

Value Ambiguity and Gains from Acquisitions of Unlisted Targets

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Abstract

This paper examines the announcement period and the post acquisition gains of UK acquirers of unlisted targets that are subject to value-ambiguity. The evidence shows that target's age, size, intangibility of assets, and investments can explain the variations in bidding firm's abnormal returns both in the short- and in the long-run. The findings further show that the gains to firms that acquire unlisted targets are associated with the difficulty in valuing unlisted targets and the means of payment used.

Keywords: mergers and acquisitions, abnormal returns, value-ambiguity, unlisted firms, method of payment.

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1. Introduction

Recent literature¹ shows that large proportion of bidders engage in unlisted target acquisitions. This has prompted research that compare the announcement period and post-acquisition wealth effects of firms that acquire unlisted versus listed targets. Studies conclude that while bidders of unlisted targets enjoy positive and significant abnormal returns, listed target bidders either breakeven or experience small losses in the short-run². Although some of these studies appear to provide some explanations as to what causes the listing effect,³ the sources of higher gains to bidders of unlisted targets remain unknown. Indeed, the literature falls short in explaining the behavior of bidding firm's abnormal returns when they acquire unlisted targets; their results are exposed to criticism for failing to include the level of the unlisted target firm's valuation-ambiguity/uncertainty in the analysis. This paper fills this void. Specifically, this paper examines whether the gains of unlisted target acquirers are associated with the degree of target firm's valuation-ambiguity (i.e. the difficulty that bidding firms face to correctly estimate the value of unlisted targets).

Earlier studies (for example, Draper and Paudyal, 2006) show that some differences in the size of gains to bidding firms acquiring unlisted targets are associated with the method of payment. Nevertheless, they suggest that takeovers of privately held targets generate positive abnormal returns irrespective of the method of payment. They also show that stock financed acquisitions generate the largest gains. Chang (1998) proposed that this is due to the potential effective monitoring of external block holders created through stock payment. It has been also argued that the limited competition for unlisted firm acquisition increases the likelihood of underpayment leading to higher returns (Chang, 1998).⁴ Studies also suggest that the asymmetric information problem proposed by Myers and Majluf (1984) will be mitigated in private acquisitions as the managers-owners of private firms (a small number of shareholders or a family) will be very careful when they accept the bidding firm's common stock. This reduces the likelihood of accepting overvalued stock and signals to market that the bidding firm's stock is not overvalued. Therefore, in addition to the examination of effects of value ambiguity, this paper controls for the method of payment as well. Our results suggest that bidding firms' gains are associated with target firm's valuation-uncertainty and the method of payment.

¹ Faccio and Masulis (2005) report that approximately 90% of UK (and Irish) acquisitions involve unlisted target firms; Draper and Paudyal (2006) report approximately 87% of the UK acquisitions involved privately held targets. However, Moeller et al., (2005) show that approximately 53% of US acquisitions involve unlisted targets.

² See for example Hansen and Lott, 1996; Chang, 1998; Ang and Kohers, 2001; Fuller et al., 2002; Da Silva Rosa et al., 2004; Moeller et al., 2004; Conn et al., 2005; Draper and Paudyal, 2006; Faccio et al., 2006.

³ Attention has been also paid to other factors that affect bidders' gain during announcement and post-acquisition periods. The factors include the methods of payment, the relative size of the deal, bidders' growth opportunities etc.

⁴ A possible reason for the limited competition regarding privately held firms, as proposed by the same author, is the high information search cost given the scarcity of public available information for this type of firms.

Many possible reasons behind the superiority of unlisted target acquisition gains have been discussed in the literature. In a recent study Draper and Paudyal (2006) articulate three possible hypotheses. They are: a) the managerial motive hypothesis, b) the illiquidity hypothesis, and c) the bargaining power hypothesis. Similarly, Ang and Kohers (2001) argue that the premium paid for privately held targets could be higher than that for publicly traded targets, especially due to the strong bargaining power of the privately held firms and the options available to them in selling the firm as they can choose both how and when to sell.⁵ Other studies suggest that the information environment of the target firms involved in M&A deals affect, to a great extent, the bidding firm's announcement and post-acquisition returns. For example, in an investigation of small manufacturing firms Shen and Reuer (2005) show that in the presence of adverse selection problem acquiring firm is likely to acquire a public target than a private firm. Officer, Pulsen, and Stegemoller (2007) attempt to further explain the variation of the bidding firm's announcement returns by using a number of accounting variables extracted from the private target firms' annual reports in order to proxy for asymmetric information effects. They find that acquirer returns are highly associated with factors that make the valuation of target more difficult. They also conclude that this association is more likely to occur in cases where stock-swap acquisitions are involved, consistent with Hansen's (1987) model. Similarly, Ekkayokkaya, Holmes, and Paudyal, (2007) found that acquirers of private targets enjoy short-run gains although suffer a loss in the long-run especially because of limited information on unlisted targets. Lastly, Doukas, Gonenc, and Plantinga (2007) show that the gains to bidders buying unlisted target firms are higher in comparison with the ones to bidders buying listed ones for 16 Western European countries, consistent with the information diffusion hypothesis.

In spite of several possible explanations of the listing effect discussed in the literature some important issues remain unaddressed. Several important differences exist between listed and unlisted targets. The issues involving the potential effects of valuation difficulty and the degree of corporate transparency on bidders' gains remain unexamined. We summarize and analyze a number of these issues in the next section where we mainly discuss the hypotheses we examine in this paper. This paper seeks to fill this void by examining the effects of valuation-ambiguity on the gains of UK bidders that acquire unlisted targets.

The paper contributes to the M&A literature by addressing the implications of the unlisted target firms' valuation-uncertainty on the announcement and post-acquisitions returns to UK acquiring firms. The paper refers to several issues pertinent to acquisitions involved unlisted targets, such as: (a) why shareholders enjoy positive announcement period returns when targets are unlisted? (b) Do the gains from unlisted target acquisitions vary with the level of target firm valuation-ambiguity? (c) What is the role of the method of payment in acquiring unlisted targets that subject to differing level of value-ambiguity? (d) What are the key determinants of the announcement period and long-term share price performance of acquiring firms that bid for unlisted targets? In the process, the paper also controls for acquirer specific features (such as growth

⁵ On the other hand, Officer (2006) document on average 15% – 30% acquisitions discounts for stand alone firms and subsidiaries of other firms relative to acquisitions of publicly traded targets.

opportunities, firm size), and deal features (such as focused vs. diversifying deals, relative size of the deal).

The remainder of this study is organized as follows. Section (2) sets up the hypotheses, section (3) describes the data, summary statistics, and the methodologies we follow, and in section (4) we report the empirical evidence and the interpretations of the results. Finally, section (5) concludes the paper.

2. Hypotheses Development

The main basis of the paper is that bidding firms acquiring unlisted targets are exposed to different levels of valuation risks due to unlisted firms' value-ambiguous informational environment. This may have several important implications on the bidding firms' value. To test for this, the paper examines several propositions summarized below.

2.1. Why Unlisted Target Firms have High Value Ambiguity?

In reality, some firms are more forthcoming about their financial affairs than other firms, and the financial statements of a few firms are designed to obscure rather than reveal information. This is more likely to occur among unlisted firms, where their 'informational environment' is more complex (opaque) than in the cases of listed firms.⁶ A substantial debate in the literature is concentrating on the different informational environments of listed vs. unlisted firms, which mainly documents that the latter is suffering from high levels of complexity/value ambiguity. Indeed, several scholars conclude that although a number of common characteristics, as well as principles of valuation between listed and unlisted firms are shared, several important differences exist that can affect, to a large degree, the way that the value of the same firms is estimated (estimation problems that are unique to unlisted companies exist). To an extent, the standard techniques for estimating risk parameters (such as beta and standard deviation) require market prices for equity, an input that is missing for unlisted firms. Similarly, when an unlisted target firm is overpopulated by risky assets (i.e. intangible assets, investments, etc.) along with the issue associated with its informational environment, the target firm's valuation becomes even more difficult and the risk exposure for a bidder acquiring this firm even more intense.

The availability data relevant for the valuation of unlisted firms is limited in both quality and quantity. This is due to the absence of a) strict disclosure regulations, and b) external investors requiring such information. On the other hand, listed firms are governed by a set of accounting standards that require disclosure of information to the market, which further allows investors to identify what each item in a financial statement includes and compare earnings across firms. The disclosure requirements are much relaxed in the cases of unlisted targets. Similarly, the share prices of publicly held/listed firms reveal collective judgments of dispersed investors (Hayek, 1945) and information about the

⁶ We discuss later on in our analysis the main reasons that led to the informational environment of the unlisted firms as 'opaque'.

business. It has been also suggested that share prices offer performance information that cannot be extracted from the firm's past, current or future accounting data (Holmstrom and Tirole, 1993).⁷ Therefore, the limited information available (i.e. accounting information extracted from the firm's annual reports) is inadequate to provide a clear estimation of the firm's value. Therefore, unlisted firms are subject to higher value-ambiguity in comparison to listed targets.

Further, another important difference is in the frequency of the data availability. Without a doubt, there is less information availability regarding unlisted firms, in comparison with listed ones, in terms of the number of years of data and the amount of information available each year. In other words, the market value of listed can be available on daily basis while this is not the case for unlisted targets. Unlisted firms usually provide data only once in a year. This makes the estimation of the fair value of the firm very difficult and inaccurate. For instance, it would be difficult to calculate the "accounting beta" of an unlisted company using the firm's accounting earnings due limited observations. Therefore, the problems associated with the value-ambiguity are more severe in the cases of unlisted targets than in the cases of listed firms.

2.2. Bidder Gains and Value Ambiguity

It has been widely documented in the literature⁸ that several explanatory variables, including the methods of payment, the relative size of the deal, the bidding firm size, and the growth opportunities of bidding firms, can, in part, explain the bidding firms' announcement and post-acquisition stock returns. Further, several studies have documented that the abnormal return to bidding firms buying unlisted target firms is associated with the level of information available about the target firm at the time of deal announcement (Chang 1998; Shen and Reuer, 2005; Draper and Paudyal, 2006 and 2007; Faccio et al., 2006; Officer et al., 2007; Ekkayokkaya et al., 2007). Several others have provided a different approach in the informational environment of unlisted firms and conclude that they suffer from high level of value-ambiguity due to several reasons (mainly due to their less known informational environment).⁹ Further, the nature of the assets held by the unlisted target firms, as well as the issue regarding their informational environment, can further constitute them even more risky, which to an extent renders the final entity of an M&A as risky too or value-ambiguous (with uncertain future expected return). In the events of acquisitions of unlisted targets high level of value-ambiguity can be arise from the fact that target managers or owners may conceal the true information, especially related to bad news.

⁷ Although, examining the accounting data of unlisted targets is the only way to figure out their fundamental value. Therefore, the complex environment of unlisted firms might lead to any incorrect value estimation, which can affect in our case, the value of the final entity (after the completion of the acquisition).

⁸ See, for instance, Chang (1998), Ang and Kohers (2001), Fuller, Netter, and Stegemoller (2002), Draper and Paudyal (2006), Faccio, McConnell, and Stolin (2006), Officer (2006), and Officer, Poulsen, and Stegemoller (2007).

⁹ For related studies, see for example: Shen and Capron (2003) and Officer, Poulsen and Schligermann. (2007).

Accordingly, the main argument we develop in this study is whether the level of a) difficulty to value unlisted targets, and b) risk exposure of the bidding firm acquiring unlisted targets due to any overload of risky assets on the unlisted target firms' balance sheets (i.e. intangible assets, investments, etc), yields any wealth effects to bidding firms' shareholders, both in the short- and in the long-run. Particularly, for a difficult to value unlisted target, overpopulated by risky assets, the overpayment is more likely, as well as the risk exposure of the final outcome of the M&A into a wealth-destruction project within a longer window (as the estimation of the expected value of these assets is difficult). Therefore, our first testable hypothesis is:

Hypothesis 1: *'Bidding firms buying difficult to value unlisted targets yield lower abnormal returns when compared to the gains of bidders that acquire unlisted targets which are less difficult to value'*. This should prevail in both the announcement period, as well as in the long-term.

2.3. Value Ambiguity and the Method of Payment

The issue described above can be further associated with the method of payment employed in M&A, the size and the growth opportunities of the bidding firm. In particular, the various means of financing signal different valuation effects for the bidding, the target, as well as the final entity's current and future performance. Based on the theory of Myers and Majluf (1984), Travlos (1987) argue that bidding companies using their stock to finance projects only when that stock is overvalued. Hence, the use of common stocks to pay for risky (or value ambiguous) assets, which to an extent renders the final outcome of the M&A as too value ambiguous, would be expected to signal the following.

- Case 1: *The bidding firm's common stock is overvalued and the unlisted target is subject to value-ambiguity.* In this case the managers of the bidding firm would be willing to use their overvalued shares to buy risky assets (these assets are very likely to be overvalued too). This is an attempt to use their *'cheap equity'* to buy risky assets (with an unknown probability of expected return). On the other hand, as Chang (1998) argues, target firm's managers should assess the bidding firm's common stock carefully before accepting it. Therefore, they should be able to realize that the bidder is overvalued. In that particular case, where the private firm's owners accept the bidder's overvalued stock they should have a plan to cash-out immediately.¹⁰ Alternatively, cash payment, in this particular case, would be preferable for unlisted target owners.
- Case 2: *The bidding firm is not overvalued but the unlisted target is subject to value-ambiguity.* In this case, the bidding firm's managers have no obvious preference to pay in stocks but they may choose to do so with a view to share the potential risk of acquiring value-ambiguous target with the owners of the target.

¹⁰ Recall that manager of private firm may conceal bad news of the company.

- Private firm owners may have motivation to accept the stocks as they could become block holders.
 - It is also possible that the private target owners do not accept the stocks as they know that the future value of the merger is ambiguous because of unknown value of the target's assets.
- Case 3: *The bidding firm is overvalued but the unlisted target is not subject to value-ambiguity.* In this particular scenario the target firm should not have any motivation of accepting the overvalued shares and the deal is expected to be financed in cash.
 - Case 4: *The bidding firm is not overvalued and the unlisted target is not subject to value-ambiguity.* In this case the method of payment (cash, stock, or combination of the two) will be decided upon other firm specific or deal specific characteristics.

Therefore, our next testable hypothesis is:

Hypothesis 2: *'Bidding firms buying difficult to value unlisted targets and paying with stock yield lower abnormal returns when compared to the returns of bidders buying less difficult to value targets and paying with stock'*. This effect should prevail in both the announcement period as well as the in the long-term.

2.4. Characteristics of Targets and bidders' gains

Size of the Target: The size of unlisted firm may vary from a small family business to that competes with publicly traded large firms. Small unlisted firms are less known, a fact that reduces the amount of information available in the market. This makes their valuation more difficult. Small firms may also have fewer customers, fewer suppliers, and fewer analysts watching them. This makes their information environment even more complex/ambiguous. In addition, the information acquisition cost for small firms will be higher making them less attractive target. On the other hand, smaller firms are more likely to integrate easily into the acquirer's business and hence more attractive. In the UK larger firms, even if they are not listed in stock exchanges, are required to disclose more information about their operational and financial activities. This makes their valuation less difficult. When larger unlisted targets are acquired with stocks, the likelihood of outside block holder creation increases significantly, a fact that is more severe once the size of the unlisted target increases relative to the size of the bidding firm. We also expect the structure of the bidder to change significantly when the acquisition involves large targets. Hence, larger firms overpopulated with risky assets are more likely to create higher uncertainty into the final outcome of the M&A. Therefore, the size of the unlisted target should be one of the important factors in determining the level of value-ambiguity. This leads to our next testable hypothesis that:

Hypothesis 3: *‘Bidding firms buying small unlisted target firms yield lower abnormal returns when compared to the gains of bidders buying large unlisted target firms’.* This effect should prevail in both the announcement period as well as the in the long-term.

We measure the size of the unlisted target firms by employing alternative proxies, namely, total assets, fixed assets, number of employees, and tangible assets.

Age of the Target: The age of the unlisted firm is measured as the difference between the announcement date of the acquisition and the date of the firm’s incorporation. It is likely for newly established firms to exhibit higher uncertainty than older firms due to several reasons. In general, it has been widely documented in the literature that firms with long history have more information available in the market (Barry and Brown, 1985). Mature companies tend to be commonly known by more customers, more suppliers, and also they might tend to be operating within more mature industries. Hannan and Freeman (1989) argue that young firms are likely to lack reliability and accountability in their organizational routines and performance. In terms of institutional constrains, young firms lack legitimacy, which occur due to the lack of support from relevant organization (Baum, 1989) and due to segmentation within the market for inter-organizational relationships (Carter and Manaster, 1990; Podolny, 1993). Hence, the valuation of older targets should be easier than the valuation of newly established companies. This leads to our next hypothesis.

Hypothesis 4: *‘Bidding firms buying young unlisted targets yield lower abnormal returns than the bidders buying mature unlisted target firms’.* This effect should prevail in both the announcement period and in the long-run.

Investments of the Target: Investment is divided into capital investment and financial investment. Capital investments include the purchase of capital goods, such as plant and machinery in a factory in order to produce goods for future consumption. The higher the level of capital investment in a company, the faster it should grow. On the other hand, financial investment is defined the purchase of assets, such as securities, works of art, bank and building society deposits, etc, with the primary view to their financial return, either as income or capital gain. (Note: this part is under development)

Hypothesis 5: *‘Bidding firms buying targets whose balance sheets are overloaded with investments yield higher abnormal returns than the bidders of targets with a small amount of investments in their balance sheets’.* This effect should prevail in both the announcement period as well as in the long-run.

Intangible Assets of the Target: Intangible assets include intellectual property, brand names, franchise, reputation, trademark, and patent rights. They are difficult to trade as it is difficult to assess their quality (Chi, 1994; Coff, 1999a) and therefore buyers are not certain as to what will be transferred due to their complex and simultaneously uncertain expected value creation. However, acquisitions are important means of transferring intangible resources that are otherwise non-marketable (Wernerfelf, 1984), a fact that let the bidding company to engage into uncertain expected value into the future. When the

target firms reveal information regarding their intangible assets (even if they are value-ambiguous), it is likely that bidders offer higher premium. In an acquisition of unlisted target whose balance sheet is laden with intangible assets, the valuation effects on the final outcome of the M&A is neither known to bidding firm managers nor to the target firm owners. This leads to our next hypothesis. (Note: this part is under development)

Hypothesis 6: *‘Bidding firms buying unlisted targets with a large proportion of intangible assets yield lower abnormal returns than the bidders buying the targets with a small proportion of intangible assets’.* This effect should prevail in both the announcement period and in the long-run.

2.5. Characteristics of Bidders and their gains

Bidders’ size: Moeller, Schlingemann, and Stulz (2004) report that larger acquirers earn about 2% less than smaller acquirers. Therefore, to allow for this effect we control for the size of the bidder. The size of the bidder is measured by their pre-bid market capitalization.

Growth opportunities of the bidder: It has been also documented that the growth opportunities of bidding firms affects their gains. Sudarshanam and Mahate (2003) and Conn et al. (2005) show that value acquirers (with low MTBV) outperform glamour bidders both in the short- and a long-run. Thus, we control for growth opportunities of the bidding firm. We measure the growth opportunity of the bidder with their market-to-book value (MTBV) ratio and the price-to-earnings (PE) ratio one month prior to the announcement of the deal.

Age of the bidder: We also control for the age of the bidding firm. This is because firms with a long trading history have more information available in public domain (Barry and Brown, 1985). Mature firms are more likely to be in more mature industries, while firm’s age may also capture the underlying volatility at the industry level. We measure the age of the firm with the number of days that the firm has been recorded in DataStream.

Relative size of the deal: Several authors have concluded that the bidding firm’s abnormal returns within a small windows surrounding the acquisition announcement’s day increase as the target size increases relative to acquirer size (Asquith et al., 1983; Jensen and Ruback, 1983; Jarrell and Poulsen, 1989; Kang, 1993; and Fuller et al., 2002). This is due to the fact that the larger the target firm’s size relative to the bidder, the more the original structure of the acquiring firm changes as a result of the acquisition.¹¹

¹¹ The relative size is measured by the ratio of the bidder’s market capitalization (MV) and the transaction value of the deal (DV), MV/DV .

3. The Sample and the Methodology

3.1. The Sample

The information on the announcements of deals is extracted from Securities Data Corporations (SDC). The sample comprises of bids announced by the UK firms between 01/01/1996 and 31/12/2005. The choice of the sample period is guided by the availability of data in FAME which holds firm specific financial data for 10 years. SDC records 15,288 deals announcements by UK firms during this period. The final sample meets the following criteria.

- The acquirer is a UK company traded in the London Stock Exchange (LSE).
- The target is a private or subsidiary (unlisted) domestic firm.
- The subsidiary's parent is an unlisted company.
- The deal value is equal to or greater than £1 million.
- The market value of the acquirer is greater than £1 million (one month prior to the announcement of the deal).
- Acquiring firms are not involved in other bids within 5-days (-2 to + 2) around the announcement of the deal.
- Data for the acquirer is available in DataStream.
- Data for the target firm is available in FAME.

Finally, 1,806 acquisitions survive the criteria.

3.2. Summary Statistics

Figure 1 and table 1 show the annual distribution of sample deals. They reveal the merger wave of late 90s. Most of the M&A activities over that period is overpopulated by acquisitions of unlisted target firms, covering almost 87% of the entire M&A activities. This pattern is consistent with the distribution of sample of Faccio and Massulis (2005) and Draper and Paudyal (2006). The merger wave of the late 90's can be attributed, to a large extent, to the sustained economic expansion, the growth of the internet and information dissemination in general, and the movements in stock market. Table 2 summarizes the distribution of M&A activities by industry sectors of both bidders and targets. Table 2 shows the collapse of consumer confidence in several industries, as well as the overcapacity in traditional sectors, caused an unexpected reduction in merger activity. Within the same period, the high technology, consumer products and services, industrials, and media and entertainment industries are remain most active.

Insert tables 1 and 2 about here

Table 3 summarizes deal, acquirer, and target specific characteristics. The average size (MV) of the bidders is £551 million with a median of £77 million reflecting a skewed distribution in bidders' size. With regards the growth opportunities of the bidding firms, the mean (median) MTBV ratio is 3.72 (1.88), while the PE ratio is 37.64 (15.70). The median value of the relative size of the deals (TV/MV) is lower than its mean, reflecting

that a considerable number of small deals are in the sample. The table also shows that bidding firms are more mature than their targets. Finally, the mean (median) liquidity ratio is 1.99 (1.05), current ratio is 2.20 (1.20), and the gearing ratio is 267 (57.06).

Insert table 3 about here

3.3. The Methodology

For the short-run analysis, the paper follows the tradition event study methods as summarized in Brown and Warner (1985). Cumulative Average Returns (CAR) for 5-days [-2, to +2] surrounding the announcement day (day 0) are estimated. The abnormal return of acquirer is estimated using equation (1).

$$AR_{i,t} = R_{i,t} - R_{m,t} \quad (1)$$

Where:

$AR_{i,t}$ = The abnormal return for security i in time period t ;

$R_{i,t}$ = The return for the security i in time period t , $\left[\frac{(RI_{i,t} - RI_{i,t-1})}{RI_{i,t-1}} \right]$; and

$R_{m,t}$ = The return for the market (the FT-All Share measured as the percentage difference of the Market Index) equally weighted index in time period t .

Finally, equation (2) estimates the Cumulative Abnormal Returns (CAR) for the five-days around the announcement day (t).

$$CAR_i = \sum_{t=-2}^{t=+2} AR_{i,t} \quad (2)$$

To assess the post-acquisition performance of bidders we estimate one, two and three year holding period excess returns after controlling for known risk factors identified in Fama and French (1996). Average monthly post-merger excess returns for 12, 24, and 36 months are estimated under a calendar time portfolio regression (CTPR) framework. The CTPR accounts for the cross-sectional dependence of stock returns, particularly due to the inclusion of frequent acquirers, caused by the lack of independence among observations. This problem arises from overlapping returns and the non-random timing of acquisitions.¹² For each calendar month in the period from January 1996 to December 2005, excess returns are calculated for all sample firms that announced bids with unlisted target firms during the previous 12, 24 and 36 months. The calendar-time portfolio excess returns are estimated with equation (3):

$$R_{p,t} - R_{f,t} = \alpha_p + \beta_p (R_{m,t} - R_{f,t}) + s_p SMB_t + h_p HML_t + \varepsilon_t \quad (3)$$

¹² For a detailed explanation of the CTPR method see Lyon et al. (1999).

In equation (3), the intercept (α_p) measures the monthly average excess return of bidders after controlling for the effects of 3 risk factors. The dependent variable ($R_{p,t}-R_{f,t}$) is the monthly excess return of the calendar-time portfolio of bidders over risk free rate; ($R_{m,t}-R_{f,t}$) is the excess return of market portfolio; SMB (Small minus Big) is the excess return of a portfolio of small firms (value weighted) over a portfolio of large firms; and HML (High minus Low) is the excess return of a portfolio of value firms (value weighted) over glamour firms. SMB and HML estimated using the method outlined in Fama and French (1996).

4. Results

This section reports and interprets the empirical findings following the short-run, the long-run, and the cross-sectional analyses. Portfolios are formed according to proxies chosen to capture the level of target's value-ambiguity, and thus expected to explain the bidding firm's announcement and post acquisition abnormal returns. Abnormal returns differentials are also reported for each proxy between portfolios sorted according to the proportion of assets, or other specific proxies computed, for both the bidding and the target firms involved in the transactions.

4.1. Short-run Analysis

The main purpose of the short-run empirical investigation is to uncover differentials in short-run abnormal returns between acquirers engaging in takeovers with unlisted target firms subject to different level of value-ambiguity. Initially, the cumulative abnormal return (hereafter CAR) is reported for the entire sample of takeovers involving unlisted targets firms, measured within a small window (t-2, t+2) surrounding the acquisition's announcement day, t. The subsequent discussion concentrates on the stock market reaction, and it is based on proxies intended to capture the target's value-uncertainty. In each case, the sample is further divided according to the alternative methods of financing utilized in the acquisition.

4.1.1. Announcement Period Bidder Gains Based on Bidders' Characteristics

Table 4 reports the CAR for all acquisitions and proxies based on previous research, namely, bidder's size (MV), bidder's market-to-book value (MTBV) ratio, bidder's price-to-earning (PE) ratio, and the relative size (RS) of the deal, divided into portfolios according to alternative methods of financing. Panel A reports the CAR for the entire sample of acquirers (1,806 bids) as well as for portfolios classified according to the different means of payment employed. In this case the abnormal return for all bids is 2.17% while abnormal returns for the acquisitions financed with cash (equity) are 1.65% (3.31%) respectively, both statistically significant at 1% level, with their differential to appear significant at 10% level. These findings are in line with the vast majority of the

literature,¹³ and they clearly reflect the market's views with regards the bidding firm's valuation effects, both currently and in the future. Panel B reports the CAR after controlling for the bidding firm's size and the alternative means of financing. Clearly, the CAR decrease with the size of the bidding firm with the largest differential to be obtained among deals financed with shares (-4.19%). These findings are consistent with the majority of studies in the literature supporting the view that small bidders gain on average higher abnormal returns than large bidders (Moeller et al., 2004).¹⁴

Insert table 4 about here

Panel C reports the CAR of the bidding firms based on the relative size of the deal. It has been argued that the relative size of the target firm to the bidding firm is a major factor explaining the bidding firm's CAR (Asquith et al. (1983), Jensen and Ruback (1983), Jarrell and Poulsen (1989), Kang (1993), Fuller et al., (2002), Conn et al., 2005, and Draper and Paudyal, 2006).¹⁵ For all three sub-groups (all cases, cash, and stock) it is clear that the CAR of bidding companies increase as we move from the low relative size portfolio to the one subject to high relative size suggesting that the greater the structural change of the bidding firms (high relative size), the higher the CAR to bidding firm. Lastly, the market-to-book value (MTBV) ratio and the price-to-earnings (PE) ratio are used in an attempt to capture the growth opportunities of the bidding firm. The MTBV of the acquiring firm reflects important information about the past, and hence the potential future stock performance of the bidder. Among others, Rau and Vermaelen (1998), and Sudarsanam and Mahate (2003) conclude that value acquirers (low MTBV) outperform glamour acquirers (high MTBV) around takeover announcements and after controlling for the mode of payment.¹⁶ From panel E CAR decrease as MTBV increases, suggesting that growth acquirer's gains are mainly due to their future high growth opportunities. Lastly, panels F and G report CAR for acquirers classified according to their PE ratio. CAR increase with the PE ratio, although the differential for the entire sample appears to be significant in statistical terms only when the sample is divided into five portfolios.

4.1.2. Announcement Period Bidder Gains by the Age of the Unlisted Target Firm

Tables 5 to 7 report gains to bidding firms by the age of the unlisted targets. Tables 6 and 7 present the sample that is further divided according to the size (total assets) of the

¹³ For related studies see for example, Chang (1998), Ang and Kohers (2001), Draper and Paudyal (2006), Officer (2006), Faccio et al (2006), Officer et al. (2007), and Ekkayokkaya et al.(2007).

¹⁴ Managerial decisions in large firms are more likely to be hubris's motivated (Roll, 1986), since managers in such firms are more often covered by the media, they are in general relatively more successful, and they tend to have a wider availability of resources when making investment decisions.

¹⁵ The stock market reaction to an acquisition's announcement is expected to be more intense the larger the target size and thus the more the original structure of the acquiring firm changes as a result of the acquisition.

¹⁶ Glamour acquirers are those firms that are overvalued on the basis of their past stock market performance. Such stocks receive premium ratings in the form of high MTBV. On the other hand, firms with low MTBV ratings may be undervalued, but may have the potential for subsequent value gains. Glamour acquirers are high growth while firms, since their high market valuation reflects the expected high growth, or investment opportunities.

unlisted target firm.¹⁷ Table 5 clearly indicates that the age of the unlisted target firm has a significant impact on the bidding firm's CAR, although this appears to be the case only when stock is used to finance the deal. More specifically, when the common stock used to finance the deals is equal to, or higher than, 80%, the differential between the portfolio of mature targets and the portfolio of young targets appears to be significant in both economical and statistical terms. These findings suggest that the valuation of mature companies is less difficult, and therefore the value-uncertainty lower, than the valuation of younger unlisted targets. The fact that mature companies tend to be more widely known and have a longer history provides more data, both in qualitative and quantitative terms, for the estimation of their value. This implies that the risk exposure of the acquirer is relatively lower and the final outcome of the acquisition less ambiguous. Hence, the use of equity to pay for the acquisition of older unlisted firms reflects significant gains to bidders, contrary to the use of equity to pay for bids against younger, and thus more risky, unlisted targets. Overall, the age of the unlisted target firm is our first proxy (from the unlisted target firm's side) that captures the level of target firm's valuation-ambiguity, which therefore further explains the bidder gains.

Insert tables 5 to 7 about here

Tables 6 and 7 show that target valuation-ambiguity varies significantly with the size and the age of the unlisted target firm, as well as with the method of payment utilized to finance the deal. The findings show that when bidders use their equity to acquire small-mature unlisted targets, they gain on average 4.30% and 8.60% more than the bidders of small-young unlisted targets. Small-young unlisted firms may be subject to high value-ambiguity for several reasons, including the scarce availability of data and information. Given the risk exposure of the bidding firm acquiring a small-young unlisted target, it is reasonable to expect stock financing to generate lower CAR to bidders, in comparison with bids of small-mature firms with the same means of payment. Basically, these two portfolios are fallen under the small firms' group (small firms do not required to disclosure information). Hence, it is likely this to be one of the main reasons of why in panels C of both tables (big unlisted firms) we do not obtain any significant differential between portfolios comprised by acquisitions with large-mature vs. large-young firms. Our findings indicate that young unlisted target firms suffer from higher levels of value-ambiguity once they compared with mature ones, even though this is more intense when the target is a small firm, supporting further our predictions.

4.1.3. Announcement Period Bidder Gains by the Size of the Unlisted Target Firm

Unlisted target firms' size may vary from very small family firms to very large companies able to compete with large listed firms. The size of unlisted firms may provide an important measure of the firm's information availability in the market, a fact that decreases the level of the firm's valuation difficulty which therefore constitutes the final

¹⁷ In tables 6 and 7 the sample is initially divided into two groups according to the target's size, subsequently the sample within each size group is further divided into either three or five portfolios according to the age of the unlisted target firms. This is in an attempt to further capture the level of target valuation-uncertainty, and gain additional explanatory power for the bidder's CAR.

outcome of the M&A less ambiguous.¹⁸ In addition to the greater availability of information for larger firms, acquisitions with large unlisted target firms are also more likely to involve outside block holders, or to change the original structure of the bidding firm substantially. Unlisted target firm's total assets are used to capture the size of the target firms, and hence to proxy for the level of their valuation-uncertainty.

Tables 8 and 9 report the CAR for portfolios sorted according to proxies capturing the size of the unlisted target firms. Specifically, table 8 reports the CAR following two dimensions, the total assets and the age of the unlisted target firms. Panel A presents CAR before controlling for the age of the unlisted target firm. The findings indicate that stock-financed acquisitions of large unlisted target firms generate higher abnormal returns to bidders than bids for small-unlisted targets (3.80% and 4.90% on average). This is the first indication that the size of the target firm as measured by its total assets, along with the method of payment employed, reflects significant valuation effects to bidding firm.¹⁹ Further, panel B reports CAR for bidding firms buying young-unlisted target firms while panel C shows CAR for acquisitions involved with mature-unlisted target firms. Clearly, for acquisitions conducted with common stock, bidders gain more when they buy young-large companies than when they buy young-small ones by on average 5.20% and 7.10% (when the proportion of stock employed is 80% and 100% respectively). These figures imply that among young companies, bidders face more difficulty to value small firms because they are not required to disclose information with regards their operation into the market, as opposite to big firms.

Insert tables 8 and 9 about here

Table 9 reports the CAR for bids with unlisted targets firms, divided into portfolios according to the size of both the bidder (MV) and the unlisted target firm (total assets). Specifically, panel B reports CAR for small bidders buying targets with their size to vary substantially. On average, bidders acquiring small vs. big unlisted target firms and pay with stock enjoy on average 4.30%, 7.70% and 9.50% higher CAR. Given that the bidding firm is a small one, the acquisition with a large unlisted target firm is more likely to create outside block holders, as well as to change the original structure of the bidder significantly. Similarly, large unlisted target firms are required to disclose more information into the market and therefore their valuation would be an easy task, leaving the final outcome of the M&A less value ambiguous.

4.1.4. Announcement Period Bidder Gains by the Intangible Assets of the Unlisted Target Firm

In this section we examine the relationship between the bidders' CAR and the proportion of intangible assets bought when an unlisted, and difficult to value, target firm is

¹⁸ Indeed, large unlisted firms are required by the UK disclosure information requirements to disclose more information regarding their financial and operational performance relative to smaller ones.

¹⁹ The larger the unlisted target firm the higher the change of the original structure of the bidding firm and the higher the abnormal returns. To an extent, the outside block holding creation following acquisitions with large unlisted target firms is more likely too once stock is utilized as the method of payment.

acquired.²⁰ Table 10 reports announcement returns of the bidding firms acquiring unlisted targets with intangible-laden balance sheets.

Insert table 10 about here

More specifically, table 10 presents the CAR, and their differentials from portfolios formed according to three proxies computed by using various assets from the target firms. Panel A (B) report CAR for portfolios formed according to the ratio computed by dividing the proportion of intangible assets held by an unlisted target firm with its corresponding proportion of total assets (fixed assets). The expectation is that the higher the ratio, the lower the CAR, as the amount of intangible assets held by the target firm cover, among others, a significant proportion of the firm's assets. Thus, the higher the ratio the higher the target firm valuation-uncertainty. This relationship is expected to be more intense as the proportion of equity used to finance the deal increases too (due to any significant risk exposure of the bidding firm). Evidently, our findings confirm to a great extent our hypotheses, with the acquisitions fallen under the low portfolio to outperform the ones in the high portfolio with economically and statistically significant differentials. Lastly, panel C reports CAR after controlling for a ratio between the intangible assets and the deal value.²¹ Clearly, the higher the ratio generates lower bidder gains, indicating that the bidding firm faces more difficulty in valuing the target firm and hence the higher the target firm's valuation-uncertainty. (Note: this part is under investigation)

4.1.5. Announcement Period Bidder Gains by the Investments of the Unlisted Target Firm

This section analyzes and further interprets the CAR of acquirers involved in acquisitions of unlisted target firms with investment-loaded balance sheets. Table 11 reports CAR and their differentials for acquisitions of unlisted target firms subject to different levels of investments. Our findings show a positive and statistically significant relationship between the proportion of investments held by the unlisted target firms and the bidder's CAR. Indeed, the CAR increases monotonically as we move from the portfolio subject to low investment (1.18%) to the portfolio subject to high investment (2.89%), with a statistically significant differential of about 1.70%. The same relationship is evident when the sample is divided according to the alternative methods of payment, although this relationship is more intense for bids financed with common stock. When stock (cash) is used to finance 80% or more of the acquisition, bidders gain on average -0.93% (0.27%) from the portfolio subject to low investment, whereas they gain 8.07% (2.54%) from the portfolio subject to high investments, with a statistically significant differential of about 9.00% (2.30%) respectively. These findings suggest that the method of payment along with the investments held by the unlisted target firm play a significant role for the bidding firm's CAR determination. (Note: this part is under investigation)

²⁰ We expect the intangible assets held by the unlisted target firm to reflect significant valuation effects to bidders due to: a) the high target valuation-uncertainty, and b) neither the bidders nor the target can estimate the exact value of the intangible assets as well as the final outcome of the M&A.

²¹ We assume that the more the intangible assets bought by 'keeping' the deal value constant (i.e. the ratio IA/DV increases too), the higher the risk exposure of the bidding firm.

Insert table 11 about here

4.2. Cross-section Analysis

Although the results from univariate analysis are revealing, they cannot account for simultaneous effects of multiple factors and allow for interaction between various determinants of acquirer's gains. To overcome such limitations, announcement period (5-days) excess returns of bidders are regressed against a set of explanatory variables that are likely to be responsible in shaping the gains of acquirers engaging in acquisitions with unlisted target firms.

$$CAR_i = \alpha_i + \sum_{i=1}^N X_i + \varepsilon_i \quad (4)$$

The intercept, (α) in equation (4), measures the excess return to bidders after accounting for the effects of all explanatory variables, while the vector of explanatory variables, 'X', includes variables likely to explain the CAR of bidding firms. Table 12 presents the results from our multivariate analysis.

Insert table 12 about here

Throughout all models in the paper, a positive and significant relationship has been found between CAR and the log of deal value, PE ratio, as well as the relative size of the deal. The findings presented in table 12 are consistent with the findings of several other studies across the M&A literature. Specifically, with regards the relative size of the deal, several scholars have proposed that the bidding firm's abnormal returns within a small windows surrounding the acquisition announcement's day increase as the target size increases relative to acquirer size (Asquith et al., 1983; Jensen and Ruback, 1983; Jarrell and Poulsen, 1989; Kang, 1993; and Fuller et al., 2002). This relationship implies that the larger the target firm's size relative to the bidder, the more the original structure of the acquiring firm changes as a result of the acquisition. On the contrary, the paper's findings present a negative and statistically significant relationship between CAR and bidders' size, consistent with the findings of Moeller, Schlingemann, and Stulz (2004). Further, the relationship between the CAR and the MTBV ratio appears to be negative, though statistically insignificant in all models.

The unique feature of this study is that it concentrates not only on the bidder's side in the determination of the bidder's CAR, but also on the under-theorized unlisted target firm's side. Accordingly, a number of target firm characteristics employed in order to explain the bidding firms' CAR in a small window surrounding the acquisition announcement's day. Specifically, we find a positive and significant relationship between bidders' CAR and the log of target firm's age, which is consistent with our main hypotheses. Similarly, the paper finds a positive and statistically significant relationship between proxies capturing the size of the unlisted target firm and bidders' CAR. In fact, bidders CAR increase significantly with the level of total assets and fixed assets held by the target firms. Finally, one of the most important determinants of the bidding firms' CAR is the investment held by the unlisted target firm. Our estimate of the investment in all the

cross-section regressions appears is always positive and significant at 5% level, implying the when bidders announce takeovers of unlisted target firms with their balance sheets overloaded of investment, they enjoy positive and significant CAR. On the other hand, acquirers experience a significant losses when they engage into acquisitions of unlisted target firms with their balance sheets laden of intangible assets.

4.3. Long-run Analysis

The findings of the short-run analysis confirms that proxies related to target firm's valuation-uncertainty and the method of payment utilized provide significant determinants of the bidder's gains when acquiring unlisted targets. This section aims to answer the question: do acquisitions of unlisted target firms subject to different levels of value-ambiguity influence differently the bidding firm's post-acquisition common stock performance? Excess returns are measured by using the calendar-time portfolio regression (CTPR) market adjusted returns and calendar-time regression intercepts, and alphas. The Fama and French (1996) three factor model is used.

Table 13, panels A, B and C show that on average UK bidders gain positive post-acquisition returns irrespective of the event window.²² This pattern remains the same when we focus on acquirers bidding for unlisted target firms using cash or stock as the method of payment to finance their acquisitions. In addition, the paper examines whether other deal characteristics reported in the literature can individually explain post-acquisition return for acquiring firms buying unlisted targets. All three tables and panels reports abnormal returns sorted by the bidder's size, growth opportunities, and relative size. Specifically, all results indicate that for the 1-, 2-, and 3-year post-event window smaller acquirers outperform larger ones. Within the same framework, low-MTBV acquirers (value) outperform high-MTBV (glamour) firms, irrespective of the post-event window and the method of payment utilized.²³ Similarly, bidders subject to high relative size ratio outperform the ones subject to low relative-size in the long run, irrespective of the post-event window.

Insert table 13 about here

Further, table 13 reports FF's alphas for portfolios constructed according to proxies capturing the level of the unlisted target firm value-ambiguity. Firstly, the model controls for the target firm's age. Our findings show that FF's alphas decrease monotonically moving from the portfolio with young-unlisted target firms (high value-ambiguity) to the portfolio with mature unlisted target firms (low value-ambiguity). These findings contradict the results of the earlier short-run analysis, and thus indicate that the unlisted target's value-ambiguity plays a significant role in the bidding firm's CAR determination in the post-event period. Furthermore, the level of intangible assets held in the unlisted

²² Note that the intercepts from the FF 3-factor model indicate that acquirers are subject to statistically insignificant average monthly abnormal return of 0.85%, 0.99%, and 1.01% per month in 12-, 24-, and 36-months respectively, starting from the next month of acquisition's announcement.

²³ These findings are consistent with Rau and Vermaelen (1998) and Sudarsanam and Mahate (2003) who find similar results in the long-run for the US and the UK markets respectively.

target's balance sheets is used. As shown in all three panels, FF's 3-factor CTRP alphas increase with the level of intangible assets. Finally, the level of investments held in the unlisted target firm's balance sheet plays a significant role as well in the explanation of the bidding firm's abnormal returns in the long-run. Clearly, and consistent with the earlier short-run results, FF's 3-factor CTRP alphas increase moving from the portfolio subject to low investment to the portfolio subject to high investment.

5. Conclusions

This paper examines the impact of the unlisted target firm's value-ambiguity on the bidding firm's announcement and post-acquisition abnormal returns. Bidding and target firm specific-, as well as transaction- specific characteristics such as the method of payment, relative size of the deal, bidder's market-to-book value (MTBV) and size (MV), have been additionally examined within this framework. The main conclusions drawn from this analysis lie on the basis of previous findings and further suggest that the unlisted target firm's value-ambiguity have a significant impact upon the bidding firm's announcement and post-acquisition common stock returns.

In general, our findings suggest that acquirers buying unlisted target firms, which are subject to low value-ambiguity, enjoy higher abnormal returns comparing to acquisitions involving high value-ambiguous unlisted target firms. This evidence is more significant when the payment is made by shares. Several proxies are employed to capture the unlisted target firm's value-ambiguity, namely a) unlisted target firm's age, b) size, c) intangible assets, and d) investment. Evidently, bidders gain on average higher short- and long-run abnormal returns from acquisitions involving mature unlisted target firms, rather than young ones, suggesting that the less value-ambiguity is reflected into the final outcome of the M&A. Similarly, takeovers of large unlisted target firms generate higher short- and long-run abnormal returns to bidding firms' shareholders due to a) the less value-ambiguity that characterize this type of unlisted firms (or the less difficulty the bidder faces to value the target firm), b) the higher probability to create outside block holders, and c) the more the original structure of the acquiring firm changes as a result of the acquisition. In addition, although bidders buying unlisted target firms with laden-balance sheets with intangible assets generate low short-run abnormal returns, they enjoy high long-run returns. The announcement period stock market reaction could be due to the fact that a) the bidding firm faces difficulty to value the unlisted target one and b) the bidding firm exposes to high risk when the transaction involves risky firms/assets. Finally, our results show that the more investments held by the unlisted target firm the more the difficulty the bidder faces to correct estimate the target firm's fair value (for example, due to target firm's limited data available). Clearly, the latter holds true for both announcement and post-acquisition abnormal returns. Overall, this paper contributes to the M&A literature by providing important additional explanations with regards the valuation effects of the unlisted target firm's value-ambiguity on the bidder announcement and post-acquisition common stock returns.

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Table 1
Distribution of M&A Activity by Years and Target Status

The table presents the annual distribution of takeovers of unlisted target firms over the period 1996 and 2005. Acquirers are UK firms listed on the London Stock Exchange whereas the unlisted target firms are both private and subsidiary of other (unlisted) firms, both operating in the domestic market.

YEAR	ALL	PRIVATE	SUBSIDIARY	PUBLIC	UNLISTED	LISTED
1996	917	499	246	172	745	172
1997	1,012	535	321	156	856	156
1998	1,156	615	365	176	980	176
1999	964	528	287	149	815	149
2000	1,118	661	341	116	1,002	116
2001	731	456	211	64	667	64
2002	612	375	176	61	551	61
2003	550	283	177	90	460	90
2004	679	406	200	73	606	73
2005	693	477	147	69	624	69
Total	8,432	4,835	2,471	1,126	7,306	1,126
(%)	(100)	(57.34)	(29.31)	(13.35)	(86.65)	(13.35)

Table 2
Distribution of M&A Deals Based on Industry Classification

The table presents the industry classification of both the bidding and the target firm company for a sample of 1,806 M&A deals over the period 1996 and 2005. Bidders are UK firms listed on the London Stock Exchange and targets are unlisted firms, both private and subsidiary of other (unlisted) firms, both operating in the domestic market.

Industry Classification	Bidder	Target
High Technology	260	286
Consumer Products and Services	299	376
Industrials	271	245
Real Estate	84	82
Retail	133	165
High Technology	260	286
Consumer Staples	104	91
Media and Entertainment	245	217
Healthcare	60	58
Materials	123	98
Financials	151	125
Telecommunications	44	30
Energy and Power	32	33

Table 3
Summary Statistics for the Sample

The table presents summary of deal-, acquirer-, and target- specific statistics, for a sample of 1,806 acquisitions announced by UK listed acquirers over the period 1996 and 2005. The sample is collected from SDC (Security Data Corporation) mergers and acquisitions database. The sample is restricted to deals equal to, or over one million pounds. The sample is either not restricted to the percentage of shares acquired, or it is restricted when the acquirer aims to obtain more than 20%, and 50% of the target firm. Deals where the acquirer has announced two or more deals within 5-day window [t-2, t+2] -where t is the acquisition announcement date- are excluded. SIGMA is defined as the idiosyncratic volatility of the bidding firm's excess returns and measured by the standard deviation of daily market excess returns over the year ending five days prior to the announcement's day. Market value (MV) is the market value of the acquirer one month prior to the acquisition's announcement day. MTBV ratio and PE ratio represents the market-to-book value of equity and the price-to-earnings ratio one month prior to the acquisition's announcement day. Relative size of the deal is the ratio calculated by dividing the transaction value of the deal over the acquirer's market value one month prior to the acquisition's announcement day (TV/MV). Age of the bidding firm is defined as the number of days since the firm was first covered by the DataStream and the acquisition's announcement day. Age of the target firm is defined as the number of days since the firm's registration (as obtained by the FAME company information) and the acquisition's announcement day. Target firm's total assets, fixed assets, turnover, tangible assets, intangible assets, investments, No of employees, liquidity ratio, current ratio, and gearing ratio, represent the mentioned unlisted target firm's proxies/variables. The data for these variables are collected from FAME company information.

	Variable	N	Mean	Med.	Min.	Max.	Std Dev	t Value	Pr > t
Bidding Firm's Side	CAR(-2,+2)	1,806	0.0217	0.01	-0.2531	0.4712	0.0787	11.69	<.0001
	SIGMA(-205,-6)	1,806	0.0247	0.02	0.0049	1.2641	0.0332	31.71	<.0001
	SIGMA(-2,+2)	1,806	0.0242	0.0161	0.0007	0.2983	0.0265	38.77	<.0001
	Market Value	1,806	551	77	1	51,882	2,260	10.37	<.0001
	MTBV Ratio	1,806	3.72	1.88	-205.43	1073.97	29.09	5.43	<.0001
	PE Ratio	1,497	37.64	15.7	0.3	3046.5	171.91	8.47	<.0001
	Relative Size	1,806	0.1903	0.0451	0.01	23.7246	0.7277	11.12	<.0001
Target Firm's Side	Firm's Age	1,806	5094	3604	289	14952	4348	49.79	<.0001
	Firm's Age	1,806	4764	2712	4	38663	6094	33.22	<.0001
	Total Assets	1,481	29161	1878	100	8823287	307301	3.65	0.0003
	Fixed Assets	1,514	11592	385	100	5412800	149368	3.02	0.0026
	Turnover	1,284	20141	3370	100	1844600	92577	7.8	<.0001
	Tangible Assets	1,397	5762	266	100	1101691	43936	4.9	<.0001
	Intangible Assets	400	3859	270	100	237100	16308	4.73	<.0001
	Investments	651	13696	91	50	5178850	206380	1.69	0.0909
	No of Employees	1,164	221	43	18	18639	994	7.59	<.0001
	Liquidity Ratio	1,526	1.99	1.05	0.5	80.69	5.19	14.93	<.0001
	Current Ratio	1,527	2.2	1.2	0.5	80.69	5.27	16.32	<.0001
Gearing Ratio	1,018	267	57.06	0.5	9173.19	759.12	11.22	<.0001	

Table 4
Announcement Period Excess Returns of Bidders by Size, Relative Size, Growth Opportunities and Payment Method

This table presents 5-day [-2, +2] announcement period cumulative abnormal returns, in percentage, of sample acquirers are presented. Abnormal returns (AR) are calculated using a modified market-adjusted model:

$$AR_{i,t} = R_{i,t} - R_{m,t} \quad (1)$$

Where $R_{i,t}$ is the return of bidder i at time t and $R_{m,t}$ is the market index (FT-All Share) at time t . Acquirers are publicly traded firms listed in the London Stock Exchange and targets are unlisted firms operating in the UK. Panel A shows the gains to acquirers for the entire sample as well as divided into two groups according to the method of payment utilized. ‘Cash’ represents the deals announced with pure cash while ‘Stock’ represents the deals announced with pure stock. Panel B shows acquirers’ gains by the size of the bidding company (MV) one month prior to the acquisition’s announcement day – 3 groups – for the entire sample and the alternative methods of payment. Panel C reports acquirers’ gains by the relative size of the deal (TV/MV) – 3 groups – for the entire sample and the alternative methods of payment. Panel D reports acquirers’ gains by the MTBV ratio of the bidding company one month prior to the acquisition’s announcement day – 3 groups – for the entire sample and the alternative methods of payment. Finally, panel E shows acquirer’s gains by the PE ratio of the bidding company one month prior to the acquisition’s announcement day – 3 groups – for the entire sample and the alternative methods of financing while panel F shows acquirer’s gains by the PE ratio of the bidding company one month prior to the acquisition’s announcement day – 5 groups – for the entire sample and the alternative methods of financing. The final column in each panel (except in panel A) shows the difference in the gains from acquisitions between the portfolios subject to high proportion of each proxy with the one subject to low proportion of each proxy. T-statistics testing for the mean equal to zero versus not equal to zero are reported in parentheses below the mean. The sample size, n , for each group is reported below T-statistic. a, b, c, and d denote significance level at 1%, 5%, 10%, and 15% respectively.

Panel A – Entire Sample					
	All	Cash	Stock	Diff: Cash vs. Stock	
Mean	2.17% ^a	1.65% ^a	3.31% ^a	-1.66% ^c	
t-value	(11.69)	(6.92)	(3.50)	(-1.70)	
n	1,806	790	141		
Panel B – Bidder Returns by Acquirer’s Size (MV)					
	All	Low (1)	Med (2)	High (3)	HML (3-1)
All					
Mean	2.17% ^a	3.37% ^a	2.03% ^a	1.10% ^a	-2.28% ^a
t-value	(11.69)	(8.37)	(6.95)	(4.59)	(-4.86)
n	1806	602	602	602	
Cash					
Mean	1.66% ^a	2.61% ^a	1.86% ^a	0.87% ^a	-1.74% ^a
t-value	(6.92)	(4.81)	(4.4)	(2.74)	(-2.96)
n	790	213	251	326	
Stock					
Mean	3.31% ^a	4.58% ^a	3.36% ^c	0.38%	-4.19% ^b
t-value	(3.50)	(3.12)	(1.85)	(0.29)	(-2.12)
n	141	75	33	33	

Continued

Table 4 – Continued

Panel C – Bidder Returns by Relative Size of the Deal					
	All	Low (1)	Med (2)	High (3)	HML (3-1)
All					
Mean	2.17% ^a	1.01% ^a	1.26% ^a	4.23% ^a	3.20% ^a
t-value	(11.69)	(3.85)	(4.89)	(10.46)	(6.70)
n	1806	602	602	602	
Cash					
Mean	1.66% ^a	0.77% ^a	1.45% ^a	3.95% ^a	3.20% ^a
t-value	(6.92)	(2.50)	(3.47)	(6.46)	(5.16)
n	790	365	262	163	
Stock					
Mean	3.31% ^a	2.05%	1.96% ^b	5.47% ^a	3.40%
t-value	(3.50)	(1.30)	(2.11)	(2.85)	(1.38)
n	141	49	39	53	
Panel D – Bidder Returns by Acquirer's MTBV					
All					
Mean	2.17% ^a	3.23% ^a	1.65% ^a	1.62% ^a	-1.61% ^a
t-value	(11.69)	(8.66)	(5.86)	(5.46)	(-3.38)
n	1806	602	603	601	
Cash					
Mean	1.66% ^a	2.27% ^a	1.93% ^a	0.64% ^c	-1.63% ^a
t-value	(6.92)	(5.18)	(4.62)	(1.76)	(-2.85)
n	790	283	263	244	
Stock					
Mean	3.31% ^a	5.93% ^a	1.57%	1.59%	-4.34% ^c
t-value	(3.50)	(3.70)	(1.20)	(0.94)	(-1.86)
n	141	56	35	50	
Panel E – Bidder Returns by Acquirer's PE (3 Groups)					
All					
Mean	2.04% ^a	1.98% ^a	1.54% ^a	2.60% ^a	0.60%
t-value	(11.03)	(6.61)	(4.93)	(7.51)	(1.35)
n	1495	501	496	498	
Cash					
Mean	1.60% ^a	1.87% ^a	1.46% ^a	1.41% ^a	-0.46%
t-value	(6.48)	(4.58)	(3.45)	(3.08)	(-0.75)
n	698	264	237	197	
Stock					
Mean	3.31% ^a	2.72% ^b	3.03%	3.74% ^b	1.00%
t-value	(3.39)	(2.20)	(1.39)	(2.46)	(0.52)
n	85	21	21	43	
Panel F – Bidder Returns by Acquirer's PE (5 Groups)					
	All	Low (1)	Med (3)	High (5)	HML (5-1)
All					
Mean	2.30% ^a	1.73% ^a	2.14% ^a	3.04% ^a	1.30% ^b
t-value	(9.43)	(4.32)	(5.94)	(6.16)	(2.06)
n	895	301	295	299	
Cash					
Mean	1.80% ^a	1.61% ^a	1.99% ^a	1.82% ^a	0.20%
t-value	(5.46)	(3.00)	(3.88)	(2.55)	(0.24)
n	424	159	157	108	
Stock					
Mean	3.12% ^a	1.78%	3.00% ^c	3.49% ^b	1.70%
t-value	(2.88)	(1.30)	(1.74)	(2.14)	(0.81)
n	55	8	14	33	

Table 5
Announcement Period Excess Returns of Bidders by Age of the Unlisted Target Firm and Payment Method

This table presents 5-day [-2, +2] announcement period cumulative abnormal returns, in percentage, of sample acquirers are presented. Abnormal returns (AR) are calculated using a modified market-adjusted model:

$$AR_{i,t} = R_{i,t} - R_{m,t}$$

Where $R_{i,t}$ is the return of bidder i at time t and $R_{m,t}$ is the market index (FT-All Share) at time t . Acquirers are publicly traded firms listed in the London Stock Exchange and targets are unlisted firms operating in the UK. The table is divided into two panels while each panel is divided into two groups; the one for acquisitions with cash and the other one for acquisitions with stock. Panel A shows the gains to acquirers by the unlisted target firm's age – 3 groups. The panel shows acquirers' gains for the entire sample as well as acquirers' gains after controlling for the alternative methods of financing, i.e. cash and stock. Cash and stock means of financing are divided into five groups according to the proportion of cash or stock used (greater than zero, less than or equal to 50%, greater than 50%, greater than or equal to 80%, and equal to 100%). Panel B shows the gains to acquirers by the unlisted target firm's age – 5 groups. The panel shows acquirers' gains for the entire sample as well as acquirers' gains after controlling for the alternative methods of financing, i.e. cash and stock. Cash and stock means of financing are divided into five groups according to the proportion of cash or stock used (greater than zero, less than or equal to 50%, greater than 50%, greater than or equal to 80%, and equal to 100%). The final column in each panel (both in the cash and stock groups) shows the difference in the gains from acquisitions of unlisted targets firms from mature vs. young firms. T-statistics testing for the mean equal to zero versus not equal to zero are reported in parentheses below the mean. The sample size, n , for each group is reported below T-statistic. a, b, c, and d denote significance level at 1%, 5%, 10%, and 15% respectively.

		CASH					STOCK				
Target Firm's Age →		All	Low (1)	Med (2)	High (3)	HML (3-1)	All	Low (1)	Med (2)	High (3)	HML (3-1)
Panel A											
All	Mean	2.17% ^a	1.99% ^a	2.42% ^a	2.09% ^a	0.10%	2.17% ^a	1.99% ^a	2.42% ^a	2.09% ^a	0.10%
	t-stat n	(11.69) 1806	(5.74) 602	(7.52) 602	(7.14) 602	(0.23)	(11.69) 1806	(5.74) 602	(7.52) 602	(7.14) 602	(0.23)
Cash or Stock% > 0%	Mean	2.07% ^a	1.66% ^a	2.45% ^a	2.08% ^a	0.40%	3.08% ^a	2.59% ^a	3.58% ^a	3.06% ^a	0.50%
	t-stat n	(11.06) 1609	(4.86) 503	(7.29) 543	(6.98) 563	(0.93)	(8.50) 656	(3.85) 237	(5.98) 237	(5.34) 182	(0.53)
Cash or Stock% ≤ 50%	Mean	2.39% ^a	1.17% ^d	3.13% ^a	2.96% ^a	1.80% ^c	2.97% ^a	2.33% ^a	3.43% ^a	3.09% ^a	0.80%
	t-stat n	(5.48) 433	(1.64) 154	(4.40) 169	(3.68) 110	(1.63)	(7.18) 420	(2.98) 135	(4.84) 151	(4.77) 134	(0.74)
Cash or Stock% > 50%	Mean	1.96% ^a	1.88% ^a	2.14% ^a	1.87% ^a	-0.01%	3.28% ^a	2.94% ^b	3.85% ^a	2.98% ^b	0.05%
	t-stat n	(9.78) 1176	(5.11) 349	(5.84) 374	(5.94) 453	(-0.02)	(4.76) 236	(2.5) 102	(3.53) 86	(2.45) 48	(0.03)
Cash or Stock% ≥ 80%	Mean	1.78% ^a	1.74% ^a	1.87% ^a	1.75% ^a	0.01%	3.31% ^a	2.70% ^c	3.41% ^b	4.73% ^b	2.00%
	t-stat n	(7.95) 914	(4.31) 273	(4.49) 279	(4.93) 362	(0.02)	(3.50) 141	(1.77) 68	(2.29) 47	(2.60) 26	(0.86)
Cash or Stock% = 100%	Mean	1.66% ^a	1.47% ^a	1.68% ^a	1.78% ^a	0.30%	3.99% ^a	3.46% ^c	3.17% ^d	7.09% ^b	3.60%
	t-stat n	(6.92) 790	(3.41) 239	(3.71) 239	(4.77) 312	(0.55)	(3.04) 93	(1.70) 47	(1.58) 30	(2.81) 16	(1.12)

Continued

Table 5 – Continued

		CASH					STOCK				
		Panel B									
Target Firm's Age →		All	Low (1)	Med (3)	High (5)	HML (5-1)	All	Low (1)	Med (3)	High (5)	HML (5-1)
All	Mean	2.17% ^a	1.94% ^a	2.49% ^a	2.14% ^a	0.20%	2.17% ^a	1.94% ^a	2.49% ^a	2.14% ^a	0.20%
	t-stat	(11.69)	(4.31)	(6.19)	(6.07)	(0.36)	(11.69)	(4.31)	(6.19)	(6.07)	(0.36)
	n	1806	361	362	361		1806	361	362	361	
Cash or Stock% > 0%	Mean	2.07% ^a	1.73% ^a	2.50% ^a	1.99% ^a	0.30%	3.08% ^a	2.37% ^a	3.77% ^a	3.85% ^a	1.50%
	t-stat	(11.06)	(3.86)	(6.07)	(5.64)	(0.45)	(8.50)	(2.68)	(4.58)	(5.09)	(1.28)
	n	1609	296	328	335		656	140	140	97	
Cash or Stock% ≤ 50%	Mean	2.39% ^a	1.32%	3.81% ^a	2.88% ^a	1.60%	2.97% ^a	2.24% ^c	3.26% ^a	3.60% ^a	1.40%
	t-stat	(5.48)	(1.39)	(4.04)	(2.85)	(1.13)	(7.18)	(1.92)	(3.52)	(4.10)	(0.93)
	n	433	92	105	53		420	76	89	62	
Cash or Stock% > 50%	Mean	1.96% ^a	1.92% ^a	1.88% ^a	1.82% ^a	-0.10%	3.28% ^a	2.52% ^c	4.65% ^a	4.31% ^a	1.80%
	t-stat	(9.78)	(3.92)	(4.63)	(4.88)	(-0.16)	(4.76)	(1.85)	(2.95)	(3.03)	(0.91)
	n	1176	204	223	282		236	64	51	35	
Cash or Stock% ≥ 80%	Mean	1.78% ^a	1.84% ^a	1.55% ^a	1.83% ^a	-0.01%	3.31% ^a	2.03%	4.18% ^c	6.02% ^a	4.00% ^d
	t-stat	(7.95)	(3.33)	(3.38)	(4.32)	(-0.01)	(3.50)	(1.14)	(2.00)	(2.83)	(1.55)
	n	914	163	162	236		141	42	28	21	
Cash or Stock% = 100%	Mean	1.66% ^a	1.60% ^a	1.45% ^a	1.67% ^a	0.07%	3.99% ^a	1.74%	3.39%	7.70% ^b	6.00% ^d
	t-stat	(6.92)	(2.72)	(2.91)	(3.74)	(0.10)	(3.04)	(0.71)	(1.08)	(2.70)	(1.67)
	n	790	144	138	205		93	30	17	14	

Table 6

Announcement Period Excess Returns of Bidders by Age and the Size of the Unlisted Target Firm and Payment Method

This table presents 5-day [-2, +2] announcement period cumulative abnormal returns, in percentage, of sample acquirers are presented. Abnormal returns (AR) are calculated using a modified market-adjusted model:

$$AR_{i,t} = R_{i,t} - R_{m,t}$$

Where $R_{i,t}$ is the return of bidder i at time t and $R_{m,t}$ is the market index (FT-All Share) at time t . Acquirers are publicly traded firms listed in the London Stock Exchange and targets are unlisted firms operating in the UK. The table presents gains to acquirers into two dimensions; by the unlisted target firm's age and size. The table is divided into three panels (based on the size of the unlisted target firm) while each panel is divided into two groups; the one for acquisitions with cash and the other one for acquisitions with stock. Panel A shows the gains to acquirers by the unlisted target firm's age only – 3 groups. The panel shows acquirers' gains for the entire sample as well as acquirers' gains after controlling for the alternative methods of financing, i.e. cash and stock. Cash and stock means of financing are divided into five groups according to the proportion of cash or stock used (greater than zero, less than or equal to 50%, greater than 50%, greater than or equal to 80%, and equal to 100%). Panel B shows the gains to acquirers by the unlisted target firm's age – 3 groups – and size (restricted to only small targets). The panel shows acquirers' gains for the entire sample as well as acquirers' gains after controlling for the alternative methods of financing, i.e. cash and stock. Cash and stock means of financing are divided into five groups according to the proportion of cash or stock used (greater than zero, less than or equal to 50%, greater than 50%, greater than or equal to 80%, and equal to 100%). Panel C shows the gains to acquirers by the unlisted target firm's age – 3 groups – and size (restricted to only big targets). The panel shows acquirers' gains for the entire sample as well as acquirers' gains after controlling for the alternative methods of financing, i.e. cash and stock. Cash and stock means of financing are divided into five groups according to the proportion of cash or stock used (greater than zero, less than or equal to 50%, greater than 50%, greater than or equal to 80%, and equal to 100%). The final column in each panel (both in the cash and stock groups) shows the difference in the gains from acquisitions of unlisted targets firms from mature vs. young firms. T-statistics testing for the mean equal to zero versus not equal to zero are reported in parentheses below the mean. The sample size, n , for each group is reported below T-statistic. a, b, c, and d denote significance level at 1%, 5%, 10%, and 15% respectively.

		CASH					STOCK				
Target Firm's Age →		All	Low (1)	Med (2)	High (3)	HML (3-1)	All	Low (1)	Med (2)	High (3)	HML (3-1)
Panel A: All (No further control based on the target firm's size)											
All	Mean	2.21% ^a	2.22% ^a	2.33% ^a	2.07% ^a	-0.14%	2.21% ^a	2.22% ^a	2.33% ^a	2.07% ^a	-0.14%
	t-stat	(11.31)	(6.09)	(6.87)	(6.7)	(-0.30)	(11.31)	(6.09)	(6.87)	(6.7)	(-0.30)
	n	1646	548	549	549		1646	548	549	549	
Cash or Stock% > 0%	Mean	2.11% ^a	1.85% ^a	2.35% ^a	2.12% ^a	0.30%	3.21% ^a	3.02% ^a	3.59% ^a	2.98% ^a	-0.04%
	t-stat	(10.62)	(5.13)	(6.65)	(6.59)	(0.56)	(8.55)	(4.37)	(5.71)	(5.02)	(-0.04)
	n	1470	463	495	512		608	224	218	166	
Cash or Stock% ≤ 50%	Mean	2.48% ^a	1.50% ^b	3.11% ^a	2.96% ^a	1.50%	3.22% ^a	2.93% ^a	3.52% ^a	3.18% ^a	0.30%
	t-stat	(5.39)	(1.96)	(4.05)	(3.44)	(1.27)	(7.44)	(3.61)	(4.86)	(4.49)	(0.23)
	n	403	148	153	102		393	130	142	121	
Cash or Stock% > 50%	Mean	1.97% ^a	2.02% ^a	2.01% ^a	1.91% ^a	-0.11%	3.19% ^a	3.14% ^a	3.71% ^a	2.44% ^b	-0.70%
	t-stat	(9.31)	(5.16)	(5.31)	(5.63)	(-0.21)	(4.49)	(2.60)	(3.11)	(2.24)	(-0.43)
	n	1067	315	342	410		215	94	76	45	
Cash or Stock% ≥ 80%	Mean	1.78% ^a	1.94% ^a	1.67% ^a	1.75% ^a	-0.20%	3.16% ^a	2.73% ^c	3.52% ^b	3.58% ^b	0.90%
	t-stat	(7.51)	(4.46)	(3.91)	(4.62)	(-0.34)	(3.18)	(1.65)	(2.11)	(2.44)	(0.38)
	n	825	242	253	330		125	59	41	25	
Cash or Stock% = 100%	Mean	1.61% ^a	1.52% ^a	1.54% ^a	1.73% ^a	0.20%	3.79% ^a	3.58% ^d	3.23%	5.33% ^b	1.80%
	t-stat	(6.42)	(3.38)	(3.29)	(4.36)	(0.35)	(2.74)	(1.69)	(1.33)	(2.76)	(0.60)
	n	712	212	214	286		81	40	26	15	

Continued

Table 6 – Continued

Target Firm's Age →		CASH					STOCK				
		All	Low (1)	Med (2)	High (3)	HML (3-1)	All	Low (1)	Med (2)	High (3)	HML (3-1)
Panel B: Target firm's SIZE: small targets only											
All	Mean t-stat n	2.15% ^a (7.50) 823	1.84% ^a (3.59) 275	2.55% ^a (4.82) 274	2.05% ^a (4.63) 274	0.20% (0.31)	2.15% ^a (7.50) 823	1.84% ^a (3.59) 275	2.55% ^a (4.82) 274	2.05% ^a (4.63) 274	0.20% (0.31)
Cash or Stock% > 0%	Mean t-stat n	2.09% ^a (7.00) 721	1.42% ^a (2.70) 219	2.73% ^a (4.88) 247	2.06% ^a (4.43) 255	0.60% (0.90)	2.99% ^a (5.95) 352	2.54% ^a (2.76) 122	3.62% ^a (4.00) 130	2.71% ^a (3.87) 100	0.20% (0.15)
Cash or Stock% ≤ 50%	Mean t-stat n	2.96% ^a (4.59) 231	1.58% ^d (1.59) 85	4.23% ^a (3.84) 87	3.08% ^a (2.63) 59	1.50% (0.95)	3.08% ^a (5.25) 233	3.40% ^a (2.67) 68	3.14% ^a (3.31) 92	2.70% ^a (3.23) 73	-0.70% (-0.47)
Cash or Stock% > 50%	Mean t-stat n	1.69% ^a (5.31) 490	1.33% ^b (2.45) 134	1.91% ^a (3.10) 160	1.75% ^a (3.56) 196	0.40% (0.58)	2.80% ^a (2.97) 119	1.45% (1.10) 54	4.77% ^b (2.29) 38	2.73% ^b (2.12) 27	1.30% (0.69)
Cash or Stock% ≥ 80%	Mean t-stat n	1.46% ^a (4.03) 369	1.09% ^c (1.80) 105	1.64% ^b (2.36) 112	1.57% ^a (2.71) 152	0.50% (0.58)	1.64% (1.40) 68	0.67% (0.37) 34	2.06% (0.88) 19	3.30% ^c (1.79) 15	2.60% (1.02)
Cash or Stock% = 100%	Mean t-stat n	1.19% ^a (3.22) 327	0.82% (1.37) 97	1.38% ^c (1.86) 97	1.34% ^b (2.25) 133	0.50% (0.62)	1.13% (0.65) 40	0.29% (0.11) 21	0.59% (0.17) 12	4.60% ^d (1.77) 7	4.30% (1.15)
Panel C: Target firm's SIZE: big targets only											
All	Mean t-stat n	2.27% ^a (8.54) 823	2.11% ^a (4.44) 274	2.20% ^a (4.90) 275	2.49% ^a (5.47) 274	0.40% (0.58)	2.27% ^a (8.54) 823	2.11% ^a (4.44) 274	2.20% ^a (4.90) 275	2.49% ^a (5.47) 274	0.40% (0.58)
Cash or Stock% > 0%	Mean t-stat n	2.13% ^a (8.08) 749	1.74% ^a (4.00) 244	2.18% ^a (4.77) 252	2.45% ^a (5.16) 253	0.70% (1.10)	3.52% ^a (6.21) 256	2.87% ^a (2.74) 91	4.10% ^a (4.46) 97	3.56% ^a (3.8) 68	0.70% (0.49)
Cash or Stock% ≤ 50%	Mean t-stat n	1.83% ^a (2.87) 172	0.63% (0.65) 60	2.13% ^c (1.96) 68	2.99% ^b (2.34) 44	2.40% ^d (1.59)	3.43% ^a (5.40) 160	2.38% ^b (2.56) 53	3.77% ^a (3.43) 68	4.26% ^a (3.42) 39	1.90% (1.24)
Cash or Stock% > 50%	Mean t-stat n	2.22% ^a (7.79) 577	2.10% ^a (4.37) 184	2.20% ^a (4.55) 184	2.34% ^a (4.59) 209	0.20% (0.33)	3.68% ^a (3.40) 96	3.57% ^c (1.64) 38	4.89% ^a (2.87) 29	2.63% ^c (1.84) 29	-0.94% (-0.36)
Cash or Stock% ≥ 80%	Mean t-stat n	2.04% ^a (6.51) 456	1.97% ^a (3.70) 142	1.88% ^a (3.46) 139	2.23% ^a (4.09) 175	0.30% (0.35)	4.97% ^a (3.02) 57	4.25% ^d (1.57) 27	7.38% ^b (2.22) 13	4.28% ^b (2.30) 17	0.03% (0.01)
Cash or Stock% = 100%	Mean t-stat n	1.97% ^a (5.77) 385	1.52% ^a (2.66) 122	1.88% ^a (3.12) 112	2.40% ^a (4.08) 151	0.90% (1.07)	6.38% ^a (3.06) 41	5.81% ^d (1.68) 20	7.82% ^c (1.80) 9	6.24% ^b (2.65) 12	0.40% (0.10)

Table 7

Announcement Period Excess Returns of Bidders by Age and the Size of the Unlisted Target Firm and Payment Method

This table presents 5-day [-2, +2] announcement period cumulative abnormal returns, in percentage, of sample acquirers are presented. Abnormal returns (AR) are calculated using a modified market-adjusted model:

$$AR_{i,t} = R_{i,t} - R_{m,t}$$

Where $R_{i,t}$ is the return of bidder i at time t and $R_{m,t}$ is the market index (FT-All Share) at time t . Acquirers are publicly traded firms listed in the London Stock Exchange and targets are unlisted firms operating in the UK. The table presents gains to acquirers into two dimensions; by the unlisted target firm's age and size. The table is divided into three panels (based on the size of the unlisted target firm) while each panel is divided into two groups; the one for acquisitions with cash and the other one for acquisitions with stock. Panel A shows the gains to acquirers by the unlisted target firm's age only – 5 groups. The panel shows acquirers' gains for the entire sample as well as acquirers' gains after controlling for the alternative methods of financing, i.e. cash and stock. Cash and stock means of financing are divided into five groups according to the proportion of cash or stock used (greater than zero, less than or equal to 50%, greater than 50%, greater than or equal to 80%, and equal to 100%). Panel B shows the gains to acquirers by the unlisted target firm's age – 5 groups – and size (restricted to only small targets). The panel shows acquirers' gains for the entire sample as well as acquirers' gains after controlling for the alternative methods of financing, i.e. cash and stock. Cash and stock means of financing are divided into five groups according to the proportion of cash or stock used (greater than zero, less than or equal to 50%, greater than 50%, greater than or equal to 80%, and equal to 100%). Panel C shows the gains to acquirers by the unlisted target firm's age – 5 groups – and size (restricted to only big targets). The panel shows acquirers' gains for the entire sample as well as acquirers' gains after controlling for the alternative methods of financing, i.e. cash and stock. Cash and stock means of financing are divided into five groups according to the proportion of cash or stock used (greater than zero, less than or equal to 50%, greater than 50%, greater than or equal to 80%, and equal to 100%). The final column in each panel (both in the cash and stock groups) shows the difference in the gains from acquisitions of unlisted targets firms from mature vs. young firms. T-statistics testing for the mean equal to zero versus not equal to zero are reported in parentheses below the mean. The sample size, n , for each group is reported below T-statistic. a, b, c, and d denote significance level at 1%, 5%, 10%, and 15% respectively.

		CASH					STOCK				
Target Firm's Age →		All	Low (1)	Med (3)	High (5)	HML (5-1)	All	Low (1)	Med (3)	High (5)	HML (5-1)
Panel A: All (No further control based on the target firm's size)											
All	Mean	2.21% ^a	2.09% ^a	2.54% ^a	2.10% ^a	0.01%	2.21% ^a	2.09% ^a	2.54% ^a	2.10% ^a	0.01%
	t-stat	(11.31)	(4.55)	(6.04)	(5.69)	(0.02)	(11.31)	(4.55)	(6.04)	(5.69)	(0.02)
	n	1646	329	330	329		1646	329	330	329	
Cash or Stock% > 0%	Mean	2.11% ^a	1.77% ^a	2.58% ^a	2.03% ^a	0.30%	3.21% ^a	2.59% ^a	4.07% ^a	3.75% ^a	1.20%
	t-stat	(10.62)	(3.93)	(6.01)	(5.33)	(0.44)	(8.55)	(2.88)	(4.81)	(4.98)	(0.99)
	n	1470	271	301	304		608	129	131	88	
Cash or Stock% ≤ 50%	Mean	2.48% ^a	1.46% ^d	4.16% ^a	2.99% ^a	1.50%	3.22% ^a	2.66% ^b	3.59% ^a	3.91% ^a	1.20%
	t-stat	(5.39)	(1.61)	(4.28)	(2.76)	(1.05)	(7.44)	(2.24)	(3.85)	(4.02)	(0.81)
	n	403	89	101	49		393	73	86	55	
Cash or Stock% > 50%	Mean	1.97% ^a	1.92% ^a	1.78% ^a	1.85% ^a	-0.08%	3.19% ^a	2.48% ^c	4.99% ^a	3.47% ^a	1.00%
	t-stat	(9.31)	(4.04)	(4.33)	(4.58)	(-0.12)	(4.49)	(1.80)	(2.91)	(2.89)	(0.54)
	n	1067	182	200	255		215	56	45	33	
Cash or Stock% ≥ 80%	Mean	1.78% ^a	2.02% ^a	1.63% ^a	1.83% ^a	-0.19%	3.16% ^a	1.73%	4.54% ^c	4.65% ^b	2.90%
	t-stat	(7.51)	(3.76)	(3.55)	(4.03)	(-0.27)	(3.18)	(0.92)	(1.90)	(2.72)	(1.14)
	n	825	142	147	215		125	35	23	20	
Cash or Stock% = 100%	Mean	1.61% ^a	1.63% ^a	1.38% ^a	1.63% ^a	-0.01%	3.69% ^a	0.38%	4.32%	6.07% ^b	5.70% ^c
	t-stat	(6.42)	(2.94)	(2.76)	(3.42)	(-0.01)	(2.74)	(0.48)	(4.32)	(2.58)	(1.71)
	n	712	125	124	187		81	25	13	13	

Continued

Table 7 – Continued

Target Firm's Age →		CASH					STOCK				
		All	Low (1)	Med (3)	High (5)	HML (5-1)	All	Low (1)	Med (3)	High (5)	HML (5-1)
Panel B: Target firm's SIZE: small targets only											
All	Mean	2.50% ^a	2.51% ^a	2.11% ^a	2.66% ^a	0.10%	2.50% ^a	2.51% ^a	2.11% ^a	2.66% ^a	0.10%
	t-stat	(8.05)	(3.38)	(3.55)	(4.13)	(0.15)	(8.05)	(3.38)	(3.55)	(4.13)	(0.15)
	n	822	164	164	164		822	164	164	164	
Cash or Stock% > 0%	Mean	2.34% ^a	2.14% ^a	2.30% ^a	2.50% ^a	0.40%	3.26% ^a	2.97% ^b	2.11% ^b	3.97% ^a	1.00%
	t-stat	(7.42)	(2.96)	(3.90)	(3.75)	(0.36)	(6.40)	(2.22)	(2.02)	(4.00)	(0.6)
	n	715	130	147	152		380	79	76	67	
Cash or Stock% ≤ 50%	Mean	2.47% ^a	2.39% ^d	3.43% ^a	3.81% ^a	1.40%	3.38% ^a	3.30% ^c	1.48%	3.45% ^a	0.10%
	t-stat	(3.88)	(1.69)	(2.91)	(2.69)	(0.69)	(5.60)	(1.85)	(1.42)	(2.90)	(0.07)
	n	232	48	54	37		238	44	46	45	
Cash or Stock% > 50%	Mean	2.28% ^a	2.00% ^a	1.63% ^a	2.07% ^a	0.07%	3.06% ^a	2.56%	3.07% ^d	5.03% ^a	2.50%
	t-stat	(6.44)	(2.65)	(2.62)	(2.76)	(0.07)	(3.34)	(1.25)	(1.58)	(2.78)	(0.91)
	n	483	82	93	115		142	35	30	22	
Cash or Stock% ≥ 80%	Mean	2.05% ^a	1.87% ^b	1.73% ^b	1.93% ^b	0.06%	3.05% ^b	0.99%	3.12%	5.94% ^c	4.90%
	t-stat	(4.90)	(2.18)	(2.47)	(2.08)	(0.05)	(2.29)	(0.36)	(0.94)	(2.08)	(1.24)
	n	349	60	68	81		86	23	15	12	
Cash or Stock% = 100%	Mean	1.60% ^a	1.52% ^c	1.64% ^b	1.16%	-0.36%	3.72% ^b	0.30%	2.83%	8.87% ^b	8.60% ^c
	t-stat	(3.63)	(1.86)	(2.05)	(1.18)	(-0.28)	(2.06)	(0.08)	(0.17)	(2.43)	(1.75)
	n	298	55	56	70		57	17	9	7	
Panel C: Target firm's SIZE: big targets only											
All	Mean	1.91% ^a	1.72% ^a	2.79% ^a	1.57% ^a	-0.16%	1.91% ^a	1.72% ^a	2.79% ^a	1.57% ^a	-0.16%
	t-stat	(8.10)	(3.48)	(4.19)	(3.58)	(-0.24)	(8.10)	(3.48)	(4.19)	(3.58)	(-0.24)
	n	824	164	165	165		824	164	165	165	
Cash or Stock% > 0%	Mean	1.89% ^a	1.45% ^a	2.70% ^a	1.65% ^a	0.20%	3.13% ^a	1.82% ^c	5.96% ^a	1.53% ^b	-0.29%
	t-stat	(7.71)	(2.77)	(4.09)	(3.57)	(0.29)	(5.87)	(1.97)	(4.00)	(2.24)	(-0.25)
	n	755	142	155	153		228	45	54	32	
Cash or Stock% ≤ 50%	Mean	2.49% ^a	-0.04%	4.55% ^a	0.82%	0.90%	2.98% ^a	1.08%	5.73% ^a	1.77% ^c	0.70%
	t-stat	(3.80)	(-0.04)	(3.03)	(0.72)	(0.55)	(5.05)	(0.87)	(3.71)	(1.86)	(0.43)
	n	171	37	51	24		155	23	37	18	
Cash or Stock% > 50%	Mean	1.72% ^a	1.98% ^a	1.80% ^a	1.81% ^a	-0.17%	3.45% ^a	2.60% ^c	6.44% ^c	1.23%	-1.36%
	t-stat	(6.80)	(3.33)	(2.81)	(3.57)	(-0.22)	(3.13)	(1.88)	(1.89)	(1.21)	(-0.79)
	n	584	105	104	129		73	22	17	14	
Cash or Stock% ≥ 80%	Mean	1.58% ^a	2.05% ^a	1.39% ^b	1.78% ^a	-0.27%	3.40% ^a	3.51% ^b	7.06%	1.66% ^d	-1.85%
	t-stat	(5.78)	(3.01)	(2.06)	(3.35)	(-0.32)	(2.75)	(2.39)	(1.51)	(1.87)	(-1.06)
	n	476	83	81	121		39	12	9	9	
Cash or Stock% = 100%	Mean	1.62% ^a	1.86% ^b	1.27% ^c	1.85% ^a	-0.02%	3.94% ^b	3.74% ^c	8.95%	2.03%	-1.71%
	t-stat	(5.52)	(2.47)	(1.71)	(3.3)	(-0.02)	(2.12)	(1.93)	(1.09)	(1.52)	(-0.73)
	n	414	71	68	106		24	8	5	6	

Table 8

Announcement Period Excess Returns of Bidders by Size and Age of the Unlisted Target Firm and Payment Method

This table presents 5-day [-2, +2] announcement period cumulative abnormal returns, in percentage, of sample acquirers are presented. Abnormal returns (AR) are calculated using a modified market-adjusted model:

$$AR_{i,t} = R_{i,t} - R_{m,t}$$

Where $R_{i,t}$ is the return of bidder i at time t and $R_{m,t}$ is the market index (FT-All Share) at time t . Acquirers are publicly traded firms listed in the London Stock Exchange and targets are unlisted firms operating in the UK. The table presents gains to acquirers into two dimensions; by the unlisted target firm's size and age. The table is divided into three panels (based on the age of the unlisted target firm) while each panel is divided into two groups; the one for acquisitions with cash and the other one for acquisitions with stock. Panel A shows the gains to acquirers by the unlisted target firm's size only – 3 groups. The panel shows acquirers' gains for the entire sample as well as acquirers' gains after controlling for the alternative methods of financing, i.e. cash and stock. Cash and stock means of financing are divided into five groups according to the proportion of cash or stock used (greater than zero, less than or equal to 50%, greater than 50%, greater than or equal to 80%, and equal to 100%). Panel B shows the gains to acquirers by the unlisted target firm's size – 3 groups – and age (restricted to only young target firms). The panel shows acquirers' gains for the entire sample as well as acquirers' gains after controlling for the alternative methods of financing, i.e. cash and stock. Cash and stock means of financing are divided into five groups according to the proportion of cash or stock used (greater than zero, less than or equal to 50%, greater than 50%, greater than or equal to 80%, and equal to 100%). Panel C shows the gains to acquirers by the unlisted target firm's size – 3 groups – and age (restricted to only mature target firms). The panel shows acquirers' gains for the entire sample as well as acquirers' gains after controlling for the alternative methods of financing, i.e. cash and stock. Cash and stock means of financing are divided into five groups according to the proportion of cash or stock used (greater than zero, less than or equal to 50%, greater than 50%, greater than or equal to 80%, and equal to 100%). The final column in each panel (both in the cash and stock groups) shows the difference in the gains from acquisitions of unlisted targets firms from big vs. small target firms. T-statistics testing for the mean equal to zero versus not equal to zero are reported in parentheses below the mean. The sample size, n, for each group is reported below T-statistic. a, b, c, and d denote significance level at 1%, 5%, 10%, and 15% respectively.

		CASH					STOCK				
Total Assets →		All	Low (1)	Med (2)	High (3)	HML (3-1)	All	Low (1)	Med (2)	High (3)	HML (3-1)
Panel A: All (No further control based on the target firm's age)											
All	Mean	2.19% ^a	2.19% ^a	2.18% ^a	2.19% ^a	0.00%	2.19% ^a	2.19% ^a	2.18% ^a	2.19% ^a	0.00%
	t-stat	(10.65)	(5.93)	(5.68)	(7.06)	(0.00)	(10.65)	(5.93)	(5.68)	(7.06)	(0.00)
	n	1481	493	494	494		1481	493	494	494	
Cash or Stock% > 0%	Mean	2.08% ^a	2.05% ^a	2.18% ^a	2.03% ^a	-0.02%	3.10% ^a	2.78% ^a	3.17% ^a	3.46% ^a	0.70%
	t-stat	(10.03)	(5.35)	(5.64)	(6.59)	(-0.04)	(7.92)	(4.42)	(4.23)	(5.36)	(0.76)
	n	1330	433	449	448		538	214	173	151	
Cash or Stock% ≤ 50%	Mean	2.46% ^a	2.93% ^a	2.68% ^a	1.52% ^b	-1.41%	3.10% ^a	2.74% ^a	3.51% ^a	3.16% ^a	0.40%
	t-stat	(5.25)	(3.82)	(2.96)	(2.11)	(-1.34)	(6.95)	(3.86)	(4.08)	(4.35)	(0.41)
	n	357	143	115	99		348	144	111	93	
Cash or Stock% > 50%	Mean	1.95% ^a	1.61% ^a	2.01% ^a	2.17% ^a	0.60%	3.09% ^a	2.85% ^b	2.56% ^c	3.96% ^a	1.10%
	t-stat	(8.61)	(3.77)	(4.83)	(6.42)	(1.04)	(4.12)	(2.27)	(1.81)	(3.24)	(0.63)
	n	973	290	334	349		190	70	62	58	
Cash or Stock% ≥ 80%	Mean	1.78% ^a	1.54% ^a	1.70% ^a	2.04% ^a	0.50%	3.16% ^a	1.03%	3.40% ^d	4.81% ^a	3.80% ^c
	t-stat	(7.02)	(3.29)	(3.48)	(5.54)	(0.86)	(2.97)	(0.73)	(1.61)	(2.67)	(1.65)
	n	751	220	252	279		106	32	38	36	
Cash or Stock% = 100%	Mean	1.64% ^a	1.22% ^a	1.77% ^a	1.88% ^a	0.70%	3.68% ^a	0.49%	4.51%	5.34% ^b	4.90% ^c
	t-stat	(6.04)	(2.64)	(3.16)	(4.73)	(1.08)	(2.57)	(0.24)	(1.40)	(2.55)	(1.67)
	n	646	199	205	242		73	21	23	29	

Continued

Table 8 – Continued

Total Assets →		CASH					STOCK				
		All	Low (1)	Med (2)	High (3)	HML (3-1)	All	Low (1)	Med (2)	High (3)	HML (3-1)
Panel B: age: Young target firms only											
All	Mean	2.14% ^a	2.29% ^a	1.93% ^a	2.21% ^a	-0.08%	2.14% ^a	2.29% ^a	1.93% ^a	2.21% ^a	-0.08%
	t-stat	(7.32)	(4.21)	(3.54)	(5.2)	(-0.12)	(7.32)	(4.21)	(3.54)	(5.2)	(-0.12)
	n	740	246	247	247		740	246	247	247	
Cash or Stock% > 0%	Mean	1.99% ^a	2.21% ^a	1.81% ^a	1.96% ^a	-0.25%	2.77% ^a	2.58% ^a	2.65% ^a	3.19% ^a	0.60%
	t-stat	(6.85)	(3.78)	(3.61)	(4.61)	(-0.35)	(4.94)	(2.83)	(2.48)	(3.55)	(0.47)
	n	643	201	221	221		289	113	97	79	
Cash or Stock% ≤ 50%	Mean	2.18% ^a	2.92% ^a	1.90% ^c	1.56% ^d	-1.36%	2.32% ^a	2.25% ^b	2.50% ^a	2.23% ^b	-0.02%
	t-stat	(3.73)	(3.04)	(1.82)	(1.54)	(-0.97)	(3.95)	(2.16)	(2.73)	(2.18)	(-0.01)
	n	204	74	74	56		171	72	52	47	
Cash or Stock% > 50%	Mean	1.90% ^a	1.79% ^b	1.76% ^a	2.10% ^a	0.30%	3.43% ^a	3.16% ^c	2.83%	4.60% ^a	1.40%
	t-stat	(5.80)	(2.44)	(3.25)	(4.61)	(0.37)	(3.18)	(1.82)	(1.37)	(2.84)	(0.60)
	n	439	127	147	165		118	41	45	32	
Cash or Stock% ≥ 80%	Mean	1.74% ^a	1.91% ^b	1.09% ^c	2.19% ^a	0.30%	2.57% ^c	-0.25%	2.68%	4.98% ^b	5.20% ^c
	t-stat	(4.79)	(2.34)	(1.79)	(4.25)	(0.31)	(1.74)	(-0.12)	(0.95)	(2.21)	(1.67)
	n	332	93	111	128		67	19	27	21	
Cash or Stock% = 100%	Mean	1.53% ^a	1.80% ^b	0.74%	2.02% ^a	0.20%	2.13%	-2.10%	2.59%	4.96% ^c	7.10% ^c
	t-stat	(3.90)	(2.13)	(1.12)	(3.63)	(0.22)	(1.05)	(-0.70)	(0.55)	(2.00)	(1.83)
	n	289	84	97	108		45	13	15	17	
Panel C: age: Mature target firms only											
All	Mean	2.23% ^a	2.38% ^a	1.96% ^a	2.35% ^a	-0.02%	2.23% ^a	2.38% ^a	1.96% ^a	2.35% ^a	-0.02%
	t-stat	(7.74)	(4.58)	(3.74)	(5.21)	(-0.04)	(7.74)	(4.58)	(3.74)	(5.21)	(-0.04)
	n	741	247	247	247		741	247	247	247	
Cash or Stock% > 0%	Mean	2.18% ^a	2.27% ^a	2.01% ^a	2.25% ^a	-0.02%	3.47% ^a	3.28% ^a	3.22% ^a	4.00% ^a	0.70%
	t-stat	(7.32)	(4.25)	(3.58)	(5.07)	(-0.03)	(6.44)	(3.87)	(3.09)	(4.32)	(0.57)
	n	687	235	226	226		249	94	81	74	
Cash or Stock% ≤ 50%	Mean	2.83% ^a	3.71% ^a	2.98% ^c	1.49% ^d	-2.22%	3.85% ^a	3.73% ^a	3.63% ^a	4.31% ^a	0.60%
	t-stat	(3.69)	(2.90)	(1.88)	(1.51)	(-1.37)	(5.80)	(3.54)	(2.75)	(4.23)	(0.4)
	n	153	59	50	44		177	71	59	47	
Cash or Stock% > 50%	Mean	1.99% ^a	1.79% ^a	1.73% ^a	2.43% ^a	0.60%	2.55% ^a	1.90% ^d	2.12%	3.46% ^c	1.60%
	t-stat	(6.35)	(3.15)	(3.08)	(4.89)	(0.86)	(2.83)	(1.61)	(1.41)	(1.89)	(0.72)
	n	534	176	176	182		72	23	22	27	
Cash or Stock% ≥ 80%	Mean	1.81% ^a	1.65% ^a	1.63% ^b	2.11% ^a	0.50%	4.19% ^a	3.29% ^d	4.03% ^c	4.98% ^c	1.70%
	t-stat	(5.14)	(2.53)	(2.46)	(4.04)	(0.56)	(2.96)	(1.70)	(2.03)	(1.72)	(0.48)
	n	419	139	130	150		39	12	11	16	
Cash or Stock% = 100%	Mean	1.73% ^a	1.26% ^c	2.24% ^a	1.79% ^a	0.50%	6.18% ^a	5.77% ^b	6.46% ^b	6.28% ^c	0.50%
	t-stat	(4.60)	(1.91)	(2.95)	(3.17)	(0.61)	(3.45)	(2.62)	(2.60)	(1.80)	(0.12)
	n	357	124	100	133		28	8	7	13	

Table 9
Announcement Period Excess Returns of Bidders by Size of the Bidder and the Unlisted Target Firm and Payment Method

This table presents 5-day [-2, +2] announcement period cumulative abnormal returns, in percentage, of sample acquirers are presented. Abnormal returns (AR) are calculated using a modified market-adjusted model:

$$AR_{i,t} = R_{i,t} - R_{m,t}$$

Where $R_{i,t}$ is the return of bidder i at time t and $R_{m,t}$ is the market index (FT-All Share) at time t . Acquirers are publicly traded firms listed in the London Stock Exchange and targets are unlisted firms operating in the UK. The table presents gains to acquirers into two dimensions; by the size of both the bidding firms and the unlisted target firm. The table is divided into three panels (based on the size of the bidding firm) while each panel is divided into two groups; the one for acquisitions with cash and the other one for acquisitions with stock. Panel A shows the gains to acquirers by the unlisted target firm's size only – 3 groups. The panel shows acquirers' gains for the entire sample as well as acquirers' gains after controlling for the alternative methods of financing, i.e. cash and stock. Cash and stock means of financing are divided into five groups according to the proportion of cash or stock used (greater than zero, less than or equal to 50%, greater than 50%, greater than or equal to 80%, and equal to 100%). Panel B shows the gains to acquirers by the unlisted target firm's size – 3 groups – and the bidding firm's size (restricted to only small bidders). The panel shows acquirers' gains for the entire sample as well as acquirers' gains after controlling for the alternative methods of financing, i.e. cash and stock. Cash and stock means of financing are divided into five groups according to the proportion of cash or stock used (greater than zero, less than or equal to 50%, greater than 50%, greater than or equal to 80%, and equal to 100%). Panel C shows the gains to acquirers by the unlisted target firm's size – 3 groups – and the bidding firm's size (restricted to only big bidders). The panel shows acquirers' gains for the entire sample as well as acquirers' gains after controlling for the alternative methods of financing, i.e. cash and stock. Cash and stock means of financing are divided into five groups according to the proportion of cash or stock used (greater than zero, less than or equal to 50%, greater than 50%, greater than or equal to 80%, and equal to 100%). The final column in each panel (both in the cash and stock groups) shows the difference in the gains from acquisitions of unlisted targets firms from big vs. small target firms. T-statistics testing for the mean equal to zero versus not equal to zero are reported in parentheses below the mean. The sample size, n, for each group is reported below T-statistic. a, b, c, and d denote significance level at 1%, 5%, 10%, and 15% respectively.

Total Assets →		CASH					STOCK				
		All	Low (1)	Med (2)	High (3)	HML (3-1)	All	Low (1)	Med (2)	High (3)	HML (3-1)
Panel A: All (No further control based on the bidding firm's size)											
All	Mean	2.19% ^a	2.19% ^a	2.18% ^a	2.19% ^a	0.00%	2.19% ^a	2.19% ^a	2.18% ^a	2.19% ^a	0.00%
	t-stat	(10.65)	(5.93)	(5.68)	(7.06)	(0.00)	(10.65)	(5.93)	(5.68)	(7.06)	(0.00)
	n	1481	493	494	494		1481	493	494	494	
Cash or Stock% > 0%	Mean	2.08% ^a	2.05% ^a	2.18% ^a	2.03% ^a	-0.02%	3.10% ^a	2.78% ^a	3.17% ^a	3.46% ^a	0.70%
	t-stat	(10.03)	(5.35)	(5.64)	(6.59)	(-0.04)	(7.92)	(4.42)	(4.23)	(5.36)	(0.76)
	n	1330	433	449	448		538	214	173	151	
Cash or Stock% ≤ 50%	Mean	2.46% ^a	2.93% ^a	2.68% ^a	1.52% ^b	-1.41%	3.10% ^a	2.74% ^a	3.51% ^a	3.16% ^a	0.40%
	t-stat	(5.25)	(3.82)	(2.96)	(2.11)	(-1.34)	(6.95)	(3.86)	(4.08)	(4.35)	(0.41)
	n	357	143	115	99		348	144	111	93	
Cash or Stock% > 50%	Mean	1.95% ^a	1.61% ^a	2.01% ^a	2.17% ^a	0.60%	3.09% ^a	2.85% ^b	2.56% ^c	3.96% ^a	1.10%
	t-stat	(8.61)	(3.77)	(4.83)	(6.42)	(1.04)	(4.12)	(2.27)	(1.81)	(3.24)	(0.63)
	n	973	290	334	349		190	70	62	58	
Cash or Stock% ≥ 80%	Mean	1.78% ^a	1.54% ^a	1.70% ^a	2.04% ^a	0.50%	3.16% ^a	1.03%	3.40% ^d	4.81% ^a	3.80% ^c
	t-stat	(7.02)	(3.29)	(3.48)	(5.54)	(0.86)	(2.97)	(0.73)	(1.61)	(2.67)	(1.65)
	n	751	220	252	279		106	32	38	36	
Cash or Stock% = 100%	Mean	1.64% ^a	1.22% ^a	1.77% ^a	1.88% ^a	0.70%	3.68% ^a	0.49%	4.51%	5.34% ^b	4.90% ^c
	t-stat	(6.04)	(2.64)	(3.16)	(4.73)	(1.08)	(2.57)	(0.24)	(1.40)	(2.55)	(1.67)
	n	646	199	205	242		73	21	23	29	

Continued

Table 9 – Continued

		CASH					STOCK				
Total Assets →		All	Low (1)	Med (2)	High (3)	HML (3-1)	All	Low (1)	Med (2)	High (3)	HML (3-1)
Panel B: Bidding firm's size: small bidders only											
All	Mean t-stat n	3.16% ^a (9.17) 740	2.67% ^a (4.61) 246	3.47% ^a (5.32) 247	3.35% ^a (5.99) 247	0.70% (0.85)	3.16% ^a (9.17) 740	2.67% ^a (4.61) 246	3.47% ^a (5.32) 247	3.35% ^a (5.99) 247	0.70% (0.85)
Cash or Stock% > 0%	Mean t-stat n	3.05% ^a (8.72) 651	2.68% ^a (4.43) 211	3.50% ^a (5.34) 228	2.95% ^a (5.39) 212	0.30% (0.32)	3.88% ^a (6.89) 331	2.60% ^a (2.73) 119	4.30% ^a (4.22) 104	4.88% ^a (5.14) 108	2.30% ^c (1.70)
Cash or Stock% ≤ 50%	Mean t-stat n	3.15% ^a (4.57) 213	2.99% ^a (2.92) 78	4.19% ^a (3.05) 74	2.08% ^c (1.82) 61	-0.92% (-0.60)	3.86% ^a (5.95) 209	3.06% ^a (2.63) 80	4.62% ^a (4.32) 69	4.06% ^a (3.66) 60	1.00% (0.62)
Cash or Stock% > 50%	Mean t-stat n	3.01% ^a (7.54) 438	2.50% ^a (3.33) 133	3.17% ^a (4.44) 154	3.30% ^a (5.37) 151	0.80% (0.83)	3.90% ^a (3.72) 122	1.64% (0.98) 39	3.67% ^c (1.67) 35	5.90% ^a (3.63) 48	4.30% ^c (1.83)
Cash or Stock% ≥ 80%	Mean t-stat n	2.79% ^a (6.07) 320	2.96% ^a (3.44) 94	3.17% ^a (3.60) 115	2.26% ^a (3.55) 111	-0.70% (-0.67)	3.85% ^a (2.66) 72	-0.39% (-0.21) 23	3.31% (1.04) 18	7.30% ^a (3.10) 31	7.70% ^a (2.59)
Cash or Stock% = 100%	Mean t-stat n	2.68% ^a (5.45) 272	2.63% ^a (3.11) 83	3.18% ^a (3.25) 96	2.21% ^a (3.14) 93	-0.41% (-0.38)	4.48% ^b (2.36) 51	-0.41% (-0.18) 18	3.22% (0.70) 11	9.11% ^a (2.95) 22	9.50% ^b (2.49)
Panel C: Bidding firm's size: big bidders only											
All	Mean t-stat n	1.21% ^a (5.57) 741	0.81% ^b (2.18) 247	0.98% ^b (2.43) 247	1.85% ^a (5.23) 247	1.00% ^b (2.04)	1.21% ^a (5.57) 741	0.81% ^b (2.18) 247	0.98% ^b (2.43) 247	1.85% ^a (5.23) 247	1.00% ^b (2.04)
Cash or Stock% > 0%	Mean t-stat n	1.16% ^a (5.14) 679	0.65% ^c (1.73) 221	0.93% ^b (2.23) 227	1.86% ^a (5.02) 231	1.20% ^b (2.29)	1.85% ^a (4.00) 207	2.20% ^a (3.18) 86	1.51% ^c (1.66) 71	1.73% ^b (2.24) 50	-0.47% (-0.45)
Cash or Stock% ≤ 50%	Mean t-stat n	1.44% ^a (2.63) 144	1.81% ^b (2.45) 60	1.55% (1.36) 49	0.66% (0.67) 35	-1.15% (-0.94)	1.95% ^a (3.70) 139	1.88% ^a (2.84) 56	1.88% ^c (1.71) 50	2.15% ^b (2.20) 33	0.30% (0.23)
Cash or Stock% > 50%	Mean t-stat n	1.08% ^a (4.41) 535	0.22% (0.50) 161	0.76% ^c (1.77) 178	2.07% ^a (5.21) 196	1.90% ^a (3.15)	1.65% ^c (1.81) 68	2.78% ^c (1.79) 30	0.64% (0.38) 21	0.91% (0.72) 17	-1.87% (-0.93)
Cash or Stock% ≥ 80%	Mean t-stat n	1.03% ^a (3.74) 431	-0.28% (-0.64) 130	0.91% ^c (1.77) 139	2.18% ^a (4.88) 162	2.50% ^a (3.91)	1.72% (1.36) 34	1.02% (0.35) 11	2.63% (1.32) 12	1.42% (0.84) 11	0.40% (0.12)
Cash or Stock% = 100%	Mean t-stat n	0.89% ^a (2.96) 374	-0.36% (-0.76) 117	0.80% (1.39) 116	1.99% ^a (4.08) 141	2.30% ^a (3.46)	1.84% (1.02) 22	-0.08% (-0.02) 6	3.57% (0.99) 6	1.95% (1.10) 10	2.00% (0.45)

Table 10
Announcement Period Excess Returns of Bidders by Intangible Assets of Unlisted Target Firm and Payment Method

This table presents 5-day [-2, +2] announcement period cumulative abnormal returns, in percentage, of sample acquirers are presented. Abnormal returns (AR) are calculated using a modified market-adjusted model:

$$AR_{i,t} = R_{i,t} - R_{m,t}$$

Where $R_{i,t}$ is the return of bidder i at time t and $R_{m,t}$ is the market index (FT-All Share) at time t . Acquirers are publicly traded firms listed in the London Stock Exchange and targets are unlisted firms operating in the UK. The table is divided into three panels (based on three proxies computed by using the unlisted target firm's intangible assets and a) deal value, b) unlisted target firm's total assets, and c) unlisted target firm's fixed assets) while each panel is divided into two groups; the one for acquisitions with cash and the other one for acquisitions with stock. Panel A shows the gains to acquirers by the unlisted target firm's intangible assets divided by the unlisted target firm's total assets – 3 groups. The panel shows acquirers' gains for the entire sample as well as acquirers' gains after controlling for the alternative methods of financing, i.e. cash and stock. Cash and stock means of financing are divided into five groups according to the proportion of cash or stock used (greater than zero, less than or equal to 50%, greater than 50%, greater than or equal to 80%, and equal to 100%). Panel B shows the gains to acquirers by the unlisted target firm's intangible assets divided by the unlisted target firm's fixed assets – 3 groups. The panel shows acquirers' gains for the entire sample as well as acquirers' gains after controlling for the alternative methods of financing, i.e. cash and stock. Cash and stock means of financing are divided into five groups according to the proportion of cash or stock used (greater than zero, less than or equal to 50%, greater than 50%, greater than or equal to 80%, and equal to 100%). Panel C shows the gains to acquirers by the unlisted target firm's intangible assets divided by the deal value – 3 groups. The panel shows acquirers' gains for the entire sample as well as acquirers' gains after controlling for the alternative methods of financing, i.e. cash and stock. Cash and stock means of financing are divided into five groups according to the proportion of cash or stock used (greater than zero, less than or equal to 50%, greater than 50%, greater than or equal to 80%, and equal to 100%). The final column in each panel (both in the cash and stock groups) shows the difference in the gains from acquisitions of unlisted targets firms from portfolios comprised by high vs. low of each of the three proxies. T-statistics testing for the mean equal to zero versus not equal to zero are reported in parentheses below the mean. The sample size, n , for each group is reported below T-statistic. a, b, c, and d denote significance level at 1%, 5%, 10%, and 15% respectively.

Intangible Assets/Total Assets →		CASH					STOCK				
		All	Low (1)	Med (2)	High (3)	HML (3-1)	All	Low (1)	Med (2)	High (3)	HML (3-1)
Panel A – Intangible Asset / Total Assets											
All	Mean	1.97% ^a	2.09% ^a	1.68% ^a	2.14% ^a	0.05%	1.97% ^a	2.09% ^a	1.68% ^a	2.14% ^a	0.05%
	t-stat	(5.34)	(3.07)	(2.56)	(3.69)	(0.06)	(5.34)	(3.07)	(2.56)	(3.69)	(0.06)
	n	400	133	134	133		400	133	134	133	
Cash or Stock% > 0%	Mean	1.90% ^a	2.07% ^a	1.49% ^b	2.13% ^a	0.06%	2.29% ^a	2.63% ^c	1.87% ^d	2.46% ^b	-0.18%
	t-stat	(5.31)	(3.02)	(2.48)	(3.68)	(0.07)	(3.12)	(1.69)	(1.54)	(2.43)	(-0.10)
	n	360	116	118	126		141	41	51	49	
Cash or Stock% ≤ 50%	Mean	1.34% ^d	1.34%	-0.01%	2.79% ^b	1.40%	1.90% ^a	2.09%	1.86% ^d	1.80% ^c	-0.29%
	t-stat	(1.59)	(0.68)	(-0.01)	(2.11)	(0.62)	(2.58)	(1.19)	(1.59)	(1.83)	(-0.15)
	n	86	26	31	29		93	26	34	33	
Cash or Stock% > 50%	Mean	2.08% ^a	2.28% ^a	2.02% ^a	1.94% ^a	-0.34%	3.06% ^c	3.59%	1.89%	3.81% ^d	0.20%
	t-stat	(5.51)	(3.33)	(3.20)	(3.01)	(-0.37)	(1.87)	(1.18)	(0.60)	(1.69)	(0.06)
	n	274	90	87	97		48	15	17	16	
Cash or Stock% ≥ 80%	Mean	1.85% ^a	1.93% ^b	1.54% ^c	2.04% ^a	0.10%	3.27%	6.56% ^d	0.73%	2.20%	-4.36%
	t-stat	(4.10)	(2.44)	(1.91)	(2.69)	(0.10)	(1.21)	(1.68)	(0.14)	(0.45)	(-0.68)
	n	205	69	62	74		27	10	10	7	
Cash or Stock% = 100%	Mean	1.94% ^a	2.41% ^a	1.37% ^d	2.02% ^b	-0.40%	3.03%	7.02%	1.00%	-0.43%	-7.45%
	t-stat	(3.87)	(2.64)	(1.65)	(2.38)	(-0.32)	(0.80)	(1.24)	(0.13)	(-0.07)	(-0.87)
	n	180	58	57	65		18	7	7	4	

Continued

Table 10 – Continued

Intangible Assets/Total Assets →		CASH					STOCK				
		All	Low (1)	Med (2)	High (3)	HML (3-1)	All	Low (1)	Med (2)	High (3)	HML (3-1)
Panel B - Intangible Asset / Fixed Assets											
All	Mean t-stat n	1.97% ^a (5.34) 400	2.55% ^a (3.53) 133	1.01% ^c (1.70) 134	2.35% ^a (4.02) 133	-0.20% (-0.21)	1.97% ^a (5.34) 400	2.55% ^a (3.53) 133	1.01% ^c (1.70) 134	2.35% ^a (4.02) 133	-0.20% (-0.21)
Cash or Stock% > 0%	Mean t-stat n	1.90% ^a (5.31) 360	2.04% ^a (3.11) 119	0.88% (1.36) 119	2.76% ^a (5.03) 122	0.70% (0.85)	2.29% ^a (3.12) 141	4.41% ^b (2.43) 40	0.79% (0.76) 48	2.06% ^b (2.02) 53	-2.34% (-1.20)
Cash or Stock% ≤ 50%	Mean t-stat n	1.34% ^d (1.59) 86	2.07% (1.04) 25	-1.87% (-1.27) 30	3.87% ^a (3.57) 31	1.80% (0.83)	1.90% ^b (2.58) 93	2.97% ^c (1.85) 28	-0.39% (-0.28) 30	3.01% ^a (3.77) 35	0.04% (0.03)
Cash or Stock% > 50%	Mean t-stat n	2.08% ^a (5.51) 274	2.03% ^a (3.15) 94	1.80% ^a (2.65) 89	2.39% ^a (3.76) 91	0.40% (0.40)	3.06% ^c (1.87) 48	7.77% ^d (1.73) 12	2.76% ^c (1.95) 18	0.22% (0.09) 18	-7.55% ^d (-1.62)
Cash or Stock% ≥ 80%	Mean t-stat n	1.85% ^a (4.10) 205	1.67% ^b (2.12) 69	1.67% ^b (2.21) 70	2.23% ^a (2.76) 66	0.60% (0.50)	3.27% (1.21) 27	13.82% ^c (2.27) 8	0.41% (0.28) 8	-2.32% (-0.59) 11	-16.13% ^b (-2.34)
Cash or Stock% = 100%	Mean t-stat n	1.94% ^a (3.87) 180	1.99% ^b (2.23) 60	1.48% ^c (1.79) 61	2.36% ^a (2.65) 59	0.40% (0.29)	3.03% (0.80) 18	15.34% ^c (2.08) 6	1.25% (0.48) 4	-5.33% (-1.29) 8	-20.67% ^b (-2.48)
Panel C - Intangible Asset / Deal Value											
Intangible Assets/Deal Value →	All	Low (1)	Med (2)	High (3)	HML (3-1)	All	Low (1)	Med (2)	High (3)	HML (3-1)	
		Mean t-stat n	Mean t-stat n	Mean t-stat n	Mean t-stat n	Mean t-stat n	Mean t-stat n	Mean t-stat n	Mean t-stat n	Mean t-stat n	
All	Mean t-stat n	1.97% ^a (5.34) 400	2.66% ^a (3.89) 133	1.44% ^b (2.28) 134	1.81% ^a (3.02) 133	-0.85% (-0.93)	1.97% ^a (5.34) 400	2.66% ^a (3.89) 133	1.44% ^b (2.28) 134	1.81% ^a (3.02) 133	-0.85% (-0.93)
Cash or Stock% > 0%	Mean t-stat n	1.90% ^a (5.31) 360	2.25% ^a (3.25) 117	1.50% ^a (2.68) 117	1.95% ^a (3.22) 126	-0.29% (-0.32)	2.29% ^a (3.12) 141	3.71% ^a (2.83) 49	1.04% (0.81) 55	2.28% ^b (2.09) 37	-1.44% (-0.84)
Cash or Stock% ≤ 50%	Mean t-stat n	1.34% ^d (1.59) 86	1.26% (0.74) 31	1.28% (0.98) 33	1.56% (0.88) 22	0.30% (0.12)	1.90% ^a (2.58) 93	2.59% ^c (1.87) 34	0.64% (0.48) 32	2.51% ^b (2.63) 27	-0.08% (-0.05)
Cash or Stock% > 50%	Mean t-stat n	2.08% ^a (5.51) 274	2.61% ^a (3.64) 86	1.58% ^a (2.68) 84	2.04% ^a (3.19) 104	-0.57% (-0.59)	3.06% ^c (1.87) 48	6.25% ^b (2.16) 15	1.60% (0.65) 23	1.63% (0.51) 10	-4.62% (-1.07)
Cash or Stock% ≥ 80%	Mean t-stat n	1.85% ^a (4.10) 205	2.32% ^a (2.63) 62	1.04% ^d (1.59) 58	2.07% ^a (2.77) 85	-0.25% (-0.22)	3.27% (1.21) 27	9.77% ^c (2.08) 8	0.11% (0.03) 13	1.44% (0.26) 6	-8.34% (-1.15)
Cash or Stock% = 100%	Mean t-stat n	1.94% ^a (3.87) 180	2.65% ^a (2.58) 51	1.13% ^d (1.59) 51	2.00% ^b (2.50) 78	-0.65% (-0.51)	3.03% (0.8) 18	15.07% (1.85) 4	0.88% (0.15) 9	-2.75% (-0.62) 5	-17.81% ^c (-2.04)

Table 11
Announcement Period Excess Returns of Bidders by Investments of the Unlisted Target Firm and Payment Method

This table presents 5-day [-2, +2] announcement period cumulative abnormal returns, in percentage, of sample acquirers are presented. Abnormal returns (AR) are calculated using a modified market-adjusted model:

$$AR_{i,t} = R_{i,t} - R_{m,t}$$

Where $R_{i,t}$ is the return of bidder i at time t and $R_{m,t}$ is the market index (FT-All Share) at time t . Acquirers are publicly traded firms listed in the London Stock Exchange and targets are unlisted firms operating in the UK. The table is divided into two groups; the one for acquisitions with cash and the other one for acquisitions with stock. The table shows the gains to acquirers by the unlisted target firm's investment – 3 groups. The table shows acquirers' gains for the entire sample as well as acquirers' gains after controlling for the alternative methods of financing, i.e. cash and stock. Cash and stock means of financing are divided into five groups according to the proportion of cash or stock used (greater than zero, less than or equal to 50%, greater than 50%, greater than or equal to 80%, and equal to 100%). The final column in the table (both in the cash and stock groups) shows the difference in the gains from acquisitions of unlisted targets firms from portfolios subject to high investment vs. the portfolio subject to low investment. T-statistics testing for the mean equal to zero versus not equal to zero are reported in parentheses below the mean. The sample size, n , for each group is reported below T-statistic. a, b, c, and d denote significance level at 1%, 5%, 10%, and 15% respectively.

Investment →		CASH					STOCK				
		All	Low (1)	Med (2)	High (3)	HML (3-1)	All	Low (1)	Med (2)	High (3)	HML (3-1)
All	Mean	2.41% ^a	1.18% ^b	3.15% ^a	2.89% ^a	1.70% ^b	2.41% ^a	1.18% ^b	3.15% ^a	2.89% ^a	1.70% ^b
	t-stat	(7.66)	(2.22)	(5.95)	(5.13)	(2.21)	(7.66)	(2.22)	(5.95)	(5.13)	(2.21)
	n	651	217	217	217		651	217	217	217	
Cash or Stock% > 0%	Mean	2.25% ^a	1.15% ^b	3.09% ^a	2.54% ^a	1.40% ^c	3.66% ^a	2.32% ^b	4.61% ^a	3.97% ^a	1.70%
	t-stat	(7.27)	(2.32)	(5.41)	(4.76)	(1.90)	(6.25)	(2.30)	(4.99)	(3.58)	(1.10)
	n	582	198	195	189		257	84	91	82	
Cash or Stock% ≤ 50%	Mean	2.84% ^a	2.67% ^a	3.09% ^a	2.70% ^c	0.03%	3.89% ^a	2.91% ^a	5.70% ^a	2.79% ^a	-0.12%
	t-stat	(4.41)	(2.80)	(2.94)	(1.89)	(0.02)	(5.81)	(3.00)	(4.54)	(2.29)	(-0.08)
	n	175	59	70	46		162	60	59	43	
Cash or Stock% > 50%	Mean	2.00% ^a	0.51%	3.09% ^a	2.49% ^a	2.00% ^a	3.26% ^a	0.85%	2.60% ^b	5.28% ^a	4.40%
	t-stat	(5.78)	(0.89)	(4.60)	(4.63)	(2.51)	(2.97)	(0.33)	(2.21)	(2.77)	(1.40)
	n	407	139	125	143		95	24	32	39	
Cash or Stock% ≥ 80%	Mean	1.87% ^a	0.27%	2.68% ^a	2.54% ^a	2.30% ^b	4.69% ^a	-0.93%	4.74% ^a	8.07% ^a	9.00% ^c
	t-stat	(4.69)	(0.36)	(3.62)	(4.31)	(2.41)	(2.69)	(-0.25)	(3.54)	(2.71)	(1.88)
	n	297	93	92	112		52	14	15	23	
Cash or Stock% = 100%	Mean	1.73% ^a	0.46%	2.16% ^a	2.48% ^a	2.00% ^b	5.08% ^b	-0.55%	4.97% ^b	7.64% ^b	8.20%
	t-stat	(3.95)	(0.58)	(2.66)	(3.66)	(1.94)	(2.06)	(-0.08)	(2.47)	(2.09)	(1.16)
	n	249	80	77	92		35	8	9	18	

Table 12
Determinants of Announcement Period Gains of Bidders: A Cross Sectional Analysis

Dep. Variable (CAR)	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)	Model (7)	Model (8)	Model (9)	Model (10)	Model (11)
Intercept	0.0373**	0.0371**	0.0095	-0.0177	-0.0234	-0.0323	-0.0132	-0.0207	-0.0359	-0.0546	-0.0202
Log (BAGE)	0.0021	0.0020	0.0003							-0.0001	0.0025
Log (MV)	-0.0098***	-0.0098***									-0.0137***
Log (DV)	0.0080***	0.0080***									0.0153***
MTBV	-0.0001	-0.0001	-0.0001							-0.0001	-0.0001
PE	0.0001*	0.0001*	0.0001*							0.0000	0.0001*
RS			0.0599***							0.0678***	
Log (TAGE)				0.0033	0.0035	0.0036	0.0069	0.0106*	0.0122*	0.0084**	0.0084**
Log (Total Assets)				0.0030	0.0030	0.0033		0.0053	0.0066*	0.0025	0.0016
Log (Fixed Assets)							0.0112**			-0.0004	0.0026
Log (Investments)				0.0034***	0.0033***	0.0033***	0.0047***	0.0027*	0.0036**	0.0037***	0.0026**
Log (Intangible Assets)							-0.0053*	0.0006	0.0010		
Log (Tangible Assets)				0.0030	0.0023	0.0023					
Log (Turnover)								-0.0111**	-0.0056		
Log (No of Employees)				-0.0078**	-0.0069*	-0.0073*	-0.0196***		-0.0141**	-0.0080**	-0.0112***
Liquidity Ratio				0.0086	0.0085	0.0071	-0.0033*			0.0131*	0.0131*
Current Ratio				-0.0095	-0.0095	-0.0082				-0.0138*	-0.0141*
Gearing Ratio				0.0001	0.0001	0.0001	0.0001			0.0001**	0.0002***
Dummy (Cash=1)				-0.0114*							
Dummy (Stock=1)	0.0127*	0.0150*	0.0024		0.0431**	0.0439**	0.0266		0.0052		
Dummy (Different I)		0.0025	0.0009			0.0116*			0.0038	0.0077	0.0066
F-Statistics	13.06***	11.21***	17.72***	2.30**	2.58***	2.54	3.21***	2.15*	2.32**	5.26***	5.08***
R-Squared (in %)	5.00%	5.01%	6.66%	5.02%	5.60%	6.10%	14.54%	6.08%	10.76%	17.39%	18.04%
N	1,497	1,497	1,497	402	402	402	160	172	163	339	338

Continued

Table 12 - Continued

Estimates of cross-sectional determinants of announcement period gains of acquirers are reported. Announcement period (5-days) excess returns of bidders are regressed against a set of explanatory variables. The following equation is estimated using ordinary least square and standard errors are corrected for heteroscedasticity.

$$CAR = \alpha + \sum_{i=1}^N X_i + \varepsilon_i$$

The intercept (α) measures the excess return to bidders after accounting for the effects of all explanatory variables. The vector of explanatory variables 'X' includes acquirer's age on the day of bid announcement (log), acquirer's market value one month prior to the announcement of deal (log), deal value of the acquisitions (log), bidder's growth opportunity (ratio of market to book value of equity and price to earning ratio of acquirer one month prior to the acquisition announcement), relative size of the deal measured as the deal value divided by acquirer's market value, target firm's age on the day of bid announcement (log), target firm's total assets (log), target firm's fixed assets (log), target firm's investment (log), target firm's intangible assets (log), target firm's tangible assets (log), target firm's turnover (log), target firm's number of employees (log), target firm's liquidity ratio, target firm's current ratio, target firm's gearing ratio. Dummy variables, that take the value of one and zero otherwise, are included to represent diversifying deals (i.e. target and acquirer do not have the same 2-digit SIC), and cash only and stock only deals.

Table 13
Long-term performance of acquirers

DEPVAR	α_p	β_p	s_p	h_p	RSQ	F-value	No of Deals	No of Observ.
Panel A: Entire Sample (1 Year)								
ENTIRE	0.0085 ^a	1.2068 ^a	0.3173 ^a	-0.4653 ^a	0.7201	101.18 ^a	1780	131
MV (Small)	0.0277 ^a	0.8756 ^a	0.9993 ^a	-0.7139 ^a	0.3892	25.07 ^a	589	129
MV (Medium)	0.0134 ^a	1.1219 ^a	0.8587 ^a	-0.2537 ^b	0.7513	118.8 ^a	594	131
MV (Big)	0.0079 ^b	1.2123 ^a	0.2608 ^b	-0.4717 ^a	0.707	94.92 ^a	597	131
MTBV (Value)	0.0175 ^a	1.0009 ^a	0.5762 ^a	0.0986	0.4345	30.23 ^a	590	131
MTBV (Medium)	0.0021	1.2553 ^a	0.5765 ^a	0.2857 ^c	0.5533	48.71 ^a	595	131
MTBV (Growth)	0.0051	1.2282 ^a	0.1452	-0.8616 ^a	0.6113	61.86 ^a	595	131
PE (Low)	0.0078 ^c	1.2598 ^a	0.4115 ^a	0.4516 ^b	0.4603	33.55 ^a	495	131
PE (Medium)	0.0002	1.1263 ^a	0.4238 ^a	0.3748 ^b	0.5438	46.89 ^a	488	131
PE (High)	0.0109 ^b	1.232 ^a	0.481 ^a	-0.7795 ^a	0.5818	54.71 ^a	496	131
RS (Low)	0.0064 ^c	1.2502 ^a	0.2085 ^c	-0.4562 ^a	0.7132	97.82 ^a	596	131
RS (Medium)	0.0124 ^b	1.0235 ^a	0.5661 ^a	-0.729 ^a	0.5014	39.55 ^a	593	131
RS (High)	0.0161 ^a	0.9783 ^a	0.7655 ^a	-0.1771	0.3634	22.46 ^a	591	131
TA (Small)	0.0090	1.3747 ^a	0.6398 ^a	-0.501 ^c	0.4863	37.24 ^a	482	131
TA (Medium)	0.0068 ^c	0.9859 ^a	0.2865 ^b	-0.5401 ^a	0.5614	50.34 ^a	486	130
TA (Big)	0.0088 ^b	1.2678 ^a	0.2845 ^b	-0.4663 ^b	0.6179	63.61 ^a	490	131
TAGE (Young)	0.0142 ^a	0.9591 ^a	0.3797 ^b	-0.6754 ^a	0.4803	36.35 ^a	594	131
TAGE (Medium)	0.0024	1.418 ^a	0.3981 ^a	-0.4756 ^b	0.6544	74.48 ^a	591	131
TAGE (Mature)	0.0092 ^b	1.1284 ^a	0.3313 ^b	-0.5302 ^a	0.5811	54.56 ^a	595	131
IA (Low)	-0.0044	0.9456 ^a	0.3846 ^c	-0.0331	0.2533	13.34 ^a	132	124
IA (Medium)	0.0000	1.1054 ^a	0.5552 ^a	-0.0505	0.3327	19.61 ^a	131	130
IA (High)	0.0077	1.5441 ^a	0.4749 ^b	-0.464 ^c	0.5296	44.28 ^a	133	125
IN (Low)	-0.0031	1.2374 ^a	0.3517 ^b	-1.1842 ^a	0.6159	63.07 ^a	217	127
IN (Medium)	0.0135 ^b	0.9884 ^a	0.4779 ^b	-0.8736 ^a	0.3785	23.95 ^a	212	130
IN (High)	0.0122 ^b	1.1451 ^a	0.3892 ^b	-0.4483 ^c	0.4841	36.91 ^a	217	129
Panel B: Entire Sample (2 Years)								
ENTIRE	0.0099 ^a	1.1167 ^a	0.3276 ^a	-0.4628 ^a	75.58%	120.71 ^a	1554	131
MV (Small)	0.0184 ^a	0.9908 ^a	0.9761 ^a	-0.3589 ^c	54.79%	47.27 ^a	516	130
MV (Medium)	0.014 ^a	1.0787 ^a	0.8883 ^a	-0.3158 ^b	72.71%	103.92 ^a	517	131
MV (Big)	0.0094 ^a	1.1234 ^a	0.2743 ^a	-0.4684 ^a	74.77%	115.56 ^a	521	131
MTBV (Value)	0.0155 ^a	0.9253 ^a	0.5415 ^a	0.073	54.75%	47.19 ^a	508	131
MTBV (Medium)	0.006 ^b	1.1499 ^a	0.5551 ^a	0.1221	63.16%	66.85 ^a	511	131
MTBV (Growth)	0.0078 ^c	1.1039 ^a	0.1465	-0.8735 ^a	65.92%	75.42 ^a	535	131
PE (Low)	0.0094 ^a	1.1881 ^a	0.3835 ^a	0.4191 ^b	52.60%	43.28 ^a	425	131
PE (Medium)	0.0024	1.0976 ^a	0.4113 ^a	0.1176	63.99%	69.3 ^a	410	131
PE (High)	0.0085 ^b	1.1071 ^a	0.2707 ^b	-0.6935 ^a	63.02%	66.46 ^a	454	131
RS (Low)	0.0089 ^a	1.1353 ^a	0.2369 ^b	-0.4736 ^a	73.59%	108.69 ^a	531	131
RS (Medium)	0.0114 ^a	1.0393 ^a	0.5763 ^a	-0.5111 ^a	62.04%	63.73 ^a	515	131
RS (High)	0.0146 ^a	1.1218 ^a	0.784 ^a	-0.247	49.78%	38.65 ^a	508	131
TA (Small)	0.0078 ^c	1.2468 ^a	0.4275 ^a	-0.5668 ^a	59.01%	56.14 ^a	424	131
TA (Medium)	0.0113 ^a	0.9777 ^a	0.3196 ^a	-0.583 ^a	62.30%	64.44 ^a	418	131
TA (Big)	0.0096 ^a	1.1897 ^a	0.3449 ^a	-0.4232 ^a	72.16%	101.1 ^a	427	131
TAGE (Young)	0.0124 ^a	1.0069 ^a	0.2805 ^b	-0.4977 ^a	57.30%	52.33 ^a	523	131
TAGE (Medium)	0.0057 ^c	1.1966 ^a	0.3269 ^a	-0.4818 ^a	71.24%	96.61 ^a	507	131
TAGE (Mature)	0.009 ^a	1.0375 ^a	0.3615 ^a	-0.63 ^a	65.51%	74.08 ^a	524	131
IA (Low)	-0.003	0.9039 ^a	0.2668	-0.073	28.73%	15.72 ^a	115	124
IA (Medium)	0.0022	1.1398 ^a	0.5773 ^a	-0.0313	45.81%	32.97 ^a	117	128
IA (High)	0.0122 ^b	1.0418 ^a	0.455 ^a	-0.8008 ^a	51.46%	41.35 ^a	112	125
IN (Low)	-0.001	1.1386 ^a	0.218	-0.97 ^a	61.67%	62.74 ^a	184	127
IN (Medium)	0.0129 ^b	0.891 ^a	0.455 ^b	-0.6239 ^b	37.81%	23.71 ^a	186	130
IN (High)	0.0104 ^a	1.2432 ^a	0.3279 ^a	-0.1967	67.14%	79.69 ^a	192	130

Continued

Table 13 – Continued

DEPVAR	α_p	β_p	s_p	h_p	RSQ	F-value	No of Deals	No of Observ.
Panel C: Entire Sample (3 Years)								
ENTIRE	0.0101 ^a	1.1758 ^a	0.3212 ^a	-0.4195 ^a	79.94%	156.73 ^a	1294	131
MV (Small)	0.0182 ^a	1.0009 ^a	0.9459 ^a	-0.3889 ^b	58.68%	55.86 ^a	421	130
MV (Medium)	0.0101 ^a	1.1652 ^a	0.9535 ^a	-0.1621	75.73%	122.74 ^a	423	131
MV (Big)	0.01 ^a	1.1774 ^a	0.259 ^a	-0.4347 ^a	79.29%	150.56 ^a	450	131
MTBV (Value)	0.0153 ^a	1.132 ^a	0.5468 ^a	-0.0121	65.16%	73.55 ^a	417	131
MTBV (Medium)	0.0069 ^b	1.2381 ^a	0.4261 ^a	0.3082 ^b	64.75%	72.26 ^a	411	131
MTBV (Growth)	0.008 ^b	1.1406 ^a	0.1685	-0.7969 ^a	70.57%	94.3 ^a	466	131
PE (Low)	0.012 ^a	1.2243 ^a	0.3673 ^a	0.2897 ^c	60.06%	59.15 ^a	354	130
PE (Medium)	0.0045	1.1457 ^a	0.3948 ^a	0.059	63.28%	67.78 ^a	335	131
PE (High)	0.0088 ^a	1.1005 ^a	0.2539 ^b	-0.6488 ^a	68.70%	86.32 ^a	397	131
RS (Low)	0.0084 ^a	1.203 ^a	0.2172 ^b	-0.391 ^a	78.07%	140.03 ^a	448	131
RS (Medium)	0.012 ^a	1.0485 ^a	0.6637 ^a	-0.4251 ^a	69.30%	88.78 ^a	433	131
RS (High)	0.0104 ^a	1.2822 ^a	0.6545 ^a	-0.1738	60.21%	59.51 ^a	413	131
TA (Small)	0.0061	1.2646 ^a	0.4123 ^a	-0.5055 ^a	62.88%	66.63 ^a	338	131
TA (Medium)	0.013 ^a	1.1306 ^a	0.2739 ^b	-0.5252 ^a	68.44%	85.3 ^a	353	131
TA (Big)	0.0088 ^a	1.2146 ^a	0.3538 ^a	-0.3291 ^a	75.67%	122.34 ^a	358	131
TAGE (Young)	0.0132 ^a	1.0379 ^a	0.2598 ^b	-0.4919 ^a	60.40%	59.98 ^a	429	131
TAGE (Medium)	0.006 ^c	1.2216 ^a	0.3201 ^a	-0.394 ^a	71.51%	98.73 ^a	425	131
TAGE (Mature)	0.0088 ^a	1.1464 ^a	0.3651 ^a	-0.4717 ^a	73.78%	110.67 ^a	440	131
IA (Low)	0.0002	0.9371 ^a	0.2652	-0.21	33.85%	20.13 ^a	88	123
IA (Medium)	0.0041	1.1372 ^a	0.5627 ^a	-0.2051	51.90%	42.45 ^a	96	130
IA (High)	0.0102 ^b	1.091 ^a	0.4375 ^a	-0.7672 ^a	51.45%	41.68 ^a	90	125
IN (Low)	0.0017	1.1703 ^a	0.2188	-0.8686 ^a	65.74%	75.48 ^a	158	127
IN (Medium)	0.0115 ^b	1.2091 ^a	0.4811 ^a	-0.2643	50.23%	39.7 ^a	155	129
IN (High)	0.0096 ^a	1.1808 ^a	0.2718 ^b	-0.2205	66.27%	77.27 ^a	162	130

This table reports OLS estimates of monthly abnormal returns, measured by alpha of the following equation, from portfolios comprising of all acquisitions for 1- 2- 3- year post-event holding periods. Excess returns are estimated using calendar time regressions for each portfolio. Acquirers enter the portfolio on the month following the announcement and remain for 12-24-36 months. This table contains three panels. Specifically, Panel A represents all acquisitions of unlisted target firms (private and subsidiary of other unlisted firms) remaining for 1 year (12 months) in the portfolio, starting from the next month from the month of the acquisition's announcement. Panel B represents all acquisitions of unlisted target firms (private and subsidiary of other unlisted firms) remaining for 2 years (24 months) in the portfolio, starting from the next month from the month of the acquisition's announcement. Panel C represents all acquisitions of unlisted target firms (private and subsidiary of other unlisted firms) remaining for 3 years (36 months) in the portfolio, starting from the next month from the month of the acquisition's announcement. From all panels, the dependent variable ENTIRE represents for the entire sample of acquisitions (without any restriction applied), MV for the bidding firm's size (the sample is sorted according to bidding firm's size), MTBV for the bidder's market to book value ratio (the sample is sorted according to bidding firm's growth opportunities), PE for the bidding firm's price to earnings ratio (the sample is sorted according to bidding firm's PE ratio), RS for the bidding firm's relative size (the sample is sorted according to bidding firm's relative size), TA for the unlisted target firm's total assets (the sample is sorted according to target firm's size), TAGE for the unlisted target firm's age (the sample is sorted according to target firm's age), IA for the unlisted target firm's intangible assets (the sample is sorted according to target firm's intangible assets), and IN for the unlisted target firm's investment (the sample is sorted according to target firm's investment). In parentheses next to each of the proxies, the level of the assets held by either the bidding of the target firm presented (i.e. small, medium, big, etc), the growth opportunities of the bidding firm (i.e. value, medium, growth, etc), and the age of the target firm (i.e. young, medium, mature). Portfolios are rebalanced each month to include firms that just announced a deal. The monthly abnormal returns are measured by intercepts in the following equation:

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

where $R_{p,t}$ is the calendar time portfolio return, $R_{f,t}$ is the return on a one month T-bill during month t, SMB is the difference in returns of value weighted portfolios of small firms and big firms during month t, HML is the return differential of value weighted portfolios of high and low book-to-market firms in month t, β_p , s_p and h_p are regression parameters specific to the portfolio and $\varepsilon_{p,t}$ is the error term. Standard errors are corrected for heteroscedasticity. a, b, or c indicate significance at the 1, 5, 10 percent level respectively.