

ความมั่นใจเกินไปของบริษัทผู้ครอบงำกิจการ: หลักฐานจากการคาดการณ์ของนักวิเคราะห์



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ACQUIRERS' OVERCONFIDENCE:
EVIDENCE FROM ANALYSTS' FORECAST



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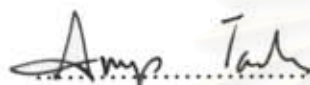
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วิทยานิพนธ์ฉบับนี้แสดงผลการศึกษาเชิงประจักษ์ถึงผลกระทบของความมั่นใจเกินไปของ
 บริษัทผู้ครอบงำกิจการที่มีต่อความมั่งคั่งของกิจการ ผลการศึกษาพบว่า การควบรวมกิจการถือเป็น
 การลงทุนที่สร้างมูลค่าให้แก่ผู้ถือหุ้นทั้งในระยะสั้นและระยะยาว และบริษัทมิได้มีลักษณะความ
 มั่นใจเกินไปในขณะที่ทำการตัดสินใจควบรวมกิจการ โดยผลการศึกษาที่พบนั้นแตกต่างจาก
 สมมติฐานของ Roll (1986) ที่ระบุว่า บริษัทผู้ครอบงำกิจการมีความมั่นใจเกินไปในความสามารถ
 ของตนที่จะสร้างมูลค่าจากการควบรวมกิจการ และเป็นที่น่าสนใจว่า จากหลักฐานที่พบ ไม่ปรากฏ
 ลักษณะที่ตลาดคาดการณ์เกี่ยวกับสิ่งที่จะเกิดขึ้นในอนาคตโดยการอ้างอิงจากข้อมูลในอดีตมาก
 จนเกินไป ดังที่กล่าวไว้โดย Rau และ Vermaelen (1998) เช่นเดียวกัน นอกจากนี้ผลการศึกษาที่
 พบดังกล่าวยังคงไม่เปลี่ยนแปลงหลังจากทำการทดสอบเพื่อยืนยันผลอีกครั้งโดยการระบุลักษณะ
 ความมั่นใจเกินไปด้วยวิธีการอื่น

สถาบันวิทยบริการ จุฬาลงกรณ์มหาวิทยาลัย

ภาควิชา การธนาคารและการเงิน

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This thesis provides an empirical evidence on the ultimate wealth effect of acquirers' overconfidence. Two important findings emerge. Firstly, merger and acquisition activities are value-creating investments for acquirer shareholders in the short-run as well as in the long-run. Secondly, the results indicate that firms are not overconfident when making the merger and acquisition decisions. This is inconsistent with the famous hypothesis by Roll (1986) that acquirers are overconfident in their ability to extract value from acquisition. Interestingly, there is no evidence of the market's overextrapolation hypothesized by Rau and Vermaelen (1998) either. Moreover, the findings are generally robust to alternative methods for estimating overconfidence.

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Table of Contents

	Page
Thai Abstract	iv
English Abstract	v
Acknowledgements	vi
Table of Contents	vii
List of Tables	ix
CHAPTER I Introduction	1
1.1 Background and Problem Review	1
1.2 Statement of Problem/Research Question	5
1.3 Objective of the Study	6
1.4 Scope of the Study	6
1.5 Contributions	6
CHAPTER II Literature Review	7
2.1 The Wealth Effect of Acquiring Firm from Merger and Acquisition.....	7
2.2 The Effects of Managerial Objectives on Acquirers' Performance.....	9
2.3 The Hubris Hypothesis and the Wealth of Bidding Firm.....	10
2.4 The Sub-Sampling Evidence on Acquirers' Performance.....	13
2.5 Summary	20
CHAPTER III Data and Methodology	22
3.1 Data	22
3.2 Theoretical Hypothesis	23
3.3 Methodology	26
3.3.1 The Identification of Overconfident Bidders	26
3.3.2 The Measurement of Abnormal Returns	28
3.3.3 The Robustness Test	36
CHAPTER IV Results	38
4.1 The Descriptive Statistic	38
4.2 The Effect of Managerial Overconfidence on Acquirers' Performance	43
4.2.1 The Overall Performance over the Announcement and Post-Acquisition Periods	43

	Page
4.2.2 The Acquirers' Performance by Method of Payment and Target Status	47
4.2.3 The Acquirers' Performance by the Relatedness of Acquisition	54
4.2.4 The Acquirers' Performance by the Price-to-Earnings and the Market-to-Book Ratios	58
4.3 The Results from Robustness Test	62
4.3.1 The Performance of Deals Announced within Six Months Following Earnings Report Date	62
4.3.2 The Acquirers' Performance by Analysts' Forecast Error and Consensus Recommendation	65
CHAPTER V Conclusion and Area for Future Research	67
5.1 Conclusion	67
5.2 Area for Future Research	69
REFERENCES	70
APPENDICES.....	73
BIOGRAPHY	85

List of Tables

Table	Page
1	The descriptive statistic for merger and acquisition deals of the United Kingdom acquirers announced between January 1995 and December 200041
2	The acquirers' performance (value-weighted) over the announcement and the post-acquisition periods46
3	The acquirers' performance (value-weighted) by method of payment and target status50
4	The acquirers' performance (value-weighted) by the relatedness of acquisition56
5	The acquirers' performance (value-weighted) by the acquirers' price-to-earnings ratio60
6	The acquirers' performance (value-weighted) by the acquirers' market-to-book ratio61
7	The acquirers' performance (value-weighted) from the acquisition announced within six months from earnings report date64
8	The acquirers' performance (value-weighted) by the analysts' forecast error and the consensus recommendation66
9	The acquirers' performance (equal-weighted) over the announcement and the post-acquisition periods74
10	The acquirers' performances (equal-weighted) by method of payment and target status75
11	The acquirers' performance (equal-weighted) by the relatedness of acquisition79
12	The acquirers' performance (equal-weighted) by the acquirers' price-to-earnings ratio81
13	The acquirers' performance (equal-weighted) by the acquirers' market-to-book ratio82

Table	Page
14 The acquirers' performance (equal-weighted) from the acquisition announced within six months from earnings report date	83
15 The acquirers' performance (equal-weighted) by analysts' forecast error and consensus recommendation	84



สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

CHAPTER I

INTRODUCTION

1.1 Background and Problem Review

Merger and acquisition activities have grown rapidly over the past decades. In the United States, the total value of merger and acquisition activities had increased dramatically from 44.3 billion dollars in 1980 to 1.4 trillion dollars in 1999 (Copeland, Weston and Shastri, 2005). The wealth effects following the acquisition are documented by a number of studies over the announcement and long-term periods. Whilst the evidence on target's return is unambiguous positive, the acquirers are found to experience only zero returns or even loss from their acquisition attempts (Jensen and Ruback, 1983; Agrawal and Jaffe, 2000). Interestingly, one remaining question is: why is the market for corporate control appealing to many companies around the world despite the strong evidence stated above that the acquirers normally loss following the acquisition? In other words, why the managers of acquiring firms still engage in such investment decisions, the merger and acquisition activities, which typically destroy shareholders' wealth at the end.

To explore one theoretically plausible answer to the above question, this thesis examines whether the underperformance is attributable to managers' overconfidence. Specifically, bidders typically tend to be large and successful companies. Thus, the managers of well-performing firms could simply be overconfident about their management abilities, leading to a feeling of supremacy and resulting in poor investment decisions. This argument is consistent with the hubris hypothesis (Roll, 1986) which states that bidding firms' managers are overly optimistic about their abilities to create values from acquisition. Then, their unrealistic expectations

motivated by the hubris will encourage them to make the acquisitions which end up with poor performance.

In order to investigate the above argument, the analysts' forecast is employed to identify overconfident bidders for the following reasons. Firstly, the analysts' forecast has been widely used in empirical research as a proxy for investor's earnings expectation (La Porta, 1996; Doukas et al., 2002). Since analysts are relatively informed traders, investors tend to anticipate the company's future prospects based on the analysts' forecast. Furthermore, the contents in analysts' reports are relatively reliable as there are a number of studies documenting the importance of forecast accuracy on the analysts' career and the supporting evidence on the analyst forecast's rationales (Keane and Runkle, 1998; Lim, 2001). Consistently, Barber et al. (2001) provide the evidence that the analysts' recommendation is valuable to investors because buying stocks with the most favorable consensus recommendation will typically yield greater returns than the least favorable stocks. Therefore, it may be argued that the managers are more likely to consider this outsider expectation as a benchmark for their performance.

Secondly, the managers normally prefer favorable information about their company. Beating market expectation is unquestionably the favorable feedback about the management abilities for managers. Hence, one would expect that managers whose actual performance is superior to the analysts' expectation are the overconfident acquirers. On the other hand, by implying manager's overconfidence from the market-based condition such as the book-to-market ratio, the managers can possibly suffer from the stock market's temporary misvaluation problem. Nonetheless,

the fundamental analysis performed by analysts is likely to be less impacted by this misvaluation problem. For instance, stock recommendation is rated after comparing intrinsic stock values to their market prices.

This thesis belongs to the growing literature attempting to empirically investigate the effect of manager's overconfidence on shareholders' wealth following the acquisition. The various proxies for overconfidence and different research horizons are adopted for investigation. Malmendier and Tate (2005) measure the acquirers' performance over the announcement period by using the exercise of company stock option from CEOs' private portfolio and how CEOs are portrayed in the business press as proxies for overconfidence. On the other hand, Billett and Qian (2006) examine both short-run and long-run abnormal returns by adopting the history of deals made by individual CEOs as a proxy for overconfidence. The evidence from those recent studies consistently shows that the overconfidence of acquiring firms' managers destroys the shareholders' wealth. Specifically, the overconfident acquirers have negative performance during both announcement and long-run periods.

As mentioned earlier, this thesis is based on the groundwork of hubris hypothesis (Roll, 1986). The market's rational expectation is the main assumption underlying the hubris hypothesis whilst managers are those who are irrational about their abilities to create value from merger and acquisition. As a result, it could be hypothesized that the market will react negatively with those irrational managers' decisions both the over-the-announcement period and long-run after the bid announcement. However, the negative post-acquisition performance expected in this thesis may lead to a controversial issue about the market efficiency. One implication

underlying the efficient market hypothesis is that the stock prices in the market should be their fair prices since they fully reflect all available information. Therefore, regarding their fundamental values, the stock prices must increase or decrease only in response to new information. The deviations from zero of the long-run abnormal returns seem to violate this assumption since it can be viewed as investors' over- or under-reaction to the merger and acquisition events. Nevertheless, it is clearly possible that the information around bid announcement could be incomplete. By allowing for this possibility, the market efficiency assumption still holds. The abnormal post-performance is caused by further reactions from the market when more information is released rather than the over- or under-reaction of the market.

With respect to the possibility of information incompleteness around bid announcement, the test of long-run performance is needed in order to examine the ultimate wealth effect of the acquiring firm. Moreover, this thesis also differs from prior studies in that distinction is made between listed and unlisted targets. Although the vast majority of the acquisitions involve the unlisted companies, none of the existing studies focusing on the acquirers' overconfidence takes the effect of target status into account. Hence, for more comprehensive results, the effects of overconfidence on the shareholders' wealth are examined through both types of targets in this thesis.

Next, the research also addresses the robustness by examining the effect of overconfidence through the market-to-book and price-to-earnings ratios of bidding firms. This test provides evidence in relation to the performance extrapolation hypothesis (Rau and Vermaelen, 1998) stating that the market overestimates the past

performance of the firm when evaluating the acquisition value. Thus, an optimistic feedback from the market will cause glamour bidders, those who have excellent performance reflected in the high market-to-book ratio, to be affected by the hubris and to face the value-destroying acquisition. Therefore, in this thesis, the performance of overconfident acquirers is investigated through various groups of the market-to-book and price-to-earnings ratios in order to ensure that the negative performance is originated from an overconfident effect not an overextrapolation from the market.

Despite being the second largest market for corporate control in the world, the United Kingdom research has provided little evidence on the implication of the hubris hypothesis. Moreover, the analysis of UK data offers additional insights into the effect of overconfidence as it provides the different payment characteristic from the US. Specifically, British acquirers generally give an option for their targets to choose between cash and stock when using a mixed payment (Draper and Paudyal, 1999). By contrast, bidders in the US typically fix the payment proportion when using mixed payment. The mixed payment in the UK is, therefore, a priori consistent with the characteristic of overconfident bidders. The acquirers are expected to give the options to their targets since they are very confident in the value generated from acquisition. Hence, unlike earlier studies which focus on the US data, this thesis is based on the UK data.

1.2 Statement of Problem/ Research Question

The above discussion points out to an important research question which has yet to be explored. That is: what is the ultimate wealth effect of acquirers' overconfidence?

1.3 Objective of the Study

In the light of the problem stated above, the objective of this thesis is to examine the abnormal return to overconfident acquirers both around the announcement and in the long run during the post acquisition period.

1.4 Scope of the Study

The sample includes successful acquisitions that are announced between January 1995 and December 2000. Both acquirers and targets are domiciled in the United Kingdom. In addition, the acquiring firms are listed companies in UK stock market (LSE, AIM, USM or London Tech) while the target firms include both listed and unlisted companies in UK.

1.5 Contributions

This thesis contributes to the existing literature by providing new important insights into the ultimate wealth effect, short-run and long-run performance, of the acquirers' overconfidence. In identifying the overconfidence characteristic of acquirers' managers, this thesis employs direct proxy for the degree of managerial overconfidence, namely analysts' forecast error.

CHAPTER II

LITERATURE REVIEW

The number of merger and acquisition deals has risen sharply over the past decades. In the light of a growing trend of this activity, its implication has been extensively investigated in the corporate finance literature. This chapter summarizes the theoretical and empirical evidence of merger and acquisition activities in relation to the acquirers' wealth. The sections are described as follows. Section 2.1 illustrates the studies that examine the acquirers' wealth effect from merger and acquisition activities. Section 2.2 presents the effects of managerial objectives on the acquirers' performance. Section 2.3 exhibits the hubris hypothesis and its implication through the wealth of bidding firm. Section 2.4 provides the sub-sampling evidence on the acquirers' performance in relation to the hubris hypothesis and acquirers' overconfidence. The last section concludes the main idea presented in this chapter.

2.1 The Wealth Effect of Acquiring Firm from Merger and Acquisition

Whether merger and acquisition create value for the shareholders is one of the most popular scholarly debates in the corporate finance as evident from a number of studies over the announcement and long-term periods. While the target firms are obviously the winners from merger and acquisition activities, a number of studies allege that bidders reach only break-even or even suffer loss following the acquisition.

Early empirical evidence of the market for corporate control is reviewed by Jensen and Ruback (1983). From their review article, they conclude that merger and acquisition activities are the zero net present value investment projects for the acquiring firms. However, it should be noted that most studies reviewed in their

article mainly focus over the announcement period, and there is a growing body of subsequent studies that shows the different interpretation from their research.

As opposed to Jensen and Ruback (1983) whose study focuses on the short-run period, Agrawal and Jaffe (2000) review their research on the post-acquisition performance of bidding firms and found that acquirers' performance corresponds with the mode of acquisition. In particular, there is the strong evidence of bidders' underperformance following the mergers while bidders earn positive abnormal returns following their tender offers. With respect to the research outside the US, Gregory (1997) provides the supporting evidence for the post-acquisition's negative performance of the United Kingdom acquirers.

Another similar study by Andrade et al. (2001) provides the evidence on the mergers in the 90s. In terms of the acquirers' wealth following the acquisition, the evidence is similar to those papers cited above. The acquiring firms earn only break-even in the short run and end up with the negative performance in the long-run.

Bruner (2003) provides a comprehensive review article about the profitability following merger and acquisition activities. Unlike the previous review articles focusing only on the event study approach, this review article includes the studies which employ other research approaches for measuring the acquirers' performance. Specifically, the accounting data, i.e. earnings per share (EPS), return on equity (ROE), and return on assets (ROA), the questionnaire for the executive, and the case study, are other approaches to measure bidders' performance beyond the event study approach. Their findings based on a traditional approach, the event study, are similar

to prior studies. Target firms enjoy a significant gain while the acquirers seem to reach only break-even. For the findings based on the data from financial statement, the merger and acquisition activities are also the value-destroying decisions since the acquirers' performance identified mostly from ROA and ROE is consistently declined after the event.

Ultimately, the target firms clearly gain following the acquisition while the evidence on the acquiring firms' performance is mixed and is hard to interpret. Mostly, prior studies conclude that bidders earn approximately zero abnormal returns over the announcement period and exhibit the negative performance in the post-acquisition period. Surprisingly, while the evidence of bidder's performances is nearly consensus, the explanation for this outcome is still inconclusive. The results usually vary with the sub-sample of bidding firms and the measurement of the abnormal returns.

2.2 The Effect of Managerial Objectives on Acquirers' performance

With respect to various motives behind merger and acquisition decisions, the managerial objectives of managers such as reducing their employment risk, pursuing their empire-building, and trying to entrench themselves in the firms are normally considered as the inappropriate motives which typically do not add value to the shareholders.

Jensen (1986) addresses an agency problem about the takeover activity that the managers whose company generates a substantial amount of free cash flow have an incentive to unnecessarily spend money in merger and acquisition activities rather

than reward it to the shareholders. In particular, since managers' compensations typically rely on the company's growth, managers tend to increase the company's growth through merger and acquisition activities. Then, the increase in company's growth beyond the optimal size causes the underperformance for the acquiring firms.

Shleifer and Vishny (1989) provide another indicator of managers' incentive to conduct the acquisition beyond the value-maximizing level, i.e. the managers try to entrench themselves in the firm by making the specific investments. In other words, managers conduct the investments that require their expertise. By doing so, they can reduce the possibility of losing job and make themselves more valuable to the shareholders.

2.3 Hubris Hypothesis and the Wealth of Bidding Firm

Apart from managerial objectives, the recent research on corporate finance has offered hubris as an explanation for the negative performance following the acquisition. The hubris hypothesis is historically introduced by Roll (1986) in order to explain the acquirers' underperformance following the acquisition. The hubris theory states that the managers of bidding firms are overoptimistic about their abilities to create value from the acquisition. Furthermore, those irrational managers tend to believe that their potential target has a good value to buy regardless of the target's market value at that moment. Then, their unrealistic expectations motivated by the hubris will encourage them to make the acquisitions which end up with poor performance. As a result, the market will negatively react to those irrational bidders whose decisions are affected by the hubris.

Rau and Vermaelen (1998) propose the performance extrapolation hypothesis which takes the hubris hypothesis into an account. They argue that the market overestimates the past performance of the firm when evaluating the acquisition value. Thus, the decision makers of bidding firms will indirectly receive this optimistic feedback. Later, this feedback will cause them to be affected by the hubris and make value-destroying acquisitions. Their findings support this hypothesis. The long-run abnormal returns of the glamour firm, inculcating high market value or low book-to-market ratio, are negative.

Shleifer and Vishny (2003), however, introduce the different acquisition model from the context of hubris hypothesis (Roll, 1986). They argue that the stock market is inefficient and therefore makes the misvaluation problem happens. On the other hand, the managers of bidding firm are rational and are aware of this incorrect value. Hence, the rationale managers who are aware of mispricing at the moment can exploit from such information through merger and acquisition activities. Specifically, if managers know that their stocks are overvalued in the market, they will use those stocks as a medium of exchange in acquisition. Eventually, the prices of those overvalued stocks will decrease in the long run.

To investigate further implications of hubris hypothesis, Malmendier and Tate (2005) examine the effect of overconfident CEOs on the announcement return from acquisitions in the United States. The exercise of company stock options from CEOs' private portfolio and how CEOs are portrayed in the business press are used as proxies for overconfidence. The overconfident CEOs are classified as those who hold company stock options until a year before expiration because they believe in good

future prospect of their firms. Moreover, they observe the type, overconfidence or conservatism, of managers that are classified in the press by journalists. The results indicate that overconfident managers who delay their exercising time are more likely to conduct value-destroying mergers and become more acquisitive than rational managers. Further, the market will react more negatively to the bid announcement of overconfident CEOs classified by the press.

Another similar study by Billett and Qian (2006) show the consistent findings about the negative effect of overconfident managers. The source of hubris is examined by using historical deals conducted by individual CEOs as a proxy for overconfidence. They argue that overconfidence in acquisition has been developed from the past acquisition experience. Moreover, bidders are more likely to repeat this behavior again if their prior acquisitions are successful. These results are consistent with their argument; the subsequent deals exhibit more negative announcement effect than prior deals and the frequent acquirer will experience more negative abnormal returns than the infrequent acquirer.

As opposed to the paper cited above, Aktas et al. (2006) examine whether hubris-infected bidders are able to learn from the mergers. The cumulative abnormal return (CAR) over the announcement period of the CEO's first deal is employed as a proxy for hubris. The lower the value of CAR in the first deal, the more likely the CEO is infected by the hubris. They find that CARs of hubris-infected CEOs increase from deal to deal while the rational CEOs face a declining trend of CAR. Moreover, they find that the time between each deal conducted by hubris-infected bidders is longer than that of rational bidders. According to their findings, they argue that

hubris-infected CEOs learn from the negative feedbacks from the market and become more cautious when they conduct the next deals. On the other hand, the rational CEOs learn from their success in the bidding process and become more aggressive when they conduct the next deals.

To sum up, hubris serves as an explanation for the negative performance following the acquisition in recent research. Different proxies are employed to identify the hubris and the results are mixed. Overall, most of the studies have documented the negative returns by the hubris-infected acquirers. However, some of them argue that the hubris-infected CEO is able to learn from the market's negative reactions, thus resulting in an increasing trend of CAR from deal to deal.

2.4 Sub-Sampling Evidence on Acquirers' Performance

The sub-samples of bidding firms are created to explain various evidence of acquirers' performance. Hence, this section summarizes different findings among deal characteristics from previous studies and also provides the connection between deal characteristics and the hubris hypothesis.

2.4.1 Methods of Payment

In terms of the method of payment, there are three common payment methods which include cash, stocks, and the combination between cash and stocks. The implications behind them are widely investigated by financial researchers.

Hansen (1987) argues that bidders should offer their stocks to target firms since stock offering has a contingent-pricing characteristic. It means if the target firms

accept the stock offering deal, they will get involved in the profit from the acquisition or the future performance of the combined firm. Thus, it can imply that target firms believe in their firms' superior value when they accept the stocks offering deal. On the other hand, using stock offering can signal that the acquirers' stocks are overvalued in the market. In other words, if bidders believe that their stocks are overvalued at the moment, they will use stocks as a medium of exchange in acquisition instead of cash offering. (Myers and Majluf, 1984).

Fishman (1989), in contrast, advocates for cash offering since it offers the advantage under the competitive environment. He argues that cash offering is made to signal the high valuation of target and the high expected payoff from the acquisition in bidders' point of view. Therefore, under the competitive environment, the high cash offering from bidders could deter other potential bidders out of the bidding competition and could increase the probability that the target firm will accept the deal.

Loughran and Vijh (1997) examine the abnormal returns following the acquisition in the US. They find that, on average, bidders' long-run performance will be negative in the mergers where the stock-financing is used. In contrast, acquirers earn positive abnormal returns in tender offers with cash-financing acquisition. The result is consistent with the argument that firms tend to use stocks when they believe that their stocks are overvalued and use cash when their stocks are undervalued. Thus, bidders' long-run performance will be negative in the stock-financing acquisition and will be positive in the cash-financing acquisition.

Another common method, mixed offering, is by far most popularly used in the UK and accounts for 62% of cases (Sudarsanam and Mahate, 2003). Additionally, British acquirers generally give an option for their targets to choose between cash and stock when using a mixed payment (Draper and Paudyal, 1999). The evidence from Draper and Paudyal (1999) shows that stock prices of bidding firms over the announcement period decrease most when targets' shareholders are given an option to choose between cash and shares.

With respect to hubris hypothesis, the method of payment used by bidders can signal bidders' overconfidence. Fishman (1989), for instance, argues that cash offering signals that bidders view the acquisition as the value-creating investment and are confident about value generated from such acquisition. Hence, this point of view is a potential sign of acquirers' overconfidence. Similarly, according to Draper and Paudyal (1999), acquirers who offer the target to choose the combination between cash and stocks, the mixed payment, provide the possibility of acquirers' overconfidence and seem to relate to such characteristic more than the fixed payment.

2.4.2 Relatedness of Acquisition

The extent to which corporate diversification creates value for shareholders is still a controversial issue in the corporate finance research. However, the diversification motive under merger and acquisition activities seems to destroy rather than creating value due to substantial evidence of bidders' negative abnormal returns from the event study (see Martin and Sayrak, 2003).

In a similar study, Morck et al. (1990) examine the effect of relatedness of acquisition on the bidders' performance. They employ the 4-digit SIC code to classify the relation of bidders and the target. If their main businesses share the same 4-digit SIC code, they are related acquisition. Otherwise, they are called unrelated acquisition. The evidence shows that bidders whose main businesses are unrelated with their target will experience negative abnormal returns. According to their findings, they argue that their managerial objectives for diversification (reducing their employment risks or trying to enter into the business they might be better) cause the poor performance.

In general, poor performance following the diversification is usually linked with the managerial objectives. However, besides pursuing managers' personal objectives, the diversification characteristics can imply their overconfident aspect. Specifically, diversifying the firm into different business sectors generally requires a large amount of knowledge and company's resources. Thus, overconfident acquirers are expected to acquire the business different from their field of expertise more than those who are rational. This expectation is inconsistent with previous studies focusing on the effect of managers' personal interest, i.e. Morck et al. (1990), since the managers in the context of hubris want to maximize shareholders' wealth but they overestimate their management abilities, resulting in poor investment decision.

2.4.3 Target Status

Although most of prior studies on bidder's performance focus on the acquisitions of the listed targets, the vast majority of the acquisitions still include the unlisted companies. Recent research has begun to focus on the effect of target status on the bidder's wealth. Chang (1998) investigates the announcement returns of US bidders whose targets are unlisted companies. He proposes a monitoring hypothesis that the private company is usually owned by a small group of shareholders. If bidding firms offer their stocks for targets, the outside blockholders will simply occur. Then, these blockholders are expected to serve as a monitoring tool of managerial performance. Moreover, he also posits the information hypothesis that the negative effect of stock offers are mitigated when firms have a small number of shareholders. Specifically, a small group of owners will hold a large amount of acquirer's stocks at last so they have to evaluate the bidding firms' prospect carefully. This can imply that their willingness to hold bidders' stocks will signal the favorable information to the market. The current evidence supports both hypotheses. Over the announcement period, bidding firms who acquire the unlisted target experience positive abnormal returns in stock offering. On the other hand, bidders who acquire the listed target with stock offering experience negative abnormal returns.

In another related study, Ang and Kohers (2001) point out the distinct characteristics of the unlisted target that a concentrated ownership is usually found in privately held companies due to a small number of owners. Thus, ownership concentration can lead to low agency conflicts and cement aligned interests within these firms. Accordingly, the strong bargaining power of target firms is implied when dealing with potential bidders. The private targets will have an option to wait and

choose the highest bidding offer since the highest offer is expected to contribute a large contribution to the firm. Furthermore, around the waiting period, unlisted targets do not suffer from the pressure of outside investors who may want to sell at that moment. The findings in both short-run and long-run periods are consistent with the argument. It is evident that the acquisition of the unlisted target yields positive abnormal returns for bidding firms.

Faccio et al. (2006) investigates the announcement period's abnormal returns of European acquirers of the listed and unlisted targets. Their results are consistent with prior studies that the acquirers in European countries who acquire unlisted targets earn positive abnormal returns while those who acquire the listed targets earn negative abnormal returns. Consistently, the supporting evidence of the effect of listed and unlisted targets on bidders' performance in the UK and European countries is also provided by Draper and Paudyal (2006).

With respect to the hubris hypothesis, since the size of listed company is typically larger than that of unlisted company, the acquisition of public firm tends to be more complicated than the private firm. Moreover, bidding process of listed company is typically more open and leads to higher competition. The managers who acquire the listed target, therefore, are more likely to be affected by the hubris and the poor acquisition could simply occur.

2.4.4 Acquirer's Past Performance

As mentioned earlier, according to the performance extrapolation hypothesis of Rau and Vermaelen (1998), the book-to-market ratio is used as an indicator for pre-bidding financial status of the acquiring firms. They find that, in the US, acquirers with good past performance, i.e. low book-to-market ratio, will experience negative long-run abnormal returns for both cash and stock offering while those with poor track record, i.e. high book-to-market ratio, will exhibit a positive post-acquisition performance.

Interestingly, Sudarsanam and Mahate (2003) report the opposite evidence in the United Kingdom acquisition. They find that the stock market in the UK does not suffer from an overextrapolation of pre-merger financial status. Both glamour and value bidders will experience negative abnormal returns over the announcement period. However, their long-run evidence is consistent with Rau and Vermaelen (1998) that the value acquirers will outperform the glamour acquirers.

Apart from the market valuation, Morck et al. (1990) study the relationship between bidders' past performance and their returns following the acquisitions in the United States. Instead of using book-to-market ratio, bidders' past performance is compared with the industry average. They predict that managers with poor past performance are more likely to make a value-destroying acquisition and experience a negative performance from the acquisition. The evidence from the study supports their arguments. Over the announcement period, bidders who underperform the industry average will experience negative abnormal returns while those who outperform the market will experience the positive returns.

Again, the above study by Morck et al. (1990) provides the different explanation for poor performance from the hubris hypothesis of Roll (1986). They argue that the poor-performance managers have the incentive to find new business at which they might be better. Then, the acquisitions by those managers should end up with negative performance rather than being value-creating decision. In contrast, Roll predicts that poor acquisitions are conducted by the well-performing managers who are infected by hubris. Moreover, the research of Morck et al. (1990) is focused only on the announcement period while the ultimate wealth effect should be investigated in both short- and long-run period.

2.5 Summary

This chapter demonstrates the research examining the acquirers' performance following the acquisition and the explanation for such outcome. A number of studies allege that the acquiring firms typically experience the negative abnormal returns in both the announcement and the post-acquisition periods. The plausible explanations for the negative performance normally come from the bad managerial objectives such as the agency problem about payout policy, empire-building, and the management entrenchment.

Another explanation is the managerial overconfidence which is the idea that merger and acquisition activities may be driven by the overconfidence of acquiring firms' manager about their management abilities to generate value from the acquisition. Several proxies for managerial overconfidence have been employed in the existing literature, and the findings from such research show that the overconfident bidders experience the negative performance following the acquisition. However,

most of them focus only on the announcement period while, to the extent that there is the possibility of information incompleteness around the bid announcement, the long-run performance should be investigated. With respect to the hubris hypothesis, the negative abnormal returns in both short-run and long-run periods are expected for the overconfident acquirers. Moreover, the implications of hubris are also discussed through various deal characteristics. For instance, in the context of target status, the overconfident acquirer may offer the deal to the listed target while the non-overconfident acquirer may refrain from such target but offer the deal to the unlisted target.

Consequently, the evidence summarized in this chapter leads to the research gap, which is the lack of long-run investigation in order to find the ultimate wealth effect of acquirers' overconfidence. Furthermore, using the new proxy to identify the overconfident aspect is another possible area of extension since several proxies for overconfidence are employed in the existing literature.

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CHAPTER III

DATA AND METHODOLOGY

3.1 Data

The sample includes successful acquisitions announced between January 1995 and December 2000. Both acquirers and targets are domiciled in the UK. The information of acquisition including the announcement date, the target status, the method of payment and the target's Standard Industrial Classification (SIC) code is obtained from the Securities Data Corporation (SDC).¹ In addition, the sample is also required to meet the following criteria;

- The acquisition is defined as one in which the acquirer owned none of the target's shares before the acquisition regardless of its ownership after the acquisition.
- The deal value is equal to or greater than £1 million.
- The target firms are the listed or unlisted companies while the acquirers are the listed companies in the UK stock exchange (LSE, AIM, USM or London Tech).
- The acquirer's stock returns and other required variables such as an analysts' forecast data, the price-to-earnings ratio, and the market-to-book ratio must be available over the investigating period.

The daily and monthly total return index, the market index, the market-to-book ratio (MTBV), the price-to-earnings ratio (PE), the market value of equity, and the three-month treasury bill rate are retrieved from the DataStream database.

¹ The SDC data is kindly provided by Dr. Manapol Ekkayokkaya.

Furthermore, the analyst forecast errors which are decomposed into the mean of forecasted earnings per share and the actual earnings per share are drawn from the Institutional Brokers Estimate System (I/B/E/S) database.

In terms of the method of payment, the sample is divided into three categories based on the form of payment. First, cash payment is the case where only cash is used. Second, stock payment is the case where only bidders' common stocks are used. Third, mixed payment is a combination between cash and bidders' stocks.

As mentioned earlier, acquirers' MTBV and PE are drawn from the Datastream database. This thesis classifies a sample into glamour or value stocks based on their MTBV and PE three months before the bid announcement month. The sample is equally divided into three groups based on their high, medium, and low value. Firms with high MTBV and PE are classified as glamour acquirers and those with low MTBV and PE are classified as value acquirers.

For the relatedness of acquisition, if the bidder and the target share the same first 2-digit SIC codes, they are called related acquisition. Otherwise, they are called unrelated acquisition.

3.2 Theoretical Hypothesis

Since the overconfidence effects examined in this thesis are expected to be various among deal characteristics, the theoretical hypotheses, therefore, are divided into five groups as follows.

3.2.1 Hypothesis 1: The Effect of Overconfidence on the Abnormal Returns over the Announcement Period.

Consistent with the hubris hypothesis, the market should react negatively to the bid announcement of overconfident bidders. Thus, it can be hypothesized that: over the announcement period, the overconfident acquirers will experience negative performance whilst the non-overconfident will earn the positive abnormal returns.

3.2.2 Hypothesis 2: The Overconfidence Effect on the Post-Acquisition Abnormal Returns.

Since the acquisitions are motivated by the hubris, it should destroy the shareholder value rather than creating one. This thesis expects that the overconfidence will ultimately lead to the deterioration of shareholder's wealth following the acquisition. Thus, it leads to the second hypothesis that: the overconfident bidder will exhibit negative post-acquisition performance while the non-overconfidence will gain from the acquisition.

3.2.3 Hypothesis 3: The Performance of Overconfident Bidders by Target Status and Payment Method.

One difference between the acquisition of listed and unlisted target is the competition environment that is typically found when the targets are listed companies. Therefore, the competition among the potential bidders can caused the manager of those acquiring firms to be affected by the hubris. Specifically, the managers of acquiring firms are easily to get distracted from their willingness to win and resulting in the poor investment decision.

Furthermore, if managers are overconfident about the value generated from acquisition, they should give those publicly targets an option to receive between cash and equity, mixed payment, as a payment method. Hence, the negative performance is expected for overconfident bidders who acquire the listed target through mixed payment. As a result, it can be hypothesized that: among the overconfident acquirers, those whose targets are listed companies and are given the option to receive between cash and stock, mixed payment, will exhibit the most negative post-acquisition performance.

3.2.4 Hypothesis 4: The Performance of Overconfident Bidders between Related and Unrelated Acquisitions.

Entering into the new business line requires a large amount of knowledge and company's resources. Thus, the overconfident acquirers who have a superior performance record, beating market's expectation, tend to be optimistic about their management ability and they are more likely to acquire business that different from their field of expertise than those who are conservative. Then, it can be hypothesized that: among the overconfident acquirers, those whose main lines of business are different from their target firms will exhibit more negative long-run performance than those who acquire the targets operated in their industries.

3.2.5 Hypothesis 5: The Abnormal Returns between Glamour and Value Acquirers.

The acquirers' performance is examined through price-to-earnings and market-to-book ratios in order to ensure that the negative abnormal returns are originated from the overconfident effect not the market extrapolation to bidders' performance.² Then, the last hypothesis is that: among the overconfident acquirers, the negative post-acquisition performance should be found in both the glamour and the value firms.

3.3 Methodology

The main objective of this thesis is to examine the effect of bidder's overconfidence on the shareholder's wealth by using the analysts' forecast error as a proxy for overconfidence. Therefore, the methodology can be separated into three main parts which are the identification of overconfidence, the measurement of acquirer's abnormal return, and the robustness test.

3.3.1 The Identification of Overconfident Bidders

As mentioned earlier, the analysts' forecast error is required to identify the overconfident bidder. The analysts' forecast has been widely used in empirical research as an appropriate proxy for investor's earning expectation (La Porta, 1996; Doukas et al., 2002). Whilst there is the literature questioning the rationale of the analysts' forecast, many studies also argue that the unbiasedness of analyst cannot be rejected (Keane and Runkle, 1998; Lim, 2005). As indicated in those studies, the accuracy of their forecast is necessary for analysts' career. Thus, analysts must seek to

² See chapter 2 section 2.4.4.

minimize their forecast errors and, then, their forecasts could be reasonably viewed as the rational expectation. Similarly, Barber et al. (2001) provide the supporting evidence of the importance of analysts' opinion on investors' investment strategy. In particular, they find that if investors buy stocks with the most favorable consensus recommendation, they will earn greater profit than buying the least favorable stocks. Therefore, the evidence from the research cited above supports the rationality of analysts' expectation and the appropriateness of employing analysts' data as a proxy for market expectation.

In this research, bidders whose actual performance beats the analysts' forecast, having negative forecast error, are classified as overconfident acquirers. In calculation, the analysts' forecast error is defined as the difference between the mean one-year-ahead earning per share (EPS) forecast and the actual EPS as in equation (1).³

$$FE = EPS_F - EPS_A \quad (1)$$

Where EPS_F is the most recent mean EPS forecast for earnings reported preceding the bid announcement. In particular, the mean EPS forecast is the forecast made two months prior to the fiscal year of financial statement. The timing of this forecast is chosen to ensure the accuracy of forecasts since the market is aware of the first three quarters' performance (Doukas et al., 2002). EPS_A is the latest actual EPS that reported prior the bid announcement.

³ Alternatively, the forecast error could be calculated in the percentage term. However, for the purpose in this thesis, both methods give the same result.

The forecast error, however, could plausibly be affected by the analysts' optimism in each period; therefore, it is adjusted by the mean forecast error of the market in the same fiscal year-end of the company as in equation (2).

$$FE_{adj} = FE - \overline{FE} \quad (2)$$

Where FE is the forecast error derived from equation (1). \overline{FE} is the mean of forecast error calculated from all companies in the market.⁴ Moreover, the mean forecast error is corresponding to the fiscal year of the earnings reported preceding the bid announcement. For instance, FE of the firm whose latest EPS is reported in 1995 is compared with \overline{FE} of 1995. Then, the managers with negative forecast error even after adjusted by \overline{FE} are classified as those who beat the analysts' forecast.

3.3.2 The Measurement of Abnormal Returns

The event study is adopted to measure the importance of corporate event by examining the change in stock price during the period in which the corporate event occurs. Then, the direction and magnitude of abnormal performance at the event will exhibit the impact of such corporate event on the shareholders' wealth. To examine the hypothesis mentioned in section 3.2, the acquirers' abnormal returns in this thesis are measured during both announcement and post-acquisition period as follows.

⁴ Also note that, the difference in number of shares for each firm may lead to an inappropriate calculation of FE_{adj} in the equation (2) since FE and mean FE cannot be directly compared. To overcome this shortfall, the analysts' forecast error for each stock is standardized by its price (P) and the mean FE , then, is calculated as follows.

$$\overline{FE} = \frac{\sum_{i=1}^n \left(\frac{FE}{P} \right)_i}{n}$$

However, the proportion of the overconfident and non-overconfident bidders after adjusting by this method is approximately the same as the equation (2).

3.3.2.1 Announcement-Period Abnormal Returns

In this thesis, the announcement period's excess returns are examined over the five-day window surrounding the bid announcement (two days before and after the announcement date).

In general, most of event studies estimate the abnormal returns by following standard event study methods of Brown and Warner (1985). In contrast, the excess returns measurement in this thesis is based on the Jensen's alpha approach implemented in recent research by Draper and Paudyal (2006). This method is superior to the market model approach from Brown and Warner (1985) since it does not require a long-period data prior to the event date in order to estimate the risk factor which is not contaminated by the effect of other events.⁵ Specifically, when the bidder involves with a takeover more than once, conducting the multiple acquisitions, during an investigation period, the availability of the *ex ante* data required from the market model to estimate uncontaminated risk parameters will decrease. On the other hand, the Jensen's Alpha approach alleviates this problem since it does not require an estimation period while the abnormal return, the value of alpha, is estimated by using the cross-sectional regression. Therefore, the dependent variable ($R_i - R_f$) is regressed on the capital asset pricing model (CAPM) as in equation (3).

$$(R_i - R_f) = \alpha + \beta(R_m - R_f) + \varepsilon_i \quad (3)$$

⁵ In Brown and Warner (1985), the abnormal return from the market model is calculated by choosing a clean estimation period prior the event date. Then, $\hat{\alpha}_i$ and $\hat{\beta}_i$ are retrieved from the regression running over this estimation period ($R_{i,t} = \alpha_i + \beta_i R_{m,t} + \varepsilon_{it}$). Thus, the abnormal return ($A_{i,t}$) is estimated by subtracting the returns over the event window ($R_{i,t}$) by the expected return ($\hat{R}_{i,t} = \hat{\alpha}_i + \hat{\beta}_i R_{m,t}$) forming by $\hat{\alpha}_i$ and $\hat{\beta}_i$ in the estimation period as in equation (4):

$$A_{i,t} = R_{i,t} - \hat{\alpha}_i - \hat{\beta}_i R_{m,t} \quad (4)$$

Where R_i is the buy-and-hold return to bidder i during five days surrounding the announcement date. R_f and R_m are the three-month treasury bill rate and the return on value weighted market portfolio during the five-day holding period, respectively. The intercept, α , is the excess return generated during the bid announcement. Additionally, the standard errors from regression are corrected for the heteroscedasticity problem by using the Newey-West adjustment procedure.

3.3.2.2 Post-Acquisition Period Abnormal Returns

As opposed to the short-run, the long-run event study generally raises more concerns to the models and approaches used to estimate the abnormal returns. Therefore, the measurement methodology for long-horizon abnormal returns must be selected carefully.

In this thesis, the windows for the long-horizon event study are 12, 24 and 36 months after the acquisition. The calculation of long-horizon abnormal returns is based on the calendar time portfolio approach suggested by Mitchell and Stafford (2000) together with the three-factor model (Fama and French, 1993). Specifically, an event portfolio is constructed in each calendar month over the entire investigation period. Additionally, the event portfolio is rebalanced every month in order to add firms that recently execute an acquisition transaction and to drop firms that reach the end of their investigation period. Then, the event portfolios are regressed on the three-factor model to find the average monthly abnormal return which is the intercept of the regression (the alpha). The advantage of this methodology will be discussed by separating into two main points; the model and the method to measure abnormal returns, as follows.

In the context of return generating process, the recent models used for long-horizon event study have become more sophisticated and seem to be developed in parallel with the asset pricing literature. However, although the model has been improved, its limitations are still problematic. Fama (1998), for instance, argues that the bad-model problem is more severe in the measurement of long-horizon abnormal returns.⁶ As mentioned earlier, this research employs the three-factor model to analyze the post-acquisition abnormal returns. The implication behind the use of the three-factor model instead of the CAPM is that the long-horizon length is more sensitive to the model than the short-run. Specifically, the daily expected returns over the short-run event window are close to zero. In addition, the short-horizon window provides less impact on the estimation of abnormal returns since the error in calculation is likely to be small. Thus, the announcement period does not require the sophisticated model and the risk adjustment problem over the short window is not serious like the long-run. On the other hand, the power to detect the abnormal performance seems to decrease in the longer period and the total abnormal returns calculated over the long-horizon have a larger impact. Therefore, the model that controls the size and book-to-market factors, the three-factor model, is adopted to capture the long-term risk characteristic of the abnormal returns (Fama and French, 1992, 1993, 1996).

With respect to the abnormal returns measurement, the measurement of long-horizon abnormal return is still a controversial issue among corporate finance studies. Lyon et al. (1999) addresses the potential biases, i.e. new listing, rebalancing, and skewness biases, which lead to the misspecification of long-run test statistic. The

⁶ There are two bad-model problems according to Fama (1998). First, the asset pricing model cannot completely describe the expected returns. Second, the specific pattern of the sample can produce the systematic deviation from the prediction even with the appropriate model.

new listing bias, for instance, occurs because the sample firms are consistent through time while the benchmark portfolio constituting the index generally includes new firms listed after the event month.

Beyond the biases stated above, the cross-sectional dependence problem is another source of the misspecification in the long-horizon event study. In particular, corporate events especially the merger and acquisition activities are clustered through time by the industry. In other words, the mergers come in wave. Moreover, it is possible that those abnormal returns are likely to share the same calendar period due to the long event window. Therefore, these aspects lead to the cross-sectional correlation of abnormal return for each security, resulting in the misspecification of the test statistic. In contrast, the calendar time portfolio approach employed in this thesis can overcome the cross-correlation problem of securities returns. Specifically, the event firms are formed each period into the event portfolio and are regressed by the time series approach. By doing so, there is only one security, the event portfolio, at one particular point in time. Thus, it results in one abnormal return instead of multiple abnormal returns and the cross-sectional problem is resolved. Consequently, the event portfolio returns are calculated (both equal and value weighted) and regressed on the three-factor model as in equation (5).

$$R_{p,t} - R_{f,t} = \alpha_p + \beta_p (R_{m,t} - R_{f,t}) + s_p SMB_t + h_p HML_t + \varepsilon_{p,t} \quad (5)$$

Where $R_{p,t}$ is bidders' portfolio returns in month t . Again, for each calendar month, the event portfolio is rebalanced in order to add firms that recently execute an acquisition transaction and to drop firms that reach the end of their investigation period. $R_{f,t}$ is the three-month treasury bill rate. $R_{m,t}$ is the return of

value-weighted market index. SMB_t is the difference between the returns of value-weighted portfolios of small stocks and big stocks. HML_t is the difference between the returns of value-weighted portfolio of high and low book-to-market stocks. According to the regression analysis, the intercept, α_p , is the average of monthly abnormal return of the event portfolio.

The SMB and HML portfolio formations follow the Fama and French (1993).⁷ In particular, at the end of June every year t , all stocks are ranked based on the market value of equity and breakpoints at the 50th percentiles of equity market value. Therefore, the stocks are classified into two groups of small and big sizes. Next, the stocks are also ranked based on their book-to-market ratio at the end of December in year $t-1$ and categorized into three groups with 30th and 70th percentiles. As a result, there are three book-to-market groups which are low, medium, and high. Then, the six portfolios (S/L, S/M, S/H, B/L, B/M and B/H) are constructed from the intersection of the two groups of equity market value and the three groups of market-to-book ratio. The value-weighted monthly returns of the six portfolios are calculated during the 12-month period from July of year t to June of year $t+1$. Then, the portfolios are reformed in June of year $t+1$. Consequently, the SMB is the simple average of returns of the three small portfolios (S/L, S/M and S/H) minus the simple average of returns of the three big portfolios (B/L, B/M and B/H). The HML is the simple average of returns of the two high-BM portfolios (S/H and B/H) minus the simple average of returns of the two low-BM portfolios (S/L and B/L).

⁷ The SMB and HML data are kindly provided by Professor Krishna Paudyal.

Similar to the regression for an announcement period, the standard errors are corrected for the heteroscedasticity problem by using the Newey-West adjustment procedure.⁸

3.3.2.3 The Differences in Abnormal Returns

For the comparison purpose, the dummy variables are introduced into the regression in order to measure the differences of the abnormal returns among deal characteristics. Specifically, all observations are pooled together into one regression and then differences between two pairs of abnormal returns from such regression can be tested by using the Wald test (Ekkayokkaya, 2007). The short-run abnormal returns measurement in equation (3) and the long-run abnormal returns measurement in equation (5), therefore, are modified by adding the dummy variables as in equation (6) and (7).

For the announcement period;

$$R_i - R_f = \sum_{j=1}^m [d_j \cdot D_{i,j}] + \beta(R_m - R_f) + \sum_{j=2}^m [\beta_j(R_m - R_f) \cdot D_{i,j}] + \varepsilon_i \quad (6)$$

Where R_i is the buy-and-hold returns to bidder i during an event period. R_f is the three-month treasury bill rate. R_m is the return of value-weighted market portfolio during the event period of each bidder. $D_{i,j}$ is the dummy variable which is equal to 1 if the acquirer belongs to the j^{th} portfolio, and 0 otherwise. In addition, m is the number of acquirers' portfolios. According to the regression

⁸ The error term in the regression may subject to the heteroscedasticity problem due to the different numbers of securities in each event portfolio. However, Lyon (1999) argues that this problem does not severe in the random sample.

analysis, the coefficient, d_j , is the buy-and-hold abnormal returns of the portfolio of acquirers j during five days surrounding the announcement period.

For post-acquisition period;

$$\begin{aligned}
 R_{p,t} - R_{f,t} = & \sum_{j=1}^m [d_{p,j} \cdot D_{pt,j}] + \beta_p (R_{m,t} - R_{f,t}) + s_p SMB_t + h_p HML_t + \\
 & \sum_{j=2}^m [\beta_{p,j} ((R_{m,t} - R_{f,t}) \cdot D_{pt,j}) + s_{p,j} (SMB_t \cdot D_{pt,j}) + \\
 & h_{p,j} (HML_t \cdot D_{pt,j})] + \varepsilon_{pt}
 \end{aligned} \tag{7}$$

Where $R_{p,t}$ is the bidders' portfolio returns in month t . $R_{f,t}$ is the three-month treasury bill rate. $R_{m,t}$ is the return of value-weighted market index. SMB_t is the difference between the returns of value-weighted portfolios of small and big stocks. HML_t is the difference between the returns of value-weighted portfolio of high and low book-to-market stocks. $D_{pt,j}$ is the dummy variable which is equal to 1 if the acquirer belongs to the j^{th} portfolio, and 0 otherwise. In addition, m is the number of acquirers' portfolios. According to the regression analysis, the coefficient, $d_{p,j}$, is the average monthly abnormal returns of the portfolio of the acquirers j .

Once the abnormal returns are estimated from the regression (6) and (7), the differences between two pairs of abnormal returns, d_j s for equation (6) and $d_{p,j}$ s for equation (7), can be tested by using the Wald test.

3.3.3 The Robustness Test

This thesis addresses the robustness by restricting the sample to overcome the outdated information problem and adding more criteria to construct the new overconfident measurement. For the first test, the sample is restricted to into the deals that are announced within six months from the financial statement report date in order to alleviate the outdated information problem. Next, the new criterion is added into the sample in order to capture more overconfident characteristic. The details for both tests are presented as follows.

3.3.3.1 Merger and Acquisition Deals Made Within Six Months from the Earnings Report Date.

Since the bid announcement date and the earnings report date may differ significantly, it is possible that the information of bidders' performance for both acquirers and investors is outdated or contaminated by other events. As a result, the feedback on acquirers' performance may not affect their investment decisions.

To overcome such problem, this test limits the sample to include only the deals that are announced within six months from the earnings report date. By doing so, the more restricted sample will ensure that the bid announcement do not take place too far from the balance sheet date and the managers' decisions still influenced by the feedback from market. Similar to the previous expectations, the negative abnormal returns over the short-run and the long-run periods are expected for the overconfident acquirers. Moreover, after limiting the sample, the acquirers' performance is estimated by the same methodology as section 3.3.2.

3.3.3.2 The Consistency of Analysts' Opinion

To distinguish overconfident and non-overconfident bidders from a whole sample, the overall sample is restricted into extreme cases by taking the consistency of analysts' opinion into account. Specifically, the new criterion, the consensus stock recommendation, is added to identify extreme overconfident and non-overconfident characteristics. Therefore, there are only two groups of bidders who receive the consistent opinion from the analysts. In particular, the sample includes those who have negative forecast errors with the upward revision for stock recommendation and those who have positive forecast errors with the downward revision. The first group of bidders whose performance is superior to the market expectation, negative forecast error, and receive an upward revision for stock recommendation are classified as overconfident bidders. Otherwise, they are classified as non-overconfident bidders.

According to this test, the positive feedbacks to the acquiring firms' managers about their management abilities are stronger. Thus, the identification of overconfident aspect is more robust. Again, this test expects the negative performance during the bid announcement and the long-horizon periods for the overconfident acquirers. With respect to the abnormal returns measurement, the excess returns of overconfident and non-overconfident acquirers are estimated by the same methodology as section 3.3.2.

CHAPTER IV

RESULTS

To examine whether the underperformance is attributable to managers' overconfidence, this thesis attempts to investigate the direction and magnitude of the abnormal returns of overconfident acquirers around the announcement and the post-acquisition periods. The new proxy namely the analysts' forecast error is employed to identify the overconfident aspect. This chapter consists of three main findings described as follows. Section 4.1 presents the descriptive statistic of the sample. The comparison between the performance of overconfident and non-overconfident bidders is reported in section 4.2.⁹ The last section exhibits the results from the robustness test.

4.1 The Descriptive Statistic

Table 1 provides the descriptive statistic for merger and acquisition deals in the sample. The average number is 220 deals per year (panel A). The data shows that, on average, most of the deals (84.19%) are conducted by the acquirers whose performance is superior to the market expectation - the negative forecast error. On the other hand, only 15.81% of total deals are executed by bidders who earn positive forecast errors. Not surprisingly, this considerable number of negative forecast errors is consistent with the argument that the acquiring firms tend to be large and successful companies. Thus, the acquirers whose actual performance is excellent and greater than the market expectation represent the vast majority of the sample.

⁹ The long-horizon abnormal returns presented in this thesis are the value-weighted returns since the long-term anomalies normally get smaller or even disappear in this approach (Fama, 1998). On the other hand, the equal-weighted returns are given in the appendices and will be discussed only when the findings are different from the value-weighted approach.

Similar to panel A, the number of overconfident bidders (1113) identified by negative forecast errors in panel B is five times larger than that of the non-overconfident bidders (206). Consistently, the average deal value of overconfident acquirers (133.34) is 1.66 times larger than that of non-overconfident acquirers (80.41). Moreover, the difference of deal values (£53 millions) between two types of bidding firms is economically significant since the amount is almost 50% of the sample average (125.08). On the other hand, the market values for both types of bidder are marginally different and inconsistent with the expectation. The average size of overconfident bidders which is expected to be greater is less than the other group by £8 millions. The evidence from the market value, however, is possibly caused by multiple acquisitions included in the investigation. In particular, each acquisition in this thesis is considered isolated from other deals in the sample although they are executed by the same acquirer. Therefore, the high amount of average market value may come from a few large bidding firms who make multiple acquisitions.

In terms of deal characteristics, the characteristics between two types of acquirers are identical when focusing on payment methods, the target status, and the relatedness of acquisition. For instance, the proportions of payment methods for both groups are about the same which are 81% for all cash deals, 7% for all stock deals, and 12% for mixed payment. This pattern also exists in the target status and the relatedness of acquisition. On the other hand, the proportions of glamour (high MTBV and PE) and value (low MTBV and PE) bidders reveal some distinct characteristics. Specifically, among overconfident acquirers, the glamour firms represent the vast majority of the group (60% of high PE). In contrast, the value firms are more common in the non-overconfident acquirers (60% of low PE and 70% of low MTBV).

To sum up, the overall sample is dominated by the overconfident bidders which contribute to 84% of the sample. Mostly, there is no distinct deal characteristic for both types of bidders. However, with respect to the acquirers' past performance, the glamour firms are commonly found in the overconfident acquirers whilst the value firms are found in the non-overconfident group.



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Table 1 The descriptive statistic for merger and acquisition deals of the United Kingdom acquirers announced between January 1995 and December 2000.

Panel A presents the number of deals classified by the analysts' forecast error (FE) of the acquiring firms. FE is defined as the difference between the mean forecast of earning per share (EPS) and the actual EPS. Therefore, the negative FE represents the deals made by acquirers who have superior performance to market expectation. Otherwise, they are classified as the positive FE.

Panel B reports the comparisons of deal characteristics between the acquisitions of overconfident and non-overconfident acquirers. Cash includes the acquisitions that are offered only with cash. Stock includes the acquisitions that are offered only with stock. Mixed payment consists of both cash and stocks with the option for target to choose the combination between these two types of payment. Listed target involves deals that the targets are listed companies in the UK stock exchange while unlisted target is the deals that acquired firms are unlisted companies. Related acquisition includes deals that acquirer and target share the same first 2 digits of SIC code while unrelated acquisition deals are otherwise. MV is bidders' market value of the month before bid announced month, MTBV represents bidders' market-to-book ratio, and PE is bidders' price-to-earnings ratio.

Panel A: The number of deals classified by forecast error (FE)

Year	Number of deals	Negative FE (%)	Positive FE (%)
1995	132	90.91	9.09
1996	149	77.85	22.15
1997	221	81.90	18.10
1998	296	92.57	7.43
1999	270	81.85	18.15
2000	251	80.08	19.92
Average	220	84.19	15.81

Panel B: The comparative descriptive statistic for the overconfident and non-overconfident acquirers

	All sample	The acquisition of	
		Overconfident acquirers	Non-overconfident acquirers
Sample size	1319	1113	206
Mean of deal value (£ million)	125.08	133.34	80.41
Mean of MV (£ million)		1278	1286
Mean of FE (£)		-2.56	4.32
% of cash	81.20	81.22	81.07
% of stock	6.60	6.47	7.28
% of mixed	12.21	12.31	11.65
% of Listed target	11.90	12.31	9.71
% of Unlisted target	88.10	87.69	90.29

% of related acquisition	48.98	50.22	42.23
% of unrelated acquisition	51.02	49.78	57.77
Mean of MTBV		4.24	2.82
% of High MTBV	44.03	46.79	28.24
% of Low MTBV	55.97	53.21	71.76
Mean of PE		22.29	18.39
% of High PE	56.83	60.18	40.85
% of Low PE	43.17	39.82	59.15



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4.2 The Effect of Managerial Overconfidence on Acquirers' Performance.

In this section, the comparisons between the performance of overconfident and non-overconfident acquirers are provided. The empirical results including both short-run and long-run performance and the effects of managers' overconfidence on the shareholders' wealth are investigated through various deal characteristics as follows.

4.2.1 The Overall Performance over the Announcement and Post - Acquisition Periods.

Table 2 presents the overall performance of the acquiring firms following the acquisition. Panel A exhibits the acquirers' performance during the bid announcement. The evidence indicates that the merger and acquisition activities are the positive investment projects for the shareholders due to the positive excess return (0.82%) during the bid announcement. Similarly, the post-acquisition performance in panel B exhibits the statistically significant gains to bidding firms equal to 0.51%, 0.40%, and 0.59% per month in 1, 2, and 3 years following the acquisition, respectively. The overall performance, therefore, is inconsistent with the previous studies of merger and acquisition that usually exhibit the negative post-acquisition performance for the acquiring firms.

When focusing on the overconfident aspect, there are two patterns found over the announcement period (panel A). The overconfident acquirers also experience gain (0.86%) like the overall sample whilst the non-overconfident bidders earn a break-even during the bid announcement. Additionally, the difference of the abnormal returns between two types of acquirer is statistically insignificant. Hence, the short-run finding is inconsistent with the research expectation that the overconfident

acquirers should experience the negative abnormal returns and non-overconfident should gain from the acquisition. On the other hand, the evidence in short-run seems to be in line with the prior study from Morck et al. (1990). The research examines the relationship between bidders' past performance and returns following the acquisitions by using an industry average as a proxy for bidders' performance. The evidence from Morck et al. (1990) indicates that poor performance bidders who underperform the industry average will experience negative abnormal returns while those who outperform their peers will receive positive returns.

The post-acquisition performance in panel B, in contrast, exhibits gains to the acquiring firms regardless of the overconfident feature. Specifically, both types of acquiring firms exhibit statistically significant gains equal to 0.45% and 0.74% per month in 1 year and 0.55% and 0.63% per month in 3 years following the announcement date. Moreover, the differences of abnormal returns between the overconfident and the non-overconfident acquirers are statistically insignificant like the short-run. Hence, similar to those of the announcement period, the long-term findings are inconsistent with the research hypothesis in that overconfident acquirers should experience the losses in the post-acquisition period. Likewise, the results also differ from most of the existing literature relating to the hubris hypothesis. For instance, Rau and Vermaelen (1998) find the negative performance for glamour acquirers who are considered as the hubris infected whilst this thesis discovers the positive excess returns for the overconfident acquirers.

In conclusion, dissimilar to the existing literature, this thesis exhibits the evidence favorable to the merger and acquisition activities as such activities generate the positive excess returns to the acquiring firms in both announcement and long-horizon periods. Moreover, with respect to the hubris hypothesis (Roll, 1986) predicting the negative abnormal returns for the irrational acquirers who are overconfident about their abilities to create value from the acquisitions, the results from this thesis are different from such prediction. Taken together, both short-run and long-run findings show that the well-performing acquirers who beat market's expectation and tend to be infected by hubris experience the positive performance in both investigation periods. As a result, to the extent that the negative forecast error reflects the overconfidence of managers, the data indicates that the acquirers are rational, not overconfident, when conducting the merger and acquisition activities.



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Table 2 The acquirers' performance (value-weighted) over the announcement and the post-acquisition periods.

This table exhibits bidding firms' performance following acquisition on both announcement and post-acquisition periods. The sample is divided into three groups; all, overconfident, and non-overconfident bidders. To identify the overconfident aspect, bidders whose actual performance beats the analysts' forecast, the negative forecast error, are classified as overconfident acquirers.

Panel A presents the acquirers' performance over five days surrounding bid announcement. The buy-and-hold abnormal returns (%) are calculated in the Jensen's alpha approach. The five-day buy-and-hold returns are regressed on risk factor of the CAPM model as in equation (1).

$$(R_i - R_f) = \alpha + \beta (R_m - R_f) + \varepsilon_i \quad (1)$$

Where R_i is the buy-and-hold returns to bidder i during t days surrounding the announcement date. R_f and R_m are the three-month treasury bills rate and the return on value weight market portfolio during the t days holding period respectively. The intercept, α , is the excess return generated from the bid announcement.

Panel B presents bidders' post-acquisition performance 12, 24, 36 months following bid announcement, respectively. The event portfolio returns are regressed on the three-factor model as in equation (2).

$$R_{p,t} - R_{f,t} = \alpha_p + \beta_p (R_{m,t} - R_{f,t}) + s_p SMB_t + h_p HML_t + \varepsilon_{p,t} \quad (2)$$

Where $R_{p,t}$ is bidders' portfolio returns (value-weighted) in month t . $R_{f,t}$ is the three-month treasury bill rate. $R_{m,t}$ is the return on value-weighted market portfolio. SMB_t is the difference between the return of value-weighted portfolios of small stocks and big stocks. HML_t is the difference between the returns of value-weighted portfolio of high book-to-market stocks and low book-to-market stocks. According to the regression analysis, the intercept, α_p , is the average monthly abnormal return of the event portfolio.

For the comparison purpose, the dummy variables are added to the equation (1) and (2) and, then, using the Wald test to compare the differences among abnormal returns. Moreover, the test statistic is corrected for autocorrelation and heteroscedasticity problems by using the Newey-West adjustment procedure. ^a, ^b, and ^c denote the significance at the 1%, 5%, and 10% levels respectively.

Panel A: Abnormal returns over the announcement period (days)

Periods	All	Overconfidence	Non-overconfidence	Over vs. Non-over
(-2,+2)	0.816 ^a	0.863 ^a	0.635	0.228
<i>n</i>	1319	1113	206	

Panel B: Abnormal returns following acquisition (months)

Periods	All	Overconfidence	Non-overconfidence	Over vs. Non-over
1-12	0.510 ^a	0.453 ^b	0.742 ^c	-0.289
1-24	0.402 ^b	0.419 ^b	0.121	0.298
1-36	0.591 ^a	0.548 ^a	0.628 ^c	-0.080

4.2.2 The Acquirers' Performance by Method of Payment and Target Status.

Table 3 provides the comparison between the excess returns of overconfident and non-overconfident bidders across different payment methods and target statuses. The overall findings are presented in panel A and B. Most findings are in line with evidence from the existing literature. Over the announcement period, the acquirers who acquire unlisted targets with stocks gain equal to 1.63% whilst those who acquire listed targets with stocks suffer loss up to 2.82% (panel A). These findings support the monitoring hypothesis predicting that the acquisition of unlisted targets with stocks offering will generate gain since shareholders of unlisted targets are served as the monitor when they accept the large amount of stocks in the acquisition (Chang, 1998; Draper and Paudyal, 2006)¹⁰. Moreover, the results are also in line with the prior study by Loughran and Vijh (1997).¹¹ Specifically, among listed targets, stock offering is viewed as the overvalued securities when bidders use it as a payment method. It, therefore, ends up with the negative abnormal returns in the long-run. Consistently, the stock offering in this research exhibits the economically loss equal to 0.11% per month in the long-run (3 years). For cash and mixed payments, they are mostly found to generate gains to the acquiring firms especially when the target is the privately held companies.

Panel C and D report the abnormal returns to overconfident bidders. Over the announcement period, the finding is consistent with the research expectation that the overconfident bidders acquiring the listed companies are expected to offer the option to choose between cash and stocks, the mixed payment, for their targets and end up

¹⁰ See chapter II, section 2.4.3.

¹¹ See chapter II, section 2.4.1.

with the worst performance. According to panel C, the overconfident acquirers who offer the mixed payment for the listed targets experience the highest loss up to 2.62%. Consistently, the result in panel D shows that when focusing on the mixed payment, the acquisition of listed targets underperforms the acquisition of unlisted companies equal to 4.23% during the bid announcement.

However, the long-run finding exhibits the opposite result and it does not support the research hypothesis. In particular, among publicly held targets, bidders who use the mixed payment earn the highest gain (0.84% and 1.06% per month) in 2 and 3 years following the acquisition (panel C). Moreover, the findings reveal that post-acquisition gains to the listed companies are not different from those of unlisted companies when using mixed payment (panel D). For the acquisition of unlisted target, the evidence is mixed. Mostly, bidders enjoy significant gains regardless of the medium of exchange.

The performance of non-overconfident acquirers is presented in the panel E and F. The findings are mixed. Mostly, there are no excess returns to this bidder group (both short-run and long-run periods). However, an extraordinary loss from listed targets occurs over the announcement period. Bidders experience a huge loss (12.60%) with the stock offering during the bid announcement. The plausible explanation for this extraordinary outcome is the limitation of sample. Since the listed targets are generally the minority group in merger and acquisition deals, the available data is very limited when sub-sampling into the non-overconfident group which is the minority in this thesis sample. Hence, the significantly negative outcomes only represent the performance of a small group of bidding firms.

To sum up, the findings from table 3 do not support the theoretical hypothesis that, among the overconfident acquirers, the mixed payment for listed target should experience the worst performance. In contrast, there are no differences of abnormal returns between mixed payment and other medium of exchanges when the targets are listed companies (panel C). Moreover, when focusing only the mixed payment, the performance between listed and unlisted targets is not statistically significant from zero (panel D).



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Table 3 The acquirers' performance (value-weighted) by method of payment and target status.

The comparison between excess returns (%) of overconfident and non-overconfident bidders is reported in this table. To identify the overconfident aspect, bidders whose actual performance beats the analysts' forecast, the negative forecast error, are classified as overconfident acquirers. Both short-term and long-term abnormal returns are classified by method of payment and target status. Cash includes acquisitions that are offered only with cash. Stock includes acquisitions that are offered only with stock. Mixed payment consists of both cash and stocks with the option for target to choose the combination between these two types of payment. Listed target involves deals that the targets are listed companies in the UK stock exchange while unlisted targets are the deals that acquired firms are unlisted companies.

Panel A and B exhibit the abnormal returns (%) to all acquirers, panel C and D report the abnormal returns to the overconfident bidders, and the non-overconfident bidders' excess returns are presented in panel E and F. The details for the abnormal returns calculation are the same as notes to table 2. ^a, ^b, and ^c denote the significance at the 1%, 5%, and 10% levels respectively.

Panel A: Abnormal returns to all acquirers

Periods	Listed targets						Unlisted target					
	Method of payment			Differences			Method of payment			Differences		
	Cash	Stock	Mixed	Cash vs. Stock	Cash vs. Mixed	Stock vs. Mixed	Cash	Stock	Mixed	Cash vs. Stock	Cash vs. Mixed	Stock vs. Mixed
(-2,+2) days <i>n</i>	0.133 82	-2.823 ^c 40	-1.910 ^b 35	-2.956	2.043 ^c	-0.913	1.007 ^a 989	1.633 ^b 47	1.283 ^a 126	-0.626	-0.276	0.350
1-12 months	0.025	0.057	0.919	-0.032	-0.894	-0.862	0.345	2.739 ^a	2.157 ^a	-2.394 ^b	-1.812	0.582
1-24 months	0.413	0.065	0.823	0.348	-0.410	-0.758	0.277	2.494 ^a	1.749 ^a	-2.217	-1.472 ^a	0.745
1-36 months	0.570 ^c	-0.107	1.047 ^b	0.677	-0.477	-1.154 ^c	0.499 ^b	1.413 ^b	1.354 ^a	-0.914	-0.855 ^c	0.059

Panel B: Abnormal returns to all acquirers

Periods	Cash			Stock			Mixed		
	Listed	Unlisted	Listed vs. Unlisted	Listed	Unlisted	Listed vs. Unlisted	Listed	Unlisted	Listed vs. Unlisted
(-2,+2) days <i>n</i>	0.133 82	1.007 ^a 989	-0.874	-2.823 ^c 40	1.633 ^b 47	-4.456 ^b	-1.910 ^b 35	1.283 ^a 126	-3.193 ^a
1-12 months	0.025	0.345	-0.320	0.057	2.739 ^a	-2.682 ^b	0.919	2.157 ^a	-1.238 ^c
1-24 months	0.413	0.277	0.136	0.065	2.494 ^a	-2.429 ^b	0.823 ^c	1.749 ^a	-0.926
1-36 months	0.570	0.499 ^b	0.071	-0.107	1.413 ^b	-1.520 ^c	1.047 ^b	1.354 ^a	-0.307

Panel C: Abnormal returns to the overconfident acquirers

Periods	Listed targets						Unlisted target					
	Method of payment			Differences			Method of payment			Differences		
	Cash	Stock	Mixed	Cash vs. Stock	Cash vs. Mixed	Stock vs. Mixed	Cash	Stock	Mixed	Cash vs. Stock	Cash vs. Mixed	Stock vs. Mixed
(-2,+2) days <i>n</i>	0.674 72	-1.756 36	-2.617 ^a 29	2.430	3.291 ^a	0.861	0.972 ^a 832	1.786 ^a 36	1.608 ^a 108	-0.814	-0.636	0.178
1-12 months	0.094	0.439	0.931	-0.345	-0.837	-0.492	0.175	2.671 ^a	2.341 ^a	-2.496 ^b	-2.166 ^a	0.330
1-24 months	0.433	0.128	0.840 ^c	0.305	-0.407	-0.712	0.284	2.138 ^b	1.799 ^c	-1.854 ^b	-1.515 ^a	0.339
1-36 months	0.613 ^c	-0.149	1.055 ^b	0.762	-0.442	-1.204 ^c	0.415 ^c	1.073	1.393 ^a	-0.658	-0.978 ^b	-0.320

Panel D: Abnormal returns to the overconfident acquirers.

Periods	Cash			Stock			Mixed		
	Listed	Unlisted	Listed vs. Unlisted	Listed	Unlisted	Listed vs. Unlisted	Listed	Unlisted	Listed vs. Unlisted
(-2,+2) days <i>n</i>	0.674 72	0.972 ^a 832	-0.298	-1.756 36	1.786 36	-3.542 ^c	-2.617 ^a 29	1.608 ^a 108	-4.225 ^a
1-12 months	0.094	0.175	-0.081	0.439	2.671 ^a	-2.232	0.931	2.341 ^a	-1.410 ^b
1-24 months	0.433	0.284	0.149	0.128	2.138 ^b	-2.010 ^c	0.840 ^c	1.799 ^a	-0.959
1-36 months	0.613 ^c	0.415 ^b	0.198	-0.149	1.073	-1.222	1.055 ^b	1.393 ^a	-0.338

Panel E: Abnormal returns to the non-overconfident acquirers

Periods	Listed targets						Unlisted target					
	Method of payment			Differences			Method of payment			Differences		
	Cash	Stock	Mixed	Cash vs. Stock	Cash vs. Mixed	Stock vs. Mixed	Cash	Stock	Mixed	Cash vs. Stock	Cash vs. Mixed	Stock vs. Mixed
(-2,+2) days <i>n</i>	-1.239 10	-12.604 ^a 4	1.865 6	11.365 ^b	-3.104	-14.469 ^a	1.195 ^c 157	1.115 11	-0.032 18	0.080	1.227	1.147
1-12 months	-0.884	-3.322	-0.910	2.438	0.026	-2.412	0.875 ^c	1.006	-4.867 ^b	-0.131	5.742 ^a	5.873 ^a
1-24 months	0.622	-1.744	-1.534	2.366	2.156	-0.210	0.160	1.353 ^c	-3.445 ^b	-1.193	3.605 ^b	4.798 ^a
1-36 months	0.846	-0.666	-0.075	1.512	0.921	-0.591	0.741 ^c	0.075	-1.168	0.666	1.909	1.243

Panel F: Abnormal returns to the non-overconfident acquirers.

Periods	Cash			Stock			Mixed		
	Listed	Unlisted	Listed vs. Unlisted	Listed	Unlisted	Listed vs. Unlisted	Listed	Unlisted	Listed vs. Unlisted
(-2,+2) days <i>n</i>	-1.239 <i>10</i>	1.195 ^c <i>157</i>	-2.434 ^c	-12.604 ^a <i>4</i>	1.115 <i>11</i>	-13.719 ^a	1.865 <i>6</i>	-0.032 <i>18</i>	1.897
1-12 months	-0.884	0.875 ^b	-1.759	-3.322	1.006	-4.328	-0.910	-4.867 ^b	3.957
1-24 months	0.622	0.160	0.462	-1.744	1.353 ^c	-3.097	-1.534	-3.445 ^b	1.911
1-36 months	0.846	0.741 ^c	0.105	-0.666	0.075	-0.741	-0.075	-1.168	1.093

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4.2.3 The Acquirers' Performance by the Relatedness of Acquisition

Table 4 reports the comparative performance between the acquiring firms who acquire the targets within their industry and those whose main business is unrelated with their targets.

Panel A presents the abnormal returns over the announcement period. The overall result suggests that the relatedness of acquisition does not affect the excess returns of all bidders since both types of acquirers experience a positive abnormal return during the bid announcement. However, when taking the overconfident attribute into account, the results are different. For overconfident bidders, both forms of acquisition lead to the positive performance equal to 0.54% and 1.17% for related and unrelated acquisition, respectively. On the other hand, the non-overconfidence reaches only break-even regardless of the relatedness of the acquisition. Therefore, as opposed to the evidence from Morck et al. (1990), there is no evidence that the cross industry acquisition leads to the poor performance of the acquiring firms.

Panel B exhibits the post-acquisition performance of the acquiring firms. The mixed results are found when examining the long-run performance. For the overall performance, the acquiring firms who share the same SIC code with their targets earn at least zero abnormal returns while the cross industry acquisition creates value to the acquirers in all investigating period. Furthermore, when focusing on the overconfident aspect, the evidence reveals that the unrelated acquisition of overconfident bidders does not destroy shareholder wealth as expected in the research hypothesis. Specifically, the hypothesis expects that the overconfident acquirers should acquire

the target incorporating in the different sector and result in the negative performance. In contrast, the unrelated acquisition generates gain (0.46% and 0.56% per month) to the acquirer in 2 and 3 years following the announcement date and the differences between two types of acquisition, related and unrelated, are statistically insignificant. Additionally, the pattern that the unrelated acquisition outperforms the related acquisition also exists in the non-overconfident group. Moreover, when focusing on the unrelated acquisition, differences of abnormal returns between overconfident and non-overconfident bidders are also not significantly different from zero (panel C). Consequently, similarly to the short-horizon, the long-term evidence does not support the thesis hypothesis expecting the worst performance for the overconfident acquirers whose main business is unrelated with their targets.

To sum up, both findings in the short-term and long-term period do not support the research proposition. Among the overconfident acquirers, the unrelated acquisitions are found to create value to the shareholders rather than destroy it.

Table 4 The acquirers' performance (value-weighted) by the relatedness of acquisition.

The comparison between excess returns (%) of overconfident and non-overconfident acquirers is reported in this table. To identify the overconfident aspect, bidders whose actual performance beats the analysts' forecast, the negative forecast error, are classified as overconfident acquirers. Both short-term and long-term abnormal returns are classified by the relatedness of acquisition. The related acquisition includes deals that acquirer and target share the same first 2 digits of the SIC code while the unrelated acquisition is otherwise.

Panel A reports the acquirers' short-term performance (%) over five days surrounding bid announcement. Panel B presents bidders' post-acquisition performance (% per month) 12, 24, 36 months following bid announcement, respectively. Panel C shows the differences between the abnormal returns of overconfident and non-overconfident acquirers. The details for the abnormal returns calculation are the same as notes to table 2. ^a, ^b, and ^c denote the significance at the 1%, 5%, and 10% levels respectively.

Panel A: Abnormal returns over the announcement period (days)

Periods	All			Overconfidence			Non-overconfidence		
	Related acquisition	Unrelated acquisition	Related vs. Unrelated	Related acquisition	Unrelated acquisition	Related vs. Unrelated	Related acquisition	Unrelated acquisition	Related vs. Unrelated
(-2,+2)	0.511 ^c	1.103 ^a	-0.592	0.542 ^b	1.171 ^a	-0.629 ^c	0.326	0.840	-0.514
<i>n</i>	646	673		559	554		87	119	

Panel B: Abnormal returns following acquisition (months)

Periods	All			Overconfidence			Non-overconfidence		
	Related acquisition	Unrelated acquisition	Related vs. Unrelated	Related acquisition	Unrelated acquisition	Related vs. Unrelated	Related acquisition	Unrelated acquisition	Related vs. Unrelated
1-12	0.434	0.510 ^b	-0.076	0.565 ^b	0.351	0.214	-0.401	0.877 ^c	-1.278 ^c
1-24	0.278	0.488 ^b	-0.210	0.381	0.464 ^b	-0.083	-0.633	0.750 ^c	-1.383 ^c
1-36	0.501 ^b	0.654 ^a	-0.153	0.546 ^b	0.556 ^a	-0.010	-0.205	0.998	-1.203

Panel C: The differences of abnormal returns between overconfident and non-overconfident acquirers.

Periods	The relatedness of acquisition	
	Related acquisition	Unrelated acquisition
(-2,+2)	0.216	0.331
1-12 months	0.966	-0.526
1-24 months	1.014	-0.286
1-36 months	0.751	-0.442

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4.2.4 The Acquirers' Performance by the Price-to-Earnings and Market-to-Book Ratios.

Table 5 shows the acquirers' performance by the price-to-earnings ratio (PE) and table 6 reports the performance by book-to-market-ratio (MTBV). The results of both tables are discussed together in this section since they both represent acquirers' past performance.

Panel A provides the abnormal returns during the bid announcement. The overall findings (from both tables) show that there are no negative abnormal returns for both glamour and value firms during the announcement date. On the other hand, bidders who have low PE and MTBV ratios, the value firms, receive the positive reaction from the market during the bid announcement equal to 1.17% and 0.66% per month respectively. Moreover, the value firms also outperform the glamour firms in the post-acquisition period (panel B). For instance, the low MTBV firms experience the significant gains while the high MTBV firms reach only break-even throughout the investigation periods.

According to this finding, the results are inconsistent with the performance extrapolation hypothesis (Rau and Vermaelen, 1998) since the acquirers earn at least break-even in both short- and long-run periods whilst such hypothesis predicts that, over the announcement period, the glamour firms will experience the positive reaction from market regarding to their excellent performance but they will end up with the negative performance in the long-run. However, the findings seem to support Rau and Vermaelen (1998) research in the context that value firms outperform glamour firms in the long-run. In panel B (table 6), for all types of acquirer, the acquisition of low

MTBV firms exhibits the positive abnormal returns in all examining periods whilst the high MTBV reach only zero following the acquisition.

When focusing on the overconfident effect, the results do not support the research hypothesis expecting the negative performance for overconfident bidders regardless of their past performance. In particular, there are no negative abnormal returns for both glamour and value firms during the bid announcement (panel A of both tables). On the other hand, the acquiring firms earn at least zero and even gain equal to 0.73% and 0.63% in table 6. For the long-run performance (panel B), although the evidence from both tables are mixed, there are no negative abnormal returns as expected in the research hypothesis that, for the overconfident acquirers, the negative post-acquisition performance should be found in the glamour firms as well as the value firms. Combined together, there are no negative abnormal returns over the announcement and post-acquisition periods for overconfident bidders even in sub-sampling evidence on their past performance.

In conclusion, the findings from table 5 and 6 do not support research expectation that the overconfident effect, the negative post-performance, should be found in both glamour and value acquirers since both acquisitions from glamour and value bidders do not destroy the wealth of overconfident bidders.

Table 5 The acquirers' performance (value-weighted) by the acquirers' price-to-earnings ratio.

The comparison between excess returns (%) of overconfident and non-overconfident acquirers is reported in this table. To identify the overconfident aspect, bidders whose actual performance beats the analysts' forecast, the negative forecast error, are classified as overconfident acquirers. Both short-term and long-term abnormal returns are classified by the acquirers' price-to-earnings ratio. The price-to-earnings ratio (PE) is retrieved from the Datastream database. It defined as the price of equity divided by the earnings per share.

Panel A reports the acquirers' short-term performance (%) over five days surrounding bid announcement. Panel B presents bidders' post-acquisition performance (% per month) 12, 24, 36 months following bid announcement, respectively. The details for the abnormal returns calculation are the same as notes to table 2. ^a, ^b, and ^c denote the significance at the 1%, 5%, and 10% levels respectively.

Panel A: Abnormal returns over the announcement period (days)

Periods	All			Overconfidence			Non-overconfidence		
	High PE	Low PE	High vs. Low	High PE	Low PE	High vs. Low	High PE	Low PE	High vs. Low
(-2,+2)	0.463	1.172 ^a	-0.709	0.507	1.231	-0.724	0.215	0.949	-0.734
<i>n</i>	466	354		408	270		58	84	

Panel B: Abnormal returns following acquisition (months)

Periods	All			Overconfidence			Non-overconfidence		
	High PE	Low PE	High vs. Low	High PE	Low PE	High vs. Low	High PE	Low PE	High vs. Low
1-12	0.879 ^b	0.213	0.666	0.839 ^b	0.004	0.835	-0.123	0.385	-0.508
1-24	0.520	0.632 ^c	-0.112	0.487	0.508	-0.021	-0.269	0.310	-0.579
1-36	0.682 ^b	0.649 ^b	0.033	0.602 ^b	0.349	0.253	0.170	0.903 ^c	-0.733

Table 6 The acquirers' performance (value-weighted) by the acquirers' market-to-book ratio.

The comparison between excess returns (%) of overconfident and non-overconfident acquirers is reported in this table. To identify the overconfident aspect, bidders whose actual performance beats the analysts' forecast, the negative forecast error, are classified as overconfident acquirers. Both short-term and long-term abnormal returns are classified by the acquirers' market-to-book ratio. The market-to-book ratio (MTBV) is retrieved from the Datastream database. It defined as the market value of the common equity, share price multiplied by the number of ordinary shares in issue, divided by the balance sheet value of the common equity in the company.

Panel A reports the acquirers' short-term performance (%) over five days surrounding bid announcement. Panel B presents bidders' post-acquisition performance (% per month) 12, 24, 36 months following bid announcement, respectively. The details for the abnormal returns calculation are the same as notes to table 2. ^a, ^b, and ^c denote the significance at the 1%, 5%, and 10% levels respectively.

Panel A: Abnormal returns over the announcement period (days)

Periods	All			Overconfidence			Non-overconfidence		
	High MTBV	Low MTBV	High vs. Low	High MTBV	Low MTBV	High vs. Low	High MTBV	Low MTBV	High vs. Low
(-2,+2)	0.466	0.662 ^b	-0.196	0.732 ^c	0.630 ^b	0.102	-2.083	0.806	-2.889 ^c
<i>n</i>	387	492		350	398		37	94	

Panel B: Abnormal returns following acquisition (months)

Periods	All			Overconfidence			Non-overconfidence		
	High MTBV	Low MTBV	High vs. Low	High MTBV	Low MTBV	High vs. Low	High MTBV	Low MTBV	High vs. Low
1-12	0.431	1.136 ^a	-0.705	0.476	0.758 ^c	-0.282	-1.180	1.323 ^c	-2.503 ^c
1-24	0.343	0.886 ^b	-0.543	0.317	0.940 ^b	-0.623	-0.531	0.746	-1.277
1-36	0.409	0.937 ^a	-0.528	0.377	0.895 ^a	-0.518	0.425	1.036 ^b	-0.611

4.3 The Results from Robustness Test

The two robustness tests are employed in this research. First, the sample is restricted to into the deals that are announced within six months from the financial statement report date in order to alleviate the outdated information problem. Second, the new criterion is added into the sample in order to capture more overconfident characteristic. The results from both tests are presented as follows.

4.3.1 The Performance of Deals Announced within Six Months Following Earnings Report Date.

To overcome the outdated information problem occurred from the gap between the bid announcement and the earnings report date, this test restricts the sample into the deals that are announced within six months from the financial statement report date.¹² Similar to the previous expectations, the negative abnormal returns over the short-run and the long-run periods are expected for the overconfident acquirers. By doing so, the overall sample decreases from 1319 to 648 deals. However, the new sample is still dominated by the overconfident bidders (556 deals).

According to the findings in table 7, the overall performance shows that the merger and acquisition are the value-creating investment projects for the shareholders since the acquiring firms gain in both short-run (0.98%) and long-run (0.50% per month in 3 years) periods following the acquisition.

When focusing on the overconfident attribute, the results also do not support the theoretical hypothesis since there is no distinction between two types of acquirers

¹² See chapter III section 3.3.3.1.

over the announcement period. Specifically, both of bidders earn the positive abnormal returns during the bid announcement (panel A). Moreover, overconfident bidders are found to outperform the non-overconfident bidders in 2 and 3 years following the acquisition (panel B). Therefore, like prior findings, there is no evidence that the acquirers are overconfident and they do not destroy the shareholders' wealth following the acquisition.



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Table 7 The acquirers' performance (value-weighted) from the acquisition announced within six months from earnings report date.

The comparison between excess returns (%) of overconfident and non-overconfident acquirers is reported in this table. The identification for overconfident aspect is the same as normal test. Bidders who have negative forecast error are classified as overconfident acquirers. The sample, however, is more restricted. Specifically, only acquisitions that announced within six months from the earnings report date are included in the sample.

Panel A reports the acquirers' short-term performance (%) over five days surrounding bid announcement. Panel B presents bidders' post-acquisition performance (% per month) 12, 24, 36 months following bid announcement respectively. The details for the abnormal returns calculation are the same as notes to table 2. ^a, ^b, and ^c denote the significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Abnormal returns over the announcement period (days)

Periods	All	Overconfidence	Non-overconfidence	Over vs. Non-over
(-2,+2)	0.978 ^a	0.931 ^a	1.241 ^b	-0.310
<i>n</i>	648	556	92	

Panel B: Abnormal returns following acquisition (months)

Periods	All	Overconfidence	Non-overconfidence	Over vs. Non-over
1-12	0.178	0.069	0.342	-0.273
1-24	0.292	0.448 ^c	0.342	0.106
1-36	0.503 ^b	0.542 ^b	0.792	-0.250

4.3.2 The Acquirers' Performance by Analysts' Forecast Error and Consensus Recommendation.

The new criterion, consensus stock recommendation, is added to identify the overconfident and non-overconfident characteristics. This robustness test is introduced to distinguish the extreme overconfident and non-overconfident bidders from a whole sample.¹³ The negative performance during the bid announcement and the long-horizon periods for the overconfident acquirers is also expected from the test.

When adding such criterion to the overconfident identification, an overall sample decreases by 931 deals. Of the 338 deals of new sample, it consists of 317 deals of overconfident bidders and 71 deals of non-overconfident bidders. Again, the overall results suggest that merger and acquisition activities are the value-creating decisions for bidding firms. In particular, there are no abnormal returns for both types of acquirer over the short-run.

With respect to the overconfident effects, the empirical evidence does not support the thesis hypothesis since both groups of acquirers earn the zero abnormal returns during the bid announcement and the overconfident acquirers outperform the non-overconfident bidders in the long-run. Specifically, the overconfident bidders experience the large gains equal to 0.82%, 0.59% and 0.47% per month in 1, 2, and 3 years following acquisition while another group still reach only break-even like the short-run period. In conclusion, the results from this robustness test also do not support the research hypothesis. The overconfident bidders do not underperform the non-overconfident bidders.

¹³ See chapter III section 3.3.3.2.

Table 8 The acquirers' performance (value-weighted) by the analysts' forecast error and the consensus recommendation.

This table presents the comparison between excess returns (%) of overconfident and non-overconfident acquirers. The consensus stock recommendation is added to the qualification of overconfidence bidders. Bidders who have negative forecast errors with the upward revision for stock recommendation are classified as overconfident bidders. Otherwise, they are classified as non-overconfident bidders.

Panel A reports the acquirers' short-term performance (%) over five days surrounding bid announcement. Panel B presents bidders' post-acquisition performance (% per month) 12, 24, 36 months following bid announcement, respectively. The details for the abnormal returns calculation are the same as notes to table 2. ^b and ^c denote the significance at the 5% and 10% level, respectively.

<i>Panel A: Abnormal returns over the announcement period (days)</i>				
Periods	All	Overconfidence	Non-overconfidence	Over vs. Non-over
(-2,+2)	0.430 ^c	0.391	0.643	0.252
<i>n</i>	388	317	71	

<i>Panel B: Abnormal returns following acquisition (months)</i>				
Periods	All	Overconfidence	Non-overconfidence	Over vs. Non-over
1-12	0.860 ^b	0.823 ^b	1.703 ^b	-0.880
1-24	0.465 ^c	0.586 ^c	0.142	0.444
1-36	0.483 ^b	0.471 ^c	0.750	-0.279

CHAPTER V

CONCLUSION AND AREAS FOR FUTURE RESEARCH

5.1 Conclusion

The advocates of the hubris hypothesis argue that the hubris which constitutes excessive pride and ambition usually leads to the negative performance of the acquiring firms. Consistently, a number of prior studies have documented the negative performance for the overconfident bidders. In the light of previous research, this thesis contributes to the existing literature by investigating the effect of hubris on acquirers' wealth with the new proxy for an overconfident aspect, namely analysts' forecast error.

Inconsistent with the existing literature, the overall findings show that merger and acquisition activities ultimately are the value-creating investment decisions for the acquiring firms' shareholders since there is no evidence of the negative performance in both short-term and long-term periods. Moreover, when focusing on the overconfident aspect, the acquirers who outperform the market's expectation are found to generate the significant gain in both the announcement and the post-acquisition periods. This finding does not support the theoretical hypothesis and also differs from the hubris hypothesis of Roll (1986) that the managers who are irrational about their abilities to create value from the acquisition should experience the negative performance following the acquisition. Hence, to the extent that the negative forecast error reflects the managers' overconfidence, the results indicate that the well-performing acquirers are not overconfident.

Moreover, when investigating the overconfident effects across different deal characteristics, there are no distinct characteristics of overconfident bidders among sub-samples as expected in the research hypothesis. Specifically, the acquisition of listed targets with the mixed payment and the cross industry acquisition, that are previously expected to exhibit the worst post-acquisition performance, generate a significant gain to overconfident bidders. Additionally, among overconfident acquirers, both glamour and value firms experience the positive excess return in long-horizon while the research expects that they should exhibit negative abnormal returns in such period. Likewise, this result is inconsistent with the performance extrapolation hypothesis hypothesized by Rau and Vermaelen (1998) as well.

Furthermore, the results still do not support the research expectations after performing two robustness tests. In particular, after controlling the effect of outdated information by limiting the sample into the deals announced within six months following the earnings report date and adding the analysts' recommendation to the identification of overconfidence, the findings are unchanged. There is no evidence of negative performance for the overconfident bidders throughout the investigation periods.

Ultimately, the two main findings found in this research are not consistent with the theoretical hypothesis and the existing literature. First, this thesis discovers the evidence favorable to the merger and acquisition activities since such activities are found to generate value to bidding firms' shareholders. Second, as opposed to Roll's hubris hypothesis, the findings indicate that the well-performing acquirers are not overconfidence. On the other hand, bidders who outperform the market's expectation

are found to experience the positive excess returns in both the announcement and the post-acquisition periods.

5.2 Areas for future research

This section presents the possible areas of extension and the open issues that may provide more additional insights for the ultimate wealth effect of overconfident acquirers. In the presence of limitations such as time constraint, this thesis does not cover the effect of overconfidence through some other deal characteristics that may reveal the distinction between over- and non-overconfident bidders. For instance, percent of acquired share and the percentage of ownership after the acquisition, the size of the acquiring firm and the cross-border acquisition are deal characteristics that could support the managerial objective behind such investment.

Next, since this thesis found the positive performance following the acquisition despite the consensus evidence from prior studies that merger and acquisition are the value-destroying investment decisions for the acquiring firms, this contradict evidence leaves the opened issue. First, the period 1995 to 2000 may have the distinct characteristic that leads to the contradict findings from prior studies. Second, the contents in analysts' reports are employed to identify the overconfident aspects and it is possible that firms with analysts' coverage may exhibit the different results from the full sample before taking analysts' forecast error into account and, therefore, this lead to the opened area of future research: whether bidders who not followed by the analysts exhibit the negative abnormal returns following the acquisition.

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APPENDICES

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Table 9 The acquirers' performance (equal-weighted) over the announcement and the post-acquisition periods.

This table exhibits bidding firms' performance following acquisition on both announcement and post-acquisition periods. The sample is divided into three groups; all, overconfident, and non-overconfident bidders. To identify the overconfident aspect, bidders whose actual performance beat the analysts' forecast, the negative forecast error, are classified as overconfident acquirers.

Panel A presents the acquirers' performance over five days surrounding bid announcement. The buy-and-hold abnormal returns (%) are calculated in the Jensen's alpha approach. The five-day buy-and-hold returns are regressed on risk factor of the CAPM model as in equation (1).

$$(R_i - R_f) = \alpha + \beta (R_m - R_f) + \varepsilon_i \quad (1)$$

Where R_i is the buy-and-hold returns to bidder i during t days surrounding the announcement date. R_f and R_m are the three-month treasury bills rate and the return on value weight market portfolio during the t days holding period respectively. The intercept, α , is the excess return generated from the bid announcement.

Panel B presents bidders' post-acquisition performance 12, 24, 36 months following bid announcement, respectively. The event portfolio returns are regressed on the three-factor model as in equation (2).

$$R_{p,t} - R_{f,t} = \alpha_p + \beta_p (R_{m,t} - R_{f,t}) + s_p SMB_t + h_p HML_t + \varepsilon_{p,t} \quad (2)$$

Where $R_{p,t}$ is bidders' portfolio returns (equal-weighted) in month t . $R_{f,t}$ is the three-month treasury bill rate. $R_{m,t}$ is the return on value-weighted market portfolio. SMB_t is the difference between the return of value-weighted portfolios of small stocks and big stocks. HML_t is the difference between the returns of value-weighted portfolio of high book-to-market stocks and low book-to-market stocks. According to the regression analysis, the intercept, α_p , is the average monthly abnormal return of the event portfolio.

For the comparison purpose, the dummy variables are added to the equation (1) and (2) and, then, using the Wald test to compare the differences among abnormal returns. Moreover, the test statistic is corrected for autocorrelation and heteroscedasticity problem by using the Newey-West adjustment procedure. ^a, ^b, and ^c denote the significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Abnormal returns over the announcement period (days)

Period	All	Overconfident	Non-overconfident	Over vs. Non-over
(-2,+2) <i>n</i>	0.816 ^a 1319	0.863 ^a 1113	0.635 206	0.228

Panel B: Abnormal returns following acquisition (months)

Periods	All	Overconfident	Non-overconfident	Over vs. Non-over
1-12	0.053	0.274	-0.816	1.090 ^b
1-24	-0.008	0.234	-1.018 ^b	1.252 ^a
1-36	0.065	0.187	-0.457	0.644 ^c

Table 10 The acquirers' performances (equal-weighted) by method of payment and target status.

The comparison between excess returns (%) of overconfident and non-overconfident bidders is reported in this table. To identify the overconfident aspect, bidders whose actual performance beats the analysts' forecast, the negative forecast error, are classified as overconfident acquirers. Both short-term and long-term abnormal returns are classified by method of payment and target status. Cash includes acquisitions that are offered only with cash. Stock includes acquisitions that are offered only with stock. Mixed payment consists of both cash and stocks with the option for target to choose the combination between these two types of payment. Listed target involves deals that the targets are listed companies in the UK stock exchange while unlisted targets are the deals that acquired firms are unlisted companies.

Panel A and B exhibit the abnormal returns (%) to all acquirers, panel C and D report the abnormal returns to the overconfident bidders, and the non-overconfident bidders' excess returns are presented in panel E and F. The details for the abnormal returns calculation are the same as notes to table 9. ^a, ^b, and ^c denote the significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Abnormal returns to all acquirers

Periods	Listed targets						Unlisted target					
	Method of payment			Differences			Method of payment			Differences		
	Cash	Stock	Mixed	Cash vs. Stock	Cash vs. Mixed	Stock vs. Mixed	Cash	Stock	Mixed	Cash vs. Stock	Cash vs. Mixed	Stock vs. Mixed
(-2,+2) days <i>n</i>	0.133 82	-2.823 ^c 40	-1.910 ^b 35	-2.956	2.043 ^c	-0.913	1.007 ^a 989	1.633 ^b 47	1.283 ^a 126	-0.626	-0.276	0.350
1-12 months	-0.836 ^c	-0.610	0.103	-0.226	-0.939	-0.713	0.109	0.532	-0.063	-0.423	0.172	0.595
1-24 months	-0.177	-0.568	0.013	0.391	-0.190	-0.581	-0.052	0.400	0.319	-0.452	-0.371	0.081
1-36 months	-0.026	-0.460	0.029	0.434	-0.055	-0.489	0.035	-0.067	0.207	0.102	-0.172	-0.274

Panel B: Abnormal returns to all acquirers

Periods	Cash			Stock			Mixed		
	Listed	Unlisted	Listed vs. Unlisted	Listed	Unlisted	Listed vs. Unlisted	Listed	Unlisted	Listed vs. Unlisted
(-2,+2) days <i>n</i>	0.133 82	1.007 ^a 989	-0.874	-2.823 ^c 40	1.633 ^b 47	-4.456 ^b	-1.910 ^b 35	1.283 ^a 126	-3.193 ^a
1-12 months	-0.836 ^c	0.109	-0.945 ^b	-0.610	0.532	-1.142	0.103	-0.063	0.166
1-24 months	-0.177	-0.052	-0.125	-0.568	0.400	-0.968	0.013	0.319	-0.306
1-36 months	-0.026	0.035	-0.061	-0.460	-0.067	-0.393	0.029	0.207	-0.178

Panel C: Abnormal returns to the overconfident acquirers

Periods	Listed targets						Unlisted target					
	Method of payment			Differences			Method of payment			Differences		
	Cash	Stock	Mixed	Cash vs. Stock	Cash vs. Mixed	Stock vs. Mixed	Cash	Stock	Mixed	Cash vs. Stock	Cash vs. Mixed	Stock vs. Mixed
(-2,+2) days <i>n</i>	0.674 72	-1.756 36	-2.617 ^a 29	2.430	3.291 ^a	0.861	0.972 ^a 832	1.786 ^a 36	1.608 ^a 108	-0.814	-0.636	0.178
1-12 months	-0.881 ^c	-0.143	0.267	-0.738	-1.148	-0.410	0.233	0.434	0.739 ^c	-0.201	-0.506	-0.305
1-24 months	-0.238	-0.334	0.221	0.096	-0.459	-0.555	0.168	0.278	0.664	-0.110	-0.496	-0.386
1-36 months	-0.076	-0.390	-0.071	0.314	-0.005	-0.319	0.155	-0.359	0.482	0.514	-0.327	-0.841

Panel D: Abnormal returns to the overconfident acquirers

Periods	Cash			Stock			Mixed		
	Listed	Unlisted	Listed vs. Unlisted	Listed	Unlisted	Listed vs. Unlisted	Listed	Unlisted	Listed vs. Unlisted
(-2,+2) days <i>n</i>	0.674 72	0.972 ^a 832	-0.298	-1.756 36	1.786 36	-3.542 ^c	-2.617 ^a 29	1.608 ^a 108	-4.225 ^a
1-12 months	-0.881 ^c	0.233	-1.114 ^b	-0.143	0.434	-0.577	0.267	0.739 ^c	-0.472
1-24 months	-0.238	0.168	-0.406	-0.334	0.278	-0.612	0.221	0.664	-0.443
1-36 months	-0.076	0.155	-0.231	-0.390	-0.359	-0.031	-0.071	0.482	-0.553

Panel E: Abnormal returns to the non-overconfident acquirers

Periods	Listed targets						Unlisted target					
	Method of payment			Differences			Method of payment			Differences		
	Cash	Stock	Mixed	Cash vs. Stock	Cash vs. Mixed	Stock vs. Mixed	Cash	Stock	Mixed	Cash vs. Stock	Cash vs. Mixed	Stock vs. Mixed
(-2,+2) days <i>n</i>	-1.239 10	-12.604 ^a 4	1.865 6	11.365 ^b	-3.104	-14.469 ^a	1.195 ^c 157	1.115 11	-0.032 18	0.080	1.227	1.147
1-12 months	-0.697	-4.133	-1.401	3.436	0.704	-2.732	-0.384	0.498	-4.138	-0.882	3.754 ^b	4.636 ^a
1-24 months	0.501	-2.957	-1.736	3.458	2.237	-1.221	-0.935 ^b	0.809	-3.451 ^a	-1.744 ^c	2.516 ^b	4.260
1-36 months	0.444	-1.212	0.438	1.656	0.006	-1.650	-0.398	-0.447	-2.001 ^c	0.049	1.603	1.554

Panel F: Abnormal returns to the non-overconfident acquirers

Periods	Cash			Stock			Mixed		
	Listed	Unlisted	Listed vs. Unlisted	Listed	Unlisted	Listed vs. Unlisted	Listed	Unlisted	Listed vs. Unlisted
(-2,+2) days <i>n</i>	-1.239 <i>10</i>	1.195 ^c <i>157</i>	-2.434	-12.604 ^a <i>4</i>	1.115 <i>11</i>	-13.719	1.865 <i>6</i>	-0.032 <i>18</i>	1.897
1-12 months	-0.697	-0.384	-0.313	-4.133	0.498	-4.631	-1.401	-4.138	2.737
1-24 months	0.501	-0.935 ^b	1.436	-2.957	0.809	-3.766	-1.736	-3.451 ^a	1.715
1-36 months	0.444	-0.398	0.842	-1.212	-0.447	-0.765	0.438	-2.001 ^c	2.439 ^c

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Table 11 The Acquirers' performance (equal-weighted) by the relatedness of acquisition.

The comparison between excess returns (%) of overconfident and non-overconfident acquirers is reported in this table. To identify the overconfident aspect, bidders whose actual performance beats the analysts' forecast, the negative forecast error, are classified as overconfident acquirers. Both short-term and long-term abnormal returns are classified by the relatedness of acquisition. The related acquisition includes deals that acquirer and target share the same first 2 digits of the SIC code while the unrelated acquisition is otherwise.

Panel A reports the acquirers' short-term performance (%) over five days surrounding bid announcement. Panel B presents bidders' post-acquisition performance (% per month) 12, 24, 36 months following bid announcement respectively. Panel C shows the differences between the abnormal returns of overconfident and non-overconfident acquirers. The details for the abnormal returns calculation are the same as notes to table 9. ^a, ^b, and ^c denote the significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Abnormal returns over the announcement period (days)

Periods	All			Overconfident			Non-overconfident		
	Related acquisition	Unrelated acquisition	Related vs. Unrelated	Related acquisition	Unrelated acquisition	Related vs. Unrelated	Related acquisition	Unrelated acquisition	Related vs. Unrelated
(-2,+2)	0.511 ^c	1.103 ^a	-0.592	0.542 ^b	1.171 ^a	-0.629 ^c	0.326	0.840	-0.514
<i>n</i>	646	673		559	554		87	119	

Panel B: Abnormal returns following acquisition (months)

Periods	All			Overconfident			Non-overconfident		
	Related acquisition	Unrelated acquisition	Related vs. Unrelated	Related acquisition	Unrelated acquisition	Related vs. Unrelated	Related acquisition	Unrelated acquisition	Related vs. Unrelated
1-12	-0.043	0.189	-0.232	0.170	0.428	-0.258	-1.099	-0.797	-0.302
1-24	0.044	-0.011	0.055	0.224	0.277	-0.053	-0.691	-1.162 ^c	0.471
1-36	0.187	-0.026	0.213	0.261	0.138	0.123	-0.229	-0.641	0.412

Panel C: The difference of abnormal returns between overconfident and non-overconfident acquirers.

Periods	The relatedness of acquisition	
	Related acquisition	Unrelated acquisition
(-2,+2)	0.216	0.331
1-12 months	1.269 ^b	1.225 ^b
1-24 months	0.915	1.439 ^b
1-36 months	0.490	0.779

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Table 12 The acquirers' performance (equal-weighted) by acquirers' price-to-earnings ratio.

The comparison between excess returns (%) of overconfident and non-overconfident acquirers is reported in this table. To identify the overconfident aspect, bidders whose actual performance beats the analysts' forecast, the negative forecast error, are classified as overconfident acquirers. Both short-term and long-term abnormal returns are classified by the acquirers' price-to-earnings ratio. Consistent with table 5, the price-to-earnings ratio (PE) is retrieved from the Datastream database. It defined as the price of equity divided by the earnings per share.

Panel A reports the acquirers' short-term performance (%) over five days surrounding bid announcement. Panel B presents bidders' post-acquisition performance (% per month) 12, 24, 36 months following bid announcement respectively. The details for the abnormal returns calculation are the same as notes to table 9. ^a and ^b denote the significance at the 1%, and 5% levels, respectively.

Panel A: Abnormal returns over the announcement period (days)

Periods	All			Overconfident			Non-overconfident		
	High PE	Low PE	High vs. Low	High PE	Low PE	High vs. Low	High PE	Low PE	High vs. Low
(-2,+2) <i>n</i>	0.463 466	1.172 ^a 354	-0.709	0.507 408	1.231 270	-0.724	0.215 58	0.949 84	-0.734

Panel B: Abnormal returns following acquisition (months)

Periods	All			Overconfident			Non-overconfident		
	High PE	Low PE	High vs. Low	High PE	Low PE	High vs. Low	High PE	Low PE	High vs. Low
1-12	0.309	-0.186	0.495	0.518	-0.066	0.584	-1.448 ^b	-0.738	-0.710
1-24	0.030	0.068	-0.038	0.401	0.094	0.307	-2.400 ^a	-0.299	-2.101 ^b
1-36	0.132	0.014	0.118	0.262	0.042	0.220	-1.242 ^b	-0.038	-1.204

Table 13 The acquirers' performance (equal-weighted) by acquirers' market-to-book ratio.

The comparison between excess returns (%) of overconfident and non-overconfident acquirers is reported in this table. To identify the overconfident aspect, bidders whose actual performance beats the analysts' forecast, the negative forecast error, are classified as overconfident acquirers. Both short-term and long-term abnormal returns are classified by the acquirers' market-to-book ratio. The market-to-book ratio (MTBV) is retrieved from the Datastream database. It defined as the market value of the common equity, share price multiplied by the number of ordinary shares in issue, divided by the balance sheet value of the common equity in the company.

Panel A reports the acquirers' short-term performance (%) over five days surrounding bid announcement. Panel B presents bidders' post-acquisition performance (% per month) 12, 24, 36 months following bid announcement respectively. The details for the abnormal returns calculation are the same as notes to table 9. ^a, ^b, and ^c denote the significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Abnormal returns over the announcement period (days)

Periods	All			Overconfident			Non-overconfident		
	High MTBV	Low MTBV	High vs. Low	High MTBV	Low MTBV	High vs. Low	High MTBV	Low MTBV	High vs. Low
(-2,+2)	0.466	0.662 ^b	-0.196	0.732 ^c	0.630 ^b	0.102	-2.083	0.806	-2.889 ^c
<i>n</i>	387	492		350	398		37	94	

Panel B: Abnormal returns following acquisition (months)

Periods	All			Overconfident			Non-overconfident		
	High MTBV	Low MTBV	High vs. Low	High MTBV	Low MTBV	High vs. Low	High MTBV	Low MTBV	High vs. Low
1-12	-0.273	0.431	-0.704	0.187	0.455	-0.268	-2.232	0.315	-2.547 ^c
1-24	-0.300	0.378	-0.678	-0.042	0.527	-0.569	-2.288 ^a	-0.132	-2.156 ^b
1-36	-0.146	0.437	-0.583	-0.065	0.548	-0.613	-1.012	0.134	-1.146

Table 14 The acquirers' performance (equal-weighted) from the acquisition announced within six months from earnings report date.

The comparison between excess returns (%) of overconfident and non-overconfident acquirers is reported in this table. The identification for overconfident aspect is the same as normal test. Bidders who have negative forecast error are classified as overconfident acquirers. The sample, however, is more restricted. Specifically, only acquisitions that announced within six months from the earnings report date are included in the sample.

Panel A reports the acquirers' short-term performance (%) over five days surrounding bid announcement. Panel B presents bidders' post-acquisition performance (% per month) 12, 24, 36 months following bid announcement respectively. The details for the abnormal returns calculation are the same as notes to table 9. ^a, ^b, and ^c denote the significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Abnormal returns over the announcement period (days)

Periods	All	Overconfidence	Non-overconfidence	Over vs. Non-over
(-2,+2)	0.978 ^a	0.931 ^a	1.241 ^b	-0.310
<i>n</i>	648	556	92	

Panel B: Post-acquisition abnormal returns (months)

Periods	All	Overconfidence	Non-overconfidence	Over vs. Non-over
1-12	-0.102	0.013	-1.039	1.052 ^c
1-24	-0.144	0.024	-0.656	0.680
1-36	0.052	0.138	-0.064	0.202

Table 15 The acquirers' performance (equal-weighted) by analysts' forecast error and consensus recommendation.

This table presents the comparison between excess returns (%) of overconfident and non-overconfident acquirers. The consensus stock recommendation is added to the qualification of overconfidence bidders. Bidders who have negative forecast errors with the upward revision for stock recommendation are classified as overconfident bidders. Otherwise, they are classified as non-overconfident bidders.

Panel A reports the acquirers' short-term performance (%) over five days surrounding bid announcement. Panel B presents bidders' post-acquisition performance (% per month) 12, 24, 36 months following bid announcement, respectively. The details for the abnormal returns calculation are the same as notes to table 9. ^c denotes the significance at the 10% level.

<i>Panel A: Abnormal returns over the announcement period (days)</i>				
Periods	All	Overconfidence	Non-overconfidence	Over vs. Non-over
(-2,+2)	0.430 ^c	0.391	0.643	0.252
<i>n</i>	388	317	71	

<i>Panel B: Post-acquisition abnormal returns (months)</i>				
Periods	All	Overconfidence	Non-overconfidence	Over vs. Non-over
1-12	0.247	0.401	-0.414	0.815
1-24	0.124	0.326	-0.812	1.138 ^c
1-36	0.185	0.214	0.114	0.100

BIOGRAPHY

Miss Jindara Chalermchavalit was born on July 16, 1982 in Bangkok. At the undergraduate level, she graduated from the Faculty of Commerce and Accountancy, Thammasat University in February 2003 with a Bachelor of Business Administration degree (Second Class Honors), majoring in Accounting. After graduating from Thammasat University, she worked as an audit assistant at KPMG Phoomchai Audit Ltd. during April 2003 and April 2004. She joined the Master of Science in Finance program, Chulalongkorn University in June 2005.



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