement period: 0.71% vs. 0.42%.

d_2. Size Difference

Hd_2: Acquiring shareholders' abnormal returns around the takeover announcement are related to the size difference between target firms and acquiring firms.

The relative size of the target to the bidding firm is a variable that may be expected to explain returns to the shareholders of acquiring firms. Jarrell and Poulsen (1989) argue that, as the target increases in size relative to that of the acquirer, the impact of the acquisition would be more readily obvious in the returns to the acquiring firms. The main reason is that target firms that are large relative to their acquirers are able to provide greater synergies in takeovers than relatively small targets can offer (Kohers and Kohers (2000)). Thus, if acquisitions are on average wealth-increasing projects for acquiring firms and the target is large relative to the acquiring firm, a positive relationship should be expected.

However, some researchers have noted that information asymmetry in the market is stronger for small firms than for larger firms (Atiase (1985), Freeman (1987)). Kohers and Kohers (2004) argue that the market responds more strongly to takeover announcements of smaller target firms due to the higher levels of information asymmetry. Thus, if takeover announcements relieve information to a great extent for small target firms than for larger target firms, a better market reaction would be expected.

In empirical tests, Asquith, Bruner and Mullins (1983) examine a sample of 211

takeovers announced from 1963 to 1979 and find a positive significant relationship between relative size and the returns to acquirers. Kohers and Kohers (2000) focus particularly on the high-tech industries and revealed a positive relation between bidder excess returns and the size of target relative to that of the acquirer. However, the later study of Asquith, Bruner and Mullins (1987) reports no significant relationship between relative size and returns to acquirers in cash offers that occurred during 1973 to 1983, which were dominated by merger transactions as opposed to tender offers. Cosh et al. (2001) examine 142 UK takeovers completed over the period 1985-1995 and find that the relative size has an insignificantly positive effect on bidder announcement share returns.

d_3. Pre-takeover Performance of Acquiring Firms

Hd_3: Acquiring shareholders' abnormal returns around the takeover announcement are positively related to the pre-takeover performance of the acquiring firms.

Pre-takeover performance is always considered as an important factor that influences returns to acquiring firms (Rau and Vermaelen (1998), Kohers and Kohers (2001)). The market has a tendency to extrapolate the acquirer's past performance into the future. If the acquiring firm tends to exhibit relatively strong performance prior to the takeover announcement, it may enhance the confidence of the market about the acquirer's ability to generate value through the merger or acquisition. Thus, the market is more likely to have a positive reaction to such takeovers.

Moeller and Schlingemann (2005) examine whether the operating performances of acquiring firms are linked to the acquirer's stock price reaction. Their findings show a significant and positive relation between operating performance and abnormal returns to the acquirers' shareholders over the period of takeovers.

All together, Table 5.1 summarises all above hypotheses on relationships between acquirers' abnormal returns and their determinants.

Table 5.1 Summary of Determinants
Definition of the variables and their relation with acquirers' abnormal returns

Variable	Description	Source	The relation to acquiring shareholders' returns
	Deal Characteristics		
CROSS	whether the target was taken or acquired by foreign firm	SDC	+/-
LEGAL DIF	whether the acquirers were from countries with English common law system applied in UK	SDC	+/-
CULTURE DIF	whether a big difference exists between acquiring countries and target countries according to Hofstede's index	SDC	+/-
RELAT	whether the acquirer and target firm in the M&A are related	SDC	+/-
HIGH-TECH	whether the takeover occurred in high-tech industries	SDC	+/-
STOCK	whether the payment is stock, cash or a combination of cash and stock	SDC	+/-
MULTIPLE BID	whether multiple bidders emerged (an auction)	SDC	-
HOSTILE	whether the contest was classified as hostile or friendly	SDC	+/-
PREMIUM	the premium paid for the target firm	SDC	-
	Target Governance Characteristics		
CEO-DEP	whether the news of target CEO departure was released around the takeover announcement	Annual Report & FT & New Release	+/-
SIZE-BOARD	the number of directors in the board of the target firm	PWC	+
NONEX	the proportion of non-executive directors in the board	PWC	+
BLOCKHD	the percentage of equity owned by blockholders	PWC	+/-
	Target Firm Characteristics		
TARGET-PERFORM	the pre-takeover performance of target firms measured by accounting ratios and stock performance	SDC & DataStream	+/-
TAREGET-LEVERAGE	the pre-takeover leverage of target firms	SDC	+/-
TARGET-M/B	the market-to-book ratios of target firms	DataStream	+/-
	Acquiring Firm Characteristics		
ACQUIRER-M/B	the market-to-book ratios of acquiring firms	DataStream	+/-
SIZE-DIF	the logarithms of the ratios of the asset of the target to the asset of the acquiring firm	SDC	+/-
ACQUIRER-PERFORM	the pre-takeover performance of target firms measured by accounting ratios and stock performance	SDC & DataStream	+

PWC: PriceWaterHouse Cooperate Register
SDC: Securities Data Corporation's (SDC) Global Mergers and Acquisitions database
FT: Financial Times

5.5 Summary

This chapter provides a brief literature review on both the target's and acquirer's shareholders returns over different time periods: prior to the takeover, around the takeover announcement and after the takeover. For the short-term effect of takeovers on shareholders wealth, there is considerable evidence of large significant abnormal returns to the target firm shareholders. But the findings on the side of acquiring firms are inconclusive. This study differs from others in that it concentrates on the special features of the most recent M&A wave and considers the effect of the intensity of M&A activities. The study seeks to highlight market reaction to acquiring firms upon the announcement of a takeover, comparing domestic and cross-border takeovers and their timing within the rise or slump of the M&A wave.

The common methodologies of event studies are reviewed in this chapter. Compared with other methods, the market model always performs well or at least as powerfully as the best alternative. So we employ the market model to do the empirical tests later. Meanwhile, to examine the robustness of our results, we use parametric and non-parametric statistical tests to test significance in the later empirical analysis.

In addition, we have reviewed the literature on the potential determinants of shareholder returns. Based on the theory and empirical results of part studies, we develop hypotheses on their relationships with returns to acquirers' shareholders around the takeover announcement. In Chapters 6 and 7, we report the results of our empirical tests of these hypotheses.

Chapter 6 An Empirical Analysis of the Wealth Effect of M&A: A Comparison between Cross-border and Domestic takeovers

6.1 Introduction

In Chapter 5, we reviewed the literature and stated various hypotheses, concerning the effect of the cross-border dimension to M&A activity on shareholder returns. This chapter empirically tests these hypotheses. An empirical comparison between cross-border and domestic takeovers is constructed. We investigate the market reactions for acquiring firms involved in takeovers during the period of 1998-2002. One purpose is to provide new evidence regarding the announcement returns of acquiring firms in the UK fourth M&A wave, which experienced both a surge in international corporate activities as well as general globalization of the world economy.

The bulk of previous research on M&As is confined to US and UK acquiring firms and most studies have concentrated on M&As in a single country. No direct study exists regarding international M&As into the UK in the 1990s. A worldwide study could contribute to this literature, as it allows us to evaluate the impact of a wide range of institutional settings and legal rules on the pattern of M&A activity. Compared to US and UK acquiring firms, acquiring firms from other countries can be characterized by weaker investor protection and less developed capital markets (La Porta et al. (1998)), and by more concentrated ownership structures (Faccio and Lang (2002)). The analyses presented in this chapter consider these potential differences.

In the recent M&A wave during the late 1990s and the early 2000s, the UK industrial economy had some distinct characteristics, such as a boom in telecoms, a dramatic increase in cross-border takeovers, and well-developed corporate governance mechanisms. Because of these distinctive economic characteristics, the results of previous studies may not apply to this period. There have been relatively few studies which have directly compared cross-border acquisitions to their domestic

counterparts. Therefore, under these types of conditions, there is a need to re-examine acquiring shareholders' returns in such circumstances. This chapter distinguishes the wealth effects of acquiring firms between domestic acquisitions and cross-border acquisitions into the UK, in an attempt to explore the performance differences between these two takeover directions. It also provides detailed information on takeover activities between the UK and 15 countries, such as the effects of differences in legal systems and in culture. We also investigate how the shareholders' wealth effects vary according to deal characteristics, target and acquiring firm characteristics, target corporate governance characteristics, including announced departure of the target CEO. These factors are expected to explain a significant part of the variation in the shareholder wealth effects across takeover deals. However, as far as we know, no previous research considers all of these explanatory factors. Hence, this study would fill this gap in the literature.

The analysis of the returns of 212 acquiring firms during takeover announcements reveals a number of interesting findings. In our sample, acquiring firms experienced significant losses around the takeover announcement during 1998-2002. The international acquiring firms did not suffer significant losses, while UK domestic acquirers experienced significant negative returns. Cross-border takeovers and acquirers' gains are found to be positively related. Acquiring a high-tech firm did not bring better announcement returns to acquiring firms. Consistent with previous research, we find that multiple bidding and high premia would reduce the returns of acquiring firms, while payment in stock significantly and positively affects the acquirers' gains during the takeover announcement.

Moreover, the proportion of nonexecutives in target firms is positively associated with the returns to acquiring firms. Also, acquirers have better announcement returns when bidding for targets with better pre-takeover performance.

A further contribution of this chapter is to examine the effect of the news release of the target CEO departure on acquiring shareholders' returns. This has not been

considered in the literature before. We find that, when the rumour or news of target CEO departure is released, acquiring shareholders have higher gains.

This chapter is organised as follows. Section 6.2 introduces the data and methodology. The results of univariate tests and multivariate tests are reported in sections 6.3 and 6.4 respectively. Section 6.5 addresses the robustness of the tests and section 6.6 concludes this chapter.

6.2 Data and Methodology

6.2.1 Sample Design and Methodology

Our sample consists of domestic or foreign public companies that acquired UK public target firms during the period 1998-2002. The daily return index[13] for each acquiring firm is collected from DataStream. For further investigations on the determinants, we collect data on deal characteristics, target governance characteristics, and target and acquiring firm characteristics. Compared with the sample in previous chapters, we lose five acquisitions for the lack of their stock return data. The final sample, therefore, contains 212 takeovers for which we have a complete data set.

To calculate the abnormal return for each firm, the market model is still the most commonly applied model, although controversy surrounds the specification of the appropriate benchmark model for estimating the expected return. As we analyzed in the previous chapter, the market model is usually at least as powerful as the best alternative (Armitage (1995)). Thus, for the empirical tests, we employ the market model to calculate abnormal returns.

$$AR_{it} = R_{it} - (\alpha + \beta R_{mt})$$

Where: R_{it} = the rate of return on security i over period t,

R_{mt} = the rate of return on DataStream total market index for the country of which i is a member in time period t

[13] It shows a theoretical growth in value of a share holding over a period, assuming that dividends are re-invested to purchase additional units of an equity or unit trust at the closing price applicable on the ex-dividend date.

This chapter adopts an analysis period stretching from day t-30 to t+30. Previous studies find that firms' share prices tend to rise prior to takeover announcement. Adopting a month pre-bid analysis period allows us to establish whether the pattern of stock performance leading up prior to the takeover differs between domestic and cross-border takeovers. The estimation period is from t-46 to t-300.

The level of statistical significance of the abnormal and cumulative abnormal returns is tested using the cross-sectional and skew-adjusted t-test. Additionally, we employ non-parametric tests: the sign test and the rank test. The level of statistical significance using non-parametric statistics is generally similar to those using a t-test.

6.2.2 Sample Description

In this chapter, the whole sample includes 212 transactions that took place between 1998 and 2002. Table 6.1 shows the distribution of the sample. 146 out of 212 are UK domestic acquiring firms and 66 are foreign acquiring firms from 14 countries. The most frequently observed country of origin for the acquiring firm was the US which accounts for 10.85% of total M&A activities in our sample. Firms from France and the Republic of Ireland are the second and third most frequent acquiring foreign firms in the UK, accounting for 3.77% and 2.83% respectively.

Figure 6.1 shows the cumulative average abnormal returns (CAARs) for acquirers over different windows within 30 days before and after the event (day 0). The details about the average abnormal returns (AARs) and CAARs for acquiring countries are exhibited in the first column of Table 6.2. For the whole sample, acquirers experience consistent negative daily returns around the takeover announcement from day -1 to day +1, which are all statistically significant (-0.30%, -0.92% and -0.48% respectively). The announcement day returns for acquiring shareholders is -0.92% with a t-statistic of -2.25, and it is very close to the study of Draper and Paudyal (1999), who find a significant negative abnormal return of -0.82%. In addition, CAARs are negative and statistically significant for event windows around and after the announcement. The loss amounts to a significant -3.88% over the (-30, +30) window. This indicates that acquirers do not perform well around the takeover

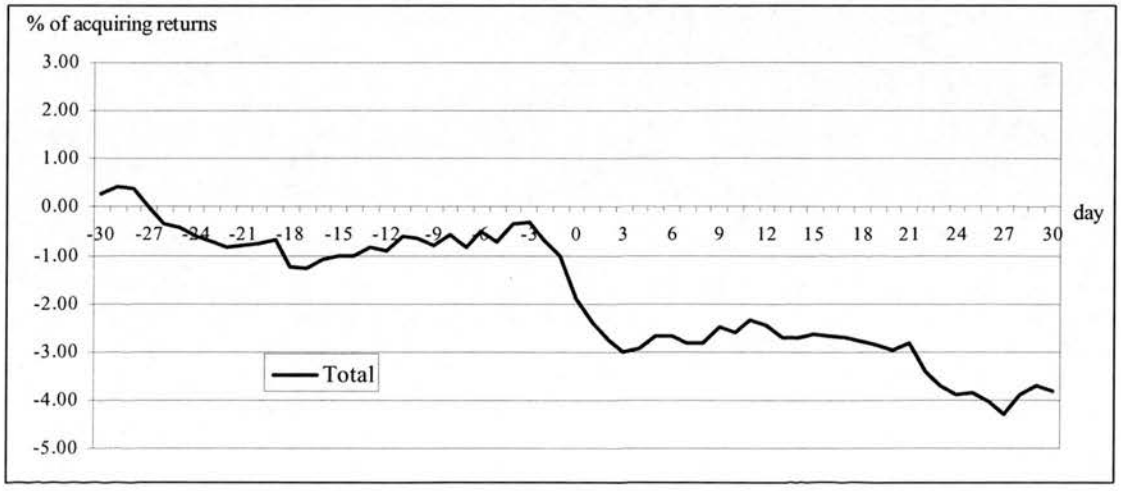
announcement. Our findings are consistent with the previous studies by Dodd (1980), Travlos (1987), Sudarsanam, Holl and Salami (1996) and Draper and Paudyal (1999), which find a small but significant negative abnormal return at the announcement of the bid.

Table 6.1
The Distribution of 212 Acquiring Firms According to their Countries

Countries	Total Freq.	Percentage
Australia	4	1.89%
Bermuda	1	0.47%
Canada	1	0.47%
Denmark	3	1.42%
France	8	3.77%
Germany	5	2.36%
Ireland Rep	6	2.83%
Italy	2	0.94%
Netherlands	4	1.89%
Singapore	2	0.94%
South Africa	3	1.42%
Sweden	1	0.47%
Switzerland	3	1.42%
United States	23	10.85%
United Kingdom	146	68.87%
Total	212	100.00%

Figure 6.1
Cumulative Average Abnormal Returns (CAARs) of 212 acquiring firms Around the M&A Announcement

This figure shows the market reaction to the announcement of M&A transactions by 212 acquiring firms of UK targets as well as the CAARs over different windows within 30 days before and after the event (day 0). The benchmark used in the market model is the total market index for each acquiring country; the model parameters are estimated over 255 days starting 300 days prior to the acquisition announcement.



When analyzing the performance of individual countries, shown in Table 6.2, we find that acquirers from Switzerland and UK have significant negative returns on the announcement day (-2.14% and -1.31% respectively). In particular, UK acquiring firms have significant negative CAARs over most post-announcement windows. In the two-month period around announcement, UK acquirers lost up to significant -6.31% of their market capitalisation.

However, not all acquiring countries are losers. On the announcement day, acquirers from Sweden have the highest significant return of 5.89% while those from Denmark and Italy have significantly positive returns of +2.22% and +1.64% respectively. Moreover, the CAARs of Australian acquirers are significant at 3.95% over the pre-announcement window of (-10, -1), but this turns to a significant loss of -8.49% over the post-announcement window of (-1, +30). Swedish acquirers have the inverse experience, a loss prior to the announcement but gains after the announcement.

Table 6.3 reports the results of the performance of acquirers from different industries. Following the classification of Fama and French[14], we break the whole sample down into twelve sections[15]. On the announcement day, energy acquirers suffered a significant loss of -6.27%. Goergen and Renneboog (2004) also find similar results that energy acquirers have a significant loss of -1.91% over (-1, 0). It seems that markets had negative reactions when the energy takeovers were announced.

Another section suffering loss is "business equipment", which is defined by Fama and French as "computers, software, and electronic equipment". Acquirers in this section experienced a significant negative return of -5.09% over the window of (-1, +1) around the takeover announcement. The loss amounts to a significant -9.31% over the window of (-1, +30). In addition, the "money" section has significant losses

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[14] Kenneth French's website: http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/index.html

[15] *Consumer NonDurables* -- Food, Tobacco, Textiles, Apparel, Leather, Toys; *Consumer Durables* -- Cars, TVs, Furniture, Household Appliances; *Manufacturing* -- Machinery, Trucks, Planes, Office Furniture, Paper, Com Printing; *Energy* -- Oil, Gas, and Coal Extraction and Products; *Chems* -- Chemicals and Allied Products; *Business Equipment* -- Computers, Software, and Electronic Equipment; *Telecom* -- Telephone and Television Transmission; *Utilities* -- Utilities; *Shops* -- Wholesale, Retail, and Some Services (Laundries, Repair Shops); *Health* --Healthcare, Medical Equipment, and Drugs; *Money* -- Finance; *Other* -- Mines, Construction, Building Material, Transport, Hotels, Bus Services, Entertainment.

Table 6.2 Average Abnormal Returns (AARs) and Cumulative Average Abnormal Returns (CAARs) Around the M&A Announcement for 212 Acquirers by Origin Acquiring Countries

This table shows the market reaction to the announcement of M&A transactions by 212 acquiring firms of UK targets as well as the ARs and the CAARs before and after the event (day 0). The whole sample is divided by origin acquiring countries. The benchmark used in the market model is the total market index for each acquiring country; the model parameters are estimated over 255 days starting 300 days prior to the acquisition announcement.

	All							IreRe				South				
	Sample	Aus	Bem$^{\Upsilon}$	Can$^{\Upsilon}$	Denm	France	Germ	p	Italy	Neth	Singa	Africa	Swed$^{\Upsilon}$	Switz	UK	US
Event Day	N=212	N=4	N=1	N=1	N=3	N=8	N=5	N=6	N=2	N=4	N=2	N=3	N=1	N=3	N=146	N=23
t-1	-0.30*$_{a}$	1.12	-1.96	-4.51	0.62	-0.91*	-0.40	0.20	0.09	1.63*$_{b}$	-1.02	-1.27***	-1.90	-1.80***$_{ab}$	-0.15	-1.16*$_{a}$
t	-0.92**$_{a}$	0.61	-0.86	3.71	2.22**$_{b}$	-1.29	-3.28	-0.03	1.64***$_{b}$	0.62	4.84	0.39	5.89***	-2.14*	-1.31***$_{ab}$	-0.17
t+1	-0.48*$_{a}$	-2.91*	-2.69	-1.09	2.28	1.93	-0.67	-1.01$_{a}$	1.11***$_{b}$	1.79*$_{b}$	-4.39***	2.28**$_{b}$	2.78**	-0.58	-0.77***$_{a}$	0.27
(-30,-1)	-1.08	11.32$_{a}$	9.29	-5.06	1.72	1.5	-7.38$_{a}$	3.38	-1.08	6.69	-7.67	-0.65	-6.60***	4.99	-1.81	-1.31
(-10,-1)	-0.4	3.95**$_{ab}$	-8.58	5.33	4.74*$_{ab}$	-1.12	1.08	2.33$_{b}$	4.07***	0.26	-2.38	-2.93***$_{ab}$	-5.93***	-3.05	-0.53	-1.14
(-1,+1)	-1.7***$_{a}$	-1.18	-5.51	-1.89	5.12$_{b}$	-0.28	-4.35	-0.84	2.85	3.64**$_{b}$	-0.58	1.06	6.76***	-4.52***$_{b}$	-2.23***$_{a}$	-1.06
(-1,+30)	-3.1**$_{a}$	-8.49*	18.27	1.98	18.31$_{ab}$	-3.18	3.31	3.95	8.88	3.11	3.67	-0.2	7.02***	-4.71	-4.65***$_{a}$	-2.83
(-10,+30)	-3.21**$_{a}$	-5.66	11.64	11.82*	22.43$_{ab}$	-3.4	4.79	6.08$_{b}$	12.86**$_{b}$	2.14	2.32	-2.29	2.99***	-5.96	-5.03***$_{a}$	-2.81
(-30,+30)	-3.88*$_{a}$	1.71	29.51	1.43	19.42$_{a}$	-0.77	-3.67	7.14*$_{b}$	7.71***$_{b}$	8.57	-2.97	0.00	2.32***	2.07	-6.31***$_{a}$	-2.97

Υ : Non-parametric statistics test is used.

a: Significant in skew-adjusted t test

b: Significant in non-parametric statistics test-sign test and rank test.

*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$ (2-tail)

Table 6.3 Average Abnormal Returns (AARs) and Cumulative Average Abnormal Returns (CAARs) Around the M&A Announcement for 212 Acquirers by Industries

This table shows the market reaction to the announcement of M&A transactions by 212 acquiring firms of UK targets as well as the ARs and the CAARs before and after the event (day 0). The whole sample is divided by origin acquiring countries. The benchmark used in the market model is the total market index for each acquiring country; the model parameters are estimated over 255 days starting 300 days prior to the acquisition announcement.

	NoDur	Durbl	Manuf	Enrgy	Chems	BusEq	Telcm	Utils	Shops	Hlth	Money	Other
Event Day	N=17	N=6	N=19	N=7	N=8	N=21	N=5	N=7	N=27	N=7	N=39	N=49
t-1	-0.04	0.79*$_{ab}$	0.06	-0.25	-0.83	-0.77	-1.60$_{a}$	0.13	0.36	-0.16	0.14	-1.03***$_{a}$
t	0.85	-0.05	-1.23$_{b}$	-6.27**$_{a}$	0.14	-2.07	-3.80	1.07	-1.24	0.29	-0.91*$_{a}$	-0.41
t+1	0.00	0.91	-0.01$_{b}$	0.64	1.26$_{b}$	-2.25**$_{a}$	-1.07	-0.55	-0.59	1.66	-0.29	-1.02*$_{a}$
(-30,-1)	-1.92	-5.49	-4.01	7.6	-0.42	1.87	-6.67	-1.22	0.89	-5.42	-0.85	-1.78
(-10,-1)	-1.11	-1.69	-1.23	4.4	-0.83	-1.17	-3.11	0.09	0.06	1.86	-0.25	-0.46
(-5,-1)	-0.62	0.52	-0.77	1.57	0.30	-2.55	-3.44$_{a}$	-0.83	0.99	0.65	-0.42	-0.92
(-1,0)	0.61	0.81	-1.17	-6.51*$_{a}$	-0.69	-2.84	-5.40	1.21	-0.90	0.13	-0.77	-1.43
(-1,+1)	0.81	1.52	-1.18	-5.87**$_{a}$	0.56	-5.09*$_{a}$	-6.48	0.66	-1.48	1.79	-1.05	-2.46**$_{a}$
(-1,+30)	2.94	-5.65	-2.02	-2.94	-6.31$_{a}$	-9.31**$_{a}$	-6.96	8.35***$_{ab}$	-0.41	7.96	-5.42$_{a}$	-4.61$_{a}$
(-10,+30)	1.86	-8.00	-3.32	1.70	-6.31	-9.71$_{a}$	-8.46	8.3***$_{a}$	-0.70$_{b}$	9.97$_{ab}$	-5.81$_{a}$	-4.05
(-30,+30)	1.06$_{b}$	-11.8	-6.1	4.91	-5.89	-6.66	-12.02	6.99$_{a}$	0.13	2.69	-6.41	-5.36

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$(2-tail)

Consumer NonDurables -- Food, Tobacco, Textiles, Apparel, Leather, Toys; *Consumer Durables* -- Cars, TVs, Furniture, Household Appliances; *Manufacturing* -- Machinery, Trucks, Planes, Office Furniture, Paper, Com Printing; *Energy* -- Oil, Gas, and Coal Extraction and Products; *Chems* -- Chemicals and Allied Products; *Business Equipment* -- Computers, Software, and Electronic Equipment; *Telecom* -- Telephone and Television Transmission; *Utilities* -- Utilities; *Shops* -- Wholesale, Retail, and Some Services (Laundries, Repair Shops); *Health* --Healthcare, Medical Equipment, and Drugs; *Money* -- Finance; *Other* -- Mines, Construction, Building Material, Transport, Hotels, Bus Services, Entertainment.

of -0.91% on the takeover announcement day, and the "others" section has significant losses of -2.46% over (-1, +1).

However, acquirers in the "utilities" and "health" industries have a significant gain over the window of (-10, +30) at 8.3% and 9.97% respectively.

6.3 Univariate Analysis of Announcement Performance

In this section, we focus on univariate analyses of AARs and CAARs for acquiring firms realized around the announcement of taking over UK target firms. We then relate the AARs and CAARs to the hypothesized determinants, which include deal characteristics, target governance characteristics, target and acquiring firm characteristics.

6.3.1 Deal characteristics

- *Cross-border/domestic takeovers*

The increase in cross-border takeovers is one of the major features of the recent M&A market. Table 6.4 and Figure 6.2 show a comparison of the market reaction around the takeover announcement in the context of cross-border and domestic takeovers.

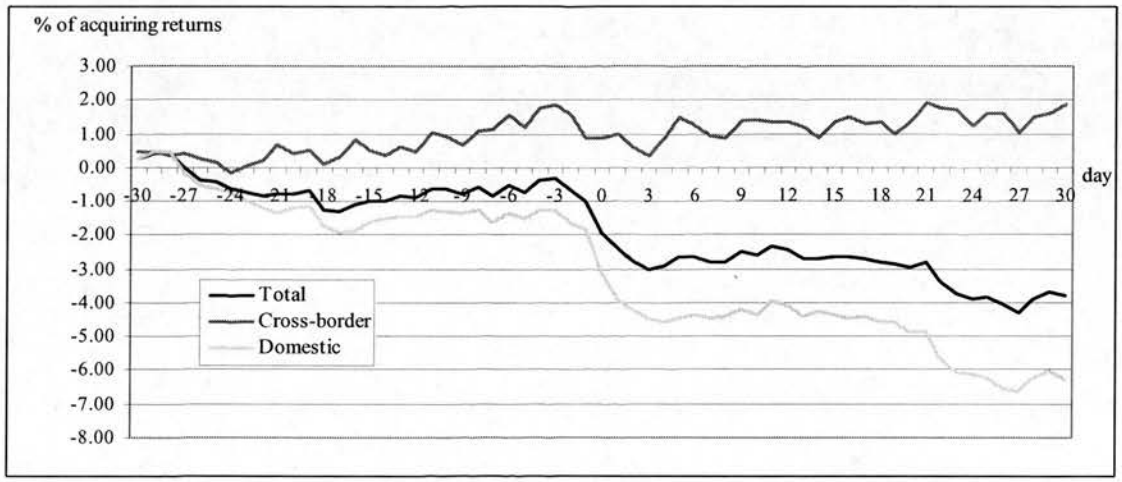
Domestic takeovers resulted in a significantly negative return of -1.31% on the announcement day, while the returns to foreign acquirers are not significantly different from zero around the takeover announcement. The CAAR of foreign acquirers is significantly higher than that of UK domestic acquirers, 0.32% vs. -4.65% over (-1, +30). The CAAR over (-30, +30) for UK acquirers is lower than the return to foreign acquirers. The difference is 7.80%, which is statistically significant. The results show that UK acquiring firms experienced negative and significant abnormal returns around and in the post-takeover announcement period, which is significantly lower than the returns for foreign acquirers.

Table 6.4 Acquirers' AARs and CAARs in Cross-border and Domestic Takeovers

	Total		Cross-border		Domestic		Difference	
	N=212		N=66		N=146			
Event Day	AR(%)	t-value	AR(%)	t-value	AR(%)	t-value		t-value
t-1	-0.30*$_a$	-1.65	-0.65**$_a$	-2.13	-0.15	-0.66	-0.50	-1.25
t	-0.92**$_a$	-2.25	-0.04	-0.07	-1.31***$_a$	-2.46	1.27$_b$	1.20
t+1	-0.48*$_a$	-1.90	0.15	0.31	-0.77***$_a$	-2.60	0.92*	1.67
(-30,-1)	-1.08	-0.94	0.54$_b$	0.35	-1.81	-1.20	2.35	0.95
(-10,-1)	-0.40	-0.74	-0.13	-0.18	-0.53	-0.73	0.40	0.33
(-1,+1)	-1.70***$_a$	-3.02	-0.53	-0.67	-2.23***$_a$	-3.04	1.70	1.40
(-1,+30)	-3.10**$_a$	-2.41	0.32	0.17	-4.65***$_a$	-2.81	4.97*	1.79
(-10,+30)	-3.21**$_a$	-2.19	0.82	0.41	-5.03***$_a$	-2.64	5.85	1.27
(-30,+30)	-3.88**$_a$	-1.97	1.49	0.56	-6.31***$_a$	-2.44	7.80*$_b$	1.84

a: Significant in skew-adjusted t test
b: Significant in non-parametric statistics test-sign test and rank test.
*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$ (2-tail)

Figure 6.2 Acquirers' AARs and CAARs in Cross-border and Domestic Takeovers

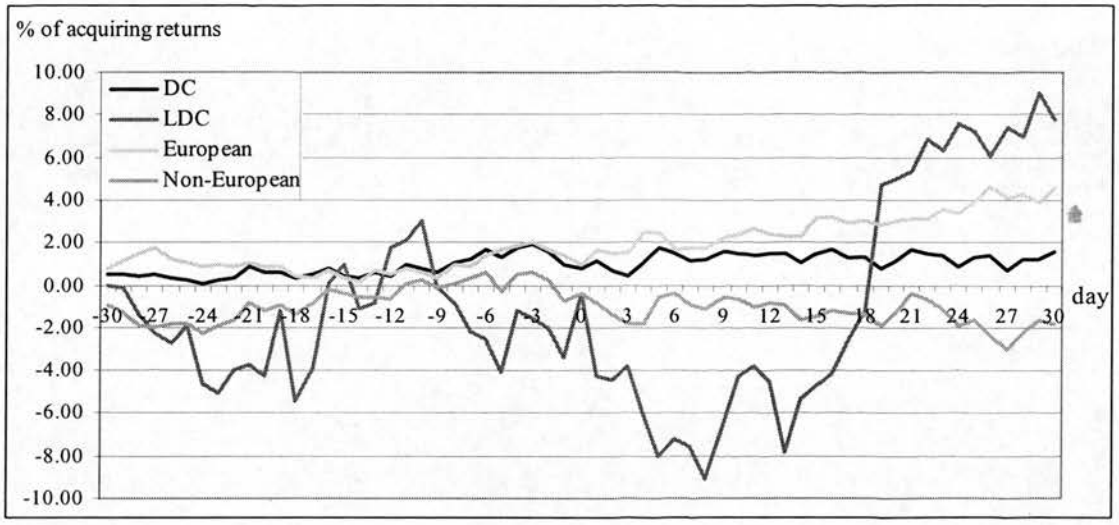


The significantly negative returns to acquirers in domestic acquisitions are consistent with previous studies (Sudarsanam and Mahate (2003), Conn et al. (2005)). The insignificant positive returns in cross-border acquisitions are not surprising given the

mixed findings in previous studies by Mathur et al. (1994), Cakici, Hessel, and Tandon (1996) and Choi and Tsai (2002). The significantly better performances of cross-border takeovers, compared with domestic takeovers, are consistent with one side of our hypothesis and gives partial support for the existence of imperfections in markets which give multinational firms a competitive advantage over local firms.

In further research of international M&As, we separate foreign acquirers by their investment origins. Table 6.5 and Figure 6.3 report the results.

Figure 6.3 AARs and CAARs of Acquirers From Developed Countries (DC), Less Developed Countries (DC), European Countries and Non-European Countries



Developed countries (DCs)include Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom (the above are European Countries), United States, Canada(North American Countries), Australia, Israel, Japan, New Zealand, and South Africa (other Developed Countries). Less developed countries (LDC) include all other non-developed countries.

Table 6.5 AARs and CAARs of Acquirers From DC, LDC, European Countries and Non-European Countries

	Cross-border Takeovers		DC		LDC		Difference		Euro		Non-Euro		Difference	
	N=66		N=63		N=3				N=32		N=34			
Event Day	AR(%)	t-value	AR(%)	t-value	AR(%)	t-value		t-value	AR(%)	t-value	AR(%)	t-value		t-value
t-1	-0.65**$_a$	-2.13	-0.62*$_a$	-1.93	-1.33**	-2.27	0.72	0.49	-0.27	-0.81	-1.01**$_a$	-2.01	0.74	1.20
t	-0.04	-0.07	-0.19	-0.33	2.94	0.91	-3.12	-1.17	-0.47	-0.58	0.37	0.47	-0.84	-0.74
t+1	0.15	0.31	0.34	0.69	-3.83***$_a$	-6.29	4.17*$_b$	1.82	0.73	1.02	-0.41	-0.61	1.13	1.16
(-30,-1)	0.54$_b$	0.35	0.66$_b$	0.42	-2.02	-0.19	2.68	0.1	1.05$_b$	0.53	0.06	0.03	0.99	0.44
(-10,-1)	-0.13	-0.18	0.07	0.10	-4.45	-1.19	4.52	0.88	0.58$_b$	0.53	-0.8	-0.81	1.38	-0.32
(-5,-1)	-0.62	-1.16	-0.62	-1.10	-0.78	-0.42	0.16	0.06	0.09	0.12	-1.29$_a$	-1.63	1.38	1.29
(-1,+1)	-0.53	-0.67	-0.45	-0.55	-2.22	-0.88	1.77	0.11	-0.01	0.00	-1.02	-1.16	1.01	0.53
(-1,+5)	-0.08	-0.07	0.17	0.14	-5.35***$_a$	-3.98	5.53	0.98	0.76	0.42	-0.86	-0.56	1.62	0.69
(-1,+30)	0.32	0.17	-0.08	-0.04	8.54	1.29	-8.62	-1.08	2.9	1.04	-2.12	-0.84	5.02	0.33
(-10,+30)	0.82	0.41	0.6	0.29	5.42	0.70	-4.82**$_b$	-2.08	3.75$_b$	1.23	-1.94	-0.74	5.69	1.43
(-30,+30)	1.49	0.56	1.19	0.44	7.86	0.46	-6.67	-0.71	4.21	1.17	-1.07	-0.28	5.28	0.62

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Developed countries (DC)include Austria, Belgium, Denmark, Finland, France, German, Greece, Iceland, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom (the above are European Countries), United Stated, Canada(North American Countries), Australia, Israel, Japan, New Zealand, and South Africa (other Developed Countries). Less developed countries (LDC) include all other non-developed countries.

- Developed / Less-developed Countries

Using a classification by UNCTAD (United Nations Conference on Trade and Development), we divide the sample into acquirers from developed countries (DC) and less developed countries (LDC). The second set of columns in Table 6.5 show that three acquiring firms are from LDCs. Returns for acquirers from LDCs are significantly negative on one day before and one day after the announcement, -1.33% and -3.83% respectively. Over the window of (-1, +5), acquirers from LDCs have a significant loss of -5.35%, which is lower than returns of 0.17% to acquirers from DCs. Choi and Tsai (2002) find similar results that the LDC acquirers underperform DC acquirers. This indicates that acquirers from developed countries have better returns than those from less-developed countries. However, LDC acquirers start gaining after the takeover announcement. CAAR over (-10, +30) is 5.42% and significantly higher than returns of 0.6% to those acquirers from DCs. This indicates that, prior to the takeover announcement, DC markets are more confident about acquiring firms in the UK, and LDC markets show very positive post-announcement reactions.

- European / Non-European Countries

The sample is also divided into European and non-European groups. The third set of columns in Table 6.5 show that European acquirers have no significant returns around announcement, but non-European acquirers have a significant loss of -1.01% on the day before announcement. Prior to the announcement, the loss amounts to -1.29% over (-5, -1). Generally, European acquirers have better performance than non-European acquirers. But the differences are not statistically significant. Our results are consistent with the recent argument that European countries have become very active M&A markets and the strong development of the single European market in recent years (Martynova and Renneboog (2006)).

- *Legal differences*

To examine the impact of the acquirer country's legal system, the sample is split according to whether the acquirer country's system is an English common law

system, a French civil law system, a Germanic civil law system or a Scandinavian civil law system (La Porta, Lopez-de-Silanes, Sheifer and Vishny (2000)).

For bids by legal origin, Table 6.6 exhibits marked differences in acquirer returns around and following the announcement. The acquiring firms of Scandinavian legal origin experienced very large wealth effects around and after the event day. Acquirers from countries with the Scandinavian legal system earned a very significant announcement day return of 3.14%. Other acquirers from English, French and German legal systems experienced announcement day returns of -0.97%, -0.33% and -2.85%, respectively, with a significant loss only for those from English legal systems. Following the takeover announcement, the acquiring firms of Scandinavian legal origin have significant CAAR of 15.49% over the window of (-1, +30), while acquirers with an English legal origin have significant negative returns of -3.91% over the same window.

These results support the argument of La Porta, Lopez-de-Silanes, Sheifer and Vishny (2000) that the quality of law enforcement is the highest in Scandinavian and German civil law countries, and lower in English common law and French civil law countries. This indicates that better law enforcement gives investors stronger legal rights and may lead to better stock performance.

- *Culture differences*

To measure the impact of national cultural differences between the acquirers' countries and the UK, we follow the study of Conn et al. (2005) and employ a composite index based on Hofstede's (1980) numerical classifications of four national culture dimensions[16]. As in the previous chapters, the composite index is the summation of these four differences between the acquirer's country and the UK in each of the culture dimensions. As before, we classify any country with a score of 28 (the median) or less as having low cultural differences, and any country with a score of more than 28 as having high cultural differences.

[16] The four dimensions are power distance, uncertainty avoidance, individuality and masculinity.

Table 6.7 shows that the announcement day returns for acquiring firms from countries with high cultural differences is insignificant at -0.13%, while acquisitions with low cultural differences results in significantly negative returns of -1.05% for acquirers. Moreover, over the windows around and post-announcement, the CAARs of acquiring firms from countries with low cultural differences are significantly negative and significantly lower than those for acquirers from countries with high cultural differences. For example, acquirers from countries with low cultural differences have a significant negative return of -4.20% over the window of (-10, +30), which is significantly lower than that for acquirers from countries with high cultural differences. These results support our hypothesis that markets expect the benefit of acquirers gaining knowledge from acquiring firms from different cultural environments.

When we focus on cross-border takeovers, over the window of (-10, +30), the CAAR is significantly higher for acquirers from countries with high cultural differences than low cultural differences. This is not surprising given the mixed results in previous work (Morosini, Shane and Singh (1998), Schweiger and Goulet (2000)). Morosini, Shane, and Singh (1998) also found a significant positive relationship between cultural distance and post-acquisition performance. Although the culture-performance relationship is more complex than is assumed, as suggested by Teerikangas and Very (2006), our results support that cultural differences benefit the acquirers by enabling acquirers to gain knowledge provided by UK targets to establish distinctive competencies worldwide.

Table 6.6 Acquirers' AARs and CAARs by Acquirers' Legal Origins

	Total		English common law		French civil law		German civil law		Scandinavian civil law	
	N=212		N=186		N=14		N=8		N=4	
Event Day	AR(%)	t-value	AR(%)	t-value	AR(%)	t-value	AR(%)	t-value	AR(%)	t-value
t-1	-0.30*$_a$	-1.65	-0.29	-1.45	-0.17	-0.34	-0.93	-1.12	-0.01	-0.01
t	-0.92**$_a$	-2.25	-0.97**$_a$	-2.18	-0.33	-0.27	-2.85	-1.32	3.14***$_{ab}$	2.6
t+1	-0.48*$_a$	-1.9	-0.71***$_a$	-2.71	1.77*$_{ab}$	1.77	-0.63	-0.69	2.4	0.6
(-30,-1)	-1.08	-0.94	-1.3	-1.03	2.61$_b$	0.74	-2.74	-0.69	-0.36	-0.15
(-10,-1)	-0.4	-0.74	-0.49	-0.81	0.01	0.01	-0.47	-0.29	2.07	0.64
(-1,+1)	-1.7***$_a$	-3.02	-1.96***$_a$	-3.28	1.29	0.64	-4.41*$_a$	-1.84	5.53$_b$	0.97
(-1,+30)	-3.1**$_a$	-2.41	-3.91***$_a$	-2.82	0.34	0.07	0.3	0.07	15.49*$_{ab}$	1.67
(-10,+30)	-3.21**$_a$	-2.19	-4.1***$_a$	-2.60	0.51	0.10	0.76	0.14	17.57$_{ab}$	1.58
(-30,+30)	-3.88**$_a$	-1.97	-4.92**$_a$	-2.28	3.11	0.45	-1.51	-0.28	15.14$_a$	1.45

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test;
*** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

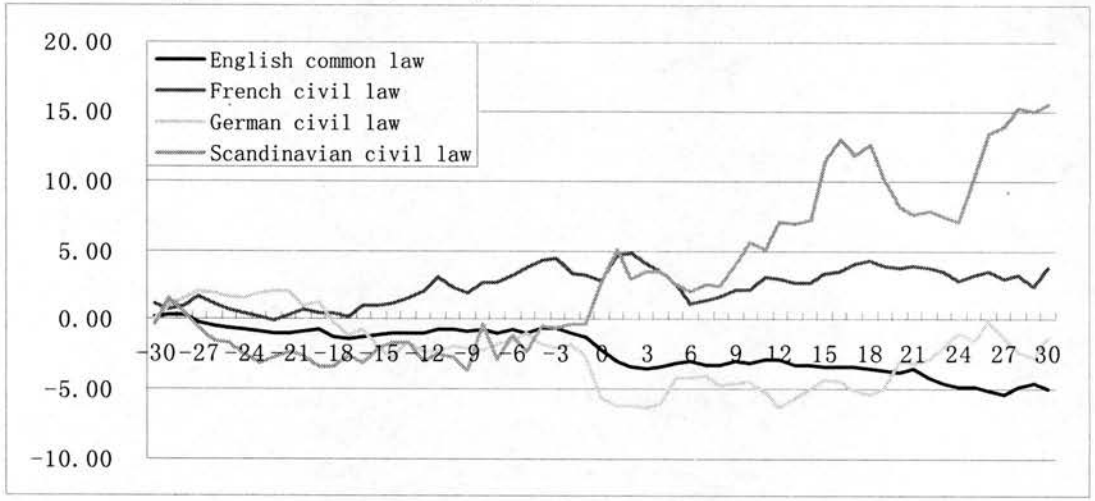
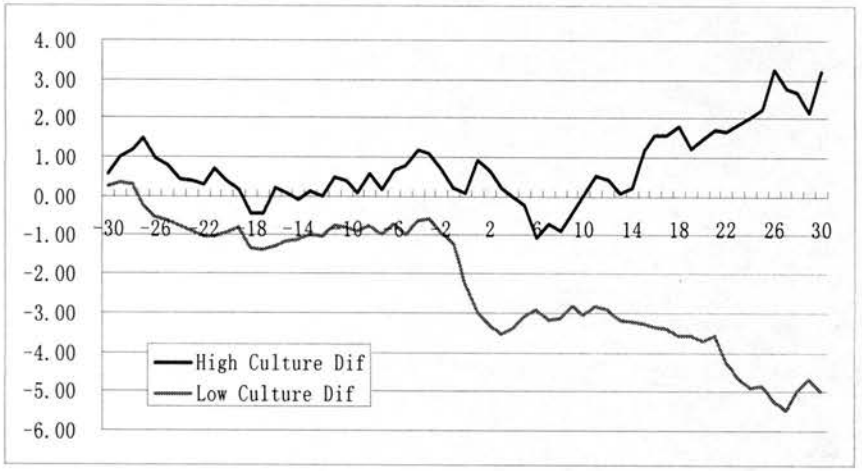


Table 6.7 Acquirers' AARs and CAARs by Culture Differences

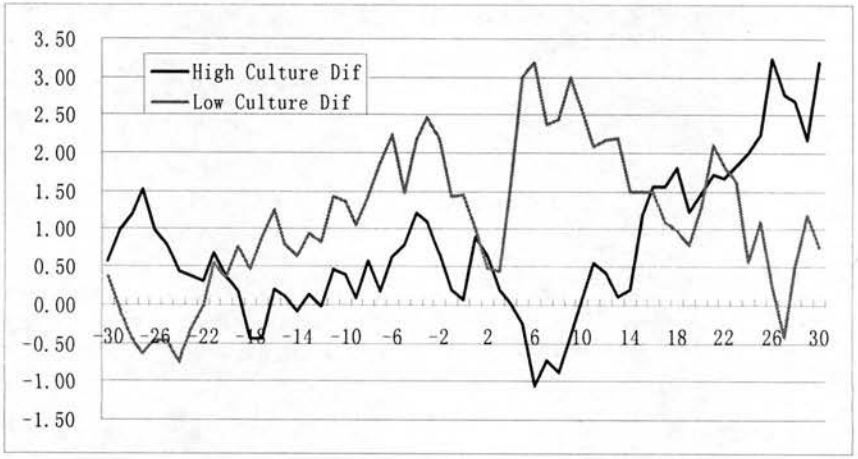
	Total						Cross-border					
	High Culture Dif N=31		Low Culture Dif N=181		Difference		High Culture Dif N=31		Low Culture Dif N=35		Difference	
Event Day	AR(%)	t-value	AR(%)	t-value		t-value	AR(%)	t-value	AR(%)	t-value		t-value
t-1	-0.49$_b$	-1.36	-0.27	-1.33	-0.22	-0.4	-0.49$_b$	-1.36	-0.79$_a$	-1.64	0.3	0.48
t	-0.13	-0.15	-1.05**$_a$	-2.33	0.76	0.66$_b$	-0.13	-0.15	0.04	0.05	-0.17	-0.15
t+1	0.84	1.08	-0.7***$_{ab}$	-2.65	1.54	2.13**$_b$	0.84	1.08	-0.44	-0.72	1.27	1.31
(-30,-1)	-0.13	-0.06	-1.24	-0.96	1.11	0.34	-0.13	-0.06	1.14	0.51	-1.27	-0.41
(-10,-1)	-0.29	-0.27	-0.43	-0.69	0.14	0.09	-0.29	-0.27	0.01	0.01	-0.30	-0.2
(-1,+1)	0.22	0.16	-2.02***$_a$	-3.30	2.24	1.41	0.22	0.16	-1.19	-1.42	1.41	0.9
(-1,+30)	2.45	0.87	-4.05***$_a$	-2.85	6.50	1.79*$_b$	2.45	0.87	-1.57	-0.62	4.02	1.06
(-10,+30)	2.62	0.84	-4.2***$_a$	-2.60	6.82	2.15**$_b$	2.62	0.84	-0.78	-0.30	3.40**$_b$	2.30
(-30,+30)	2.77	0.73	-5.02**$_a$	-2.27	7.79	1.4	2.77	0.73	0.35	0.10	2.42	0.45

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



Cross-border



- *Related/unrelated takeovers*

Our sample of 212 takeover announcements includes 117 takeovers in related industries and 95 conglomerate takeovers. Table 6.8 compares the AARs and CAARs of the acquiring firms in non-related takeovers with those in related M&As. The first set of three columns in the tables present the results for the full sample. Moreover, we compare AARs and CAARs of foreign and domestic acquiring firms. The results are exhibited in the second and third set of columns in tables. The fourth column shows t-values of the difference between the returns to foreign and domestic acquiring firms in terms of related and non-related takeovers.

On the announcement day, related takeovers have a significant loss of -1.57%, while the returns of non-related takeovers are not significantly different from zero. In the period of (-1, +1), related takeovers have a significant loss of -2.64%, which is a significantly higher loss than that of non-related takeovers. Following the takeover announcement, acquiring firms involved in related takeovers keep experiencing a significant loss. This result is consistent with the study by Gregory and McCorriston (2005) and is in line with our hypothesis that better performance is expected for unrelated takeovers that gain benefits from diversification.

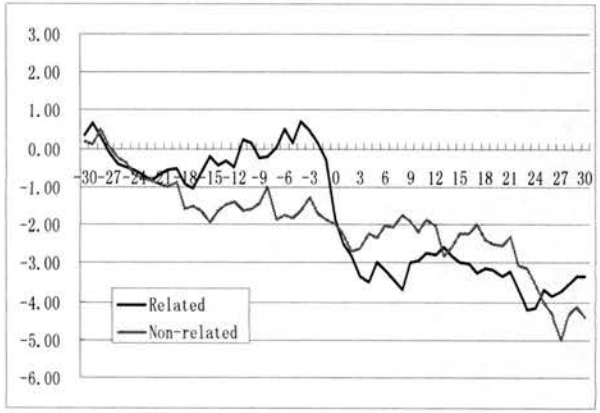
When splitting our sample into cross-border and domestic takeovers, we find a similar situation in domestic takeovers. Around the announcement day (-1, +1), CAAR of UK domestic acquirers in related takeovers is -3.21%, while domestic acquirers involved in non-related takeovers have a significant loss of -1.06%. The difference is statistically significant by using the non-parametric test. In addition, we find that, compared with foreign acquirers in non-related takeovers, UK domestic acquirers in non-related takeovers suffered significant losses: -8.14% vs. 4.49% over (-30, +30). This indicates that, around the announcement, acquirers in foreign markets have higher expectation of business expansion in the UK than domestic acquirers.

Table 6.8 Acquirers' AARs and CAARs in Related and Non-related Takeovers

	Total			Cross-border			Domestic			Difference (Cross-border vs. Domestic)	
	Related	Non-related	Difference	Related	Non-related	Difference	Related	Non-related	Difference	Related	Non-related
	N=117	N=95	t-value	N=38	N=28	t-value	N=79	N=67	t-value	t-value	t-value
Event Day	AR(%)	AR(%)		AR(%)	AR(%)		AR(%)	AR(%)			
t-1	-0.43*$_a$	-0.15	-0.77	-1.13**$_a$	0.00	-1.84*	-0.11	-0.2b	0.21	-1.83*	0.35
t	-1.57**$_a$	-0.12	-1.46$_b$	-0.28	0.27	-0.48	-2.18***$_{ab}$	-0.28	-1.43$_b$	1.13	0.53
t+1	-0.65**$_a$	-0.28	-0.73	-0.07	0.46	-0.54	-0.93**$_{ab}$	-0.58	-0.59	1.21	1.19
(-30,-1)	-0.41	-1.90	0.64	-0.74	2.27	-0.96	-0.26	-3.64*$_a$	1.12	-0.13	1.87*$_b$
(-10,-1)	-0.54	-0.24	-0.27	-0.16	-0.1	-0.04	-0.73	-0.29	-0.3	0.33	0.12
(-1,+1)	-2.64***$_{ab}$	-0.54	-1.87*$_b$	-1.44	0.71	-1.36	-3.21***$_{ab}$	-1.06$_b$	-1.47$_b$	1.04	1.06
(-1,+30)	-3.46*$_a$	-2.67	-0.3	-1.08	2.21	-0.86	-4.60*$_a$	-4.71**$_a$	0.03	0.91	1.75*
(-10,+30)	-3.57*$_a$	-2.76	1.13	-0.14	2.12	-0.52	-5.22*$_a$	-4.8**$_a$	-1.46$_b$	0.13	1.74*
(-30,+30)	-3.44	-4.42	0.25	-0.72	4.49	-0.97	-4.75	-8.14**$_a$	0.65	0.66	2.17**$_b$

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



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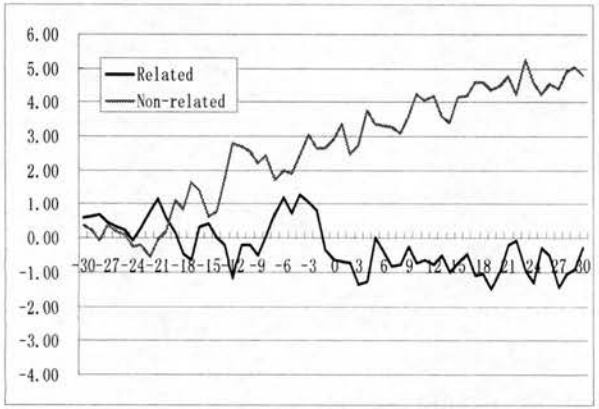
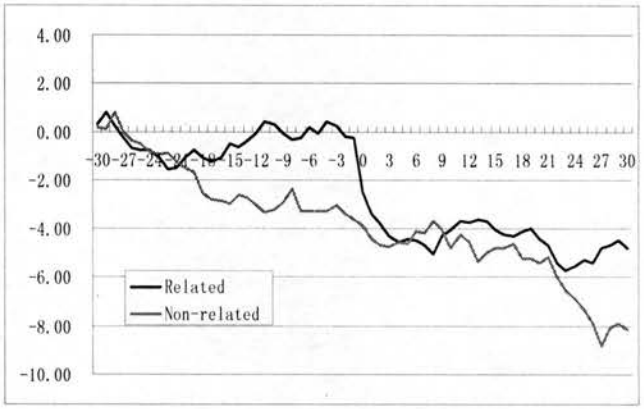


Domestic



- *High-Technology*

During our research period of 1998-2002, the global market went through a boom and collapse of the telecom sector, which is highly related to high-tech industries. The results in Table 6.9 show that, for the whole sample, high-tech acquirers suffer serious losses compared with non-high-tech acquirers.

On the announcement day, the AAR of high-tech acquirers is a significant -2.55%, which is significantly lower than the -0.37% of non-high-tech acquirers. Also, CAARs of high-tech acquirers are lower than that of non-high-tech acquirers across most windows. A significant difference exists in the periods around and following takeover announcement. For example, over the window of (-1, +30), returns to acquirers involved in high-tech takeovers was -6.99%, while acquirers involved in non-high-tech takeovers had CAARs of -1.78%. The results are in line with the findings of Gao and Sudarsanam (2003), suggesting that markets have a negative reaction to high-tech takeovers. This is consistent with our hypothesis that high risk and an uncertain future made high-tech takeovers less attractive.

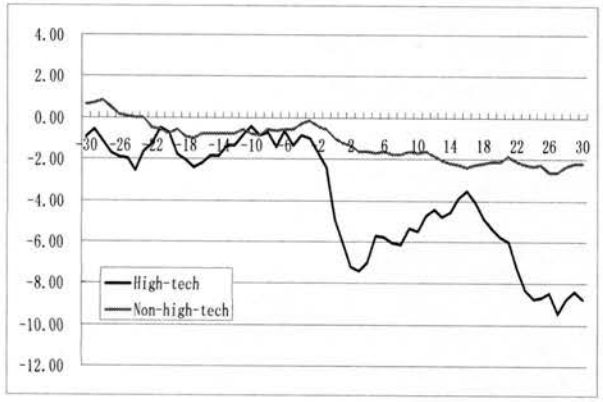
Further, we look at high-tech takeovers in cross-border and domestic M&A activities. We find that, on the announcement day, significant losses are mainly in domestic high-tech takeovers, which experience a significant -3.87%. Over the short periods following the takeover announcements, CAARs are also significant and negative, which amounts to -10.90% over (-1, +30). Domestic high-tech acquirers have significantly lower returns than cross-border high-tech acquiring firms around the announcement (-1, +1), -6.23% vs. -1.23%. This result is in line with the study of Gao and Sudarsanam (2003) that UK high-tech acquirers underperform compared with non-high-tech acquirers. This suggests that UK stock market investors may be more conservative and cautious than foreign stock market investors.

Table 6.9 Acquirers' AARs and CAARs in High-tech and Non-high-tech Takeovers

	Total			Cross-border			Domestic			Difference (Cross-border vs. Domestic)	
	High-tech N=54	N-high-tech N=158	Difference	High-tech N=21	N-high-tech N=45	Difference	High-tech N=33	N-high-tech N=113	Difference	High-tech	N-high-tech
Event Day	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	t-value	t-value
t-1	-0.67	-0.18	-1.18	-0.90	-0.53*$_a$	-0.56	-0.53	-0.04	-0.9	-0.41	-1.11
t	-2.55**$_{ab}$	-0.37	-1.73*$_b$	-0.38	0.11	-0.4	-3.87**$_{ab}$	-0.56	-1.9*$_b$	1.13	0.76
t+1	-1.1*$_{ab}$	-0.27	-1.43$_b$	0.03	0.21	-0.16	-1.83**$_{ab}$	-0.45	-1.97*$_b$	1.44	1.13
(-30,-1)	-2.15	-0.71$_b$	-0.55	0.18	0.71$_b$	-0.16	-3.63	-1.28	-0.65	0.61	0.79$_b$
(-10,-1)	-1.51	-0.03	-1.17	-0.55	0.07	-0.39	-2.12	-0.06	-1.18	0.53	0.11
(-1,+1)	-4.28***$_{ab}$	-0.81	-2.73***$_b$	-1.23	-0.2	-0.61	-6.23***$_a$	-1.06	-3.03***$_b$	1.69*	0.70
(-1,+30)	-6.99**$_{ab}$	-1.78	-1.77*$_b$	-0.84	0.85	-0.41	-10.90***$_a$	-2.82*$_a$	-2.07**$_b$	1.67	1.20
(-10,+30)	-7.82**$_a$	-1.63	-1.28$_b$	-0.49	1.43	-0.51	-12.49**$_a$	-2.85	-1.35$_b$	1.20	0.89
(-30,+30)	-8.46*$_a$	-2.31	-1.36	0.24	2.07	-0.32	-14.00*$_a$	-4.06$_a$	-1.62	1.38	1.39$_b$

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



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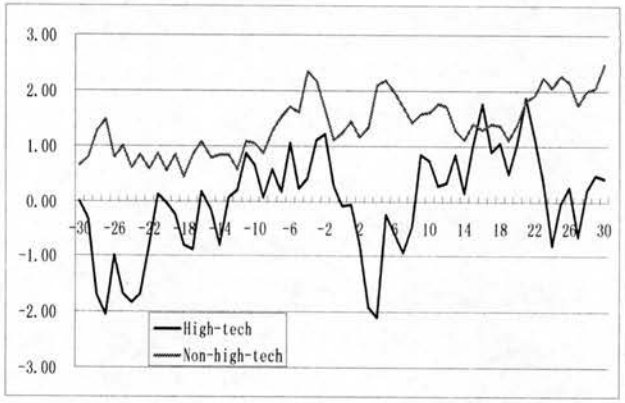
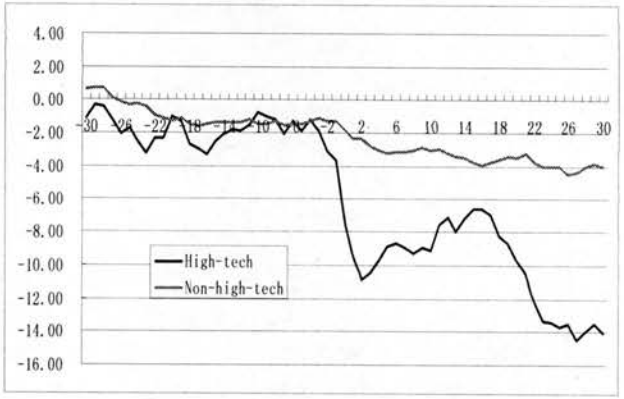


Domestic



- *Payment*

Generally, asymmetric information between the acquirers' management and outside investors may influence the choice of payment in the acquisition and the consequent market reaction to the announcement. Table 6.10 exhibits that, in acquisitions of targets financed by cash, AAR is a significant 1.05% on the announcement day, while AAR is a significant -2.12% for those equity-financed acquirers. The superior performance over (-1, +1) for acquirers in cash transactions is similar to the finding of Martynova and Renneboog (2006). This indicates that markets have positive reactions to the announcement of cash transactions. But such a situation doesn't last long. For the cash-financed acquisitions, the CAARs over the periods following announcement are significantly negative and reach -3.14% over (-1, +30). Acquirers that offered mixed payment have significant losses over two-months around the announcement, while the returns to equity-financed acquirers are not significantly different from zero over the same period.

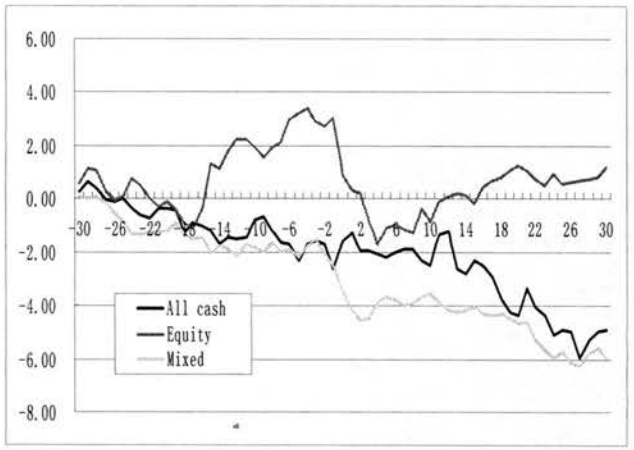
When the samples are divided into cross-border and domestic takeovers, UK domestic cash-financed acquirers mainly lost across all windows, compared with equity-financed acquirers, e.g. -11.20% vs. 1.43% over (-30, +30). For cash-financed bids, the CAARs of foreign acquirers are significantly higher than those of domestic bidders over the two-month period around takeover: 0.76% vs. -11.20% over (-30, +30). In particular, the significant gain is in the periods prior to takeover announcements: 1.84% vs. -7.64% over (-30, -1). If these changes prior to announcement are due to information leakage, this suggests that markets take the cash payment as a positive signal that foreign acquirers are confident about the takeover and the potential synergy that a UK target may bring in the future, and that the UK market doesn't consider cash as a favourable payment method for takeovers.

Table 6.10 Acquirers' AARs and CAARs by Means of Payments

	Total			Cross-border			Domestic			Difference (Cross-border vs. Domestic)		
	All cash N=38	Equity N=57	Mixed N=117	All cash N=20	Equity N=11	Mixed N=35	All cash N=18	Equity N=46	Mixed N=82			
Event Day	AR(%)	AR(%)	AR(%)	AR(%)	AR(%)	AR(%)	AR(%)	AR(%)	AR(%)	t-value	t-value	t-value
t-1	-0.91**$_a$	0.29	-0.41*	-1.3**$_a$	-0.21	-0.43	-0.49	0.41	-0.39	-0.92	-0.7	-0.07
t	1.05*$_{ab}$	-2.12*$_a$	-0.98**$_a$	1.00	-2.68$_a$	0.12	1.1**$_{ab}$	-2.00	-1.45***$_{ab}$	-0.09	-0.44	1.6$_b$
t+1	0.26	-0.56	-0.68**$_a$	-0.01	-0.39	0.41	0.55	-0.6	-1.15***$_a$	-0.48	0.15	2.17**$_b$
(-30,-1)	-2.65	2.93	-2.52*$_{ab}$	1.84	-0.44	0.11b	-7.64***$_{ab}$	3.73	-3.64**$_a$	2.52**$_b$	-0.59	1.22
(-10,-1)	-1.12	0.78	-0.75	0.62	0.53	-0.77	-3.06	0.84	-0.74	1.47	-0.1	-0.01
(-1,+1)	0.42	-2.35*$_a$	-2.06***$_a$	-0.25	-3.05***$_{ab}$	0.11	1.16$_b$	-2.18*$_a$	-2.99***$_a$	-0.8	-0.24	2.05**$_b$
(-1,+30)	-3.14$_b$	-1.49$_b$	-3.88**$_a$	-2.31	0.2	1.86	-4.05$_b$	-1.89$_b$	-6.33***$_{ab}$	0.39	0.29	2.18**$_b$
(-10,+30)	-3.38	-1.00$_b$	-4.23**$_a$	-0.46	0.94	1.51b	-6.62$_b$	-1.46$_b$	-6.68***$_a$	1.44	0.02	1.34
(-30,+30)	-4.91$_b$	1.15	-5.99**$_a$	0.76	-0.03	2.39	-11.2**$_{ab}$	1.43	-9.57***$_a$	1.92*$_b$	-0.13	2.13**$_b$

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$(2-tail)

Total



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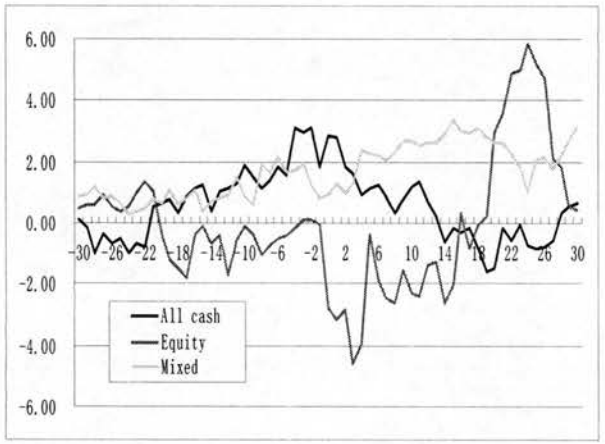
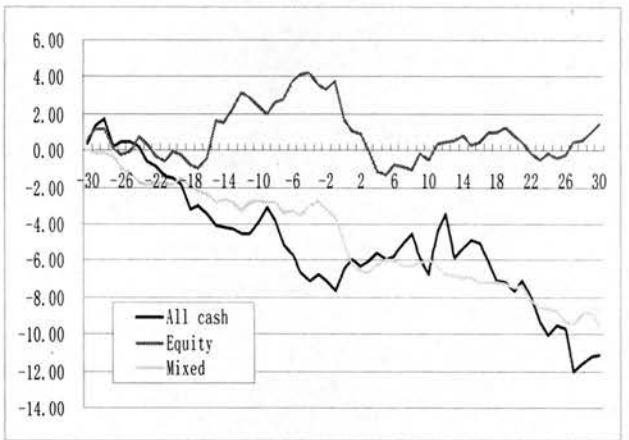


Domestic



- *Auctions*

Competing bids for the same target firm always affects the gain of bidding firms. Table 6.11 shows a comparison of AARs and CAARs in the context of a single bidder and multiple bidders. Acquiring firms involved in multiple bidding for a target always have lower abnormal returns bidders in the sample though there are not always significant. For example, on the announcement day, the single bidders have higher returns than those acquiring firms in multiple-bidding contests, -0.86% vs. -1.76%. Over the research period of (-1, +30), the CAAR to acquirers involved in multiple bids is significantly lower than that for single-bidding acquirers: -9.48% vs. -2.65%. The results are similar to the findings of Jarrell and Poulsen (1989) and are consistent with our hypothesis that multiple bidding would bid up the price of the target, which would cause unfavourable market reactions when there are multiple bidding firms.

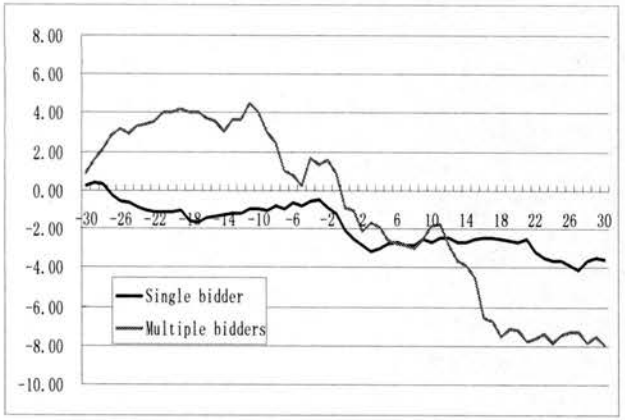
When we break the samples down into cross-border and domestic takeovers, a similar situation is found for domestic takeovers. Furthermore, single acquirers in cross-border takeovers tend to outperform those in domestic takeovers. In cross-border takeovers, single bidders experienced returns of 0.81% over (-1, +30), which is significantly higher than the return of -4.12% for those single bidders in domestic takeovers over the same period. Acquirers in multiple biddings experienced negative returns in both groups, and the returns in domestic takeovers are significantly worse than those in cross-border takeovers. Over the period of (-10, +30), the CAAR of multiple bidders in cross-border takeover is -3.99%, while multiple bidders in domestic takeover have a significant -20.78%. The difference is significant at the 10% level. This suggests that the effect of multiple bidding is stronger in domestic takeovers than cross-border takeovers. Because of information asymmetry, acquirers involved in cross-border takeovers may be more cautious than bidders in domestic takeovers.

Table 6.11 Acquirers' AARs and CAARs by Auctions

	Total			Cross-border			Domestic			Difference (Cross-border vs. Domestic)	
	Single bidder	Multiple bidders	Difference	Single bidder	Multiple bidders	Difference	Single bidder	Multiple bidders	Difference	Single bidder	Multiple bidders
	N=198	N=14		N=59	N=7		N=139	N=7			
Event Day	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	t-value	t-value
t-1	-0.28	-0.71*$_a$	-0.58	-0.62*$_a$	-0.96	-0.35	-0.14	-0.46	-0.3	-1.11	-0.61
t	-0.86**$_a$	-1.76*$_a$	-0.64	0.06	-0.9	-0.53	-1.24**$_a$	-2.63$_a$	-0.64	1.15$_b$	0.87
t+1	-0.51*$_a$	-0.15	0.35	0.13	0.3	0.1	-0.77**$_a$	-0.60	0.13	1.53	0.96
(-30,-1)	-1.19	0.47	0.36	0.27$_b$	2.86	-0.51	-1.8	-1.91	-0.02	0.79	0.73
(-10,-1)	-0.18	-3.62**$_a$	-1.56	-0.02	-1.09	0.44	-0.25	-6.15**$_a$	-1.75*$_b$	0.18	1.44
(-1,+1)	-1.63***$_a$	-2.62**$_a$	-0.44	-0.4	-1.57	0.45	-2.15***$_a$	-3.68$_a$	-0.44	1.35	0.81
(-1,+30)	-2.65**$_a$	-9.48***$_{ab}$	-1.32$_b$	0.81	-3.87	0.76	-4.12**$_a$	-15.09***$_{ab}$	-1.42$_b$	1.68*	1.69
(-10,+30)	-2.56*$_a$	-12.39***$_{ab}$	-1.18	1.39$_b$	-3.99	-0.08	-4.23**$_a$	-20.78***$_{ab}$	-1.65$_b$	1.01	2.07*
(-30,+30)	-3.57*$_a$	-8.29	-0.59	1.67	-0.04	0.2	-5.79**$_a$	-16.54*	-0.89	1.65$_b$	1.51

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



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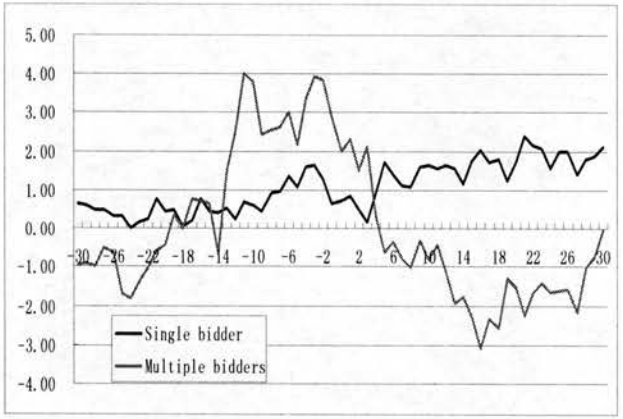
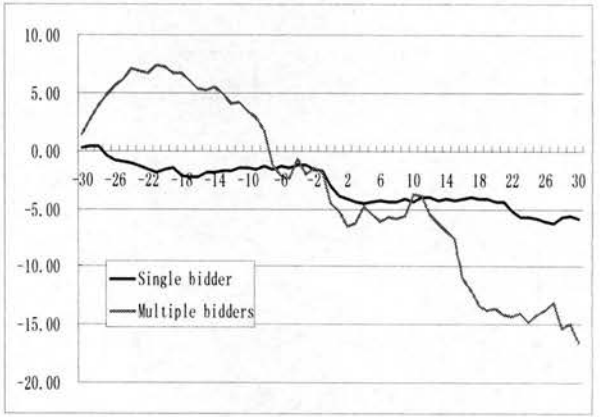


Domestic



- *Attitude*

After the boom of hostile takeovers in the 1980s, firms learnt certain lessons. "Aggressive negotiations" in hostile takeovers always lead to high bid prices, which may not be covered by the synergies generated later. In the recent M&A wave, friendly bids have become dominant. We partition all takeovers into two groups based on the target firm's attitude towards to the bid: hostile or friendly. The results are reported in Table 6.12. When friendly bids are made, acquiring firms' shareholders have a significant negative announcement return of -0.96%. The event return is not significantly different from zero for those acquirers that made a hostile bid. Over the two-month research window of (-30, +30), the CAAR on hostile bidders is -5.56%, while friendly acquirers have the significant -3.80%. The difference is not statistically significant.

We compare the market reaction to takeover attitude in cross-border and domestic takeovers. Generally, no significant difference is found between returns to hostile acquirers and friendly acquirers in both subsamples. Compared with hostile acquirers in cross-border takeovers, hostile UK domestic acquirers have significantly lower returns one day before the announcement: -1.06% vs. 0.57%.

- *Premium*

Premium is an important issue that effects the market reaction to takeover announcement. Higher premia are considered as a signal that the acquiring firm may end up paying too much for the target. Table 6.13 compares the AARs and CAARs of acquirers that paid a higher premium and those that paid a lower premium in cross-border and domestic takeovers. We classify any acquirer with a premium in the highest quartile as paying a "high premium", and any acquirer with a premium in the lowest quartile as paying a "low premium".

As we expected, acquirers that paid a high premium generally have lower AARs and CAARs than those that paid a low-premium, although the difference is not

statistically significant. For foreign acquirers, the CAAR over (-10, +1) is significantly lower for the high premium group than for the low premium group. It is consistent with our hypothesis that acquiring firms have lower returns after paying a higher premium, as suggested by Malmendier and Tate (2005). Such a difference is not significant for domestic acquirers. The difference in AARs between the high and low premium groups tends to occur before the announcement for cross-border acquirers (-2.31% vs. 0.41% on t-1), but after the announcement for domestic acquirers (-1.21% vs. 0.47% on t+1).

Summary

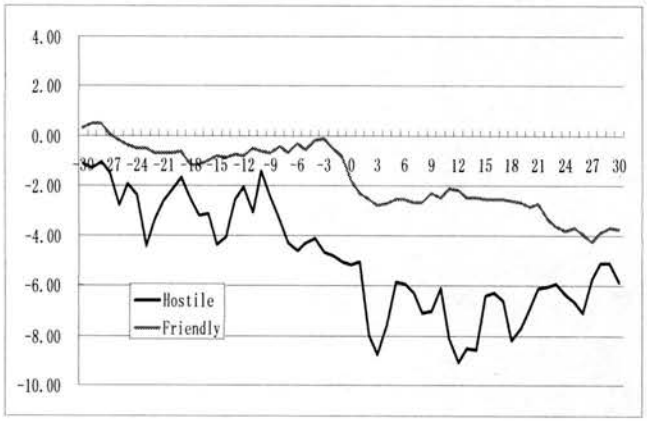
In this section, the results show that cross-border takeovers outperformed domestic takeovers, especially in the period following takeover announcement. This supports our hypothesis that acquiring firms benefit from international corporate diversification. Acquiring firms with positive returns were mainly from European countries. Further, we find that acquiring firms from countries with a Scandinavian civil law system experienced positive returns around and after takeover announcement, while acquirers in English common law systems had a significant loss over the same periods. This suggests that acquiring firms have better returns when the countries have better investor protection ((La Porta, Lopez-de-Silanes, Sheifer and Vishny (2000)). Also, acquirers from countries with high cultural differences had better stock performance than those from low cultural difference countries, indicating that markets emphasize and value the learning benefits provided by cultural differences. Related takeover and high-tech takeovers brought significant losses to acquirers around and following the takeover announcement. Acquiring firms had better returns when the transaction was financed by equity. In line with our hypothesis and most previous studies, our results show that multiple biddings led to significantly lower returns to acquiring firms. No significant difference of acquirers' gains is found between hostile and friendly takeovers in this study. These findings are more significant in domestic takeovers. In addition, we find that, in cross-border takeovers, higher premium is related to lower returns for foreign acquirers prior to the takeover announcement.

Table 6.12 Acquirers' AARs and CAARs by Attitude

	Total			Cross-border			Domestic			Difference (Cross-border vs. Domestic)	
	Hostile N=10	Friendly N=202	Difference	Hostile N=5	Friendly N=61	Difference	Hostile N=5	Friendly N=141	Difference	Hostile	Friendly
Event Day	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	t-value	t-value
t-1	-0.25	-0.31	0.07	0.57*	-0.76**$_a$	1.16	-1.06***$_{ab}$	-0.12	-0.75	3.42***$_b$	-1.51
t	-0.15	-0.96**$_a$	0.34	0.85	-0.12	0.46	-1.15	-1.31**$_a$	-0.02	0.61	1.07$_b$
t+1	0.18	-0.52**$_a$	0.58	0.71	0.1	0.33	-0.35	-0.78	0.27	0.31	1.59
(-30,-1)	-4.59	-0.9	-0.68	4.79	0.19	0.78	-13.97$_a$	-1.38	-1.53	1.74	0.62
(-10,-1)	-1.88	-0.33	-0.6	0.47	-0.18	0.23	-4.23***$_{ab}$	-0.4	-0.96	1.53	0.17
(-1,+1)	-0.21	-1.77***$_a$	0.59	2.13	-0.74	0.97	-2.56	-2.21***$_a$	-0.09	1.15	1.16
(-1,+30)	-1.23	-3.2**$_a$	0.32	5.17	-0.08	0.73	-7.62	-4.54**$_a$	-0.34	1.19	1.55
(-10,+30)	-2.86	-3.22**$_a$	0.58	5.08	0.47	1.18	-10.79	-4.82**$_a$	-0.21	1.77	0.98
(-30,+30)	-5.56	-3.8*$_a$	-0.19	9.4	0.84	0.85	-20.53	-5.8**$_a$	-1.04	1.55	1.52

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



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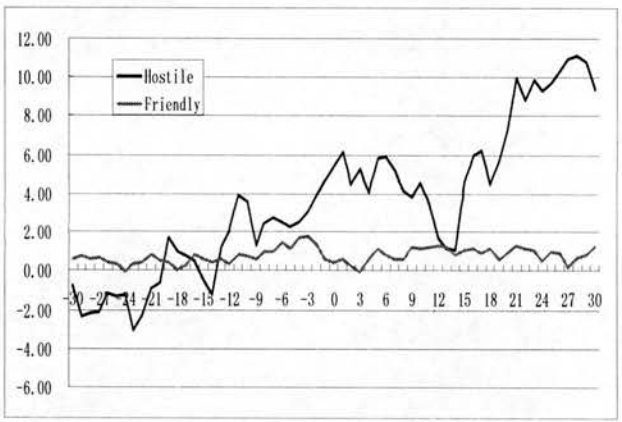

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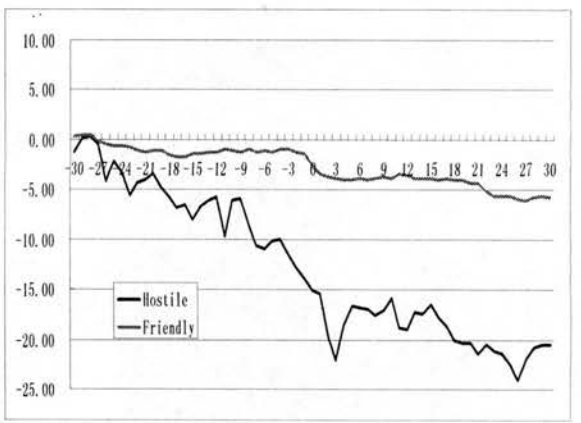
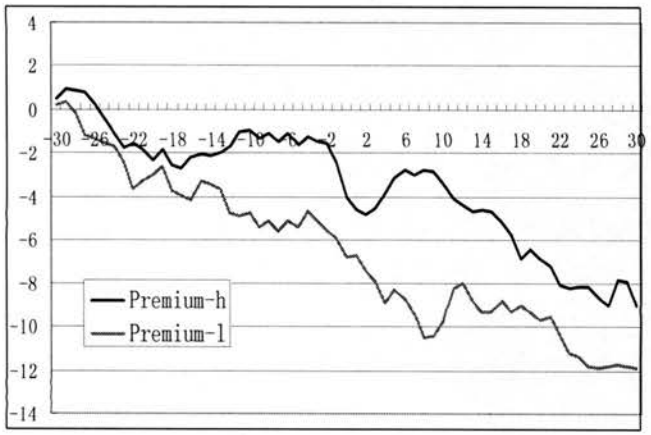


Table 6.13 Acquirers' AARs and CAARs by Premium

	Total			Cross-border			Domestic			Difference (Cross-border vs. Domestic)	
	Premium-h	Premium-l	Dif	Premium-h	Premium-l	Dif	Premium-h	Premium-l	Dif	Premium-h	Premium-l
Event Day	N=43	N=43	t-value	N=16	N=16	t-value	N=36	N=36	t-value	t-value	t-value
	AR(%)	AR(%)		AR(%)	AR(%)		AR(%)	AR(%)			
t-1	-0.9*$_a$	-0.38	0.43	-2.31***$_a$	0.14	2.49**$_b$	-0.61	-0.35	0.44	-1.78*$_b$	0.43
t	-1.61*$_a$	-0.85	0.25	-1.47	-0.07	0.64	-2.29*$_a$	-1.43	0.54	0.41	0.44
t+1	-0.56	0.03	0.85	-0.57	-0.02	0.36	-1.21$_b$	0.47	1.62$_b$	0.44	-0.37
(-30,-1)	-2.51	-5.94***$_a$	-0.64	1.88$_b$	-0.16	0.36	-5.39	-8.22***$_a$	0.3	1.17	1.42
(-10,-1)	-1.4	-1.03	0.56	-1.33	2.01$_b$	-1.28$_b$	-2.03	-2.23$_a$	-0.1	0.20	1.20
(-1,+1)	-3.01**$_a$	-1.2	0.62	-4.06**$_{ab}$	0.04	-1.71	-4.11**$_a$	-1.31	-1.12	-0.03	0.32
(-1,+30)	-7.42**$_a$	-6.32*$_a$	-0.01	-1.32	-0.16	-0.18	-11.5**$_{ab}$	-8.54*$_a$	-0.4	1.28	1.07
(-10,+30)	-7.93**$_a$	-6.97*$_a$	-1.12	-0.51	1.71	-0.78	-12.92***$_{ab}$	-10.43*$_a$	-0.58	0.97	1.28
(-30,+30)	-9.05$_a$	-11.87**$_a$	-0.36	2.7	-0.46	0.28	-16.29**$_a$	-16.41***$_a$	-0.09	1.62	1.38

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



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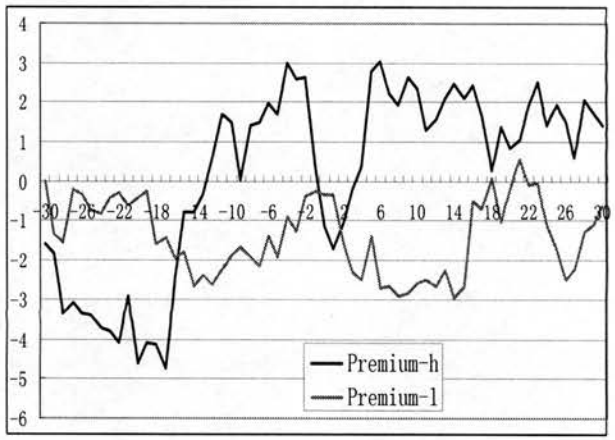
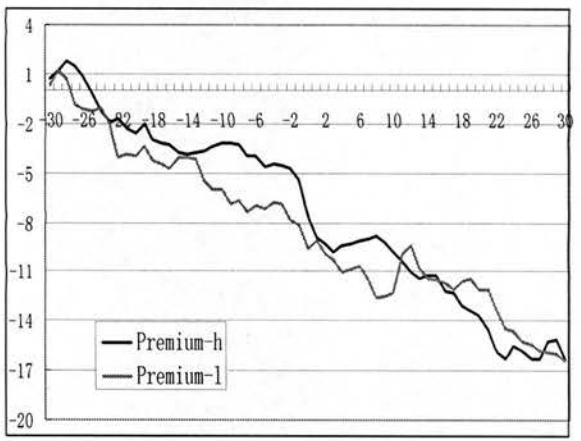


Domestic



6.3.2 Target Governance Characteristics

- *Post-takeover CEO departure*

To correct ineffective management of a target firm is one of functions of M&A activity. We examine the effect of the news of target CEO departure on the abnormal returns of acquiring firms around the takeover announcement. To capture the rumour, we check if the departure of a target CEO was either officially announced or released by the media during the period from ten days prior to announcements to takeover completion date. In such cases, these acquirers are defined as "acquirers with target CEO departure".

In our sample, 68 out of 212 acquirers are identified as having released news of the departure of the target CEO during the research period. The results in Table 6.14 show that the average announcement day return for acquirers without target CEO departure is significant at -1.02%. Also, the CAARs for acquirers without target CEO departure are generally significantly negative around and following the takeover announcement. However, over the same windows, the returns for acquirers with target CEO departure are not significantly different from zero. This is consistent with the argument that markets have a more positive reaction to acquiring firms where it has been announced that the CEO of the target firm they are acquiring will depart following the takeover, although the differences we observe are not significant.

For cross-border takeovers, the average return for acquirers without target CEO departure is significant at -1.33% over (-1, +1) around the announcement day, which is significantly lower than those with target CEO departure. A similar situation is observed for domestic takeovers, though the difference between returns for acquirers with target CEO departure and without target CEO departure is not statistically significant. The returns on cross-border acquirers are generally higher than that for domestic acquirers. In the period of (-1, +1), the CAAR of acquirers with target CEO departure is significantly higher in cross-border takeovers than that in domestic takeovers: 2.20% vs. -1.37%. This shows that, in the context of cross-border

takeovers, markets give a positive reaction for those acquirers with target CEO departure. Markets may consider that, especially for foreign acquiring firms, the ability to control the target outweighs the benefit that acquiring the target CEO may bring to the new firms.

- *Board Size*

The relation between board size and corporate performance is still very controversial. Table 6.15 shows the stock performance of acquiring firms based on a comparison of bidding for a target with a board in the largest and smallest quartiles. For the whole sample, CAARs are negative for those acquirers that bid for a small-board target over most research windows, which are always lower than returns on acquirers that bid for a big-board target. But the differences are not statistically significant. A similar situation is found in both cross-border takeovers and domestic takeovers.

Compared with cross-border acquirers, domestic acquirers experience significant losses around and following announcements, when bidding for a target with a small board. The CAAR of domestic acquirers is -13.03% over (-30, +30), which is significantly lower than that of foreign acquirers.

- *Board Composition*

In addition to board size, we examine the effect of target nonexecutives (outsiders) on acquirers' returns. These outsiders are considered to have more incentives to maximize shareholders' interest, and ensure that a good deal takes place. Table 6.16 shows the AARs and CAARs of acquirers based on a comparison of the lowest and highest quartile of outsiders on their target board.

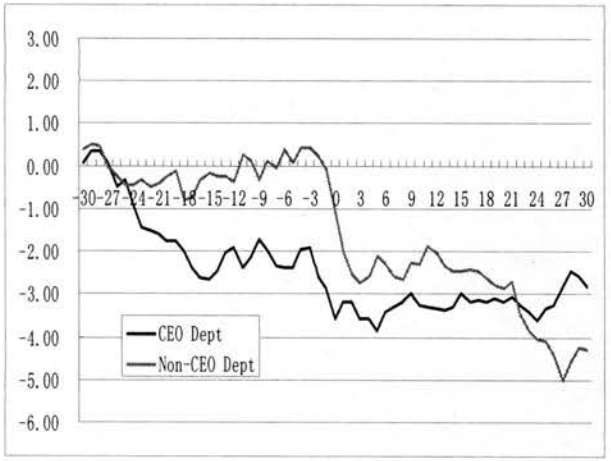
For the whole sample, CAARs of acquirers are substantially lower across all windows for bidding targets with the lowest versus highest quartile of outsiders on their board. For example, over the window of (-10, +30), the CAAR of acquirers bidding for targets in the highest quartile of outsiders on the target's board is 0.77%,

Table 6.14 AARs and CAARs of Acquirers bidding for targets with and without CEO departure

	Total			Cross-border			Domestic			Difference (Cross-border vs. Domestic)	
	CEO Dept N=68	Non-CEO Dept N=144	Difference	CEO Dept N=15	Non-CEO Dept N=51	Difference	CEO Dept N=53	Non-CEO Dept N=93	Difference	CEO Dept	Non-CEO Dept
Event Day	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	t-value	t-value
t-1	-0.27	-0.32	0.14	-0.44	-0.72$^{**}_{ab}$	0.38	-0.22	-0.11	-0.22	-0.34	-1.19
t	-0.71	-1.02$^{*}_{a}$	0.85	1.36$^{*}_{ab}$	-0.46	1.37	-1.29$^{*}_{a}$	-1.32$^{*}_{a}$	0.52	1.5$_{b}$	0.76
t+1	0.39	-0.9$^{***}_{ab}$	2.4$^{**}_{b}$	1.28	-0.19	1.27	0.14$_{b}$	-1.28$^{***}_{ab}$	2.36$^{**}_{b}$	1.19	1.65$_{b}$
(-30,-1)	-2.89$^{*}_{a}$	-0.22$_{b}$	-1.09	-1.79	1.23$_{b}$	-0.82	-3.2$^{*}_{a}$	-1.02	-0.7	0.36	0.71
(-10,-1)	-0.48	-0.37	-0.1	-0.91	0.1	-0.57	-0.36	-0.63	0.18	-0.24	0.51
(-1,+1)	-0.58	-2.22$^{***}_{a}$	1.37	2.20	-1.33$^{*}_{a}$	1.92*	-1.37$^{*}_{a}$	-2.71$^{**}_{a}$	0.88	2.02**	0.89
(-1,+30)	-0.21	-4.47$^{***}_{a}$	1.55	5.34	-1.16	1.46	-1.78	-6.29$^{***}_{a}$	1.31	1.63	1.46
(-10,+30)	-0.42	-4.52$^{**}_{a}$	1.07	4.87	-0.37	0.86	-1.92	-6.8$^{**}_{a}$	0.98	0.82	1.17
(-30,+30)	-2.83	-4.38$^{*}_{a}$	0.36	3.99	0.76	0.51	-4.76	-7.19$^{**}_{a}$	0.45	1.33	1.46

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$(2-tail)

Total



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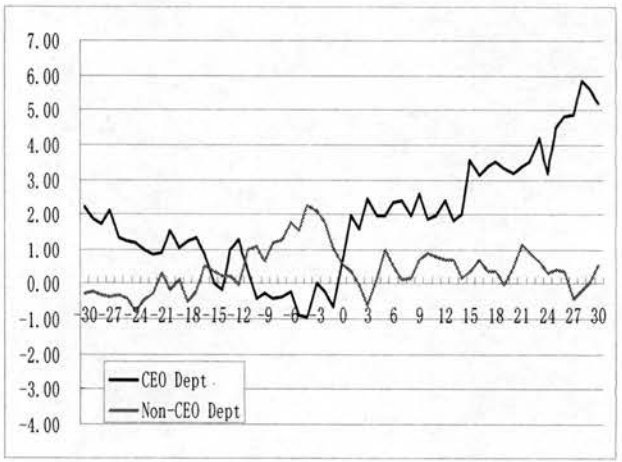


Domestic

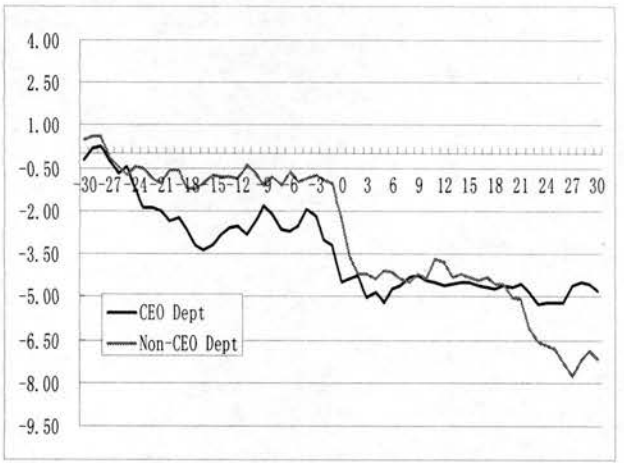
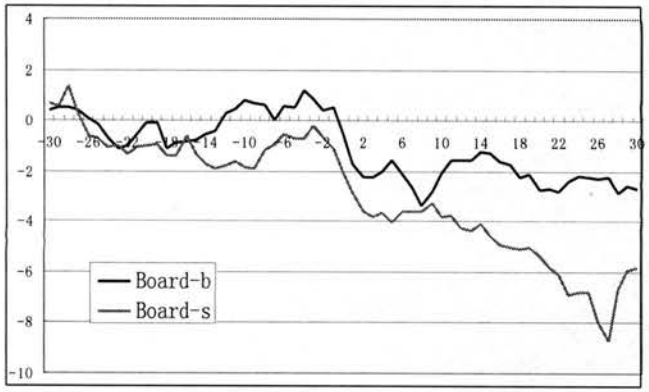


Table 6.15 AARs and CAARs of Acquirers bidding for targets with the board in the highest and lowest quartile

	Total			Cross-border			Domestic			Difference (Cross-border vs. Domestic)	
	Board-b N=43	Board-s N=43	Difference t-value	Board-b N=16	Board-s N=16	Difference t-value	Board-b N=36	Board-s N=36	Difference t-value	Board-b t-value	Board-s t-value
Event Day	AR(%)	AR(%)		AR(%)	AR(%)		AR(%)	AR(%)			
t-1	0.09	-0.47	-0.72	-0.18	-0.77	-0.67	0.21	-0.22	-0.84_b	-0.56	-0.62
t	-1.05	-0.93_a	0.5	-0.26_b	0.23	0.94	-1.29	$-1.4*_a$	-0.04	0.03	0.91
t+1	$-1.2**_a$	-0.81	0.17	$-1.97***_a$	-0.39	1.36	-0.8	$-1.14**_a$	-0.52	-1.29	0.72
(-30,-1)	0.41	-1.21	0.30	0.7	3.45	-0.96	-0.1	-4.68	0.01	0.83	1.05
(-10,-1)	0.05	0.50_b	0.16	-0.02	0.71	-0.95	0.01	0.27_b	-0.4	-0.02	0.32
(-1,+1)	-2.13	$-2.21**_a$	0.12	-2.26_a	-0.89	-0.91	-1.88	$-2.76**_a$	0.53	-0.63	0.64
(-1,+30)	-3.11	-5.19_a	-0.94	-0.85	2.42	-0.27	-3.49	$-8.57*_a$	1.32	0.06	1.22
(-10,+30)	-3.15	-4.23	1.05	-0.68	3.85	0.48	-3.69	-8.08_a	1.23	0.88	1.12
(-30,+30)	-2.79	-5.94	-0.33	0.03	6.59	-1.04	-3.8	-13.03	0.72	0.62	1.35_b

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



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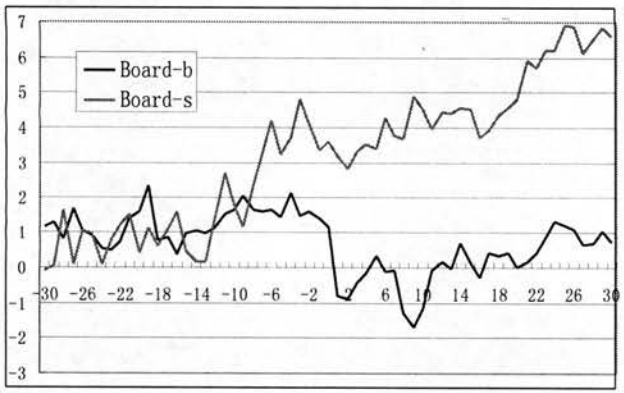


Domestic

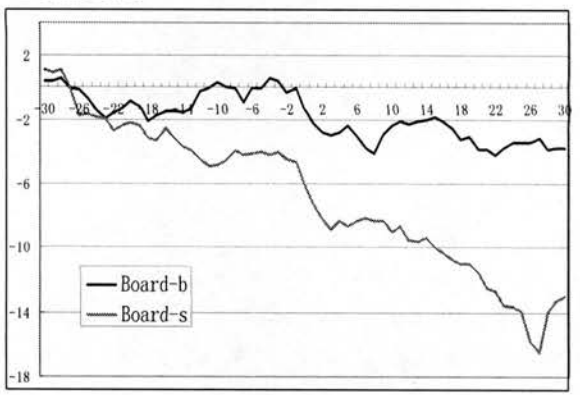
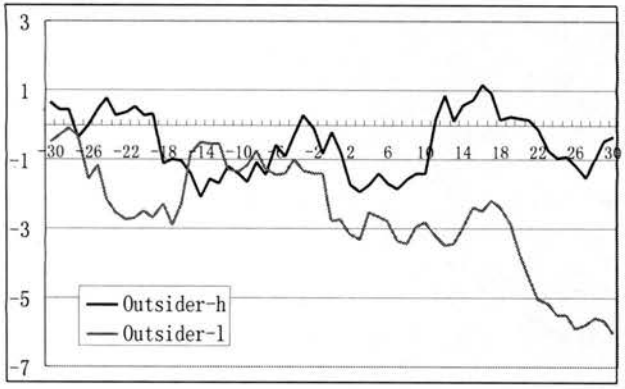


Table 6.16 AARs and CAARs of Acquirers bidding for targets with outsiders in the highest and lowest quartile

	Total			Cross-border			Domestic			Difference (Cross-border vs. Domestic)	
	Outsider-h N=43	Outsider-l N=43	Difference	Outsider-h N=16	Outsider-l N=16	Difference	Outsider-h N=36	Outsider-l N=36	Difference	Outsider-h t-value	Outsider-l t-value
Event Day	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value		
t-1	-0.72	-0.02	1.00	-1.55*$_a$	0.23	-1.5	-0.33	-0.11	0.22	-1.44	0.36
t	0.62	-1.39	-1.53$_b$	2.12*$_{ab}$	-0.74	1.77*	-0.39	-1.73	1.38$_b$	0.88	0.74
t+1	-0.56	0.04	0.66	-1	2.2$_a$	-1.54$_b$	-0.37	-0.89	0.63	-0.36	2.17**$_b$
(-30,-1)	-1.01	-1.34	-0.87	5.07**$_{ab}$	-0.56$_b$	1.67	-2.87	-1.46	0.06	1.87*$_b$	0.01
(-10,-1)	0.34$_b$	-0.17	-1.35$_b$	2.12$_b$	2.44$_b$	0.39	-0.02	-1.26	0.73	0.66	0.81
(-1,+1)	-0.66	-1.37	-0.34	-0.43	1.67	-0.65	-1.1	-2.73	1.27	-0.09	1.64
(-1,+30)	-0.29	-4.58	-1.83*	2.41	6.33	-0.19	-1.19	-9.75**$_a$	2.31**$_b$	0.19	1.81*$_b$
(-10,+30)	0.77$_b$	-4.73	1.71**$_b$	6.08	8.56$_b$	0.58	-0.88	-10.9*$_a$	1.84*	0.67	1.13
(-30,+30)	-0.58	-5.9	-1.69*$_b$	9.03**$_a$	5.56	0.76	-3.73	-11.09	1.32$_b$	1.45	1.01

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



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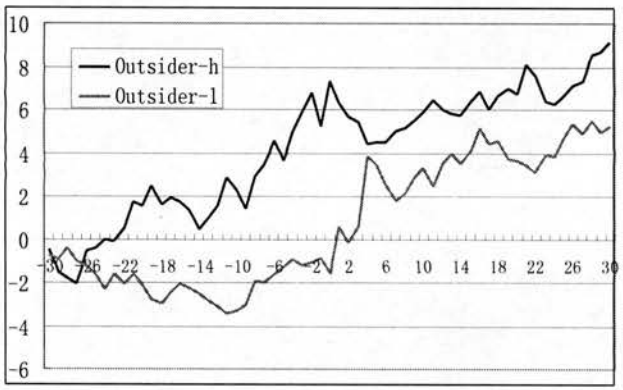


Domestic

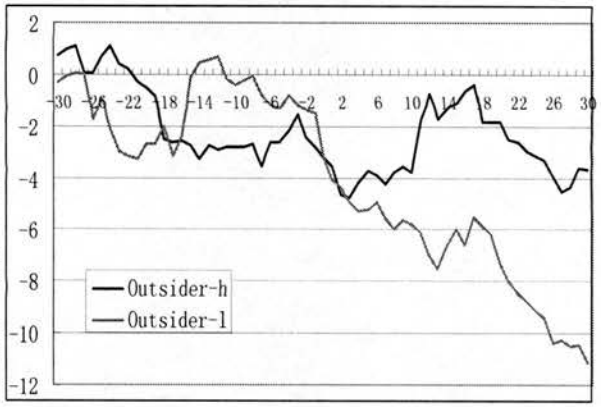
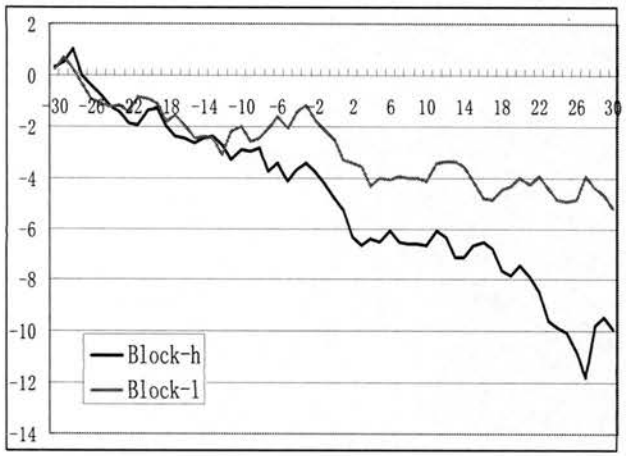


Table 6.17 AARs and CAARs of Acquirers bidding for targets with blockholder ownership in the highest and lowest quartile

	Total			Cross-border			Domestic			Difference (Cross-border vs. Domestic)	
	Block-h N=43	Block-l N=43	Difference t-value	Block-h N=16	Block-l N=16		Block-h N=36	Block-l N=36		Block-h t-value	Block-l t-value
Event Day	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value		
t-1	-0.42	-0.36	0.56	-1.1	-0.63	-0.34	-0.43	-0.35	-0.8	-0.16	-0.32
t	-0.56	-0.42	0.29	0.66	0.55	0.16	-0.98	-0.98	-0.21	1.13	0.53
t+1	-0.47	-0.78	-0.25	1.87	-0.42	1.4	-1.46**$_a$	-0.78	-0.57	2.12**$_b$	0.24
(-30,-1)	-4.24*$_a$	-2.18	1.56$_b$	-0.45	0.42	-0.7	-5.74*$_a$	-3.8	-1.12$_b$	1.65	0.95
(-10,-1)	-0.9$_b$	0.04$_b$	1.12	3.02$_b$	-0.17	1.28	-2.59	0.02	-1.5$_b$	2.2**$_b$	0.09
(-1,+1)	-1.46	-1.56	0.27	1.42	-0.5	0.75	-2.87*$_a$	-2.1	-0.6	1.73*	0.38
(-1,+30)	-6.09*$_a$	-3.38	0.68	-0.37	0.25	-0.2	-9.89**$_a$	-5.34	-0.74	1.28	0.95
(-10,+30)	-6.57$_a$	-2.98$_b$	-0.58	3.75	0.71	-0.24	-12.05**$_a$	-4.97	-0.44	1.07	0.99
(-30,+30)	-9.91**$_a$	-5.2	1.22$_b$	0.28	1.31	-0.47	-15.2**$_a$	-8.79	-1.03	1.78*$_b$	1.18

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



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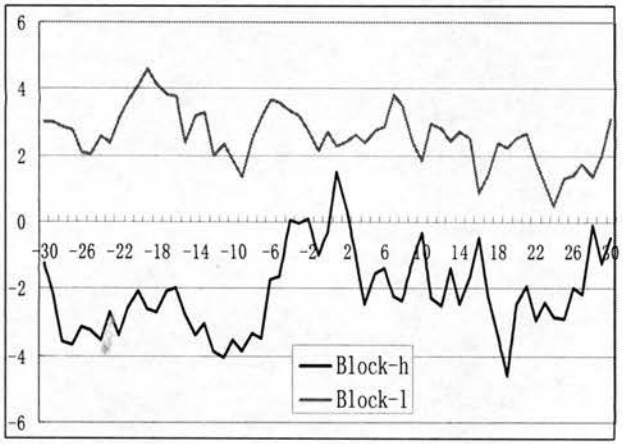
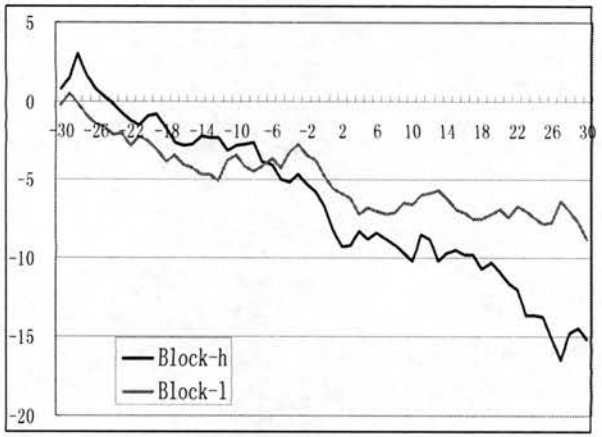


Domestic



while the CAAR for bidding targets with the lowest quartile of outsiders on the target's board is -4.73%. The difference is statistically significant. The results strongly support our hypothesis that outsiders promote the shareholders' interests and make sure that the right decision is made, which leads to positive market reactions.

When the samples are separated into cross-border and domestic takeovers, we find a similar situation mainly in domestic takeovers. Also, when acquiring targets within the lowest quartile of outsiders on their board, domestic acquirers have significantly lower CAARs than foreign acquirers: -9.75% vs. 6.33% over (-1, +30). This shows that the UK market may be less confident about the transactions, if target firms have poor corporate governance, which may lead to a "bad" deal.

- *Blockholder Ownership*

We also examine the returns to acquiring firms based on a comparison of their targets with the highest and lowest quartile of blockholder ownership. The results are reported in Table 6.17.

For the whole sample, CAARs of acquiring firms are significant and negative across most windows when bidding targets are within the highest quartile of blockholder ownership. But CAARs of acquirers bidding for target within the lowest-quartile of blockholders are not different from zero. The difference is found to be statistically significant by non-parametric tests over windows of (-30, -1) and (-30, +30).

When the samples are split into domestic and cross-border takeovers, a similar situation is found for domestic takeovers. Our results suggest that acquiring firms might have to pay a high premium to targets with high blockholder ownership, which leads to very negative returns for acquiring firms. Also, when bidding for targets with the highest quartile of blockholder ownership, the returns for foreign acquirers are significantly higher than returns for UK domestic acquirers across most research windows.

Summary

The results of tests in this section show that some target governance characteristics are related to the returns of acquiring firms around the takeover announcement. When the rumour or news of target CEO departure was released around takeover announcements, acquirers normally had better performance. Those acquirers without target CEO departure experienced significant and negative returns around and following takeover announcement. This is consistent with our hypothesis and indicates that markets have better reactions for those acquiring firms that dismiss the target CEO. In addition, acquiring firms had significantly higher returns around announcement when their target boards had a higher proportion of nonexecutives. This implies that target outsiders may be expected to be more objective in evaluating the costs and benefits of an acquisition decision and make a good deal happen, which is in line with our hypothesis. However, target blockholders sometimes have myopic investment objectives, as suggested by Kohers and Kohers (2000). They may even ask for higher premia, which leads to the loss of the acquiring firm. Our results provide evidence that, when bidding for targets with high blockholder ownership, acquirers' returns were significantly negative, and also significantly lower than those of firms bidding for low blockholder-owned targets. There are no significantly different returns for acquirers between bidding for targets with the board in the biggest and smallest quartile. Again, the findings are more significant in domestic takeovers.

6.3.3 Target Firm Characteristics

- *Pre-takeover performance*

We examine the effect of target pre-takeover performance on the returns for bidding firms around the takeover announcement. The industry-adjusted ROA (IAROA) is employed to measure the performance of each target firm one year prior to the takeover announcement. The top group is target firms that are in the best quartile of

IAROA, while the bottom group includes targets within the lowest quartile of IAROA. The results are reported in Table 6.18.

On the announcement day, the average AR is significant at -1.09% for acquirers where the target is in the lowest performance quartile, while the average AR is not significantly different from zero for acquirers that bid for the best-performing targets. Generally, CAARs of acquirers are significant and negative around and following the announcement, when acquiring firms bid for target firms in the lowest quartile of IAROA. But the difference between the CAARs of acquirers for the best- and worst-performing targets is not statistically significant.

When comparing the cross-border and domestic takeovers, we find that, in cross-border takeover over the period of (-5, -1), the returns for foreign acquirers that bid for the best-performing targets are significantly higher than those for acquirers that bid for the worst-performing targets: 1.19% vs. -2.37%. This supports our hypothesis that markets are more confident on bidding for the better-performing targets. But we find no such significant difference in domestic takeovers. Moreover, when bidding for targets with the top pre-takeover performance, the returns for foreign acquirers are always higher than those for domestic acquirers. The difference is statistically significant over the window of (-10, -1) and (-10, +30). A similar situation is found over (-30, -1) and (-30, +30) when bidding for the worst-performing targets.

- *Pre-takeover Leverage*

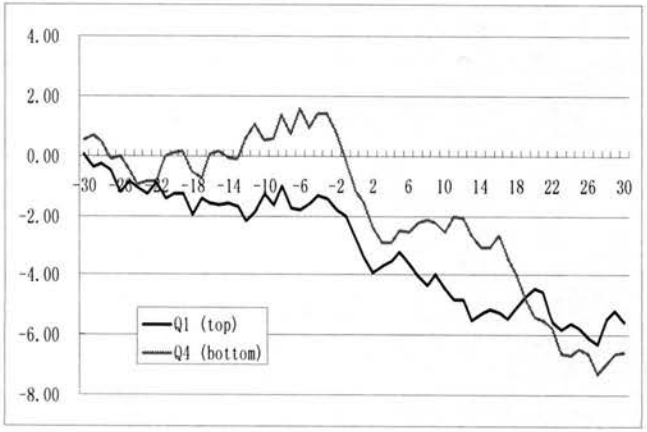
Table 6.19 exhibits comparisons of market reactions for acquiring targets in extreme quartiles of leverage. The acquiring firms experienced consistently and significantly negative returns over the two-month research period (-30, +30), when bidding for target firms in the highest leverage quartile. But the difference between the high and low groups is significant only over (-10, -1): -1.42% vs.1.56%. This is consistent with our hypothesis that the high level of debt makes the market doubt if the transaction is worthwhile or if the debt could be paid off by the synergies in the

Table 6.18 AARs and CAARs of Acquirers bidding for targets with pre-takeover performance in the highest and lowest quartile

	Total			Cross-border			Domestic			Difference (Cross-border vs. Domestic)	
	Q1 (top) N=53	Q4 (bottom) N=53	Difference	Q1 (top) N=16	Q4 (bottom) N=16	Difference	Q1 (top) N=36	Q4 (bottom) N=36	Difference	Q1 (top)	Q4 (bottom)
Event Day	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	t-value	t-value
t-1	-0.23	-0.91*$_a$	1.1	0.24	-1.72*$_a$	1.87*	-0.46	-0.42	-0.04	0.79	-1.26
t	-0.75	-1.09*$_a$	0.31	-0.73	1.52$_b$	-1.28	-0.78	-1.67*$_a$	0.65	0.03	2.01**$_b$
t+1	-0.62	-0.33	-0.37	1.34	-0.62	1.35	-1.52***$_a$	-0.1	-1.54$_b$	2.62**$_b$	-0.4
(-30,-1)	-2.03	-0.18	-0.49	-0.66$_b$	5.47*$_a$	-1.41	-2.95	-2.49	-0.09	0.45	1.21$_b$
(-10,-1)	-0.14$_b$	-1.1	0.61	2.05$_b$	1.61	0.2	-1.15	-1.73	0.27	1.55$_b$	1.17
(-5,-1)	-0.19	-1.65*$_a$	1.30	1.19$_b$	-2.37$_a$	2.01*$_b$	-0.82	-1.34	0.37	1.42	-0.52
(-1,+1)	-1.6	-2.31**$_a$	0.44	0.85	-0.72	0.65	-2.75**$_a$	-2.19	-0.27	1.46	0.6
(-1,+30)	-3.75$_b$	-7.35**$_a$	0.88	1.4	-0.88	0.39	-7.28**$_{ab}$	-9.12**$_{ab}$	0.36	1.5	1.27
(-10,+30)	-3.66	-7.56**$_a$	0.88	3.21	2.35	1.1	-7.97**$_a$	-10.43**$_a$	0.37	1.97*	1.19
(-30,+30)	-5.55	-6.64	0.16	0.5	6.21	-0.74	-9.77*$_a$	-11.19$_a$	0.16	1.11	1.59$_b$

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



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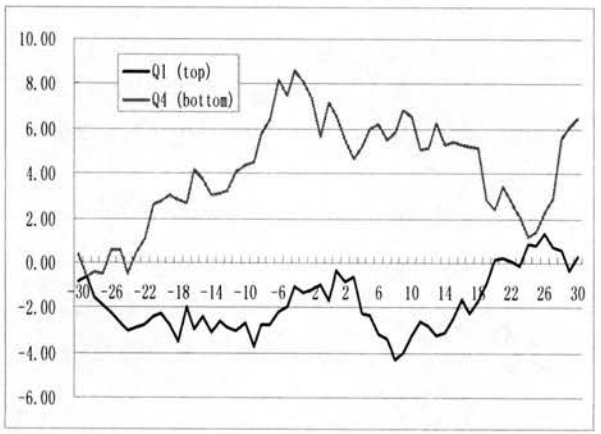

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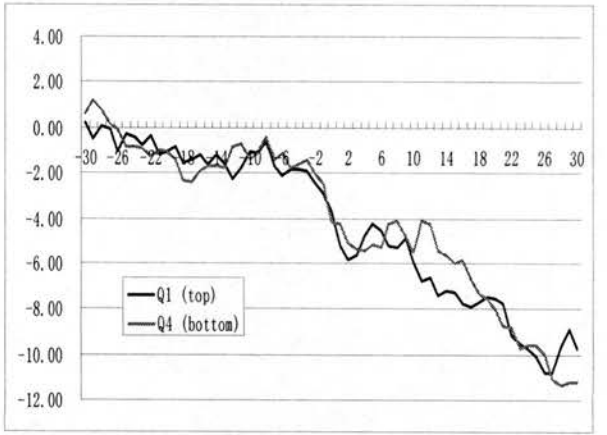
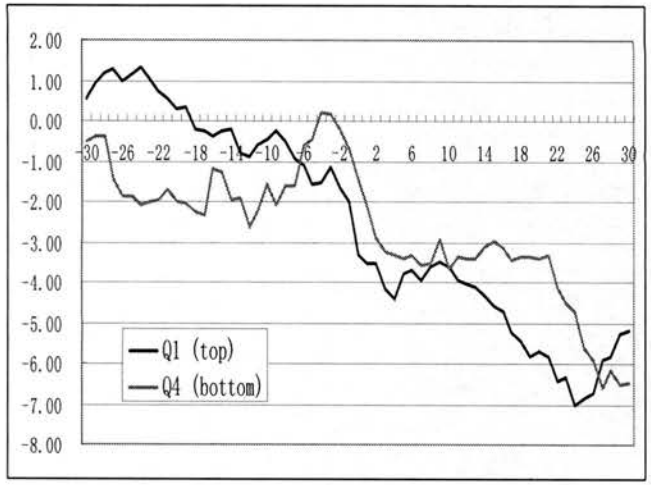


Table 6.19 AARs and CAARs of Acquirers bidding for targets with pre-takeover leverage in the highest and lowest quartile

	Total			Cross-border			Domestic			Difference (Cross-border vs. Domestic)	
	Q1 (top) N=53	Q4 (bottom) N=53	Difference	Q1 (top) N=16	Q4 (bottom) N=16	Difference	Q1 (top) N=36	Q4 (bottom) N=36	Difference	Q1 (top)	Q4 (bottom)
Event Day	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	t-value	t-value
t-1	-0.34	-0.44	0.18	-0.89*$_{a}$	-1.88**$_{ab}$	0.99	-0.07$_{b}$	0.08	-0.24	-1	-2.15**$_{b}$
t	-1.30*$_{a}$	-0.77	-0.96	0.37	-1.22	0.9	-2.17***$_{a}$	-0.91	-1.44$_{b}$	1.66	-0.58
t+1	-0.24	-0.63	0.71	0.86$_{b}$	-1.19*$_{a}$	2.13**$_{b}$	-0.97*$_{a}$	-0.46	-0.71	2.04**$_{b}$	-0.83
(-30,-1)	-2.14	-0.58	-0.47	-1.13	1.73	-0.58	-2.38	-1.56	-0.19	0.34	0.52
(-10,-1)	-1.42	1.56	-2.04**$_{b}$	-2.02*$_{a}$	1.79**$_{a}$	-2.55**$_{b}$	-1.12	1.46	-1.27	-0.41	0.14
(-1,+1)	-1.85*$_{a}$	-1.83	-0.01	0.26	-4.17***$_{ab}$	2.81***$_{b}$	-3.21**$_{a}$	-1.29	-0.93	1.65$_{b}$	-1.14$_{b}$
(-1,+30)	-3.51*$_{a}$	-6.2***$_{a}$	0.88	0.79	-6.74**$_{a}$	1.53	-6.08**$_{ab}$	-6.17**$_{a}$	0.02	1.51	-0.11
(-10,+30)	-4.59**$_{a}$	-4.21$_{a}$	0.77	-0.34	-3.2	0.14	-7.13***$_{a}$	-4.8	0.55	0.57	0.91
(-30,+30)	-5.31*$_{ab}$	-6.35	0.21	0.55$_{b}$	-3.26	0.51	-8.39***$_{ab}$	-7.82	-0.09	1.49	0.49

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



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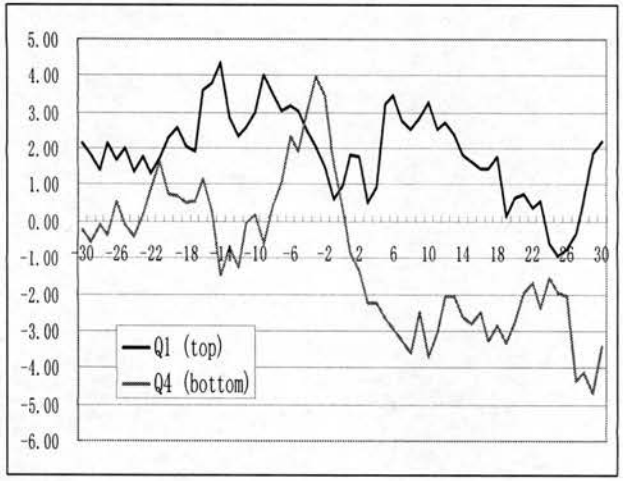


Domestic

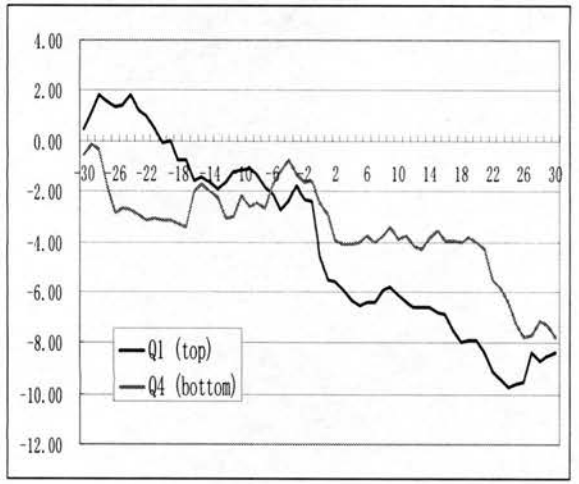


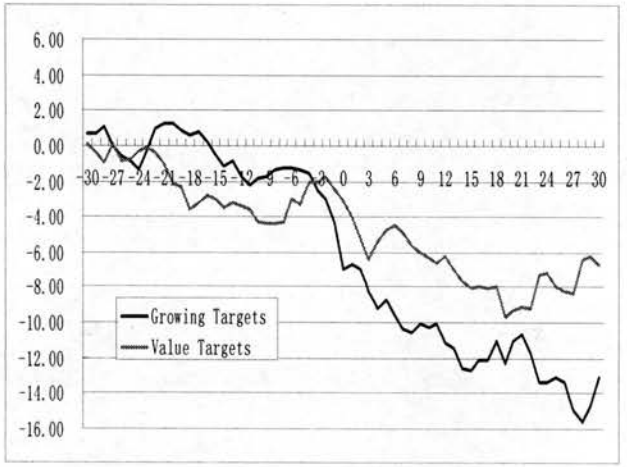
Table 6.20 AARs and CAARs of Acquirers bidding for growth and value targets

	Total			Cross-border			Domestic			Difference (Cross-border vs. Domestic)	
	Growth Target N=42	Value target N=42	Difference	Growth Target N=13	Value target N=13	Difference	Growth Target N=29	Value target N=29	Difference	Growth Target	Value target
Event Day	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	t-value	t-value
t-1	-0.99**$_a$	-0.68	-0.48	-1.29$_a$	-0.73$_a$	-0.52	-0.64	-0.61	-0.03	-0.62	-0.13
t	-1.70	-0.97	-0.54	-2.66**$_a$	-0.68	-0.91	-1.12	-1.29	0.1	-0.65	0.33
t+1	0.26	-0.85	1.35	0.29	-0.83	0.85	0.13	-1.42**$_a$	1.63	0.13	0.53
(-30,-1)	-4.95**$_a$	-0.75	-1.08	-4.84	-2.5	-0.42	-6.37**$_a$	1.10	-1.50	0.3	-0.55
(-10,-1)	-2.92***$_a$	-0.64	-1.40$_b$	-2.09	1.05	-1.33	-2.83*$_a$	-0.69	-0.97	0.3	0.64
(-1,+1)	-2.38*$_a$	-2.49*$_a$	0.06	-3.66***$_a$	-2.24	-0.65	-1.63	-3.32*$_a$	0.64	-0.64	0.39
(-1,+30)	-6.32***$_{ab}$	-2.59	-1.21	-9.84***$_{ab}$	-4.83*$_a$	-1.14	-4.67	-2.37	-0.59	-1.00	-0.62
(-10,+30)	-8.26***$_{ab}$	-2.56	-1.54	-10.65***$_a$	-3.05	-0.59	-6.86**$_a$	-2.45$_b$	-1.21	0.22	-0.11
(-30,+30)	-10.29**$_a$	-2.66$_b$	-1.30	-13.39**$_{ab}$	-6.6	-0.86	-10.4**$_a$	-0.66$_b$	-1.29	-0.35	-0.65

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total

Cross-border



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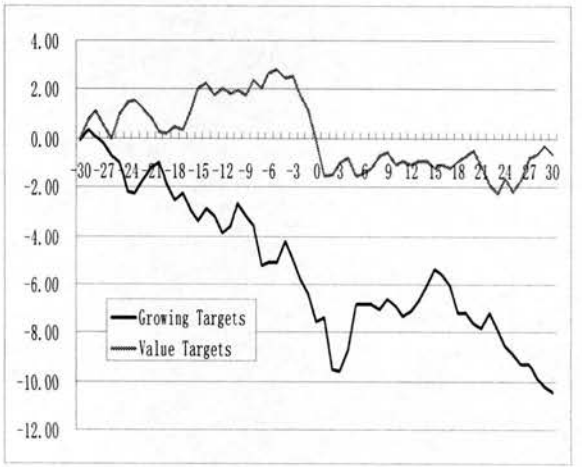


future. This mainly exists in cross-border takeovers prior to the takeover announcement.

Compared with foreign acquirers, domestic acquiring firms make significantly larger losses when they bid for the highest-leverage-quartile targets: -3.21% vs. 0.26% over (-1, +1). But foreign acquirers have significantly lower returns than domestic acquirers over (-1, +1): -4.17% vs. -1.29%, when bidding for targets in the lowest leverage quartile.

- *Book-to-market Ratios of Targets*

The potential growth opportunities of target firms are very important for acquirers. We use the market-to-book ratio to measure the growth potential of target firms, which may explain the variance of stock returns to acquirers (Fama and French (1992)). Following Conn et al. (2005), targets are classified as "value" if their market-to-book ratio is in the lowest quartile, and as "growth" if in the highest quartile.

The results in Table 6.20 show that acquirers bidding for growth targets experience significant and negative returns over the two-month period around the takeover announcement. The non-parametric statistics tests show that the returns for acquirers bidding for growth targets are significantly lower than those for acquirers that bid for value firms: -2.92% vs. -0.64% but only over (-10, -1). This suggests that markets place higher values on the takeovers of value firms and may think that growth targets are more risky or that acquirers pay too much for growth targets. In addition, we find no significant difference between cross-border takeovers and domestic takeovers.

Summary

We find no significantly different returns for acquiring firms between bidding for targets in the best quartile and the worst quartile of pre-takeover performance. Acquiring firms had significant positive returns when bidding for targets with pre-

takeover leverage in the highest quartile, and it is significantly higher than those bidding for targets with leverage in the lowest quartile. This is mainly observed in cross-border takeovers prior to the takeover announcement. In addition, acquiring firms experienced very strong and significant negative returns when bidding for growth targets, and these returns are significantly lower than those earned by acquirers bidding for value targets shortly prior to the takeover announcement.

6.3.4 Acquiring Firm Characteristics

- *Book-to-market Ratios of Acquirers*

We examine the effect of acquirer types on the returns of acquirers around the announcement period. Table 6.21 reports the results. For the whole samples, both growth and value acquiring firms have significant and negative returns on the announcement day: -1.76% and -1.26% respectively. A significant difference is found on the day before the announcement: -0.66% vs. -0.02%. This supports our hypothesis and suggests that markets place less value on growth acquirers than value acquirers. No significant difference is found for CAARs between the two groups.

When we separate the cross-border and domestic takeovers, the results show that the foreign value acquirers have significant and positive returns in the run-up period and the announcement period: 2.08% over (-10, -1) and 2.47% over (-1, +1). The returns of foreign value acquirers around the announcement date are significantly higher than those for UK domestic value acquirers: 2.47% vs. -2.37% over (-1, +1). This refines the above findings that foreign markets are more confident about takeovers by value acquirers.

Moreover, we find that domestic growth acquirers experience significant and negative returns around and following the announcement periods, e.g. -4.02% over (-1, +1) and -6.60% over (-1, +30). Growth acquirers have the significantly lower returns than value acquirers over (-10, +30): -6.44% vs. 1.29%. Our findings are similar to the results of Conn et al. (2005). These suggest that the UK market is

uncertain as to whether takeovers by growth acquirers may lead to some disadvantage, such as the hubris and overpayment of growth acquirers (Sudarsanam and Mahate (2003), Rau and Vermaelen (1998)). Additionally, domestic growth acquirers have significant lower returns than foreign growth acquirers over (-1, +30): -6.60% vs. 4.41%.

- *Size differential rate*

The size difference between target and acquirer is always considered as an important variable that affects the returns of the acquiring firms (Jarrell and Poulsen (1989), Kohers and Kohers (2000)). We divide the whole sample into three groups based on the ratio of the total asset of target-to-acquirers (R): $R \leq 0.1$, $0.1 < R \leq 0.5$, $R > 0.5$.

The results in Table 6.22 show that when the ratio of target to acquirers is greater than 0.5, the AR of acquirers is significant and negative at -1.73% on the announcement day. Such significant losses are across all research windows and amounts up to -9.94% over (-30, +30). No significant returns are found for other groups of acquiring firms with $R \leq 0.1$ and $0.1 < R \leq 0.5$. This is consistent with our hypothesis and shows that markets have negative reactions to acquiring firms that bid for relatively bigger targets. This suggests that markets may be less confident about acquirers integrating with big targets, which implies greater complexity of acquiring bigger targets.

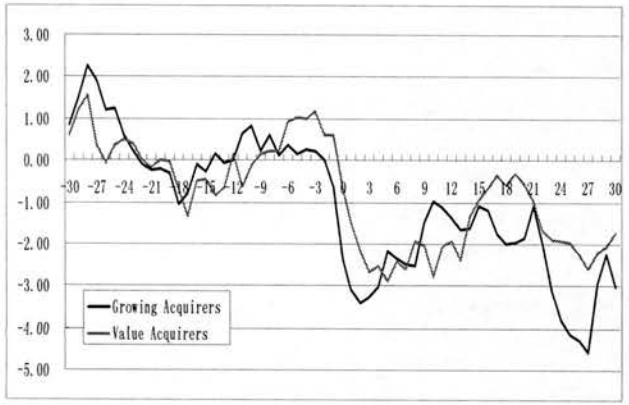
When we break down the sample to cross-border and domestic takeovers, similar results are found in domestic takeovers. In contrast, foreign acquirers with $R > 0.5$ experience significant gain of 4.85% over (-1, +30) and 4.64% over (-30, +30). Generally, these returns are significantly higher than that for domestic acquirers with $R > 0.5$. This result suggests that foreign markets have positive reactions to the acquisition of relatively big UK targets.

Table 6.21 Acquirers' AARs and CAARs by growth and value acquirers

	Total			Cross-border			Domestic			Difference (Cross-border vs. Domestic)	
	Growth Aqur N=42	Value Aqur N=42	Difference	Growth Aqur N=13	Value Aqur N=13	Difference	Growth Aqur N=29	Value Aqur N=29	Difference	Growth Aqur	Value Aqur
Event Day	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	t-value	t-value
t-1	-0.66*$_b$	-0.02	-1.16$_b$	-0.43	0.31	-0.82	-0.75$_b$	-0.22	-0.73	0.36	0.59
t	-1.76*$_a$	-1.26**$_a$	-0.47	-1.45	0.47	-0.81	-2.19*$_a$	-1.18**$_a$	-0.76	0.35	1.14$_b$
t+1	-0.68$_b$	-0.82*$_a$	0.22	1.29$_a$	1.69	-0.21	-1.08*$_{ab}$	-0.98*$_a$	-0.13	2.11**	2.11**$_b$
(-30,-1)	-0.88	0.56$_b$	-0.37	1.65	3.38	-0.3	-2.48	-0.24	-0.45	0.79	0.56
(-10,-1)	-1.26	1.21	-1.57	-1.65	2.08$_b$	-1.35	-0.59	0.81	-0.69	-0.46	0.47
(-1,+1)	-3.05**$_a$	-2.09***$_a$	-0.63	-0.48	2.47$_b$	-0.95	-4.02**$_a$	-2.37**$_a$	-0.87	1.26	2.27**$_b$
(-1,+30)	-3.04	-2.34	-0.17	4.41	2.33	0.29	-6.60*$_a$	0.26	-1.43	1.56$_b$	0.41
(-10,+30)	-3.64	-1.12	-0.59	3.20	4.09	-0.19	-6.44$_a$	1.29	-1.68*	0.93	-0.13
(-30,+30)	-3.26	-1.76	-0.23	6.49	5.4	0.11	-8.33	0.24	-1.03	1.42	0.54

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



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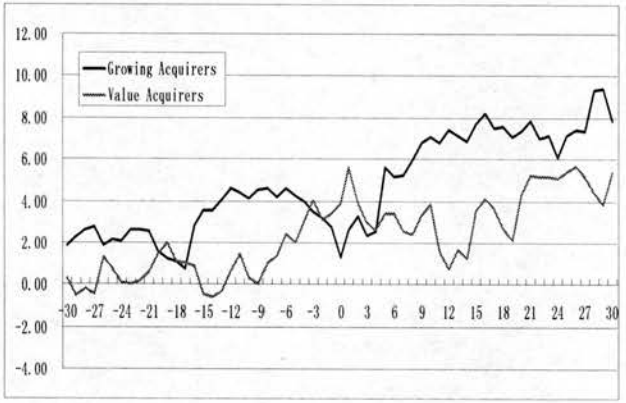


Domestic

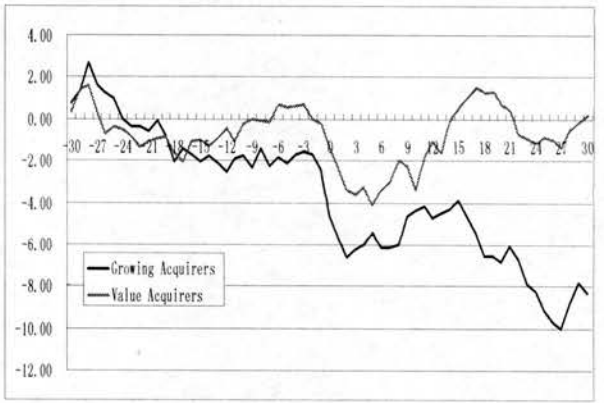
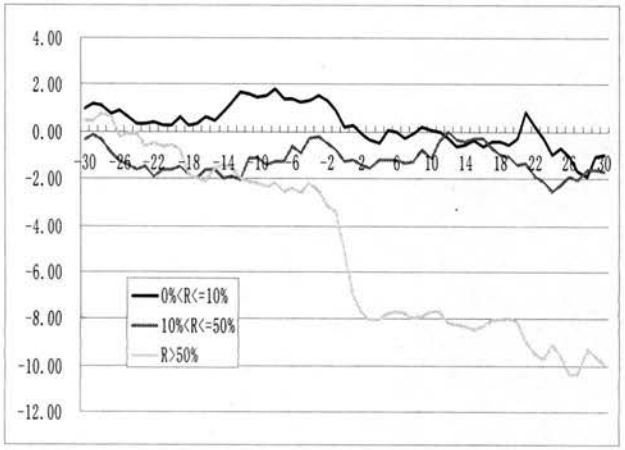


Table 6.22 Acquirers' AARs and CAARs by the relative size of the targets

	Total			Cross-border			Domestic			Difference (Cross-border vs. Domestic)		
	R<=0.1	0.1<R<=0.5	R>0.5	R<=0.1	0.1<R<=0.5	R>0.5	R<=0.1	0.1<R<=0.5	R>0.5	R<=0.1	0.1<R<=0.5	R>0.5
	N=68	N=84	N=60	N=30	N=29	N=7	N=38	N=55	N=53			
Event Day	AR(%)	AR(%)	AR(%)	AR(%)	AR(%)	AR(%)	AR(%)	AR(%)	AR(%)	t-value	t-value	t-value
t-1	-0.39	-0.29	-0.23	-0.76_{a}	$-0.83^{*}{}_{a}$	0.49	-0.11	-0.01	-0.33	-0.86	-1.36	0.87
t	-0.71	-0.51	$-1.73^{**}{}_{a}$	-0.66	0.7	-0.54_{b}	-0.74	-1.14	$-1.89^{**}{}_{ab}$	0.05	1.46	0.31_{b}
t+1	0.01	0.09	$-1.88^{***}{}_{ab}$	0.27	0.28	-1.05	-0.19	0	$-1.97^{***}{}_{ab}$	0.51	0.36	0.55
(-30,-1)	0.58	-0.73	-3.45*	0.39	1.36_{b}	-2.21	0.74_{b}	-1.83	-3.62	-0.1	0.76	0.21
(-10,-1)	-0.62	0.37_{b}	$-1.25^{*}{}_{a}$	$-2.32^{**}{}_{a}$	$2.04^{*}{}_{a}$	0.28	0.73	-0.52	$-1.45^{*}{}_{a}$	-1.51	1.24	0.74
(-1,+1)	-1.06	-0.7	$-3.81^{***}{}_{a}$	-1.08	0.15	-0.95	-1.04	-1.15	$-4.19^{***}{}_{ab}$	-0.02	0.72	0.92
(-1,+30)	-2.23	-1.22	$-6.72^{**}{}_{a}$	-0.41	-0.02	$4.85^{**}{}_{b}$	-3.67	-1.85	$-8.25^{**}{}_{a}$	0.82	0.46	1.44_{b}
(-10,+30)	-2.47	-0.57	$-7.73^{***}{}_{a}$	-2.03	2.84	$4.64^{*}{}_{ab}$	-2.82	-2.37	$-9.37^{***}{}_{ab}$	0.69	-0.11	$1.81^{*}{}_{b}$
(-30,+30)	-1.27	-1.66	$-9.94^{**}{}_{a}$	0.68	2.17	2.14	-2.82	-3.68	$-11.54^{**}{}_{ab}$	0.57	0.89	1.06

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



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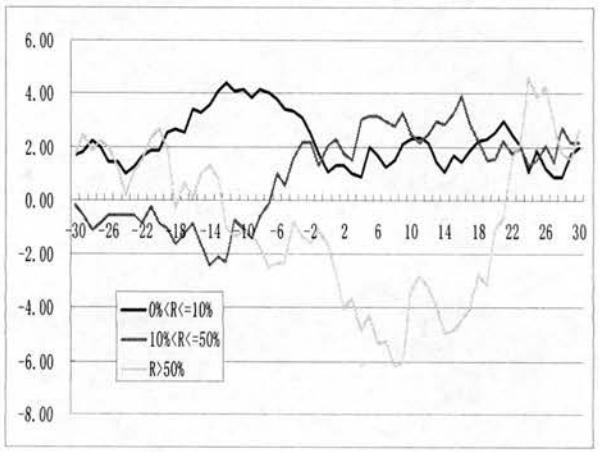


Domestic

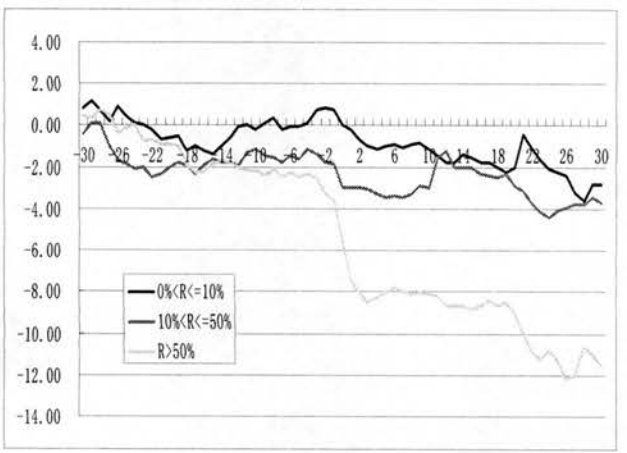
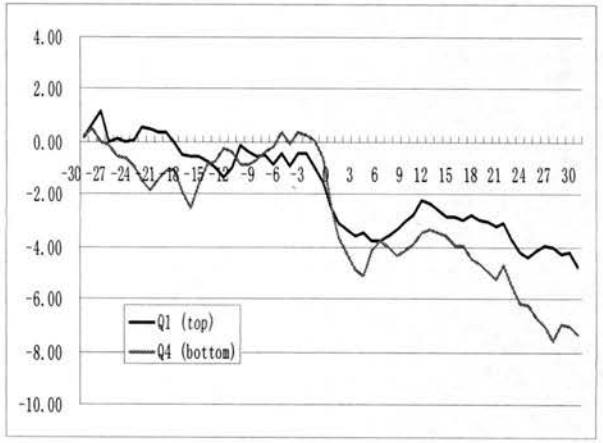


Table 6.23 Acquirers' AARs and CAARs by their pre-takeover performance

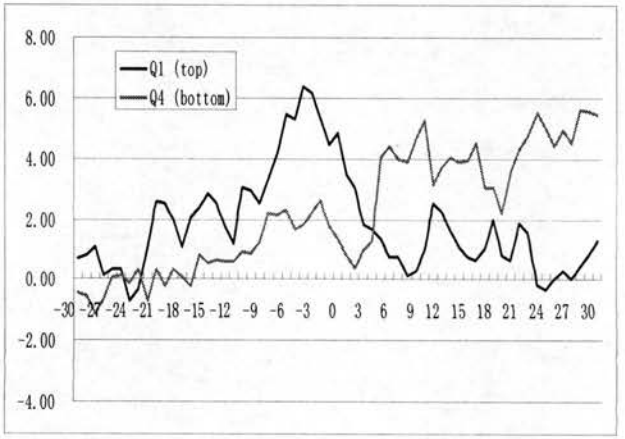
	Total			Cross-border			Domestic			Difference (Cross-border vs. Domestic)	
	Q1 (top) N=53	Q4 (bottom) N=53	Difference	Q1 (top) N=16	Q4 (bottom) N=16	Difference	Q1 (top) N=36	Q4 (bottom) N=36	Difference	Q1(top)	Q4 (bottom)
Event Day	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	t-value	t-value
t-1	-0.58	-0.68**$_a$	0.17	-0.81	-0.84	0.03	-0.3	-0.65*$_a$	0.52	-0.51	-0.26
t	-0.96$_a$	-1.87*$_a$	0.76	0.34	-0.44	0.44	-1.21*$_a$	-2.52*$_a$	0.86	1.27	0.89
t+1	-0.59	-1.19***$_a$	0.85	-1.38*$_a$	-0.52	-0.76	0	-1.43**$_a$	1.61$_b$	-1.22	0.88
(-30,-1)	-1.61	-0.65	-0.28	4.10$_a$	2.07	0.49	-2.79	-2.15	-0.14	1.67$_b$	0.67
(-10,-1)	-1.46	0.27	-0.99	1.45	0.86	0.30	-2.62*$_a$	-0.12	-1.05	1.69*$_b$	0.33
(-1,+1)	-2.13**$_a$	-3.71***$_{ab}$	1.00	-1.85	-1.77	-0.04	-1.52	-4.6***$_a$	1.48	-0.15	1.12
(-1,+30)	-3.71*$_a$	-7.37**$_{ab}$	0.98	-3.89	2.75	-1.27	-5.24*$_a$	-11.9***$_a$	1.37	0.27	2.34**$_b$
(-10,+30)	-4.58*$_a$	-6.42*$_a$	0.52	-1.62	4.45	0.10	-7.56**$_a$	-11.37**$_a$	0.05	1.3	1.27
(-30,+30)	-4.74*$_a$	-7.34	0.47	1.02	5.66	-0.77	-7.72**$_a$	-13.39**$_a$	0.75	1.41	1.85*$_b$

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

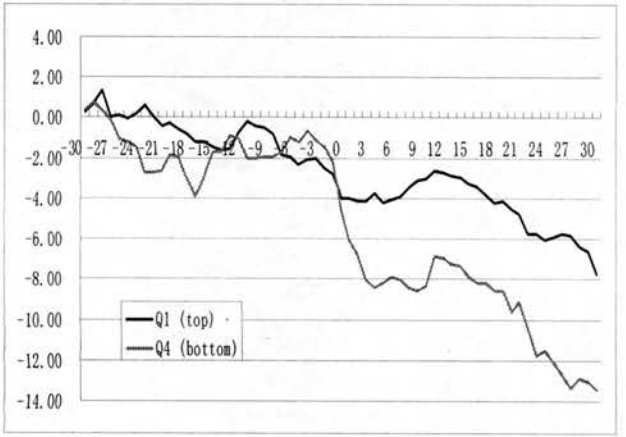
Total



Cross-border



Domestic



- *Pre-takeover Performance*

We examine the impact of acquirers' pre-takeover performance on their returns around the takeover announcement. The industry-adjusted cash flow margin (IACFM) is employed to measure acquirers' performance one year prior to the takeover announcement. Table 6.23 contains the results.

For the whole samples, both the best- and worst-performing acquiring firms experienced significant and negative returns around the takeover announcement. But the difference is not statistically significant across all windows. A similar situation is found in both cross-border takeovers and domestic takeovers.

Comparing cross-border with domestic takeovers, domestic best-performing acquirers have significant and negative returns of -2.62% over (-10, -1), which is significantly lower than those for the foreign best-performing acquirers. Moreover, the worst-performing acquirers in cross-border takeovers generally have higher returns than the worst-performing domestic acquiring firms, e.g. 2.75% vs. -11.90% over (-1, +30). This provides more evidence about the better performance of foreign acquiring firms compared with UK domestic acquirers.

Summary

Generally, growth acquiring firms underperformed value acquiring firm around the takeover announcements. The statistically significant difference is found one day before the announcement. This is consistent with our hypothesis that markets are more confident on acquisitions made by value acquirers than growth acquirers. Acquirers' pre-takeover performance seems to have no significant effect on their stock performance around takeover announcements. Acquiring firms had a very strong significant and negative return when the ratio of size difference between target and acquirers is large than 0.5. Compared to foreign acquirers, these findings are more significant for UK domestic acquirers.

6.4 Cross-sectional Analysis of Announcement Performance

To further test the relation between determinants and abnormal returns of acquiring firms, we perform cross-section regression analyses in this section. In our sample, 21 acquiring firms were involved in more than one takeover during our research period of 1998-2002. To avoid the overlap problem, we keep only the early acquisition for each acquirer in the regressions. The resulting sample analysed in this section consists of 191 acquiring firms.

Median regressions are employed in our analysis, because this regression overcomes various problems that OLS is confronted with. If the data is heteroscedastic, median regression estimators can be more efficient than mean regression estimators. Also, median Regression allows for estimation where the typical assumption of normality of the error term might not be strictly satisfied (Koenker and Bassett, 1978). And last but not least, OLS is sensitive to extreme outliers, which can distort the results significantly.

Median regression estimates the median of the dependent variable, conditional on the values of the independent variable. This is similar to least-squares regression, which estimates the mean of the dependent variable. Said differently, median regression finds the regression plane that minimizes the sum of the absolute residuals rather than the sum of the squared residuals.

The dependent variable in each regression is the market-adjusted return for the acquiring firms over the window of (-10, +30), in order to catch the effect of the news of target CEOs' departure which is measured ten days prior to the announcement. Independent variables are grouped into four categories: deal characteristics, target governance characteristics, target firm characteristics and acquiring firm characteristics.

6.4.1 The whole sample

Table 6.24 shows the regression results based on the whole sample. Each regression model includes "cross-border or not", "legal difference" and "culture difference"[17].

The coefficient of the "cross-border" dummy is statistically significant and positive, which show that acquirers' gains are higher in cross-border acquisitions than in domestic acquisitions. In other words, foreign investors, on average, expect significantly more value creation from the firm's decision to undertake a cross-border takeover compared to a UK domestic takeover, even after controlling for other factors expected to affect acquirer returns. This result further supports the finding of the unvariate tests and it is consistent with the study of Markides and Ittner (1994), Cakici et al. (1996), Choi and Tsai (2002).

Moreover, legal difference and cultural difference have significant and positive effects on acquirers' returns. This suggests that acquirers from countries with non-English common law gained higher returns than acquiring firms from English common law countries. The positive effect of cultural difference in our study is consistent with the finding of Morosini, Shane, and Singh (1998). This result is consistent with our hypothesis, suggesting that learning benefits provided by cultural differences outweigh the costs of cultural difference.

We also find that CAARs around the takeover announcement are significantly related to deal characteristics. In line with the study of Kaplan (1989) and Kohers and Kohers (2004), high-tech takeovers are strongly negatively associated with CAARs of acquirers, indicating that the high risk and unclear feature of high-tech acquisitions make markets less confident about high-tech takeovers. The significant and positive coefficient on payment shows that acquirers' gains are significantly better in stock-financed transactions. This is consistent with one side of our hypothesis that the acquirer must pay a higher acquisition price in the case of cash

[17] In the correlation test, we find that "cross-border or not", "legal difference" and "culture difference" are highly significantly correlated. Hence, we put only one of them into each regression.

Table 6.24 Regression Analysis of CAAR of 191 Acquiring Firms

	Model 1		Model 2		Model 3	
	Coef.	t-value	Coef.	t-value	Coef.	t-value
(Constant)	-13.79	(-1.65)	-6.51	(-0.70)	-9.23	(-1.16)
Cross-border	10.94***	(4.19)				
Legal dif.			10.94***	(2.90)		
Culture dif.					10.06***	(3.26)
Related or not	-1.74	(-0.73)	-0.06	(-0.02)	-1.85	(-0.82)
High-tech	-9.53***	(-3.62)	-4.99*	(-1.73)	-4.39*	(-1.75)
Payment	5.03	(1.49)	2.84	(0.79)	5.32*	(1.70)
Auction	-10.18**	(-2.23)	-7.19	(-1.45)	-5.87	(-1.32)
Attitude	0.01	(0.00)	2.52	(0.47)	2.68	(0.58)
Premium	-0.07**	(-2.31)	-0.03	(-1.07)	-0.04*	(-1.45)
CEO depat.	7.72***	(3.09)	5.64*	(2.03)	6.71**	(2.78)
Board size	0.08	(0.17)	-0.44	(-0.89)	-0.44	(-1.03)
Outsiders	17.50**	(2.13)	13.91	(1.56)	15.53**	(1.99)
Blockholders-own	-2.24	(-0.38)	-9.47	(-1.48)	-7.58	(-1.38)
Target Pre-perfm	2.77**	(2.31)	0.40	(0.30)	0.24	(0.21)
Target Pre-levg	-9.86	(-0.56)	5.42	(0.29)	6.40	(0.39)
Target-MTBV	-0.42	(-0.13)	1.91	(0.54)	1.47	(0.47)
Acqr-MTBV	1.27	(0.40)	3.22	(0.93)	3.55	(1.19)
Size dif.	0.48	(0.40)	-0.19	(-0.15)	0.46	(0.42)
Acqr Pre-perfm[1]	0.89	(0.69)	-0.68	(-0.48)	-0.18	(-0.15)
R Square	0.075		0.065		0.062	

*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$ (2-tail)

In median regressions, the dependent variable is the acquirers' cumulative average abnormal returns (CAARs) over the window of (-10, +30). Independent variables are following variables. Cross-border takes a value of 1 if the "acquirer nation code" of an acquiring firm in SDC is not UK, and is 0 otherwise. Legal difference takes a value of 1 if the acquiring firm was from a non-English common-law country, and is 0 otherwise. Culture difference takes a value of 1 if the summation of differences between the Hofstede's index score of the UK and the Hofstede's index score of the acquiring country is above the median of 28, and is 0 otherwise. Related takeover is also an indicator that is 1 when the target and acquiring firms have same four or three-digit SIC, and is 0 otherwise. High-tech is an indicator that is 1 for firms involved in high-tech industries, and is 0 otherwise. Stock payment is an indicator that is 1 if the acquiring firm paid the deal by stock, and is 0 otherwise. Auction is an indictor that takes a value of 1 if more than one bidder had an interest in the target firm, is 0 otherwise. The indictor variable, attitude, is 1 if the takeover is a hostile takeover, and is 0 otherwise. Premium is the premium paid for the target firm. CEO departure takes a value of 1 if the news of target CEO departure is released around the takeover announcement, and is 0 otherwise. Board size is the number of directors in the board of the target firm. Outsider is the proportion of nonexecutive directors in the board. Blockholder ownership is the percentage of equity owned by blockholders. Target firm pre-takeover performances are measured by the industry-adjusted ROA (IAROA) one year prior to the takeover announcement. Target firm pre-takeover leverages are measured by the total debt to total asset one year prior to the takeover announcement. Target MTBV is the market-to-book ratio for the target firm. Acquirer MTBV is the market-to-book ratio for the acquiring firm. Size difference is the logarithms of the ratios of the asset of the target to the asset of the acquiring firm. Acquiring firm pre-takeover performances are measured by IAROA one year prior to the takeover announcement.

offer to offset the tax burden of the target shareholders, which lead to better market reaction to stock payment.

In line with the previous studies of Bradley, Desai and Kim (1988), Jarrell and Poulsen (1989), multiple biddings are negatively and significantly related to acquirers' returns, which is consistent with our hypothesis. High premia are associated with a worse market reaction, which is consistent with Malmendier and Tate (2005), Moeller and Schlingemann (2005).

In addition, coefficients of "CEO departure" are significantly positive, which is consistent with our hypothesis. This indicates that acquirers experience higher returns if the target CEO departs following takeover announcement. The rumour or the news of the target CEO's departure affects returns of acquirers around the takeover announcement. That is, the market reaction is positive when an acquiring firm dismisses the CEO of its target firm. Takeover is considered to have an important role in replacing the ineffective target managers.

Other variables relating to target governance are found to have significant relations with acquirers' returns. The coefficients of "outsiders" are significant and positive, suggesting that the more nonexecutive directors target firms have, the greater the gain acquiring firms have around the takeover announcement. These results support our hypothesis that, as a relatively independent party, the nonexecutive directors play a very important role to make sure the right decision is made including a right merger or acquisition (Harford (2003)).

Moreover, model 1 shows that CAARs around the takeover announcement are significantly and positively related to target pre-takeover performance. This result supports our hypothesis and the argument of Goergen and Renneboog (2004) that high quality firms may bring high operational synergy to acquirers, which generates favourable market reaction.

6.4.2 Cross-border Takeovers

In this section, we repeat the regression based on cross-border takeovers rather than the whole sample. The first set in Table 6.25 shows the results. No significant relationship is found between acquirers' returns and these variables.

6.4.3 Domestic Takeovers

We re-examine the regression based on domestic takeovers in this section. The results for domestic takeovers are reported in the second set in Table 6.25.

The coefficient of "payment" is significant and negative, which is opposite to the result based on the whole sample and the cross-border takeovers. This supports the other side of our hypothesis, which indicates that stock payment negatively affects acquirers' returns around the announcement. This finding provides evidence that the UK market takes stock payment as a signal of overvaluation of the firm and share prices of acquiring firms change downwards. Moreover, we find a significant positive relation between "CEO departure" and acquirers' returns. This finding refines the result based on the whole sample.

Table 6.25 Regression Analysis of CAAR of Acquiring Firms in Cross-border and Domestic Takeovers

	Cross-border takeovers		Domestics takeovers	
	CAR(-10,+30)		CAR(-10,+30)	
	N=59		N=131	
	Coef.	t-value	Coef.	t-value
(Constant)	-7.69	(-0.29)	-7.65	(-0.88)
Related or not	-6.06	(-1.24)	-2.76	(-0.94)
High-tech	-12.14	(-1.43)	1.44	(0.35)
Payment	8.24	(1.33)	-12.67**	(-2.17)
Auction	-15.08	(-1.27)	4.42	(0.64)
Attitude	-0.77	(-0.05)	-0.05	(-1.46)
Premium	0.00	(0.01)	0.27	(0.52)
CEO depat.	7.76	(0.98)	4.43*	(1.69)
Board size	-1.03	(-1.18)	2.80	(1.13)
Outsiders	28.72	(1.29)	8.78	(1.04)
Blockholders ownership	3.45	(0.11)	-9.46	(-1.57)
Target Pre-perfm	1.95	(0.42)	0.24	(0.19)
Target Pre-levg	58.65	(1.03)	-20.77	(-1.10)
Target-MTBV	6.51	(0.46)	-4.88	(-1.39)
Acqr-MTBV	-0.90	(-0.06)	2.73	(0.89)
Size dif.	4.12	(1.10)	-1.64	(-1.32)
Acqr Pre-perfm	0.10	(0.02)	1.85	(1.31)
R Square	0.242		0.073	

*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$ (2-tail)

In median regression, the dependent variable is the acquirers' cumulative average abnormal returns (CAARs) over the window of (-10, +30). Independent variables are following variables. Related takeover is also an indicator that is 1 when the target and acquiring firms have same four or three-digit SIC, and is 0 otherwise. High-tech is an indicator that is 1 for firms involved in high-tech industries, and is 0 otherwise. Stock payment is an indicator that is 1 if the acquiring firm paid the deal by stock, and is 0 otherwise. Auction is an indictor that takes a value of 1 if more than one bidder had an interest in the target firm, is 0 otherwise. The indictor variable, attitude, is 1 if the takeover is a hostile takeover, and is 0 otherwise. Premium is the premium paid for the target firm. CEO departure takes a value of 1 if the news of target CEO departure is released around the takeover announcement, and is 0 otherwise. Board size is the number of directors in the board of the target firm. Outsider is the proportion of non-executive directors in the board. Blockholder ownership is the percentage of equity owned by blockholders. Target firm pre-takeover performances are measured by the industry-adjusted ROA (IAROA) one year prior to the takeover announcement. Target firm pre-takeover leverages are measured by the total debt to total asset one year prior to the takeover announcement. Target MTBV is the market-to-book ratio for the target firm. Acquirer MTBV is the market-to-book ratio for the acquiring firm. Size difference is the logarithms of the ratios of the asset of the target to the asset of the acquiring firm. Acquiring firm pre-takeover performances are measured by IAROA one year prior to the takeover announcement.

For the whole sample, a strong and significant positive relation between cross-border takeovers and acquirers' returns in multiple regressions are consistent with our hypothesis about the benefit of international takeovers. Legal difference and culture difference have a significant and positive effect on acquirers' returns. These findings are in line with previous studies of Choi and Tsai (2002), Rossi and Volpin (2004) and Mayrhofer (2004). We also find that acquirers' returns have a significant and negative association with high-tech takeovers, multiple bidders and premium. Moreover, target CEO departures are found to have significant positive effects on acquirers' returns, which is consistent with our hypothesis and indicates that markets have positive reactions to disciplining takeovers. Stock payment, target outsiders and target pre-takeover performance are also significantly and positively related to the gains of acquiring firms.

For cross-border takeovers, we find no significant association between variables and foreign acquirers' gains. For domestic takeovers, the stock payment is found to have a significant negative relation with domestic acquirers' gains, indicating that the UK market may consider more about overvaluation problem of the firm. The significant and positive association between target CEO departures and acquirers' returns is found only in domestic takeovers.

6.5 Robustness tests

Some studies exclude from their sample those acquiring and target firms that are classified as financial services, because financial service firms are heavily regulated. Here we conduct robustness tests by separating the data of firms in financial services from non-financial services and the results are reported in Table 6.26. During the period following takeover announcements, the returns to acquirers in financial services are lower than those not in financial services. But the difference is not statistically significant across all research windows.

Table 6.26 Acquirers' AARs and CAARs

by Finance and Non-finance Business Section

	Total		Finance		Non Finance		Difference	
	N=212		N=39		N=173			
Event Day	AR(%)	t-value	AR(%)	t-value	AR(%)	t-value		t-value
t-1	-0.30*$_a$	-1.65	0.14	0.36	-0.41*$_a$	-1.95	0.55	1.35
t	-0.92**$_a$	-2.25	-0.91*$_a$	-1.70	-0.92*$_a$	-1.89	0.01	-0.20
t+1	-0.48*$_a$	-1.90	-0.29	-0.49	-0.53*$_a$	-1.86	0.24	0.48
(-30,-1)	-1.08	-0.94	-0.85	-0.45	-1.13	-0.85	0.28	-0.06
(-10,-1)	-0.40	-0.74	-0.25	-0.27	-0.44	-0.69	0.19	0.17
(-1,+1)	-1.70***$_a$	-3.02	-1.05	-1.12	-1.84***$_a$	-2.81	0.79	0.63
(-1,+30)	-3.10**$_a$	-2.41	-5.42$_a$	-1.54	-2.58*$_a$	-1.89	-2.84	-0.77
(-10,+30)	-3.21**$_a$	-2.19	-5.81$_a$	-1.56	-2.62*$_a$	-1.65	-3.19	-1.16
(-30,+30)	-3.88*$_a$	-1.97	-6.41	-1.40	-3.31	-1.51	-3.10	-0.66

a: Significant in skew-adjusted test;
b: Significant in non-parametric statistics test-sign test and rank test;
*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$

6.6 Conclusion

This chapter provides a study of announcement effects on acquiring firms that bid for UK targets. The stock market reaction upon the announcement of a merger reflects the changes in the expected future value accrued to the shareholders involved. We examine the difference between cross-border and domestic takeovers acquiring UK companies in 1998-2002. Our analysis reveals several major interesting findings.

Firstly, for the whole samples, acquiring firms experienced losses in takeovers into the UK during 1998-2002. We find a significant negative return of -0.92% on the announcement day. The losses accumulate to a significant -3.88% over (-30, +30). Further, cross-border M&As trigger higher wealth effect to acquirers' shareholders than do domestic takeovers. Over the two-month period of (-30, +30), the average return to foreign acquirers is 1.49%, which is significantly higher than the average return to UK acquirers of -6.31%. It indicates that the advantage of cross-border

takeovers into the UK may lead to a higher market expectation and higher announcement returns for foreign acquiring firms. These results reinforce the literature on the benefits of international operations and are at odds with the recent diversification discount literature.

When partitioning our sample based on the legal origin of the acquiring firms, we find that acquirers from Scandinavian law origins earn the highest abnormal return, whereas acquirers from English common law suffer significant losses. The evidence suggests that the difference in level of corporate governance regulations across countries of different legal origins has a large impact on acquirers' gains in takeovers, which is consistent with the argument of La Porta, Lopez-de-Silanes, Sheifer and Vishny (2000). Moreover, a significant and positive relationship is found between acquirers' returns and culture difference, implying that markets place more value on the learning benefits provided by cultural differences rather than the costs of cultural difference (Ghoshal (1987), Mayrhofer (2004)).

Secondly, as one of the distinguishing features of the recent M&A wave, high-tech takeover is rather disappointing for acquirers' shareholders. The high-tech acquisitions trigger a lower abnormal return than non-high-tech acquisitions: -4.28% vs. -0.81% over (-1, +1). This indicates that markets are not confident about the high risk and uncertain future of high-tech takeovers. An acquirer's loss is also found to be related to multiple bidders and a higher premium, in line with most previous studies. Moreover, markets react more positively to acquirers which use stock to pay for merger or acquisition. But the situation is inverse in UK domestic takeovers, implying that, for UK acquirers, the choice of the means of payment act as a signal to the market about the overvaluation of the firm (Martynova and Renneboog (2006)).

Thirdly, there is evidence that target governance is related to the abnormal returns of acquiring firms. We find that the rumour or the news about target CEO departure positively affects acquirers' returns. It indicates that the market has a positive reaction, when acquiring firms dismiss the target CEO. In addition, the proportion of

nonexecutives in target firms is positively associated with acquirers' gains, which suggests that good target governance leads to a good decision and even a good deal.

Finally, we demonstrate that target pre-takeover performance is positively associated with the announcement returns of acquiring firms. When bidding for targets in the worst pre-takeover performance quartile, acquirers have worse abnormal returns around takeover announcements. This suggests that the worst-performing targets may be more risky, which makes markets doubt the wisdom of acquiring firms taking over such targets.

Chapter 7 Wealth Effect: A Comparison Between the Takeover Active Period and Less Active Period

7.1 Introduction

Although mergers have been studied extensively, there are only very few papers that have investigated the relationship between economic conditions in merger waves and shareholder wealth. This is surprising because the overall economic conditions substantially influence all kinds of business decisions and activities, including mergers and acquisitions. However, we know comparatively little about the impact of general economic conditions on the characteristics of merger participants in waves, whether takeovers in active periods are different from those in less active periods, and whether M&A waves generate value. In particular, the recent M&A wave has distinctive characteristics, such as the highest transaction value in M&A history, the boom of telecoms and globalization. This wave slumped with the collapse of stock markets in 2000. This makes these questions especially interesting. By investigating these questions, this chapter attempts to add a new dimension towards the understanding of the effects of takeovers on shareholders' wealth.

In this chapter, we study the recent M&A wave between 1998 and 2002. We demonstrate differences between the characteristics of takeovers that occur during the rising period of the M&A wave and those that occur during the slumping period. We also try to answer specific questions about whether takeovers on the rising side are more or less likely to create value for acquiring firms than those on the slumping side of the M&A wave. Because of the concentration of takeover activity in merger waves, understanding M&A waves and how takeovers in the active period are different from others in the less-active period will further our knowledge of the sources of value in takeovers. The comparison of takeovers between two different periods would have implications for the way M&As are studied. The research also addresses the broader research question of what determinants affect the acquirers' gains in takeovers.

The results in our study show no significant relation between the intensity of merger activity and acquiring shareholders' wealth around the takeover announcement. But, prior to takeover announcement, acquirers' returns are significantly lower when merger activities were increasing than when they were decreasing. As in the previous tests, we find that cross-border takeovers, the legal system and cultural differences and target CEO departure are significantly and positively related to the returns of acquiring firms around the takeover announcement. However, being a high-tech takeover, having multiple bidders and target blockholder ownership has a negative effect on the acquirers' gains. We also find weak evidence that, on the slumping side of the M&A wave, target pre-takeover performance and acquirers with high market-to-book ratio are positively associated with acquirers' returns.

This chapter is structured as follows. The next section provides the background, followed by a description of the sample and methodology in section 7.3. The findings of univariate tests and multivariate tests are presented in section 7.4 and 7.5 respectively. Section 7.6 concludes this chapter.

7.2 Background

Previous studies document clear clustering of takeover waves within industries and these heightened merger activities are often tied up with various technological, economic or regulatory shocks to these industries (Mitchell and Mulherin (1996), Mulherin and Boon (2000) and Andrade, Mitchell and Stafford (2001)). M&A activities in the UK peaked in 1968, 1972, 1984-1989 and the 1990s (Sudarsanam (2003)). Similar trends occurred in different countries.

The UK fourth M&A wave started in 1993. Like all previous waves, it came along with an economic boom in the 1990s. This wave is unprecedented both in terms of transaction value and the number of M&A deals. With the rise of this wave, the booming market creates more opportunities. Kohers and Kohers (2000) argue that the UK fourth wave appeared to have been motivated by the search for synergies and companies enhancing their competitiveness through increased focus on the core

business or acquisition of technologies. An international nature is a striking feature of this M&A wave. The substantial proportion of cross-border takeover reflects the growing globalisation of products, services and capital markets. The global market creates more opportunities and allows input supply at lower costs. Meanwhile, international acquirers may exploit benefit in tax and market efficiencies such as a cheaper labour market. For those takeovers in high tech industries, a decrease of R&D cost may make M&A an attractive strategy for the companies. These issues may bring acquiring firms better operation and more market efficiencies and investors would have an expectation of higher returns in the future. So the stock market would be confident for these takeovers in the fourth M&A wave.

However, in such an environment, overvalued equity is overwhelmingly used by bidders to buy real assets of undervalued or less-overvalued targets. Jensen (2004) argues that overvaluation pushed managers to make takeover bids even if these deals did not create synergies or other benefits. When a company's market value is above the future performance expected by management, it is encouraged to undertake acquisitions. Martynava and Renneboog (2006) suggest that, at the peak of the takeover wave, the bidders' shareholders do not realize that their firm may be overpaying. Moreover, the global environment is characterised by optimism during the dotcom bubble of the 1990s. Many acquisitions, especially high-technology acquisitions may have been driven by managerial optimism and hubris (Gao and Sudarsanam (2003)). These biases may have compounded the problem of valuation risk associated with acquisition leading to overpayments for targets, which would cause shareholder value loss to acquiring firms.

Following the collapse of the stock market in 2000, the takeover market become a little more orderly as the overoptimistic managers regained some common sense. Managerial hubris and managerial self-interest may be limited. The less overvaluation of target firms decreased managerial discretion, leading to a lower probability of making poor acquisitions. Hence, the strategies of M&As were more rationally considered and acquirers were more cautious in the action of takeovers. Moreover, the trend of globalisation kept pushing international takeovers to a new

peak, so that acquirers could take better advantage of such global resources. In such cases, better market reaction to takeover announcements would be expected.

The rising period and the slumping period of the M&A wave have very different conditions. Although a large number of event studies concerning the effect of merger announcements have been made, no paper has distinguished between returns in periods when M&A activities are rising and periods when they are falling. In this chapter, we examine the market reaction to takeover announcement in the fourth UK wave and compare the situation in the period when M&A activities were rising with those in the period when it was falling, in order to investigate whether the intensity of the takeover market has an effect on acquirers' returns around the takeover announcement.

7.3 Sample and Methodology

In this chapter, we use the same sample of 212 takeovers as in the last chapter. We also divide the period 1998 to 2000 into the same two periods as in Chapter 4. Thus, the rising part of the wave relates to January 1998 to May 2000, characterised by the boom stock market and a high merger activity era, while the falling part relates to June 2000 to December 2002, characterised by the slumping stock market and a low merger activity era.

In the following section, we use univariate and multivariate tests to compare acquirers' returns around takeover announcements in these two periods of the merger wave and examine the relationship between the acquirers' returns and numerous determinants. Both parametric[18] and non-parametric[19] statistical tests are performed in this study.

Table 7.1 exhibits the sample which we divide into two subsamples. 137 out of 212 takeovers took place in the boom period, while only one-third of the sample, 75

[18] Cross-section t-test and skewness-adjusted t-test are employed in the tests of significance.
[19] Unlike the parametric tests, the non-parametric tests do not make the assumptions that returns are normally distributed. Here, the sign test and rank test are employed in the later tests of significance.

takeovers, occurred in the slumping period. This provides more evidence that M&A activities are coincident with the capital market (Key (1997), Tse and Soufani (2001)). The stock market boom has been associated with a frenzied takeover activity. Economic boom stimulates company growth and leads to higher corporate profitability. Additionally, active stock markets allow firms to have more overvalued equity or other ways to finance takeovers. But following the collapse of the stock market, the takeover market was adverse. The number of transactions shrank to only half of that in the boom period.

Table 7.1 The Distribution of 212 Acquiring Firms according to their Countries

	Total		Jan 1998-May 2000		June 2000-Dec 2002	
Countries	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.
Australia	4	1.89%	-	-	4	5.33%
Bermuda	1	0.47%	1	0.58%	-	-
Canada	1	0.47%	-	-	1	1.33%
Denmark	3	1.42%	3	1.73%	-	-
France	8	3.77%	5	2.89%	3	4.00%
Germany	5	2.36%	1	0.58%	4	5.33%
Ireland Rep	6	2.83%	5	2.89%	1	1.33%
Italy	2	0.94%	1	0.58%	1	1.33%
Netherlands	4	1.89%	2	1.16%	2	2.67%
Singapore	2	0.94%	1	0.58%	1	1.33%
South Africa	3	1.42%	1	0.58%	2	2.67%
Sweden	1	0.47%	-	-	1	1.33%
Switzerland	3	1.42%	3	1.73%	-	-
United States	23	10.85%	17	9.83%	6	8.00%
United Kingdom	146	68.87%	97	56.07%	49	65.33%
Total	212	100.00%	137	64.62%	75	35.38%

Table 7.2 reports average abnormal returns (AARs) and cumulative average abnormal returns (CAARs) for acquiring firms involved in takeovers in the rising and slumping periods of the merger wave. Generally, the acquirers in the rising side did not significantly outperform those acquirers in the slumping side, indicating that

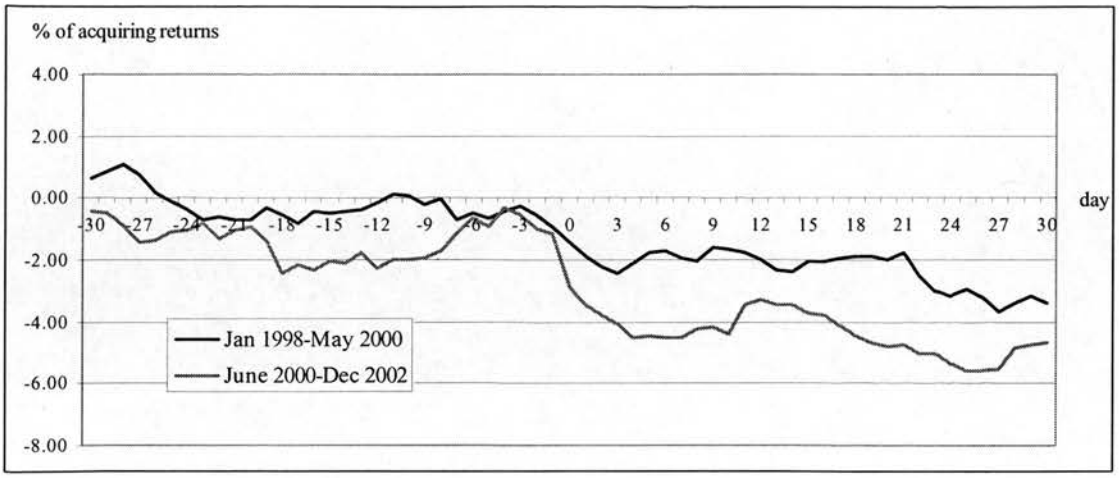
the bidder returns appear to be consistent in both merger activity eras. But, in the price run-up period of (-10, -1), acquirers in the declining stage of the wave experienced significant gains of 0.80%, while the return to bidders in the rising side of the wave is -1.06%. The difference is statistically significant at the level of 10% by using a non-parametric test. This result suggests that, just prior to the takeover announcement, markets have a more positive reaction to acquirers on the slumping side than those on the rising side of the merger wave. This is in line with the study of Jensen (2004) that overvaluation in the stock market boom encouraged managers to make takeovers that may not create profit in the future, bringing a loss to acquirers' shareholders. It also provides weak evidence that following the collapse of the stock market in 2000, managers and investors were more calm and rational. The problem of limited information processing, managerial hubris and managerial self-interest became less common. Such an environment is more likely to lead to the high possibility of making good acquisitions. Hence, markets value M&A more highly as a reasonable strategy for acquirers to approach external growth. However, around and following the takeover announcement, we find no significant difference between the returns for acquirers on the rising side and the slumping side of the M&A wave.

Table 7.2 Acquirers' AARs and CAARs on the Rising Side and the Slumping Side of the M&A wave

	Total		Rising		Slumping		Difference (Rising vs. Slumping)	
	N=212		N=137		N=75			
Event Day	AR(%)	t-value	AR(%)	t-value	AR(%)	t-value		t-value
t-1	-0.30*$_a$	-1.65	-0.37*$_a$	-1.67	-0.17	-0.53	-0.20	-0.52
t	-0.92**$_a$	-2.25	-0.48	-0.96	-1.71**$_a$	-2.46	1.23	0.97
t+1	-0.48*$_a$	-1.90	-0.44	-1.36	-0.55	-1.38	0.11	0.21
(-30,-1)	-1.08	-0.94	-1.08	-0.71	-1.07	-0.65	-0.01	0.00
(-10,-1)	-0.40	-0.74	-1.06	-1.56	0.80$_b$	0.87	-1.86	-1.62$_b$
(-1,+1)	-1.70***$_a$	-3.02	-1.30*$_a$	-1.86	-2.43***$_a$	-2.56	1.13	0.96
(-1,+30)	-3.10**$_a$	-2.41	-2.81$_a$	-1.63	-3.64**$_a$	-1.98	0.83	0.31
(-10,+30)	-3.21**$_a$	-2.19	-3.50*$_a$	-1.80	-2.68	-1.26	-0.82	-0.66
(-30,+30)	-3.88**$_a$	-1.97	-3.52	-1.32	-4.55*$_a$	-1.66	1.03	0.25

a: Significant in skew-adjusted test
b: Significant in non-parametric statistics test-sign test and rank test.
*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$

Figure 7.1 Acquirers' AARs and CAARs on the Rising Side and the Slumping Side of the M&A wave



7.4 Univariate Analysis of Stock Performance

In this section, we compare AARs and CAARs of two subsamples around takeover announcement with respect to deal characteristics, target governance characteristics, and target and acquiring firms' characteristics. We conduct univariate tests to determine whether the acquirers' returns are significantly related to these characteristics. In the following tables, the results for the full sample are presented in the first set of three columns. The second and third sets of columns show the results for acquirers on the rising and slumping sides of the merger wave. The fourth column reports the t-value for the difference to determine if the acquirers' returns are different between takeovers which occurred on the rising side and those on the slumping side in terms of the characteristics studied in this chapter.

7.4.1 Deal Characteristics

- *Cross-border /Domestic takeovers*

Table 7.3 shows the comparison of AARs and CAARs of acquiring firms involved in cross-border takeovers and domestic takeovers in both subsamples. On the rising-side of the M&A wave, no significant differences for AARs are found between

foreign acquirers and domestic acquirers. But, on the slumping-side of the M&A wave, AARs on the day after the announcement for domestic acquirers is significantly lower than that for cross-border acquirers: -1.27% vs. 0.80%.

For the CAARs across all windows in both subperiods, we find that generally cross-border takeovers result in higher returns than domestic takeovers. Especially on the slumping side, the CAAR of foreign acquirers is significantly higher than that for domestic acquirers: 0.10 % vs. -3.77% over the window of (-1, +1). This is consistent with the findings of Cakici, Hessel and Tandon (1996) and Choi and Tsai (2002). This suggests that, even when the M&A wave slumped, the confidence of foreign markets involved in cross-border takeovers was still strong, which coincided with the rising trend in international takeovers.

Furthermore, we find that cross-border takeovers on the slumping side bring significantly higher price run-up returns to acquirers than those on the rising side of wave: 1.97% vs. -1.50% over (-10, -1). This suggests that prior to takeover announcements, foreign markets have higher expectations of cross-border takeovers in the slumping period than they do in the boom period.

- *Legal differences*

To examine the impact of the legal system, we divide acquiring firms into two groups. One is the group from countries with non-English common law systems (the Scandinavian, Germanic and French civil law systems), the other is the group from countries with the English common law system. Table 7.4 shows the results.

For the whole sample, acquirers from non-English common law systems have better performance than those from English common law systems. The CAARs for acquirers from English common law systems are constantly significant and negative around and following takeover announcement. The difference in CAAR between the two legal systems is statistically significant following the takeover announcements of (-1, +30). The loss of acquirers from the English common law system amounts to

-3.91% over (-1, +30), which is significantly lower than returns of 2.66% for acquirers from the non-English common law system. The results provide evidence that investors gain better protections in Scandinavian and Germanic civil law system, which is suggested in the study of La Porta et al. (2000, 2001).

Significant negative CAARs for acquirers from English law systems are found in both periods of the merger wave. Only on the slumping side is the difference in returns to acquirers from English and non-English law systems statistically significant over windows following announcement, e.g. 5.15% vs. -5.15% over (-1, +30). This provides more support to the above findings, and such a situation appeared only after the collapse of the stock market.

- *Cultural differences*

Table 7.5 documents the comparison of returns to acquirers from countries with high and low cultural differences from the UK.

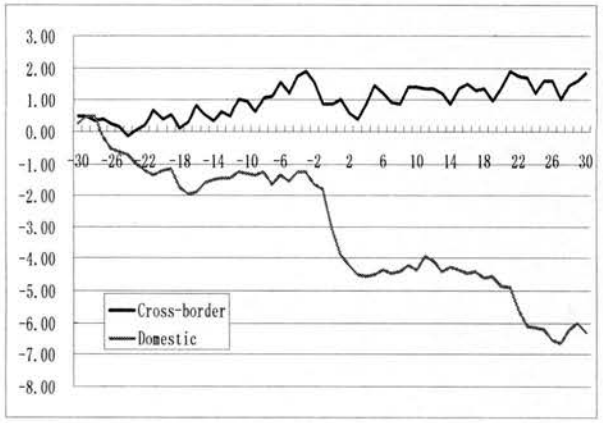
For the whole sample, acquirers in countries with high cultural differences outperform those in low-culture-difference countries. Looking at the two subperiods of the merger wave, the situation appears to be quite similar. But significant differences between CAARs of acquirers from countries with high and low culture differences are found only on the slumping side of the merger wave. For example, over the window of (-10, +30), the CAARs of acquirers in high-culture-difference countries are significantly higher than that of those in countries with low cultural differences: 6.11% vs. -4.70%. Our results are consistent with the significant positive relationship between cultural distance and post-acquisition performance found by the study of Morosini, Shane, and Singh (1998). Given the complexity of culture issue, Ghoshal (1987) and Mayrhofer (2004) suggest that markets may emphasize the learning benefits provided by cultural differences. Such a situation is more significant in takeovers on the slumping side than on the rising side of the merger wave.

Table 7.3 Acquirers' AARs and CAARs in Cross-border and Domestic Takeovers

	Total			Up			Down			Difference (Up vs. Down)	
	Cross-border	Domestic	Difference	Cross-border	Domestic	Difference	Cross-border	Domestic	Difference	Cross-border	Domestic
Event Day	N=66	N=146		N=40	N=97		N=26	N=49			
	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	t-value	t-value
t-1	-0.65**$_a$	-0.15	-1.25	-0.57*$_a$	-0.29	-0.56	-0.79	0.13	-1.33	0.34	-0.87
t	-0.04	-1.31***$_a$	1.2$_b$	-0.09	-0.64	0.5	0.03	-2.63***$_a$	1.40$_b$	-0.1	1.22
t+1	0.15	-0.77***$_a$	1.67*	-0.28	-0.51	0.31	0.8$_b$	-1.27***$_a$	2.55**$_b$	-1.09$_b$	1.23
(-30,-1)	0.54$_b$	-1.81	0.95$_b$	0.28	-1.64	0.57	0.95	-2.14	0.89	-0.21	0.16
(-10,-1)	-0.13	-0.53	0.33	-1.50	-0.88	-0.41	1.97**$_{ab}$	0.17	0.93$_b$	-2.37**$_b$	-0.68
(-1,+1)	-0.53	-2.23***$_a$	1.40	-0.94	-1.44	0.33	0.10	-3.77***$_a$	1.98*	-0.64	1.51
(-1,+30)	0.32	-4.65***$_a$	1.79*	0.78	-4.29**$_a$	1.34	-0.39	-5.37**$_a$	1.30	0.3	0.31
(-10,+30)	0.82	-5.03***$_a$	-0.90	-0.15	-4.88**$_a$	1.07	2.31	-5.32*$_a$	0.62	-0.21	-0.55
(-30,+30)	1.49	-6.31***$_a$	1.84*$_b$	1.63	-5.64$_a$	1.24	1.28	-7.64**$_a$	1.56	0.06	0.36

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



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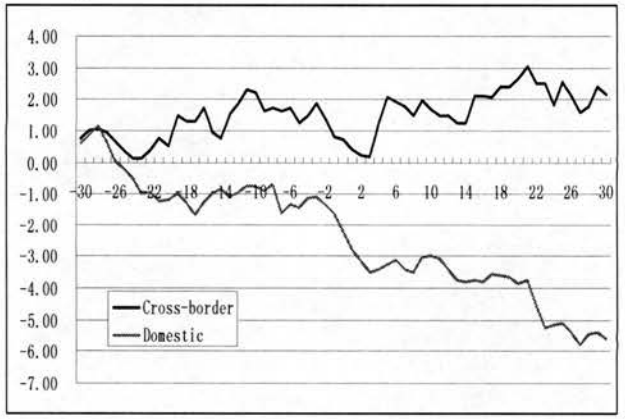

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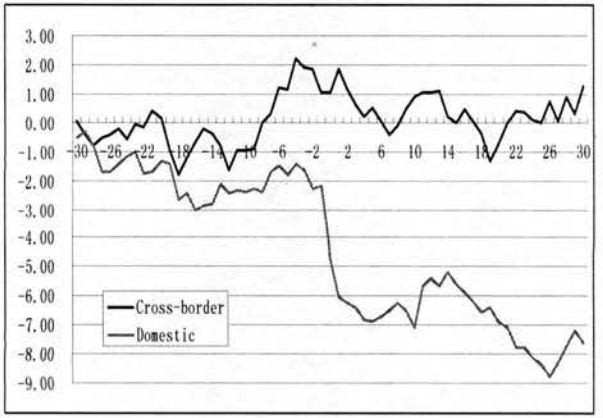
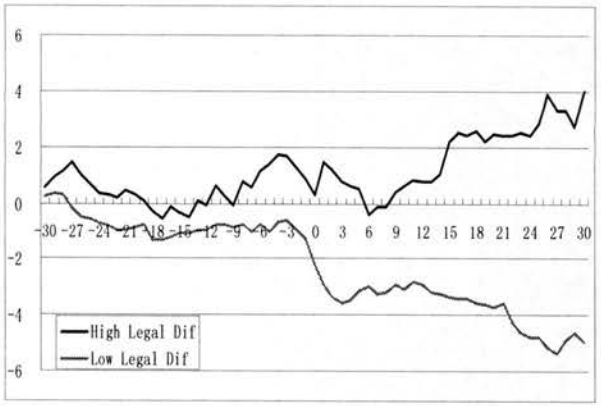


Table 7.4 Acquirers' AARs and CAARs by acquirers' Legal Origins

	Total			Up			Down			Difference (Up vs. Down)	
	Non-English law	English law	Difference	Non-English law	English law	Difference	Non-English law	English law	Difference	Non-English law	English law
	N=26	N=186		N=15	N=122		N=11	N=64			
Event Day	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	t-value	t-value
t-1	-0.39	-0.29	-0.16	-0.52	-0.36	-0.22	-0.19	-0.17	-0.02	-0.38	-0.44
t	-0.57	-0.97**$_a$	0.19	-0.3	-0.51	0.13	-0.95	-1.84**$_a$	0.21	0.32	0.93
t+1	1.13	-0.71***$_a$	2.40**$_b$	1.06	-0.63**$_a$	1.63	1.22***$_{ab}$	-0.86*$_a$	1.86*$_b$	-0.09	0.41
(-30,-1)	0.51	-1.30	0.52	2.73	-1.55	0.88	-2.53	-0.82	-0.36	1.15	-0.27
(-10,-1)	0.18	-0.49	0.4	-1.19	-1.05	-0.06	2.05$_b$	0.58	0.56	-1.35	-1.28
(-1,+1)	0.19	-1.96***$_a$	1.25	0.25	-1.49**$_a$	0.78	0.1	-2.86***$_a$	1.1$_b$	0.05	1.09
(-1,+30)	2.66	-3.91***$_a$	1.68*$_b$	0.83	-3.26*$_a$	0.74	5.15	-5.15***$_a$	2.03**$_b$	-0.64	0.65
(-10,+30)	3.21$_b$	-4.1***$_a$	-0.76	0.16	-3.95*$_a$	1.14	7.37*$_b$	-4.40*$_a$	1.65	-0.75	-0.36
(-30,+30)	3.54	-4.92**$_a$	1.41	4.08	-4.45	1.00	2.79	-5.81**$_a$	1.11	0.14	0.30

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



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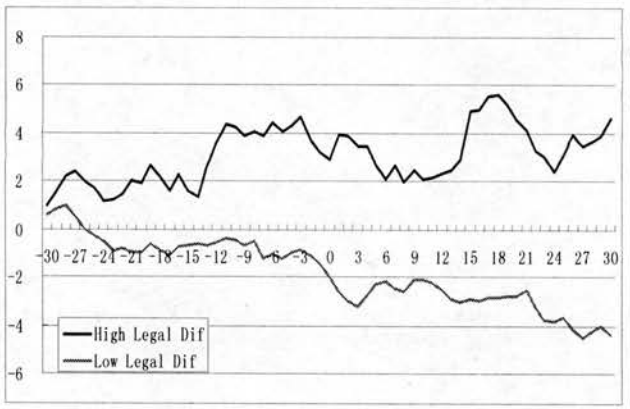

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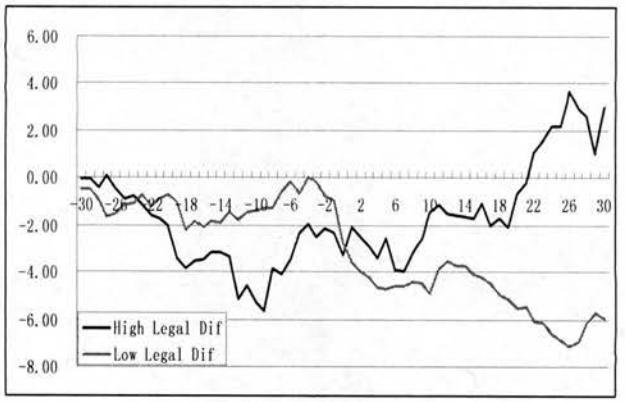
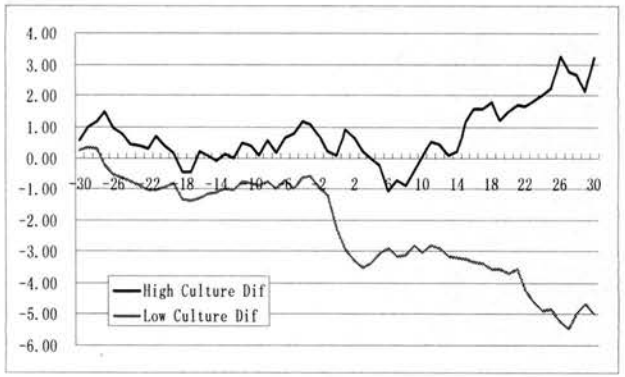


Table 7.5 Acquirers' AARs and CAARs by Culture Differences

	Total			Up			Down			Difference (Up vs. Down)	
	High Culture Dif N=31	Low Culture Dif N=181	Difference	High Culture Dif N=17	Low Culture Dif N=120	Difference	High Culture Dif N=14	Low Culture Dif N=61	Difference	High Culture Dif	Low Culture Dif
Event Day	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	t-value	t-value
t-1	-0.49$_b$	-0.27	-0.4	-0.63	-0.34	-0.43	-0.29	-0.15	-0.16	-0.45	-0.43
t	-0.13	-1.05**$_a$	0.66$_b$	0.3	-0.6	0.59	-0.65	-1.95***$_a$	0.45	0.53	0.9
t+1	0.84	-0.7***$_{ab}$	2.13**$_b$	0.7	-0.6*$_a$	1.28	0.99*$_b$	-0.91*$_a$	1.88*$_b$	-0.19	0.56
(-30,-1)	-0.13	-1.24	0.34	0.28	-1.27	0.34	-0.63	-1.17	0.13	0.21	-0.04
(-10,-1)	-0.29	-0.43	0.09	-1.71	-0.97	-0.36	1.45	0.65$_b$	0.34	-1.52	-1.24
(-1,+1)	0.22	-2.02***$_a$	1.41	0.33	-1.53**$_a$	0.88	0.09	-3.01***$_a$	1.28	0.08	1.14
(-1,+30)	2.45	-4.05***$_a$	1.79*$_b$	0.83	-3.32*$_a$	0.79	4.41	-5.49***$_a$	2.15**$_b$	-0.63	0.72
(-10,+30)	2.62	-4.2***$_a$	2.15**$_b$	-0.25	-3.96*$_a$	1.22	6.11*$_b$	-4.7*$_a$	1.86*$_b$	-0.81	-0.24
(-30,+30)	2.77	-5.02**$_a$	1.4	1.74	-4.26	0.74	4.03	-6.51**$_a$	1.51	-0.29	0.48

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



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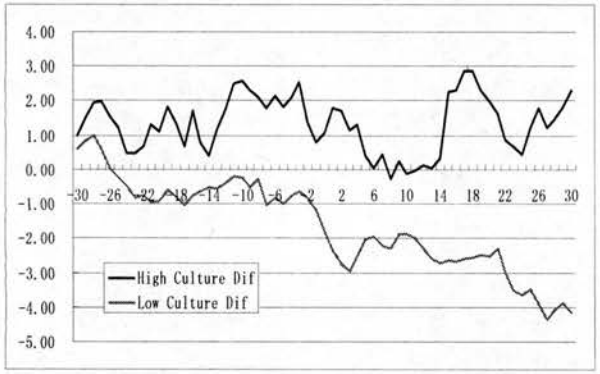

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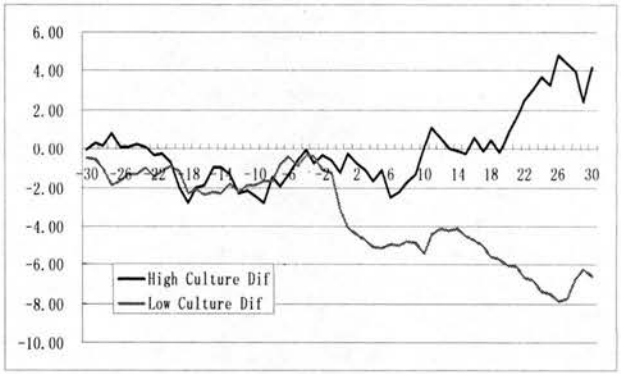


- *Related/unrelated takeover*

Table 7.6 compares AARs and CAARs of related takeovers with unrelated takeovers. We find that related takeovers generally result in significantly lower returns for acquiring firms than unrelated takeovers around the takeover announcement of (-1, +1). Such a situation is mainly found on the rising side, rather than on the slumping side. On the rising side, the AAR on the announcement day for acquirers involved in related takeovers is significant at -1.53%, which is significantly lower than that for acquirers involved in unrelated takeovers. The CAAR over (-1, +1) for acquirers involved in related takeovers is significantly lower than that for acquirers involved in non-related takeovers: -3.04% vs. 0.43%. This indicates that, in the boom period of takeover and of the stock market, markets have higher expectations for non-related takeovers which may create more synergies by diversification (Solnik (1974), Davis (1991)). No significant differences for AARs and CAARs are found on the slumping side of the M&A wave.

For related takeovers, the CAARs are higher for acquirers on the slumping side than those on the rising side. The difference is statistically significant over the pre-announcement window of (-10, -1). For unrelated takeovers, a significant difference between two periods of the merger wave is found over (-1, +1): 0.43% vs. -3.10%. These results suggest that, after the stock market collapse, markets seem to lose confidence about non-related takeovers relative to related takeovers. The disadvantages of diversification may become notable and outweigh the expected gain from synergies (Martynova and Renneboog (2006)).

- *High-Technology Takeovers*

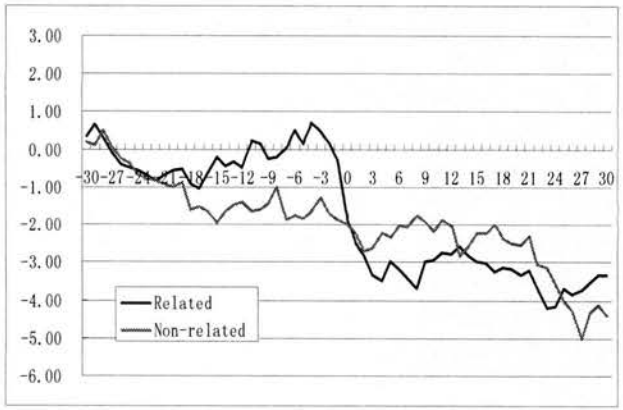
The boom in high-tech industries is one major feature during the rising-side of the M&A wave. We examine the impact of high-tech takeovers on acquiring shareholders' wealth in the two periods of the M&A wave. The results are reported in Table 7.7.

Table 7.6 Acquirers' AARs and CAARs in Related and Non-related Takeovers

	Total			Up			Down			Difference (Up vs. Down)	
	Related N=117	Non-related N=95	Difference	Related N=68	Non-related N=69	Difference	Related N=49	Non-related N=26	Difference	Related	Non-related
Event Day	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	t-value	t-value
t-1	-0.43*$_a$	-0.15	-0.77	-0.69**$_a$	-0.06$_b$	-1.4$_b$	-0.07	-0.38	0.45	-1.18	0.54
t	-1.57**$_a$	-0.12	-1.46$_b$	-1.53*$_a$	0.53	-2.07**$_b$	-1.64*$_a$	-1.84**$_a$	0.54	-0.38	2.27**
t+1	-0.65**$_a$	-0.28	-0.73	-0.85*$_{ab}$	-0.04	-1.24	-0.37	-0.9	0.62	-0.71	0.97
(-30,-1)	-0.41	-1.90	0.64	-1.04	-1.13	0.03	0.45	-3.94	1.27	-0.43	0.86
(-10,-1)	-0.54	-0.24	-0.27	-1.73$_a$	-0.41	-0.97	1.1$_b$	0.21$_b$	0.46	-1.75*$_b$	-0.38
(-1,+1)	-2.64***$_{ab}$	-0.54	-1.87*$_b$	-3.04***$_{ab}$	0.43$_b$	-2.54**$_b$	-2.07**$_a$	-3.10*$_a$	0.51	-0.60	2.09**
(-1,+30)	-3.46*$_a$	-2.67	-0.3	-3.84	-1.79	-0.59	-2.92*$_a$	-5.00	0.54	-0.25	0.78
(-10,+30)	-3.57*$_a$	-2.76	1.13	-4.88	-2.13	0.87	-1.75	-4.42	0.57	-0.34	-0.36
(-30,+30)	-3.44	-4.42	0.25	-4.19	-2.85	-0.25	-2.41	-8.58	1.07	-0.31	0.94

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



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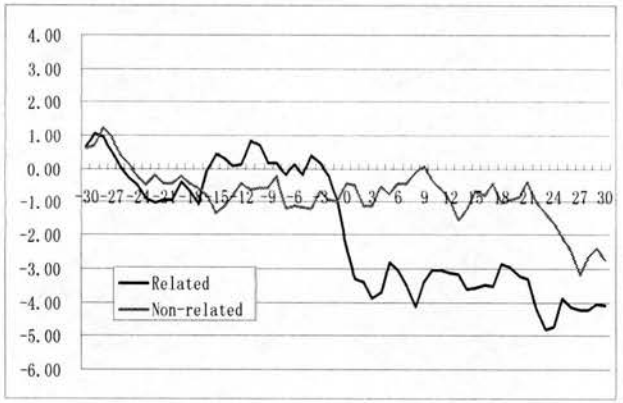

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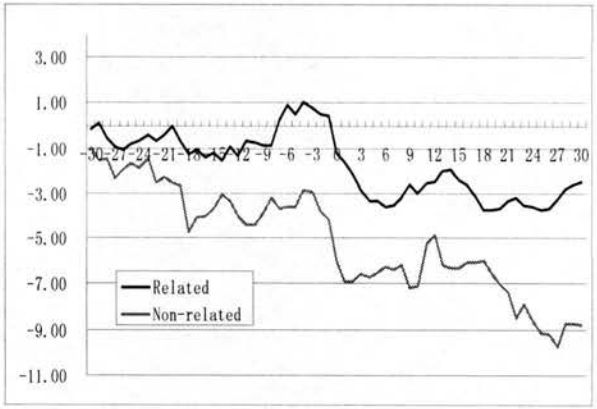
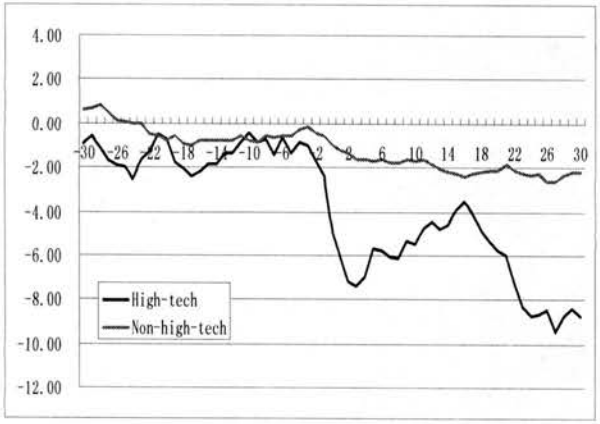


Table 7.7 Acquirers' AARs and CAARs in High-tech and Non-high-tech Takeovers

	Total			Up			Down			Difference (Up vs. Down)	
	High-tech N=54	N-high-tech N=158	Difference	High-tech N=36	N-high-tech N=101	Difference	High-tech N=18	N-high-tech N=57	Difference	High-tech	N-high-tech
Event Day	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	t-value	t-value
t-1	-0.67	-0.18	-1.18	-0.79*$_a$	-0.23	-1.11	-0.44	-0.09	-0.47	-0.38	-0.34
t	-2.55**$_{ab}$	-0.37	-1.73*$_b$	-1.03	-0.29	-0.64	-5.51***$_{ab}$	-0.50	-2.09**$_b$	1.21	0.26
t+1	-1.1*$_{ab}$	-0.27	-1.43$_b$	-0.47$_b$	-0.43	-0.05	-2.37**$_a$	0.02	-2.64**$_b$	1.42	-0.83
(-30,-1)	-2.15	-0.71$_b$	-0.55	-3.16	-0.34	-0.82	-0.12	-1.37	0.32	-0.47	0.43
(-10,-1)	-1.51	-0.03	-1.17	-2.52$_a$	-0.54	-1.28	0.51	0.89$_b$	-0.17	-1.00	-1.24$_b$
(-1,+1)	-4.28***$_{ab}$	-0.81	-2.73***$_b$	-2.27	-0.95	-0.83	-8.32***$_{ab}$	-0.57	-3.79***$_b$	2.00*	-0.33
(-1,+30)	-6.99**$_{ab}$	-1.78	-1.77*$_b$	-5.26	-1.94	-0.85	-10.44***$_{ab}$	-1.49	-2.13**$_b$	0.82	-0.15
(-10,+30)	-7.82**$_a$	-1.63	-1.28$_b$	-6.98	-2.25	-1.21$_b$	-9.5**$_a$	-0.52	-0.45	-0.62	-0.36
(-30,+30)	-8.46*$_a$	-2.31	-1.36	-7.63	-2.05	-0.92	-10.13$_a$	-2.78	-1.14	0.23	0.18

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



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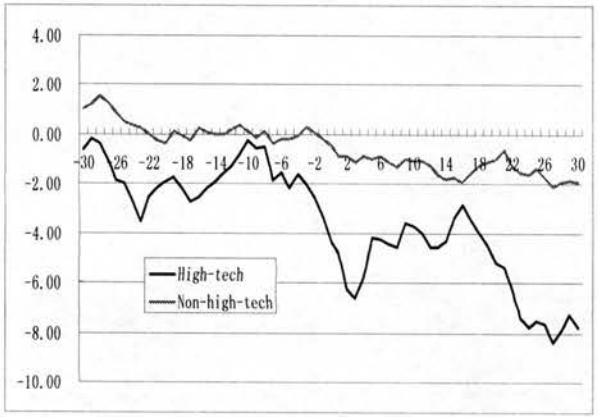

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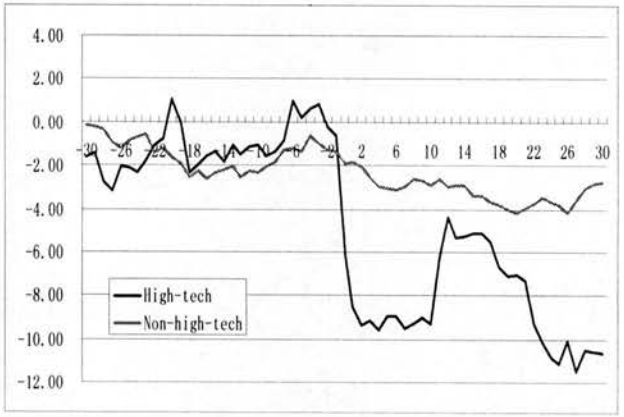
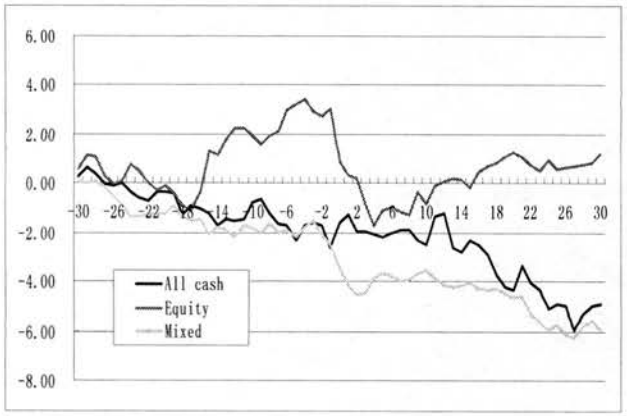


Table 7.8 Acquirers' AARs and CAARs by Means of Payments

	Total			Up			Down			Difference (Up vs. Down)		
	Cash	Equity	Mixed	Cash	Equity	Mixed	Cash	Equity	Mixed	Cash	Equity	Mixed
	N=38	N=57	N=117	N=23	N=36	N=78	N=15	N=21	N=39			
Event Day	AR(%)	AR(%)	AR(%)	AR(%)	AR(%)	AR(%)	AR(%)	AR(%)	AR(%)	t-value	t-value	t-value
t-1	-0.91**$_a$	0.29	-0.41*	-0.37	0.08	-0.59**$_a$	-1.79**$_a$	0.66$_b$	-0.04	1.59	-0.79	-1.05
t	1.05*$_{ab}$	-2.12*$_a$	-0.98**$_a$	0.99	-0.26	-1.02*$_a$	1.13$_b$	-5.22***$_a$	-0.90	-0.13	1.52	-0.12
t+1	0.26	-0.56	-0.68**$_a$	0.31	0.2	-0.95**$_{ab}$	0.19	-1.86***$_a$	-0.14	0.1	1.9*	-1.15
(-30,-1)	-2.65	2.93	-2.52*$_{ab}$	-1.91	4.50	-3.42*$_a$	-3.80$_a$	0.22	-0.72	0.45	0.74	-0.9
(-10,-1)	-1.12	0.78	-0.75	-0.71	-0.82	-1.28	-1.76	3.53*$_{ab}$	0.30	0.4	-1.41	-1.11
(-1,+1)	0.42	-2.35*$_a$	-2.06***$_a$	0.92	0.02	-2.56***$_a$	-0.34	-6.42***$_a$	-1.08	0.7	2.31**$_b$	-0.99
(-1,+30)	-3.14$_b$	-1.49$_b$	-3.88**$_a$	-1.32	1.67$_b$	-5.32**$_a$	-5.92**$_{ab}$	-6.9*$_a$	-1.01	1.02	1.47$_b$	-1.16
(-10,+30)	-3.38	-1.00$_b$	-4.23**$_a$	-1.66	0.78	-6.01**$_a$	-6.01**$_{ab}$	-4.03	-0.67	0.16	-0.66	-0.45
(-30,+30)	-4.91$_b$	1.15	-5.99**$_a$	-2.86	6.1	-8.15**$_a$	-8.05**$_a$	-7.35	-1.69	0.78	1.45$_b$	-1.17

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



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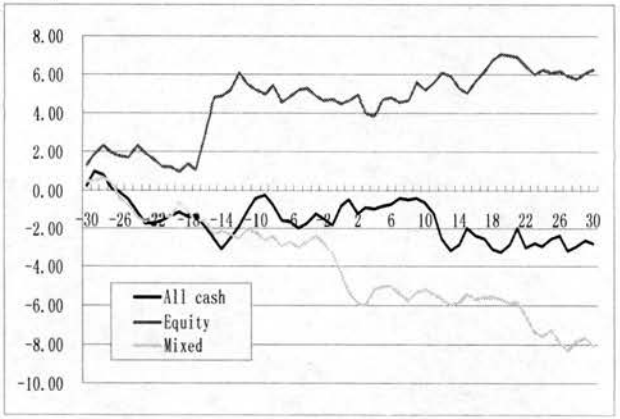

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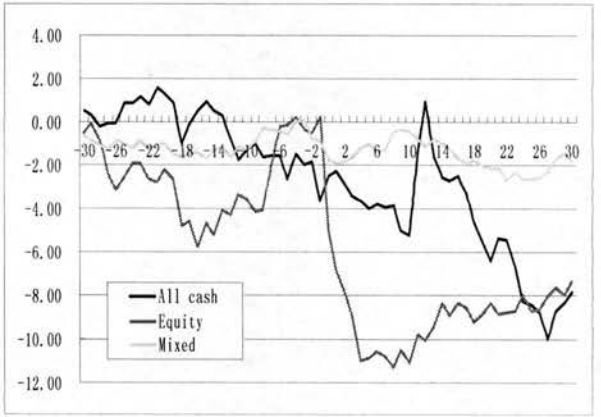


Generally, high-tech acquirers underperform non-high-tech acquiring firms in both periods. Losses are mainly during the slumping period of the M&A wave, especially around and following takeover announcements. High-tech acquirers in the rising side have an AAR of -1.03% on the announcement day, while the AAR is significant: -5.51% for high-tech acquirers on the slumping side. Considering CAARs, those of high-tech acquirers are significantly lower on the slumping side than on the rising side of the merger wave, e.g. -8.32% vs. -2.27% over (-1, +1). This suggests that the market's reaction for high-tech takeovers became worse after the collapse of the stock market in 2000. In particular, after the bubble of the "new economy" burst, the uncertain future and unproven outcomes lead to much speculation about the true worth of high tech firms (Kohers and Kohers (2004)), which is shown in market reactions to high-tech takeovers.

- *Payment*

The market reaction is related to the choice of payment in M&A activities (Goergen and Renneboog (2004)). When the stock markets were globally booming and M&A activities were also increasing, overvalued equity is more likely to be used in deals (Rhodes-Kropf and Viswanathan (2004)). Table 7.8 shows ARRs and CAARs of acquiring firms when employing cash, stock and mixed payment in transactions.

On both the rising and slumping sides of the M&A wave, the announcement ARRs of cash-financed acquisitions are significant and positive, while equity-financed bids and mixed cash and equity bids have negative returns for acquiring firms. It is not surprising that cash payment always shows the confidence of acquirers about the true value of targets (Martynova and Renneboog (2006)), especially in boom periods of the equity market, so that markets give a positive reaction.

On the rising-side of the M&A wave, equity-financed acquisitions led to higher returns to acquiring shareholders than cash-financed bids in the periods following the bid announcement, such as 1.67% vs. -1.32% over (-1, +30). But the situation reverses after the collapse of the stock market. On the slumping side, the equity

financed bids are less superior compared with cash financed bids after the announcements, e.g. -6.90% vs. -5.92% over (-1, +30).

In particular, the market reactions to equity payment are significantly higher before May 2000, than afterwards, such as 0.02% vs. -6.42% over (-1, +1). This provides more evidence for the above conclusion that in the boom period of the stock market and the takeover market, acquirers have greater returns when employing equity as payment, rather than in the slumping period.

- *Auctions*

We examine the effect of multiple bidding on the returns of acquiring firms in two M&A activity eras and the results are exhibited in Table 7.9.

For the whole sample, acquirers involved in multiple bidding always underperform single bidders. However, the difference is statistically significant only on the rising side of the M&A wave. Over windows just prior to and following the announcement, multiple bidders on the rising side experience a significant loss, which amounts to -10.79% over (-1, +30), which is significantly higher than the returns of -2.18% for single bidders. A similar situation is found in the slumping period, but the difference is not statistically significant. The results are consistent with the findings of Bradley, Desai and Kim (1988), suggesting that multiple biddings are more likely to lead to overbidding, which makes acquiring firms lose.

- *Attitude*

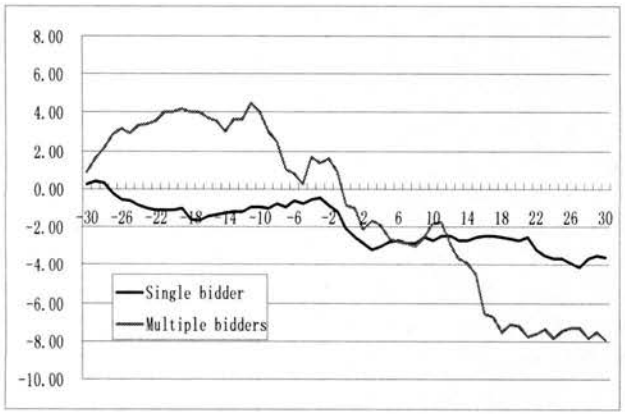
Table 7.10 exhibits comparisons of AARs and CAARs of acquirers involved in hostile and friendly takeovers.

Table 7.9 Acquirers' AARs and CAARs by Auctions

	Total			Up			Down			Difference (Up vs. Down)	
	Single bidder N=198	Multiple bidders N=14	Difference	Single bidder N=127	Multiple bidders N=10	Difference	Single bidder N=71	Multiple bidders N=4	Difference	Single bidder	Multiple bidders
Event Day	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	t-value	t-value
t-1	-0.28	-0.71*$_a$	-0.58	-0.34	-0.78	0.51	-0.15	-0.53	0.26	-0.46	-0.28
t	-0.86**$_a$	-1.76*$_a$	-0.64	-0.34	-2.27*$_a$	1.00	-1.77**$_a$	-0.5	-0.27	1.13	-0.81
t+1	-0.51*$_a$	-0.15	0.35	-0.45*	-0.38	-0.06	-0.61	0.42	-0.57	0.28	-0.77
(-30,-1)	-1.19	0.47	0.36	-1.21	0.60	0.31	-1.14	0.16	0.17	-0.03	0.06
(-10,-1)	-0.18	-3.62**$_a$	-1.56	-0.82	-4.17*$_a$	-1.28	0.97$_b$	-2.25	-0.78	-1.50$_b$	-0.46
(-1,+1)	-1.63***$_a$	-2.62**$_a$	-0.44	-1.13	-3.43**$_a$	-0.86	-2.53**$_a$	-0.6	0.45	1.13	-0.99
(-1,+30)	-2.65**$_a$	-9.48***$_{ab}$	-1.32$_b$	-2.18	-10.79**$_a$	-1.30$_b$	-3.5*$_a$	-6.19**$_a$	-0.33	0.47	-0.57
(-10,+30)	-2.56*$_a$	-12.39***$_{ab}$	-1.18	-2.65	-14.18**$_{ab}$	-1.02	-2.38	-7.91	-0.53	-0.56	-0.33
(-30,+30)	-3.57*$_a$	-8.29	-0.59	-3.05	-9.41	-0.62	-4.49	-5.50	-0.08	0.33	-0.3

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



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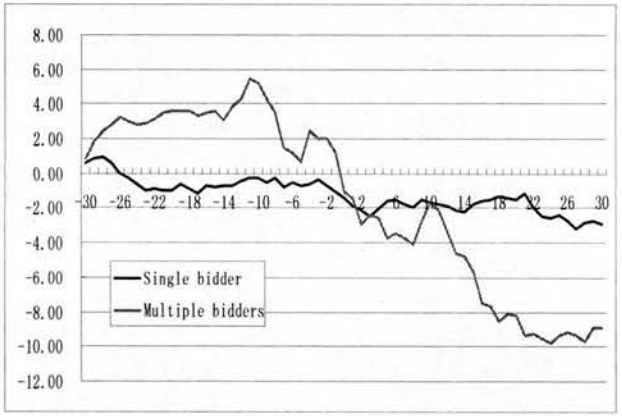

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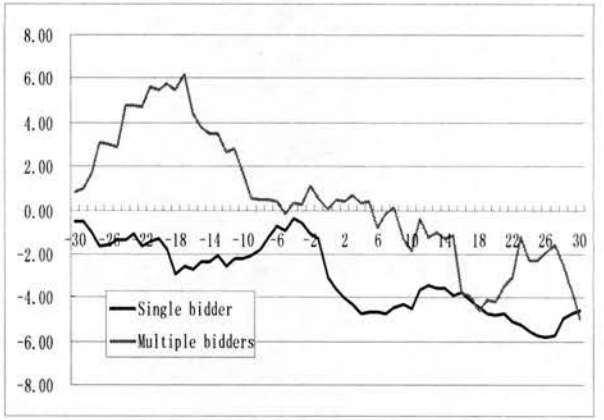
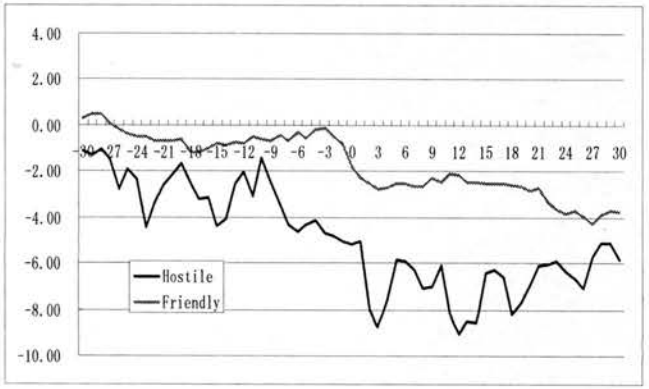


Table 7.10 Acquirers' AARs and CAARs by Attitude

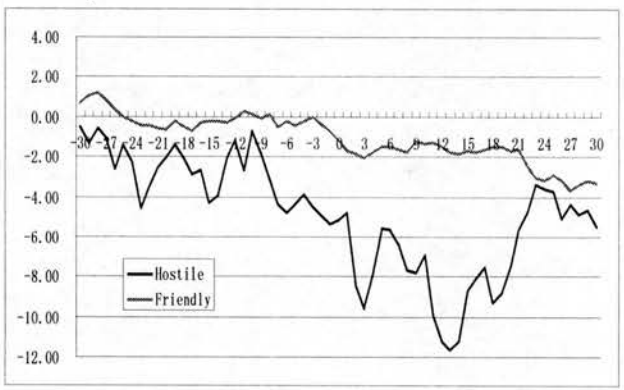
	Total			Up			Down			Difference (Up vs. Down)	
	Hostile N=10	Friendly N=202	Difference	Hostile N=8	Friendly N=129	Difference	Hostile N=2	Friendly N=73	Difference	Hostile	Friendly
Event Day	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	t-value	t-value
t-1	-0.25	-0.31	0.07	-0.45	-0.37	-0.08	0.57	-0.19	0.38	-1.19	-0.44
t	-0.15	-0.96**$_a$	0.34	0.23	-0.53	0.36	-1.68	-1.71**$_a$	-0.09	0.46	0.88
t+1	0.18	-0.52**$_a$	0.58	0.36	-0.49	0.61	-0.51	-0.56	0.02	0.2	0.12
(-30,-1)	-4.59	-0.9	-0.68	-5.15	-0.83	-0.67	-2.32	-1.04	-0.12	-0.18	0.09
(-10,-1)	-1.88	-0.33	-0.6	-2.48$_b$	-0.97	-0.52	0.52	0.80$_b$	-0.05	-0.71	-1.10
(-1,+1)	-0.21	-1.77***$_a$	0.59	0.14	-1.38*$_a$	0.51	-1.62***	-2.45**$_a$	0.14	0.32	0.88
(-1,+10)	-1.46	-1.94**$_a$	0.12	-2.33	-1.03	-0.28	2.05	-3.56**$_a$	0.71	-0.46	1.42
(-1,+30)	-1.23	-3.2**$_a$	0.32	-0.9	-2.93$_a$	0.27	-2.52	-3.67*$_a$	0.1	0.11	0.27
(-10,+30)	-2.86	-3.22**$_a$	0.58	-2.93	-3.53*$_a$	0.84	-2.57	-2.68$_a$	-0.32	0.76	-0.8
(-30,+30)	-5.56	-3.8*$_a$	-0.19	-5.6	-3.39	-0.19	-5.41***	-4.52$_a$	-0.05	-0.01	0.27

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



Up



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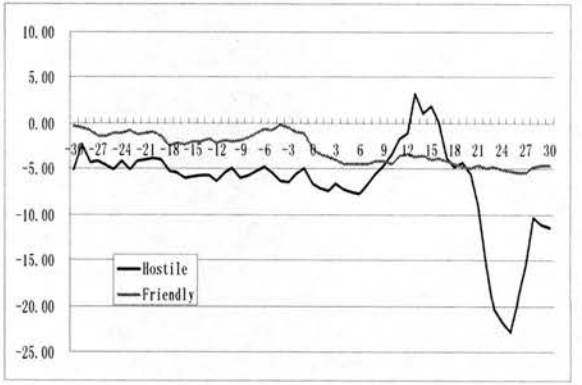
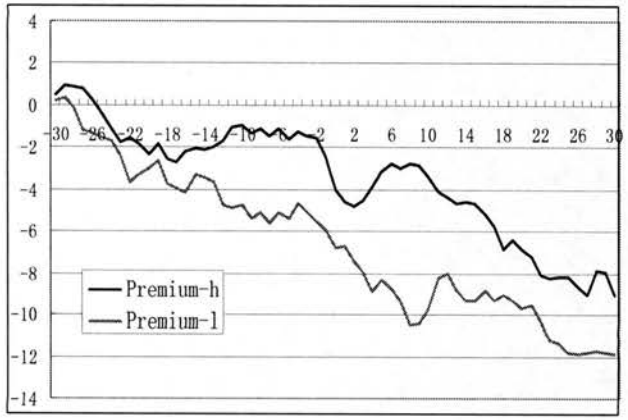


Table 7.11 AARs and CAARs by Premium

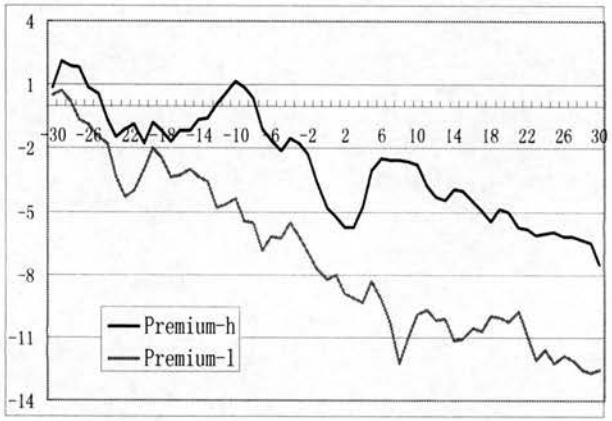
	Total			Up			Down			Difference (Up vs. Down)	
	Premium-h N=43	Premium-l N=43	Difference t-value	Premium-h N=34	Premium-l N=34	Difference t-value	Premium-h N=19	Premium-l N=19	Difference t-value	Premium-h t-value	Premium-l t-value
Event Day	AR(%)	AR(%)		AR(%)	AR(%)		AR(%)	AR(%)			
t-1	-0.9*$_a$	-0.38	0.43	-1.29***$_{ab}$	-0.80`	-0.97	-0.28	-0.29	0.32	-1.01	0.19
t	-1.61*$_a$	-0.85	0.25	-1.25*$_a$	-0.50	-0.12	-2.28	-2.22	-0.02	0.52	0.47
t+1	-0.56	0.03	0.85	-0.45	0.18	-0.72	-0.56	0.07	-0.24	0.09	0.44
(-30,-1)	-2.51	-5.94***$_a$	-0.64	-3.61	-7.70***$_a$	0.08	0.44	-5.08	0.98	-0.64	0.21
(-10,-1)	-1.4	-1.03	0.56	-4.11***$_a$	-3.00*$_a$	-1.19	2.67	1.04	0.49	-2.37**$_b$	-0.69
(-1,+1)	-3.01**$_a$	-1.2	0.62	-2.94**$_a$	-1.11	-0.66	-3.09	-2.44	0.00	0.05	0.55
(-1,+30)	-7.42**$_a$	-6.32*$_a$	-0.01	-5.35	-5.58	0.28	-5.71$_b$	-10.17*$_a$	0.71	0.05	0.46
(-10,+30)	-7.93**$_a$	-6.97*$_a$	-1.12	-8.17*$_a$	-7.78	-0.54	-2.77	-8.84	0.12	-0.58	0.01
(-30,+30)	-9.05$_a$	-11.87**$_a$	-0.36	-7.67	-12.48*	0.32	-5.00	-14.96*$_a$	0.95	-0.25	0.41

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

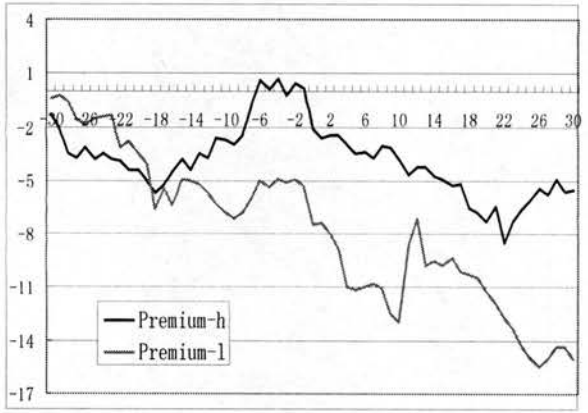
Total



Up



Down



For the whole sample, friendly takeovers experience significant losses around and following the announcement. But no significant difference in AARs or in CAARs of acquirers is found between hostile takeovers and friendly takeovers. Such a situation appears in both M&A activity eras.

- *Premium*

A high premium is considered to lead to overpayment by acquiring firms. In Table 7.11, we compare ARRs and CAARs for extreme quartiles of premia paid. Generally, for the whole sample, acquirers that paid a high premium underperform those that paid a low premium. But the difference is not statistically significant in any windows. This is found both on the rising side and on the slumping side of the M&A wave.

For the acquirers in the highest premium quartile, acquirers' returns on the rising side are significantly lower than those on the slumping side over (-10, -1): -4.11% vs. 2.67%. The results are consistent with our hypothesis that a high premium could lead to a serious loss for an acquiring firm, and such a situation is more notable shortly prior to announcement on the rising side of the merger wave. This indicates that managers of acquiring firms may be more aggressive and more likely to overpay targets in a boom period (Malmendier and Tate (2005)).

Summary

International M&A activities increased strongly even after the stock market collapsed in 2000 (Martynova and Renneboog (2006)). Foreign acquiring firms outperformed UK domestic firms on the slumping side of the merger wave. It seems that markets always show favourable reactions to international takeovers into the UK. Also, the superior performance of acquirers from countries with non-English common law systems (high legal differences) and high cultural differences appear mainly on the slumping side of the merger wave. This indicates that on the down side, markets had higher expectation about takeovers when having better investors'

protection provided by Scandinavian and Germanic civil law systems and the learning benefits from culture difference.

On the rising side of the M&A wave, the underperformance of related takeovers is more significant, suggesting that, in the boom period, the market favoured diversification takeovers rather than focused takeovers. High-tech acquirers experience significantly lower returns than non-high-tech acquirers, especially on the slumping side of the merger wave, which indicates that the market reaction to high-tech takeovers was even worse following the slump of the "new economy". Around and following takeover announcement, equity payment brings significantly higher returns to acquiring firms on the rising side than on the slumping side of the wave.

Moreover, the significant difference in acquirers' returns between single and multiple bidding appears on the rising side, which indicates that multiple bidders may be more aggressive in the boom market and lead to significantly lower returns. No significant difference is found between the returns for friendly acquirers and for hostile acquirers. A high premium brings worse returns to acquirers prior to the announcement on the rising side than on the slumping side.

7.4.2 Target Governance Characteristics

- *Post-takeover CEO departure*

Table 7.12 provides the relation between acquirers' returns and target governance by comparing targets with and without a rumour of CEO departure around the takeover announcement. On the announcement day, acquirers without target CEO departure have significant losses of -1.02%, while acquirers with target CEO departure have returns that are not significantly different from zero. On the day after the announcement, the ARR of acquirers without target CEO departure is significant at -0.90%, which is significantly lower than that for those with target CEO departure. These results show that, around the takeover announcement, markets give a negative reaction to acquiring firms where the target CEO is expected to be retained. This

indicates that, to some extent, the failure of correcting target management is related to the negative market reaction to acquiring firms. No significant difference in AARs was found between the two stages of the merger wave.

Considering CAARs, acquiring firms suffer a significant loss around and following the announcement when there is no rumour or news released about the departure of target CEO. But, in both subperiods of the M&A wave, no significant difference is found between CAARs for acquiring firms with and without target CEO departure.

In particular, acquirers without target CEO departure on the slumping side have significantly higher returns than those on the rising-side of M&As over (-10, -1): 1.13% vs. -1.16%. This suggests that markets have a worse reaction to acquisitions that bid for targets without CEO departure on the rising side than on the slumping side. But no significant difference is found for acquirers with target CEO departure between the two periods of the M&A wave.

- *Board Size*

We examine the effect of target board size on acquirers' returns by comparing the acquirers' returns when the bidding target's board size is in the highest quartile with those when target's board size is in the lowest quartile. The results are presented in Table 7.13.

For the whole sample, we find no significant difference in AARs and CAARs of acquirers when they bid for targets with board size in the highest compared with the lowest quartile. A similar situation is found on the rising side of the merger wave. However, on the slumping side, acquirers bidding for targets with the highest-quartile board size earn higher returns than those acquiring targets with the lowest-quartile board size across all windows. The difference is statistically significant over the (-30, +30) window. Acquirers bidding for targets with the highest-quartile board size earn a return of 4.41% over (-30, +30), while acquirers bidding targets with the lowest-quartile board size have a significant loss of -10.01% over the same period.

Moreover, acquirers taking over targets with board sizes in the highest quartile, acquirers on the slumping side earn significantly higher returns than those on the rising side of the M&A wave over the windows of (-30, -1) and (-1, +1). In general, the large board size leads to less effective management and lower firm value. Our results, therefore, suggest that, after the overoptimism in the boom merger wave, markets may be more rational and have a larger reaction to takeovers of such targets with a large board size (Jensen (1993) and Lipton and Lorsch (1992)).

- *Board Composition*

Table 7.14 shows the comparison of returns to acquirers when bidding for a target within the highest-quartile and lowest-quartile of the proportion of outsiders on the target's board.

For the whole sample, the returns are significantly lower for acquirers bidding for targets in the lowest quartile than in the highest quartile of outsiders' proportion on the board, and such a result is the same across most windows. When breaking the merger wave into two periods, the same results are found on the rising side of the M&A wave. For example, acquirers bidding for targets in the highest-quartile of outsiders' proportion have returns of 1.36% over (-1, +30), which is significantly higher than the returns of -6.18% for those bidding for targets in the lowest-quartile of outsiders' proportion. However, no such significant difference is found on the slumping side of the merger wave. The results suggest that the proportion of outsiders on the board is positively related to the acquirers' returns, and the impact of outsiders is greater in the boom period than in the slumping period of the merger wave.

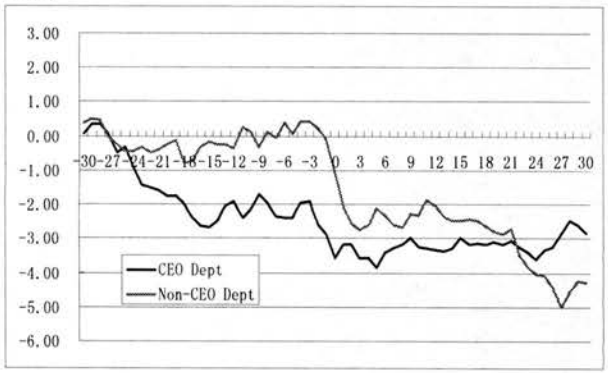
This is in contrast to the AAR results where on the day after announcement, acquirers of targets in the highest quartile have significantly lower returns than those of targets in the lowest quartile only on the slumping side of the wave. A smaller proportion of outsiders improves acquiring firms' returns just after the announcement on the slumping side but not on the rising side. But this effect disappeared after 30 days.

Table 7.12 AARs and CAARs of Acquirers bidding for targets with and without CEO departure

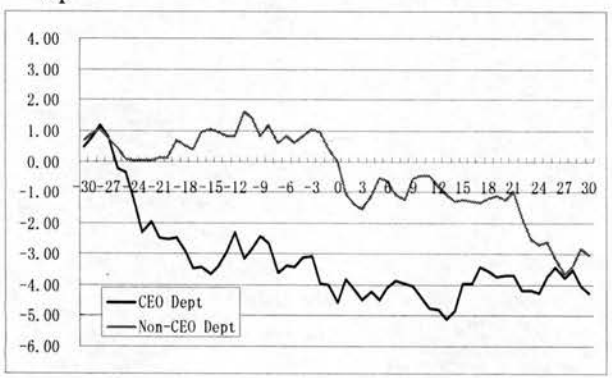
	Total			Up			Down			Difference (Up vs. Down)	
	CEO Dept N=68	Non-CEO Dept N=144	Difference	CEO Dept N=43	Non-CEO Dept N=94	Difference	CEO Dept N=25	Non-CEO Dept N=50	Difference	CEO Dept	Non-CEO Dept
Event Day	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	t-value	t-value
t-1	-0.27	-0.32	0.14	-0.07	-0.51*$_a$	0.92	-0.61	0.05	-0.97	0.96	-1.12
t	-0.71	-1.02*$_a$	0.85	-0.54	-0.46	-0.07	-1	-2.06**$_a$	1.51	-0.59	1.43
t+1	0.39	-0.9***$_{ab}$	2.4**$_b$	0.74	-0.99**$_{ab}$	2.5**$_b$	-0.19	-0.73	0.63	1.12	-0.38
(-30,-1)	-2.89*$_a$	-0.22$_b$	-1.09	-4.11*$_a$	0.30$_b$	-1.35	-0.8	-1.21	0.12	-0.99	0.48
(-10,-1)	-0.48	-0.37	-0.1	-0.84	-1.16	0.22	0.13	1.13$_b$	-0.51	-0.5	-1.61$_b$
(-1,+1)	-0.58	-2.22***$_a$	1.37	0.13	-1.95**$_a$	1.38	-1.80$_a$	-2.74**$_a$	0.46	1.25	0.51
(-5,+5)	-1.46*$_a$	-2.49***$_a$	0.64	-1.09	-1.39	0.14	-2.11	-4.58***$_a$	0.99	0.43	1.57
(-1,+30)	-0.21	-4.47***$_a$	1.55	-0.27	-3.97*$_a$	0.99	-0.10	-5.41**$_a$	1.37	-0.04	0.41
(-10,+30)	-0.42	-4.52**$_a$	1.07	-1.04	-4.62*$_a$	1.28	0.63	-4.33$_a$	0.35	0.08	-0.79
(-30,+30)	-2.83	-4.38*$_a$	0.36	-4.31	-3.15	-0.20	-0.29	-6.67*$_a$	1.1	-0.7	0.64

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



Up



Down

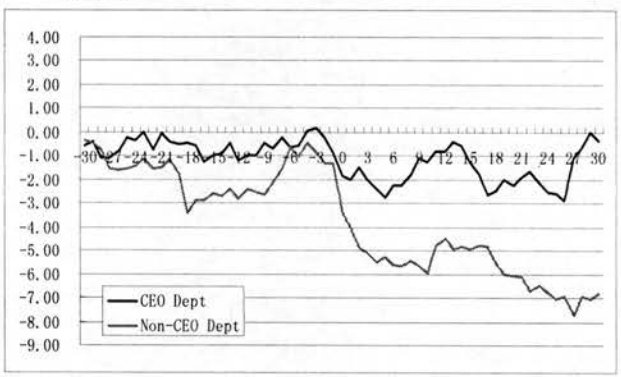
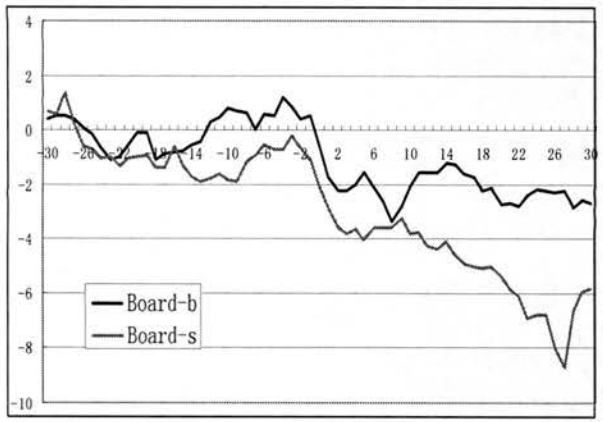


Table 7.13 AARs and CAARs of Acquirers bidding for targets with a board in the highest and lowest quartiles

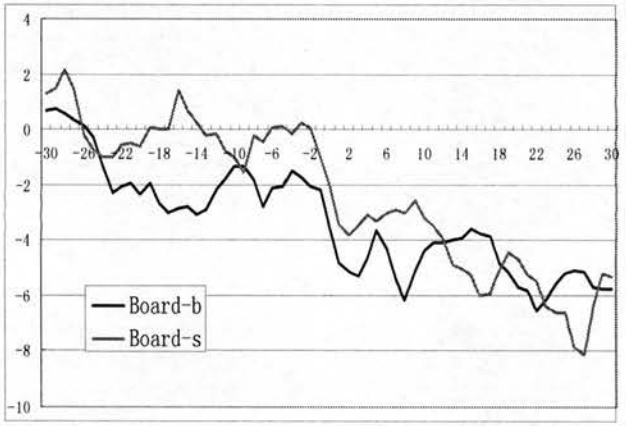
	Total			Up			Down			Difference (Up vs. Down)	
Event Day	Board-b N=43 AR(%)	Board-s N=43 AR(%)	Difference t-value	Board-b N=34 AR(%)	Board-s N=34 AR(%)	Difference t-value	Board-b N=19 AR(%)	Board-s N=19 AR(%)	Difference t-value	Board-b t-value	Board-s t-value
t-1	0.09	-0.47	-0.72	-0.12	-1.02**$_a$	1.31$_b$	0.33	0.54	-0.21	-0.28	-1.80*
t	-1.05	-0.93$_a$	0.50	-1.36	-1.08	-0.31	0.70$_b$	-0.78	0.98	-0.99$_b$	0.05
t+1	-1.2**$_a$	-0.81	0.17	-1.27*$_b$	-1.37*$_a$	0.29	-0.55	-0.30	-0.30	-0.77	-1.35
(-30,-1)	0.41	-1.21	0.30	-2.28	-1.20	-0.48	2.46	-4.69	1.48	-1.66$_b$	0.37
(-10,-1)	0.05	0.50$_b$	0.16	-0.41	-0.22$_b$	-0.02	1.64$_b$	0.58	0.67	-1.04	-0.62
(-1,+1)	-2.13	-2.21**$_a$	0.12	-2.71	-3.47**$_a$	0.35	0.48	-0.54	0.46	-1.03$_b$	-1.25
(-1,+30)	-3.11	-5.19$_a$	-0.94	-3.73	-5.40	0.41	2.28	-4.78$_a$	1.41	-1.04	-0.10
(-10,+30)	-3.15	-4.23	1.05	-4.02	-4.60$_b$	0.54	3.59	-4.74$_a$	1.20	-1.09	-0.03
(-30,+30)	-2.79	-5.94	-0.33	-5.89	-5.59	-0.11	4.41	-10.01*$_a$	1.83*$_b$	-1.63	0.26

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



Up



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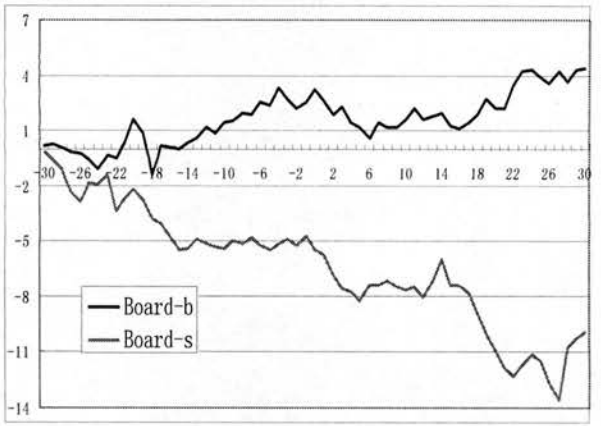
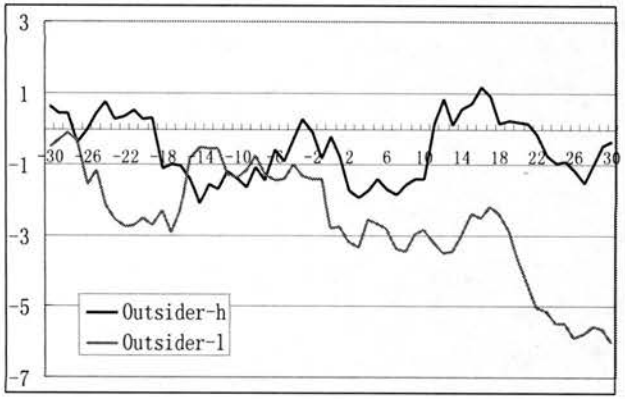


Table 7.14 AARs and CAARs of Acquirers bidding for targets with outsiders in the highest and lowest quartiles

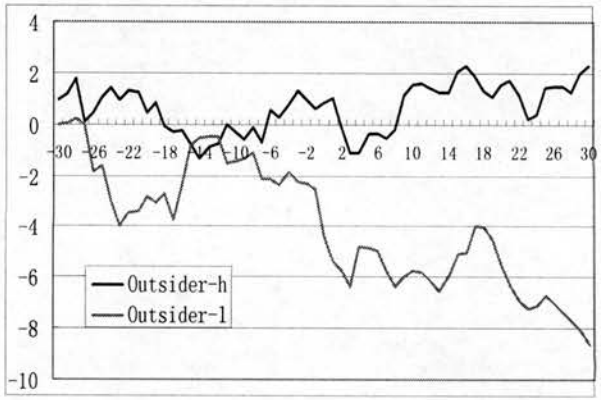
	Total			Up			Down			Difference (Up vs. Down)	
Event Day	Outsider-h N=43 AR(%)	Outsider-l N=43 AR(%)	Difference t-value	Outsider-h N=34 AR(%)	Outsider-l N=34 AR(%)	Difference t-value	Outsider-h N=19 AR(%)	Outsider-l N=19 AR(%)	Difference t-value	Outsider-h t-value	Outsider-l t-value
t-1	-0.72	-0.02	1.00	-0.34	-0.24	-0.33	-1.21_b	0.11	-0.80	0.69	0.11
t	0.62	-1.39	-1.53_b	0.23	-1.81_b	0.50	0.50_b	-0.98	1.00	-0.28	-0.02
t+1	-0.56	0.04	0.66	0.16	-1.00_b	1.04	-1.64	1.62^{**}_{ab}	-2.01^{*}_b	1.31	-1.73^{*}_b
(-30,-1)	-1.01	-1.34	-0.87	0.4	-2.49	0.79	-3.26	0.23	-0.77	1.06	-0.53
(-10,-1)	0.34_b	-0.17	-1.35_b	0.59	-1.04	1.14	-0.77	1.62	-0.77	0.55	-1.19
(-1,+1)	-0.66	-1.37	-0.34	0.06	-3.05	0.76	-2.35	0.75_b	-0.8	0.68	-0.82
(-1,+30)	-0.29	-4.58	-1.83*	1.36	-6.18	1.69*	-3.13	-4.35	0.28	1.27	-0.28
(-10,+30)	0.77_b	-4.73	1.71^{**}_b	2.29	-6.99	1.52_b	-2.7	-2.83	0.91	0.21	0.07
(-30,+30)	-0.58	-5.9	-1.69^{*}_b	2.10	-8.44	1.47_b	-5.19	-4.23	-0.08	1.39	-0.47

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



Up



Down

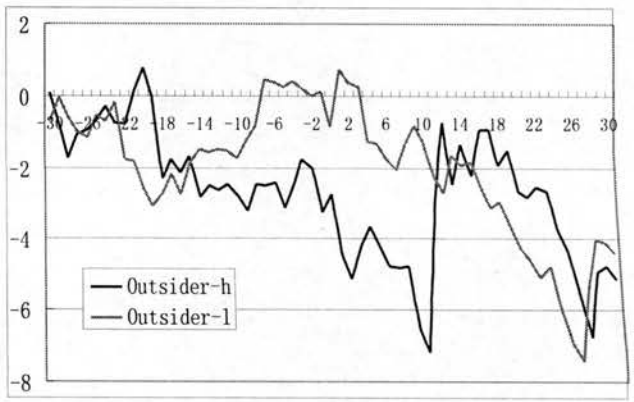
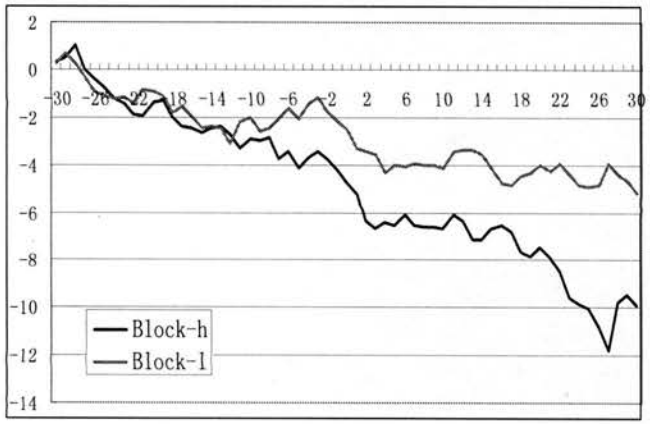


Table 7.15 CAARs of Acquirers bidding for targets with blockholder ownership in the highest and lowest quartile

	Total			Up			Down			Difference (Up vs. Down)	
	Block-h N=43	Block-l N=43	Difference t-value	Block-h N=34	Block-l N=34	Difference t-value	Block-h N=19	Block-l N=19	Difference	Block-h	Block-l
Event Day	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	t-value	t-value
t-1	-0.42	-0.36	0.56	0.05	-0.47	0.67	-1.39*$_a$	-0.17	-0.89	0.93	-0.64
t	-0.56	-0.42	0.29	-0.46	-1.14	0.58	-1.80	0.21	-1.11	0.87	-0.78$_b$
t+1	-0.47	-0.78	-0.25	-0.71	-2.16***$_{ab}$	1.35$_b$	-0.50	0.62	-0.52	-0.28	-2.4**$_b$
(-30,-1)	-4.24*$_a$	-2.18	1.56$_b$	-0.74$_b$	-6.41*$_a$	0.6	-10.56***$_a$	3.38	-3.08***$_b$	1.81*$_b$	-1.5
(-10,-1)	-0.9$_b$	0.04$_b$	1.12	-0.52	-1.29	-0.06	-1.99	0.66	-1.01	0.47	-0.56
(-1,+1)	-1.46	-1.56	0.27	-1.11	-3.78*	1.15$_b$	-3.70	0.66	-1.30	0.67	-1.69$_b$
(-1,+30)	-6.09*$_a$	-3.38	0.68	-3.3	-10.05**$_a$	1.07	-9.70**$_a$	4.59	-2.05*$_b$	0.82	-2.03**$_b$
(-10,+30)	-6.57$_a$	-2.98$_b$	-0.58	-3.87	-10.87**$_a$	0.71	-10.30**$_a$	5.42$_b$	-0.98	0.55	-1.11
(-30,+30)	-9.91**$_a$	-5.2	1.22$_b$	-4.09	-16***$_a$	1.02	-18.87***$_{ab}$	8.14$_b$	-3.12***$_b$	1.39$_b$	-2.14**$_b$

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



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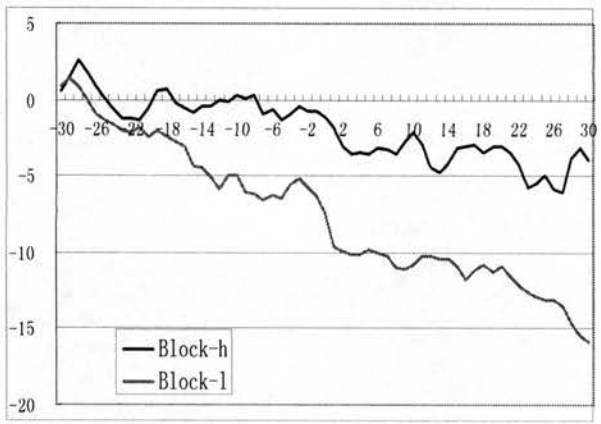

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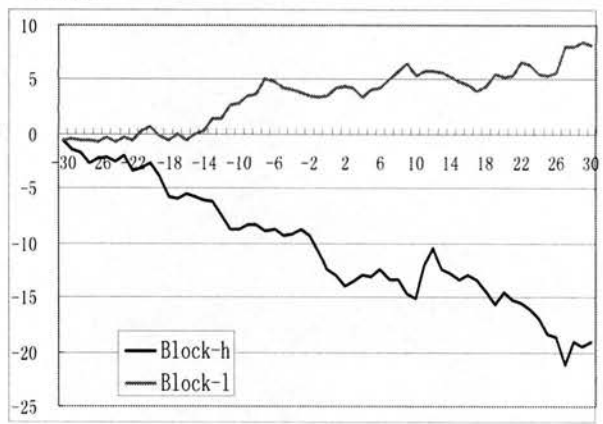


- *Blockholder Ownership*

We examine the effect of target blockholders on acquirers' returns and the results are shown in Table 7.15.

For the whole sample, acquirers' returns are lower when bidding for a target in the highest-quartile than in the lowest-quartile by blockholder ownership across most windows. The difference is statistically significant over the windows of (-30, -1) and (-30, +30). The same results exist on the slumping side of the merger wave. Acquiring firms have significant and negative CAARs when bidding for targets with the highest-quartile blockholder ownership, while bidding for targets within the lowest-quartile blockholder ownership bring positive returns to acquiring firms. The difference is statistically significant across most windows, especially -18.87% vs. 8.14% over (-30, +30). But no such significant differences are found on the rising side. As suggested by Kohers and Kohers (2000), some blockholders have myopic investment objectives and are not really effective at monitoring. They always react positively to higher premia, which may lead to a loss to acquiring firms. The situation is more serious on the slumping side of the merger wave.

For acquiring targets with the highest-quartile blockholder ownership, we find that CAARs of acquirers over (-30, -1) and (-30, +30) on the slumping side are significantly lower than that for those on the rising side of the merger wave. But for acquiring targets with the lowest-quartile blockholder ownership, CAARs for acquirers across most research windows on the slumping side are significantly higher than that for those on the rising side of the merger wave.

Summary

Both on the rising side and on the slumping side of the merger wave, the returns are lower for acquirers without than for those with target CEO departure, but the difference is insignificant. However, over the window of (-10, -1), the returns to acquirers without target CEO turnover are significantly higher on the slumping side

than on the rising side of the merger wave. This indicates that unfavourable market reaction for acquiring firms that fail to change target management is worse in the rising period than the slumping period of the merger wave. Moreover, significantly higher returns are found for acquirers bidding for targets with a large board size than with a small board size on the slumping side, but not on the rising side. This suggests that after the over optimism in the boom period, markets may be more optimistic towards takeovers of targets with poor governance, as a large board is usually considered to be ineffective. However, more outsiders on the target board may be better at monitoring the management and at correcting such a situation, and we find significantly higher returns for acquirers bidding for targets with a high than low proportion of outsiders during the rising part of the M&A wave. In addition, a high proportion of blockholder ownership brings significantly worse returns to acquiring firms on the slumping side, implying that high premia asked by blockholders may lead to serious losses for acquiring firms.

7.4.3 Target Firm Characteristics

- *Pre-takeover performance*

Table 7.16 shows comparisons of acquirers' returns when bidding for the best- and worst-performing targets. Generally, for each set of samples, acquirers bidding for worst-performing targets underperform those that bid for the best-performing targets. But statistical tests don't show any statistically significant difference between two groups of targets.

- *Pre-takeover leverage*

Table 7.17 reports comparisons of acquirers' returns when bidding for targets in the the highest and the lowest quartiles of leverage.

On the rising side of the M&A wave, bidding for targets in the lowest leverage quartile results in higher returns to acquiring firms than those bidding for targets in

the highest quartile over (-10, -1): 1.78% vs. -2.06%. When bidding for targets in the highest leverage quartile, acquiring firms have significant and negative returns around and following the takeover announcement: -2.29% over (-1, +1) and -5.21% over (-1, +30). This suggests that markets react negatively to takeovers of targets with high leverage, as too much debt may exert a greater burden and risk on acquiring firms. But on the slumping side, the results are the opposite. Over the window of (-1, +30), acquirers bidding for the lowest-leverage-quartile targets have significant negative returns, which are significantly lower than those of acquirers bidding for the highest-leverage-quartile targets: -9.97% vs. -0.27%.

- *Market-to-book ratios of target firms*

We examine the market reaction to takeovers of growth targets (targets in the highest quartile of market-to-book ratio) and value targets (targets in the lowest quartile of market-to-book ratio) in the two periods of the M&A wave.

The results in Table 7.18 show that in the rising period of the merger wave, the returns to acquirers bidding for growth targets are significantly lower than those for acquirers bidding for value targets across most windows. This finding is consistent with Rau and Vermaelen (1998), suggesting that the greater risk associated with growth targets may make markets less confident about takeovers.

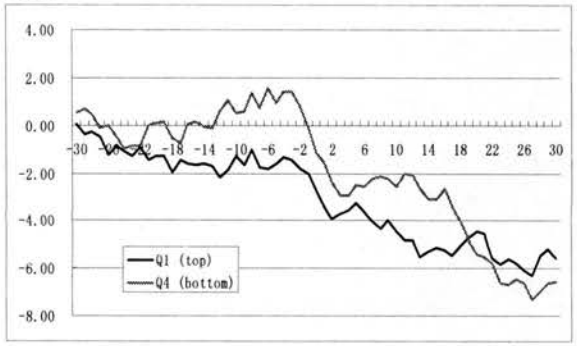
Additionally, when bidding for value targets, acquirers experience significantly higher CAARs on the rising side than on the slumping side of the M&A wave: 4.55% vs. -8.29% over (-30, -1) and 4.91% vs. -12.88% over (-30, +30). This suggests that market reactions to acquirers bidding for value targets are quite significantly affected by the intensity of M&A activity and the stock market. When stock markets are in a boom period, investors seem more confident and have higher expectations about the takeover of value targets. Otherwise, they tend to worry more about such takeovers.

Table 7.16 AARs and CAARs of Acquirers bidding for targets with pre-takeover performance in the highest and lowest quartile

	Total			Up			Down			Difference(Up vs. Down)	
	Q1 (top) N=53	Q4 (bottom) N=53	Difference	Q1 (top) N=34	Q4 (bottom) N=34	Difference	Q1 (top) N=19	Q4 (bottom) N=19	Difference	Q1 (top)	Q4 (bottom)
Event Day	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	t-value	t-value
t-1	-0.23	-0.91*$_a$	1.1	-0.55	-0.88	0.44	0.24	-0.86	1.01	-0.97	-0.02
t	-0.75	-1.09*$_a$	0.31	-0.84	-1.72*$_a$	0.56	-2.13**$_a$	-0.75	-0.89	0.72	-0.61
t+1	-0.62	-0.33	-0.37	-1.16*$_b$	-0.39	-0.77	-0.29	-0.56	0.23	-0.87$_b$	0.14
(-30,-1)	-2.03	-0.18	-0.49	-1.66	1.07$_b$	-0.51	-3.18$_a$	-2.21	-0.21	0.32	0.52
(-10,-1)	-0.14$_b$	-1.1	0.61	-0.44	-0.94	0.25	-0.84	-1.21	0.14	0.21	0.1
(-5,-1)	-0.19	-1.65*$_a$	1.30	-0.47	-0.82	0.25	-0.32	-3.16**$_a$	1.54	-0.11	1.21
(-1,+1)	-1.6	-2.31**$_a$	0.44	-2.55	-2.99**$_a$	0.2	-2.18	-2.17	-0.01	-0.16	-0.34
(-1,+20)	-2.67*$_{ab}$	-6.18**$_a$	1.15	-2.86$_b$	-5.60**$_a$	0.66	-3.95**$_a$	-9.18***$_a$	1.38	0.27	0.75
(-1,+30)	-3.75$_b$	-7.35**$_a$	0.88	-3.89	-7.48*$_a$	0.63	-5.19**$_{ab}$	-10.37**$_{ab}$	1.12	0.23	0.48
(-10,+30)	-3.66	-7.56**$_a$	0.88	-3.78	-7.55$_a$	0.74	-6.27**$_a$	-10.72**$_{ab}$	0.86	0.26	0.44
(-30,+30)	-5.55	-6.64	0.16	-5	-5.54	0.06	-8.61***$_a$	-11.73*$_{ab}$	0.43	0.4	0.59

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



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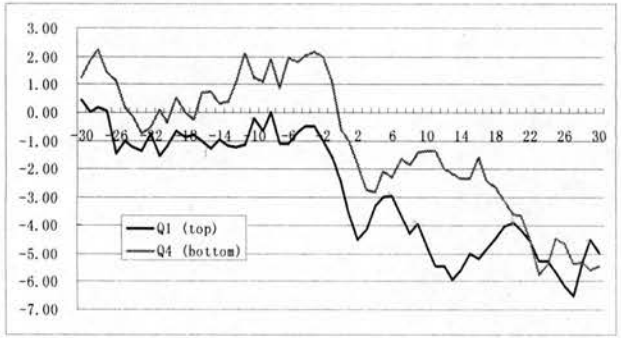

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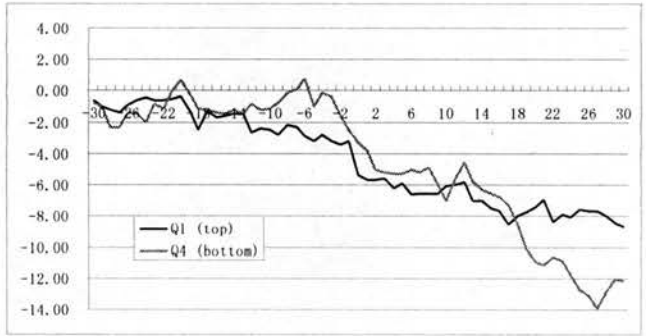
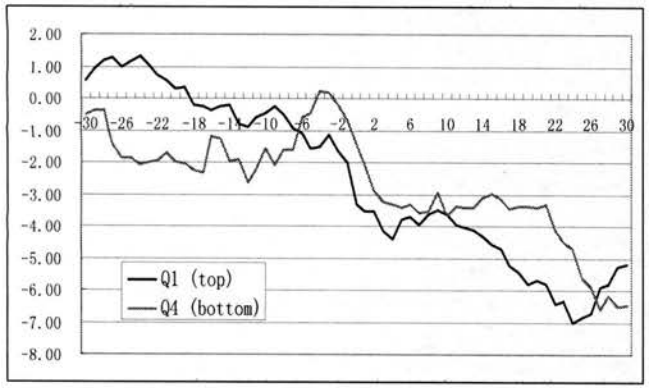


Table 7.17 AARs and CAARs of Acquirers bidding for targets with pre-takeover leverage in the highest and lowest quartile

	Total			Up			Down			Difference (Up vs. Down)	
	Q1 (top) N=53	Q4 (bottom) N=53	Difference	Q1 (top) N=34	Q4 (bottom) N=34	Difference	Q1 (top) N=19	Q4 (bottom) N=19	Difference	Q1 (top)	Q4 (bottom)
Event Day	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	t-value	t-value
t-1	-0.34	-0.44	0.18	-0.60	-0.49	-0.14	0.23	-0.88	1.24	-1.09	0.41
t	-1.30*$_a$	-0.77	-0.96	-1.31	-0.11	-0.85	-1.5	-1.62	-0.74	0.13	-0.02
t+1	-0.24	-0.63	0.71	-0.43	-0.7	0.35	0.26	-0.62	1.16	-0.86	-0.1
(-30,-1)	-2.14	-0.58	-0.47	-2.41	2.12	-1.03	-1.9	-4.94	0.69	-0.15	1.21
(-10,-1)	-1.42	1.56	-2.04**$_b$	-2.06	1.78$_b$	-2.04**$_b$	0.18	0.40	-0.1	-1.07	0.64
(-1,+1)	-1.85*$_a$	-1.83	-0.01	-2.29*$_a$	-1.3	-0.49	-1.01	-3.07**$_a$	0.97	-0.64	0.73
(-1,+30)	-3.51*$_a$	-6.2***$_a$	0.88	-5.21*$_a$	-4.09	-0.29	-0.27	-9.97**$_a$	1.89*	-1.15	1.25
(-10,+30)	-4.59**$_a$	-4.21$_a$	0.77	-6.66**$_a$	-1.82	-0.75	-0.32	-8.73*$_a$	1.64	-1.54	1.15
(-30,+30)	-5.31*$_{ab}$	-6.35	0.21	-7.01*$_a$	-1.48	-0.86	-2.4$_b$	-14.07**$_a$	1.53	-0.8	1.47

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



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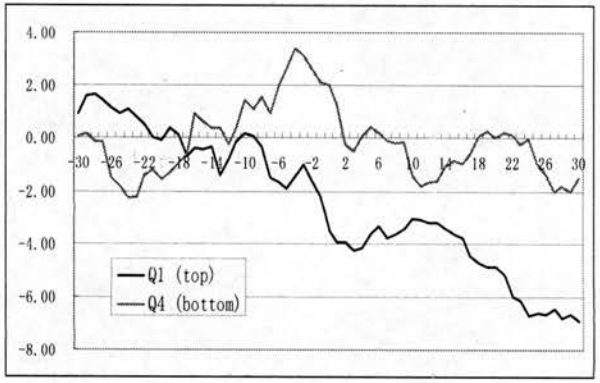

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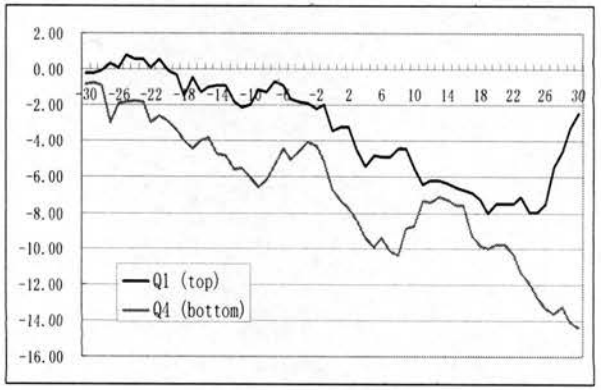
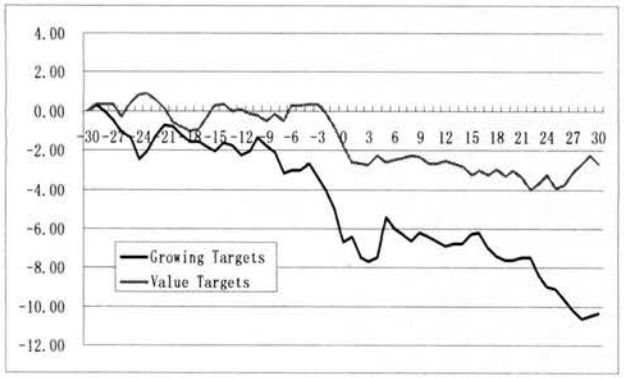


Table 7.18 AARs and CAARs of Acquirers bidding for growth and value targets

	Total			Up			Down			Difference (Up vs. Down)	
	Growth Target N=42	Value target N=42	Difference	Growth Target N=27	Value target N=27	Difference	Growth Target N=15	Value target N=15	Difference	Growth Target	Value target
Event Day	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	t-value	t-value
t-1	-0.99**$_a$	-0.68	-0.48	-1.18**$_a$	-0.70$_a$	-0.66	-0.05	-0.07	0.02	-1.19	-0.71
t	-1.70	-0.97	-0.54	-0.78	-0.57	-0.12	-2.10$_a$	-1.73$_a$	-0.20	0.62	0.69
t+1	0.26	-0.85	1.35	0.59	-0.51	1.01	0.26	-1.45$_a$	1.34	0.28	0.73
(-30,-1)	-4.95**$_a$	-0.75	-1.08	-6.2*$_a$	4.55	-2.02**	-0.56	-8.29***$_a$	1.68	-1.11	2.10**$_b$
(-10,-1)	-2.92***$_a$	-0.64	-1.40$_b$	-3.29**$_a$	0.03	-1.63$_b$	-1.05	-1.66	0.21	-0.92	0.67
(-1,+1)	-2.38*$_a$	-2.49*$_a$	0.06	-1.34	-1.78	0.19	-1.89	-3.25	0.44	0.20	0.52
(-1,+30)	-6.32***$_{ab}$	-2.59	-1.21	-5.90*$_a$	-0.34	-1.38	-2.42	-4.66*$_a$	0.47	-0.67	1.10
(-10,+30)	-8.26***$_{ab}$	-2.56	-1.54	-8.02**$_{ab}$	0.39	-2.08**$_b$	-3.42	-6.25**$_a$	0.17	-1.13	0.72
(-30,+30)	-10.29**$_a$	-2.66$_b$	-1.30	-10.93**$_a$	4.91	-1.94*	-2.93	-12.88***$_{ab}$	1.40	-0.92	2.09**$_b$

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



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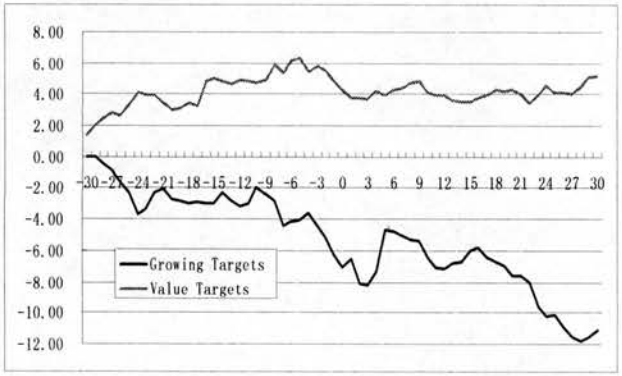

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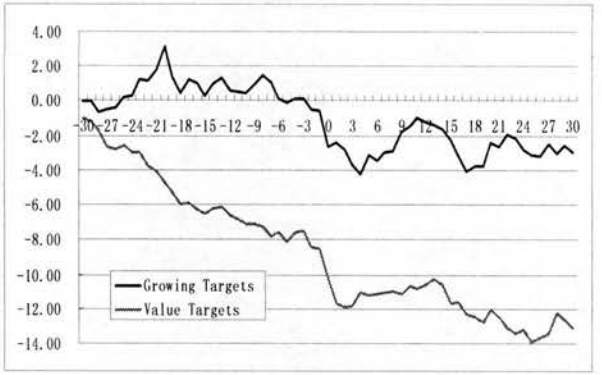


We find that acquiring firms experience lower returns when bidding for targets with the worst than they do when bidding for targets with the best pre-takeover performance. But the difference is not statistically significant. Moreover, on the rising side, the returns are significantly lower for acquirers bidding for targets with high leverage than low leverage shortly prior to takeover announcement. High leverage in targets seems to lead to a worse market reaction. But the situation is the opposite following takeover announcements on the slumping side. In addition, acquiring firms experience significantly better returns when bidding for value targets on the rising side. This suggests that markets show higher expectations of takeovers of value targets in the boom M&A market. But no such difference is found on the slumping side of the M&A wave.

7.4.4 Acquiring Firm Characteristics

- *Market-to-book ratios of acquiring firms*

Table 7.19 exhibits comparisons of growth acquiring firms, those with the highest quartile of market-to-book ratios, and value acquiring firms, those with the lowest quartile of market-to-book ratios in the two periods of the M&A wave. Both on the rising side and the slumping side of the M&A wave, we find no significant difference between the returns for value acquirers and for growth acquirers.

Over the window of (-30, -1), growth acquirers have significantly higher returns on the slumping side than on the rising side of the merger wave: 4.13% vs. -3.59%. This suggests that, prior to the takeover announcement, markets have a more positive reaction to growth acquirers on the slumping side of the merger wave than on the rising part of the wave.

- *Size difference*

We examine the relative size effect on acquirers' returns. Table 7.20 shows the results.

For the whole sample, we find that when bidding for targets with a large relative size (R>0.5), acquiring firms experience consistently significant negative returns across all windows. This suggests that markets have very negative reactions to acquisitions with a large relative size difference. When breaking the sample into the two time periods of the M&A wave, we found the same result for each era and no significant difference exists between the two periods for those takeovers with R>0.5.

Moreover, acquirers with 0.1<R<=0.5 have higher returns on the slumping side than on the rising side prior to the announcements: 2.39% vs. -1.15% over (-10, -1).

- *Pre-takeover performance*

Table 7.21 shows comparisons of the best- and worst-performing acquiring firms in the two periods of the M&A wave.

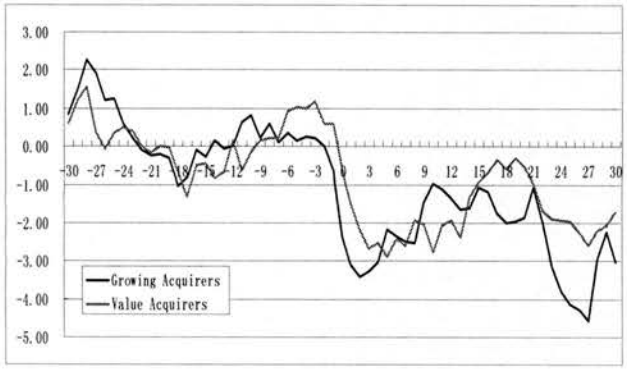
For the whole sample, no significant difference is found between acquiring firms with the best pre-takeover performance and those with the worst pre-takeover performance. Similar situations appear on the rising side of the M&A wave. On the slumping side of the M&A wave, we find the CAAR over (-1, +30) of the worst-performing acquiring firms is significantly lower than that for those best-performing acquirers: -11.76% vs. -2.08%. The results are in line with the finding of Moeller and Schlingemann (2005). This indicates that the collapse of the equity market made investors more cautious and react more negatively, when acquiring firms did not perform well prior to the takeover.

Table 7.19 Acquirers' AARs and CAARs by growth and value acquirers

	Total			Up			Down			Difference (Up vs. Down)	
	Growth Auqr N=42	Value Auqr N=42	Difference	Growth Auqr N=27	Value Auqr N=27	Difference	Growth Auqr N=15	Value Auqr N=15	Difference	Growth Auqr	Value Auqr
Event Day	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	t-value	t-value
t-1	-0.66*$_b$	-0.02	-1.16$_b$	-0.51	-0.14	-0.55	0.41	0.55	-0.13	-1.15	-0.77
t	-1.76*$_a$	-1.26**$_a$	-0.47	-1.12	-0.91	-0.15	-5.01**$_a$	-2.05**$_a$	-1.22	1.68*	0.97
t+1	-0.68$_b$	-0.82*$_a$	0.22	-0.74$_b$	-0.73	-0.01	-1.23	-0.73	-0.38	0.4	0
(-30,-1)	-0.88	0.56$_b$	-0.37	-3.59	3.90$_b$	-1.50	4.13	-4.51	1.41	-1.53*	1.33
(-10,-1)	-1.26	1.21	-1.57	-0.89	1.66	-1.20	2.3	-0.23	0.82	-1.19	0.75
(-1,+1)	-3.05**$_a$	-2.09***$_a$	-0.63	-2.37	-1.78	-0.28	-5.83**$_a$	-2.23	-1.12	1.11	0.23
(-1,+30)	-3.04	-2.34	-0.17	-2.75	-0.32	-0.45	-2.36	-0.79	-0.3	-0.06	0.1
(-10,+30)	-3.64	-1.12	-0.59	-3.13	1.48	-0.64	-0.46	-1.56	-0.12	-0.98	-0.72
(-30,+30)	-3.26	-1.76	-0.23	-5.82	3.71	-1.12	1.37	-5.85	0.91	-0.75	1.12

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



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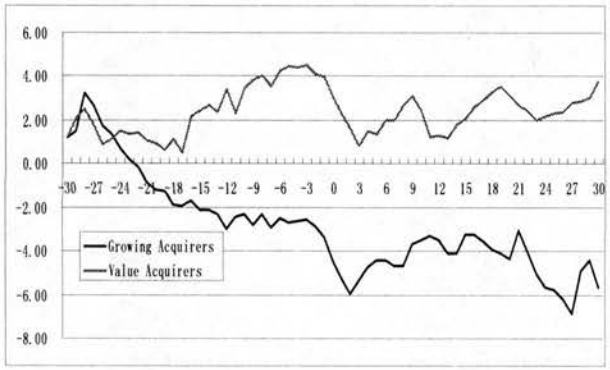

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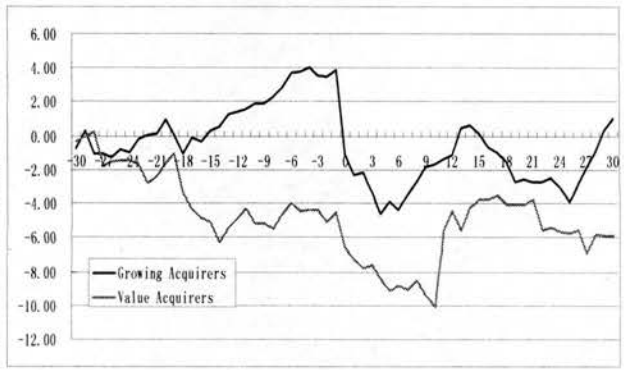
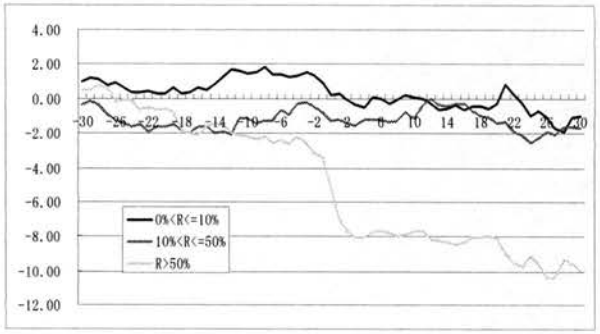


Table 7.20 Acquirers' AARs and CAARs by the relative size of the targets

Event Day	Total			Up			Down			Difference (Up vs. Down)		
	R<=0.1	0.1<R<=0.5	R>0.5	R<=0.1	0.1<R<=0.5	R>0.5	R<=0.1	0.1<R<=0.5	R>0.5	R<=0.1	0.1<R<=0.5	R>0.5
	N=68	N=84	N=60	N=54	N=48	N=35	N=14	N=36	N=25			
	AR(%)	AR(%)	AR(%)	AR(%)	AR(%)	AR(%)	AR(%)	AR(%)	AR(%)	t-value	t-value	t-value
t-1	-0.39	-0.29	-0.23	-0.45	-0.35	-0.3	-0.12	-0.21	-0.14	-0.34	-0.22	-0.27
t	-0.71	-0.51	-1.73**$_a$	-0.19	-0.46	-0.95	-2.64	-0.57	-2.83**$_a$	1.33	0.08	0.42
t+1	0.01	0.09	-1.88***$_{ab}$	0.24	-0.27	-1.78***$_{ab}$	-0.86	0.57	-2.01**$_a$	1.01	-1.13$_b$	0.23
(-30,-1)	0.58	-0.73	-3.45*	-0.48	-0.99	-2.13	4.68	-0.37	-5.3*$_a$	-1.19	-0.15	0.74
(-10,-1)	-0.62	0.37$_b$	-1.25*$_a$	-1.23	-1.15	-0.68	1.76	2.39**$_{ab}$	-2.04	-1.2	-1.8*$_b$	0.9
(-1,+1)	-1.06	-0.7	-3.81***$_a$	-0.40	-1.08	-2.98**$_a$	-3.60$_a$	-0.21	-4.97***$_a$	1.37	-0.5	0.87
(-1,+30)	-2.23	-1.22	-6.72**$_a$	-1.65	-1.61	-6.24	-4.46$_b$	-0.71	-7.4*$_a$	0.57	-0.23	0.19
(-10,+30)	-2.47	-0.57	-7.73***$_a$	-2.44	-2.41	-6.61$_a$	-2.6	1.89	-9.31**$_a$	-0.18	-0.68	-0.3
(-30,+30)	-1.27	-1.66	-9.94**$_a$	-1.69	-2.25	-8.07	0.32	-0.87	-12.57**$_a$	-0.27	-0.22	0.53

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



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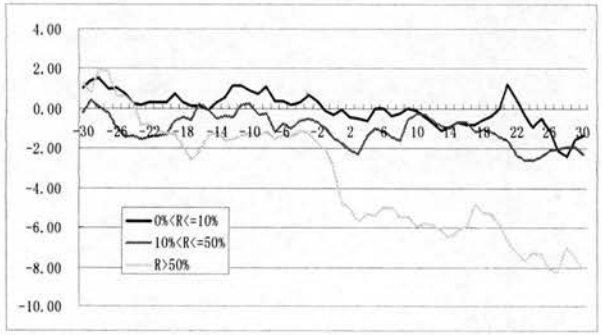

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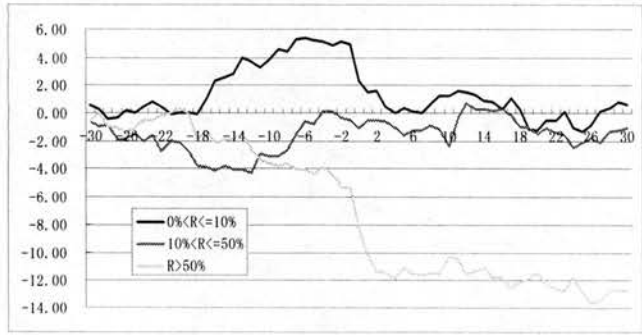
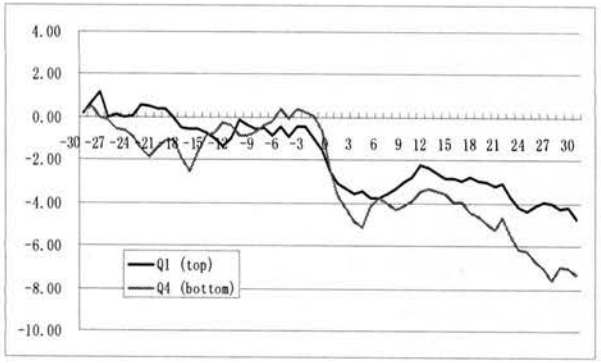


Table 7.21 Acquirers' AARs and CAARs by their pre-takeover performance

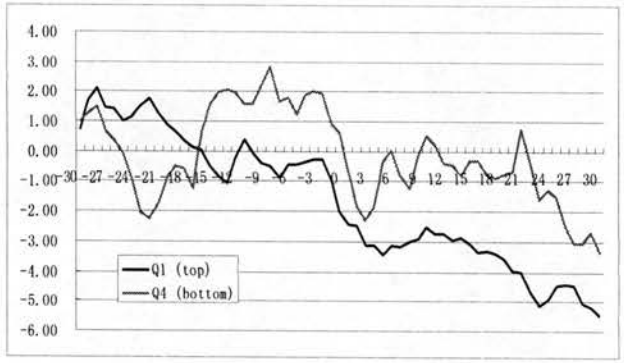
	Total			Up			Down			Difference (Up vs. Down)	
	Q1 (top) N=53	Q4 (bottom) N=53	Difference	Q1 (top) N=34	Q4 (bottom) N=34	Difference	Q1 (top) N=19	Q4 (bottom) N=19	Difference	Q1 (top)	Q4 (bottom)
Event Day	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	AR(%)	AR(%)	t-value	t-value	t-value
t-1	-0.58	-0.68**$_a$	0.17	-0.7	-0.99**$_a$	0.43	-0.24	-0.16	-0.07	-0.49	-1.06
t	-0.96$_a$	-1.87*$_a$	0.76	-1.07	-0.33	-0.5	-0.31	-3.56*$_a$	1.59	-0.6	1.50
t+1	-0.59	-1.19***$_a$	0.85	-0.36	-1.31**$_a$	1.14	-1.02	-1.48*$_a$	0.36	0.59	0.18
(-30,-1)	-1.61	-0.65	-0.28	-1.01	0.71$_b$	-0.39	-1.67	-2.48	0.14	0.17	0.52
(-10,-1)	-1.46	0.27	-0.99	-1.36	-0.67	-0.33	-1.63	2.29$_b$	-1.24	0.12	-1.04
(-1,+1)	-2.13**$_a$	-3.71***$_{ab}$	1.00	-2.13	-2.62**$_a$	0.27	-1.57	-5.21**$_a$	1.24	-0.25	1.08
(-1,+30)	-3.71*$_a$	-7.37**$_{ab}$	0.98	-5.20*$_a$	-5.26*	0.01	-2.08	-11.76**$_a$	1.76*	-0.67	1.08
(-10,+30)	-4.58*$_a$	-6.42*$_a$	0.52	-5.85*$_a$	-4.94	0.19	-3.47	-9.3*$_a$	0.82	-0.51	0.31
(-30,+30)	-4.74*$_a$	-7.34	0.47	-5.51	-3.56	-0.27	-3.5	-14.07**$_{ab}$	1.24	-0.33	1.05

a: Significant in skew-adjusted test; b: Significant in non-parametric statistics test-sign test and rank test; *** indicates $p<0.01$, ** indicates $p<0.05$, * indicates $p<0.10$ (2-tail)

Total



Up



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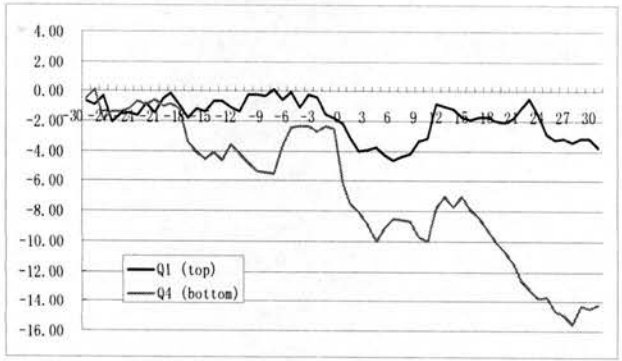

Prior to the takeover announcement, we find that growth acquiring firms have significantly better performance on the slumping side than those on the rising side of the merger wave. Acquiring firms experience significant loss in both periods of the merger wave when bidding for targets with a large relatively size (R>0.5). On the slumping side, we find that over periods following the announcement, the returns are significantly lower for acquiring firms with the worst than for those with the best pre-takeover performance. This indicates that markets have less confidence about the worst-performing acquiring firms, especially after the collapse of the stock market.

7.5 Multivariate analysis

In this section, we do regressions to test the relation between acquirers' returns around the takeover announcement and a set of potential determinants. In particular, a new variable, a time dummy, is included in the regressions to distinguish the effect of aggregate merger intensity on the returns to the acquiring firms. We define the time dummy as 1 if the takeover took place in the boom period of January 1998 to May 2000. If the takeover occurred in the slumping side of merger wave between June 2000 and December 2002, the time dummy is 0. For each regression, "cross-border or not", "legal difference" and "culture difference" are included.

7.5.1 The Whole Sample

Table 7.22 shows the regression results based on the whole sample. We find that no coefficient of the time dummy is statistically significant. This suggests that acquirers' returns have a similar mean value in the two subperiods. The intensity of the takeover market has no significant effect on the returns to acquiring firms around the takeover announcement.

In line with Chapter 6, the coefficients of "cross-border", "legal difference", "culture difference" are significantly positive. This indicates that markets have a positive

reaction to cross-border takeovers for the benefit of globalisation (Ghoshal (1987), Mayrhofer (2004)). We also find a significant and negative relation between acquirers' returns and other deal characteristics, such as high-tech takeover and auction. This may be because of the higher risk associated with high-tech takeovers. As multiple bidders always bid up the price of targets, it is not surprising that acquirers involved in multiple bidding have lower returns.

In addition, target CEO departures are positively related to acquirers' returns in model 1. This is consistent with one side of our hypothesis and indicates that markets have a positive reaction to the rumours or news about target CEO departure. Also, target outsiders are positively associated with the returns of acquiring firms around the takeover announcement. The association is significant in model 1 and 2 if we employ one-tail significant tests. This suggests that target outsiders may make sure a deal occurs, which leads to higher acquirers' returns. The blockholder ownership in targets has a significantly negative effect on acquirers' returns in model 2. This indicates that blockholders may reject relatively low offers so that acquirers offer higher premia, which increases the loss of acquiring firms.

7.5.2 Takeovers between January 1998 and May 2000

In this section, we repeat the regressions based on takeovers on the rising side of the M&A wave only. The results in Table 7.23 show that none of the coefficients is statistically significant.

7.5.3 Takeovers between June 2000 and December 2002

In this section, we examine whether the acquirers' returns on the slumping side of the merger wave have significant relations with potential determinants. The results are reported in Table 7.24.

Table 7.22 Regression Analysis of CAAR of 191 Acquiring Firms

	Model 1		Model 2		Model 3	
	Coef.	t-value	Coef.	t-value	Coef.	t-value
(Constant)	-11.69	(-1.06)	-7.84	(-0.91)	-7.75	(-0.69)
time dummy	-4.63	(-1.40)	-4.04	(-1.61)	-4.49	(-1.39)
Cross-border	8.34**	(2.41)				
Legal dif.			10.01***	(2.86)		
Culture dif.					9.60**	(2.29)
Related or not	0.90	(0.28)	-0.40	(-0.17)	-0.32	(-0.10)
High-tech	-7.30**	(-2.07)	-5.97**	(-2.23)	-5.90*	(-1.74)
Payment	4.08	(0.94)	4.28	(1.28)	3.74	(0.84)
Auction	-9.07	(-1.46)	-13.00***	(-2.68)	-13.02**	(-2.08)
Attitude	0.70	(0.10)	4.06	(0.80)	3.29	(0.51)
Premium	-0.05	(-1.28)	-0.03	(-0.92)	-0.02	(-0.61)
CEO depat.	6.49*	(1.93)	3.74	(1.46)	3.81	(1.14)
Board size	0.12	(0.20)	0.10	(0.21)	0.15	(0.24)
Outsiders	15.76	(1.47)	11.87	(1.41)	12.18	(1.13)
Blockholders-own	-5.76	(-0.74)	-10.65*	(-1.79)	-10.68	(-1.41)
Target Pre-perfm	2.16	(1.40)	-0.17	(-0.14)	0.00	(0.00)
Target Pre-levg	-5.83	(-0.26)	5.40	(0.31)	1.25	(0.06)
Target-MTBV	-0.27	(-0.06)	0.47	(0.14)	0.14	(0.03)
Acqr-MTBV	2.94	(0.69)	4.36	(1.34)	4.86	(1.14)
Size dif.	-0.41	(-0.27)	-1.12	(-0.93)	-1.15	(-0.74)
Acqr Pre-perfm	-0.003	(0.00)	0.32	(0.24)	0.40	(0.23)
R Square	0.080		0.072		0.069	

*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$ (2-tail)

In median regressions, the dependent variable is the acquirers' cumulative average abnormal returns (CAARs) over the window of (-10, +30). Independent variables are following variables. Time dummy is a dummy variable that takes the value 1 if takeover is in the period from January 1998 to May 2000, and is 0 otherwise. Cross-border takes a value of 1 if the "acquirer nation code" of an acquiring firm in SDC is not UK, and is 0 otherwise. Legal difference takes a value of 1 if the acquiring firm was from a non-English common-law country, and is 0 otherwise. Culture difference takes a value of 1 if the summation of differences between the Hofstede's index score of the UK and the Hofstede's index score of the acquiring country is above the median of 28, and is 0 otherwise. Related takeover is also an indicator that is 1 when the target and acquiring firms have same four or three-digit SIC, and is 0 otherwise. High-tech is an indicator that is 1 for firms involved in high-tech industries, and is 0 otherwise. Stock payment is an indicator that is 1 if the acquiring firm paid the deal by stock, and is 0 otherwise. Auction is an indictor that takes a value of 1 if more than one bidder had an interest in the target firm, is 0 otherwise. The indictor variable, attitude, is 1 if the takeover is a hostile takeover, and is 0 otherwise. Premium is the premium paid for the target firm. CEO departure takes a value of 1 if the news of target CEO departure is released around the takeover announcement, and is 0 otherwise. Board size is the number of directors in the board of the target firm. Outsider is the proportion of non-executive directors in the board. Blockholder ownership is the percentage of equity owned by blockholders. Target firm pre-takeover performances are measured by the industry-adjusted ROA (IAROA) one year prior to the takeover announcement. Target firm pre-takeover leverages are measured by the total debt to total asset one year prior to the takeover announcement. Target MTBV is the market-to-book ratio for the target firm. Acquirer MTBV is the market-to-book ratio for the acquiring firm. Size difference is the logarithms of the ratios of the asset of the target to the asset of the acquiring firm. Acquiring firm pre-takeover performances are measured by IAROA one year prior to the takeover announcement.

Table 7.23 Regression Analysis of CAAR of 119 Acquiring Firms Involved in Takeovers on the Rising Side of the M&A Wave

	Model 1		Model 2		Model 3	
	Coef.	t-value	Coef.	t-value	Coef.	t-value
(Constant)	-1.59	(-0.05)	5.56	(0.19)	6.00	(0.19)
Cross-border or not	7.08	(0.74)				
Legal dif.			-3.17	(-0.29)		
Culture dif.					-3.41	(-0.30)
Related or not	-2.00	(-0.23)	-2.89	(-0.37)	-2.55	(-0.31)
High-tech	-4.94	(-0.49)	-7.92	(-0.85)	-7.61	(-0.77)
Payment	-1.99	(-0.16)	-2.64	(-0.22)	-1.61	(-0.13)
Auction	-11.09	(-0.59)	3.38	(0.19)	3.33	(0.18)
Attitude	-0.69	(-0.03)	3.74	(0.20)	4.19	(0.21)
Premium	-0.11	(-0.81)	-0.11	(-0.96)	-0.12	(-0.98)
CEO depat.	2.70	(0.29)	0.95	(0.11)	0.89	(0.10)
Board size	-0.33	(-0.22)	-0.22	(-0.16)	-0.26	(-0.17)
Outsiders	6.38	(0.20)	9.01	(0.31)	8.98	(0.30)
Blockholders ownership	6.65	(0.29)	2.47	(0.12)	1.61	(0.07)
Target Pre-perfm	0.16	(0.03)	-3.32	(-0.76)	-3.04	(-0.66)
Target Pre-levg	-17.66	(-0.28)	-37.36	(-0.65)	-40.03	(-0.66)
Target-MTBV	-0.09	(-0.01)	-5.92	(-0.51)	-6.63	(-0.58)
Acqr-MTBV	4.63	(0.33)	5.69	(0.48)	6.09	(0.45)
Size dif.	1.99	(0.51)	1.93	(0.54)	1.97	(0.52)
Acqr Pre-perfm	1.73	(0.32)	2.98	(0.62)	2.56	(0.50)
R Square	0.058		0.050		0.050	

*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$ (2-tail)

In median regressions, the dependent variable is the acquirers' cumulative average abnormal returns (CAARs) over the window of (-10, +30). Independent variables are following variables. Cross-border takes a value of 1 if the "acquirer nation code" of an acquiring firm in SDC is not UK, and is 0 otherwise. Legal difference takes a value of 1 if the acquiring firm was from a non-English common-law country, and is 0 otherwise. Culture difference takes a value of 1 if the summation of differences between the Hofstede's index score of the UK and the Hofstede's index score of the acquiring country is above the median of 28, and is 0 otherwise. Related takeover is also an indicator that is 1 when the target and acquiring firms have same four or three-digit SIC, and is 0 otherwise. High-tech is an indicator that is 1 for firms involved in high-tech industries, and is 0 otherwise. Stock payment is an indicator that is 1 if the acquiring firm paid the deal by stock, and is 0 otherwise. Auction is an indictor that takes a value of 1 if more than one bidder had an interest in the target firm, is 0 otherwise. The indictor variable, attitude, is 1 if the takeover is a hostile takeover, and is 0 otherwise. Premium is the premium paid for the target firm. CEO departure takes a value of 1 if the news of target CEO departure is released around the takeover announcement, and is 0 otherwise. Board size is the number of directors in the board of the target firm. Outsider is the proportion of non-executive directors in the board. Blockholder ownership is the percentage of equity owned by blockholders. Target firm pre-takeover performances are measured by the industry-adjusted ROA (IAROA) one year prior to the takeover announcement. Target firm pre-takeover leverages are measured by the total debt to total asset one year prior to the takeover announcement. Target MTBV is the market-to-book ratio for the target firm. Acquirer MTBV is the market-to-book ratio for the acquiring firm. Size difference is the logarithms of the ratios of the asset of the target to the asset of the acquiring firm. Acquiring firm pre-takeover performances are measured by IAROA one year prior to the takeover announcement.

Table 7.24 Regression Analysis of CAAR of 71 Acquiring Firms Involved in Takeovers on the Slumping Side of the M&A Wave

	Model 1		Model 2		Model 3	
	Coef.	t-value	Coef.	t-value	Coef.	t-value
(Constant)	-7.20	(-0.70)	-6.65	(-0.62)	-4.80	(-0.26)
Cross-border or not	7.76***	(2.86)				
Legal dif.			11.11***	(2.76)		
Culture dif.					9.39*	(1.96)
Related or not	1.63	(0.57)	1.78	(0.53)	3.13	(0.51)
High-tech	-7.42**	(-2.30)	-7.02*	(-1.94)	-7.46	(-0.86)
Payment	7.88*	(1.97)	5.64	(1.35)	3.83	(0.53)
Auction	-11.30**	(-2.30)	-12.68**	(-1.95)	-16.35**	(-1.73)
Attitude	-7.92	(-0.97)	-2.60	(-0.42)	-1.57	(-0.13)
Premium	-0.02	(-0.48)	0.02	(0.59)	0.01	(0.11)
CEO depat.	11.48***	(4.16)	7.39**	(2.43)	6.99*	(1.96)
Board size	-0.45	(-0.77)	-0.20	(-0.31)	0.11	(0.11)
Outsiders	1.29	(0.15)	1.38	(0.13)	0.92	(0.06)
Blockholders ownership	-12.92*	(-1.73)	-12.46	(-1.54)	-18.21	(-1.21)
Target Pre-perfm	3.15**	(2.53)	0.50	(0.33)	0.76	(0.32)
Target Pre-levg	2.32	(0.11)	1.46	(0.07)	7.84	(0.20)
Target-MTBV	6.92*	(1.72)	3.84	(0.84)	5.81	(0.39)
Acqr-MTBV	5.32	(1.60)	6.56*	(1.88)	5.53	(0.41)
Size dif.	0.27	(0.14)	-1.26	(-0.56)	-0.52	(-0.10)
Acqr Pre-perfm	-0.58	(-0.47)	-0.32	(-0.22)	0.25	(0.07)
R Square	0.216		0.217		0.206	

*** indicates $p<0.01$, ** indicates $p<0.05$, and * indicates $p<0.10$ (2-tail)

In median regressions, the dependent variable is the acquirers' cumulative average abnormal returns (CAARs) over the window of (-10, +30). Independent variables are following variables. Cross-border takes a value of 1 if the "acquirer nation code" of an acquiring firm in SDC is not UK, and is 0 otherwise. Legal difference takes a value of 1 if the acquiring firm was from a non-English common-law country, and is 0 otherwise. Culture difference takes a value of 1 if the summation of differences between the Hofstede's index score of the UK and the Hofstede's index score of the acquiring country is above the median of 28, and is 0 otherwise. Related takeover is also an indicator that is 1 when the target and acquiring firms have same four or three-digit SIC, and is 0 otherwise. High-tech is an indicator that is 1 for firms involved in high-tech industries, and is 0 otherwise. Stock payment is an indicator that is 1 if the acquiring firm paid the deal by stock, and is 0 otherwise. Auction is an indictor that takes a value of 1 if more than one bidder had an interest in the target firm, is 0 otherwise. The indictor variable, attitude, is 1 if the takeover is a hostile takeover, and is 0 otherwise. Premium is the premium paid for the target firm. CEO departure takes a value of 1 if the news of target CEO departure is released around the takeover announcement, and is 0 otherwise. Board size is the number of directors in the board of the target firm. Outsider is the proportion of non-executive directors in the board. Blockholder ownership is the percentage of equity owned by blockholders. Target firm pre-takeover performances are measured by the industry-adjusted ROA (IAROA) one year prior to the takeover announcement. Target firm pre-takeover leverages are measured by the total debt to total asset one year prior to the takeover announcement. Target MTBV is the market-to-book ratio for the target firm. Acquirer MTBV is the market-to-book ratio for the acquiring firm. Size difference is the logarithms of the ratios of the asset of the target to the asset of the acquiring firm. Acquiring firm pre-takeover performances are measured by IAROA one year prior to the takeover announcement.

Consistent with the results based on the whole sample, we find that the returns of acquiring firms are significantly and *positively* related to cross-border takeovers, legal differences, cultural differences, the rumour of target CEO departure, target pre-takeover performances, and target and acquiring market-to-book ratios. But the high-tech takeovers, multiple bidders and target blockholders' ownership have a significant *negative* relation with acquirers' returns.

7.6 Conclusion

This chapter compares the returns of acquiring firms involved in two different takeover activity eras. We find, in most research windows around the takeover announcement, no significant difference between returns for acquiring firms on the rising side and on the slumping side of the UK fourth merger wave. However, the CAARs of acquirers over (-10, -1) are significantly lower on the rising side than on the slumping side of the merger wave. This suggests that the market reactions shortly prior to announcement were affected by the M&A activity eras. To some extent, the results support the argument of Jensen (2004) that merger decisions are affected by the overvaluation of the stock market, which is consistent with the high merger activity era. In this period, the valuation risk related to an acquisition plus the managerial over optimism and hubris is more likely to lead to overpayment for target firms, which may lead to return losses for acquiring firms around the takeover announcements. But multiple regressions show that the intensity of takeover activity has no significant relationship with acquirers' returns.

The returns of acquiring firms around the announcement are significantly and positively related to cross-border takeovers, suggesting that markets are more confident about such international takeovers of UK targets and have a positive reaction to such takeovers. Meanwhile, the significant positive associations between acquirers' returns, "legal difference" and "culture difference" indicate that acquiring firms would benefit from better investor protection and the learning benefits provided by cultural differences in international M&As. Such situations are more significant on the slumping side of the M&A wave. Moreover, high-tech takeovers

lead to significant losses to acquiring firms, which become worse on the slumping side of the merger wave. It is not surprising that the uncertain future and unproven outcomes lead to much more serious speculation about the true worth of high-tech firms, especially after the bubble of the "new economy" broke. We also find that acquiring firms experienced loss around the takeover announcement, when multiple bidders were involved. Multiple bidders may be more aggressive and bid up the price of target firms. Then higher premia lead to larger losses for acquiring firms. We do not find this on the rising side of the wave.

Acquiring firms have better returns if the rumours or news about target CEO departure came out around the takeover announcement, especially on the slumping side of the merger wave. This indicates that markets have a better reaction to takeovers that correct the target management. Additionally, target blockholders' ownership has a significantly negative relationship with acquirers' returns. Blockholders with high ownership in target firms usually ask for a higher premium, which leads to losses for acquiring firms. This situation appears even worse for acquirers on the slumping side of the merger wave.

We also find a weakly positive but significant relationship between target pre-takeover performance and acquirers' returns around takeover announcements on the slumping side. Markets have more confidence about the takeovers of targets with better performance prior to announcement. Moreover, we find weak evidence that growth acquirers are positively related to acquirers' returns, which is on the slumping side of M&A wave as well. We do not find this on the rising side. This indicates that markets have a better reaction to takeover by growth acquiring firms when M&A activities are slumping.

In general, our findings are in line with the previous literature that acquiring firms experience losses around the takeover announcement. This chapter has taken a step forward into a previously unexplored dimension by splitting the sample according to merger activity eras. The findings suggest that no significant relation exists between the wealth effect of takeover announcements and the prevailing economic condition.

However, just prior to the takeover announcement, acquiring shareholders' wealth is significantly lower on the rising side than on the slumping side of the M&A wave.

Chapter 8 Conclusion

This thesis is a pioneering piece of research on M&A in the UK that addresses the distinctive features appeared in the recent M&A wave. This thesis has investigated the determinants of post-takeover target CEO turnover and the announcement returns to acquiring shareholders for takeovers of UK targets between 1998 and 2002. We carried out two main comparisons: cross-border takeovers vs. domestic takeovers, and takeovers on the rising side vs. those on the slumping side of the M&A wave.

This chapter summarizes several important contributions of this study to the existing literature on corporate takeovers. In the following section we consider the implications of the findings and in the final section we discuss some limitations of the research and suggest further lines of work.

8.1 Contributions of the Research

8.1.1 The Disciplinary Role of Corporate Takeovers

The elimination of inefficient target management is a widely accepted motive among financial economists for corporate takeovers. However, there is relatively little empirical evidence to support this view. As far as we know, no research has been done on the disciplinary role of *recent* corporate takeovers in the UK. This thesis provides new UK evidence regarding the relation between the likelihood of post-takeover target CEO turnover and pre-takeover performance from 1998 to 2002.

This study finds a weak but significantly negative relation between target CEO turnover and various performance metrics, which indicates a disciplinary role for corporate takeovers. This result is consistent with the evidence reported in Martin

and McConnell (1991) and Denis et al. (1997) for the US takeover market. In particular, such a constraint is more effective in the takeover active period of January 1998 and May 2000, which is in line with the finding of Mikkelson and Partch (1997) and Denis and Kruse (2000). Further, in contrast to the evidence reported in Franks and Mayer (1996) for UK targets over the sample period 1985-1986, we find a positive relation between hostility and the likelihood of post-takeover target CEO turnover, implying a discipline motive for hostile takeovers in recent UK takeover market.

In addition, this study is the first to examine the effect of the rumour of target CEO departure on acquirers' returns around the takeover announcement. We find that acquirers had better gains if the rumour or news about target CEO departure was released in markets around the takeover announcement. This suggests that markets see the departure of a target CEO as a value enhancing event.

8.1.2 The Wealth Effect of Takeovers on Acquiring Shareholders

The shareholders' wealth effect of corporate M&As has been researched and analyzed for several decades. Although most studies reach the same conclusion that target shareholders have gains, the wealth effect on the acquiring shareholders is still inconclusive. Although hundreds of studies have been published on the assessment of shareholders' gains in takeovers, little research has taken the prevailing characteristics of the economic activity in different periods into consideration. This study differs from previous studies in that it addresses the different economic features in different periods of recent M&A activity and adds a new dimension towards the perceptive of the impacts of takeover transactions on acquiring shareholders' wealth.

For the whole sample, acquiring firms generally experienced losses when acquiring UK target firms between 1998 and 2002. A small loss of -0.92% occurred on the takeover announcement day and reached -3.88% over the window of (-30, +30). This finding is consistent with previous studies of Sudarsanam et al. (1996) and Draper and Paudyal (1999) which finds a small but negative return for acquiring firms around the takeover announcement. Further, we find that acquiring shareholders who engaged in international takeovers have significantly higher announcement returns than those who engaged in domestic takeovers. Moreover, acquiring shareholders have higher returns in the less active takeover period than the active takeover period.

8.1.3 International Transactions

Globalisation is the key feature of the new competitive landscape within which the M&A waves have taken place in recent years. Globalisation is occurring through the international expansion of markets, through the impact of new communication technologies, and through growing economic interdependence with capital and trade flows across borders. During the 1990s, the share of cross-border M&As stood at just about one-third of the world total, in terms of both value and the number of deals (UNCTAD 2000). Globalization is following a trend and even after the collapse of the stock market in 2000, international transactions were still increasing worldwide. On the surface, the scale and speed of international takeovers are breathtaking. But cross-border takeovers face more risks than domestic takeovers, including internal risks: cultural, moral and language, and external risks: market conditions, politics and regulation. Thus considering this key feature, globalization, the comparison of cross-border and domestic takeovers provides insight into the recent M&A activities and highlights the role played by international transactions. Most studies focus on M&As in a single country, but no direct research has been done on the international takeovers into the UK in recent years. This study is the first to investigate acquiring

firms from 15 countries that were involved in taking over UK target firms.

This study of target CEOs finds a significant negative relationship between cross-border takeovers and post-takeover target CEOs turnover. That is, a significantly lower target CEO turnover rate follows cross-border takeovers than domestic takeovers. For each takeover, there is a challenge to reconcile the different systems and cultures of two merged companies. In international transactions, effective liaison becomes necessary and the target CEO always plays a key role given their familiarity with the target business. Also, their knowledge of local market conditions and regulations may benefit new owners, which helps to secure their job. This supports the argument of Child et al. (2001) that CEOs appointed from outside the target generally bring about more change than will insider CEOs who hold continuing appointments.

Moreover, this study on acquiring shareholder wealth observes that UK domestic acquiring firms had significant negative abnormal returns around the takeover announcement, while foreign acquiring shareholders did not experience a significant loss. Cross-border takeovers brought better abnormal returns to acquiring shareholders than did domestic takeovers. This result is not surprising given the range of possible benefits of international operation and diversification. Additionally, investment into the UK with a favourable business environment may lead to high market expectation around the takeover announcement.

Furthermore, a number of challenges exist in cross-border takeovers. This study mainly examines two important issues in cross-border transactions: the legal system differences and culture differences. The effect of cultural differences can be present as early as the stage of negotiating an acquisition (Goulet and Schweiger (2006)), but such differences may be perceived more clearly during the period of announcement

and post-takeover management. The evidence in this study shows that cultural differences have a significant negative influence on target CEO turnover following takeovers. It provides further support that target CEOs are more valued in cross-border takeovers. Further, by using four different dimensions of Hofstede's index, we discover that when acquiring firms were from masculine countries that stressed future performance, target CEOs are more likely to remain in the new firms, presumably for the need of integration and/or the improvement of future business.

Our study on acquiring shareholder wealth observes a significant positive relation between cultural difference and acquirers' returns. This suggests that some cultural differences can be a source of attraction rather than stress. As Child and Faulkner (1998) suggested, cross-national cultural differences can provide complementary resources and learning benefits for international strategic alliance partners. We also find that acquirers from the Scandinavian law system had the highest gains and acquirers from the French law system earn least around the announcement. This implies that acquirers' gains differ between countries with different legal systems, as suggested by La Porta, Lopez-de-Silanes, Sheifer and Vishny (2000).

8.1.4 The Intensity of M&A Activities

M&A activities occur in waves over time. Research offers several explanations for this activity: managerial hubris, market overvaluation and industry shock and so on. Some financial economists argue that the coincidence exists between economic performance and M&A activities (Golbe and White (1993), Shleifer and Vishny (2001), Tse and Soufani (2001)). Bruner (2004) argues that the economic turbulence from industry shocks is always present. Kay (1997) finds that every stock market boom has been associated with frenzied M&A activity. Thus, there are reasons to believe in a possible close relationship between general economic performance and

takeover activities, but very little research takes it into account.

The UK fourth M&A wave started in the early 1990s and came along with the economic boom in the 1990s. The high transaction value and the large number of takeovers distinguish this wave from previous M&A waves. The high technology, media and telecoms industries boomed during this wave and boosted the bubble of the "new economy". Friendly, strategically-motivated takeovers and dramatically increased international transactions characterized this wave. After the bubble burst in 2000, this M&A wave slumped. No UK research on the effects of announcements on acquirers' returns and on target CEO turnover has considered economic conditions in the boom and in the slump periods of the merger wave. This study fills this gap and attempts to find whether the effect of takeovers on target CEOs and acquiring shareholders' wealth are different in these two periods by establishing comparisons between the takeover active period (the rising side) and the takeover less active period (the slumping side) of the M&A wave.

It is found that target CEO turnover rates are much lower on the slumping side of the M&A wave than that on the rising side. Such a decrease occurred mainly amongst target firms with poor pre-takeover performance. On the rising side of the M&A wave, CEO turnover rate is significantly lower for targets in the highest pre-takeover performance quartile than for those in the lowest per-takeover performance quartile. Such a turnover-performance relation only existed in takeovers on the rising side of the M&A wave. This implies that disciplinary takeovers are more likely to take place in the intensive takeover period, which is consistent with Mikkelson and Partch (1997) and Denis and Kruse (2000). However, the significant negative relation between target CEO turnover and cross-border takeover is confined only to the slumping side of the M&A wave.

This study finds no significant relation between the intensity of takeover activities and acquirers' returns around the announcement. However, over the window (-10, -1) before the announcement, acquirers' returns are significantly lower on the rising side than that on the slumping side of the M&A wave. This indicates that in the takeover active period, the combination of the valuation risk, managerial over optimism and hubris may lead to serious overpayment, which may bring significant losses to acquiring firms. Hence, markets did not show the favourable reaction prior to the announcement. Moreover, the positive relation between acquirers' returns and cross-border takeovers is significant on the slumping side of takeovers. It shows that foreign markets have confidence about such cross-border takeovers into the UK.

8.1.5 The Internal Governance Mechanism

Some financial economists argue that relative to the 1980s, internal governance mechanisms became more prominent and more effective in the 1990s (Holmstrom and Kaplan (2001) and Kini et al. (2004)). In the UK, a series of reports[20] lead to more focus on the development of internal corporate governance mechanisms. These improved mechanisms are expected to monitor managers better and to increase the probability that decisions are made for maximizing firm value. However, very few studies consider the effect of internal corporate governance mechanisms in the field of M&A research in the UK. To address this gap in the literature of M&As, this study examines the effect of several internal corporate governance mechanisms: the target board, nonexecutives (outsiders) and blockholders.

Our study of target CEO turnover finds that on the slumping side of the M&A wave, the probability of post-takeover target CEO turnover is negatively related to blockholder ownership and the proportion of nonexecutives on the board. This result

[20] Cadbury Report (1992), Greenbury Report (1995), Hampel Report (1998), Turnbull (1999) and Higgs Report (2003)

is consistent with the view of Jensen (1986, 1988) that the corporate takeover market acts as a "court of last resort". As these mechanisms became more effective in later years, the takeover market's role as the source of managerial discipline declined.

In addition, this study finds an impact of target governance on the announcement returns for acquiring firms. Target blockholders' ownership has a significant negative relation with acquirers' returns around the takeover announcement. This indicates that blockholders with high ownership in target firms might ask for a higher premium and this led to losses for acquiring firms. The situation is even worse on the slumping side of the merger wave.

8.2 Implications of the Research

This thesis offers an up-to-date UK study of the corporate control market and the effect of takeovers on acquiring shareholders' wealth in the context of globalization in the UK fourth M&A wave. Based on the empirical results presented in previous chapters, this thesis has three implications for acquiring firms.

First, according to empirical results, cross-border takeovers are significantly and negatively related to the probability of target CEO departure following the takeover. Although a weak but significantly negative relation is found between target CEO turnover and various performance metrics of target firms, target CEOs may have their knowledge of the local market and regulations that may be very useful for foreign acquiring firms. The control of the target firm is important, but foreign acquiring firms should bear in mind the benefit of target CEOs. It may be a good idea to retain the target CEO in the new firm to help the integration of the target firm and improve local business.

Second, the results in Chapter 7 find that shortly prior to the takeover announcement, acquirers' returns are significantly lower on the rising side than that on the slumping side, although results in multiple regressions show no significant relation between the intensity of M&A activities and acquirers' returns around the announcement. This suggests that markets have worse reactions to the takeover announcement in the boom period than that in the slumping period of the M&A wave. The overvaluation, managerial over optimism and hubris are always common in the takeover active period, which may lead to the overpayment for the target firms. Hence, acquiring firms may need to be more cautious when taking M&As in the boom period.

Third, this study finds a negative relationship between the probability of post-takeover target CEO turnover and blockholder ownership, the proportion of nonexecutives on the target's board in the takeover slumping period. This indicates that the takeover was less needed to discipline the target CEO, when these mechanisms became more efficient in the later period. This suggests that the company needs to develop its internal governance mechanisms well, because these mechanisms play very important roles in monitoring the management of the company and ensuring that the right decisions are made. Perhaps the government should impose more regulations and encourage companies to improve the efficiency of their internal governance mechanisms.

8.3 Limitation and Further Research

This thesis investigates the fourth M&A wave in the UK, and there are some limitations on data. However, these limitations and difficulties may encourage further research that can be continued to carry on.

First, M&A booms are always different from previous ones. Ignoring the unique issues in each industry, several forces may have a large influence on shaping the M&A wave: technology change, regulatory change, globalization, and demographic change. For years, the existence of M&A waves is one of the unsolved problems in finance. There are needs to understand better why the M&A cycle occur. It would be better to investigate the whole fourth M&A wave which started in the UK at the beginning of the 1990s. It is extremely difficult to collect data on all takeovers back to the early 1990s, especially personal information about CEOs and details of corporate governance. So research on the whole M&A wave would be interesting and may provide a relatively completed picture of the fourth M&A wave in the UK. It would give a glimpse of the forces behind the M&A wave.

Second, this study explores a special M&A perspective: international transactions. Cross-border effects are significant and the volume of such activities is more likely to get bigger as countries and regional markets integrate into the global market. Such cross-border takeovers can be motivated by a range of factors which are different from domestic takeovers. When companies from different nations buy UK target firms, they tend to introduce a series of challenges over time. Meanwhile, cross-border takeovers raise difficult questions about strategy, valuation, deal design and implementation. Hence, international transactions are much more complicated and some cross-border effects may be explained by some other issues, such as information asymmetry, tax differences and currency arbitrage. However, it is difficult to access the data what is needed. For example, cultural differences may be national cultural differences and/or organizational cultural differences. It is difficult to collect a proxy for organizational culture. However, this may open more research fields for international transactions and it may offer the key to successful international takeovers.

Third, internal governance mechanisms are the main concern in this study. It is reasonable that internal governance mechanisms of acquiring firms may influence their returns around the takeover announcement. This study examines firms bidding for UK target firms, including both foreign acquiring firms and domestic acquiring firms. For those foreign acquiring firms from 15 countries, it is extremely difficult to collect data on foreign acquirers' boards and their management. The influence of foreign acquirers' internal governance mechanisms should be examined in the future. Moreover, the future research can focus on the interplay between targets' and acquirers' internal governance mechanisms.

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Appendix

Table 1
Summary statistics on the pre-takeover performance of 217 target firms

Variables	All sample			Domestic Takeovers			Cross-Border Takeovers			
	Mean	Median	St.dev	Mean	Median	St.dev	Mean	Median	St.dev	t-stat
Panel A. IAROE										
IAROE (-4, -1)	8.053*	0.944	68.468	12.784**	1.493	76.286	-2.598	0.021	44.351	1.54 (0.126)
IAROE (-3, -1)	11.378*	0.525	90.844	17.322**	1.135	104.254	-2.020	-0.270	45.655	1.46 (0.147)
IAROE (-2, -1)	4.719	-0.261	75.277	6.942	-0.336	84.685	-0.307	0.000	47.247	0.66 (0.513)
IAROE (year -1)	-4.103	-1.070	62.009	-2.431	-0.985	58.545	-7.730	-0.830	69.058	0.58 (0.561)
Panel B. IAROA										
IAROA (-4, -1)	1.159	-0.005	23.078	2.285	-0.115	25.009	-1.334	0.340	17.717	1.07 (0.286)
IAROA (-3, -1)	1.108	-0.173	21.217	1.877	-0.271	22.471	-0.583	0.032	17.954	0.79 (0.430)
IAROA (-2, -1)	3.272	-0.123	37.795	3.676	-0.205	36.313	2.334	0.450	40.931	0.24 (0.809)
IAROA (year -1)	1.276	-0.350	25.272	1.537	-0.350	25.661	0.703	0.000	24.362	0.22 (0.823)
Panel C. IACFM										
IACFM (-4, -1)	-3.097	-1.177	44.880	-2.250	-1.177	49.109	-4.876	-1.177	33.359	0.40 (0.691)
IACFM (-3, -1)	-3.413	-2.270	38.141	-2.939	-2.245	41.340	-4.362	-2.270	29.665	0.25 (0.80)
IACFM (-2, -1)	-6.677**	-2.280	40.545	-5.469**	-1.335	29.870	-9.222	-4.260	57.729	0.63 (0.529)
IACFM (year -1)	-5.920**	-2.155	33.400	-6.487**	-1.910	34.119	-4.535	-2.850	31.690	-0.40 (0.691)
Panel D. CMAR (Monthly)										
-38 to -3	-0.446***	-0.368	0.729	-0.481***	-0.376	0.716	-0.369***	-0.353	0.751	-1.05 (0.297)
-26 to -3	-0.357***	-0.268	0.676	-0.360***	-0.221	0.671	-0.350***	-0.351	0.689	-0.10 (0.920)
-14 to -3	-0.184***	-0.098	0.539	-0.175***	-0.075	0.533	-0.208***	-0.174	0.550	0.43 (0.668)

Table 2

Summary statistics on the pre-takeover Leverage of 217 target firms

Variables	All sample			Domestic Takeovers			Cross-Border Takeovers			
	Mean	Median	St.dev	Mean	Median	St.dev	Mean	Median	St.dev	t-stat
Panel A. Capital Leverage1 (Net Debt/Total Asset)										
Year -4	0.082***	0.134	0.278	0.073***	0.111	0.291	0.103***	0.140	0.247	-0.74 (0.461)
Year -3	0.088***	0.128	0.276	0.079***	0.122	0.285	0.111***	0.132	0.253	-0.77 (0.440)
Year -2	0.103***	0.141	0.291	0.095***	0.134	0.299	0.124***	0.145	0.269	-0.68 (0.500)
Year -1	0.102***	0.130	0.294	0.096***	0.115	0.296	0.118***	0.144	0.290	-0.52 (0.606)
Panel B. Capital Leverage2 (Total Debt/Total Asset)										
Year -4	0.229***	0.225	0.190	0.224***	0.221	0.191	0.242***	0.227	0.187	-0.66 (0.512)
Year -3	0.232***	0.218	0.188	0.226***	0.217	0.187	0.245***	0.234	0.189	-0.69 (0.494)
Year -2	0.240***	0.220	0.206	0.234***	0.218	0.208	0.254***	0.231	0.199	-0.65 (0.514)
Year -1	0.231***	0.216	0.212	0.222***	0.185	0.209	0.254***	0.224	0.219	-0.10 (0.319)
Panel C. Interest Coverage (EBITDA/Net Interest Charges)										
Year -4	0.587	3.131	50.114	-1.512	1.893	57.189	4.305	6.904	28.964	-0.79 (0.432)
Year -3	-0.440	3.531	52.096	-3.011	1.997	59.249	6.522*	6.855	30.833	-1.24 (0.215)
Year -2	4.914**	7.340	33.474	3.420	5.651	32.838	8.963**	9.021	35.040	-1.13 (0.262)
Year -1	0.994	4.188	38.809	-1.189	4.188	36.452	6.239	5.906	43.317	-1.31 (0.193)

Table 3

Pre-takeover Performance for 217 Target Firms of Successful Takeovers over the Period 1998 to 2002

Variables	All sample			Domestic Takeovers			Cross-Border Takeovers		
	No CEO Turnover (N=112)	CEO Turnover (N=105)	t-stat	No CEO Turnover (N=74)	CEO Turnover (N=76)	t-stat	No CEO Turnover (N=38)	CEO Turnover (N=29)	t-stat
Panel A. IAROE									
IAROE (-4, -1)	6.826 (1.09)	9.325 (1.35)	-0.27 (0.788)	10.771 (1.29)	14.745 (1.59)	-0.32 (0.751)	-0.856 (-0.10)	-4.880 (-0.93)	0.37 (0.716)
IAROE (-3, -1)	8.605 (1.22)	14.277 (1.39)	-0.46 (0.646)	13.521 (1.40)	21.022 (1.50)	-0.44 (0.661)	-0.968 (-0.11)	-3.399 (-0.56)	0.21 (0.831)
IAROE (-2, -1)	7.712 (0.93)	1.495 (0.26)	0.61 (0.543)	11.759 (0.99)	2.251 (0.31)	0.69 (0.494)	-0.170 (-0.02)	-0.486 (-0.05)	0.03 (0.979)
IAROE (year -1)	-8.327 (-1.29)	0.476 (0.09)	-1.05 (0.296)	-4.392 (-0.62)	-0.522 (-0.08)	-0.4 (0.687)	-15.988 (-1.22)	3.092 (0.34)	-1.12 (0.266)
Panel B. IAROA									
IAROA (-4, -1)	2.362 (0.86)	-0.107 (-0.08)	0.79 (0.431)	5.071 (1.34)	-0.428 (-0.27)	1.35 (0.179)	-2.913 (-0.89)	0.735 (0.28)	-0.83 (0.408)
IAROA (-3, -1)	1.983 (0.80)	0.195 (0.14)	0.62 (0.535)	4.355 (1.30)	-0.535 (-0.34)	1.34 (0.184)	-2.635 (-0.81)	2.106 (0.76)	-1.07 (0.288)
IAROA (-2, -1)	4.239 (1.05)	2.220 (0.72)	0.39 (0.694)	7.597 (1.45)	-0.141 (-0.05)	1.31 (0.193)	-2.300 (-0.38)	8.405 (1.00)	-1.06 (0.292)
IAROA (year -1)	1.769 (0.63)	0.757 (0.41)	0.29 (0.768)	3.813 (1.03)	-0.679 (-0.34)	1.07 (0.285)	-2.210 (-0.53)	4.520 (1.08)	-1.12 (0.266)
Panel C. IACFM									
IACFM (-4, -1)	-2.154 (-0.38)	-4.029**(-2.40)	0.31 (0.759)	1.370 (0.18)	-5.775** (-2.62)	0.89 (0.375)	-9.016 (-1.28)	0.548 (0.34)	-1.17 (0.248)
IACFM (-3, -1)	-2.188 (-0.46)	-4.648***(-2.68)	0.47 (0.635)	0.334 (0.05)	-6.126***(-2.71)	0.96 (0.340)	-7.101 (-1.14)	-0.773 (-0.39)	-0.86 (0.391)
IACFM (-2, -1)	-8.201 (-1.62)	-4.949***(-2.72)	-0.59 (0.555)	-4.344 (-1.01)	-6.563***(-2.76)	0.45 (0.651)	-15.71 (-1.28)	-0.720 (-0.36)	-1.05 (0.296)
IACFM (year -1)	-6.435 (-1.61)	-5.297***(-2.71)	-0.25 (0.802)	-5.615 (-1.12)	-7.336***(-2.85)	0.31 (0.759)	-8.03 (-1.20)	0.046 (0.02)	-1.03 (0.305)
Panel D. CMAR (Monthly)									
-38 to -3	-0.340*** (-4.84)	-0.560***(-8.26)	2.25** (0.026)	-0.395*** (-4.62)	-0.565***(-7.13)	1.46 (0.146)	-0.234*(-1.90)	-0.547*** (-4.10)	1.71* (0.091)
-26 to -3	-0.266*** (-4.27)	-0.454***(-6.81)	2.06** (0.040)	-0.282*** (-3.52)	-0.435***(-5.86)	1.41 (0.162)	-0.234**(-2.40)	-0.501*** (-3.48)	1.59 (0.118)
-14 to -3	-0.161*** (-2.96)	-0.211***(-4.35)	0.69 (0.489)	-0.181** (-2.60)	-0.168***(-3.16)	-0.15 (0.882)	-0.120 (-1.41)	-0.324*** (-3.07)	1.51 (0.135)

Table 4

Pre-takeover Leverage for 217 Target Firms of Successful Takeovers over the Period 1998 to 2002

Variables	All sample			Domestic Takeovers			Cross-Border Takeovers		
	No CEO Turnover (N=112)	CEO Turnover (N=105)	t-stat	No CEO Turnover (N=74)	CEO Turnover (N=76)	t-stat	No CEO Turnover (N=38)	CEO Turnover (N=29)	t-stat
Panel A. Capital Leverage1 (Net Debt/Total Asset)									
Year -4	0.064**(2.40)	0.102***(3.85)	-1.01 (0.314)	0.042 (1.21)	0.104***(3.21)	-1.31 (0.191)	0.108**(2.68)	0.098**(2.11)	0.17 (0.868)
Year -3	0.067**(2.55)	0.113***(4.23)	-1.22 (0.224)	0.045 (1.34)	0.113***(3.49)	-1.47 (0.143)	0.110**(2.64)	0.111**(2.39)	-0.01 (0.988)
Year -2	0.088***(3.11)	0.120***(4.43)	-0.81 (0.419)	0.071* (1.98)	0.118***(3.55)	-0.96 (0.341)	0.122**(2.62)	0.126**(2.72)	-0.07 (0.944)
Year -1	0.089***(3.07)	0.117***(4.29)	-0.71 (0.477)	0.069*(1.85)	0.122***(3.95)	-1.10 (0.272)	0.128***(2.86)	0.105*(1.82)	0.32 (0.748)
Panel B. Capital Leverage2 (Total Debt/Total Asset)									
Year -4	0.219***(11.59)	0.240***(13.80)	-0.83 (0.410)	0.206***(8.31)	0.241***(12.60)	-1.13 (0.262)	0.245***(8.80)	0.239***(6.14)	0.13 (0.894)
Year -3	0.218***(12.21)	0.246***(13.60)	-1.11 (0.269)	0.205***(8.99)	0.247***(12.14)	-1.37 (0.174)	0.244***(8.61)	0.246***(6.30)	-0.04 (0.966)
Year -2	0.233***(11.34)	0.249***(13.27)	-0.58 (0.563)	0.223***(8.39)	0.246***(11.45)	-0.67 (0.505)	0.252***(7.97)	0.257***(6.65)	-0.11 (0.912)
Year -1	0.227***(10.20)	0.237***(13.16)	-0.35 (0.723)	0.208***(7.39)	0.236***(12.05)	-0.81 (0.419)	0.264***(7.38)	0.241***(5.87)	0.42 (0.674)
Panel C. Interest Coverage (EBITDA/Net Interest Charges)									
Year -4	-2.687 (-0.51)	3.454 (0.82)	-0.90 (0.369)	-6.158 (-0.83)	3.013 (0.52)	-0.98 (0.328)	4.074 (0.69)	4.609 (1.63)	-0.07 (0.941)
Year -3	-1.852 (-0.36)	1.834 (0.37)	-0.52 (0.605)	-7.100 (-1.01)	0.970 (0.14)	-0.83 (0.406)	8.369 (1.33)	4.100 (1.39)	0.56 (0.578)
Year -2	5.503 (1.35)	4.735**(2.63)	0.17 (0.867)	3.028 (0.60)	3.801*(1.83)	-0.14 (0.886)	10.321 (1.46)	7.182* (2.01)	0.36 (0.719)
Year -1	-1.122 (-0.29)	3.479 (0.98)	-0.87 (0.383)	-4.426 (-1.12)	1.963 (0.44)	-1.07 (0.285)	5.312 (0.63)	7.454 (1.36)	-0.20 (0.843)

Table 5

Post-takeover Turnover Rates for 217 Target Firms of Successful Takeovers over 1998 to 2002 for Extreme Performance Quartiles

Time period relative to takeover	All sample			Domestic takeover			Cross-border takeover		
	Quartile 1 (highest)	Quartile 4 (Lowest)	Chi^2 (p-Value)	Quartile 1 (highest)	Quartile 4 (Lowest)	Chi^2 (p-Value)	Quartile 1 (highest)	Quartile 4 (Lowest)	Chi^2 (p-Value)
Panel A. CEO Turnover rate using IAROE as the performance metric									
IAROE (-4, -1)	46.30%	46.30%	0.000 (1.000)	47.37%	47.37%	0.000 (1.000)	35.29%	47.06%	0.486 (0.486)
IAROE (-3, -1)	42.59%	44.44%	0.038 (0.846)	52.63%	47.37%	0.211 (0.646)	35.29%	47.06%	0.486 (0.486)
IAROE (-2, -1)	37.04%	46.30%	0.952 (0.329)	39.47%	44.74%	0.216 (0.642)	35.29%	47.06%	0.486 (0.486)
IAROE (year -1)	42.59%	48.15%	0.336 (0.562)	44.74%	52.63%	0.474 (0.491)	41.18%	41.18%	0.000 (1.000)
Panel B. CEO Turnover rate using IAROA as the performance metric									
IAROA (-4, -1)	40.74%	50.00%	0.934 (0.334)	39.47%	55.26%	1.900 (0.168)	41.18%	41.18%	0.000 (1.000)
IAROA (-3, -1)	42.59%	48.15%	0.336 (0.562)	44.74%	52.63%	0.474 (0.491)	47.06%	41.18%	0.119 (0.730)
IAROA (-2, -1)	37.04%	53.70%	3.026*(0.082)	39.47%	55.26%	1.900 (0.168)	35.29%	47.06%	0.486 (0.486)
IAROA (year -1)	33.33%	50.00%	3.086*(0.079)	34.21%	57.89%	4.290**(0.038)	29.41%	35.29%	0.134 (0.714)
Panel C. CEO Turnover rate using IACFM as the performance metric									
IACFM (-4, -1)	44.44%	50.00%	0.334 (0.563)	42.11%	57.89%	1.895 (0.169)	52.94%	29.41%	1.943 (0.163)
IACFM (-3, -1)	44.44%	51.85%	0.593 (0.441)	42.11%	57.89%	1.895 (0.169)	52.94%	35.29%	1.074 (0.300)
IACFM (-2, -1)	44.44%	50.00%	0.334 (0.563)	39.47%	52.63%	1.324 (0.250)	52.94%	41.18%	0.472 (0.492)
IACFM (year -1)	42.59%	53.70%	1.335 (0.248)	39.47%	55.26%	1.900 (0.168)	52.94%	41.18%	0.472 (0.492)
Panel D. CEO Turnover rate using cumulative abnormal return as the performance metric (Monthly)									
-38 to -3	40.74%	55.56%	2.374 (0.123)	42.11%	52.63%	0.844 (0.358)	41.18%	64.71%	1.889 (0.169)
-26 to -3	37.04%	55.56%	3.724*(0.054)	36.84%	50.00%	1.339 (0.247)	35.29%	58.82%	1.889 (0.169)
-14 to -3	38.89%	50.00%	1.350 (0.245)	42.11%	50.00%	0.477 (0.490)	29.41%	52.94%	1.943 (0.163)

Table 6

Post-takeover Turnover Rates for 217 Target Firms of Successful Takeovers over 1998 to 2002 for Extreme Leverage Quartiles

Time period relative to takeover	All sample			Domestic takeover			Cross-border takeover		
	Quartile 1 (highest)	Quartile 4 (Lowest)	Chi^2 (p-Value)	Quartile 1 (highest)	Quartile 4 (Lowest)	Chi^2 (p-Value)	Quartile 1 (highest)	Quartile 4 (Lowest)	Chi^2 (p-Value)
Panel A. CEO Turnover rate using Net Debt/Total Asset as the leverage metric									
Year -4	51.85%	40.74%	1.341 (0.247)	63.16%	39.47%	4.266**(0.039)	29.41%	47.06%	1.121 (0.290)
Year -3	50.00%	38.89%	1.350 (0.245)	60.53%	36.84%	4.266**(0.039)	29.41%	47.06%	1.121 (0.290)
Year -2	44.44%	44.44%	0.000 (1.000)	57.89%	44.74%	1.317 (0.251)	17.65%	41.18%	2.267 (0.132)
Year -1	50.00%	40.74%	0.934 (0.334)	60.53%	39.47%	3.368*(0.066)	23.53%	47.06%	2.061 (0.151)
Panel B. CEO Turnover rate using Total Debt/Total Asset as the leverage metric									
Year -4	53.70%	37.04%	3.026*(0.082)	68.42%	34.21%	8.901***(0.003)	29.41%	47.06%	1.121 (0.290)
Year -3	51.85%	35.19%	3.051*(0.081)	65.79%	31.58%	8.901***(0.003)	29.41%	41.18%	0.515 (0.473)
Year -2	50.00%	38.89%	1.350 (0.245)	60.53%	39.47%	3.368*(0.066)	29.41%	35.29%	0.134 (0.714)
Year -1	51.85%	37.04%	2.400 (0.121)	63.16%	36.84%	5.263**(0.022)	29.41%	35.29%	0.134 (0.714)
Panel C. CEO Turnover rate using EDITDA/Interest Charges as the leverage metric									
Year -4	51.85%	42.59%	0.929 (0.335)	63.16%	39.47%	4.266**(0.039)	29.41%	35.29%	0.134 (0.714)
Year -3	51.85%	37.04%	2.400 (0.121)	63.16%	36.84%	5.263**(0.022)	23.53%	41.18%	1.209 (0.271)
Year -2	51.85%	44.44%	0.593 (0.441)	52.63%	44.74%	0.474 (0.491)	29.41%	23.53%	0.151 (0.697)
Year -1	53.70%	46.30%	0.593 (0.441)	55.26%	47.37%	0.474 (0.491)	41.18%	29.41%	0.515 (0.473)

Table 7
Total Value and Number of Deals for Each Month from January 1998 to December 2002 in UK Takeover Market

Announcement Date	Deal Value ($ Mil)	Number of Deals	Announcement Date	Deal Value ($ Mil)	Number of Deals
January 1998	9,898.90	280	July 2000	15,419.20	314
February 1998	32,174.30	262	August 2000	17,404.80	283
March 1998	26,430.90	352	September 2000	22,130.40	279
April 1998	11,046.40	277	October 2000	8,718.10	234
May 1998	8,080.80	244	November 2000	10,853.80	254
June 1998	17,887.70	252	December 2000	38,474.90	264
July 1998	13,917.00	237	January 2001	9,456.00	218
August 1998	9,001.10	235	February 2001	13,042.20	247
September 1998	16,474.80	236	March 2001	20,419.80	246
October 1998	5,579.20	256	April 2001	19,517.30	236
November 1998	19,284.10	266	May 2001	36,240.70	268
December 1998	12,801.80	293	June 2001	8,201.50	205
January 1999	25,463.30	215	July 2001	8,711.40	236
February 1999	13,330.30	222	August 2001	7,603.70	182
March 1999	12,180.20	301	September 2001	1,522.00	143
April 1999	16,251.40	345	October 2001	8,249.90	218
May 1999	10,989.50	261	November 2001	6,262.30	226
June 1999	38,085.20	291	December 2001	11,101.80	159
July 1999	48,517.10	274	January 2002	5,855.80	185
August 1999	14,063.40	240	February 2002	3,534.50	173
September 1999	12,459.10	277	March 2002	20,465.80	202
October 1999	51,228.60	224	April 2002	19,663.80	195
November 1999	59,739.80	260	May 2002	7,561.30	210
December 1999	11,318.20	262	June 2002	21,088.60	163
January 2000	93,393.40	277	July 2002	6,150.10	187
February 2000	32,920.10	316	August 2002	8,418.00	162
March 2000	35,366.30	304	September 2002	3,820.00	186
April 2000	43,652.20	274	October 2002	15,836.30	188
May 2000	75,998.50	328	November 2002	6,460.90	168
June 2000	20,798.90	295	December 2002	11,824.80	135

Table 8
Summary statistics on the pre-takeover performance of 217 target firms

Variables	All sample			Jan 1998-May2000 N=141			June 2000-Dec 2002 N=76			
	Mean	Median	St.dev	Mean	Median	St.dev	Mean	Median	St.dev	t-stat
Panel A. IAROE										
IAROE (-4, -1)	8.053*	0.944	68.468	7.664	0.713	68.158	8.724	1.440	69.039	-0.11 (0.91)
IAROE (-3, -1)	11.378*	0.525	90.844	12.654	0.220	100.139	8.929	2.580	70.217	0.32 (0.75)
IAROE (-2, -1)	4.719	-0.261	75.277	3.929	-1.405	79.796	6.140	1.924	65.994	-0.22 (0.83)
IAROE (year -1)	-4.103	-1.070	62.009	-3.520	-0.260	67.333	-5.082	-1.440	50.585	0.19 (0.85)
Panel B. IAROA										
IAROA (-4, -1)	1.159	-0.005	23.078	2.360	-0.720	23.324	-1.045	1.800	22.445	1.05 (0.30)
IAROA (-3, -1)	1.108	-0.173	21.217	2.316	-0.690	20.530	-1.105	1.111	22.274	1.11 (0.27)
IAROA (-2, -1)	3.272	-0.123	37.795	4.146	-0.590	32.767	1.622	2.540	45.680	0.43 (0.67)
IAROA (year -1)	1.276	-0.350	25.272	2.743	-0.070	24.151	-1.436	-0.985	27.030	1.13 (0.26)
Panel C. IACFM										
IACFM (-4, -1)	-3.097	-1.177	44.880	-0.451	-1.177	48.661	-7.903	-3.701	36.306	1.28 (0.20)
IACFM (-3, -1)	-3.413	-2.270	38.141	-1.277	-2.270	40.324	-7.276	-3.885	33.346	1.17 (0.24)
IACFM (-2, -1)	-6.677**	-2.280	40.545	-6.864	-1.160	44.607	-6.189	-3.395	31.615	-0.13 (0.90)
IACFM (year -1)	-5.920**	-2.155	33.400	-4.328	-0.840	32.446	-8.771	-2.980	34.938	0.92 (0.36)
Panel D. MAR (Monthly)										
-38 to -3	-0.446***	-0.368	0.729	-0.435	-0.375	0.657	-0.468	-0.306	0.846	0.30 (0.76)
-26 to -3	-0.357***	-0.268	0.676	-0.357	-0.292	0.605	-0.355	-0.230	0.793	-0.02 (0.98)
-14 to -3	-0.184***	-0.098	0.539	-0.171	-0.100	0.501	-0.211	-0.098	0.602	0.49 (0.62)

Table 9

Summary statistics on the pre-takeover Leverage of 217 target firms

Variables	All sample			Jan 1998-May2000 N=141			June 2000-Dec 2002 N=76			
	Mean	Median	St.dev	Mean	Median	St.dev	Mean	Median	St.dev	t-stat
Panel A. Capital Leverage1 (Net Debt/Total Asset)										
Year -4	0.082***	0.134	0.278	0.112	0.140	0.244	0.028	0.110	0.327	1.96* (0.05)
Year -3	0.088***	0.128	0.276	0.119	0.132	0.238	0.033	0.109	0.328	2.03**(0.05)
Year -2	0.103***	0.141	0.291	0.143	0.145	0.252	0.031	0.131	0.340	2.53** (0.01)
Year -1	0.102***	0.130	0.294	0.134	0.130	0.250	0.044	0.132	0.356	1.96*(0.05)
Panel B. Capital Leverage2 (Total Debt/Total Asset)										
Year -4	0.229***	0.225	0.190	0.244	0.232	0.209	0.203	0.214	0.147	1.67* (0.10)
Year -3	0.232***	0.218	0.188	0.247	0.228	0.204	0.205	0.217	0.151	1.72* (0.09)
Year -2	0.240***	0.220	0.206	0.261	0.228	0.222	0.202	0.209	0.163	2.24**(0.03)
Year -1	0.231***	0.216	0.212	0.243	0.217	0.228	0.212	0.214	0.179	1.11 (0.27)
Panel C. Interest Coverage (EBITDA/Net Interest Charges)										
Year -4	0.587	3.131	50.114	-0.165	1.933	60.586	1.119	3.644	20.093	-0.23 (0.82)
Year -3	-0.440	3.531	52.096	-1.000	1.933	63.400	1.661	3.892	18.946	-0.46 (0.65)
Year -2	4.914**	7.340	33.474	6.939	9.153	39.337	1.778	4.172	18.322	1.32 (0.19)
Year -1	0.994	4.188	38.809	0.727	4.188	45.732	1.804	4.702	20.503	-0.24 (0.81)

Table 10

Pre-takeover Performance for 217 Target Firms of Successful Takeovers over the Period 1998 to 2002

Variables	All sample			Jan 1998-May2000 N=141			June 2000-Dec 2002 N=76		
	No CEO Turnover (N=112)	CEO Turnover (N=105)	t-stat	No CEO Turnover (N=69)	CEO Turnover (N=72)	t-stat	No CEO Turnover (N=43)	CEO Turnover (N=33)	t-stat
Panel A. IAROE									
IAROE (-4, -1)	6.826 (1.09)	9.325 (1.35)	-0.27 (0.788)	8.477 (1.07)	6.885 (0.82)	0.14 (0.89)	4.177 (0.40)	14.648 (1.19)	-0.65 (0.51)
IAROE (-3, -1)	8.605 (1.22)	14.277 (1.39)	-0.46 (0.646)	10.976 (1.16)	14.263 (1.03)	-0.20 (0.85)	4.801 (0.46)	14.308 (1.12)	-0.58 (0.57)
IAROE (-2, -1)	7.712 (0.93)	1.495 (0.26)	0.61 (0.543)	12.384 (0.99)	-4.173 (-0.80)	1.22 (0.23)	0.214 (0.03)	13.862 (0.96)	-0.84 (0.41)
IAROE (year -1)	-8.327 (-1.29)	0.476 (0.09)	-1.05 (0.296)	-8.335 (-0.91)	1.094 (0.16)	-0.83 (0.41)	-8.313 (-1.02)	-0.871 (-0.11)	-0.64 (0.52)
Panel B. IAROA									
IAROA (-4, -1)	2.362 (0.86)	-0.107 (-0.08)	0.79 (0.431)	5.937 (1.61)	-1.068 (-0.74)	1.77* (0.08)	-3.375 (-0.86)	1.992 (0.67)	-1.09 (0.28)
IAROA (-3, -1)	1.983 (0.80)	0.195 (0.14)	0.62 (0.535)	5.432* (1.71)	-0.670 (-0.46)	1.75* (0.83)	-3.550 (-0.91)	2.082 (0.70)	-1.15 (0.25)
IAROA (-2, -1)	4.239 (1.05)	2.220 (0.72)	0.39 (0.694)	8.450* (1.73)	0.022 (0.01)	1.52 (0.13)	-2.518 (-0.36)	7.015 (0.88)	-0.90 (0.37)
IAROA (year -1)	1.769 (0.63)	0.757 (0.41)	0.29 (0.768)	5.235 (1.43)	0.355 (0.19)	1.19 (0.24)	-3.792 (-0.87)	1.633 (0.38)	-0.88 (0.38)
Panel C. IACFM									
IACFM (-4, -1)	-2.154 (-0.38)	-4.029**(-2.40)	0.31 (0.759)	2.100 (0.26)	-2.896 (-1.44)	0.60 (0.55)	-8.981 (-1.28)	-6.499** (-2.14)	-0.32 (0.75)
IACFM (-3, -1)	-2.188 (-0.46)	-4.648***(-2.68)	0.47 (0.635)	1.224 (0.19)	-3.674* (-1.76)	0.71 (0.48)	-7.664 (-1.20)	-6.771** (-2.17)	-0.13 (0.90)
IACFM (-2, -1)	-8.201 (-1.62)	-4.949***(-2.72)	-0.59 (0.555)	-9.641 (-1.32)	-4.202* (-1.82)	-0.71 (0.48)	-5.889 (-0.97)	-6.581** (-2.26)	0.10 (0.92)
IACFM (year -1)	-6.435 (-1.61)	-5.297***(-2.71)	-0.25 (0.802)	-4.223 (-0.84)	-4.429* (-1.88)	0.04 (0.97)	-9.983 (-1.52)	-7.192** (-2.04)	-0.37 (0.71)
Panel D. MAR (Monthly)									
-38 to -3	-0.340*** (-4.84)	-0.560***(-8.26)	2.25** (0.026)	-0.312*** (-3.89)	-0.552*** (-7.43)	2.19** (0.03)	-0.385*** (-2.94)	-0.577*** (-4.00)	0.99 (0.33)
-26 to -3	-0.266*** (-4.27)	-0.454***(-6.81)	2.06** (0.040)	-0.263*** (-3.64)	-0.448*** (-6.33)	1.83* (0.07)	-0.270** (-2.36)	-0.466*** (-3.17)	1.05 (0.30)
-14 to -3	-0.161*** (-2.96)	-0.211***(-4.35)	0.69 (0.489)	-0.180*** (-2.70)	-0.163*** (-3.07)	-0.20 (0.84)	-0.129 (-1.39)	-0.317*** (-3.13)	1.36 (0.18)

Table 11

Pre-takeover Leverage for 217 Target Firms of Successful Takeovers over the Period 1998 to 2002

Variables	All sample			Jan 1998-May2000 N=141			June 2000-Dec 2002 N=76		
	No CEO Turnover (N=112)	CEO Turnover (N=105)	t-stat	No CEO Turnover (N=69)	CEO Turnover (N=72)	t-stat	No CEO Turnover (N=43)	CEO Turnover (N=33)	t-stat
Panel A. Capital Leverage1 (Net Debt/Total Asset)									
Year -4	0.064**(2.40)	0.102***(3.85)	-1.01 (0.314)	0.094*** (2.94)	0.129*** (4.94)	-0.86 (0.39)	0.017 (0.36)	0.043 (0.70)	-0.34 (0.74)
Year -3	0.067**(2.55)	0.113***(4.23)	-1.22 (0.224)	0.093*** (3.04)	0.145*** (5.54)	-1.30 (0.20)	0.026 (0.54)	0.042 (0.68)	-0.21 (0.83)
Year -2	0.088***(3.11)	0.120***(4.43)	-0.81 (0.419)	0.124*** (3.68)	0.161*** (6.17)	-0.88 (0.38)	0.031 (0.62)	0.030 (0.48)	0.01 (0.99)
Year -1	0.089***(3.07)	0.117***(4.29)	-0.71 (0.477)	0.113*** (3.21)	0.155*** (6.57)	-1.00 (0.32)	0.051 (1.02)	0.035 (0.51)	0.18 (0.85)
Panel B. Capital Leverage2 (Total Debt/Total Asset)									
Year -4	0.219***(11.59)	0.240***(13.80)	-0.83 (0.410)	0.239*** (8.71)	0.248*** (11.10)	-0.27 (0.78)	0.188*** (8.64)	0.223*** (8.42)	-1.03 (0.31)
Year -3	0.218***(12.21)	0.246***(13.60)	-1.11 (0.269)	0.235*** (9.33)	0.257*** (11.00)	-0.64 (0.52)	0.191*** (8.38)	0.223*** (8.28)	-0.91 (0.37)
Year -2	0.233***(11.34)	0.249***(13.27)	-0.58 (0.563)	0.257*** (8.78)	0.265*** (11.15)	-0.21 (0.83)	0.193*** (7.82)	0.213*** (7.36)	-0.52 (0.60)
Year -1	0.227***(10.20)	0.237***(13.16)	-0.35 (0.723)	0.239*** (7.45)	0.247*** (11.30)	-0.20 (0.84)	0.208*** (7.72)	0.217*** (6.73)	-0.21 (0.83)
Panel C. Interest Coverage (EBITDA/Net Interest Charges)									
Year -4	-2.687 (-0.51)	3.454 (0.82)	-0.90 (0.369)	-5.765 (-0.69)	5.201 (0.87)	-1.07 (0.29)	2.253 (0.68)	-0.359 (-0.11)	0.57 (0.57)
Year -3	-1.852 (-0.36)	1.834 (0.37)	-0.52 (0.605)	-4.820 (-0.59)	2.662 (0.38)	-0.70 (0.49)	2.912 (1.00)	0.030 (0.01)	0.66 (0.51)
Year -2	5.503 (1.35)	4.735**(2.63)	0.17 (0.867)	7.773 (1.23)	6.139** (2.61)	0.24 (0.81)	1.859 (0.58)	1.672 (0.67)	0.05 (0.96)
Year -1	-1.122 (-0.29)	3.479 (0.98)	-0.87 (0.383)	-3.513 (-0.60)	4.791 (0.95)	-1.08 (0.28)	2.715 (0.74)	0.618 (0.24)	0.47 (0.64)

Table 12

Post-takeover Turnover Rates for 217 Target Firms of Successful Takeovers over 1998 to 2002 for Extreme Performance Quartiles

Time period relative to takeover	All sample			Jan 1998-May2000 N=141			June 2000-Dec 2002 N=76		
	Quartile 1 (highest)	Quartile 4 (Lowest)	Chi^2 (p-Value)	Quartile 1 (highest)	Quartile 4 (Lowest)	Chi^2 (p-Value)	Quartile 1 (highest)	Quartile 4 (Lowest)	Chi^2 (p-Value)
Panel A. CEO Turnover rate using IAROE as the performance metric									
IAROE (-4, -1)	46.30%	46.30%	0.000 (1.000)	42.86%	48.57%	0.23 (0.63)	47.37%	47.37%	0.000 (1.000)
IAROE (-3, -1)	42.59%	44.44%	0.038 (0.846)	42.86%	48.57%	0.23 (0.63)	52.63%	42.11%	0.42 (0.52)
IAROE (-2, -1)	37.04%	46.30%	0.952 (0.329)	37.14%	45.71%	0.53 (0.47)	36.84%	47.37%	0.43 (0.51)
IAROE (year -1)	42.59%	48.15%	0.336 (0.562)	51.43%	51.43%	0.000 (1.000)	26.32%	47.37%	1.81 (0.18)
Panel B. CEO Turnover rate using IAROA as the performance metric									
IAROA (-4, -1)	40.74%	50.00%	0.934 (0.334)	40.00%	57.14%	2.06 (0.15)	42.11%	42.11%	0.000 (1.000)
IAROA (-3, -1)	42.59%	48.15%	0.336 (0.562)	48.57%	57.14%	0.52 (0.47)	47.37%	47.37%	0.000 (1.000)
IAROA (-2, -1)	37.04%	53.70%	3.026*(0.082)	37.14%	54.29%	2.07 (0.15)	42.11%	47.37%	0.11 (0.74)
IAROA (year -1)	33.33%	50.00%	3.086*(0.079)	34.29%	54.29%	2.84*(0.09)	31.58%	47.37%	0.99 (0.32)
Panel C. CEO Turnover rate using IACFM as the performance metric									
IACFM (-4, -1)	44.44%	50.00%	0.334 (0.563)	54.29%	51.43%	0.06 (0.81)	31.58%	42.11%	0.45 (0.50)
IACFM (-3, -1)	44.44%	51.85%	0.593 (0.441)	54.29%	57.14%	0.06 (0.81)	26.32%	52.63%	2.75* (0.10)
IACFM (-2, -1)	44.44%	50.00%	0.334 (0.563)	54.29%	45.71%	0.51 (0.47)	26.32%	57.89%	3.89**(0.5)
IACFM (year -1)	42.59%	53.70%	1.335 (0.248)	51.43%	57.14%	0.23 (0.63)	31.58%	47.37%	0.99 (0.32)
Panel D. CEO Turnover rate using MAR as the performance metric (Monthly)									
-38 to -3	40.74%	55.56%	2.374 (0.123)	40.00%	62.86%	3.66*(0.06)	36.84%	47.37%	0.43 (0.51)
-26 to -3	37.04%	55.56%	3.724*(0.054)	40.00%	54.29%	1.43 (0.23)	31.58%	57.89%	2.66 (0.10)
-14 to -3	38.89%	50.00%	1.350 (0.245)	51.43%	51.43%	0.000 (1.000)	21.05%	42.11%	1.95 (0.16)

Table 13

Post-takeover Turnover Rates for 217 Target Firms of Successful Takeovers over 1998 to 2002 for Extreme Leverage Quartiles

Time period relative to takeover	All sample			Jan 1998-May2000 N=141			June 2000-Dec 2002 N=76		
	Quartile 1 (highest)	Quartile 4 (Lowest)	Chi^2 (*p*-Value)	Quartile 1 (highest)	Quartile 4 (Lowest)	Chi^2 (*p*-Value)	Quartile 1 (highest)	Quartile 4 (Lowest)	Chi^2 (*p*-Value)
Panel A. CEO Turnover rate using Net Debt/Total Asset as the leverage metric									
Year -4	51.85%	40.74%	1.341 (0.247)	57.14%	40.00%	2.06 (0.15)	47.37%	36.84%	0.43 (0.51)
Year -3	50.00%	38.89%	1.350 (0.245)	54.29%	37.14%	2.07 (0.15)	47.37%	42.11%	0.11 (0.74)
Year -2	44.44%	44.44%	0.000 (1.000)	51.43%	34.29%	2.10 (0.15)	42.11%	52.63%	0.42 (0.52)
Year -1	50.00%	40.74%	0.934 (0.334)	54.29%	40.00%	1.43 (0.23)	47.37%	52.63%	0.11 (0.75)
Panel B. CEO Turnover rate using Total Debt/Total Asset as the leverage metric									
Year -4	53.70%	37.04%	3.026*(0.082)	57.14%	40.00%	2.06 (0.15)	47.37%	36.84%	0.43 (0.51)
Year -3	51.85%	35.19%	3.051*(0.081)	54.29%	40.00%	1.43 (0.23)	52.63%	36.84%	0.96 (0.33)
Year -2	50.00%	38.89%	1.350 (0.245)	48.57%	37.14%	0.93 (0.33)	52.63%	36.84%	0.96 (0.33)
Year -1	51.85%	37.04%	2.400 (0.121)	57.14%	37.14%	2.81* (0.09)	47.37%	36.84%	0.43 (0.51)
Panel C. CEO Turnover rate using EDITDA/Interest Charges as the leverage metric									
Year -4	51.85%	42.59%	0.929 (0.335)	60.00%	40.00%	2.80* (0.09)	31.58%	47.37%	0.99 (0.32)
Year -3	51.85%	37.04%	2.400 (0.121)	62.86%	31.43%	6.94***(0.01)	31.58%	42.11%	0.45 (0.50)
Year -2	51.85%	44.44%	0.593 (0.441)	57.14%	48.57%	0.52 (0.47)	36.84%	47.37%	0.43 (0.51)
Year -1	53.70%	46.30%	0.593 (0.441)	57.14%	42.86%	1.43 (0.23)	36.84%	52.63%	0.96 (0.33)