The Market Valuation of M&A Announcements in the United Kingdom

Dimitris Andriosopoulos [a], Shuai Yang [b,*], Wei-an Li [c]

Abstract

This paper investigates the short-term market reaction to UK acquirers announcing domestic and foreign mergers and acquisitions (M&As) from 2000-2010. We define acquirers as value, moderate and glamour acquirers based on equally weighted market-to-book terciles. We find that value acquirers outperform glamour acquirers during and after the M&A announcement. We also focus on the impact of institutional ownership and find that higher domestic, foreign and total institutional ownership leads to lower market reaction to M&A announcements. We also find that long-term institutional investors lead to a higher post-announcement market performance. Finally, we find that a higher domestic institutional ownership mitigates the typical poor short-term performance following M&A announcements of glamour acquirers.

Keywords: institutional ownership, domestic institutional ownership, institutional ownership turnover, mergers and acquisitions, glamour acquirers, value acquirers, announcement returns

JEL classification: G14, G30, G32, G34

[a] Department of Accounting and Finance, University of Strathclyde, 100 Cathedral Street, Glasgow, G4 0LN, United Kingdom

[b] China Academy of Corporate Governance, Business School, Nankai University, Tianjin, China.

[c] Tianjin University of Finance and Economics, Tianjin, China; China Academy of Corporate Governance, Business School, Nankai University, Tianjin, China.

[*] *Corresponding author*: e-mail: *nkyangs@nankai.edu.cn*

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1. Introduction

A surge in M&A activity since the 1990s has imitated an extensive literature that addresses a number of issues surrounding M&As. For instance, Andrade et al. (2001) show that shares is a preferred method of payment while Shleifer and Vishny (2003) suggest that acquirers use their overvalued equity in order to acquire targets and their respective assets at a discount. Emery and Switzer (1999) suggest that acquirers exploit information asymmetries for selecting the deal payment method with expectations of higher abnormal returns. Therefore, the choice of payment method of M&As can significantly influence the shareholders' wealth at the time of the M&A announcement and during the post-merger period.[1] Evidence in the literature supports the asymmetric information hypothesis that acquirers with cash offers experience higher abnormal returns than acquirers with share offers. Berkovitch and Narayanan (1990) report that both bidder and target firms have higher returns with cash payments compared to equity payments. Similarly, Houston and Ryngaert (1997) find that acquirers outperform when a greater proportion of cash is used for acquiring target firms.

Moeller et al. (2007) find a negative relationship between information asymmetry and the stock performance of acquirers of public firms. Andrade et al. (2001) show that acquirers using shares in the M&A payment, have a negative stock performance over the three days surrounding the M&A announcement, while acquirers with pure equity financing have a small positive performance. Moreover, acquirers that use stock as payment for M&As significantly underperform over a five year period compared to acquirers that use cash as the payment method (Loughran and Vijh, 1997). However, using equity as payment for M&As benefits acquirers during the announcement period when targets are difficult to value – especially

[1] Announcement returns to shareholders vary significantly across different samples and periods. See Kennedy and Limmack (1996); Sudarsanam et al. (1996); Rau and Vermaelen (1998); Akhigbe and Martin (2000); Sudarsanam and Mahate (2003); Conn et al. (2005); and Freund et al. (2007).

private targets (Officer et al., 2009). Therefore, a stock payment can mitigate the potential risk of a target firm being overvalued.

While cross-border M&As can be an important entry mode for foreign markets they are related to higher levels of risk and uncertainty for both acquirers and targets. The wealth effects of cross-border M&As are lower compared to domestic M&As (Goergen and Renneboog, 2004). Cakici et al. (1996) find that while US acquirers do not gain from cross-border M&As, foreign firms acquiring US targets have a significant and positive market performance, in line with Akihigbe and Martin (2000). Moreover, Black et al. (2007) report that US acquirers engaging in cross-border M&As experience significantly negative long-run post-merger abnormal returns. However, Francoeur (2006) finds that Canadian firms acquiring foreign targets create great efficiency gains and increase their shareholder value while there are no sustained gains or losses for domestic M&As. In the UK, Conn et al. (2005) report negative announcement and post-announcement returns for domestic and public M&A targets, zero announcement returns and negative post-merger returns for cross-border public deals, and positive announcement returns for private targets. Meanwhile, foreign acquirers with UK targets have negative announcement returns (Danbolt, 1995), and UK firms acquiring domestic targets outperform their counterparts that acquire US and European targets (Aw and Chatterjee, 2004).

In the UK, which is the focal point of this study, the majority (approximately 80%) of target firms are privately held companies (Chang, 1998; Draper and Paudyal, 2008). Chang (1998) argues that takeovers of private targets via share payment tend to create large block shareholders as the ownership of private targets is highly concentrated. It is widely documented that large shareholders and institutional investors in particular can significantly influence firms' decision making and especially on M&As (Stulz et al., 1990; Ambrose and Megginson, 1992; Chen et al., 2007; Ferreira et al., 2010; Andriosopoulos and Yang, 2015).

Moreover, institutional investors can be active investors and discourage poor decisions made by entrenched managers (Jensen, 1991; Bushee, 1998; Duggal and Millar, 1999; Hartzell and Starks, 2003). The shareholdings of institutional investors in the US and the UK has increased significantly since the 1990s (Aguilera et al., 2006) with approximately 50% of the UK equity markets being held by institutional investors (Andriosopoulos and Yang, 2015). Nevertheless, UK managers are more restricted compared to their US counterparts due to the greater influence and monitoring of institutional investors (Short and Keasey, 1999).

In support of the monitoring argument, the positive relationship between acquirer firms' stock returns with share payments and the new block shareholders from the target company suggests that large shareholders are effective monitors (Chang, 1998). Duggal and Millar (1999) report a positive relationship between institutional ownership and acquirers' abnormal returns in the US but argue this positive relationship is driven by firm size and the acquirers' listing on the S&P 500 index, casting doubt on the active monitoring role in the M&As' transactions. However, Kohers and Kohers (2001) show that acquirers with higher institutional ownership have superior post-merger long-run performance. Meanwhile, institutional investors have a significantly lower share turnover rate in the UK compared to the US (Black and Coffee, 1994; Aguilera et al., 2006) suggesting they can have a key role in the monitoring of firms and firms' decision making.

We assess the monitoring role of institutional ownership on acquirers' performance reflected by the market reaction during the announcement period of M&As and the short-term post-announcement period. Moreover, we delve deeper into the impact of institutional ownership by splitting institutional ownership between domestic and foreign investors. We find that total, foreign, and domestic institutional ownership has a negative impact on the market reaction during the M&A announcement. However, during the short-term post-announcement period acquirers with greater total and domestic institutional investors outperform their peers.

In addition, the results show that acquirer firms with higher ownership concentration by long-term institutional investors have a smaller market reaction during the M&A announcement but outperform their peers over the 20 days following the announcement, consistent with Gaspar et al. (2005). Overall, our results suggest that a greater presence of institutional investors with a long-term investment horizon reduces information asymmetries and equity mispricing during the announcement, as evident by a small price reaction. Meanwhile the positive post-announcement performance is due to institutional and long-term institutional investors being effective monitors, therefore decreasing the likelihood of an M&A being a poor decision and resulting in a positive market performance.

Lakonishok et al. (1992) and Del Guercio (1996) suggest that institutional investors are more likely to shift their investment toward 'good' or 'glamour' equity rather than basing their investment decisions on objective risk characteristics, especially for banks and mutual funds. Moreover, Carline et al. (2009) report a poor performance for acquirers that target domestic firms and have lower growth opportunities. Glamour acquirers are firms with a high market valuation measured by the price-to-earnings ratio or the market-to-book value ratio (Sudarsanam and Mahate, 2003) and are considered to have higher future growth opportunities and experience higher announcement returns (Lang et al. 1989; Servaes, 1991; Megginson et al., 2004). Rau and Vermaelen (1998) argue that glamour acquirers experience significantly higher announcement returns than value acquirers but with a reversal in performance over a three year period following the announcement. Kohers and Kohers (2001) find that the poor post-announcement performance of glamour acquirers is driven by the adverse effects of acquirers' agency problems. Sudarsanam and Mahate (2003) find that UK glamour acquirers experience negative long-run returns following M&A announcements. However, Conn et al. (2005) show that glamour acquirers perform poorly only when acquiring public firms, as opposed to private targets. Moreover, Alexandridis et al. (2008) do

not find a significant relationship between acquirers' returns during the M&A announcement and their market-to-book value.

We assess whether institutional ownership has a varying impact between value and glamour acquirers and their respective market performance during the short-term announcement and post-announcement periods. We find that value acquirers consistently outperform glamour acquirers during the announcement and post-announcement periods. Our findings are consistent with Sudarsanam and Mahate (2003). However, our results show that glamour acquirers with a higher concentration of domestic institutional investors have a better post-announcement performance.

In summary, our contribution to the literature is threefold. First, we assess the impact of institutional ownership on the market reaction to M&A announcements while providing a further breakdown of institutional investors between domestic and foreign investors. Second, we assess the short-term market performance of value, moderate, and glamour firms, surrounding M&A announcements and evaluate the marginal influence of domestic institutional ownership on glamour firms. Third, we ensure our findings are robust by controlling for an extensive number of deal-specific and firm-specific characteristics.

The rest of the paper is organized as follows. Section 2 discusses the literature and sets the testable hypotheses. Section 3 describes the data. In section 4 we provide and discuss the empirical results. Section 5 concludes.

2. Literature review and Hypotheses

2.1. Glamour acquirers

Firms that are perceived to have high growth opportunities typically have high price valuations reflecting their past earnings and cash flow performance, and the expectation of

sustainable future growth. The positive expectation of future growth allows glamour acquirers to make value-decreasing acquisitions for which the market may not penalise them (Sudarsanam and Mahate, 2003). This is in line with the hypothesis that managerial hubris plays an important role in the decision making process of glamour acquirer firms when managers may be overconfident about their ability to manage an M&A deal (Roll, 1986). Furthermore, firms with high market-to-book ratios are subject to higher information asymmetries because a large proportion of their market value comes from intangible assets (Moeller et al., 2004). Therefore, these firms are more likely to be overvalued (Dong et al., 2006). Due to information asymmetries, managers of glamour firms may know that their shares are trading at unsustainable levels and will try to convert shares into real assets. This is one of the reasons why glamour acquirers prefer to make share payments for acquiring firms (Rau and Vermaelen, 1998; Sudarsanam and Mahate, 2003). Moreover, firm takeovers can be used to attract investors' scrutiny, potentially leading to the revaluation of undervalued firms (Draper and Paudyal, 2008).

Glamour firms' typically high growth in cash flows and earnings can reassure managers about their ability to handle an M&A and potentially enhance managers' overconfidence. In contrast, value acquirers are more prudent when making takeover decisions and therefore are more likely to create value for shareholders (Lakonishok et al., 1992). Pástor and Veronesi (2003) find evidence that firms' market-to-book value increases with the uncertainty about average profitability as well as the idiosyncratic return volatility, especially for firms that do not pay dividends.

According to the performance extrapolation hypothesis, investors reward or penalise firms based on the belief that past performance will persist into the future. Therefore, investors over-extrapolate past positive performance of glamour firms considering that it can be sustained in the future. Similarly, investors penalise value stocks based on the idea that

poor recent performance will persist. Lang et al. (1989), Servaes (1991), and Megginson et al. (2004) find that glamour acquirers earn significantly higher announcement period returns than value acquirers. Rau and Vermaelen (1998) report that glamour acquirers underperform over the three years following an M&A, which the authors attribute to the market's higher expectations due to the over-extrapolation of the glamour firms' past performance. However, these findings contradict those of Sudarsanam and Mahate (2003). Freund et al. (2007) report significant positive announcement returns between 1985 and 1998 for US acquirers involved in cross-border M&As, especially for value acquirers, which is supported by Francis et al. (2008). However, Alexandridis et al. (2008) do not find a significant relationship between market-to-book value and acquirers' announcement returns over a five-day window surrounding the M&A announcement.

Therefore, we test whether the over-extrapolation theory explains the M&A announcement returns and whether institutional ownership can mitigate the information asymmetries and relevant revaluations stemming from the M&A announcements. We formulate our hypotheses as follows:

Hypothesis 1: Glamour acquirers experience lower abnormal returns during the M&A announcement.

Hypothesis 2: Glamour acquirers with higher institutional ownership experience higher abnormal returns during the M&A announcement.

2.2. Institutional Ownership

Institutional investors can act as effective monitors of managers' behavior and strategy, and therefore can influence both current and future firm performance (Jensen, 1991; Bushee, 1998; Hartzell and Starks, 2003). For instance, Bushee (1998) finds a negative relationship between institutional ownership and R&D expenditures, suggesting that institutional investors can

reduce managers' myopic behavior and focus on short-term performance. Moreover, greater institutional ownership is linked to higher audit quality (Kane and Velury, 2004) and higher R&D expenditures (Hansen and Hill, 1991), suggesting that institutional investors can act as effective monitors. Potter (1992) finds that a greater concentration of institutional investors reduces the informativeness of share prices prior to earnings announcements and suggests that the sophistication of institutional investors is unlikely to pre-empt the information content of earnings announcements that trigger the share price variability at the time of the announcement. Moreover, the author finds a positive correlation between firm size and institutional ownership. Similarly, Cready (1994) and Hessel and Norman (1992) find that institutional investors prefer larger firms, such as S&P 500 constituents, in which to invest. Lev (1988) suggests that, compared to individual shareholders, institutional investors are better informed due to their lower marginal costs of gathering information. Diamond and Verrechia (1991) and Kim and Verrechia (1994) suggest that increased institutional ownership is positively associated with expanded disclosure which can reduce information asymmetries and increase firms' stock liquidity. Lev (1992) argues that institutional investors are preferred by the firms in which they invested, due to their better monitoring performance and the requirement of sophisticated and future-oriented information.

Regarding M&As, Eakins (1993) finds that institutional investors are important players in M&As that involve changes in corporate control. Moreover, institutional investors may act to alleviate agency problems and discourage poor management decisions from entrenched managers and therefore, higher institutional ownership is positively associated with tender offers (Kohers et al., 2007). This is in line with Gaspar et al. (2005) who argue that institutional investors can be effective monitors and mitigate the agency costs that arise during M&As between shareholders and managers. Stulz et al. (1990) show that higher institutional ownership has a positive relationship with lower takeover premiums. Duggal and Millar (1999)

show that institutional ownership has a positive impact on acquirers' returns but find that this positive relationship is primarily driven by firm size. Chen et al. (2007) find that firms with independent long-term oriented institutional investors outperform those with moderate (grey) or short-term oriented investors over the three years following an M&A announcement. Similarly, Gaspar et al. (2005) find that acquirers with more short-term institutional investors experience lower announcement returns which the authors attribute to the weaker monitoring that can allow managers to make acquisitions that can damage the value of the firm. Following Hartzell and Starks (2003) and Bhojraj and Sengupta (2003) we test for possible effects of concentrated institutional ownership and use the sum of holdings of the five largest (*top 5*) institutional investors[2]. We also use the holdings of the largest institutional investor. Therefore we assess the impact of institutional ownership on the market valuation during the short-term window surrounding the M&A announcement. We state our hypotheses as follows:

Hypothesis 3: Greater institutional ownership has a positive impact on acquirers' short-term post-announcement performance.

Hypothesis 4: Long-term institutional investors have a positive impact on acquirers' short-term post-announcement performance.

2.3. Payment Method

If all investors enjoy the same information (in a perfect market) the method of payment for an M&A should have no impact on the wealth creation. In reality, both acquirer and target firms have different preferences for the deal payment methods due to the existence of asymmetric information. For instance, firms are less likely to acquire firms that are foreign and privately owned via a share payment (Faccio and Masulis, 2005). Reuer et al. (2004)

[2] Alternatively we use the ownership of the *three largest institutional investors* and the results remain qualitatively the same.

argue that the method of payment used in M&As can significantly influence the valuation of the participating firms, consequently affecting the wealth of the participating shareholders.

Cash or debt financing is preferred, compared to stock financing, as the latter dilutes the existing shareholdings and increases the risk of losing control (Huang and Walkling, 1987; Franks et al. 1988; Amihud et al., 1990). Chang (1998) suggests that financing an M&A with common stock is similar to a private placement of equity because the target is owned by one or a small number of shareholders. In the UK, a large proportion of M&A target firms are privately held. Therefore, the consideration of avoiding block shareholders and keeping voting power is an important factor for using cash offers. When the target firm is acquired with cash, the target firm's shareholders face immediate tax charges as opposed to a stock payment where tax charges can be deferred (Fuller et al., 2002). Therefore, the accompanying tax charges lead to a higher premium for cash offers than stock offers to compensate target shareholders for the immediate payment of taxes, resulting in higher abnormal returns.

According to Fishman (1989) the key difference between cash and stock financing is that a stock's value depends on the profitability of M&A deals, while the value of cash does not. Therefore, the target firms need to make an efficient decision rejecting or accepting the offer as targets and acquirers have asymmetric information. Typically, a cash payment benefits acquirers since the market views cash payments as a positive signal of expectations for future returns (Conn et al., 2005). There are two main explanations for this. First, acquirers prefer a share payment when their stock is overvalued as they try to exploit their information advantages by offering stock financing (Myers and Majluf, 1984; Shleifer and Vishny, 2003). Since acquirers face the risk of incorrectly valuing a target, due to information asymmetries, they may prefer a share payment offer because in that case the target firm's shareholders share part of the valuation risk of the merged entity (Sudarsanam and Mahate, 2003). However, target firms will expect a cash payment when the acquirers' equity is undervalued, leading to

payment methods acting as informational signals (Myers and Majluf, 1984). Chemmanur et al. (2009) find that acquirers choosing a share payment are overvalued and those using cash financing are correctly valued, while a greater overvaluation of the acquirer's shares increases the likelihood of a share payment. The second explanation for the positive impact of cash payments is that acquirers may choose to provide share payment when they have less information regarding the target's value (Hansen, 1987) or a low valuation of the target firm (Fishman, 1989). Similarly, Chemmanur et al. (2009) argue that greater information asymmetries between acquirers and targets increase the likelihood of a cash offer.

Irrespective of acquirers' pre-bid financial status, in the UK a cash payment can generate higher post-acquisition shareholder returns for acquiring firms over a 3-year period compared to share payment (Sudarsanam and Mahate, 2003; Abhyankar et al., 2005). As earlier discussed, the information asymmetries between the shareholders of acquiring and target firms are at the core of the financing decision. However, institutional investors can be effective monitors, mitigate information asymmetries and influence both the current and future performance of a firm (Jensen, 1991; Bushee, 1998; Hartzell and Starks, 2003; Gaspar et al., 2005). Therefore, we test whether the institutional investors affect the signaling and respective market reaction to the choice of payment method, cash[3] or shares, surrounding the M&A announcement. We set our hypothesis as follows:

Hypothesis 5: Acquirers making cash payments experience a higher market reaction to the M&A announcement.

[3] Following Martin (1996) and Faccio and Masulis (2005), cash payments are defined to include cash, non-contingent liabilities and newly issued notes. Moreover, cash payment includes actual cash, debt, assumed debt, converted debt and loan notes, as defined in Bureau van Dijk.

3. Data and descriptive statistics

3.1. Sample

We identify all M&As undertaken by UK listed companies from Bureau Van Dijk (Zephyr) from 01/01/2000 to 31/12/2010. The final sample is selected by complying with the following conditions: 1) The acquirer has equity ownership records available from Thomson One Banker, and both financial records at the year-end prior to the announcement and stock price records around the announcement date from Worldscope; 2) The transaction is completed at the end of sample period; 3) All acquirers that are financial firms are excluded from the sample (2-dig SIC 60-69);[4] 4) The deal value is greater than £1 million; 5) Targets are both UK and non-UK firms, including listed private and subsidiary firms; 6) The acquirer firms have the stock price records for 200 days before the announcement date and 10 days after the announcement date in DataStream; and 7) We exclude the deals from the same acquirers within 20 days, as the acquirers' abnormal return cannot be isolated for a particular target (Fuller et al., 2002). The final sample is comprised of 2,582 completed M&As undertaken by UK publicly listed companies. The final sample contains 1,519 domestic targets and 1,063 foreign targets.

Firm-level institutional ownership characteristics are obtained from Thomson Reuters,[5] which compiles information contained quarterly in the 13F historical holder the proportion of foreign institutional ownership, low-turnover institutional ownership as well as total institutional ownership in each firm at the year-end prior to the deal announcement, as in Aggarwal et al. (2011) and Cornett et al. (2007). Variable descriptions are provided in Table 1.

[4] The sample excludes financial industries due to the uniqueness of the industry such as: special asset composition, high leverage, and stricter government regulations (Elyasiani and Jia, 2010).
[5] Thomson Reuters has a minimum of 0.015% threshold for UK firms' ownership record.

3.2. Descriptive statistics

Table 2 provides the annual distribution of domestic and cross-border M&As undertaken by UK acquirers over our sample period. Overall, the number of M&As is relatively stable during the first half of 2000 with a peak in deals in both 2006 and 2007, after which there is a trough in M&A activity due to the financial crisis of 2008-09. In 2010 the number of M&As rise again to the levels of the early 2000s. Even though domestic deals are the main type of M&As across the sample period, the average deal value is higher for cross-border M&As. For instance, the total deal value of cross-border transactions accounts for over 79% of the total deal value of all M&As undertaken by UK listed companies during our sample period.

[Insert Table 2 about here]

Table 3 highlights the sample features according to the acquirers' market-to-book value (MTBV) ratio. Following Sudarsanam and Mahate (2003), we rank all acquirers' MTBVs[6] and construct the samples into three equally-weighted terciles: Value (low MTBV, 797), Moderate (median MTBV, 797) and Glamour (high MTBV, 798). Glamour acquirers have an average MTBV ratio of 3.11 compared to 1.08 and 0.51 for moderate and value acquirers respectively. Cross-border M&As undertaken by glamour acquirers are greater in frequency and size than the other two groups. For instance, the average deal value of cross-border M&As undertaken by glamour acquirers (£458.68m) is approximately triple the average deal value of M&As undertaken by moderate and value acquirers; however, the latter focus more on domestic M&As deals. Secondly, cash is the main payment method in M&As and is especially preferred by value acquirers, while the most prevalent use of share payment is found in deals undertaken by glamour acquirers. The results are broadly consistent with previous evidence showing that glamour firms prefer a share payment – the payment of shares when the stock price is

[6] Both book and market values (BV and MV respectively) are lagged one year relative to the M&A announcement.

overvalued (Myers and Majluf, 1984; Shleifer and Vishny, 2003; Sudarsanam and Mahate, 2003). Moreover, the figures show that glamour acquirers are more engaged (172 M&As) in the high-tech industry as opposed to value acquirers (82 M&As).

[Insert Table 3 about here]

Moreover, we find that value acquirers have a greater presence of institutional investors than moderate and glamour acquirers, with the top 5 institutional ownerships being 26.95%, 25.34% and 24.10% for value, moderate and glamour acquirers, respectively. However, there is no significant difference in the total institutional ownership across the three types of acquirers. When analyzing further the type of institutional investors, i.e. between domestic and foreign investors, we find some discrepancies. In particular, we find that foreign institutional investors prefer glamour acquirers whereas domestic institutional investors are more prominent in value acquirers. Moreover, we find that value acquirers attract more long-term institutional investors (40.68%), as opposed to moderate (40.55%) and glamour (38.29%) acquirers. Similarly, short-term investors have a higher presence in glamour acquirers as opposed to value acquirers.

Finally, we find that glamour acquirers are smaller in size, have lower leverage and higher cash ratios[7] consistent with the existing literature, which suggests that glamour firms usually have higher valuations by the market based on their high growth in cash flow and earnings (Sudarsanam and Mahate, 2003).

4. Empirical results

4.1. Short-term value creation for the acquirers

We employ a standard event study of methodology to calculate the cumulative abnormal

[7] We use the ratio of Cash and Cash Equivalents adjusted by total assets as a proxy for cash. We also use the ratio of Cash and Cash Equivalents adjusted by Net Assets as an alternative proxy for firm liquidity and our results (unreported) remain the same.

returns (CARs) during the short period around the time of the M&A announcement date. The abnormal returns are estimated based on daily dividend-adjusted stock returns with a standard OLS market model and the FTSE All Share Index as the proxy for the market portfolio. The OLS market model coefficients are estimated over a 250 trading-days window up to the 20 trading days prior to the M&A announcement day.

Figure 1 illustrates the cumulative average abnormal returns for acquirers announcing domestic and cross-border M&As over the 41-day window (-20, +20) surrounding the announcement date. The graph shows that on average domestic M&As enjoy a higher market reaction on the day of the announcement, as opposed to cross-border M&As, consistent with Conn et al. (2005). However, this is a short-lived reaction as there is a reversal to the pre-announcement levels over the 20 days following the announcement. When plotting the market reaction across the three types of acquirers (Figure 2), we find that value acquirers experience an economically significant market reaction on the day of the announcement which persists over the 20-day post-announcement period. This is contrary to the market reaction to glamour acquirers where there is an insignificant market reaction followed by a negative performance approximately a week following the M&A announcement.

We assess the market reaction to M&A announcements in more detail in Table 4. Overall, we do not find strong evidence of a pre-event out(under)performance but we find strong evidence of a positive market reaction across all event windows (-1, +1), (Day 0), and (-5, +5). Overall, we find that acquirers enjoy an average 0.598% outperformance during the 3-day event window, with domestic M&As having significantly better outperformance (0.763%) compared to cross-border deals (0.363%), also consistent with Conn et al. (2005). Similarly, we find that value acquirers enjoy a significantly higher market reaction (0.747%) compared to glamour acquirers (0.219%). This is consistent with the notion that the UK market over-extrapolates acquirers' past performance prior to M&A announcements (Sudarsanam and Mahate, 2003),

since in the UK most targets are privately held firms and tend to accept the equity of value bidders as it is less likely to be overpriced (Chang, 1998).

[Insert Table 4 about here]

During the post-announcement period (+2, 20) there is a reversal in performance which dissipates almost all gains from the announcement market reaction. This reversal applies to both domestic and cross-border M&As. However, we find that value acquirers retain any gains from the market reaction to the announcement, contrary to glamour acquirers which display a negative performance of approximately 1% over the 20-day period following the announcement.

We analyze further the performance of domestic and cross-border M&As across the three MTBV groups of acquirers: value, moderate and glamour. The results in Table 5 show that overall there is no significant difference between domestic and cross-border M&As for each acquirer category, with the exception of the moderate acquirers where the market reaction on day 0 for domestic deals is approximately threefold compared to cross-border deals. Moreover, we find that value and moderate acquirers outperform glamour acquirers during the announcement event windows, consistent with Sudarsanam and Mahate (2003) who find that value acquirers outperform glamour acquirers, but contrary to the 'over-extrapolation' hypothesis (Rau and Vermaelen, 1998) that suggests markets favor glamour acquirers during M&A announcements. Finally, the results confirm the earlier graphical illustration pointing to an underperformance for glamour acquirers, mostly driven by cross-border M&As, following the deal announcement, as opposed to value and moderate acquirers which retain the gains achieved during the deal announcement.

[Insert Table 5 about here]

4.2. Univariate analysis of CARs based on deal and firm characteristics

Table 6 presents the CARs for the two extended event windows (-1, +1) and (-5, +5) and the post-event (+2,+10) for domestic and cross-border M&As, which are calculated for each pair of below and above median values of selected ownership and firm characteristics. Moreover, the statistics on differences in means are reported. The results show there is no difference for different deal sizes for domestic and cross-border deals. Moreover, we find that firms with a higher concentration of single, or top 5 institutional ownership outperform those acquirers with lower ownership concentration but only in the post-announcement window.

Firms with higher ownership by domestic institutional investors underperform compared to firms with lower domestic institutional ownership during the announcement window of domestic only deals. However, there is a smaller reversal for higher domestic institutional ownership following the announcement. This is possibly driven by the fact that retail investors may overreact to news announcements, such as M&As, leading to readjustment following the event. Moreover, we find that firms with higher foreign institutional investors experience a lower market reaction on the event window and a lower reversal on the post-event window. This is contrary to Ferreira et al. (2010) who find that firms with greater foreign institutional ownership experience significantly greater announcement abnormal returns in cross-border M&As as foreign institutional investors can help to reduce transaction costs and information asymmetry. However, we argue that this mainly because Ferreira et al. (2010) assess the impact of foreign institutional investors on the combined (value-weighted) CARs of both acquirers and targets, whereas we assess the market reaction on the acquirers only. For instance, the authors report a (-1,+1) CAR of -0.78% and 11.81% for acquirers and targets respectively, which shows that on average acquirers have a negative market reaction and therefore the relationship between foreign investors and the market valuation may be driven by the targets' market

valuation. Moreover, a higher proportion of UK institutional investors have a lower turnover rate leading to a lower market reaction for domestic deals (0.376% for the 6-day window) similar to the performance of firms with higher total institutional ownership (0.357% for the 6-day window).

[Insert Table 6 about here]

The evidence from the firm-specific characteristics shows that smaller firms experience a higher market reaction when undertaking a cross-border M&A, due to the higher information asymmetries. This supports the conclusion of firm size effect in acquisition announcement returns by Moeller et al. (2004) who report an approximately 2% higher announcement return for smaller acquirer shareholders irrespective of the financing resources and listing status. Moreover, value firms outperform glamour firms during the event and post-event windows for domestic deals and for the post-event window only for cross-border deals.

Table 7 reports the CARs for the 3-day (-1, +1) and 6-day (-5, +5) event windows and the post-event window (+2, +20) on various deal-specific characteristics sorted by acquirers' value, moderate, and glamour status. The results show that value acquirers with high-tech and non-high-tech targets outperform glamour acquirers. For the whole sample, the market reaction is positive and significant for firms acquiring high-tech targets (0.45%) and non-high-tech targets (0.63%) consistent with Conn et al. (2005). Moreover, we find that value acquirers have a positive post-announcement performance for non-high-tech targets (0.33%) while glamour acquirers have a negative post-event performance for high-tech targets (-1.45%). Value acquirers consistently outperform glamour acquirers that target cross- or intra-industry targets and for either a cash or share payment. Moreover, a cash offer outperforms share payment deals, especially for glamour acquirers which have negative returns (-1.306%) for share payments, consistent with Sudarsanam and Mahate (2003) and Andre et al. (2004). Finally, deals with unlisted targets outperform deals with listed targets, especially for value acquirers,

consistent with US (Chang, 1998) and UK (Conn et al., 2005) evidence.

[Insert Table 7 about here]

4.3. Multivariate Analysis

In this section we assess the combined drivers of the market valuation to M&A announcements. We do so with a standard ordinary least squares regression as shown below:

$$CAR_{i,j,t} = a + \beta_1 Cross - Border_{i,j} + \beta_2 Cross - Industry_{i,j} + \beta_3 Deal\ Size_{i,j} + \gamma\ Institutional\ Ownership_{i,j,t-1} + \delta\ Deal\ Characteristics_{i,j} + \theta\ Firm\ Characteristics_{i,j,t-1} + \varphi\ \ Industry\ and\ Year\ controls_{i,j} + \varepsilon_{i,j,t} \qquad (1)$$

$CAR_{i,j,t}$ is the CARs for the event window (-1, +1)[8] and the post-event window (+2, +20) for acquirer *i* for M&A deal *j* at time *t*. Cross-border is a binary variable equal to one when the target is a non-UK firm, and zero otherwise for M&A *j*. Cross-industry is a binary variable equal to one when acquirer and target firms have different 2-digit SIC codes and zero otherwise for M&A *j*. Deal size is the natural logarithm of the deal value for M&A *j*. Institutional ownership, Deal characteristics and Firm characteristics are matrices of institutional owners and turnover, M&A deal-specific information and firm-specific characteristics respectively, as described earlier in Table 1. Finally, we control for industry and time fixed effects.

The results on the event window reported in Table 8 show that it is mostly value acquirers that are affected by institutional ownership. In particular, consistent with our previous results, we find that acquirers with a higher concentration of long-term institutional investors experience a lower market reaction on the day of the M&A announcement. The same impact is found for domestic and total institutional ownership, suggesting that the presence of

[8] The results for the extended event window (-5, +5) remain unaltered and are not reported for brevity.

institutional investors minimizes an overreaction to material news such as M&As. Moreover, we find that smaller value firms experience a higher market reaction which can be attributed to the relatively higher information asymmetries among value firms. Surprisingly though, we find no evidence of foreign institutional investors affecting the market reaction or of any other deal or firm characteristic having a significant influence. The exception is the negative impact of foreign institutional investors on moderate acquirers. We find no evidence of institutional investors, deals, or firm characteristics affecting the market reaction to the M&A announcement for glamour acquirers.

[Insert Table 8 about here]

The results of the post-announcement valuation drivers show that the financial crisis has a negative impact, as expected, for value acquirers. Moreover, we find that more profitable, and with lower cash levels, value acquirers have a better post-announcement performance. The results of the moderate acquirers show that only the financial crisis has a negative post-announcement impact. The evidence on glamour acquirers shows that glamour firms that make cash payments have a better post-event performance, as opposed to share payments. This is consistent with Sudarsanam and Mahate (2003) and Abhyankar et al. (2005), and suggests that the market prefers glamour acquirers to pay cash so that the existing shareholders will not lose their voting power nor their growth potential and respective stock appreciation of the glamour firm. Finally, the presence of domestic and total institutional investors has a positive impact on the post-event market reaction, due to their monitoring role which can prevent managers from making poor investment decisions (Hartzell and Starks, 2003; Gaspar et al., 2005).

[Insert Table 9 about here]

For further analysis we pool our samples and re-run our regressions while controlling for acquirers' market-to-book. As an alternative to the market-to-book ratio we include a

categorical variable *Glamour category* that takes the value of 1 for value acquirers (first tercile of market-to-book ratio), 2 for moderate MTBV acquirers (second tercile of market-to-book ratio) and 3 for glamour acquirers (third tercile of market-to-book ratio).The results are reported in Table 10. Panel A reports the results of the event window (-1, +1) and shows that cross-border M&As are not perceived favorably by the market, as suggested by the negative coefficient, consistent with Conn et al. (2005) and Goergen and Renneboog (2004). However, we do not find any evidence of cross-industry deals affecting the market reaction to the M&A announcement. Regarding the impact of institutional investors, we find that acquirers with a single, large institutional investor experience a positive market reaction. However, a closer examination of the influence of institutional investors shows that the presence of domestic or foreign investors has a negative impact on the market reaction during the event window. This is similar to the results on total institutional ownership and low-turnover institutional ownership, suggesting that, overall, institutional investors, and especially long-term oriented investors, mitigate information asymmetries and potentially risk-increasing decisions. This is mainly because institutional investors are considered as well informed investors, supporting O'Neill and Swisher (2003) who find that the degree of informed trading and information asymmetry cost component are lower in stocks with relatively high institutional ownership. Lakonishok et al. (1992) and Del Guercio (1996) suggest that institutional investors are more likely to shift their investment towards the 'good' or 'glamour' equity, rather than basing their investment decisions on objective risk characteristics, especially for banks and mutual funds. This also supports the argument that institutional investors can shape corporate risk-taking activities and monitor firm strategies and corporate decision making (Wright et al., 1996), thereby helping to reduce firms' risk levels through effectively monitoring management and enhancing corporate decision-making quality (Roberts and Yuan, 2010). Overall, these findings are contrary to our hypothesis *H4* at least for

the market reaction to the M&A announcement.

The results further show that glamour acquirers, captured by the MTBV ratio or the glamour category, have a lower market reaction to the M&A announcement supporting our hypothesis *H1* and consistent with Sudarsanam and Mahate (2003). Moreover, we find that larger acquirers experience a lower market reaction due to the lower information asymmetries. However, we find no evidence of deal size having a significant impact when controlling for other firm-, deal- and ownership-specific factors, contrary to Loderer and Martin (1990) who argue that acquirers experience greater losses with large deals as they are more likely to overpay, especially in the presence of overconfident managers who overestimate their ability to extract acquisition benefits and thus overpay (Hayward and Hambrick, 1997; Malmendier and Tate, 2008).

[Insert Table 10 about here]

When it comes to the post-announcement window (+2, +20) the results of the payment method show that cash payments are preferred by the market compared to share payments, consistent with our hypothesis *H5*. Compared to our findings on the market reaction to the event window, we find a reversal on the impact of institutional investors. In particular, domestic and long-term oriented institutional investors have a positive impact on the post-event market reaction. Similarly, a higher ownership by total institutional investors has a positive impact. These findings support our hypotheses *H3* and *H4* for the short-term post-announcement performance, suggesting that institutional investors are effective monitors by focusing on the managers' behavior and firms' developing strategy. Moreover, the results of the performance between value and glamour acquirers hold for the post-announcement market valuation, suggesting that glamour acquirers experience lower returns and this is consistent with our hypothesis *H1*. We further analyze the marginal impact of glamour acquirers with a higher institutional ownership, by interacting the market-to-book ratio with domestic

institutional ownership. Although we find that glamour firms underperform, glamour acquirers with a higher domestic institutional ownership have a significantly better post-announcement performance, which supports our hypothesis *H2*. Finally, we find that acquirers with higher leverage have a poor post-announcement performance while other firm- or deal-specific characteristics are not significant factors.

5. Conclusion

The aim of this paper is to provide a comprehensive analysis of the market reaction during the short-term period surrounding the announcement of M&As in the UK and evaluate the impact of institutional ownership on value and glamour acquirers. We find that value acquirers consistently outperform glamour acquirers during M&A announcements and over the short-term post-announcement period, in line with Sudarsanam and Mahate (2003), while contrasting the outperformance of glamour acquirers reported in Rau and Vermaelen (1998). Our evidence shows that the market views more favorably firms acquiring targets with cash rather than share payments, as reflected by the short-term post-announcement market performance. However, there is a positive relationship between domestic institutional ownership and post-announcement performance, suggesting that domestic institutional investors help to keep a buoyant share performance for glamour acquirers following the M&A announcement.

Moreover, our results show that institutional ownership has a negative relationship with announcement returns, including foreign institutional ownership, low-turnover institutional ownership and domestic institutional ownership. Following the M&A announcement, acquirers where domestic and long-term institutional investors have greater stakes outperform their peers. This supports the effective monitoring role of institutional investors and

specifically those investors that have a long-term horizon and whose interests are more aligned with those of the firms in which they have invested. In addition, we find that glamour acquirers underperform compared to their peers, but glamour acquirers with a higher concentration of domestic institutional investors have a better post-announcement performance. Finally, we find that cross-border deals result in a lower market reaction only during the M&A announcement, due to the transaction costs and information asymmetries associated with cross-border M&As.

Our findings should be treated with a caveat regarding the relationship between institutional ownership, firm size, and respective information asymmetries. For instance, Ferreira and Matos (2008) suggest that institutional investors prefer large firms, whereas Hussain (2000) reports that UK institutional investors prefer smaller and widely held firms. The purpose of this paper is not to document and test the investment preferences of different types of institutional investors, but rather to assess the information asymmetries and respective market valuations, as well as the extent to which they are driven by varying types of institutional investors that are already present in a firm, for significant events such as M&As. The establishment of the causality and directional effects between different types of institutional investor, firm size, and market performance would be a fertile ground for further investigation.

References

Abhyankar, A., Ho, K. Y., & Zhao, H. (2005). Long-run post-merger stock performance of UK acquiring firms: a stochastic dominance perspective. *Applied Financial Economics*, *15*, 679-690.

Aggarwal, R., Erel, I., Ferreira, M., & Matos, P. (2011). Does governance travel around the world? Evidence from institutional investors. *Journal of Financial Economics*, *100*, 154-181.

Aguilera, R.V., Williams, C.A., Conley, J.M. & Rupp, D.E. (2006). Corporate governance and social responsibility: a comparative analysis of the UK and the US. *Corporate Governance: An International Review,* 14, 147–158.

Akhigbe, A., & Martin, A. D. (2000). Information-signaling and competitive effects of foreign acquisitions in the US. *Journal of Banking & Finance*, *24*, 1307-1321.

Alexandridis, G., Antoniou, A., & Zhao, H. (2008). Belief asymmetry and gains from acquisitions. *Journal of Multinational Financial Management*,*18*, 443-460.

Ambrose, B.W. & Megginson, W.L. (1992). The role of asset structure, ownership structure, and takeover defenses in determining acquisition likelihood. *Journal of Financial & Quantitative Analysis*, 27, 575–589.

Amihud, Y., Lev, B., & Travlos, N. G. (1990). Corporate control and the choice of investment financing: The case of corporate acquisitions. *Journal of Finance*, *45*, 603-616.

Andrade, G., Mitchell, M., & Stafford, E. (2001). New Evidence and Perspectives on Mergers. *Journal of Economic Perspectives*, *15*, 103-120.

Andre, P., Kooli, M., & L'her, J. F. (2004). The long-run performance of mergers and acquisitions: Evidence from the Canadian stock market. *Financial Management*, *33,* 27-43.

Andriosopoulos, D., & Yang, S. (2015). The impact of institutional investors on mergers and acquisitions in the United Kingdom. *Journal of Banking & Finance*, *50*, 547-561.

Antoniou, A., Arbour, P., & Zhao, H. (2008). How much is too much: are merger premiums too high? *European Financial Management*, *14*, 268-287.

Attig, N., Cleary, S., El Ghoul, S., & Guedhami, O. (2012). Institutional investment horizon and investment–cash flow sensitivity. *Journal of Banking & Finance*, *36*, 1164-1180.

Aw, M. S. B., & Chatterjee, R. A. (2004). The performance of UK firms acquiring large cross-border and domestic takeover targets. *Applied Financial Economics*, *14*, 337-349.

Berkovitch, E., & Narayanan, M. P. (1990). Competition and the medium of exchange in takeovers. *Review of Financial Studies*, *3*, 153-174.

Bhojraj, S., & Sengupta, P. (2003). Effect of corporate governance on bond ratings and yields: The role of institutional investors and outside directors. *Journal of Business*, *76*, 455-475.

Black, B.S. & Coffee Jr., J.C. (1994). Hail Britannia? Institutional investor behavior under limited regulation. *Michigan Law Review*, 92, 1997–2087.

Black, E. L., Carnes, T. A., Jandik, T., & Henderson, B. C. (2007). The Relevance of Target Accounting Quality to the Long‐Term Success of Cross‐Border Mergers. *Journal of Business Finance & Accounting*, *34*, 139-168.

Bushee, B. J. (1998). The influence of institutional investors on myopic R&D investment behavior. *Accounting Review*, 73, 305-333.

Cakici, N., Hessel, C., & Tandon, K. (1996). Foreign acquisitions in the United States: Effect on

shareholder wealth of foreign acquiring firms. *Journal of Banking & Finance*, *20*, 307-329.

Cameron, A.C., Gelbach, J.B., & Miller, D.L., 2008. Bootstrap-based improvements for inference with clustered errors. *Review of Economics and Statistics*, 90, 414-427.

Carline, N. F., Linn, S. C., & Yadav, P. K. (2009). Operating performance changes associated with corporate mergers and the role of corporate governance. *Journal of Banking & Finance*, *33*, 1829-1841.

Chang, S. (1998). Takeovers of privately held targets, methods of payment, and bidder returns. *Journal of Finance*, *53*, 773-784.

Chemmanur, T. J., Paeglis, I., & Simonyan, K. (2009). The medium of exchange in acquisitions: Does the private information of both acquirer and target matter? *Journal of Corporate Finance*, *15*, 523-542.

Chen, X., Harford, J., & Li, K. (2007). Monitoring: Which institutions matter? *Journal of Financial Economics*, *86*, 279-305.

Conn, R. L., Cosh, A., Guest, P. M., & Hughes, A. (2005). The impact on UK acquirers of domestic, cross-border, public and private acquisitions. *Journal of Business Finance & Accounting*, *32*, 815-870.

Cready, W. M. (1994). Determinants of relative investor demand for common stocks. *Journal of Accounting, Auditing & Finance*, *9*, 487-507.

Danbolt, J. (1995). An analysis of gains and losses to shareholders of foreign bidding companies engaged in cross-border acquisitions into the United Kingdom, 1986-1991. *European Journal of Finance*, *1*, 279-309.

Del Guercio, D. (1996). The distorting effect of the prudent-man laws on institutional equity investments. *Journal of Financial Economics*, *40*, 31-62.

Diamond, D. W., & Verrecchia, R. E. (1991). Disclosure, liquidity, and the cost of capital. *Journal of Finance*, *46*, 1325-1359.

Dong, M., Hirshleifer, D., Richardson, S., & Teoh, S. H. (2006). Does investor misvaluation drive the takeover market? *Journal of Finance*, *61*, 725-762.

Draper, P., & Paudyal, K. (2008). Information asymmetry and bidders' gains. *Journal of Business Finance & Accounting*, *35*, 376-405.

Duggal, R., & Millar, J. A. (1999). Institutional ownership and firm performance: The case of bidder returns. *Journal of Corporate Finance*, *5*, 103-117.

Eakins, S. (1993). Institutional investor support of managers: An investigation of tender offers. *Quarterly Journal of Business and Economics*, *32*, 75-84.

Elyasiani, E. & Jia, J. (2010). Distribution of institutional ownership and corporate firm performance. *Journal of Banking & Finance*, 34, 606-620.

Emery, G. W., & Switzer, J. A. (1999). Expected market reaction and the choice of method of payment for acquistions. *Financial Management*, *28*, 73-86.

Faccio, M., & Masulis, R. W. (2005). The choice of payment method in European mergers and acquisitions. *Journal of Finance*, *60*, 1345-1388.

Ferreira, M. A., & Matos, P. (2008). The colors of investors' money: The role of institutional investors around the world. *Journal of Financial Economics*, 88, 499-533.

Ferreira, M. A., Massa, M., & Matos, P. (2010). Shareholders at the gate? Institutional investors and cross-border mergers and acquisitions. *Review of Financial Studies, 23*, 601-644.

Fishman, M. J. (1989). Preemptive bidding and the role of the medium of exchange in

acquisitions. *Journal of Finance*, *44*, 41-57.

Francis, B. B., Hasan, I., & Sun, X. (2008). Financial market integration and the value of global diversification: Evidence for US acquirers in cross-border mergers and acquisitions. *Journal of Banking & Finance*, *32*, 1522-1540.

Francoeur, C. (2006). The long-run performance of cross-border mergers and acquisitions: Evidence to support the internalization theory. *Corporate Ownership & Control*, *4*, 312-323.

Franks, J. R., Harris, R. S. & Mayer, C. (1988). Means of Payment in Takeovers: Results for the United Kingdom and the United States. *In:* Auerbach, A. J. (ed.) *Corporate Takeovers: Causes and Consequences.* UMI.

Freund, S., Trahan, E. A., & Vasudevan, G. K. (2007). Effects of global and industrial diversification on firm value and operating performance. *Financial Management, 36,* 143-161.

Fuller, K., Netter, J., & Stegemoller, M. (2002). What do returns to acquiring firms tell us? Evidence from firms that make many acquisitions. *Journal of Finance*, *57*, 1763-1793.

Gaspar, J. M., Massa, M., & Matos, P. (2005). Shareholder investment horizons and the market for corporate control. *Journal of Financial Economics*, *76*, 135-165.

Ghosh, A. (2001). Does operating performance really improve following corporate acquisitions? *Journal of Corporate Finance*, *7*, 151-178.

Goergen, M., & Renneboog, L. (2004). Shareholder Wealth Effects of European Domestic and Cross‐border Takeover Bids. *European Financial Management*, *10*, 9-45.

Hansen, G.S. & Hill, C.W.L. (1991). Are institutional investors myopic? A time-series study of four technology-driven industries. *Strategic Management Journal*, 12, 1-16.

Hansen, R. G. (1987). A theory for the choice of exchange medium in mergers and acquisitions. *Journal of Business, 60,* 75-95.

Hartzell, J. C., & Starks, L. T. (2003). Institutional investors and executive compensation. *Journal of Finance*, *58*, 2351-2374.

Hayward, M. L., & Hambrick, D. C. (1997). Explaining the premiums paid for large acquisitions: Evidence of CEO hubris. *Administrative Science Quarterly, 42,* 103-127.

Hessel, C. A., & Norman, M. (1992). Financial characteristics of neglected and institutionally held stocks. *Journal of Accounting, Auditing & Finance*, *7*, 313-330.

Houston, J. F., & Ryngaert, M. D. (1997). Equity issuance and adverse selection: A direct test using conditional stock offers. *Journal of Finance*, *52*, 197-219.

Huang, Y. S., & Walkling, R. A. (1987). Target abnormal returns associated with acquisition announcements: Payment, acquisition form, and managerial resistance. *Journal of Financial Economics*, *19*, 329-349.

Hussain, S. (2000). Simultaneous determination of UK analyst following and institutional ownership. *Accounting & Business Research, 30*, 111-124.

Jensen, M. C. (1991). Corporate control and the politics of finance. *Journal of Applied Corporate Finance*, *4*, 13-33.

Kane, G. D., & Velury, U. (2004). The role of institutional ownership in the market for auditing services: an empirical investigation. *Journal of Business Research*, *57*, 976-983.

Kennedy, V. A., & Limmack, R. J. (1996). Takeover activity, CEO turnover, and the market for corporate control. *Journal of Business Finance & Accounting*, *23*, 267-285.

Kim, O., & Verrecchia, R. E. (1994). Market liquidity and volume around earnings

announcements. *Journal of Accounting and Economics*, *17*, 41-67.

Kohers, N., & Kohers, T. (2001). Takeovers of technology firms: Expectations vs. reality. *Financial Management, 30,* 35-54.

Kohers, N., Kohers, G. & Kohers, T. (2007). Glamour, value, and the form of takeover. *Journal of Economics and Business*, 59, 74-87.

Lakonishok, J., Shleifer, A., Vishny, R. W., Hart, O., & Perry, G. L. (1992). The structure and performance of the money management industry. *Brookings Papers on Economic Activity. Microeconomics*, 339-391.

Lang, L. H., Stulz, R., & Walkling, R. A. (1989). Managerial performance, Tobin's Q, and the gains from successful tender offers. *Journal of Financial Economics*, *24*, 137-154.

Lee, C. M. (1992). Earnings news and small traders: An intraday analysis. *Journal of Accounting and Economics*, *15*, 265-302.

Lev, B. (1988). Toward a Theory of Equitable and Efficient Accounting Policy. *Accounting Review*, 63, 1-22.

Lev, B. (1992). Information disclosure strategy. *California Management Review*, *34*, 9-32.

Loderer, C., & Martin, K. (1990). Corporate acquisitions by listed firms: The experience of a comprehensive sample. *Financial Management, 19,* 17-33.

Loughran, T., & Vijh, A. M. (1997). Do long-term shareholders benefit from corporate acquisitions? *Journal of Finance*, *52*, 1765-1790.

Malmendier, U., & Tate, G. (2008). Who makes acquisitions? CEO overconfidence and the market's reaction. *Journal of Financial Economics*, *89*, 20-43.

Martin, K. J. (1996). The method of payment in corporate acquisitions, investment opportunities, and management ownership. *Journal of Finance*, *51*, 1227-1246.

Megginson, W. L., Morgan, A., & Nail, L. (2004). The determinants of positive long-term performance in strategic mergers: Corporate focus and cash. *Journal of Banking & Finance*, *28*, 523-552.

Moeller, S. B., Schlingemann, F. P., & Stulz, R. M. (2004). Firm size and the gains from acquisitions. *Journal of Financial Economics*, *73*, 201-228.

Moeller, S. B., Schlingemann, F. P., & Stulz, R. M. (2007). How do diversity of opinion and information asymmetry affect acquirer returns? *Review of Financial Studies*, *20*, 2047-2078.

Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, *13*, 187-221.

Officer, M. S., Poulsen, A. B., & Stegemoller, M. (2009). Target-firm information asymmetry and acquirer returns. *Review of Finance*, *13*, 467-493.

Pástor, L., & Veronesi, P. (2003). Stock valuation and learning about profitability. *Journal of Finance*, *58*, 1749-1790.

Petersen, M. A. (2009). Estimating standard errors in finance panel data sets: Comparing approaches. *Review of Financial Studies*, *22*, 435-480.

Potter, G. (1992). Accounting earnings announcements, institutional investor concentration, and common stock returns. *Journal of Accounting Research, 30,* 146-155.

Rau, P. R., & Vermaelen, T. (1998). Glamour, value and the post-acquisition performance of acquiring firms. *Journal of Financial Economics*, *49*, 223-253.

Reuer, J. J., Shenkar, O., & Ragozzino, R. (2004). Mitigating risk in international mergers and

acquisitions: the role of contingent payouts. *Journal of International Business Studies*, *35*, 19-32.

Roberts, G., & Yuan, L. E. (2010). Does institutional ownership affect the cost of bank borrowing? *Journal of Economics and Business*, *62*, 604-626.

Roll, R. (1986). The hubris hypothesis of corporate takeovers. *Journal of Business, 2,*197-216.

Servaes, H. (1991). Tobin's Q and the Gains from Takeovers. *Journal of Finance*, 46, 409-419.

Shleifer, A. & Vishny R.W. (2003). Stock market driven acquisitions. *Journal of Financial Economics*, 70, 295-311.

Short, H. & Keasey, K. (1999). Managerial ownership and the performance of firms: Evidence from the UK. *Journal of Corporate Finance*, 5, 79–101.

Stulz, R. M., Walkling, R. A., & Song, M. H. (1990). The distribution of target ownership and the division of gains in successful takeovers. *Journal of Finance*, *45*, 817-833.

Sudarsanam, S., & Mahate, A. A. (2003). Glamour acquirers, method of payment and post-acquisition performance: the UK evidence. *Journal of Business Finance & Accounting*, *30*, 299-342.

Sudarsanam, S., Holl, P., & Salami, A. (1996). Shareholder wealth gains in mergers: effect of synergy and ownership structure. *Journal of Business Finance & Accounting*, *23*, 673-698.

Wright, P., Ferris, S. P., Sarin, A., & Awasthi, V. (1996). Impact of corporate insider, blockholder, and institutional equity ownership on firm risk taking. *Academy of Management Journal*, *39*, 441-458.

Table 1 Description of variables

Variables	Description
	Panel A: Firm-level Institutional Ownership variables
Largest Institutional Ownership	Percentage shareholdings held by the largest institutional investor in the acquirer firm at the year-end prior to the deal announcement (Thomson Reuters).
Top 5 Institutional Ownership	Cumulative percentage shareholdings held by the top 5 institutional investors in the acquirer firm at the year-end prior to the deal announcement (Thomson Reuters).
Domestic Institutional Ownership	Cumulative percentage shareholdings held by UK institutional investors in the acquirer firm at the year-end prior to the deal announcement (Thomson Reuters).
Foreign Institutional Ownership	Cumulative percentage shareholdings held by non-UK institutional investors in the acquirer firm at the year-end prior to the deal announcement (Thomson Reuters).
Total Institutional Ownership	Cumulative percentage shareholdings held by all institutional investors in the acquirer firm at the year-end prior deal announcement (Thomson Reuters).
Low-turnover Institutional Ownership	Binary variable equal to one for shareholdings held by institutional investors with annual portfolio turnover rate less than or equal to 50% at the year-end prior deal announcement and zero otherwise (Thomson Reuters).
Moderate-turnover Institutional Ownership	Binary variable equal to one for shareholdings held by institutional investors with annual portfolio turnover rate greater than 50% and less than or equal to 100% at the year-end prior the deal announcement and zero otherwise (Thomson Reuters).
High-turnover Institutional Ownership	Binary variable equal to one for shareholdings held by institutional investors with annual portfolio turnover rate greater than 100% at the year-end prior the deal announcement and zero otherwise (Thomson Reuters).
	Panel B Firm-specific control variables
Firm Size	Natural logarithm of total assets of acquirer firm at the year-end prior to the M&A announcement (Worldscope).
ROA	Return on assets of acquirer firm at the year-end prior to the M&A announcement (Worldscope).
Leverage	Ratio of total debt to total assets at the year-end prior to the M&A announcement (Worldscope).
Cash & Equivalent	Ratio of cash and equivalents to total assets at the year-end prior to the M&A announcement (Worldscope).
Dividend Yield	Ratio of common cash dividends relative to the share price at the year-end prior to the M&A announcement (Worldscope).

Share Turnover	Number of shares traded divided by number of shares outstanding at the year-end prior to the M&A announcement (Worldscope).
Market-to-book ratio	Market value of equity divided by book value of assets at the year-end prior to the M&A announcement (Worldscope).
Glamour category	Categorical variable that takes the value of 1 for value acquirers (first tercile of market-to-book ratio), 2 for moderate MTBV acquirers (second tercile of market-to-book ratio) and 3 for glamour acquirers (third tercile of market-to-book ratio).
	Panel C: M&A deal-related variables
Deal size	Deal value in millions of GBP pounds (Bureau van Dijk)
Cross-border	Binary variable equal to one when the target is a non-UK firm, and zero otherwise (Bureau van Dijk)
High-tech	Binary variable equal to one when the target firm belongs to the high-technology industry and zero otherwise (Bureau van Dijk).
Cross Industry	Binary variable equal to one when acquirer and target firms have different 2-digit SIC codes and zero otherwise (Bureau van Dijk).
Listed Target	Binary variable equal to one when the target firm is a publicly listed firm and zero otherwise (Bureau van Dijk).
Cash Payment	Binary variable equal to one if the M&A deal employs cash only as payment method and zero otherwise (Bureau van Dijk).
Share Payment	Binary variable equal to one if the M&A deal employs share only as payment method and zero otherwise (Bureau van Dijk).
Financial Crisis	Binary variable equal to one if the M&A deal is announced during the 2007-2008 crisis period and zero otherwise (Bureau van Dijk).

Table 2 Annual distribution of UK mergers and acquisitions sample.

The table presents the annual distribution of deal number, mean of deal value and median of deal value (millions of GBP) for completed domestic and cross-border M&As announced by UK listed acquirers between January 1, 2000 and December 31, 2010.

	Domestic			Cross-border			Total		
Year	N	Mean Deal Value	Median Deal Value	N	Mean Deal Value	Median Deal Value	N	Mean Deal Value	Median Deal Value
2000	134	65.98	8.73	104	1418.63	19.00	238	657.05	12.33
2001	114	33.70	7.30	84	85.72	14.45	198	55.77	9.40
2002	115	38.42	6.50	88	174.73	21.56	203	97.51	9.74
2003	101	58.17	5.50	69	88.95	10.50	170	70.66	6.88
2004	133	74.12	7.40	86	63.18	22.74	219	69.82	11.00
2005	182	43.26	7.15	101	101.30	11.50	283	63.97	8.46
2006	183	31.70	7.00	133	115.07	10.71	316	66.79	8.58
2007	218	51.80	8.15	135	199.52	13.61	353	108.29	9.90
2008	128	32.66	6.40	114	117.46	15.70	242	72.61	9.93
2009	90	24.66	5.97	65	105.37	11.83	155	58.51	8.60
2010	121	22.92	4.82	84	55.69	15.93	205	36.35	6.98
Total	1,519	44.09	6.70	1,063	243.72	14.79	2,582	126.28	9.00

Table 3 Descriptive statistics

The market-to-book value (MTBV) is the ratio of the market capitalization of acquirers' equity to the book value of equity at the year-end prior to the announcement date. Acquirers are ranked into three equally-weighted terciles based on their MTBV: 797 value (low MTBV), 797 moderate, and 798 glamour (high MTBV). The variable description is in Table1

Panel A: Descriptive statistics of deal characteristics:

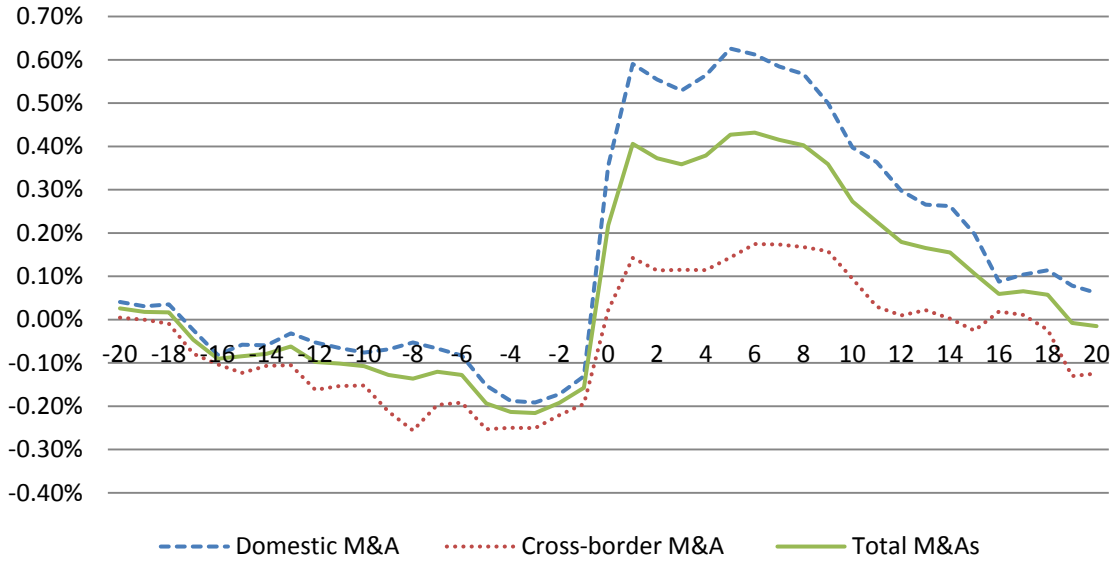
	Value (Low MTBV)			Moderate MTBV			Glamour (High MTBV)		
	Domestic	Cross-border	Total	Domestic	Cross-border	Total	Domestic	Cross-border	Total
Mean MTBV ratio	0.49	0.53	0.51	1.07	1.10	1.08	3.30	2.91	3.11
Median MTBV ratio	0.49	0.57	0.53	1.06	1.10	1.08	2.27	2.14	2.18
Sample size	500	297	797	473	322	797	407	391	798
Average deal value (mil. GBP)	50.85	103.70	70.55	37.81	145.36	81.32	53.91	458.68	251.99
Total deal value (mil. GBP)	25,426.99	30,799.24	56,226.24	17,929.86	46,804.81	64,734.67	21,988.13	179,341.90	201,330.10
Method of payment:									
Cash	345	209	554	323	195	518	226	256	482
Share	70	22	92	67	32	99	94	50	144
High-tech targets	60	22	82	65	44	109	94	78	172
Cross-industry deals	311	183	494	303	203	506	245	223	468
Listed targets	3	14	17	5	15	20	7	23	30

Panel B: Descriptive statistics of acquirer's characteristics:

	Value (Low MTBV)			Moderate MTBV			Glamour (High MTBV)				
	N	Mean	Median	N	Mean	Median	N	Mean	Median	Homogeneity across Means	Homogeneity across Medians
Deal size (mil. GBP)	797	70.55	8.50	797	81.22	10.00	798	252.22	10.18	(0311)	(0.058)*
Largest institutional ownership	758	9.885	9.210	776	9.121	8.355	762	8.785	7.405	(0.001)***	(0.000)***
Top 5 institutional ownership	758	26.95	26.65	776	25.34	25.36	762	24.10	23.94	(0.000)***	(0.000)***
Domestic institutional ownership	758	42.49	42.93	776	42.63	44.42	762	38.73	38.56	(0.001)***	(0.002)***
Foreign institutional ownership	758	10.42	5.02	776	10.01	5.79	763	12.97	7.54	(0.000)***	(0.000)***
Low-turnover institutional ownership	758	40.68	42.17	776	40.55	41.95	762	38.29	40.17	(0.074)*	(0.081)*
Median-turnover institutional owner.	758	1.16	0.31	776	1.11	0.42	762	1.38	0.59	(0.083)*	(0.251)
High-turnover institutional owner.	758	6.82	5.85	776	7.04	5.83	762	7.51	6.53	(0.072)*	(0.031)**

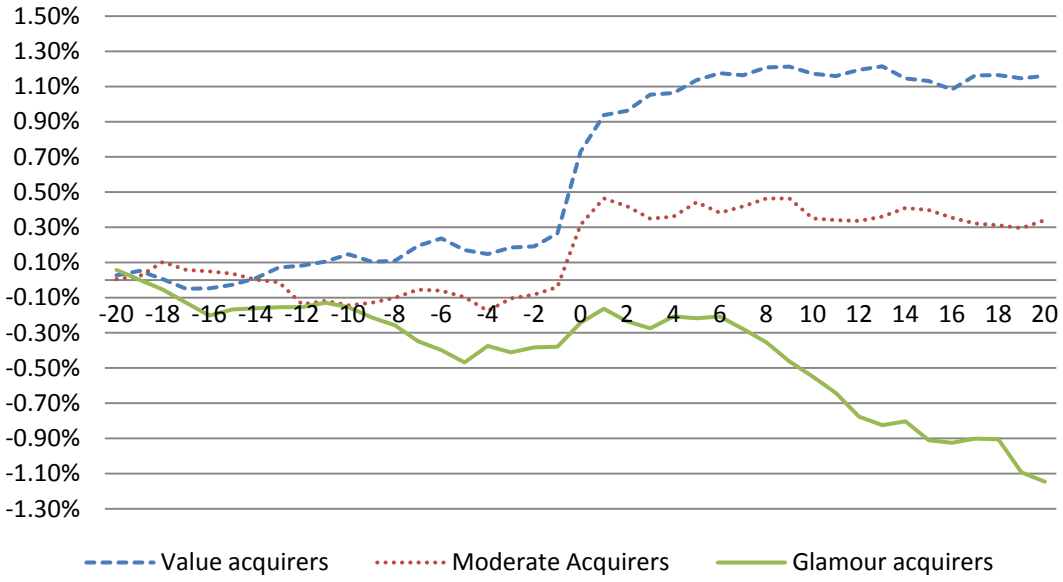
Total institutional ownership	758	52.91	56.69	776	52.64	55.61	762	51.71	56.98	(0.673)	(0.835)
Firm size (total assets mil. GBP)	797	5,982.3	330.8	797	4,091.1	206.4	798	2,178.5	146.6	(0.000)***	(0.000)***
ROA	797	-0.01	0.03	796	0.03	0.06	798	0.03	0.09	(0.001)***	(0.000)***
Leverage	790	0.21	0.18	794	0.17	0.17	792	0.15	0.10	(0.000)***	(0.000)***
Cash & equivalent	797	0.10	0.07	797	0.14	0.09	798	0.22	0.16	(0.000)***	(0.000)***
Dividend yield	792	3.19	3.01	792	2.34	2.16	776	1.55	1.30	(0.000)***	(0.000)***
Share turnover	778	0.88	0.71	778	0.82	0.67	741	0.99	0.79	(0.000)***	(0.001)***
Market-to-book ratio	797	0.51	0.53	797	1.08	1.08	798	3.11	2.18	(0.000)***	(0.000)***

Figure 1 Cumulative Abnormal Returns: Domestic vs. Cross-border M&As.



This figure presents the daily cumulative average abnormal returns around the M&A announcement date for domestic and cross-border M&As using a standard event study methodology. The abnormal returns are estimated based on the one-factor OLS market model with the FTSE ALL share index as the proxy for the market portfolio. The sample contains 2,582 M&As which include 1,519 domestic deals and 1,063 cross-border deals from January 1, 2000 to December 31, 2010.

Figure 2 Cumulative Abnormal Returns: Value acquirers vs. Glamour acquirers.



This figure presents the daily cumulative average abnormal returns around the M&A announcement date for value and glamour acquirers, from January 1, 2000 to December 31, 2010, using a standard event study methodology. The abnormal returns are estimated based on the one-factor OLS market model with the FTSE ALL share index as the proxy for the market portfolio. Acquirers are ranked into three equally-weighted terciles based on their MTBV: 797 value (low MTBV), 797 moderate, and 798 glamour (high MTBV).

Table 4 Market reaction to M&As for UK acquirers on different event windows.

This table presents the CARs around M&A announcements. The abnormal returns are estimated as with the standard OLS market adjusted returns with the FTSE ALL Share index as the proxy for the market portfolio. The sample contains 2,582 M&A which include 1,519 domestic deals and 1,063 cross-border deals from January 1, 2000 to December 31, 2010. t-statistics are reported in parentheses. ***, ** and * denote significance at the 0.01, 0.05, 0.1 level respectively.

		Panel A			***Panel B***		
Event Windows	All M&As CARs	Domestic M&As CARs	Cross-Border M&As CARs	Differences across CARs (Domestic vs. Cross-border)	Value acquirers CARs	Glamour acquirers CARs	Differences across CARs (Value vs. Glamour)
(-20,-2)	-0.002	-0.002	-0.002	0.000	0.002	-0.004*	0.006**
	(-1.734)*	(-1.132)	(-1.389)	(0.215)	(1.098)	(-1.788)	(2.080)
(-1,+1)	0.598***	0.763***	0.363***	0.400**	0.747***	0.219*	0.527***
	(7.381)	(6.304)	(3.874)	(0.015)	(7.034)	(1.690)	(3.145)
(0)	0.376***	0.487***	0.217***	0.270**	0.465***	0.136	0.329***
	(6.128)	(5.281)	(3.133)	(0.030)	(6.220)	(1.327)	(2.597)
(-5,+5)	0.555***	0.709***	0.335**	0.374	0.900***	0.181	0.719***
	(4.884)	(4.243)	(2.423)	(0.105)	(5.792)	(0.900)	(2.830)
(-10,+10)	0.374***	0.463**	0.248	0.215	1.068***	-0.420	1.488***
	(2.595)	(2.248)	(1.301)	(0.462)	(5.241)	(-1.602)	(4.482)
(+2,+20)	-0.421*	-0.529***	-0.267	-0.262	0.223	-0.982***	1.205***
	(-1.744)	(-3.497)	(-1.660)	(-1.163)	(1.344)	(-2.264)	(4.373)
(-20,+20)	0.015	0.062	-0.124	0.186	1.161***	-1.145***	2.306***
	(-0.078)	(0.222)	(-0.477)	(0.469)	(4.218)	(-3.001)	(4.900)
N	***2,582***	***1,519***	***1,063***		***797***	***798***	

Table 5 Announcement period UK acquirers' CARs sorting by market-to-book value.

This table presents average CARs around M&As announcements and computed using an event study methodology. The abnormal returns are estimated as the market adjusted returns with the FTSE ALL share index as the proxy for the market portfolio. The sample contains 2,582 M&A, including 1,519 domestic deals and 1,063 cross-border deals from January 1, 2000 to December 31, 2010. The market-to-book value (MTBV) is the ratio of the market capitalization of acquirer firm's equity to the book value of equity at the year-end prior to the announcement date. Acquirers are ranked into three equally-weighted terciles based on their MTBV: 797 value (low MTBV), 797 moderate, and 798 glamour (high MTBV). t-statistics are reported in parentheses. ***, ** and * denote significance at the 0.01, 0.05, 0.1 level respectively.

	Event Window	All M&As CARs (%)	Domestic M&As CARs (%)	Cross-border M&As CARs (%)	Differences across CARs (Domestic vs. Cross-border)
Value acquirers:	(-20,-2)	0.002	0.003	0.000	0.003
		(1.098)	(1,259)	(0.125)	(0.695)
	(-1,+1)	0.747***	0.859***	0.558***	0.301
		(7.034)	(6.349)	(3.267)	(1.369)
	(0)	0.465***	0.530***	0.355***	0.175
		(6.220)	(5.113)	(3.597)	(1.130)
	(-5,+5)	0.900***	1.042***	0.661**	0.381
		(5.792)	(5.177)	(2.722)	(1.186)
	(-10,+10)	1.068***	1.214***	0.823***	0.391
		(5.241)	(4.689)	(2.489)	(0.928)
	(2,+20)	0.223	0.227	0.217	-0.010
		(1.344)	(1.064)	(0.820)	(-0.029)
	(-20,+20)	1.161***	1.369***	0.809*	0.560
		(4.218)	(3.911)	(1.820)	(0.985)
	N	***797***	***500***	***297***	
Moderate acquirers:	(-20,-2)	-0.001	-0.000	-0.002	0.001
		(-0.475)	(-0.139)	(-0.619)	(0.349)
	(-1,+1)	0.547***	0.693***	0.333***	0.360
		(4.680)	(3.848)	(2.905)	(1.510)
	(0)	0.354***	0.479***	0.169**	0.310*
		(4.188)	(3.610)	(2.327)	(1.802)
	(-5,+5)	0.503***	0.700**	0.211	0.489
		(2.750)	(2.615)	(0.958)	(1.315)
	(-10,+10)	0.470**	0.628*	0.237	0.391

		(2.050)	(1.887)	(0.832)	(0.838)
	(2,+20)	-0.124	-0.194	-0.022	-0.171
		(-0.698)	(-0.771)	(-0.090)	(-0.465)
	(-20,+20)	0.340	0.467	0.154	0.312
		(1.175)	(1.117)	(0.420)	(0.529)
	N	***797***	***475***	***322***	
Glamour acquirers:	(-20,-2)	-0.004*	-0.004	-0.003	-0.001
		(-1.788)	(-1.338)	(-1.187)	(-0.251)
	(-1,+1)	0.219*	0.329*	0.105	0.224
		(1.690)	(1.710)	(0.607)	(0.861)
	(0)	0.136	0.241	0.026	0.215
		(1.327)	(1.589)	(0.191)	(1.051)
	(-5,+5)	0.181	0.175	0.186	-0.011
		(0.900)	(0.577)	(0.713)	(-0.027)
	(-10,+10)	-0.420	-0.537	-0.297	-0.240
		(-1.602)	(-1.388)	(-0.845)	(-0.457)
	(2,+20)	-0.982***	-1.135***	-0.824***	-0.311
		(-2.264)	(-3.502)	(-2.775)	-(0.706)
	(-20,+20)	-1.145***	-1.241**	-1.046**	-0.195
		(-3.001)	(-2.151)	(-2.106)	(-0.255)
	N	***798***	***407***	***391***	

Table 6 Univariate Sorting of CARs.

This table presents the CARs for selected windows around M&A announcements and computed using an event study methodology. The abnormal returns are estimated as the market adjusted returns with the FTSE ALL share index as the proxy for the market portfolio. The sample contains 2,582 M&As which includes 1,519 domestic deals and 1,306 cross-border deals undertaken by UK listed companies from January 1, 2000 to December 31, 2010. Each deal is split between value (below median market-to-book) and glamour (above median market-to-book) acquirers for domestic and cross-border M&As respectively.

	Domestic			**Cross-border**		
	Below	Above	t-statistic	Below	Above	t-statistic
			Deal size			
(-1, +1)	0.679	0.874	(-0.794)	0.517	0.259	(1.350)
(-5, +5)	0.728	0.683	(0.136)	0.411	0.284	(0.452)
(+2,+20)	-0.361	-0.752	(1.279)	-0.140	-0.352	(0.648)
N	**868**	**651**		**429**	**634**	
			Largest institutional ownership			
(-1, +1)	0,752	0.728	(0.094)	0.293	0.404	(-0.594)
(-5, +5)	0.642	0.843	(-0.567)	0.169	0.569	(-1.413)
(+2,+20)	-0.625	-0.076	(-1.844)*	-0.679	0.112	(-2.439)**
N	**693**	**724**		**513**	**480**	
			Top 5 institutional ownership			
(-1, +1)	0.885	0.594	(1.170)	0.332	0.361	(-0.154)
(-5, +5)	0.931	0.548	(1.131)	0.279	0.445	(-0.588)
(+2,+20)	-0.624	-0.062	(-1.888)*	-0.779	0.185	(-2.978)***
N	***711***	***706***		***496***	***497***	
			Domestic institutional ownership			
(-1, +1)	1.016	0.448	(2.283)**	0.346	0.348	(-0.012)
(-5, +5)	1.055	0.408	(1.913)*	0.411	0.316	(0.334)
(+2,+20)	-0.650	-0.021	(-2.112)**	-0.410	-0.192	(-0.670)
N	***727***	***690***		***478***	***515***	
			Foreign institutional ownership			
(-1, +1)	0.898	0.494	(1.589)	0.598	0.204	(2.005)**
(-5, +5)	0.921	0.459	(1.333)	0.362	0.348	(0.047)
(+2,+20)	-0.390	-0.272	(-0.386)	-0.672	-0.077	(-1.737)*
N	***862***	***555***		***344***	***650***	
			Low-turnover institutional ownership			
(-1, +1)	0.941	0.498	(1.772)*	0.367	0.331	(0.194)
(-5, +5)	1.043	0.376	(1.963)**	0.344	0.376	(-0.110)
(+2,+20)	-0.691	0.073	(-2.557)**	-0.696	0.011	(-2.161)**
N	**773**	**644**		**432**	**561**	
			Moderate-turnover institutional ownership			
(-1, +1)	0.815	0.654	(0.644)	0.562	0.167	(2.114)**
(-5, +5)	0.846	0.619	(0.669)	0.413	0.320	(0.328)
(+2,+20)	-0.684	0.044	(-2.441)**	-0.468	-0.154	(-0.960)
N	***755***	***662***		***452***	***541***	
			High-turnover institutional ownership			
(-1, +1)	0.995	0.379	(2.445)**	0.594	0.193	(2.089)**
(-5, +5)	0.924	0.481	(1.288)	0.484	0.287	(0.676)
(+2,+20)	-0.472	-0.164	(-1.016)	-0.449	-0.203	(-0.738)
N	***829***	***588***		***380***	***613***	
			Total institutional ownership			
(-1, +1)	0.932	0.498	(1.731)*	0.479	0.251	(1.206)
(-5, +5)	1.045	0.357	(2.024)**	0.494	0.266	(0.797)
(+2,+20)	-0.642	0.030	(-2.243)**	-0.563	-0.104	(-1.394)
N	***789***	***628***		***418***	***575***	
			Firm size			
(-1, +1)	0.735	0.400	(1.629)	0.581	0.163	(2.207)**

(-5, +5)	0.718	0.391	(1.079)	0.303	0.364	(-0.206)
(+2,+20)	-0.673	-0.090	(-1.907)	-0.555	-0.097	(-1.343)
N	***865***	***573***		***366***	***658***	
			ROA			
(-1, +1)	0.706	0.488	(1.081)	0.365	0.273	(0.503)
(-5, +5)	0.724	0.441	(0.948)	0.366	0.321	(0.162)
(+2,+20)	-0.760	-0.085	(-2.274)**	-0.226	-0.288	(0.188)
N	***756***	***681***		***474***	***549***	
			Leverage			
(-1, +1)	0.555	0.626	(-0.350)	0.436	0.220	(1.186)
(-5, +5)	0.424	0.686	(-0.885)	0.481	0.238	(0.856)
(+2,+20)	-0.687	-0.232	(-1.514)	-0.009	-0.472	(1.408)
N	***739***	***690***		***485***	***532***	
			Cash & equivalent			
(-1, +1)	0.612	0.590	(0.107)	0.323	0.303	(0.112)
(-5, +5)	0.646	0.524	(0.410)	0.295	0.383	(-0.310)
(+2,+20)	0.039	-0.481	(1.693)*	-0.281	-0.242	(-0.120)
N	***758***	***680***		***473***	***551***	
			Dividend yield			
(-1, +1)	0.808	0.431	(1.743)*	0.242	0.374	(-0.723)
(-5, +5)	0.748	0.610	(0.451)	0.260	0.399	(-0.493)
(+2,+20)	-0.796	0.317	(-3.747)***	-0.446	-0.070	(-1.181)
N	***742***	***662***		***476***	***541***	
			Share turnover			
(-1, +1)	0.843	0.464	(1.671)*	0.479	0.245	(1.239)
(-5, +5)	0.961	0.496	(1.458)	0.460	0.294	(0.563)
(+2,+20)	0.039	-0.481	(1.693)*	-0.524	-0.028	(-1.512)
N	***798***	***545***		***367***	***619***	
			Market-to-book			
(-1, +1)	0.812	0.449	(1.860)*	0.450	0.201	(1.348)
(-5, +5)	1.004	0.274	(2.463)**	0.475	0.221	(0.888)
(+2,+20)	0.115	-0.832	(3.143)***	0.136	-0.579	(2.215)**
N	***749***	***633***		***447***	***563***	

Table 7 Announcement returns sorted by acquirers' MTBV

This table presents average CARs around M&A announcements computed using an event study methodology. The abnormal returns are estimated as the market adjusted returns with the FTSE ALL share index as the proxy for the market portfolio. The total sample contains 2,582 M&As which includes 1,519 domestic deals and 1,063 cross-border deals from January 1, 2000 to December 31, 2010. Acquirers are ranked into three equally-weighted terciles based on their MTBV: value (low MTBV), moderate, and glamour (high MTBV). t-statistics and number of observations are reported in parentheses. ***, ** and * denote significance at the 0.01, 0.05, 0.1 level respectively.

Panel A: CAR (-1, +1)				
	Value acquirer	**Moderate acquirer**	**Glamour acquirer**	**Total**
High-tech target	0.924***	0.371	0.078	0.449**
	(3.317, 82)	(1.116, 109)	(0.222, 172)	(2.229, 408)
Non-high-tech target	0.726	0.576	0.258	0.626***
	(6.374, 715)	(4.606, 688)	(1.916, 627)	(7.073,2174)
Cross-industry deal	0.722***	0.580***	0.341**	0.673***
	(5.532, 494)	(4.324, 505)	(1.981, 468)	(6.013, 1572)
Intra-industry deal	0.787***	0.492**	0.045	0.482***
	(4.347,303)	(2.234, 291)	(0.231, 330)	(4.297, 1010)
Listed target	0.101	1.126	-0.256	0.146
	(0.230,17)	(0.999, 20)	(-0.749, 30)	(0.383, 72)
Unlisted target	0.761***	0.533***	0.238*	0.611***
	(7.044, 780)	(4.569, 777)	(1.774, 769)	(7.395, 2510)
Cash payment	0.691***	0.575***	0.246*	0.540***
	(5.890, 579)	(5.540, 551)	(1.923, 509)	(6.835, 1753)
Share payment	1.086**	0.760	0.201	1.209***
	(2.340, 92)	(1.059, 99)	(0.423, 144)	(3.189, 382)
Panel B: CAR (-5, +5)				
	Value acquirer	**Moderate acquirer**	**Glamour acquirer**	**Total**
High-tech target	0.679	0.147	-0.129	0.193
	(1.474, 82)	(0.302, 109)	(-0.233, 172)	(0.653, 408)
Non-high-tech target	0.925***	0.560***	0.265	0.623***
	(5.607, 715)	(2.835, 688)	(1.288, 627)	(5.065,2174)
Cross-industry deal	0.952***	0.672***	0.475*	0.737***
	(5.045, 494)	(2.948, 505)	(1.965, 468)	(4.874, 1572)
Intra-industry deal	0.814***	0.212	-0.239	0.272
	(3.024,303)	(0.690, 291)	(-0.699, 330)	(1.600, 1010)
Listed target	2.244**	2.237	0.250	0.876
	(2.619,17)	(0.706, 20)	(0.287, 30)	(0.868, 72)
Unlisted target	0.870***	0.459***	0.177	0.546***
	(5.525, 780)	(2.704, 777)	(0.862, 769)	(4.827, 2510)
Cash payment	0.970***	0.644***	0.397**	0.683***
	(5.570, 579)	(3.333, 551)	(2.030, 509)	(5.685 1753)
Share payment	0.529	0.346	-0.550	0.398
	(0.905, 92)	(0.397, 99)	(-0.816, 144)	(0.891, 382)
Panel C: CAR (+2, +20)				
	Value acquirer	**Moderate acquirer**	**Glamour acquirer**	**Total**
High-tech target	-0.708	-0.839	-1.448***	-1,179
	(-1.053, 82)	(-1.130, 109)	(-2.813, 172)	(-, 408)
Non-high-tech target	0.330**	-0.011	0.258	-0.279
	(1.964, 715)	(-0.064, 688)	(1.916, 627)	(-1.029,2174)
Cross-industry deal	0.101	-0.115	-1.015***	-0.460
	(0.477, 494)	(-0.488, 505)	(-3.664, 468)	(-0.878, 1572)
Intra-industry deal	0.442	-0.141	0.045	-0.361*
	(1.578,303)	(-0.507, 291)	(0.231, 330)	(1.702, 1010)
Listed target	1.810	0.256	-0.515	-0.275
	(1.111,17)	(0.173, 20)	(-0.558, 30)	(0.709, 72)
Unlisted target	0.188	-0.134	0.238*	-0.425

	(1.136, 780)	(-0.740, 777)	(1.774, 769)	(-1.934, 2510)
Cash payment	0.435**	0.075	-0.568**	0.035
	(2.283, 579)	(0.403, 551)	(-2.310, 509)	(0.448, 1753)
Share payment	-0.330	-0.720	-2.821***	-0.697***
	(-0.511, 92)	(-1.152, 99)	(-3.920, 144)	(-2.663, 335)

Table 8 Regressions of announcement period abnormal returns - event window (-1, +1)

This table presents the results of regression estimates of different deal- and investor-specific characteristics for the event window (-1,+1). t-statistics based on cluster-adjusted robust standard errors (Petersen, 2009), hence, providing robust interpretations (Cameron et al., 2008) are reported in parentheses. ***, ** and * indicate the significance level at 0.01, 0.05, 0.1 respectively.

	Value acquirers					Moderate acquirers					Glamour acquirers				
	(1)	(2)	(3)	(4)	(5)	(7)	(8)	(9)	(10)	(11)	(13)	(14)	(15)	(16)	(17)
Cross-border	-0.143	-0.100	-0.219	-0.095		-0.138	-0.248	-0.336	-0.296		-0.077	-0.105	-0.110	-0.207	
	(-0.572)	(-0.393)	(-0.900)	(-0.398)		(-0.648)	(-1.094)	(-1.278)	(-1.252)		(-0.258)	(-0.352)	(-0.378)	(-0.759)	
Cross industry	-0.188	-0.157	-0.062	-0.103		0.132	0.136	0.135	0.144		0.166	0.189	0.437	0.230	
	(-0.732)	(-0.607)	(-0.231)	(-0.404)		(0.522)	(0.545)	(0.437)	(0.527)		(0.604)	(0.688)	(1.522)	(0.849)	
Cash payment			-0.128					-0.047					-0.073		
			(-0.378)					(-0.100)					(-0.195)		
Share payment	0.153	0.048				-0.262	-0.266				0.050	0.061			
	(0.308)	(0.096)				(-0.416)	(-0.414)				(0.096)	(0.117)			
Financial crisis	0.363					0.554					0.635				
	(0.747)					(0.622)					(0.871)				
Largest institutional ownership	-0.000					0.031					0.042				
	(-0.019)					(0.893)					(1.129)				
Top 5 institutional ownership		0.022					0.014					0.026			
		(1.439)					(0.684)					(0.999)			
Low-turnover institutional ownership		-0.023**					-0.004					-0.016			
		(-2.521)					(-0.426)					(-1.175)			
Foreign institutional ownership	-0.003					-0.025**					-0.013				
	(-0.349)					(-2.458)					(-1.401)				
Domestic institutional ownership			-0.012*		-0.010*			0.003		0.007			0.003		0.001
			(-1.704)		(-1.673)			(0.472)		(0.901)			(0.392)		(0.137)
Total institutional ownership				-0.010*					-0.002					-0.003	
				(-1.856)					(-0.499)					(-0.450)	
Deal Size	-0.060	-0.016	-0.067	-0.058		0.116	0.099	0.051	0.050		-0.018	-0.014	-0.013	-0.001	
	(-0.774)	(-0.200)	(-0.950)	(-0.890)		(0.946)	(0.801)	(0.474)	(0.577)		(-0.259)	(-0.199)	(-0.168)	(-0.009)	
Firm size					-0.647***					-0.117					-0.290
					(-3.700)					(-0.496)					(-1.202)
ROA	-0.164	-0.096	-0.213	-0.373	0.404	-2.207	-2.133	-2.500	-2.354	-1.915	-0.709	-0.630	-0.869	-0.425	-0.547
	(-0.156)	(-0.093)	(-0.260)	(-0.419)	(0.410)	(-1.236)	(-1.199)	(-1.275)	(-1.230)	(-1.011)	(-0.564)	(-0.510)	(-0.600)	(-0.353)	(-0.450)
Leverage	-0.586	-0.422			0.033	-0.646	-0.621			-0.523	0.605	0.558			0.466
	(-0.774)	(-0.582)			(0.044)	(-0.775)	(-0.751)			(-0.701)	(0.853)	(0.812)			(0.684)
Cash & equivalent	1.415	1.251			0.548	0.720	0.708			0.754	-0.476	-0.817			-0.839
	(0.905)	(0.799)			(0.351)	(0.572)	(0.530)			(0.598)	(-0.373)	(-0.587)			(-0.609)
Turnover rate	-0.241	-0.078			0.173	-0.128	-0.295			-0.208	-0.183	-0.204			-0.142
	(-0.993)	(-0.417)			(1.005)	(-0.422)	(-0.976)			(-0.487)	(-0.769)	(-0.927)			(-0.603)
Dividend yield	0.040	0.056			0.063	-0.049	-0.053			-0.057	0.097	0.139			0.142
	(0.631)	(0.892)			(1.041)	(-0.973)	(-1.074)			(-0.876)	(0.897)	(1.299)			(1.310)
Year controls	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
_cons	0.735	1.506**	1.951***	1.571***	4.372***	-0.138	0.923	1.082**	-0.139	0.614	-0.498	-0.328	-0.792	0.053	1.307

	(1.161)	(2.143)	(2.928)	(3.084)	(4.000)	(-0.137)	(1.342)	(2.047)	(-0.181)	(0.350)	(-0.621)	(-0.414)	(-1.059)	(0.072)	(0.821)
Obs.	740	740	684	758	740	757	757	683	775	757	709	709	685	762	709
Adj. R^2 (%)	0.075	1.113	0.582	0.944	3.408	1.258	0.634	0.436	0.735	0.987	0.575	0.468	0.894	0.461	0.889

Table 9 Regressions of announcement period abnormal returns – post-event window (+2,+20)

This table presents the results of regression estimates of different deal- and investor-specific characteristics for the post-event window (+2, +20). t-statistics based on cluster-adjusted robust standard errors (Petersen, 2009), hence, providing robust interpretations (Cameron et al., 2008) are reported in parentheses. ***, ** and * indicate the significance level at 0.01, 0.05, 0.1 respectively.

	Value acquirers					Moderate acquirers					Glamour acquirers				
	(1)	(2)	(3)	(4)	(5)	(7)	(8)	(9)	(10)	(11)	(13)	(14)	(15)	(16)	(17)
Cross-border	-0.374	-0.384	-0.324	-0.300		0.082	0.073	-0.002	0.040		-0.249	-0.263	0.159	0.011	
	(-1.136)	(-1.140)	(-0.885)	(-0.928)		(0.209)	(0.182)	(-0.006)	(0.110)		(-0.565)	(-0.604)	(0.331)	(0.027)	
Cross industry	-0.148	-0.154	-0.359	-0.279		-0.006	-0.051	0.261	0.112		-0.432	-0.387	-0.139	-0.091	
	(-0.446)	(-0.467)	(-1.021)	(-0.865)		(-0.015)	(-0.117)	(0.664)	(0.261)		(-0.969)	(-0.856)	(-0.282)	(-0.194)	
Cash payment			0.649					0.728					1.186**		
			(1.240)					(1.428)					(2.359)		
Share payment	-0.302	-0.334				-0.777	-0.675				-1.323*	-1.323*			
	(-0.460)	(-0.511)				(-0.981)	(-0.835)				(-1.867)	(-1.900)			
Financial crisis	-2.422***					-2.697*					-0.178				
	(-2.716)					(-1.830)					(-0.121)				
Largest institutional ownership	0.022					0.040					0.023				
	(0.657)					(1.289)					(0.631)				
Top 5 institutional ownership		0.020					-0.005					0.032			
		(0.992)					(-0.226)					(1.221)			
Low-turnover institutional ownership		-0.005					0.016					-0.014			
		(-0.393)					(0.992)					(-0.818)			
Foreign institutional ownership	0.001					0.010					-0.005				
	(0.037)					(0.541)					(-0.333)				
Domestic institutional ownership			0.002		0.003			0.003		0.005			0.021**		0.004
			(0.253)		(0.462)			(0.473)		(0.715)			(2.217)		(0.383)
Total institutional ownership				0.005					0.003					0.017**	
				(0.799)					(0.436)					(2.171)	
Deal Size	0.032	0.042	-0.004	0.025		0.077	0.056	0.001	0.014		-0.004	0.018	-0.005	0.022	
	(0.318)	(0.416)	(-0.035)	(0.262)		(0.746)	(0.552)	(0.011)	(0.135)		(-0.031)	(0.141)	(-0.037)	(0.184)	
Firm size					-0.039					0.155					0.067
					(-0.177)					(0.640)					(0.222)
ROA	2.515	2.505	3.048*	3.092*	2.594	1.925	1.915	-0.794	1.295	2.126	-0.565	-0.553	0.835	0.608	-0.347
	(1.392)	(1.380)	(1.746)	(1.782)	(1.446)	(0.547)	(0.555)	(-0.414)	(0.436)	(0.622)	(-0.461)	(-0.455)	(0.606)	(0.502)	(-0.275)
Leverage	-1.374	-1.257			-1.377	0.598	0.381			0.523	-2.489	-2.300			-2.554*
	(-1.427)	(-1.305)			(-1.412)	(0.384)	(0.258)			(0.342)	(-1.585)	(-1.477)			(-1.727)
Cash & equivalent	-3.087	-3.083*			-3.199*	2.932	3.353			3.313	-2.055	-2.286			-1.993
	(-1.642)	(-1.652)			(-1.721)	(1.352)	(1.453)			(1.478)	(-1.301)	(-1.348)			(-1.118)
Turnover rate	0.291	0.320			0.244	-0.456	-0.546			-0.392	0.216	0.229			0.138
	(1.290)	(1.605)			(1.071)	(-0.938)	(-1.113)			(-0.889)	(0.615)	(0.704)			(0.388)
Dividend yield	-0.042	-0.040			-0.034	0.055	0.033			0.072	0.473***	0.501***			0.524***
	(-0.465)	(-0.438)			(-0.384)	(0.393)	(0.218)			(0.515)	(2.998)	(3.205)			(3.455)
Year controls	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
_cons	1.759*	0.881	0.513	-0.465	0.040	0.877	-0.874	-0.756	1.534	0.262	0.002	-0.329	-1.902	-0.992	-1.109

	(1.692)	(0.841)	(0.464)	(-0.524)	(0.028)	(0.688)	(-0.859)	(-0.915)	(1.136)	(0.135)	(0.001)	(-0.173)	(-1.204)	(-0.665)	(-0.420)
Obs.	740	740	684	758	740	757	757	683	775	757	709	709	685	762	709
Adj. R^2 (%)	2.445	2.567	2.282	2.307	2.750	0.726	0.764	0.691	0.095	0.802	6.479	6.649	7.753	6.287	6.231

Table 10 Pooled regressions of announcement period abnormal returns

This table presents the results of regression estimates of different deal- and investor-specific characteristics. Panel A reports the results for the event window (-1,+1). Panel B reports the results for the post-event window (+2, +20). t-statistics based on cluster-adjusted robust standard errors (Petersen, 2009), hence, providing robust interpretations (Cameron et al., 2008) are reported in parentheses. ***, ** and * indicate the significance level at 0.01, 0.05, 0.1 respectively.

Panel A.	**CAR(-1, +1)**									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Cross-border	-0.280*	-0.301*	-0.324**	-0.288*	-0.285*	-0.211	-0.225	-0.331**	-0.280*	-0.123
	(-1.791)	(-1.928)	(-2.188)	(-1.822)	(-1.836)	(-1.391)	(-1.525)	(-2.109)	(-1.910)	(-0.736)
Cross industry	0.129	0.177	0.068	0.134	0.129	0.06	0.105	0.121	0.068	0.154
	(0.707)	(0.977)	(0.402)	(0.735)	(0.698)	(-0.366)	(-0.628)	(-0.653)	(-0.402)	(-0.821)
High-tech target						-0.023				0.003
						(-0.083)				(-0.011)
Cash payment	-0.044			-0.021	-0.058			-0.152		-0.127
	(-0.171)			(-0.084)	(-0.226)			(-0.590)		(-0.498)
Share payment	0.110			0.161	0.088	-0.035				-0.304
	(0.259)			(0.378)	(0.205)	(-0.106)				(-0.757)
Financial crisis										0.024
										(-0.058)
Largest institutional ownership							0.036*			0.014
							(1.812)			(-0.365)
Top 5 institutional ownership						0.016				0.005
						(1.412)				(-0.224)
Foreign institutional ownership	-0.009**	-0.035**		-0.015*			-0.008			-0.003
	(-2.290)	(-2.042)		(-1.841)			(-1.638)			(-0.254)
Domestic institutional ownership			-0.009*					-0.004		-0.004
			(-1.862)					(-1.164)		(-0.396)
Low-turnover institutional ownership		-0.011**				-0.012*	-0.010**			-0.001
		(-2.049)				(-1.959)	(-2.065)			(-0.104)
Low-turnover x Foreign institutional ownership		0.000								
		(1.529)								
Total institutional Ownership					-0.005*				-0.007**	
					(-1.654)				(-2.357)	
Deal Size	-0.011	0.057	-0.02	-0.009	-0.016	0.031	0.026	-0.024	-0.004	0.095
	(-0.196)	(0.998)	(-0.395)	(-0.148)	(-0.307)	(-0.559)	(-0.480)	(-0.427)	(-0.076)	(-1.622)
Firm size										-0.382*
										(-1.753)
ROA						-0.908				-0.884
						(-1.074)				(-0.938)
Leverage						-0.169				0.036
						(-0.382)				(-0.076)
Cash & equivalent						0.159				-0.339
						(-0.189)				(-0.365)
Turnover rate						-0.156				-0.041
						(-1.169)				(-0.243)
Dividend yield						-0.004				-0.019
						(-0.095)				(-0.435)
Market-to-book			-0.244**	-0.180**		-0.182**		-0.160**	-0.168***	-0.198**
			(-2.351)	(-2.064)		(-2.564)		(-2.450)	(-2.854)	(-2.438)
Glamour category	-0.248**				-0.257***		-0.218**			
	(-2.557)				(-2.672)		(-2.367)			
Market-to-book x Domestic institutional ownership			0.003							
			(1.250)							
Market-to-book x Foreign institutional ownership				0.003						
				(0.711)						
Cons	-0.085	1.194	0.898	-0.369	0.229	1.242	0.672	0.006	0.936	2.718
	(-0.075)	(1.241)	(0.984)	(-0.319)	(0.197)	(-1.366)	(-0.724)	(-0.006)	(-1.055)	(-1.513)
Industry/Year controls	√	√	√	√	√	√	√	√	√	√
Obs.	2,054	2,410	2,296	2,054	2,053	2,206	2,296	2,053	2,296	1,969
Adj. R^2 (%)	0.376	0.553	0.893	0.58	0.347	1.303	0.874	0.547	0.994	1.277

Panel B.	**CAR(+2, +20)**									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Cross-border	-0.040	-0.030	0.010	-0.039	-0.106	-0.131	-0.009	-0.017	-0.046	-0.13
	(-0.152)	(-0.128)	(0.041)	(-0.147)	(-0.410)	(-0.540)	(-0.038)	(-0.067)	(-0.195)	(-0.496)
Cross industry	-0.238	-0.268	-0.183	-0.239	-0.248	-0.35	-0.221	-0.252	-0.244	-0.349
	(-0.996)	(-1.141)	(-0.791)	(-1.008)	(-1.026)	(-1.522)	(-0.943)	(-1.047)	(-1.052)	(-1.462)
High-tech target						-0.470				-0.216
						(-0.952)				(-0.553)
Cash payment	0.366			0.385	0.386			0.971***		0.395
	(0.910)			(0.963)	(0.962)			(3.198)		(0.994)
Share payment	-1.003*			-0.867	-0.905	-0.985**				-0.695
	(-1.754)			(-1.541)	(-1.595)	(-2.387)				(-1.227)
Financial crisis										-2.480***
										(-3.232)
Largest institutional ownership							0.022			-0.021
							(0.966)			(-0.399)
Top 5 institutional ownership						0.015				0.034
						(1.197)				(1.101)
Foreign institutional ownership	0.007	-0.019		-0.006			0.000			-0.016
	(0.842)	(-0.766)		(-0.450)			(0.003)			(-0.955)
Domestic institutional ownership			-0.000					0.010**		-0.017
			(-0.050)					(2.150)		(-1.091)
Low-turnover institutional ownership		0.019***				0.002	0.014**			0.013
		(3.110)				(0.229)	(2.372)			(0.895)
Low-turnover x Foreign institutional ownership		0.000								
		(0.718)								
Total institutional Ownership					0.011**				0.011***	
					(2.443)				(2.763)	
Deal Size	-0.011	0.004	0.040	-0.001	-0.023	0.034	0.019	-0.002	0.026	0.005
	(-0.139)	(0.060)	(0.602)	(-0.016)	(-0.303)	(0.492)	(0.281)	(-0.021)	(0.379)	(0.054)
Firm size										-0.006
										(-0.025)
ROA						0.429				0.458
						(0.417)				(0.469)
Leverage						-1.351*				-1.533**
						(-1.880)				(-2.018)
Cash & equivalent						0.046				-0.541
						(0.042)				(-0.472)
Turnover rate						0.093				0.237
						(0.437)				(0.933)
Dividend yield						0.092				0.100
						(1.431)				(1.497)
Market-to-book			-0.653***	-0.512***		-0.369***		-0.427***	-0.441***	-0.350***
			(-2.967)	(-3.180)		(-3.257)		(-3.508)	(-3.901)	(-2.781)
Glamour category	-0.474***				-0.469***		-0.469***			
	(-3.290)				(-3.269)		(-3.542)			
Market-to-book x Domestic institutional ownership			0.007*							
			(1.647)							
Market-to-book x Foreign institutional ownership				0.008						
				(1.251)						
Cons	2.963***	0.699	1.258	2.781***	2.340**	-1.412	-0.938	0.463	-1.006	0.854
	(2.742)	(0.763)	(1.352)	(2.597)	(2.163)	(-0.968)	(-0.721)	(0.323)	(-0.830)	(0.379)
Industry/Year controls	√	√	√	√	√	√	√	√	√	√
Obs.	2,054	2,410	2,296	2,054	2,053	2,206	2,296	2,053	2,296	1,969
Adj. R^2 (%)	3.817	2.885	4.460	5.259	4.098	4.164	2.996	5.294	4.303	4.574