

Do UK Mergers Create Shareholder Value?

UK Evidence

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ABSTRACT

In this paper we empirically investigate the performance of misvalued acquiring firms for deals which successfully complete (termed 'Successful') and those which subsequently fail to consummate (termed 'Failed') to investigate whether UK deals create value through mergers and acquisitions. We employ a UK dataset for the period 1990-2009 and find that in the short-run, Successful Overvalued acquirers generate significant returns whilst Failed acquirers experience significant losses. However, Undervalued acquirers are found to produce stronger gains and suffer lower losses than their Overvalued counterparts and thus Undervaluation appears to be a stronger motive for M&A activity. Furthermore, we find a significant reversal in the long-run with Failed deals outperforming those which succeed. This outperformance of deals which fail in the long-run is robust to target status and method of payment and is not simply a reflection of the UK phenomenon of private deals financed using cash. Contrasting US evidence, we conclude with the finding that whilst UK deals may create short-term value, this does not transpire to the long-run where successfully completed deals significantly underperform.

JEL Classification: G32; G34.

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I. Introduction

The wealth effects from Merger and Acquisition (M&A)¹ activity is a well-documented research topic within the financial literature. A large body of the M&A investigations is unanimous in its agreement that deals largely create significant gains for the shareholders of target firms around the announcement period (Jensen and Ruback. 1983). However, the gains to bidding firms are not quite so clear-cut with the acquiring firm shareholders earning negative to zero abnormal returns from the combination (Mueller, 1985; Loughran and Vjih, 1997; Antoniou *et al.*, 2007). Furthermore, most empirical evidence relates to the US, leaving the UK relatively ignored. Much research assumes the two markets to be similar and yet they differ in key ways.

Franks and Harris (1985) report that target firms gain higher than their US counterparts. Faccio and Masulis (2005) document that 80.2% of deals conducted in the UK are cash-financed. And finally, Doukas and Petmezas (2007) write that 91% of UK deals involve the acquisition of a private target. With these characteristics in mind, it becomes automatically apparent that US theories for merger activity, such as market-timing, do not hold for the UK market. The market-timing hypothesis requires stock financing to be used in overvalued periods and cash to be used in undervalued periods. It seems somewhat unlikely that the UK market is undervalued for 80.2% of the time. With this in mind, the UK is an interesting market to investigate further.

Many merger theories have emerged to explain why firms continue to initiate M&A's in spite of the overwhelming evidence indicating that their shareholders will effectively 'lose out'. Savor and Lu (2009) extend the existing literature with the innovative construction of a sample of Failed M&A deals employed as a proxy of the performance of Successful deals had they not have successfully completed. They show that acquiring firms purchasing a public target do create value for their shareholders in the US with significant outperformance of successfully completed deals to those which fail. We adopt their comparative assessment approach to investigate whether UK acquisitions create value for bidding firm shareholders.

With rising merger activity across the world, the prevailing issue is whether or not such corporate activity is to the benefit of the acquiring firm shareholders. We believe that it is bidders which demand so much examination as much of the evidence suggests negative to zero abnormal returns to these firms after initiating a merger deal. However, these firms continue to initiate further deals. Alexandridis *et al.* (2010) examining a global dataset find that in the most competitive markets (namely US, UK and Canada) gains are largely enjoyed only by target firms whilst in the rest of the world the benefits on offer from M&A activity are shared between bidder and target. This research highlights further the need to investigate the three markets further. Whilst much is known regarding the US, there is a lot still unknown about the UK and Canadian merger experience. We aim to fill the void with explorations into the UK market.

It is largely recognised that the key managerial objective should be to maximise the wealth of the shareholders they represent. With the UK market now increasingly competitive with scarce avenues for natural growth, growth through merger appears to be the only way for firms to achieve larger market positions². But is the cost of acquiring these better market

¹ Strictly speaking, the terms 'merger' and 'acquisition' differ in the aspect of the nature of the deal conducted. Mergers relate to a friendly combination between two firms in agreement. Acquisitions on the other hand suggest one party is more dominant than the other, with potentially hostile relations between the two. However, in this study, we use the terms interchangeably to relate to the combination of two firms into one entity.

² This is largely accepted as being true within the retailing sector for example. Companies such as Tesco plc frequently entertain 'land-banking' – the corporate practice of buying land in prime retailing

positions worth it for the acquiring firm shareholders over the long-term? It is here that we make a contribution.

Recall that Faccio and Masulis (2005) report that 80.2% of UK deals are cash-financed whilst Franks and Harris (1985) report that UK targets realise higher CAR's than their US counterparts. With this in mind, the literature suggests that UK mergers destroy more value than their US counterparts. We investigate to determine whether UK deals do destroy shareholder value. If this holds, then we should see failed deals outperforming those which succeed.

Furthermore, US evidence largely suggests that over the long-term, cash acquisitions generate value whilst stock-acquisitions lose due to the signalling content of the financing employed. Cash is largely associated with undervaluation within the information asymmetry literature. With the corresponding implication from the coveted US Market-Timing Hypothesis (Shleifer and Vishny, 2003) that cash-financing occurs when bidding firms believe their stock to be undervalued, it seems somewhat unrealistic to believe that the UK market could be so continually undervalued. Additionally, Amihud *et al.* (1990) find that firms with insiders who value control prefer financing mergers using cash or debt. It could be the case that mergers in the UK are dominated by firms with high insider-ownership. The use of cash is then a means for managers to retain control. Alternatively, the use of cash could be as the result of managerial gambling. The management team does not require the approval of the shareholder group and thus is able to 'gamble' on the target without the restrictions and discipline of an equity-offer. We test to investigate the performance of cash-acquisitions in both the short and long-term in the UK to ascertain whether UK deals create or destroy value.

Research has found that the impact of the revelation of information around deal announcements to the market is distinctly different between public and private deals (Travlos, 1987; Chang, 1998). Doukas and Petmezas (2007) point out that the majority of UK deals relate to the acquisition of a private target. Stock-acquisitions for example are negatively received for a public acquisition but positively received when the target is private as it is believed that target owners which accept stock must have been privy to some positive private information relating to the bidder. We examine the differences between public and private UK acquisitions and the effects of method of payment in each to cast more light on this key characteristic.

Within this work, we will focus on ascertaining the wealth effects of M&A deals upon value creation for the bidding firm shareholders to answer the overriding question 'Do UK mergers create shareholder value?'. We investigate whether or not successfully completed merger deals are associated with significant gains warranting the continued adoption of M&A programs within the UK. We suggest that if mergers are in the best interests of existing shareholders, then successfully completed deals should outperform those which subsequently fail. This is due to several reasons. Notably, if successfully completed deals outperform those which fail in terms of the gains generated in both the short and long-run, then the evidence will suggest that managers are working towards their key objective of maximising shareholder wealth and mergers will be financially worthwhile for acquiring firm shareholders. Even if losses are incurred for both successfully completed deals and their failed counterparts, mergers can still be beneficial to bidding firm shareholders so long as the losses to successfully completed deals transpire to be lower than those of deals which fail over the long-term.

positions to prevent rival companies building franchises and thus reinforcing higher barriers to entry. Competitors, such as Wm. Morrison plc have been forced to employ mergers (with Safeway plc.) to become larger to compete with the market leaders on a national footing (Simms, 2007).

We also address misvaluation within the UK market to ascertain the wealth effects of overvalued and undervalued acquirers for bidding shareholders. Rising literature from the school of behavioural finance has argued that merger activity can be as the result of managers attempting to capitalise upon favourable market misvaluations, either through the exploitation of their overvalued equity or the capitalisation of the purchase of a 'cheap' target³. The performance of misvalued acquisitions has been largely ignored for the UK market and we provide further evidence on this relatively unexplored field.

We include misvalued firms within our analysis for two reasons. Firstly, as noted, there has not been much attention given to misvalued UK acquisitions. While overvaluation has been proven to be a useful determinant in the US market, much overvalued activity is conducted using equity and this activity forms a key ingredient of the Market-Timing hypothesis (Shleifer and Vishny, 2003). As noted earlier, much of the UK market is financed using cash. According to the Market-Timing hypothesis, cash is employed when the managerial team believes their firm to be *undervalued*. The proposition that the UK market is continually undervalued seems unsound. Thus characteristically we are driven to investigate the level and effect of misvalued merger activity within the UK. Secondly, Draper and Paudyal (2008) argue that undervalued firms have a stronger incentive to announce merger activity as the information revelation at the time of deal announcement positively benefits their shareholders two-fold – from the synergies of the deal as well as the upward revaluation of their firm. In this way, even if a deal fails, the market's attention has still been attracted and the shareholders at least benefit from the latter. With this in mind, we examine the UK market to cast further evidence on misvaluation as a driver of M&A activity.

Our results strongly contrast the US evidence. We find that while the successful sample of bidders outperforms significantly in the short-run, this outperformance does not transpire to the long-run where the failed sample largely outperforms. This indicates that over the long-term, merger activity does not benefit bidding firm shareholders and suggests that the market is placing bets in favour of deals which will be consummated against those that will not. In fact, the shareholders of 'successful' acquirers would have benefitted more in the long-term had their deals have failed. We suggest that at the time of the announcement of the deal, the UK market is overoptimistic about the proposed synergies. The firms do not proceed to deliver the expected results and we witness a reversal of fortunes for these firms in the long-term.

We also find that at the time of the announcement of the deal, when the market does not know whether the deal in question will continue to succeed or will subsequently fail, we find that the market does correctly distinguish between those deals which subsequently complete and those which are subsequently withdrawn. This provides evidence that the market holds more information for the short-term prospects of the firm. In the short-term, those deals which successfully are consummated earn significantly positive abnormal returns while those deals which subsequently fail are punished with significant losses. Furthermore, at the time of the announcement of the deal being withdrawn, when the market receives confirmation of its earlier suspicions, the market further punishes these acquirers with further significantly negative abnormal returns. This suggests that insiders may have been responsible for the initial price decline of the acquirers. It appears that the market is overly optimistic about successful deals and maybe overly pessimistic about failed deals in the short-run, given the significant outperformance of the failed sample over the long-term.

Finally, we find that the sample of undervalued acquirers significantly outperforms the overvalued bidding sample. We also find that successful undervalued acquirers significantly outperform those undervalued acquirers which fail. In addition, the losses across the failed sample are the lowest for undervalued acquirers. This supports the proposition that

³ See Baker and Wurgler (2005) for a comprehensive survey of the Behavioural Finance literature.

undervalued acquirers benefit twofold – both from the upward revaluation of the firm and from the synergies on offer from the merger deal. We suggest that undervaluation is a stronger motive for merger activity in the UK as shareholders benefit at least from the revaluation of the firm, even if the deal fails.

We contribute to the existing literature in several ways. Firstly, we investigate the wealth effects of UK acquisition deals around the announcement of the deal and the date of effective completion/withdrawal. We find significant differences from established US findings. Savor and Lu (2009) find an economically and statistically significant outperformance of successful bidders to those which fail for acquisitions of public targets. We incorporate both public and private targets. Our results show that regardless of target status, whilst successful bidders may significantly outperform in the short-run, this does not transpire to the long-run. Overall, we find that shareholders endure negative impacts upon their wealth from UK merger activity. Secondly, we comparatively assess undervaluation and overvaluation as a motive for merger activity in the UK and find undervaluation to be more beneficial for shareholders of both successful and failed bidders in the long-run. Finally, we present evidence suggesting that the market successfully predicts the success or failure of a prospective deal at the announcement date.

The paper is organized as follows: Section II presents the existing literature pertaining to the wealth creation from merger activity. Section III outlines the dataset and methodological approach employed. Section IV reports the empirical results. Section V concludes the paper.

II. Literature Review

Neoclassical economics portrays managers as wealth-maximising agents acting on behalf of the shareholders they represent. Since the eighties however, much research has begun to question whether this proposition really holds true. With the increasing popularity of behavioural finance, theories such as the market timing hypothesis (Shleifer and Vishny, 2003), catering hypothesis (Baker and Wurgler, 2004) and hubris theory (Roll, 1986) emerged, employed as attempts to model a rational investor-irrational manager framework. With the separation of ownership and control, so came the conflicts between the two parties (Jensen and Meckling, 1976) as managers sought to satisfy their own personal needs.

In the early eighties, Jensen and Ruback (1983) clarified the existing studies on merger activity and compiled a summary of the empirical evidence-to-date. They presented the evidence in the framework of a Managerial Competition model. In this model, managers are perceived to compete against one another to gain control over the market's corporate resources. The target and bidder managerial teams compete against one another to gain/retain control of the targets resources. Managers are argued to be forced to work in line with the best interests of shareholders as poor performance would lead them to control fewer resources and thus risk the chance of being eradicated from the market due to the existence of competition. The evidence summarized focuses on the US market which finds that target firms gain circa 20% in mergers which successfully complete whilst bidders earn zero abnormal returns. However, if the deal does not successfully complete then targets earn insignificant losses (although these simply reflect drops to the pre-event level) whilst bidders significantly lose 5%. This is reasoned as proof of the worth of mergers as targets only significantly gain once control of their corporate resources has successfully been transferred to the bidding firm. Whilst the motivation for target firms to engage in mergers is clear in terms of the potential gains generated, it remains an anomaly as to why bidders continue to engage in such corporate activities when the documented highest gain from a merger is zero abnormal returns.

Recognising the lack of UK evidence, Limmack (1991) furthered the debate and investigated the UK market, examining the period 1977-1986. The work segments the data into successful and unsuccessful deals and examines the performance of each. Furthermore,

Limmack (1991: 239) also uses both the bid announcement date and bid outcome date to examine the impact of both upon the share price, reasoning that the latter more accurately captures the wealth effects from merger activity. The period of analysis is divided into various sections and we see Pre-Bid, Announcement to Outcome, Post-Outcome and Overall analyses. The evidence finds that in the run-up to the announcement of a merger deal, bidders earn statistically significant positive returns which are independent of the subsequent outcome of the deal providing early evidence that market conditions affect the timing of merger activity. There is a size effect present with larger bidders earning smaller pre-bid abnormal returns than smaller ones. For completed bids, bidders earn insignificant negative returns of -0.20% from bid announcement-to-outcome whilst those firms which see their deals finish unsuccessfully experience significantly negative wealth losses of -1.28%. Limmack (1991) rejects the information leakage hypothesis at this stage arguing that if it were true, we should witness positive performance of deals which complete, which does not hold. The negative losses mean that the pre-bid positive run-up is not a reflection of an information leak regarding the deal. In this way, one could view this as early evidence supportive of mergers as a result of market optimism on that back of recent positive performance. The negative reaction of the market to deals which fail introduces an anomaly as if successful deals are wealth-destroying, then those which fail should experience a favourable reaction upon the announcement of the deal. Referring back to Jensen and Ruback (1983), Limmack (1991) suggests that the unfavourable market reaction could be a reflection of the failure of the bidding manager in the competitive contest between target and bidder to gain control of the target's corporate resources. Interestingly, Limmack (1991) also finds that regardless of the outcome of a deal, bidders experience a downward drift in their returns post-event using a 24-month CAR. Losses of -14.87% are generally experienced. This is heightened to significantly negative losses of -20.23% for deals which are abandoned inferring that the market shows no mercy for "failure". The paper concludes with evidence suggesting that target gains are a reflection of wealth transfers from bidder to target shareholders.

The type of deal is also shown to be an important determinant of wealth effects in UK deals by Sudarsanam and Mahate (2006). Investigating 519 successfully completed deals, evidence is found that at the announcement date both types of acquirers (i.e. Friendly vs. Hostile) experience wealth losses of -1.5% and -1.9% respectively. Whilst the bid announcement period shows similar losses, in the long-run aftermath period, hostile acquirers are shown to produce significantly higher share price performance than their friendly counterparts, despite the associated higher levels of co-operation in the latter. The evidence suggests that in the UK market, bidders serve their shareholders better by engaging in hostile transactions than those of a co-operative friendly nature, despite the 'extra pain' incurred (Sudarsanam and Mahate, 2006: S27).

While the UK levels of gains over the long-run largely support the US evidence with downward drifts in bidding stock prices becoming apparent post-acquisition, the reasoning for such activity has been a predominant concern in the behavioural literature. One such theory pertains to stock-market driven acquisitions (Shleifer and Vishny, 2003). The theory writes that mergers are as a result of deviations away from the true intrinsic value of the firm – that is, from misvaluations. In this light, firms can become over- and under-valued (that is hold firm values higher and lower than they ought to be). Mergers are reasoned as vehicles in which rational managers attempt to capitalise upon these irrationalities of the market.

Savor and Lu (2009) provide US evidence supportive of overvaluation as a motive for mergers. They construct a sample of deals which do not complete, rather like Limmack (1991), but restrict the criteria for failure as being for reasons other than valuation changes in the acquirers stock price (Savor and Lu, 2009: 1061). This sample of deals which do not complete is used as a proxy of the performance of successful deals should their deals have not completed (Savor and Lu, 2009: 1063). If overvaluation creates value, then it is through

the use of overvalued equity. Managers use overvalued equity to purchase the hard assets of a target firm. This raises the value of the acquirer so that while the overvalued stock price falls, it does so to a new equilibrium firm value, higher than it previously was. It is found that unsuccessful stock acquirers are outperformed by successful stock bidders in both an economic and statistically significant manner (Savor and Lu, 2009: 1093), which is shown to increase as the holding period is increased (Savor and Lu, 2009: 1093). Therefore, supportive evidence of stock acquirers creating value through overvaluation is discovered. The use of overvalued equity does lead to negative long-run performance but this is to the benefit of existing shareholders as this is lower than what would have otherwise been experienced due to their firm's overvaluation.

Alternatively, Jensen (2004) wrote that mergers are actually a way for managerial teams to attempt to prolong the favourable mispricing of their firm – i.e. the overvaluation of the firm. This 'market fooling' story writes that managers attempt to 'fool' the market and do so through undertaking value-destroying projects. In this hypothesis, managers are not necessarily rational agents and do not benefit existing shareholders with their actions. The merger deal may not be wealth-maximising in the long-run but is undertaken so as to maintain the overvaluation of the firm in the short-run.

Conversely, Draper and Paudyal (2008) provide evidence of undervaluation as a motive for merger activity. Whilst undervaluation could relate to the acquisition of a 'cheap' target, Draper and Paudyal (2008) focus upon the acquirer. Investigating the impact of information asymmetry of a firm's value upon the bidder's gain, Draper and Paudyal (2008) examine the UK market for the period 1985-2003. They find that successful undervalued acquirers significantly gain circa 0.72% in their overall sample. The study shows that these gains are most pronounced on the announcement of the first deal in which the argument holds that the firm in question benefits from positive adjustments to their stock price sourced from the potential synergies on offer but also from the upward revaluation of the firm's value. Subsequent bids do not reveal the same amount of private information and thus the gains on offer from revaluation fall as the number of deals announced increases. The firm can only release news of its undervaluation once and does so in the first-deal. Thereafter, we see decreasing returns to the acquirer as the level of information relating to the firm becomes less and less the more deals which are undertaken. The merger is presented here as a vehicle in which firms can attract market attention to rectify the unfavourable misvaluation of their firm.

Whilst the literature for corporate finance is vast, the UK evidence is still minimal in relation to the knowledge we possess regarding the US market. In this work, we aim to rectify this and ask whether UK managers act in the best interests of their shareholders when they undertake a merger or acquisition. We investigate whether mergers in the UK act a way for managers to enhance the wealth of the principals they represent or simply serve as a way for managers to boost their own status and personal utility. Finally, we address the worth of misvaluation as a motive for UK activity and examine the performance of over- and undervalued bidders at both the announcement and outcome dates in the short and long-run periods.

II.1 Hypotheses Development

As noted, a predominant concern within the empirical analysis of late has been attempting to answer why M&A activity continues to grow given evidence documenting losses for the shareholders of acquiring firms. Alexandridis *et al.* (2010) examining a global dataset find that in the most competitive markets (US, UK and Canada) gains largely are enjoyed only by target firms whilst in the rest of the world the benefits on offer from M&A activity are shared between bidder and target. If this is true, then in the US, UK and Canada, bidders are in a disadvantageous position from the onset of a deal. The question remains therefore why

would a firm in either the US, UK or Canada still initiate a deal if it is documented that the gains will largely go to the target firm?

Savor and Lu (2009) have argued that value is created for bidding firm shareholders if successfully completed deals outperform those which fail. The outperformance is measured in terms of the favourable wealth effects enjoyed by the bidding firm shareholders. So, in other words, mergers are a value-creating corporate action if the returns to deals which succeed are higher than the returns to deals which fail. Even though both may invoke losses, the premise holds that we only require successful deals to outperform those which fail. If this is true, then merger activity benefits bidding-firm shareholders through providing higher returns. This leads us to the testable proposition: *If mergers are in the best interests of existing shareholders, then successfully completed deals should outperform those which subsequently fail.*

Furthermore, the literature provides motivations for merger activity driven by firm misvaluations (Shelifer and Vishny, 2003; Draper and Paudyal, 2008; Savor and Lu, 2009). US evidence finds that overvalued acquirers can create value through cushioning the collapse of a firm's stock price by acquiring the assets of a target firm. In this way, managers conduct mergers to raise the intrinsic valuation of their firm in order to lower the amount by which the stock price will fall once the market becomes aware of the firm's misvaluation. However, if the deal continues to fail then the managerial team will have failed to raise the intrinsic valuation of the firm but will still have signalled its overvaluation to the market. If overvaluation does indeed create value through the successful completion of the deal, then this leads us to the testable proposition: *Successful overvalued acquirers should outperform failed overvalued acquirers.*

Draper and Paudyal (2008) write that undervaluation is a motive for UK merger activity. The firm wishes to raise its valuation upward to its true level and does so through the revelation of this positive information to the market. One vehicle which can aid this quest is mergers and acquisitions. The announcement of a merger attracts the attention of the market which receives information signals realigning its viewpoint of the acquiring firm. Market participants revalue the firm upward to the benefit of the bidding firm shareholders who also benefit from the estimation of perceived synergies potentially to be unlocked upon deal completion. In this way, bidding firm shareholders benefit twofold during undervalued acquisitions. This leads us to the testable proposition: *If undervaluation benefits shareholders twofold through perceived synergies and upward revaluations, then successful undervalued acquirers should outperform those which fail.*

III. Data, Methodology and Summary Statistics

III.I Data

The key data utilised within this work is sourced from Thomson One Banker and Thomson DataStream. Information related to the characteristics of the deals analysed (acquirer name, target nation, deal number, announcement date, date of effective completion/withdrawal, payment methods, deal status, deal value and target status) are taken from Thomson One Banker. 63,967 deals were announced by UK acquirers between 01/01/1985 and 31/12/2009 of which 57,170 are flagged as succeeding and 1388 are flagged as having been withdrawn. We restrict the samples to the following criteria:

- The acquirer is a publicly-listed UK firm.
- The deal value is a minimum of £1m.
- The deal is not within the financials, utilities and government agencies sectors.

- Information relating to share price, market-to-book, price-to-earnings and market value data for the acquirer is available from Thomson DataStream.
- Payment-information is known (i.e. cash, stock or mixed).

Our main investigation is the performance of successful deals in relation to those which fail. Thus deal outcome plays a pivotal role within this work. We define a deal as being Successful if the acquirer gains control of the target – that is has a holding of 51% or above post-acquisition. We define a deal as having Failed as one in which the deal is withdrawn, as flagged by Thomson One Banker. In order to control for the possibility of hostile bids composing the majority of the Failed sample, we eliminate deals which are flagged as hostile to form a smaller sample for secondary analysis. Our final sample consists of 7639 Successful deals and 387 Failed deals. We can see from Figure 1 the cluster of M&A deals in the late-nineties. There was a larger majority of deals failing in the early-nineties.

[Insert Figure 1]

A secondary variable to be assessed within the empirical analysis is firm misvaluation. In order to identify which firms are overvalued (undervalued), we assess valuation changes using a twelve-month historical firm PE and a twenty-four month historical firm PE centred on the announcement month. We also additionally compute valuations based on a comparison between the firm PE and Market PE one month before announcement. If the PE ratio on the announcement month or pre-announcement month is higher (lower) than the twelve-month average/twenty-four month average/Market PE then the firm is deemed to be overvalued (undervalued). We use this information to construct overvalued (undervalued) portfolios for short- and long-run analyses for both samples. We report findings for the twenty-four month PE ratio although the results for the other two classifications are available upon request and largely serve to confirm our findings.

The study identifies key periods of ‘hot’ and ‘cold’ market activity within the UK in which it is believed that firms can become misvalued. It is posited that in ‘hot’ periods of economic activity, stock prices can become overvalued due to market inefficiencies which leads to stock-financed M&A deals, in accordance with Shleifer and Vishny’s (2003) predictions. Conversely, in ‘cold’ markets, stock prices can become deflated and potentially undervalued which can lead to cash-financed M&A transactions. It is our intention to discover whether this holds within the UK market whilst also assessing whether this leads to value creation for the shareholders involved. The sample-period has been classified into ‘hot’ and ‘cold’ months using the UK total market index PE ratio. We use a detrended PE ratio to classify our sample as hot and cold. If the current months PE ratio is higher (lower) than the preceding five-year average, then we classify the month as above (below) average. We then classify the top (bottom) half of the above (below) average months as hot (cold). Deals in these months are correspondingly classified as hot/cold.

As additional control variables, the literature notes the effects of bid-competition upon gain generation (De *et al.*, 1996). It is our belief that more research can be completed in this field in terms of testing the effect that such competition can have upon the bidding managerial team, who may indeed become embroiled in the competition of winning the bid, rather than retaining their rational opinion over the true target value. High premiums can ensue and lead to value-destroying actions for the shareholder group. A multiple bidder dummy will be used within multivariate analysis taking the value of 1 for those deals which involved more than one bidder for control of the target. Furthermore, as some acquirers are responsible for more than one deal within the dataset, we also construct a Frequent Bidder dummy (Doukas and Petmezas, 2007) which takes the value of 1 for those firms which are responsible for more than three acquisitions within the dataset to examine the evidence regarding the overconfidence heuristic.

Finally, commonplace control variables will also be used in multivariate analysis. From the literature these include relative size (Asquith *et al.*, 1983; Jensen and Ruback, 1983; Antoniou *et al.*, 2007; Kiyamaz, 2004), target status (Travlos, 1987; Chang, 1998; Draper and Paudyal, 2006), market momentum, method of payment (Travlos, 1987; Fishman, 1989; Linn and Switzer, 2001), glamour/value acquirers (Rau and Vermaelen, 1998; Sudarsanam and Mahate, 2003), domestic/foreign deals (Doukas and Kan, 2004) and diversified/focussed deals (Chatterjee, 1986; Morck *et al.*, 1990).

III.II Methodology

The performance of the acquiring firms is measured in terms of both the short-run and long-run abnormal return's (AR) generated by the M&A deal. The short-run analysis centres on a five-day window employing the Market Adjusted Abnormal Return approach (Seiler 2004; Brown and Warner, 1985) whilst the long-run is assessed using the Buy-and-Hold Abnormal Return (BHAR) approach favoured by Buchheim *et al.* (2001). The analyses aim to identify what the short-run market reactions are in terms of AR's generated before determining whether the short-run ARs transpire into long-run gains for the shareholder group.

The short-run analysis is conducted as an event-study with a window of five days (-2,+2) around the M&A announcement date. We calculate the normal returns of the firm using daily price index data as follows:

$$R_i = \ln\left(\frac{P_t}{P_{t-1}}\right)$$

Where R_i relates to the daily normal return of stock i while P_t and P_{t-1} refer to the stock price on day t and $t - 1$ respectively.

In determining short-run AR's, we note the abundant methods available (Sharpe, 1964; Lintner, 1965; Lyon *et al.*, 1999; Brown and Warner, 1985). Due to the restrictions of models such as the CAPM (Roll, 1977), we follow the guidelines of Seiler (2004) who writes that AR's are defined as anything earned above the market return each day so that the expected return of a stock is assumed to be that earned by the market (Seiler, 2004: 220). This market adjusted AR approach is in line with Brown and Warner (1980) so that AR's are the excess stock return adjusted for the market over the sample period (Buchheim *et al.*, 2001: 22). With this in mind, the normal returns of the stock (R_i) must have the normal market return (R_m) deducted in order to generate the AR on each of the five day's as follows:

$$AR_i = R_i - R_m$$

Where

$$R_m = \ln\left(\frac{P_t}{P_{t-1}}\right)$$

relating to the normal market return calculated using the daily price of the FTSE Allshare over the sample period. The AR's are then adjusted for the risk-free rate and are summated to give the cumulative AR (CAR) as follows:

$$CAR_i = \sum_{i=0}^n AR_i$$

Given the role the market is posited to play in potential firm misvaluation, we believe this model to be particularly appropriate in determining the AR's to be analysed through allowing

for us to see whether stock returns move in line with the ups and downs of the market. Additionally, this approach is simple to comprehend and employ (Buchheim *et al.*, 2001: 22).

Short-Run univariate analysis will involve the above process for each portfolio of M&A deals. Their characteristics will be analysed in terms of the descriptive statistics based on the portfolio CAR's before we compute the portfolio t-value, again based upon the portfolio CAR in line with event-study guidelines provided by Seiler (2004). T-statistics are computed using the conventional formula:

$$t = \frac{\overline{AR}_T}{\sigma(AR_T)/\sqrt{n}}$$

Where \overline{AR}_T refers to the sample mean and $\sigma(AR_T)$ to the 'cross-sectional sample standard deviation for the sample of n firms' (Lyon *et al.*, 1999: 173).

In assessing acquirer long-run performance, we take heed from Fama (1998) who notes that different methodological approaches produce different results for long-run AR's so that testing in effect becomes a one over the choice of econometric model rather than a direct test of the study at hand (Fama, 1998: 293). The assessment of various events with different models is noted often to eradicate the existence of an anomaly (Fama, 1998: 293). Choosing the correct model is therefore imperative.

To combat problems associated with long-run analysis and the noted bad-model problem (Fama, 1998), we intended to employ the use of two well-known long-term approaches – the BHAR approach and the Calendar-Time Portfolio approach (CTPA). However, upon implementation of the CTPA, we encountered a number of problems with the Failed sample due to its smaller size. Fama-French Three-Factor regressions had to be conducted over various smaller sample periods raising questions over the validity of the results. This is because whilst smaller regressions were conducted for the Failed samples, the Successful sample, due to its larger size, experienced no such issues and thus there is a question over our ability to reliably compare such sample results given the different periods assessed. In this way, the discussion of long-run acquirer performance will be analysed in terms of the BHAR approach. It is recognised that the introduction of extra failed acquirers with extensions into a pan-European study will reduce these problems faced and as such we bear these issues in mind for future research.

The BHAR approach employed measures 'the difference between the compounded actual return and the compound predicted return' (Buchheim *et al.*, 2001: 28) and is calculated as follows:

$$BHAR_{it} = \prod_{t=0}^T [1 + R_{it}] - \prod_{t=0}^T [1 + R_{mt}]$$

Where R_{it} and R_{mt} refer to the arithmetic returns including dividends on security i and the FTSE Allshare capitalisation-weighted index respectively at time t . For statistical significance, we use the conventional t-statistic as outlined above. We report results for a thirty-six month holding period but also compute twelve- and twenty-four month BHAR's which serve to confirm our results. These are available upon request.

The BHAR approach itself is well-used within recent literature and is the advocated methodology for long-term return analysis by Lyon *et al.* (1999) who argue that it provides an accurate measure of the AR's experienced by an investor (Lyon *et al.*, 1999: 198). However, Fama (1998) argues that long-run BHAR's suffer from compounding expected-return's and

their associated problems from short-run analysis. Furthermore, BHAR's can produce a statistically significant result even when none is present due to the effect of short-run movements (Buchheim *et al.*, 2001: 28). The possible positive-skewness problem can yield potentially misleading results and thus may cast doubt over the efficiency of the output generated from statistical analysis.

We intend to robustly check our results through calculation of a Bootstrapped T-Statistic also. This statistical method has gained prominence within the literature as research began to criticise the potential skewed-distribution problem of the BHAR approach (Barber and Lyon, 1997). We calculate the BSA t-statistic as follows:

$$t_{sa} = \sqrt{n} \left(S + \frac{1}{3} \hat{\gamma} S^2 + \frac{1}{6n} \hat{\gamma} \right)$$

Where

$$S = \frac{\overline{AR_T}}{\sigma(AR_T)}$$

And

$$\hat{\gamma} = \frac{\sum_{i=1}^n (AR_{iT} - \overline{AR_T})^3}{n\sigma(AR_T)^3}$$

This statistic has been shown to reduce Type 1 errors within empirical analysis - that is it corrects for occurrences when the methodological approach over-rejects the data and thus incorrectly rejects a true null hypothesis (Barber and Lyon, 1997).

BHAR's do accurately reflect the effect of a particular corporate event upon the investor and their holdings (Buchheim *et al.*, 2001: 28) and it is for this reason that they are utilized for assessing the long-run performance of UK acquirers.

In order to ensure the reliability of the results produced, robustness checks for the short-run have been conducted. The short-run window has been shortened from five-days to three-days to further assess the impact the M&A announcement has upon the gains created. We report 5-day CAR's and find 3-day CAR's support our findings⁴.

Once short-run and long-run univariate analysis has been complete, we conduct multivariate analysis to examine the causation factors explaining the reactions of the market reflected in the acquiring firm's share prices. Univariate analysis fails to allow for the interaction of alternative variables upon acquirer's gains and for this reason we extend our analysis to model such interactions (Draper and Paudyal, 2008).

We model 5-day CAR's and 36-month BHAR's in the following multivariate framework:

$$\begin{aligned} CAR_i/BHAR_i = & \alpha + \beta_1 DOM_{it} + \beta_2 PUBLIC_{it}(PRIVATE_{it}) + \beta_3 CASH_{it} + \beta_4 HOT_{it} \\ & + \beta_5 OVERVALUED_{it}(UNDERVALUED_{it}) + \beta_6 FAILED_{it}(SUCCESSFUL_{it}) \\ & + LOG(MV)_{it} + LOG(MTBV)_{it} + \varepsilon_{it} \end{aligned}$$

Within this model, the intercept term reflects '*everything after controlling for the effects of all explanatory variables*' (Draper and Paudyal, 2008: 395). The explanatory variables denoted include various factors we believe may help explain the returns generated. The variables are as follows:

⁴ Robustness checks are available upon request.

- DOM_{it} is a dummy variable representing domestic acquisitions and takes the value of 1 if the target is located in the UK.
- $PUBLIC_{it}$ is a dummy variable which represents the target status and this takes the value of 1 if the target is publicly listed on an exchange.
- $CASH_{it}$ is a dummy variable which represents cash-financing and takes the value of 1 if the deal was financed using 100% cash.
- HOT_{it} is a dummy variable representing the market conditions and this takes a value of one if the market is deemed to be 'hot' in the announcement month of the deal.
- $OVERVALUED_{it}(UNDervalUED_{it})$ is a dummy variable which represents the valuation of the acquirer. This takes the value of 1 if the acquirer is deemed to be overvalued (undervalued) using a historical 24-month PE ratio. If the announcement month PE of the firm is higher (lower) than the historical average then the firm is deemed to be overvalued (undervalued).
- $FAILED_{it}(SUCCESSFUL_{it})$ is a dummy variable which takes the value of 1 if the deal in question fails (succeeds) as defined earlier.

III.III Summary Statistics

[Insert Table 1 – Summary Statistics]

Table 3 depicts the summary statistics for Successful and Failed acquirers. For Successful acquirers we see an average market capitalisation of £1226.54m. For Failed deals, we see acquirers are much larger with an average market value of £3406.32m. Most notably, we witness much larger MTBV's for Successful acquirers than Failed ones, with large figures for value acquirers attempting to conduct a focussed acquisition (that is, an acquisition of a target operating within the same industry). This suggests that maybe Successful acquirers are more overvalued than their Failed counterparts. There appears to be a large majority of Successful deals completed using cash being undertaken in hot markets with Failed deals additionally also having slightly more cash-deals than stock.

Our third proposition is refuted here. Instead of finding more stock deals in hot markets, we find an overwhelming majority of cash-deals supportive of Faccio and Masulis (2005) evidence showing the larger majority of cash deals conducted by a UK bidder. However, cash deals do have the lowest MTBV figures for the method of payment portfolios which suggests that valuation may not play a major role in the choice of deal-financing. Cash-acquirers are depicted as larger than stock-acquirers in Table 1 for both samples and maybe they benefit from the ability to generate and source more cash-financing.

We can see that on average for private targets, Successful acquirers are 18% of the size of their counterparts conducting public acquisitions. For Failed deals, private acquirers are 26.8% the size of public acquirers. Whilst private targets are smaller relative to the acquirer in Successful deals compared to public targets, this does not hold in Failed deals where public targets are smaller. This suggests that relative size plays an important role in determining the success or failure of a given deal.

Not surprisingly, we see a much larger time interval in deals which are subsequently withdrawn (107 days) as compared with those that succeed (27 days). Failed deals could fail for a number of reasons such as changed regulation, competing offers, falling valuations, repellent strategies amongst others. It could be the case that the longer a deal is taking to complete, the stronger the indication that the deal may fail. This, coupled with the presence of competitive bids, may explain the reason for deal failure. This will be investigated in our multivariate analysis.

IV. Empirical Results

IV.1 Short-Run Results

The EMH (Fama, 1965; 1970) writes that the market should not be able to use any information, past or present, to be able to predict the movement of stock prices. With this in mind, then at the time of deal announcement, the market should not be able to distinguish between deals which succeed and those which will subsequently fail. In other words the market should not be able to predict the outcome of the deal.

[Insert Table 2]

Instantly, we can see from Table 2 that the market certainly distinguishes between the two samples at the announcement of the deal. Successfully completed deals enjoy positive gains at the announcement of the deal. The market positively receives these prospective mergers and rewards the acquirer with 1.16% significant gains (p value = 0.0000). Conversely, the announcement of Failed deals generates a negative market reaction and these acquirers suffer significant losses of -0.72% (p value = 0.0000). These results hold across the method of payment. In line with the existing literature we witness largely significant losses for public deals regardless of deal status.

Examining the market's reaction to Failed deals, we can see that the announcement of such deals is always negatively received by the market indicating that the market may be anticipating the deal to fail. It may be the case that the market has superior information relating to the characteristics of the deal or indeed the nature of the deal (i.e. hostile bids) could be an explanatory factor.

In the short-term, the evidence suggests that the market *can* distinguish between whether a deal will succeed or fail. These results are surprising as they suggest that the market can foresee the failure of a deal. It could be explained that for Successful deals, the date of announcement and the effective date of completion are sometimes the same dates. However, when we examine the reaction at the time of effective completion for Successful acquirers (that is the date at which the deal is announced as having completed), these firms enjoy further gains of +0.68% whilst Failed acquirers are further punished with heavier losses of -1.98%. The negative reaction at the announcement of deal withdrawal suggests that the market would have preferred for the deal to have succeeded which contradicts the interpretation that the market perceives the deal to be bad at the time of announcement. As Limmack (1991) argues, if the deal in question is bad then the market should reward the withdrawal with a favourable reaction. This is not witnessed and so this interpretation can be rejected.

For private target acquisitions, both samples perform better with gains of +1.23% for Successful deals and losses of -0.43% for Failed ones, in comparison with stock price adjustments of -0.33% and -1.36% for public acquisitions respectively. This is supportive of prior literature which finds that private targets generate higher returns for bidding firms than those of public due to the higher informational asymmetry involved in such deals.

As noted earlier, Savor and Lu (2009) write that merger deals are worthwhile for existing shareholders if those which succeed outperform those which don't. Furthermore, those which are overvalued create higher value through reducing the amount by which their overvalued stock will fall once the market adjusts the firm towards its true valuation. While successful overvalued deals reveal information regarding their overvaluation to the market, these acquirers raise the value of their hard assets and thus raise the intrinsic valuation of the firms so that while the adjustment still takes place and continues to impose a downward pressure on the stock price of the firm, it does so to a lower degree. Conversely, failed deals

reveal their overvaluation but subsequently do not raise the intrinsic level of the firm's value. In this way, successful overvalued acquirers should outperform failed overvalued ones. Together, these formed our first two propositions.

We can see from Table 2 that in the short-run, successful acquirers do significantly outperform at the 1% level those which fail to complete their proposed deal by 1.89%. This significant outperformance holds for private deals and continues at the announcement of deal completion/withdrawal as can be seen in Table 2 with a further outperformance of 2.66% (p value = 0.0000). In this manner, UK deals do appear to create value for shareholders through successful execution in the short-run.

[Insert Table 3]

[Insert Table 4]

Furthermore, both successful overvalued and undervalued acquirers outperform in the short-run significantly as can be seen from Table's 3 and 4. Successful overvalued acquirers outperform by 1.32% (p value = 0.0011) for the full samples and this increases to an outperformance of 1.62% when acquiring a privately-held target. In the short-term, evidence in support of M&A value creation is thus found.

Previously, we proposed that introducing asymmetric information into the analysis can contribute further to examining the power of the method of payment in conveying the relative valuation of the acquirer to the market. In our final proposition, we posited that undervalued acquirers which successfully complete a deal should outperform those which are undervalued and fail to consummate their merger. This is because the successful undervalued firm benefits from both synergies and upward revaluations whilst failed undervalued bidders benefit only from the latter. The attention of the market upon the firm brought about through the merger deal allows for information to be disseminated to the benefit of bidding firm shareholders who currently hold undervalued stocks.

Table 4 shows that successful undervalued acquirers do significantly outperform those undervalued acquirers which fail by 1.92% (p value = 0.0020). However, the losses across the failed sample are the lowest for undervalued acquirers, with downward movements of -0.54% (p value = 0.3650). This supports the proposition that undervalued acquirers benefit twofold and an indication is given supporting undervaluation as a motive for UK merger activity.

Whilst the outperformance of successful deals over those which fail is slightly lower for undervalued acquirers than overvalued acquisitions, this is largely due to an increased performance of Failed deals. Successful undervalued acquirers experience significant gains of 1.37% (p value = 0.0000) at the announcement of their deals outperforming the announcement gains of overvalued ones by 0.68%. This confirms Draper and Paudyal (2008) who find that undervalued acquirers initiate merger deals to attract the attention of the market which rewards these firms with significant upward movements in their stock prices as the result of the revaluation of these firms as well as the proposed synergies available from the merger.

At the time of the completion or withdrawal of the deal, successful overvalued acquirers continue to outperform significantly. Those using cash outperform by 19.46% (p value = 0.0372) as a result of significantly poor returns (-17.05% with p value = 0.0631) to those acquirers which intend to use cash but fail. This is also true for the undervalued sample where, despite being undervalued, the market still punishes these acquirers for failing to secure the success of their deals with a significant underperformance for those which do of 1.92% (p value = 0.0020).

In the short-term we also find that successful undervalued acquirers using cash significantly outperform those which are classified as overvalued and use stock by 9.06% (p value = 0.0736) at the time of deal announcement. Furthermore, this outperformance continues at the announcement of the success of the deal and we see undervalued cash acquirers earn 10.02% (p value = 0.449) more than their overvalued stock-acquiring contemporaries. This supports the informational content of the choice over the method of financing and rejects the US story of market-timing.

Overall, we can see that the short-run results indicate that value is created by successful acquirers. The market reacts favourably to the announcement of deals which subsequently complete and this is to the benefit of bidding firm shareholders. The real impact upon shareholders is whether or not these short-run gains transpire into long-run positive wealth changes. We now present long-run results.

IV.II Long-Run Results

The true test of whether a firm has created value through conducting a M&A deal is primarily revealed in the long-run once the market has adjusted for all short-term reactions and has been able to effectively view the success of the combination in question. Whilst we witnessed significant outperformance of successful deals in the short-run and could infer that value creation occurs, we can see in Table 5 that this finding does not hold in the long-run with a dramatic reversal being witnessed. Those deals which subsequently do not complete significantly outperform those which complete across all samples.

[Insert Table 5]

For the full samples, we witness from the time of deal announcement a significant underperformance of -45.44% (p value = 0.0100) for those acquirers using stock. Whilst this figure is reduced for private deals, we still see poor performance for successful acquirers of -24.63% (p value = 0.0007). Again, the losses involved for acquirers successfully completing using stock when financing a private deal are substantial with losses of -63.19% (p value = 0.0000). Whilst failed acquirers also lose in the long-run (-16.06% with p value = 0.0012), they do so to a lesser extent and therefore outperform those which complete. From the time of deal completion or withdrawal, the results are fairly similar to those witnessed from deal announcement. We see significant losses of -24.39% (p value = 0.0000) for successful deals and -16.78% (p value = 0.0008) for failed deals.

These results markedly contrast US findings. Savor and Lu (2009) study public deals and find that successfully completed deals outperform those which fail. They take this evidence as indication that merger activity benefits bidding firm shareholders. However, when we transpire the analysis to the UK, we find this does not hold. As noted, a large amount of UK deals involve the acquisition of an unlisted target. Once private deals have been taken into consideration, the wealth changes do not hold in the long-run. It could be the case that there is increased informational asymmetry regarding these target firms which prevents the market and its participants from being able to correctly value the synergies available through the deal.

Furthermore, the evidence suggests that at the time of the deal announcement or completion, the market overreacts to those which succeed which results in a severe negative underperformance of these acquirers in the long-term as the market corrects its over-optimism. The reversal we see would therefore be as a result of an overreaction at the time of announcement in the short-run. For example, overvaluation should result in a fall in the firm's share price and yet we witness in the short-run that successful overvalued acquirers gain. The market therefore initially further inflates these companies share prices before

reducing them in the long-run. However, this further inflation at the time of deal announcement/completion leads to higher losses in the long-run. We posited that if value is created, successful acquirers should outperform failed ones. Our univariate results suggest the opposite and the puzzle as to why firms acquire still remains open.

[Insert Table 6]

When we examine the overvalued deals in the long-run, we can see in Table 6 that successful acquirers once again significantly underperform those deals which fail by 14.14% (p value = 0.0392). Whilst this also holds for private-target acquisitions, we do witness outperformance in public deals for those which successfully complete of 9.35% however this is insignificant (p value = 0.4105). Concentrating on those deals which successfully complete, we witness significant losses across all categories in Table 6. This does not instantaneously disprove the market-timing theory favoured within the US. As noted by Savor and Lu (2009) losses in the long-run are to be expected. Overvalued acquirers *will* lose in the long-term because the market will correct its mistake and adjust the firm's value downwards. However, the losses to be incurred are expected to be *lower* than those deals which fail. We do not find this to be the case however and so the evidence appears to suggest these deals completing are not in the best interests of the shareholder group in the long-term. We therefore reject the US evidence with the finding that in the UK, merger activity does not benefit bidding firm shareholders.

In fact, focussing upon deals which fail, Table 6 shows us that failed cash-acquirers and failed stock-acquirers gain in the long-run, albeit insignificantly. It shows that from the announcement of the failure of the deal, those which are deemed overvalued if acquiring using a mixture of cash and stock, significantly gain 1.45% over the longer-term (p value = 0.0850).

[Insert Table 7]

Table 7 shows us that this negative performance of successful deals is not just confined to those which are overvalued. We still see significant losses across the undervalued sample, with an average loss for the whole sample of -7.79% (p value = 0.0000). Whilst these losses are significant, we do see a marked improvement for undervalued acquirers when comparing them to those which are overvalued. In fact, we find that successful undervalued acquirers significantly outperform those which are overvalued by 17.56% (p value = 0.0000). This is also true from the announcement of the completion of the deal where we see a significant outperformance of 17.56% (p value = 0.0000). This suggests that whilst overvaluation leads to an incentive for firms to transfer wealth from new to existing shareholders, in the long-run, the shareholders of those which acquire when their firm is undervalued produce better results.

Overall, we can see that the results indicate that whilst in the short-run, over-optimistic market reactions create shareholder value for the bidding firm, this does not transpire to the long-run. Value is destroyed in the long-run with failed deals outperforming those which succeed. This finding strongly contrasts US evidence and leads us to investigate the role of each factor further. We now conduct multivariate analysis to help examine further the relationship between the returns generated and known explanatory factors.

IV.III Multivariate Analyses: Model Specification

While the evidence gathered above strongly supports the notion that UK merger and acquisition activity tends to destroy value for bidding firm shareholders, the determinants of these results are unknown. In order to investigate the relationship between the returns experienced and various explanatory factors, such as acquirer size (Moeller *et al.*, 2004),

deal outcome (Jensen and Ruback, 1983; Limmack, 1991), target status (Chang, 1998), method of payment (Travlos, 1987) and so forth, we must conduct multivariate analyses to further examine the causation factors behind the wealth changes experienced within the UK merger market.

Earlier, we wrote that if UK mergers create value, then those deals which succeed should outperform those which fail in terms of the gains generated. The univariate results indicated that this proposition does not hold. The failed sample was shown to outperform the successful one in the long-term. The results indicated that a reversal occurs between the short and long-run. Those deals which succeed generate higher returns than their failed counterparts in the short-run but progress to generate significant wealth losses in the long-run. This evidence implied that the market overestimates the potential synergies on offer in the short-term. Once the company fails to realise the benefits of the deal as perceived by the market, shareholders lose out and this is reflected in the long-term underperformance of deals which successfully complete.

To explore these results further we regress the returns from the short and long-run against a series of independent variables proven within the existing literature to be influential in terms of a bidder's performance during and after a M&A deal. In all regressions, the main explanatory variables used are deal outcome and valuation. The deal outcome is measured with a (0, 1) dummy where the dummy takes the value of 1 if the deal has Failed. Earlier, we might have expected a negative relationship between deal failure and the returns generated. However, the univariate results suggest that in the UK, failed deals outperform those which are successfully consummated. Because of this, we expect to see a positive relationship between the deal failing and the returns experienced.

In terms of valuation, we classify the samples as overvalued and undervalued as earlier. Each deal classified as overvalued takes a value of one in the regressions which include the overvaluation variable. Because not all value information is known to classify each deal in terms of the valuation, we also run separate regressions including an undervalued dummy, classified in the same manner as earlier, which takes the value of one if the deal is correspondingly undervalued. We expect to see a positive relation for undervalued deals and a negative relationship for overvalued deals given the univariate result. This would serve to reinforce our view that undervalued-bidders would better serve their shareholders through conducting M&A activity as opposed to those bidders which are overvalued.

We run a series of regressions where the dependent variable changes. We maintain the same independent variables for ease of comparison. For the short-run we model 5 day CAR's around the Date of Announcement (DA) and Date of Deal Outcome (DO). The long-run analysis models the 36 month BHAR's from the Announcement month (DA) and the Outcome month (DO). Independent variables relate to the target nation (domestic/foreign - where domestic takes a value of 1, 0 otherwise), target status (public deals take a value of 1, 0 otherwise), method of payment (cash takes a value of 1, 0 otherwise), market conditions (hot deals take a value of 1, 0 otherwise), deal outcome (failed deals take a value of 1, 0 otherwise) and the logarithm of the acquirer market-to-book value one month prior to deal announcement (Log MTBV). We also control for acquirer size using the logarithm of the market value of the acquirer one month before deal announcement (Log MV).

IV.IV. Multivariate Results

[Insert Table 8]

Table 8 reports the multivariate results. In regressions (1) to (4) we model the dependent variables upon our control variables and the dummy for overvaluation. In regressions (1) and (2) we model 5 day CAR's around the date of announcement (DA) and date of deal outcome

(DO) respectively. After controlling for known effects, we find there to be a positive and significant relationship between deals which fail (Failed dummy) and the returns generated providing further support for our univariate findings. Furthermore we witness positive and significant coefficients in the long-run also in models (3) and (4) where the dependent variables are the 36-month BHAR for the date of announcement (DA) and date of deal outcome (DO) respectively. This reinforces the finding that UK deals do not create value for the shareholders involved and in fact, these firms would be better placed if their deals were to fail than complete.

Reaffirming the univariate findings, we find acquirer overvaluation to have a significantly negative impact upon wealth creation across models (1) to (4). This provides evidence that regardless of the success or failure of the deal, an overvalued firm does not provide substantial benefits to the shareholders within the UK through timing and undertaking a merger deal to capitalise on the favourable mispricing. Confirming this find, we find undervaluation has a significantly positive effect in models (5) to (8). Evidence is thus provided supporting the notion that undervaluation is more beneficial for shareholders than overvaluation. As in the univariate analysis, undervaluation is shown to be a stronger and more reasonable motive for activity within the UK.

Consistent with prior literature, we find acquirer size to negatively impact upon gains in the short-run with significantly negative coefficients on the Log (MV) variable. However, this effect reverses in the long-run where we witness a significantly positive effect on the BHAR's. In addition, we find public deals to have a significantly negative effect on wealth creation in models (1) and (5). However, this effect is no statistically different from zero in the remaining models.

Travlos (1987), furthering the work on information asymmetry, showed that method of payment is an important determinant of shareholder wealth effects. Stock- financing signalled to the market that the firm was overvalued whilst cash signalled firm undervaluation. The results here provide further proof that method of payment is a significant factor in generating returns for shareholders. The results display positive and significant cash coefficients in models (1), (3), (4), (7) and (8).

However, as noted earlier, many UK deals are financed using cash and relate to private acquisitions. We now present results with restricted samples to test the robustness of our results in light of these characteristics.

IV.V. Private Acquisitions

Since Myers and Majluf (1984) introduced a more thorough application of informational asymmetry to the financial world, much research ensued to garner its worth within corporate finance. Travlos' (1987) seminal work introduced the informational content inherent within the method of payment used to finance projects, such as mergers and acquisitions. It was widely accepted that the use of equity to purchase a target signalled to the market that the bidder was overvalued. Conversely, the use of cash conveyed the undervaluation of the acquirer. However, the story was not fully complete until Chang's (1998) explorations into the informational content of private-target acquisitions. Unlisted targets were shown to have different characteristics than publicly held companies. Whilst the market generally holds various pieces of information about a public target, it does not for a private one and this leads to high asymmetry. In these scenarios, Chang (1998) found that equity-financed acquisitions of privately-held firms did not lead to the same wealth destruction as witnessed in public-acquisitions. Instead, equity-financed acquisitions of private targets signalled positive information. The story read that the privately-held target owners, which were usually a select few, were privy to the private information of the acquirer. If the owners accepted stock then it conveyed that the private information they had received was positive so that

they had been convinced to keep a stake in the combined enterprise, even at the expense of perhaps losing their controlling position.

An interesting feature of the UK market is that most deals relate to the acquisition of a privately-held target. Doukas and Petmezas (2007) report that 91% of UK deals involve the purchase of an unlisted target. In our sample, circa 60% of the deals involve the acquisition of a private target. In this way, cash payment may not necessarily reflect the same gains as witnessed overall due to the changing informational content. Furthermore, with less information regarding the target, we may witness positive relations between successful deals and the overall wealth creation.

[Insert Table 9]

Table 9 reports the results for the sub-sample of acquisitions of privately-held targets. Despite concerns, the results largely serve to further support our earlier findings. We find that overvalued-bidders still do not create value in the long-run. Whilst the short-run overvalued dummy loses its significance as can be seen in models (1) and (2), the signs still remain negative. Furthermore, we still find significantly negative coefficients in the long-run in models (3) and (4). Serving as further reinforcement of the univariate results, the coefficients for the Failed dummy still display a significantly positive relationship between the deal failing and the returns generated in models (1) to (4). It still remains the case that failed deals, regardless of target status, have a better impact for acquirer performance than deals which succeed. The significantly positive relationship across all models in both Tables 8 and 9 indicates that acquirers would be better off if their deals failed than if they succeeded.

This result strongly contrasts the US evidence. Savor and Lu (2009) find that successfully completed deals outperform both statistically and economically significantly those deals which fail in both the short and long-run. However, our results show that in the UK firms do not create value through mergers and acquisitions and actually, would be better placed if their firms fail in their bid than if they succeed. This maybe serves as another form of winner's curse. The debate over why UK firms still continue to initiate merger deals therefore still remains open with the anomaly presently unanswered.

IV.VI Cash Acquisitions

Cash deals have largely been considered to convey the most positive information about an acquiring firm. Myers and Majluf (1984) showed that a firm will use cash to finance an investment project if it believes itself to be undervalued. The firm will not wish to raise external funds through an equity issued as this would further drive down the price of the firm's shares. In this way, cash is the most optimal way for the firm to signal its undervaluation and conduct its investment.

Draper and Paudyal (2008) write that undervalued bidders have an incentive to conduct mergers so as to raise the profile of their firm and attract the attention of the market. Through doing, the firm becomes re-valued to its true level and shareholders benefit two-fold – through the upward revaluation of the firm and through the potential synergies from the deal perceived by the market.

As mentioned earlier, the UK has another unique characteristic in that the deals conducted involve 100% cash-financing, or if mixed-financing is employed, high levels of cash are preferred. The anomaly remains open as to why. However, this feature could cause a bias in our results. Because of this, we run regressions for a restricted sample containing only those deals financing solely using cash. This amounts to 3154 deals in total.

[Insert Table 10]

We find that the earlier findings are once again supported further reinforcing that regardless of method of payment, our results hold true. The overvalued dummy, reflecting deals financed using cash but of which the bidder has been classified as overvalued, displays significantly negative coefficients across models (1) to (4) once again showing that overvaluation within the UK does not have the same positive effects as witnessed in the US. Furthermore, undervalued cash-acquirers are shown to once again exert a positive impact on return generation in models (6) to (8) with significantly positive coefficients for the undervalued dummy.

As has been found in all multivariate analyses, the Failed dummy continues to remain significantly positive across all models, both in the short- and long-run. With these robust results continuing to hold, it can reasonably be concluded that failed deals outperform within the UK and bidders would be best served to attempt acquisitions in periods of undervaluation where market attention can raise the firm value upwards to its true level.

Additionally, we find support for prior literature in our control variables. In model (1), where we regress the 5 day CAR for cash deals around the date of announcement, we find a positive relationship between return generation and public deals. This supports the literature in that cash-financing is positively received signalling favourable information about the target. Furthermore, we also find a significantly negative relationship between acquirer size and bidder returns as found earlier in the full results.

IV.VII Robustness Checks

We conducted a series of robustness checks to ensure our results held true when put under various constraints. Our first two robustness checks included those mentioned above – the analysis of restricted samples relating to privately-held target acquisitions and those deals where the method of payment used was cash. Despite these two constraints, the results remained largely unchanged with the key findings still holding true – that is, that overvalued acquisitions invoke a negative impact upon wealth creation in the UK and failed deals outperform those which succeed in a statistically significant positive manner.

Further checks were performed in which we used a three-day window for the short-run and a twenty-four month holding period for the BHAR used in our long-run analysis. The outcome further supported our findings and these results are available upon request.

V. Conclusion

This paper examines the proposition that successfully completed deals outperform those which subsequently fail and in doing so create value for the shareholders involved. Savor and Lu (2009) examine this hypothesis through comparatively assessing deals which complete against those which fail for exogenous reasons (that is, for reasons beyond the control of the firm) and find that overvalued acquirers create value through successfully completing their deals. We extend their work and incorporate foreign and unlisted targets while examining the UK. The key characteristics of the UK market (cash-financing and unlisted targets) lead us to investigate whether value is created in this market.

We predominantly try to address why mergers continue to feature as a major corporate event especially given the well-documented losses involved (Jensen and Ruback, 1983; Mueller, 1985; Loughran and Vijh, 1997; Fuller *et al.*, 2002; Antoniou *et al.*, 2007). We reason that if mergers are in the best interests of shareholders then those which successfully complete should outperform those which don't ('failed' deals). We find that in the short-run, successfully completed deals significantly outperform those which don't by 1.89% (p value = 0.0000). This outperformance holds across method of payment and for overvalued and

undervalued acquirers. The superiority of successful deals in the short-term is also true at the time of the effective completion/withdrawal of the deal. We can conclude that due to favourable market reactions to deals which complete, value is created for shareholders in the short-run. The market can reasonably forecast the future short-term prospects of the firm and thus rewards deals which complete to the benefit of bidding firm shareholders.

However, this does not hold in the long-run and we see that successful deals significantly underperform by a large margin with losses of up to -45.44% (p value = 0.0100) for those using stock for example. This suggests that the market is overoptimistic at the announcement of the deal and we see a large reversal in the long-run to correct for its mistake. The fact that value is destroyed within the long-run strongly contradicts US evidence and still leaves open the question of why firms still engage in merger activity. Short-term compensation plans may be the root cause and we offer this as a possible route for further research.

We also conjectured that if the market-timing hypothesis holds then successful overvalued acquirers should outperform failed overvalued acquirers. This is largely reasoned as due to the revelation of private information revealing to the market the fact that this firm is overvalued. While the intrinsic valuation of successful acquirers is raised through the addition of new assets during the merger combination, failed acquirers do not receive this cushion. In this way, they reveal their overvaluation to the market but do not benefit from lowering the losses to be incurred through the failure of the proposed merger deal. We find in the short-term, failed overvalued acquirers do significantly underperform those which succeed, particularly when using cash (-19.46% with p value = 0.0372). This suggests that through using cash in the short-term, the market does not receive an 'overvaluation' signal as such and the firm enjoys stock price increases. However, once again, this superior performance is confined to the short-run. In the long-run we witness significant underperformance of successfully completed deals by failed overvalued acquirers of -14.14% (p value = 0.0392). This suggests once again that in the long-run, shareholders do not benefit from overvalued acquisitions. Overvaluation does not create value in the long-run as it does in the US and the evidence fails to support this as a plausible motive for UK activity.

Our final proposition addressed the worth of undervaluation as a motive for UK merger deals. We documented Draper and Paudyal (2008) who write that undervalued firms have a motive to attract the attention of the market in order to raise the value of the firm to its intrinsic level. One vehicle which garners the attention is via the announcement of a merger. We reason that if this is true, then undervalued firms which successfully complete their merger deal should outperform those which fail due to benefitting from both upward revaluations as well as potential synergies. Furthermore, the failed undervalued sample should see the lowest failed losses because of benefitting at least from attracting the market's attention. We find support for both of these hypotheses. We find that successful undervalued acquirers do significantly outperform in the short-run but once again this does not hold in the long-run. Nevertheless, failed undervalued bidders provide the lowest losses in the long-run when compared with the full failed sample and the failed overvalued sample and provide support for at least the positive upward revaluation of the firm. In this way, undervaluation appears to hold the strongest motive for merger activity in the UK.

To summarise, this work finds that UK bidders destroy value in the long-run. Undervaluation is shown to hold the most worth in explaining UK merger activity but nevertheless, losses are still incurred. It seems apparent that UK firms would be better placed to use mergers as a way of attracting the market's attention only in undervalued periods.

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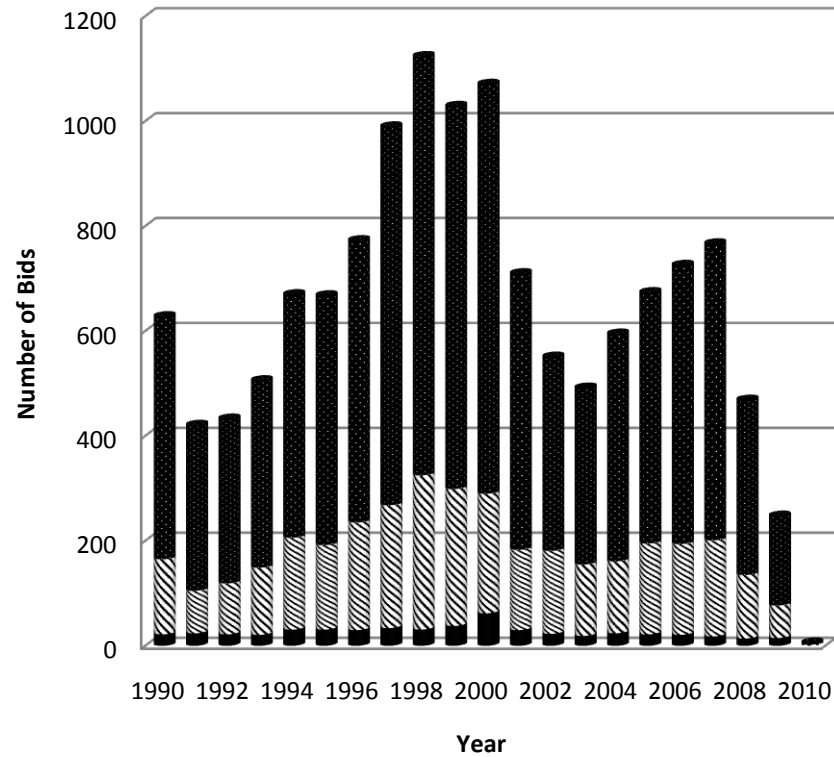
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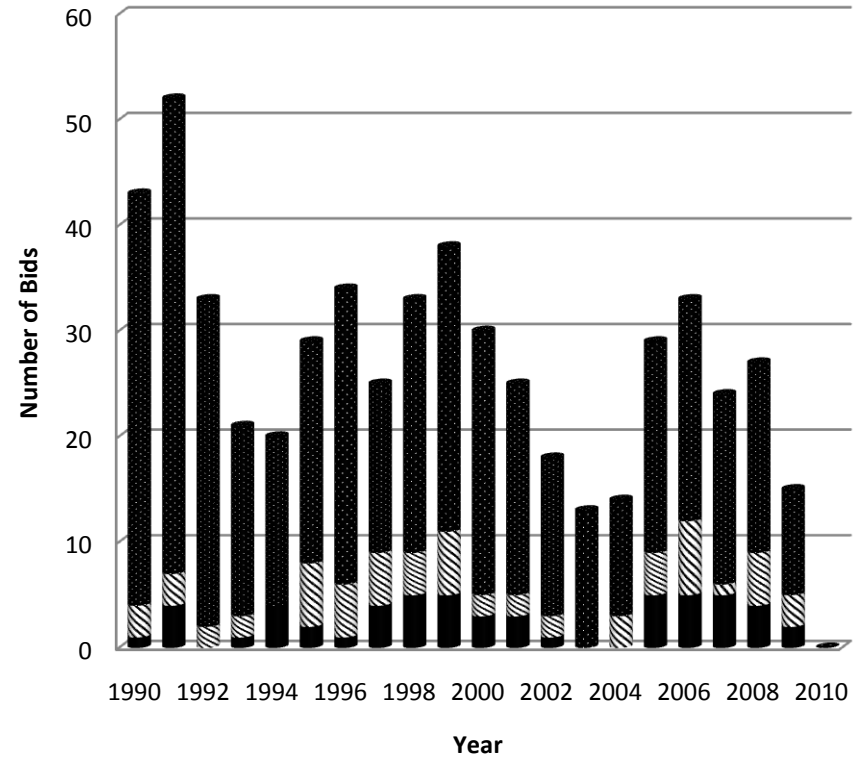
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Figure 1
Merger Bids by Method of Payment

The upper bar plots the total number of bids for each sample. The middle bar displays the number of cash-financed deals and the lower bar plots the number of stock-financed merger bids over time. The left hand figure displays the characteristics of the successful sample while the figure on the right corresponds to the failed sample. The successful sample contains all deals which successfully completed. The failed sample contains those deals which were subsequently withdrawn and failed to complete.



Successful Sample



Failed Sample

Table 1: Summary Statistics

Summary statistics are presented for both samples. 'S' refers to the Successful sample in which only deals which are subsequently completed are included. 'F' relates to the Failed sample in which only deals which are subsequently withdrawn are included. 'N' defines the number of bids in each category. The market value (MTBV) is the market value (market to book value) of the acquirer one month before the announcement of the deal measured in millions of pound. To classify hot and cold market periods we use a detrended PE proxy. If the current month's PE ratio is higher (lower) than the preceding five year average then the month is classified as above-average (below-average). Finally, we classify the top-half of the above-average months as 'hot' and the bottom half of the below-average months as 'cold'. We report the number of deals conducted in these conditions for each deal category. The time interval measures the number of days between deal announcement and either completion or withdrawal for the successful/failed samples respectively. For the deal categories, we consider the cases of acquisitions of privately held targets, publicly listed targets, domestic targets, foreign targets, targets within the same industry ('focussed'), targets within different industries ('diversifying'), deals which use 100% cash, deals which use 100% stock and deals which use a mixture of cash and stock. We also classify acquirers as value or glamour acquirers according to their MTBV values. The bottom (top) 30% is classified as glamour (value) acquirers. Finally, we classify acquirers as small or big depending upon their market values. The bottom (top) 30% is classified as small (big) acquirers.

Deal Categories	N		Market Value (£ mil)		MTBV		Hot		Cold		Time Interval (Days)	
	S	F	S	F	S	F	S	F	S	F	S	F
All	7639	387	1226.54	3406.32	3.60	1.66	2354	131	1579	68	27	107
Private Target	5492	245	652.36	2848.93	0.98	4.12	1689	84	1033	46	18	94
Public Target	734	109	3585.68	3356.65	2.55	3.49	265	42	148	18	73	140
Domestic	6575	266	683.61	1229.91	15.45	3.24	2085	100	1215	42	22	83
Foreign	3508	170	2924.54	6889.56	2.52	4.39	1059	58	688	39	37	160
Focussed	2798	183	1413.13	3763.73	23.64	3.75	832	59	551	39	31	129
Diversifying	6916	253	1478.13	3241.50	1.26	3.60	2312	99	1352	42	26	103
Cash	3305	65	1799.29	2428.90	1.23	2.68	1030	21	662	9	25	110
Stock	532	55	1070.52	417.54	1.30	5.70	160	19	112	13	51	70
Mixed	3802	267	749.55	4319.45	15.86	4.11	282	102	59	50	25	109
Value	2741	120	2021.72	5414.91	36.07	11.77	250	34	73	23	27	128
Glamour	2740	122	1257.27	2284.57	-4.20	-2.51	184	44	126	25	28	107
Small	2893	129	20.56	25.97	32.37	2.64	889	49	525	26	23	73
Big	3875	128	168.12	10795.45	2.99	3.48	1210	29	710	26	20	147

Table 2: 5 Day CAR's

The following table presents the short-run 5 day CAR's (-2,+2) for the samples around the announcement date of the deal (DA) and the date of effective completion (DE) or effective withdrawal (DW) for the successful and failed samples respectively. We measure the cumulative abnormal return using the formula $CAR_i = \sum_{i=0}^n AR_i$. The Successful sample contains all deals which were subsequently completed so that the acquirer gained control of the target with a holding of +51%. The Failed sample contains all deals which were subsequently withdrawn so that the acquirer did not gain control of the target. Cash deals refer to those which were financed 100% using cash. Stock deals refer to those which were financed 100% using equity. Mixed deals refer to those deals with known information confirming that the deal was financed using equity and cash. Private relates to a privately held target and public relates to a target listed on an exchange. Significance at the 1% level, 5% level and 10% level are denoted a, b and c respectively.

	All				Private				Public			
	All	Cash	Share	Mixed	All	Cash	Share	Mixed	All	Cash	Share	Mixed
Panel A: Successful												
Mean DA	0.0116 ^a	0.0593 ^a	0.0130	0.0582 ^a	0.0123 ^a	0.0545 ^a	0.0427	0.0662 ^a	-0.0033	0.0648 ^b	-0.1083 ^a	-0.0261
P-Value	0.0000	0.0000	0.5400	0.0000	0.0000	0.0000	0.1760	0.0000	0.3390	0.0238	0.0040	0.4592
Mean DE	0.0068 ^a	0.0374 ^a	-0.0131	0.0401 ^a	0.0065 ^a	0.0413 ^a	-0.0420	0.0415 ^a	0.0053 ^b	-0.0314	0.0139	0.0763 ^b
P-Value	0.0000	0.0000	0.5277	0.0000	0.0000	0.0005	0.1805	0.0000	0.0188	0.2451	0.7108	0.0298
N	7639	3305	532	3802	4484	1461	243	2780	659	288	172	199
Panel B: Failed												
Mean DA	-0.0072 ^a	-0.1041 ^c	-0.1571 ^b	-0.0667 ^b	-0.0043	-0.1055	-0.1479 ^b	-0.0872 ^c	-0.0136 ^b	0.0219	-0.2917 ^b	-0.0736
P-Value	0.0268	0.0812	0.0104	0.0180	0.3305	0.1270	0.0345	0.0510	0.0125 ^a	0.8941	0.0406	0.1294
Mean DW	-0.0198 ^a	-0.1183 ^b	-0.0689	-0.0572 ^c	-0.0084	-0.1657 ^b	-0.0404	0.0316	-0.0207	0.0170	-0.3650 ^c	-0.1674 ^a
P-Value	0.0004	0.0464	0.2865	0.0523	0.1845	0.0223	0.5766	0.4441	0.0073	0.9109	0.0633	0.0016
N	387	65	55	267	222	46	47	129	93	11	5	77
Panel C: Successful - Failed												
Diff DA	0.0189 ^a	0.1634 ^a	0.1701 ^a	0.1249 ^a	0.0165 ^a	0.1600 ^b	0.1906 ^b	0.1534 ^a	0.0104	0.0429	0.1834	0.0475
P-Value	0.0000	0.0076	0.0086	0.0000	0.0003	0.0245	0.0132	0.0009	0.1035	0.7975	0.1375	0.4267
Diff DE/W	0.0266 ^a	0.1557 ^b	0.0558	0.0973 ^a	0.0150 ^b	0.2070 ^a	-0.0016	0.0099	0.0259 ^a	-0.0484	0.3789 ^c	0.2437 ^a
P-Value	0.0000	0.0101	0.4103	0.0015	0.0210	0.0054	0.9841	0.8143	0.0013	0.7539	0.0552	0.0001

Table 3: 5 Day CARs for Overvalued Samples

The following table presents the short-run 5 day CAR's (-2,+2) for the overvalued samples around the announcement date of the deal (DA) and the date of effective completion (DE) or effective withdrawal (DW) for the successful and failed samples respectively. We measure the cumulative abnormal return using the formula $CAR_i = \sum_{t=0}^n AR_i$. The Successful sample contains all deals which were subsequently completed so that the acquirer gained control of the target with a holding of +51%. The Failed sample contains all deals which were subsequently withdrawn so that the acquirer did not gain control of the target. For both samples, the included deals are those in which the acquirer is deemed to be overvalued. The acquirer's PE on the month of announcement is compared with a historical firm PE average of 24 months (-12,+12) around the announcement. If the announcement month PE is higher (lower) than the historical average, the firm is classified as overvalued (undervalued). Cash deals refer to those which were financed 100% using cash. Stock deals refer to those which were financed 100% using equity. Mixed deals refer to those deals with known information confirming that the deal was financed using equity and cash. Private relates to a privately held target and public relates to a target listed on an exchange. Significance at the 1% level, 5% level and 10% level are denoted a, b and c respectively.

	All				Private				Public			
	All	Cash	Share	Mixed	All	Cash	Share	Mixed	All	Cash	Share	Mixed
Panel A: Successful Overvalued												
Mean DA	0.0069 ^a	0.0536 ^a	-0.0199	0.0539 ^a	0.0082 ^a	0.0312	0.0966	0.0819 ^a	-0.0118 ^a	0.0694	-0.1468 ^b	-0.2072 ^a
P-Value	0.0000	0.0001	0.6839	0.0001	0.0000	0.1193	0.2293	0.0000	0.0139	0.1280	0.0447	0.0010
Mean DE	0.0048 ^a	0.0241 ^c	-0.0400	0.0526 ^a	0.0051 ^a	0.0205	-0.0649	0.0567 ^a	0.0013	-0.0713	-0.0610	0.1131 ^c
P-Value	0.0000	0.0762	0.4057	0.0002	0.0002	0.3049	0.3840	0.0005	0.6757	0.1615	0.4332	0.0922
N	2406	1154	118	1134	1409	535	51	823	203	92	46	65
Panel B: Failed Overvalued												
Mean DA	-0.0063	-0.0864	-0.1746	-0.0880 ^c	-0.0080	-0.1750 ^c	-0.1746	-0.1538 ^b	0.0010	-0.4023 ^b	-	0.0022
P-Value	0.1012	0.3362	0.1657	0.0502	0.1580	0.0715	0.1657	0.0262	0.8782	0.0389	-	0.9767
Mean DW	-0.0023	-0.1705 ^c	-0.0414	-0.0341	0.0077	-0.1658	-0.0414	0.0250	-0.0246 ^c	-0.1090	-	-0.1735 ^b
P-Value	0.6381	0.0631	0.7946	0.4701	0.2049	0.1377	0.7946	0.7168	0.0556	0.4435	-	0.0389
N	145	28	13	104	86	22	13	51	34	5	-	29
Panel C: Successful Overvalued - Failed Overvalued												
Diff DA	0.0132 ^a	0.1400	0.1547	0.1419 ^a	0.0162 ^a	0.2062 ^b	0.2712 ^c	0.2357 ^a	-0.0128	0.4717 ^c	-	-0.2094 ^b
P-Value	0.0011	0.1279	0.2436	0.0028	0.0062	0.0393	0.0690	0.0012	0.1160	0.0641	-	0.0315
Diff DE/W	0.0071	0.1946 ^b	0.0014	0.0867 ^c	-0.0026	0.1863	-0.0235	0.0317	0.0259 ^b	0.0377	-	0.2866 ^a
P-Value	0.1548	0.0372	0.9933	0.0794	0.6791	0.1020	0.8932	0.6543	0.0499	0.7948	-	0.0075

Table 4: 5 Day CARs Undervalued Samples

The following table presents the short-run 5 day CAR's (-2,+2) for the undervalued samples around the announcement date of the deal (DA) and the date of effective completion (DE) or effective withdrawal (DW) for the successful and failed samples respectively. We measure the cumulative abnormal return using the formula $CAR_i = \sum_{t=0}^n AR_i$. The Successful sample contains all deals which were subsequently completed so that the acquirer gained control of the target with a holding of +51%. The Failed sample contains all deals which were subsequently withdrawn so that the acquirer did not gain control of the target. For both samples, the included deals are those in which the acquirer is deemed to be undervalued. The acquirer's PE on the month of announcement is compared with a historical firm PE average of 24 months (-12,+12) around the announcement. If the announcement month PE is higher (lower) than the historical average, the firm is classified as overvalued (undervalued). Cash deals refer to those which were financed 100% using cash. Stock deals refer to those which were financed 100% using equity. Mixed deals refer to those deals with known information confirming that the deal was financed using equity and cash. Private relates to a privately held target and public relates to a target listed on an exchange. Significance at the 1% level, 5% level and 10% level are denoted a, b and c respectively.

	All				Private				Public			
	All	Cash	Share	Mixed	All	Cash	Share	Mixed	All	Cash	Share	Mixed
Panel A: Successful Undervalued												
Mean DA	0.0137 ^a	0.0707 ^a	-0.0218	0.0900 ^a	0.0152 ^a	0.0766 ^a	0.1076	0.0836 ^a	0.0026	0.0608	-0.1814 ^b	0.1128 ^b
P-Value	0.0000	0.0000	0.6289	0.0000	0.0000	0.0001	0.1546	0.0000	0.5509	0.1599	0.0116	0.0330
Mean DE	0.0098 ^a	0.0602 ^a	0.0891 ^b	0.0520 ^a	0.0106 ^a	0.0650 ^a	0.0149	0.0562 ^a	0.0108 ^a	0.0077	0.1401 ^b	0.1098 ^b
P-Value	0.0000	0.0000	0.0316	0.0000	0.0000	0.0005	0.8353	0.0002	0.0003	0.8399	0.0349	0.0226
N	2890	1407	116	1367	1608	589	35	984	273	135	53	85
Panel B: Failed Undervalued												
Mean DA	-0.0054	-0.0720	-0.1399	-0.0409	0.0011	0.0048	-0.1399	0.0185	-0.0108 ^c	-0.1545	-	-0.1773 ^b
P-Value	0.3650	0.4567	0.1994	0.4136	0.8744	0.9687	0.1994	0.8041	0.0664	0.4071	-	0.0449
Mean DW	0.0028	-0.0901	0.0398	-0.0039	0.0069	-0.1014	0.0398	0.0998	-0.0105 ^c	-0.0303	-	-0.1605 ^c
P-Value	0.5582	0.3397	0.7374	0.9365	0.2994	0.3820	0.7374	0.1532	0.0946	0.9090	-	0.0590
N	132	26	18	88	83	18	18	47	31	5	-	26
Panel C: Successful Undervalued - Failed Undervalued												
Diff DA	0.0192 ^a	0.1427	0.1181	0.1309 ^b	0.0141 ^c	0.0718	0.2475 ^c	0.0651	0.0134 ^c	0.2153	-	0.2901 ^a
P-Value	0.0020	0.1495	0.3108	0.0124	0.0577	0.5634	0.0620	0.3918	0.0654	0.2721	-	0.0052
Diff DE/W	0.0070	0.1503	0.0493	0.0559	0.0037	0.1664	-0.0249	-0.0436	0.0213 ^a	0.0380	-	0.2703 ^a
P-Value	0.1515	0.1196	0.6936	0.2722	0.5873	0.1636	0.8566	0.5388	0.0029	0.8870	-	0.0062

Table 5: 36 Month BHARs

The following table presents the BHAR's for the samples from the announcement month of the deal (DA) and the date of effective completion (DE) or effective withdrawal (DW) month for the successful and failed samples respectively for a thirty-six month post-acquisition period. We measure the buy-and-hold abnormal return using the formula $BHAR_{it} = \prod_{t=0}^T [1 + R_{it}] - \prod_{t=0}^T [1 + R_{mt}]$. The Successful sample contains all deals which were subsequently completed so that the acquirer gained control of the target with a holding of +51%. The Failed sample contains all deals which were subsequently withdrawn so that the acquirer did not gain control of the target. Cash deals refer to those which were financed 100% using cash. Stock deals refer to those which were financed 100% using equity. Mixed deals refer to those deals with known information confirming that the deal was financed using equity and cash. Private relates to a privately held target and public relates to a target listed on an exchange. Significance at the 1% level, 5% level and 10% level are denoted a, b and c respectively.

	All				Private				Public			
	All	Cash	Share	Mixed	All	Cash	Share	Mixed	All	Cash	Share	Mixed
Panel A: Successful												
Mean DA	-0.2356 ^a	-0.1353 ^a	-0.4926 ^a	-0.3177 ^a	-0.2960 ^a	-0.1770 ^a	-0.6319 ^a	-0.3621 ^a	-0.1890 ^a	-0.0757	-0.4414 ^a	-0.1601 ^a
P-Value	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1192	0.0000	0.0091
Mean DE	-0.2439 ^a	-0.1369 ^a	-0.4845 ^a	-0.3316 ^a	-0.3014 ^a	-0.1731 ^a	-0.6470 ^a	-0.3712 ^a	-0.1849 ^a	-0.0619	-0.4131 ^a	-0.1615 ^b
P-Value	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1948	0.0000	0.0158
N	6751	2929	479	3343	3883	1259	223	2401	582	250	151	181
Panel B: Failed												
Mean DA	-0.1606 ^a	-0.0582	-0.0382	-0.2072 ^a	-0.0497	-0.1196	-0.0847	-0.0408	-0.2902 ^a	-0.0196	-1.3395	-0.3192 ^a
P-Value	0.0012	0.6324	0.8172	0.0008	0.4824	0.4468	0.6323	0.6791	0.0035	0.9446	0.1002	0.0045
Mean DW	-0.1678 ^a	-0.0964	-0.0921	-0.1764 ^a	-0.0881	-0.1421	-0.0082	-0.0811	-0.2306 ^b	-0.1681	-1.0840	-0.4288
P-Value	0.0008	0.4650	0.5450	0.0051	0.2051	0.4256	0.9602	0.4028	0.0264	0.3764	0.1835	0.2798
N	352	57	45	250	196	39	39	118	86	10	3	73
Panel C: Successful - Failed												
Diff DA	-0.0750	-0.0771	-0.4544 ^a	-0.1105 ^c	-0.2463 ^a	-0.0574	-0.5472 ^a	-0.3213 ^a	0.1012	-0.0561	0.8981	0.1591
P-Value	0.1375	0.5306	0.0100	0.0823	0.0007	0.7176	0.0003	0.0017	0.3201	0.8442	0.1874	0.2045
Diff DE/W	-0.0761	-0.0405	-0.3924 ^b	-0.1552 ^b	-0.2133 ^a	-0.0310	-0.6388 ^a	-0.2901 ^a	0.0457	0.1062	0.6709	0.2673
P-Value	0.1342	0.7602	0.0155	0.0167	0.0028	0.8632	0.0005	0.0038	0.6691	0.5820	0.3411	0.8097

Table 6: 36 Month BHARs for Overvalued Samples

The following table presents the BHAR's for the samples from the announcement month of the deal (DA) and the date of effective completion (DE) or effective withdrawal (DW) month for the successful and failed samples respectively for a thirty-six month post-acquisition period. We measure the buy-and-hold abnormal return using the formula $BHAR_{it} = \prod_{t=0}^T [1 + R_{it}] - \prod_{t=0}^T [1 + R_{mt}]$. The Successful sample contains all deals which were subsequently completed so that the acquirer gained control of the target with a holding of +51%. The Failed sample contains all deals which were subsequently withdrawn so that the acquirer did not gain control of the target. Cash deals refer to those which were financed 100% using cash. For both samples, the included deals are those in which the acquirer is deemed to be overvalued. The acquirer's PE on the month of announcement is compared with a historical firm PE average of 24 months (-12,+12) around the announcement. If the announcement month PE is higher (lower) than the historical average, the firm is classified as overvalued (undervalued). Cash deals refer to those which were financed 100% using cash. Stock deals refer to those which were financed 100% using equity. Mixed deals refer to those deals with known information confirming that the deal was financed using equity and cash. Private relates to a privately held target and public relates to a target listed on an exchange. Significance at the 1% level, 5% level and 10% level are denoted a, b and c respectively.

	All				Private				Public			
	All	Cash	Share	Mixed	All	Cash	Share	Mixed	All	Cash	Share	Mixed
Panel A: Successful Overvalued												
Mean DA	-0.2609 ^a	-0.1807 ^a	-0.4424 ^a	-0.3445 ^a	-0.3134 ^a	-0.2225 ^a	-0.5709 ^a	-0.3952 ^a	-0.1907 ^a	-0.0671	-0.3705 ^a	-0.2019 ^b
P-Value	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0000	0.0002	0.4289	0.0024	0.0254
Mean DE	-0.2572 ^a	-0.1764 ^a	-0.4315 ^a	-0.3452 ^a	-0.3144 ^a	-0.2174 ^a	-0.5645 ^a	-0.3995 ^a	-0.1478 ^a	-0.0241	-0.3605 ^a	-0.1174
P-Value	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0002	0.0000	0.0058	0.7899	0.0022	0.2267
N	2068	997	114	957	1171	446	49	676	181	81	44	56
Panel B: Failed Overvalued												
Mean DA	-0.1195 ^c	0.0836	0.2352	-0.2042 ^a	-0.0365	0.1055	0.2352	-0.0977	-0.2843 ^a	-0.0178	-	-0.3763 ^a
P-Value	0.0737	0.7001	0.5697	0.0019	0.7157	0.6906	0.5697	0.2994	0.0085	0.9713	-	0.0033
Mean DW	-0.0835	-0.2188	0.0241	0.0145 ^c	-0.0225	0.1011	0.0009	-0.1050	-0.2108 ^b	-0.2939	-	-0.1225
P-Value	0.2087	0.9114	0.9980	0.0850	0.8234	0.7240	0.9980	0.2970	0.0191	0.4158	-	0.3295
N	131	25	13	93	76	19	13	44	31	5	-	26
Panel C: Successful Overvalued - Failed Overvalued												
Diff DA	-0.1414 ^b	-0.2643	-0.6776	-0.1403 ^b	-0.2768 ^a	-0.3280	-0.8061 ^c	-0.2975 ^a	0.0935	-0.0493	-	0.1744
P-Value	0.0392	0.2324	0.1226	0.0422	0.0081	0.2279	0.0766	0.0036	0.4105	0.9217	-	0.2352
Diff DE/W	-0.1736 ^b	0.0424	-0.4556	-0.3597 ^a	-0.2918 ^a	-0.3185	-0.5654	-0.2945 ^a	0.0630	0.2698	-	0.0051
P-Value	0.0116	0.3782	0.2597	0.0020	0.0057	0.2767	0.1602	0.0063	0.5323	0.4617	-	0.9736

Table 7: 36 Month BHARs for Undervalued Samples

The following table presents the BHAR's for the samples from the announcement month of the deal (DA) and the date of effective completion (DE) or effective withdrawal (DW) month for the successful and failed samples respectively for a thirty-six month post-acquisition period. We measure the buy-and-hold abnormal return using the formula $BHAR_{it} = \prod_{t=0}^T [1 + R_{it}] - \prod_{t=0}^T [1 + R_{mt}]$. The Successful sample contains all deals which were subsequently completed so that the acquirer gained control of the target with a holding of +51%. The Failed sample contains all deals which were subsequently withdrawn so that the acquirer did not gain control of the target. Cash deals refer to those which were financed 100% using cash. For both samples, the included deals are those in which the acquirer is deemed to be undervalued. The acquirer's PE on the month of announcement is compared with a historical firm PE average of 24 months (-12,+12) around the announcement. If the announcement month PE is higher (lower) than the historical average, the firm is classified as overvalued (undervalued). Cash deals refer to those which were financed 100% using cash. Stock deals refer to those which were financed 100% using equity. Mixed deals refer to those deals with known information confirming that the deal was financed using equity and cash. Private relates to a privately held target and public relates to a target listed on an exchange. Significance at the 1% level, 5% level and 10% level are denoted a, b and c respectively.

	All				Private				Public			
	All	Cash	Share	Mixed	All	Cash	Share	Mixed	All	Cash	Share	Mixed
Panel A: Successful Undervalued												
Mean DA	-0.0779 ^a	-0.0023	-0.1975 ^b	-0.1575 ^a	-0.1242 ^a	-0.0294	-0.4805 ^a	-0.1802 ^a	-0.0531	0.0219	-0.3203 ^b	-0.0102
P-Value	0.0000	0.9311	0.0596	0.0000	0.0000	0.4883	0.0005	0.0000	0.2583	0.7337	0.0273	0.9131
Mean DE	-0.0935 ^a	-0.0058	-0.2063 ^b	-0.1823 ^a	-0.1338 ^a	-0.0326	-0.5131 ^a	-0.1986 ^a	-0.0528	0.0446	-0.2777 ^c	-0.0439
P-Value	0.0000	0.8256	0.0421	0.0000	0.0000	0.4517	0.0002	0.0000	0.2922	0.4828	0.0540	0.6918
N	2623	1272	104	1247	1431	513	33	885	244	117	46	81
Panel B: Failed Undervalued												
Mean DA	0.0095	-0.1534	0.0471	0.0016	0.0186	-0.2718	0.0471	0.0312	0.0262	0.3988	-	-0.0340
P-Value	0.9083	0.3561	0.7889	0.9894	0.8503	0.1780	0.7889	0.8535	0.9052	0.4514	-	0.8922
Mean DW	-0.0376	-0.2188	0.0241	0.0145	-0.0471	-0.3151	0.0241	0.0199	0.0350	0.2527 ^c	-	0.1129
P-Value	0.6591	0.2661	0.8591	0.9099	0.6254	0.2142	0.8591	0.9059	0.8864	0.0604	-	0.6975
N	119	23	15	81	76	17	15	44	27	3	-	24
Panel C: Successful Undervalued - Failed Undervalued												
Diff DA	-0.0874	0.1511	-0.2446	-0.1591	-0.1429	0.2424	-0.5276 ^b	-0.2114	-0.0793	-0.3769	-	0.0238
P-Value	0.2989	0.3687	0.2358	0.1978	0.1624	0.2359	0.0195	0.2234	0.7247	0.4737	-	0.9291
Diff DE/W	-0.0559	0.2130	-0.2304	-0.1968	-0.0867	0.2825	-0.5372 ^a	-0.2185	-0.0878	-0.2081 ^b	-	-0.1568
P-Value	0.5203	0.2825	0.1760	0.1353	0.3845	0.2692	0.0055	0.2067	0.7252	0.0534	-	0.6137

Table 8: Full Multivariate Results

This table presents the results for the multivariate analysis of the full samples – both the successful and failed deals combined. The successful sample contains all deals which were subsequently completed so that the acquirer gained control of the target with a holding of +51%. The Failed sample contains all deals which were subsequently withdrawn so that the acquirer did not gain control of the target. We model the short-run in models (1), (2), (5) and (6) where we model five-day CAR's. We measure the five-day cumulative abnormal return using the formula $CAR_i = \sum_{i=0}^n AR_i$, which relates to the summation of the five-day abnormal returns, defined as anything earned by the firm above and beyond that of the market. We model the long-run in models (3), (4), (7) and (8) where the dependent variable is the 36-month BHAR measured as $BHAR_{it} = \prod_{t=0}^T [1 + R_{it}] - \prod_{t=0}^T [1 + R_{mt}]$. DA relates to the date of announcement whilst DO relates to the date of outcome (i.e. completion date for successful deals and termination date for failed deals). The independent variables are listed in column one. Domestic is a dummy which takes the value of one for a domestic target. Public is a dummy which takes the value of one for a publicly listed target. Cash is a dummy which takes the value of one for a deal financed 100% using cash. Hot relates to hot market conditions and takes the value of one if the deal was announced/completed/terminated in a 'hot' month. For the Overvalued (Undervalued) dummy, deals are classified in the following way. The acquirer's PE on the month of announcement is compared with a historical firm PE average of 24 months (-12,+12) around the announcement. If the announcement month PE is higher (lower) than the historical average, the firm is classified as overvalued (undervalued). The deals classified as overvalued or undervalued take the value of one for the corresponding dummy. Models (1) to (4) include the overvalued dummy whilst models (5) to (8) include the undervalued dummy due to some deals being classified as neither. Failed is a dummy which takes the value of one if the deal failed. Log(MV) relates to the log of the acquirer's market value one-month prior to deal announcement. Log (MTBV) relates to the log of the acquirer's market to book value one month prior to deal announcement.

Model	1	2	3	4	5	6	7	8
Dependent Variable ->	5 Day CAR's DA	5 Day CAR's DO	36 Month BHAR's DA	36 Month BHAR's DO	5 Day CAR's DA	5 Day CAR's DO	36 Month BHAR's DA	36 Month BHAR's DO
<i>Constant</i>	0.0208 [0.000]	0.0117 [0.000]	-0.3599 [0.000]	-0.3896 [0.000]	0.0267 [0.000]	0.0107 [0.000]	-0.4088 [0.000]	-0.4351 [0.000]
<i>Domestic</i>	-0.0042 [0.030]	0.0011 [0.511]	0.0286 [0.235]	0.0415 [0.080]	-0.0043 [0.000]	0.0011 [0.541]	0.0266 [0.265]	0.0397 [0.092]
<i>Public</i>	-0.0149 [0.000]	-0.0020 [0.458]	0.0346 [0.361]	0.0456 [0.222]	-0.0146 [0.000]	-0.0018 [0.513]	0.0405 [0.282]	0.0508 [0.171]
<i>Cash</i>	0.0032 [0.076]	0.0022 [0.176]	0.1849 [0.000]	0.1913 [0.000]	0.0029 [0.115]	0.0019 [0.236]	0.1724 [0.000]	0.1798 [0.000]
<i>Hot</i>	0.0068 [0.000]	0.0045 [0.008]	0.0721 [0.002]	0.0696 [0.002]	0.0065 [0.001]	0.0043 [0.012]	0.0659 [0.004]	0.0643 [0.004]
<i>Overvalued</i>	-0.0057 [0.003]	-0.0036 [0.035]	-0.0779 [0.001]	-0.0631 [0.006]				
<i>Undervalued</i>					0.0052 [0.004]	0.0042 [0.009]	0.2203 [0.000]	0.2074 [0.000]
<i>Failed</i>	0.0352 [0.000]	0.0455 [0.000]	0.9050 [0.000]	0.9052 [0.000]	0.0355 [0.000]	0.0457 [0.000]	0.9191 [0.000]	0.9188 [0.000]
<i>Log(MV)</i>	-0.0058 [0.000]	-0.0023 [0.023]	0.0381 [0.008]	0.0380 [0.008]	-0.0069 [0.000]	-0.0031 [0.002]	0.0097 [0.496]	0.0122 [0.386]
<i>Log(MTBV)</i>	-0.0031 [0.138]	-0.0028 [0.131]	-0.1018 [0.000]	-0.0870 [0.001]	-0.0030 [0.150]	-0.0027 [0.149]	-0.0908 [0.000]	-0.0761 [0.003]
F Statistic	18.80 [0.000]	21.67 [0.000]	52.28 [0.000]	53.76 [0.000]	18.69 [0.000]	21.97 [0.000]	64.08 [0.000]	64.89 [0.000]
R-Squared	0.0196	0.0226	0.0596	0.0611	0.0195	0.0229	0.072	0.0729
Adjusted R-Squared	0.0186	0.0215	0.0584	0.06	0.0185	0.0218	0.0709	0.0717
N	7515	7514	6614	6614	7515	7514	6614	6614

Table 9: Multivariate Results - Private Sample

This table presents the results for the multivariate analysis of the private samples – both the successful and failed deals combined. The successful sample contains all deals which were subsequently completed so that the acquirer gained control of a privately-held target with a holding of +51%. The Failed sample contains all deals which were subsequently withdrawn so that the acquirer did not gain control of the privately-held target. We model the short-run in models (1), (2), (5) and (6) where we model five-day CAR's. We measure the five-day cumulative abnormal return using the formula $CAR_i = \sum_{i=0}^n AR_i$, which relates to the summation of the five-day abnormal returns, defined as anything earned by the firm above and beyond that of the market. We model the long-run in models (3), (4), (7) and (8) where the dependent variable is the 36-month BHAR measured as $BHAR_{it} = \prod_{t=0}^T [1 + R_{it}] - \prod_{t=0}^T [1 + R_{mt}]$. DA relates to the date of announcement whilst DO relates to the date of outcome (i.e. completion date for successful deals and termination date for failed deals). The independent variables are listed in column one. Domestic is a dummy which takes the value of one for a domestic target. Public is a dummy which takes the value of one for a publicly listed target. Cash is a dummy which takes the value of one for a deal financed 100% using cash. Hot relates to hot market conditions and takes the value of one if the deal was announced/completed/terminated in a 'hot' month. For the Overvalued (Undervalued) dummy, deals are classified in the following way. The acquirer's PE on the month of announcement is compared with a historical firm PE average of 24 months (-12,+12) around the announcement. If the announcement month PE is higher (lower) than the historical average, the firm is classified as overvalued (undervalued). The deals classified as overvalued or undervalued take the value of one for the corresponding dummy. Models (1) to (4) include the overvalued dummy whilst models (5) to (8) include the undervalued dummy due to some deals being classified as neither. Failed is a dummy which takes the value of one if the deal failed. Log(MV) relates to the log of the acquirer's market value one-month prior to deal announcement. Log (MTBV) relates to the log of the acquirer's market to book value one month prior to deal announcement.

Model	1	2	3	4	5	6	7	8
Dependent Variable ->	5 Day CAR's DA	5 Day CAR's DO	36 Month BHAR's DA	36 Month BHAR's DO	5 Day CAR's DA	5 Day CAR's DO	36 Month BHAR's DA	36 Month BHAR's DO
<i>Constant</i>	0.0253 [0.000]	0.0093 [0.018]	-0.4239 [0.000]	-0.4414 [0.000]	0.0241 [0.000]	0.0082 [0.037]	-0.4687 [0.000]	-0.4843 [0.000]
<i>Domestic</i>	0.0001 [0.979]	0.0018 [0.456]	0.0278 [0.362]	0.0334 [0.274]	0.0000 [0.999]	0.0018 [0.469]	0.0249 [0.410]	0.0307 [0.311]
<i>Cash</i>	-0.0003 [0.912]	0.0025 [0.291]	0.1950 [0.000]	0.2098 [0.000]	-0.0007 [0.800]	0.0022 [0.349]	0.1845 [0.000]	0.1998 [0.000]
<i>Hot</i>	0.0082 [0.002]	0.0072 [0.003]	0.0646 [0.028]	0.0681 [0.021]	0.0079 [0.003]	0.0070 [0.004]	0.0561 [0.054]	0.0600 [0.040]
<i>Overvalued</i>	-0.0041 [0.116]	-0.0024 [0.310]	-0.0694 [0.021]	-0.0658 [0.029]				
<i>Undervalued</i>					0.0064 [0.010]	0.0055 [0.015]	0.2347 [0.000]	0.2248 [0.000]
<i>Failed</i>	0.0353 [0.000]	0.0438 [0.000]	0.9599 [0.000]	0.9419 [0.000]	0.0355 [0.000]	0.0440 [0.000]	0.9635 [0.000]	0.9453 [0.000]
<i>Log(MV)</i>	-0.0056 [0.001]	-0.0018 [0.266]	0.0467 [0.019]	0.0469 [0.019]	-0.0067 [0.000]	-0.0026 [0.094]	0.0151 [0.440]	0.0167 [0.397]
<i>Log(MTBV)</i>	-0.0062 [0.038]	-0.0046 [0.092]	-0.0754 [0.028]	-0.0700 [0.041]	-0.0059 [0.048]	-0.0044 [0.113]	-0.0647 [0.057]	-0.0597 [0.079]
F Statistic	10.75 [0.000]	12.61 [0.000]	39.83 [0.000]	39.37 [0.000]	11.36 [0.000]	13.33 [0.000]	49.73 [0.000]	48.41 [0.000]
R-Squared	0.0168	0.0196	0.0683	0.0676	0.0177	0.0207	0.0838	0.0818
Adjusted R-Squared	0.0152	0.0181	0.0666	0.0658	0.0161	0.0191	0.0822	0.0801
N	4423	4422	3812	3812	4423	4422	3812	3812

Table 10: Multivariate Results - Cash Samples

This table presents the results for the multivariate analysis of the cash samples – both the successful and failed deals combined. The successful sample contains all deals which were subsequently completed so that the acquirer gained control of a target with a holding of +51% using 100% cash-financing. The Failed sample contains all deals where the bidder intended to use 100% cash but subsequently withdrew their deal so that the acquirer did not gain control of the target. We model the short-run in models (1), (2), (5) and (6) where we model five-day CAR's. We measure the five-day cumulative abnormal return using the formula $CAR_i = \sum_{i=0}^n AR_i$, which relates to the summation of the five-day abnormal returns, defined as anything earned by the firm above and beyond that of the market. We model the long-run in models (3), (4), (7) and (8) where the dependent variable is the 36-month BHAR measured as $BHAR_{it} = \prod_{t=0}^T [1 + R_{it}] - \prod_{t=0}^T [1 + R_{mt}]$. DA relates to the date of announcement whilst DO relates to the date of outcome (i.e. completion date for successful deals and termination date for failed deals). The independent variables are listed in column one. Domestic is a dummy which takes the value of one for a domestic target. Public is a dummy which takes the value of one for a publicly listed target. Cash is a dummy which takes the value of one for a deal financed 100% using cash. Hot relates to hot market conditions and takes the value of one if the deal was announced/completed/terminated in a 'hot' month. For the Overvalued (Undervalued) dummy, deals are classified in the following way. The acquirer's PE on the month of announcement is compared with a historical firm PE average of 24 months (-12,+12) around the announcement. If the announcement month PE is higher (lower) than the historical average, the firm is classified as overvalued (undervalued). The deals classified as overvalued or undervalued take the value of one for the corresponding dummy. Models (1) to (4) include the overvalued dummy whilst models (5) to (8) include the undervalued dummy due to some deals being classified as neither. Failed is a dummy which takes the value of one if the deal failed. Log(MV) relates to the log of the acquirer's market value one-month prior to deal announcement. Log (MTBV) relates to the log of the acquirer's market to book value one month prior to deal announcement.

Model	1	2	3	4	5	6	7	8
Dependent Variable ->	5 Day CAR's DA	5 Day CAR's DO	36 Month BHAR's DA	36 Month BHAR's DO	5 Day CAR's DA	5 Day CAR's DO	36 Month BHAR's DA	36 Month BHAR's DO
<i>Constant</i>	0.0317 [0.000]	0.0196 [0.000]	-0.1302 [0.027]	-0.1436 [0.015]	0.0308 [0.000]	0.0178 [0.000]	-0.2083 [0.000]	-0.2158 [0.000]
<i>Domestic</i>	-0.0036 [0.103]	0.0006 [0.777]	0.0491 [0.143]	0.0556 [0.097]	-0.0038 [0.087]	0.0004 [0.832]	0.0508 [0.127]	0.0576 [0.084]
<i>Public</i>	0.0062 [0.090]	-0.0012 [0.722]	0.0547 [0.328]	0.0407 [0.467]	0.0068 [0.062]	-0.0006 [0.852]	0.0592 [0.286]	0.0441 [0.427]
<i>Hot</i>	0.0042 [0.057]	0.0025 [0.222]	0.0359 [0.273]	0.0322 [0.327]	0.0038 [0.090]	0.0021 [0.309]	0.0354 [0.276]	0.0326 [0.317]
<i>Overvalued</i>	-0.0071 [0.001]	-0.0071 [0.000]	-0.0912 [0.005]	-0.0732 [0.026]				
<i>Undervalued</i>					0.0014 [0.499]	0.0041 [0.029]	0.2036 [0.000]	0.1903 [0.000]
<i>Failed</i>	0.0239 [0.001]	0.0402 [0.000]	0.7489 [0.000]	0.7726 [0.000]	0.0238 [0.002]	0.0402 [0.000]	0.7498 [0.000]	0.7739 [0.000]
<i>Log(MV)</i>	-0.0068 [0.000]	-0.0044 [0.000]	0.0371 [0.072]	0.0342 [0.098]	-0.0076 [0.000]	-0.0054 [0.000]	0.0154 [0.450]	0.0151 [0.461]
<i>Log(MTBV)</i>	-0.0001 [0.981]	0.0009 [0.722]	-0.1994 [0.000]	-0.1812 [0.000]	-0.0005 [0.846]	0.0006 [0.795]	-0.1891 [0.000]	-0.1705 [0.000]
F Statistic	8.66 [0.000]	9.97 [0.000]	12.04 [0.000]	11.24 [0.000]	7.15 [0.000]	8.77 [0.000]	17.29 [0.000]	16.07 [0.000]
R-Squared	0.0189	0.0217	0.0295	0.0276	0.0157	0.0191	0.0418	0.0390
Adjusted R-Squared	0.0167	0.0195	0.0270	0.0251	0.0135	0.0170	0.0394	0.0366
N	3154	3154	2781	2781	3154	3154	2781	2781