LONG-RUN SHARE PERFORMANCE OF U.K. FIRMS ENGAGING IN CROSS-BORDER ACQUISITIONS

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Abstract
This study examines the impact of cross-border and domestic acquisitions on the long-run share returns of U.K. acquiring firms. Using a sample of 3260 acquisitions of public and private targets completed during 1984-2000, we find evidence of significantly negative post-acquisition share returns in U.K. domestic acquisitions. In contrast, cross-border acquisitions result in neutral post-acquisition share returns, which are significantly higher than those in domestic acquisitions. However, this difference is only weakly significant when other factors such as the industry of the acquiring company are controlled for. We find evidence that the timing of cross-border acquisitions has a significant effect on post-acquisition returns, with those completed in the 1990s performing significantly better than those completed in the 1980s. Cross-border post-acquisition returns do not differ significantly according to the country of the target company.

Keywords: Cross-border acquisitions; post-acquisition performance; long-horizon event studies

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1. Introduction

Mergers since the mid 1980s have been larger and more global than in earlier episodes that experienced greater consolidation or diversification of corporate structures within national boundaries (Black, 2000; Cosh and Hughes, 1996). The sustainability of the cross-border nature of the recent merger wave is illustrated in Figure 1 which shows that about 26 percent of the dollar value of total acquisitions (i.e. sum of both domestic and cross-border acquisitions in all countries) has been cross-border during the last two decades. The increasing size of both domestic and cross-border mergers as shown in Figure 1 illustrates that the global value of cross-border acquisitions has risen steadily since the mid 1980s from about 0.5 percent of world wide GDP to being well over 2 percent today. Clearly, cross-border mergers are bigger and more prevalent than ever before. These global trends are also largely reflected in U.K. domestic and cross-border (Cosh and Hughes, 1996). Collectively cross-border mergers now account for over eighty percent of all foreign direct investment (FDI) by industrialized countries. FDI occurs primarily through merger rather than new greenfield investments in the U.K., U.S. and Western Europe (UN, 2000). This scale of economic activity raises the issue of whether we might expect the same value creation effects in international mergers as has been found in domestic mergers. The literature on domestic mergers is large and controversial. On balance as we shall see, the evidence on stock market prices suggests that for acquiring companies, initial positive market responses are followed by significant market corrections which lead to overall wealth losses for acquiring companies. As the international merger wave continues, it is important to ask whether shareholders in globally active acquiring firms may experience on average the same fate.

This paper tackles this issue by measuring and analyzing the post-merger performance of a sample of over 1,000 U.K. acquisitions of

foreign public and private companies occurring during 1984-2000, over the three post-acquisition years. The paper has several unique features. One, it focuses on long-run share performance of U.K. acquiring firms rather than short-run shareholder effects. Two, it utilizes a long-run methodology commonly used in such events as domestic mergers, seasoned equity offerings, and IPOs (e.g. Fama, 1998), but not applied to cross-border mergers except in a recent paper by Black et al. (2001). Three, a benchmark group of U.K. domestic mergers allows the results of the cross-border sample to be put in context with domestic studies. Finally, the study includes cross-border acquisitions of both foreign public and private companies. This latter feature is important because most cross-border mergers are with privately held firms. The paper is the most extensive analysis to date of the long-run performance of U.K. acquiring firms carrying out cross-border acquisitions.

2. Returns to shareholders

2.1 Short-run returns

The most frequently cited summaries of short-run event studies of domestic mergers in the U.S. and U.K., like Jensen and Ruback (1983) and Jarrell, Brickley, and Netter (1988), have concluded that acquiring firms generally experience either zero or negative returns in the days surrounding announcement and consummation. While others have questioned the generality of this interpretation (Mueller, 2001), the conventional wisdom within financial economics is that short-term shareholder returns to bidding firms are not positive in domestic mergers. There are important differences when samples are stratified across transaction and firm characteristics. Results are systematically explained by method of payment (cash versus stock), and whether the mergers are horizontal versus conglomerate. These findings are robust across a variety of methodologies, time periods and sample characteristics. Investors' short-term reactions to all mergers are also influenced

by the relative size of bidder to target, active bidder (multiple acquisitions) versus bidder with single merger, and the industry of merging firms.

The evidence on cross-border mergers accumulated rapidly during the 1990s, with nearly all the studies focused on short-run returns within a market model context of cumulative abnormal returns (CAR). There have been a number studies addressing the returns to shareholders of firms engaged in cross-border mergers. Because stock data are most readily available for U.S. and U.K. firms, acquiring and acquired firms from these two countries have been the most extensively analyzed. Table 1 summarizes the extant studies that measure CAR in the event period (i.e. in the days surrounding merger announcement). Panel A deals only with studies of U.S. acquiring firms' CAR whereas panel B highlights the CAR of non-U.S. acquiring firms. The primary conclusion from these 16 studies is the dominance of zero or negative CAR for acquiring firms in the days surrounding merger announcement and consummation. Panel A shows that 7 of 9 studies of U.S. acquiring firms in cross-border mergers find either zero or negative CAR around short-run event dates. Only Black (2001) and Markides-Ittner (1994) find significant positive CAR for U.S. acquiring firms. However, these latter two studies are important because of their relatively large sample sizes (i.e. 360 and 276 mergers, respectively) and also the long time periods analyzed (1975-1995 inclusive). Whether the negative and zero returns in other studies are due to their limited samples or shorter time periods is not clear. However, the small size of the buying firms' CAR in every case suggests that many U.S. cross-border mergers yield very low abnormal returns in the short-run to shareholders of bidder firms.

Panel B, which highlights 9 studies of short-term CAR to non-U.S. bidders in transnational mergers, also finds very mixed results. Only 2 studies report significantly positive CAR for non-U.S.

bidder firms who purchased U.S. firms. Kang (1993) investigates exclusively Japanese mergers within the U.S. while Cakici et al.(1996) report positive CAR for their entire sample as well as a U.K. sub-sample. However, Eun et al. (1996) report negative CAR for their total sample of non-U.S. bidders as well as sub-sample of U.K. bidders. Thus, the evidence is quite mixed on returns to non-U.S. bidders overall, and also when findings are reported on country specific sub-samples. Japan is the exception here with the three studies that have reported CAR for Japanese buyers in international mergers, finding significantly positive returns. Kang's explanation for the positive CAR relies on bidder specific characteristics and Yen appreciation. For example, cross sectional variation in bidder returns is significantly related to the bidders ties to financial institutions through borrowings, bidders' leverage, and strength of the Yen against the dollar. In general, the diversity of findings is remarkable given the similarity of methods used by most of the studies (e.g. market model with coefficients estimated from daily, pre-merger data).

Several studies have used monthly data because their focus was longer than the few days surrounding the event period. Two analyses of U.K. bidders' returns (Conn and Connell,1990; and Aw and Chatterjee, 2000), using monthly returns with the market model, report significantly negative CAR both during the merger event period and for a year following consummation of 8-11 percent. Similarly, Eckbo and Thorburn (2000) report significantly negative CAR for U.S. acquirers of Canadian firms. However, Conn and Connell find CAR is highly sensitive to how benchmark returns are estimated (using pre-merger or post-merger returns) due to an unstable intercept term in the market model. The market model as a methodology for estimating long-run returns has produced large negative returns that may be quite sensitive to alternative specifications. Unfortunately, neither Aw and Chatterjee nor Eckbo and Thorburn report the robustness of their results with alternative model specifications. In sum, the evidence

from the 9 studies that have measured CAR based on some version of the market model is not consistent with U.K. shareholders gaining positive abnormal returns from cross-border mergers.

2.2. Long-run returns

The principal drawback of the extensive event study literature is its short-term focus. While ex ante expectations are important sources of information, especially in highly efficient securities markets, the possibility exists that the market does not always accurately predict the future performance of acquisitions in the short time period surrounding announcement and completion. Hence an evaluation of the long run performance of mergers may be warranted. Such an evaluation has been made possible by new, improved long horizon methodologies that have been applied to a variety of corporate events, including mergers.

Early evidence strongly suggested that the models used to measure short-run impacts were not suitable for long-run analyses (e.g. Conn and Connell, 1990). Commonly used models such as CAPM and market models, both using daily and monthly data, showed significant signs of parameter instability and hence loss of reliability as generators of benchmark expected returns (e.g. Coutts, Mills and Roberts, 1997). While the models were suitable for short-run analysis due to the magnitude of valuation effects, the cumulative influence of model instabilities made long-run analysis less reliable. The development of multi-index models following the findings of Fama and French (1992) that security pricing models based on beta are inferior to those based on such variables as size and relative valuation addressed some of the earlier concerns. Furthermore, the recognition of other statistical problems and biases has led to more reliable test statistics (Lyon et al., 1999). As a consequence, the past few years have seen a renewed interest in long-run analysis of a variety of corporate financial

events, including initial public offerings, seasoned equity offerings, and domestic mergers.

Analyses of acquiring firms' performance over a long horizon have been mostly limited to domestic mergers, the evidence upon which is extensively reviewed in Agrawal and Jaffe (2001). Panel A of Table 2 summarizes 5 recent long-run studies of U.S. or U.K. acquiring firms' returns in domestic mergers that address some of the methodological issues raised by Fama (1998) and others (e.g. Lyon, Barber and Tsai, 1999). These studies differ in two fundamental ways from earlier market model methodologies. One, they use buy-and-hold returns (BAHR) rather than CAR to avoid the unlikely and costly portfolio rebalancing costs implicitly assumed in CAR. Two, they use control groups/firms based on multi-index models that in turn utilize firm size, prior performance and/or market-to-book value (MTBV) to form benchmark returns for acquiring firms.

The two studies noted in Panel A that measure long-run returns in U.S. domestic mergers to acquiring firms use similar sequential sorting techniques to identify matching control firms or portfolios based on firm size and relative valuation ratios (MTBV). Loughran and Vijh (1997) report insignificant negative returns for the entire sample of 947 U.S. domestic mergers, whereas Rau and Vermaelen (1998) did not provide returns for their entire sample. However, both studies report findings for sub-samples that reveal interesting differences in performance. Loughran and Vijh find that stock mergers (e.g. predominantly friendly mergers) have significantly negative returns of about 25 percent in the 5 year post merger period, whereas cash tender offers (e.g. predominantly hostile takeovers) have a positive BAHR of over 60 percent over the same period. Rau and Vermaelen report similar but smaller differences between returns in mergers versus tender offers. The common thread in the results of both studies is that the mode of the acquisition (merger versus tender offer) is the preeminent feature

explaining long-run returns in U.S. domestic takeovers. Rau and Vermaelen also find that long-run returns vary significantly with the pre-merger relative valuation of the bidder. Bidders with relatively low MTBV (value firms) tend to have higher long-run returns than do bidders with relatively high MTBV (glamour firms). Given the prevalence of private targets in cross-border acquisitions, it is of interest to note that Rau and Vermaelen find little difference in the long-run performance of acquisitions involving private and public acquisitions.

Analyses of acquiring firms' long-run shareholder performance in domestic U.K. mergers that use similar methodologies find results consistent with the U.S. studies. Gregory (1997) and Baker and Limmack (2001) find significant negative returns in the 3-5 years after merger for their entire samples, whereas Higson and Elliot (1998) and Cosh and Guest (2001) report post-merger returns insignificantly different from zero. Positive post-merger returns in hostile takeovers are found by Cosh and Guest and Higson and Elliot, and friendly mergers exhibit consistently lower or negative post-merger returns. Baker and Limmack (2001) find cash bids with zero returns and equity bids with negative long-run returns.

Only one study to date has measured the long run share returns of cross-border mergers using the techniques recommended by Lyon et al. (1999). Panel B summarizes the results of Black et al. (2001). Using control portfolios based on firm size, MTBV, and pre-merger performance, Black et al., find significant negative returns to U.S. bidders during 3-5 years after cross-border mergers. Thus, their principal finding is consistent with the long-run domestic event studies that find the stock market's long-run reaction to be negative. Evidence consistent with this is provided by Gugler et al. (2000), who find that cross-border acquisitions result in a significant decrease in the market value of the acquiring firm over the 5 post-acquisition years.

In their review of the literature on domestic post-merger shareholder returns, Agrawal and Jaffe (2000) conclude that over 3 to 5 years, shareholder returns are generally negative for entire samples. The study by Black et al., and Gugler et al. (2000), suggest similar results for acquirers in cross-border acquisitions. The domestic studies suggest that in general, acquiring firms' returns are positively associated with cash payments, horizontal type, hostile approaches, active bidders, lack of competing bids, relatively large targets, and below average pre-merger performance. Negative or neutral returns are most commonly associated with stock payments, diversifying types, friendly takeovers, single acquirers, competing bids, relatively small targets, and above average pre-merger acquirer performance. In attempting to establish whether there is a difference in the long run returns to domestic and cross-border acquisitions, we control for such factors in the subsequent analysis.

2.3. Why should announcement period and long run share returns differ between domestic and cross-border acquisitions?

2.31. Announcement period returns

The evidence suggests that cross-border mergers, like domestic mergers, are wealth neutral activities for acquiring firms in the short-run, and wealth decreasing activities over the long run. The question of interest is why we would expect the stock market's reaction to cross-border mergers and domestic mergers to be different over these two periods, once common merger characteristics are accounted for.

Within the value-maximizing paradigm there are multiple explanations for why cross-border mergers occur which are separate from the motives for domestic acquisitions. These motives are reviewed in Conn (2001), and include speed, market

imperfections, internalization of markets for a firm's intangible assets, diversification, and reactions to macro economic conditions flowing from exchange rate changes, international tax motivations and accounting issues. To the extent that the gains from these motives are not achievable in domestic acquisitions, ceteris paribus, cross-border acquisitions may be expected to result in higher announcement period gains than domestic acquisitions. However, there are several reasons why it may be harder to realize the gains in cross-border mergers compared to domestic mergers. Information differences lead to cross-border acquisitions being more risky than domestic ones. The value and operating properties of the assets in the acquirer's home country are known more precisely than in any alien market where the firm's proprietary assets may be deployed, and information about the expected payout of investments in various host-country sites is costly. Costs of information and calculation lead the acquirer to rationally settle for less than complete information [i]. The acquirer abroad therefore faces a greater variance of expected outcomes than a domestic acquirer contemplating the same investment opportunity. Other downward effects on performance in cross-border acquisitions result from cultural assimilation problems and organizational managerial complexity compared to domestic acquisitions.

The neutral announcement period returns in domestic acquisitions has led some to suggest that they are carried out for non-value maximizing motives. Managerial motives for acquisition argue that growth maximizing managers undertake acquisitions which benefit themselves but will not improve performance and shareholder value. For domestic acquisitions, there is ample evidence of self-interest motivated investment (Loderer and Martin, 1997; Shinn, 1999). The question is whether cross-border acquisitions are just as likely to be motivated by such factors. Doukas (1995) shows that the abnormal announcement period stock returns of foreign acquisitions are significantly negatively related to free cash flow for low Q bidders, consistent with the managerial explanation. This

evidence suggests that agency problems are also at work in cross-border acquisitions. Alternatively, acquiring management may believe that it will be able to carry out a profitable takeover but is unable to do so, because of reasons such as ill conceived motives or integration problems. Any manager that goes ahead with an acquisition, knowing the average takeover destroys value, could be argued to suffer from managerial hubris (Roll, 1986). The relevant question for this study is whether cross-border acquirers are as likely to suffer from hubris as domestic acquirers. There does not seem to be an obvious reason why they would not be. Therefore, the announcement period returns to cross-border acquirers may differ from those to domestic acquisitions, depending on the strength of these different factors.

2.32. Long run returns

If the stock market is weak form efficient, acquisitions should result in zero average abnormal post-takeover returns. We now consider explanations for the post-takeover negative returns in domestic acquisitions and consider how these explanations are expected to differ in cross-border acquisitions.

The most prevalent explanation for the negative post-merger returns observed in domestic acquisitions is that they reflect the poor performance of the actual acquisitions (Agrawal and Jaffe, 2001; Mueller, 2001). The market does not anticipate the poor performance at announcement and instead responds slowly to this over a long run period following acquisition. Both the managerial theory of acquisitions and the hubris hypothesis described above can account for this pattern of returns. With the former it is unlikely that management wants the stock market to know the true motive for the acquisition, and therefore misleads it with regard to the future profitability of the acquisition. Hence the post-acquisition negative returns as the market learns over time. We argue that if managerial motives explain the post-acquisition

negative returns in domestic acquisitions, cross-border acquisitions may also be expected to result in negative post-bid returns. In case of acquirer hubris the market is fooled by the overoptimistic (rather than deliberately misleading) views of acquirer management regarding future takeover performance. The evidence of Rau and Vermalean (1998) described above is in line with this explanation, since acquirers who have done well in the past are more likely to suffer from hubris and therefore experience negative post-acquisition returns. The relevant question for this study is whether cross-border deals are also likely to be on average unsuccessful, and for managers to suffer from hubris which the market only recognizes over the long run. Datta and Puia (1995) argue that the full potency of culture only becomes apparent in the merger implementation phase when interaction of two often disparate cultures takes place. They argue that the result can be a culture shock, often accompanied by negative effects on performance. Consequently, they argue that studies should examine the post-acquisition performance in cross-border acquisitions. The discussion above suggests that, a priori, it is not obvious whether cross-border acquisitions will perform better or worse than domestic acquisitions. We therefore hypothesize that the anomaly summarized by Agrawal and Jaffe (2000) and Mueller (2001) with respect to domestic acquisitions will be similar with respect to cross-border mergers.

Other explanations for the negative post-acquisition negative share returns argue that the returns do not reflect the performance of the takeover but instead reflect methodological problems in the measurement of long run returns, "chance" events associated with takeover, and overvaluation of the acquiring firm at the time of acquisition. We evaluate each in turn and assess their relevance to cross-border acquisitions.

In their review of the empirical literature on takeovers, Andrade, Mitchell and Stafford argue that, "given the serious

methodological concerns with the long run empirical literature, we are reluctant to accept the results at face value" (2001, p.14). However, Agrawal and Jaffe (2001) dismiss this explanation because of the finding of negative returns across a very wide range of techniques. If negative domestic returns are simply a methodological error, there is no obvious reason to believe that the method error will be different in cross-border acquisitions. There is no prima facie case why the methodology should be biased in one case or the other. To address this issue, we employ a sample of both domestic and cross-border deals and apply the techniques most recently recommended by Fama (1998), and Lyon et al. (1999).

A third explanation is to accept the negative returns but to argue that they are nothing to do with the acquisition itself but are instead due to chance events (Fama, 1998). As Mueller (2001) has argued, however, "to assume that this dramatic change in the nature of the unexpected information about the acquirer's performance can occur around the time of the mergers and yet be totally independent of them seems hardly plausible" (2001). Moreover, this would not explain why the chance events affect domestic but not cross-border acquisition.

A fourth explanation for the negative returns is that acquirers time their acquisitions when their stock is overvalued. Consequently, following the acquisition there is a devaluation in the acquirer's share price which has nothing to do with the effect of acquisition and would have happened even in the absence of merger. This explanation receives some support from the robust finding above that bids using equity as the method of payment result in significantly negative returns whereas cash bids do not. Fama (1998) argues that equity mergers may simply be part of the seasoned equity offering anomaly, whereby firms that issue equity in general experience negative returns. The relevant question is whether cross-border acquirers are as likely as domestic acquirers

to issue shares when they are overvalued. Relevant evidence is presented by Serra (1997), who examines the long run returns of firms' dual-listing on international exchanges, and finds a significant decline following listing consistent with domestic SEOs. This evidence suggests that cross-border acquirers may be just as likely as domestic acquirers to time their acquisitions when they are overvalued.

In summary, the motives for cross-border acquisitions suggest more potential for shareholder gain than in domestic acquisitions. However, this possibility is offset by potential problems in cross-border acquisitions such as problems of valuation and cultural differences. It is therefore not obvious whether acquirer announcement gains will be greater in cross-border acquisitions compared to domestic acquisitions. Similarly, it is not obvious why the long run returns should be any different in cross-border mergers than they are in domestic mergers. The null hypothesis for both the short and the long-run is therefore that the acquiring firm share returns are no different in cross-border and domestic acquisitions. The one difference we expect is that the greater uncertainty in cross-border acquisitions makes acquisitions more difficult for the stock market to evaluate, and that this leads to a greater *variance* in post-acquisition returns in cross-border acquisitions. We may expect the variance to be lower in countries which have greater disclosure and transparency in financial statements such as the US.

3. Data and methodology

3.1. Data

We examine a sample of domestic and cross-border acquisitions of public and private target companies by U.K. public companies, completed between November 1984 and July 2000. The sample

data are drawn from Acquisitions Monthly, which reports a total of 8786 domestic and 4869 cross-border takeovers by U.K. companies over this time period. Takeovers are defined as occurring when the bidder owns less than 50 per cent of the target's voting shares before the takeover, and increases its ownership to at least 50 per cent as a result of the takeover. We exclude takeovers if the bidder is not public with its share price data held on the Datastream Database. This results in the exclusion of 2619 domestic acquisitions, and 758 cross-border acquisitions. As may be expected when comparing public and private companies, we find that the excluded acquirers are significantly smaller in terms of sales than the non-excluded acquirers. We find no difference in target size between the included and excluded acquisitions, measured either in terms of sales, or bid value.

Many acquisitions involve relatively small targets which may not be expected to have a material effect on the acquirer. For the analysis in this paper, we adopt a materiality constraint and limit our sample to acquisitions in which the relative acquisition value of the target firm is at least 5 per cent of the acquiring firm's market value in the acquisition month (see e.g. Megginson, Morgan and Nail, 2000). We exclude takeovers for which the acquisition value was not reported in Acquisitions Monthly (846 domestic acquisitions, 708 cross-border acquisitions). In these excluded acquisitions, the targets were significantly larger in terms of sales than the remaining targets, as was the case for acquiring firms. We also excluded those takeovers in which the relative size was less than 5 per cent (2679 domestic acquisitions, 2214 cross-border acquisitions). We found that the targets excluded by this technique were significantly smaller than the remaining targets. We also found that the excluded acquirers were significantly larger than the remaining acquirers. This technique therefore excludes some of the acquisitions made by the largest acquiring firms.

Finally, our matching methodology described below requires at least 12 months of share returns prior to the year of acquisition. This criteria resulted in the exclusion of a further 447 domestic and 124 cross-border acquisitions. In this case we found that excluded targets are significantly smaller than remaining targets, whilst remaining acquirers are significantly smaller than the remaining acquirers. This process resulted in a final sample of 2195 domestic acquisitions and 1065 cross-border acquisitions.

Descriptive statistics for the sample are reported in Table 3 below. Panel A reports the annual number of sample acquisitions during 1984-2000. The sample of domestic and cross-border takeovers is disproportionately clustered in the years 1985-89. Of the 2195 domestic takeovers, 1130 took place between 1985-89, whilst 1059 took place between 1990-2000. Similarly, of the 1065 cross-border takeovers, 430 took place between 1985-89, and 629 between 1990-2000. Figure 2 plots the number of acquisitions over time.

Panel B shows the method of payment used in the sample acquisitions. There is a marked difference in the method of payment used in domestic and cross-border deals. The proportion of all cash offers in domestic acquisitions is 27 per cent, which is to be compared with the much larger 67 per cent in cross-border acquisitions. The correlation coefficient between a dummy variable for cross-border acquirers and dummy variables for all cash and all equity offers are 0.32 and –0.15 respectively, both of which are significant at the 1 per cent level.

Panel C shows that the value of the acquisition is on average £79m in domestic deals and £357m in cross-border deals. The difference is statistically significant at the one per cent level. As a result of the selection procedure outlined above, the acquisitions are large in relative terms. Panel D shows that the median transaction represents 15 per cent of the acquirer's pre-announcement market equity in domestic deals and 11 per cent in cross-border deals. We

find using the Mann-Whitney test that the relative size of targets is significantly greater (at the one per cent level) in domestic deals. Panel E reports strong evidence of multiple acquisitions by our sample acquirers. The median acquirer in both domestic and cross-border acquisitions carries out a total of 4 sample acquisitions.

3.2. Computation of abnormal returns

For the computation of acquirer abnormal returns, we calculate buy and hold share returns for the announcement month, and for the 12, 24, and 36 months from the beginning and end of the announcement month. The returns are compared to those of control firms matched on size and prior share price performance.

The selection of a proper benchmark is always problematic when examining long run returns. Lyon, Barber and Tsai (1999) show that differences in the properties of sample and population distributions can create biases and ambiguities in test statistics, and recommend a comparison of sample firms to the general population on the basis of variables such as size, MTBV, prior share price performance and industry. Such a comparison is of particular importance for this study, since acquiring firms may differ from the population in terms of such variables. For example, Mitchell and Stafford (2000) show that bidders tend to have above average market-to-book ratios, whilst Mitchell and Mulherin (1997) show that acquisitions tend to cluster in particular industries. Table 4 reports such a comparison for our sample firms. Panel A shows that acquirers in domestic acquisitions tend to be distributed in the middle size quintiles of all U.K. quoted firms. However, acquirers in cross-border acquisitions are heavily distributed in the larger size quintiles, with 74 per cent being concentrated in the largest two quintiles. The difference in size between domestic and cross-border acquirers is statistically significant at the 1 per cent level. Panel B shows that acquirers experience above average share returns in the 12 months prior to

the year of acquisition. Acquirers in both domestic and cross-border acquisitions are distributed more heavily in the high quintiles, with almost 50 per cent being concentrated in the largest 2 quintiles. Panel C shows that acquirers also differ in terms of MTBV, with cross-border acquirers in particular being distributed amongst the largest MTBV quintiles.

Panel D classifies acquirers according to certain industry groupings, formed from 2 digit SIC codes. Manufacturing industries are more acquisition intensive than service industries in our sample. This is particularly so for cross-border acquisitions. The chemicals and building materials industry, engineering, other manufacturing, and business services account for the highest proportion of acquirers especially in cross-border acquisitions. The correlation coefficient between a dummy variable for whether the takeover is foreign or domestic, and dummy variables for the different industries, shows a significantly positive correlation between cross-border acquisitions and industry groupings 2, 3 and 8, whilst a significantly negative correlation for industry groupings 5, 6, 7 and 9.

Panel D also shows that horizontal acquisitions are significantly (at 1 per cent level) more prevalent in cross-border acquisitions. We define horizontal acquisitions as those involving firms operating in the same 2 digit SIC code.

The benchmark we use for this study is size and prior performance. Although earlier literature suggested that cross sectional returns are better explained by size and MTBV, Lyon, Barber and Tsai (1999) recommend control measures formed on the basis of prior performance given their finding of negative bias in 3-5 year returns for firms with positive abnormal pre-event returns. Recent analyses of long-run performance of acquiring firms in domestic U.K. mergers (Baker and Limmack, 2001) and cross-border US mergers

(Black et al., 2001) form control portfolios based on prior performance as well as attributes such as size.

Sample firm share returns are measured relative to control firms matched on size and prior performance, based on the methodology suggested by Barber and Lyon (1997). The control firms are selected by first dividing all U.K. stocks listed on Datastream into ten equal sized portfolios based on their market values at the beginning of each calendar year. Each sample firm is then matched with the firm from its size portfolio which has the closest prior 12 month buy-and-hold share return. This procedure is repeated for each post-takeover calendar year using a fresh grouping by size decile for the year in question. If a control firm dies within the year, we replace the returns from the month of exit with the returns of the next nearest firm in terms of share returns within the particular size decile at the beginning of the year in which the exit took place. If this control firm subsequently dies then we use the next closest firm, and so on.

We adopt the control firm approach because it avoids the skewness and rebalancing biases inherent in a reference portfolio. The rebalancing bias arises because the compound returns of a reference portfolio, such as an equally weighted market index, are typically calculated assuming periodic rebalancing. The skewness bias arises because the distribution of long run abnormal stock returns is positively skewed. However, our approach is susceptible to the new listing bias which arises because some of our control firms begin trading subsequent to the announcement month. Generally, the new listing bias creates a positive bias in test statistics, because newly listed firms tend to underperform. The underlying parameter of interest in this study is the long-run performance of sample firms, and we therefore employ buy and hold returns rather than cumulative average returns which are a biased measure of long run returns (Barber and Lyon, 1997). We utilize the three year time horizon used by both Rau and

Vermaelen (1998) rather than the five year horizon used by Loughran and Vijh (1997), to maximize the number of events that we can study. We report mean and median buy-and-hold returns, and measure statistical significance using a standard *t*-test and the Wilcoxon Matched Pair Signed Ranks test.

4. Main results

4.1. Univariate analyses

We start our analysis by examining the announcement and post-acquisition returns as a function of whether the acquisition is domestic or cross-border. Table 5 reports abnormal returns for the sample of all acquisitions, and the subsamples of domestic and cross-border acquisitions. Panel A shows that the mean abnormal return to all acquirers during the announcement month is 1.22 per cent, which is statistically significant at the one per cent level. The median abnormal return is 0.41 per cent, which is also statistically significant at the one per cent level. We find that 51.75 per cent of acquirers experience higher announcement returns than their control firms, which is significant at the one per cent level using the Sign Test. The strong conclusion therefore is that acquiring firms experience significantly positive share returns over the announcement month.

Panels B and C split the sample into domestic and cross-border acquisitions. The announcement returns are similar for the two types of bid. Both experience significantly positive returns using the mean or median abnormal performance measures. Panel D reports the differences in the mean and median abnormal returns to the two samples. For the announcement returns, both differences are less than 0.1 per cent and statistically insignificant.

Table 5 also reports the abnormal returns over the three years following the announcement month. Panel A shows that the sample

of all acquirers experience significantly negative average returns in years 1 and 2 of –2.6 per cent and –5 per cent respectively. The median abnormal returns are also significantly negative. There is no evidence of abnormal returns after the second year. In the third post-acquisition year the average return is –1.66 and statistically insignificant. In the fourth and fifth post-bid years, we found no evidence of significant abnormal returns. It appears that acquirers in takeovers as a whole experience a significant deterioration after takeover, and that this deterioration takes place in the 24 month period following announcement. This is consistent with Gregory (1997). Panel A also reports the buy-and-hold abnormal return from the announcement month to the 24th post-acquisition month. The return is a significantly negative -4.7 per cent, indicating that the gains experienced by acquirer shareholders at announcement are swamped by the negative post-takeover returns.

Panels B and C show the long run returns to domestic and cross-border acquirers respectively. The sample of domestic acquirers experience mean abnormal returns of -4.9 per cent in year 1 and -6 per cent in year 2. Both returns are statistically significant at the one per cent level. Median abnormal returns are slightly lower but also statistically significant. The buy and hold return for the two years post-bid is significant at the 1 per cent level, as is the three year return. The evidence in Panel B is consistent with prior studies on domestic acquisitions such as Gregory (1997). However, the performance of acquirers in cross-border acquisitions reported in Panel C is markedly different. The abnormal return in year 1 following takeover is insignificantly positive. In year two the mean abnormal return is negative and marginally significant. However, the median abnormal return is not different from zero and the proportion of positive returns is not significantly different from the expected proportion of 0.5. In year 3 the abnormal returns are not significantly different from zero. The returns for the months 1-24 are insignificantly positive. We therefore find very important differences in the post-acquisition performance of domestic and

cross-border acquisitions. The former are significantly negative, while the latter are neutral. Panel D tests for differences between the two samples. The difference in long run returns is significantly negative at the one per cent level in year 1, and negative although statistically insignificant in year 2. The difference in returns over the 24 month post-bid period as a whole is significant both in terms of median and mean returns, being -11.03 and -6 per cent respectively. The results clearly indicate that shareholders in domestic acquisitions suffer significantly more negative long run excess returns than do shareholders in cross-border acquisitions, and that this is driven by the performance in the first year after acquisition. Figure 3 plots the average BHAR over the 40 months from three months prior to the acquisition to 36 months following the announcement month.

We test for the robustness of our results in various ways. A potential statistical problem that arises with our dataset is that of cross sectional dependence in returns which can inflate test statistics, because the number of sample firms overstates the number of independent observations. To eliminate the problem of calendar clustering, we employ a calendar-time portfolio approach as advocated by Lyon, Barber and Tsai (1999). Our results (not reported) show that for domestic takeovers, the monthly calendar-time portfolio abnormal return is significantly negative, whilst it is insignificant in cross-border mergers. A related sample problem is that of overlapping abnormal returns because of the high number of multiple sample acquirers (1614 sample acquisitions occur less than 3 years following a previous acquisition by the same sample firm). We removed the overlapping cases (following Loughran and Vijh, 1997) and found no difference to our results. We also excluded all those acquisitions which were preceded by, or followed by another acquisition within 36 months either side of the acquisition month. Our results were unchanged by this exclusion. Finally, we carried out our analysis excluding acquirers which did not have 24 months of post-acquisition returns, either because they

died beforehand or because the takeover took place after July 1999. Our results are unchanged by the exclusion of such acquirers.

4.12. Subsample analyses

The literature on post-acquisition domestic performance shows that certain variables have an impact on post-acquisition performance. In this section we investigate the impact of these variables on performance in domestic and cross-border acquisitions. In particular, we are interested in whether these factors also affect cross-border acquisition performance and whether the superior performance of cross-border acquisitions is due to a correlation with one these characteristics rather than the cross-border nature of the acquisition per se.

4.121. Time

Previous studies have shown that post-acquisition returns can differ according to the time period of the acquisition (Agarawl and Jaffe, 2000; Higson and Elliot, 1998). In particular, returns appear to be more negative in periods of high takeover activity. Our sample of cross-border acquisitions is less heavily concentrated in the 1980s than the sample of domestic acquisitions. We therefore investigate the impact of time on acquisition performance by splitting the two samples into those that occurred from 1984-89 and those that occurred between 1990-2000.

The results are reported in Table 6, and do show some evidence of higher returns to acquisitions completed in the 1990s. For domestic acquisitions consummated in the 1980s, mean returns are significantly negative and some 3 per cent lower than in the 1990s. However, the difference is not statistically significant and the returns in the 1990s are still significantly negative, albeit less so. In cross-border acquisitions the difference in returns for the two time

periods is more marked, being roughly 10 per cent for the 24 months following the announcement month and statistically significant at the 10 per cent level. There is therefore some evidence that cross-border acquisition performance has improved in the 1990s compared to the 1980s. However, there is little evidence that time can explain the performance difference between domestic and cross-border acquisitions. In neither time period is there evidence of significantly negative post-acquisition returns in cross-border acquisitions. Panel E shows that the difference between domestic and cross-border acquisition performance in the 1990s is statistically significant at the 1 per cent level. However, the difference for the 1980s is not significant at the 5 per cent level. This suggests that the difference between domestic and cross-border acquisitions has a temporal element to it. However, there is little evidence that the superior performance of cross-border acquisitions simply reflects a higher density of cross-border deals in well performing acquisition years. The 12 month post-acquisition abnormal returns for each year from 1984-2000 are plotted in Figure 4, whilst the variances for each year are plotted in Figure 5. Figure 5 shows no evidence that those years experiencing the most negative abnormal returns also experience relatively large variances in abnormal returns.

4.122. Industry effect

In Table 7, we report post-acquisition returns for each of the nine industry groupings described in Table 4, and summary results are graphically shown in Figure 6. Panel A reports the mean abnormal returns of domestic acquirers across the different groupings. Negative returns for the 24-month period are evident in seven of the nine industries, significantly negative in 5 industries. In contrast, Panel B reports that for cross-border acquirers, returns are significantly negative in three industries, and significantly positive in one industry. The most striking difference is that industries 3, 4 and 5 and 8 are the industries where cross-border mergers benefit

acquirers. In general they are also most damaging (in case of business services beneficial) for domestic acquirers. The differences between cross-border and domestic mergers in industries 3 and 4 significant in either months, 1-12, 1-24, or 1-36. Alternatively, industry groupings seven and nine are marked by severe underperformance in both types of bid. Since the differences between cross-border and domestic mergers are only significant in at most two industries for any time period, it is possible that the overall difference is the result of domestic acquirers being more heavily located in industries which are predisposed to low returns.

4.123. Method of payment

Table 3 showed that a high proportion of cross-border acquisitions involve cash as the method of payment, compared to domestic acquisitions. Since cash bids have been shown to result in positive post-takeover returns (Loughran and Vijh, 1997), the difference in the post-acquisition performance of domestic and cross-border acquisitions results may be driven by a method of payment effect. In Table 8, we investigate this by comparing all cash acquisitions with acquisitions using other methods of payment. Panel A shows that domestic acquisitions involving both cash and the residual other payment methods result in significantly negative returns over the 24 month post-acquisition period [ii]. The differences between the two types of acquisition are not statistically significant. In Panels C and D, there is weak evidence that cash cross-border deals do better than cross-border deals involving other payment methods. The 24 month mean return is insignificantly positive for the former bid type, whilst very close to zero for the latter bid type. However, as shown in Panel E, the difference between cash and non-cash bids is not statistically significant.

Panel E shows that cash cross-border deals perform significantly better than cash domestic acquisitions in the 24-month post-bid

period. The difference in both mean and median return is greater than 10 per cent and significant at the 5 per cent level. In terms of non-cash acquisitions, the difference between cross-border and domestic deals is economically important at 6.5 per cent but statistically insignificant. These results suggest that the superior post-acquisition performance of cross-border deals is not the result of cash being a more prevalent method of payment. Instead, the superior performance would appear to hold across the different payment types.

4.124. Relative size

Previous studies have on the whole not shown that the post-acquisition negative returns are related to the relative size of the acquisition (Agrawal and Jaffe, 2000). However, since the relative size of the target is significantly greater in domestic acquisitions, we investigate the impact of relative size on our results. The results are shown in Table 9, where the samples are divided according to whether the relative size is greater or less than the median relative size for the particular sample. Panels A and B show that in domestic acquisitions, where the relative size is greater than the median, abnormal returns are quite similar to those in which the relative size is less than the median. The post-takeover returns are significantly negative for both types of acquisition.

In the sample of cross-border acquisitions, we find little difference between those acquisitions involving large or small relative size targets. Both result in insignificant returns, although returns are slightly higher for the lower relative size subsample. The are no significant differences between these two subsamples.

Panel E reports the differences between domestic and cross-border acquisitions in terms of the relative size subsamples. In terms of the 24-month returns, cross-border acquirers experience significantly higher returns for both subsamples, although the

difference is larger and more robust for the small relative size sample. These results appear to suggest that the difference between cross-border acquirers and domestic acquirers is not related to the relative sizes of the two types of acquisition. There is some evidence that relatively large targets worsen the outcome more for cross border than for domestic (relative to outcomes for relatively small targets).

4.125. Multiple acquirers

Baker and Limmack (2001) show that multiple acquirers experience significantly higher returns than single acquirers, and that the pattern of negative returns is confined to the latter type of acquirer. We define multiple acquires as those that carry out more than one sample acquisition, and single acquirers which carry out just one acquisition. The returns to these different types of acquirer are reported in Table 10.

Panels A and B show that both single and multiple acquirers in domestic acquisitions experience significantly negative post-acquisition returns and that there are no significant differences between them. A comparison of Panels C and D reveals that in the case of cross-border acquisitions, single acquirers earn negative returns of –3.95 per cent in 24 months starting at the beginning of the announcement month, in contrast with the 3.8 per cent earned by multiple acquirers. However, the difference is not statistically significant. The final two rows of Panel E show that for the sample of multiple acquirers, cross-border acquisitions result in significantly higher returns of some 10 per cent compared to domestic acquisitions. Similarly, rows 5 and 6 show that single acquirers in cross-border deals out perform single acquirers in domestic deals by 10 per cent on average, although the difference is statistically insignificant.

The above results strongly suggest that the superior performance of cross-border acquisitions is not the result of greater acquirer experience on the part of cross-border acquirers. Instead, we have shown that experienced acquirers perform much better in cross-border deals than experienced acquirers in domestic deals, and that this is largely a result of differences in the first year.

4.126. Industrial direction of the acquisition

Many recent empirical studies have documented significant wealth gains accruing to shareholders of firms engaging in focus-increasing activities and wealth losses suffered by stockholders of firms engaging in focus decreasing, or diversifying activities. Healy, Palepu and Ruback (1992) find that mergers involving firms with highly overlapping businesses significantly outperform those involving firms with few overlapping businesses, and Maquiera, Megginson and Nail (1998) show that acquiring stockholders in non-conglomerate mergers experience wealth gains while those in conglomerate mergers experience wealth losses. Similar results are found by Megginson, Morgan and Nail (2000). Since a relatively large proportion of cross-border acquisitions are horizontal in nature, the closer industrial relatedness of cross-border mergers may explain their relative success.

We investigate this in Table 11. In domestic acquisitions we find no significant difference between the long run performance of horizontal and non-horizontal deals. Both result in significantly negative abnormal returns over the 24-month period following announcement. In cross-border acquisitions, there is an economically important difference between horizontal and non-horizontal deals. The former results in marginally significant positive returns whereas the latter result in mildly negative returns. The difference in average returns is only marginally significant. We therefore find little evidence that acquirers who diversify abroad destroy shareholder wealth. This is in contrast to domestic

non-horizontal acquisitions which destroy value, and the difference between cross-border non-horizontal and domestic non-horizontal acquisitions is statistically significant. Table 11 also shows that the difference between cross-border horizontal and domestic horizontal acquisitions is over 13 per cent and statistically significant. Once again, the difference is driven by the first year performance. We conclude that the difference in performance between cross-border and domestic acquisitions is unlikely to be the result of the industrial relatedness of the acquirer and target company.

4.127. MTBV

Another factor that we control for in our analysis is the MTBV of the acquiring firm. Rau and Vermaelen (1997) show that high MTBV (glamour) bidders experience significantly negative post-acquisition returns whereas low MTBV (value) bidders experience positive returns. Furthermore, as mentioned above, Fama and French (1992) show that stock returns are negatively related to MTBV whilst Lyon, Barber, and Tsai (1999) show that when sample firms differ from the population in terms of MTBV, bias inferences can result when such factors are not controlled for. It was shown in Table 4 that sample bidders are heavily concentrated in the medium to high MTBV deciles, and since our matching procedure does not control for MTBV, the possibility exists that the post-acquisition returns have been biased downwards by not controlling for MTBV.

We examine the impact of MTBV using a subset of acquirers, which are classified as either glamour or value. Glamour acquirers are defined as those located in the top three deciles of MTBV firms at the beginning of the takeover year, whilst value acquirers are those located in the bottom three deciles. The results in Table 12 show that glamour acquirers do underperform value acquirers in

both domestic and cross-border acquisitions. However, the differences are not statistically significant. Since a larger proportion of cross-border acquirers are glamour stocks, it is expected that any bias is expected to lower cross-border acquisition performance relative to domestic acquisition performance. As a result, it is very unlikely that the difference between cross-border and domestic acquisition performance is the result of not controlling for MTBV. Panel E shows that the significant differences in returns between domestic and cross-border acquirers holds for both subsets of value and glamour bidders.

4.13. Summary of findings

In summary, the evidence presented in this section indicates that both domestic and cross-border takeovers create significant value for acquirer shareholders at announcement. Over the long run post-takeover period, cross-border takeovers result in zero abnormal returns whilst domestic takeovers result in significantly negative returns. The negative returns in domestic acquisitions occur within the first two post-takeover years, and there are no significantly negative returns after this. The difference in the 36 month post-acquisition returns between domestic and cross-border acquisitions is statistically significant. However, this is driven by the difference in returns in the first 12 months. The differences in years 2 and 3 are not significantly different. The domestic evidence is consistent with prior studies such as Gregory (1997). However, the cross-border evidence is inconsistent with prior U.K. studies using different event study methodology, which found evidence of long run underperformance (Conn and Connell, 1990). The evidence is also inconsistent with a recent US study (Black et al., 2001) which uses similar methodology to us and finds negative returns in cross-border US acquisitions.

We investigate whether the difference between domestic and cross-border acquisitions holds after forming sub-samples based upon well known control variables. Although these variables have differentiated performance in domestic acquisitions in previous studies, they do not appear to have a significant effect on cross-border acquisition returns. We find no evidence that cross-border deals involving all cash offers perform significantly better than cross-border acquisitions using other payment methods. Additionally, the relative size of the target has very little effect on cross-border performance. Multiple acquirers in cross-border acquisitions do not perform significantly better than single acquirers. There is some evidence that horizontal cross-border deals result in higher returns than non-horizontal ones. However, the difference is not statistically significant at conventional levels. Consistent with the domestic study of Rau and Vermaelen (1998) we find weak evidence that value acquirers perform better than glamour acquirers in cross-border acquisitions. However, this could reflect the fact that we do not control for MTBV in our counterfactual measure. The two variables having the most impact on cross-border acquisition performance are time and industry. We find that cross-border acquisitions perform significantly better if they were completed in the 1990s rather than the 1980s. The returns for the 1990s are positive and marginally significant. However, we find on the whole that the statistical difference between domestic and cross-border acquisitions tends to hold across these different subsamples. Consequently, it appears unlikely that the difference in returns between domestic and cross-border acquisitions could be explained by these control variables. Perhaps the most notable exception is that of industry. Cross-border long run returns are heavily dependent upon the industry of the acquirer, and when domestic and cross-border acquirer performance is compared within industries, few significant differences between domestic and cross-border acquisitions remain. We now develop these issues further within a multivariate framework.

4.2. Multivariate analyses

The univariate tests do not show whether the cross-border nature of acquisitions is a significant determinant of post-acquisition returns in the presence of the other variables taken together. We test for such effects using the full sample of 3260 acquisitions and the reduced sample of 2260 for which we know the method of payment, using multiple regression analysis in Table 13.

In Panel A, the dependent variable is the abnormal return for the announcement month, whereas in Panels B, C and D it is the abnormal return for periods 1-12, 1-24, and 1-36 respectively. In each Panel we report results for the full sample of all acquirers and the subsamples of domestic and cross-border acquisitions separately. The independent variables are a foreign bid dummy (1 for cross-border and 0 for domestic), a cash payment dummy (1 for all cash payment and 0 for other payment methods), a relative size dummy (1 for relative size greater than the median relative size and 0 for less than the median), a multiple acquirer dummy (1 for multiple acquirers and 0 for single acquirers), a horizontal dummy (1 for horizontal acquisitions and 0 for non-horizontal acquisitions), and the MTBV of the acquirer at the month announcement. We also include 10 industry dummies (one for each of the industry groupings described in Table 4) and 16 calendar year dummy variables (one for each year of acquisition from 1984 to 2000).

Panel A shows the effect of these variables on the announcement month returns. For the domestic sample, the only significant coefficient is RELSIZE, which has a negative impact. Whether the acquirer is a multiple bidder or not, whether the deal is horizontal, and the acquirer's MTBV, have no significant effect on the announcement month share returns. The all cash dummy has a positive impact, consistent with previous studies, however it is

statistically insignificant. For cross-border acquisitions, the only significant variable is the horizontal dummy which is significant at the 5 per cent level. However, the coefficient is not significant once the method of payment is included.

For the sample of all takeovers, the FOREIGN dummy has no significant impact on announcement returns. This suggests that the market does not anticipate any difference in performance through domestic and cross-border acquisitions. The only consistently significant explanatory variable in the full sample announcement returns regression is the RELSIZE, which is significantly negative. This suggests that the stock market downgrades acquirers who acquire relatively large companies, possibly anticipating problems of indigestion, or viewing such bids in particular as managerial or hubris motivated.

In Panel B the dependent variable is the post-acquisition abnormal return measured from the end of the announcement month to 12 months afterwards. For the domestic sample results, the dummy MULTIPLE has a positive effect on long run returns, which is insignificant. The horizontal bid dummy has a neutral impact, which is consistent with the results above. The MTBV dummy has a positive (insignificant) coefficient, whilst RELSIZE has a significantly negative impact. The ALLCASH dummy has a positive effect but it is statistically insignificant.

In columns 4-5 we report the same regressions for the sample of cross-border acquisitions. The dummy MULTIPLE is positive as in the domestic regression and statistically significant at the 10 per cent level, although only for reduced sample. The horizontal dummy is positive but insignificant. RELSIZE is negative, yet statistically insignificant. MTBV has a negative sign which is significant only when the reduced sample is employed. The dummy variable for all cash offers has a positive impact but is insignificant. It appears that in both the domestic and cross-border

samples, the control variables have the expected effects but do not explain much of the cross sectional variation in acquirer share returns.

In columns 6-7, we report the 12 month post-acquisition returns to all takeovers and include a dummy according to whether the acquisition was cross-border or not. In the regression for the full sample, the FOREIGN dummy has a coefficient of 0.0485 and is statistically significant at the 5 per cent level. The coefficient for MULTIPLE is significantly positive, whilst the coefficient for relative size is significantly negative. The other coefficients are all insignificant. When we run this regression for the reduced sample of acquisitions for which we have method of payment information, we find that the coefficient for FOREIGN is only significant at the 10 per cent level. This suggests that part of the difference can be explained by the fact that cash offers are more prevalent in cross-border acquisitions.

Panels C and D reveal that the significance of the FOREIGN dummy is reduced as the length of time increases. For example, when we use the 24 month abnormal return, although the FOREIGN dummy is always significant for the full sample regressions, it is not significant for the reduced sample regression. This result is not surprising since all the abnormal returns have been shown to occur within the 12 months of the announcement month. It therefore appears that our results are dependent on the length of the estimation period. However, we conclude that the regression results confirm the importance of cross-border acquisitions in determining acquisition performance, in the presence of other variables. It seems that cross-border acquirers perform better than domestic acquisitions and that this holds after controlling for a wide range of variables shown to impact domestic acquisition performance.

To test the robustness of these results we employ robust regression techniques. The results (not reported) show that when all the explanatory variables are included for both the full and reduced samples, the coefficient for FOREIGN is no longer statistically significant for months 1-12, as it is in the normal OLS regression. However, when the industry dummy variables are excluded, the coefficient for FOREIGN is statistically significant for months 1-12, and 1-24. However, when the industry dummies are included, the coefficient becomes insignificant. This is the case for the full sample excluding the ALLCASH dummy, and also for the reduced sample including this dummy. Similarly, excluding all the explanatory variables except the industry dummies results in FOREIGN being statistically insignificant for each time period. It appears that the superior relationship of cross-border acquisitions is not robust to the inclusion of industry effects.

5. Cross-border post-acquisition returns by target country

In this section we examine whether the post-acquisition returns in cross-border acquisitions differs according to the country of the target company. We divide the sample of cross-border acquisitions into those carried out in America, other English speaking countries (Eire, Australia, New Zealand, Canada, Hong Kong), all other European countries, and the rest of the world. The number of acquisitions in these four categories are 570, 90, 380 and 21 respectively.

The univariate results are reported in Table 14. The announcement returns to bidders are significantly positive for the acquisitions of European targets, yet insignificantly positive for the other categories. Panel E shows that the difference between the returns to bidders taking over European and US targets is significant, but not between the acquisition of European targets and the other categories. There is thus some evidence that the market expects acquisitions of European targets to be more value creative than

other acquisitions. It appears that the above finding of significant announcement gains for the sample of all cross-border acquirers is driven primarily by the acquisitions of European targets.

In the post-acquisition period 1-12, bidder returns are no different from zero in acquisitions of US targets, European targets and targets from the rest of the world. However, for acquisitions of English speaking targets, bidder returns are significantly positive. In the months 13-24, returns are negative for all categories except rest of the world targets, for whom the acquirers experience large significantly negative returns. In months 25-36, acquirers of European targets experience significantly negative returns whereas other acquirers experience returns not significantly different from zero. When considering returns over the periods 1-24, or 1-36 months, there is no evidence of significant under or over performance for acquirers in any of the categories. Although the negative returns to bidders taking over targets from the rest of the world are very large at about –30 per cent, the returns are not statistically significant. The post-acquisition returns to acquirers of US targets, English speaking targets, and European targets, are not significantly different from one another. However, the 24 month returns are significantly higher for each of these acquirer types than the returns to acquirers of targets from the rest of the world. However, it should be noted that the sample size for this subset of acquisitions is extremely small.

Table 14 shows that the variance in bidder post-acquisition returns is smallest in acquisitions of US targets, becomes larger for acquisitions of English speaking targets, larger still for European targets, and largest of all for targets from the rest of the world. However, Panel E shows that the differences in variances between the different categories are not on the whole statistically significant.

6. Conclusion

Using a methodology robust to the recent criticisms of long run event study methodology, we find that domestic U.K. acquisitions have a negative impact on long run share returns, consistent with previous studies for the U.K. and US. The negative returns occur in the first two years following the acquisition. However, in cross-border acquisitions we find no evidence of post-acquisition negative returns. In this type of acquisition we report significant announcement returns and neutral post-takeover returns. The post-takeover returns are significantly different from the returns earned by domestic acquirers. This difference is driven by returns in the first post-takeover year. In years 2 and 3, there is no difference in the returns earned by domestic and cross-border acquirers. These long run results for cross-border takeovers stand in contrast to the results of Conn and Connell (1990), and Black et al. (2001), who find that such acquisitions experience significantly negative post-acquisition returns.

We investigate whether the difference between domestic and cross-border post-acquisition holds in the presence of other factors which have been shown to be important in a domestic setting. Most variables such as acquirer experience, method of payment, and relative size do not have a significant impact on performance in cross-border acquisitions. However, there is an important industry effect, and the performance of cross-border acquisitions depends significantly on the industry of the acquiring company. Consistent with previous studies on domestic acquisitions, post-acquisition returns in cross-border acquisitions are dependent upon the time period in which the acquisition takes place. Cross-border acquisitions carried out in the 1990s result in significantly higher post-acquisition returns than those carried out in the 1980s. When we control for these other variables in a multivariate OLS framework, we find that the difference between domestic and cross-border acquisitions is only weakly significant for the 12

month period following acquisition. Furthermore, the difference is no longer significant using robust regression techniques.

Explanations for the poor performance in domestic acquisitions have included agency problems on the part of acquiring management. If indeed this is the case it is not immediately obvious why such motives should be absent in cross-border acquisitions. Another explanation is that acquiring firms are overvalued and that the post-acquisition returns reflect a market correction rather than a reflection of takeover performance. Once again, it is not obvious why this should be the case in domestic acquisitions but not cross-border acquisitions. An alternative explanation is that motives for cross-border acquisitions are more easily realized than those in domestic acquisitions. Motives such as internalization may reap higher gains than the value increasing motives for domestic acquisitions. Consequently, there may be no need for the stock market to revise downward its valuation of cross-border acquirers in the post-acquisition period. In order to examine this hypothesis, future work should quantify as many of the cross-border motives as possible and assess their relative importance in the explanation of post-acquisition performance.

Future work should aslo test the sensitivity of post-acquisition performance in cross-border acquisitions to different long run event study methodologies.

Notes

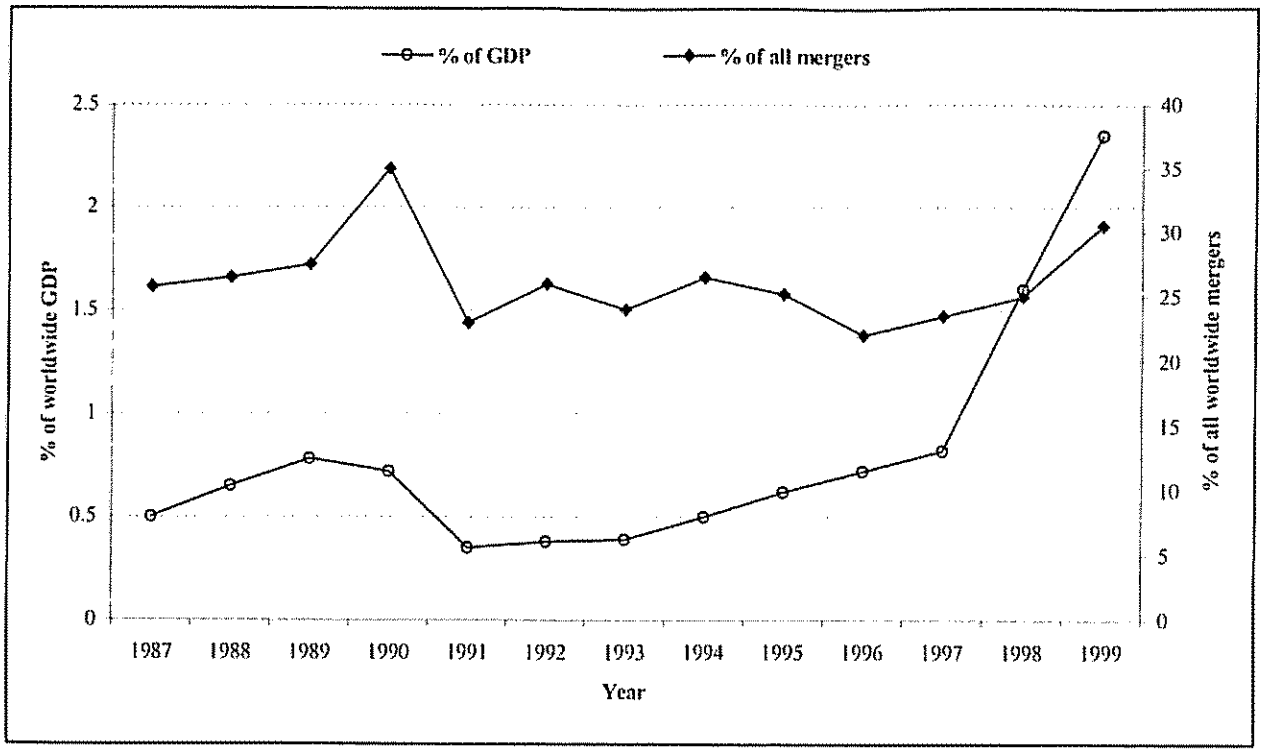
1 An example is valuation of the target company. Since a targets financial statements will have been prepared under the accounting rules of its home country, foreign bidders are forced to acclimate themselves to this issue when preparing their offers. There is evidence that such adjustments are very difficult to make (Black et al., 2001). Therefore, we may expect the variance of valuations to increase in cross-border acquisitions.

[2] However, separate analysis reveals that only cash acquisitions of private targets result in significantly negative returns. Cash acquisitions of public acquisitions result in neutral post-acquisition returns.

FIGURES AND TABLES

Figure 1

Cross-border mergers as a percentage of all mergers in the world (domestic and cross-border), and as a percentage of worldwide GDP, 1987-1999



Source: United Nations Conference on Trade and Development (UNCTAD), 2000.

Figure 2

The number of domestic and cross-border acquisitions in the sample

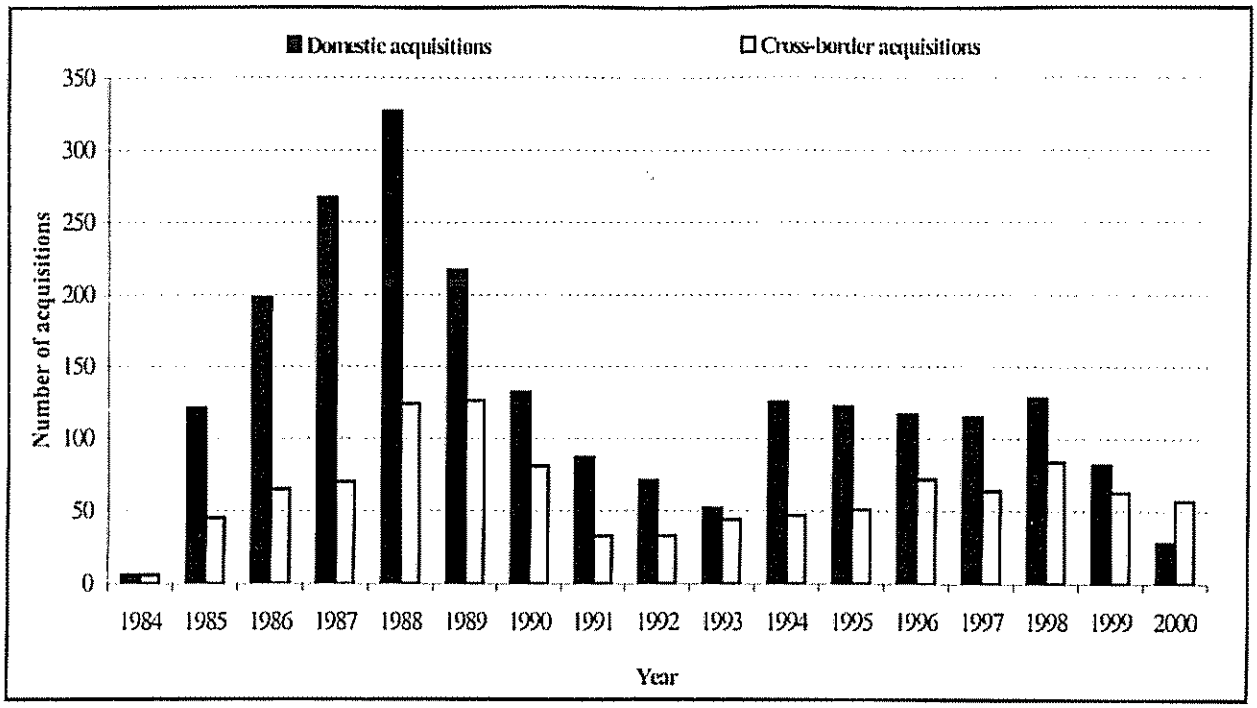


Figure 3

The 36 month post-takeover mean buy-and-hold share returns of domestic and cross-border takeovers

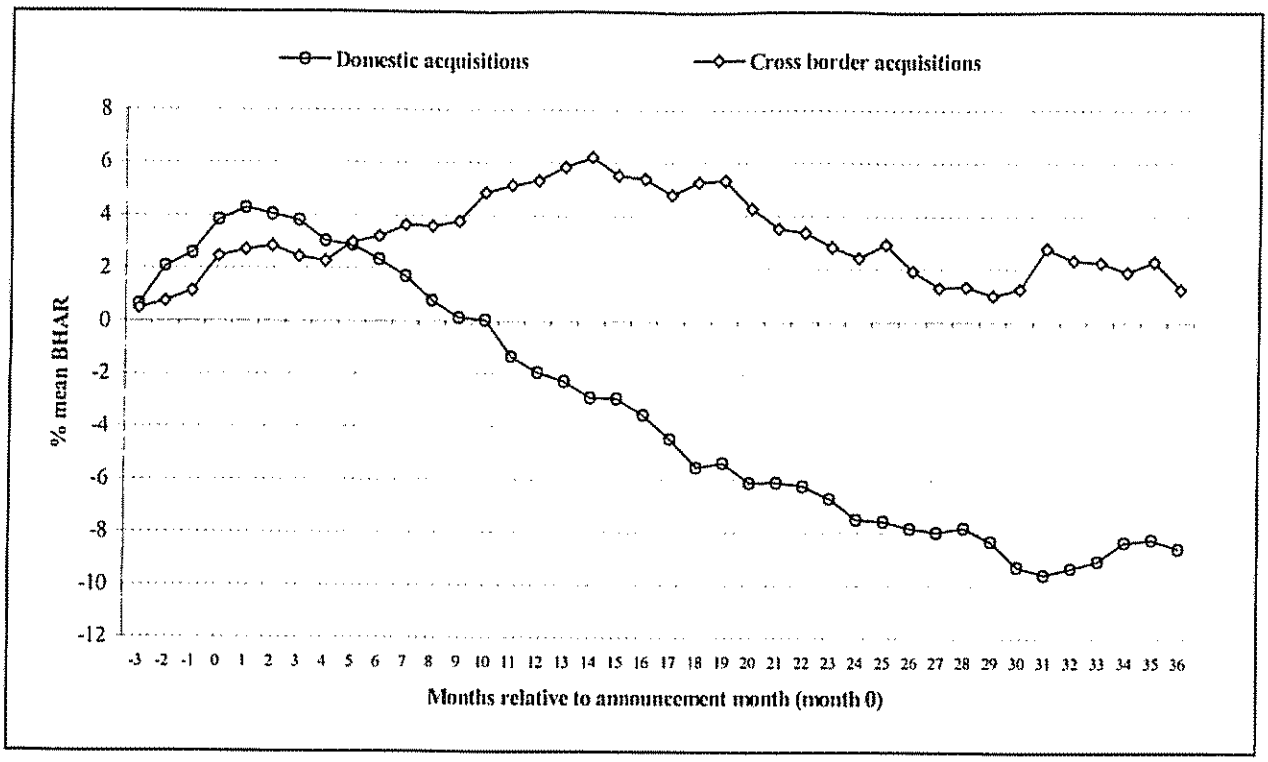


Figure 4

The 12 month post-takeover share returns of domestic and cross-border takeovers according to takeover year

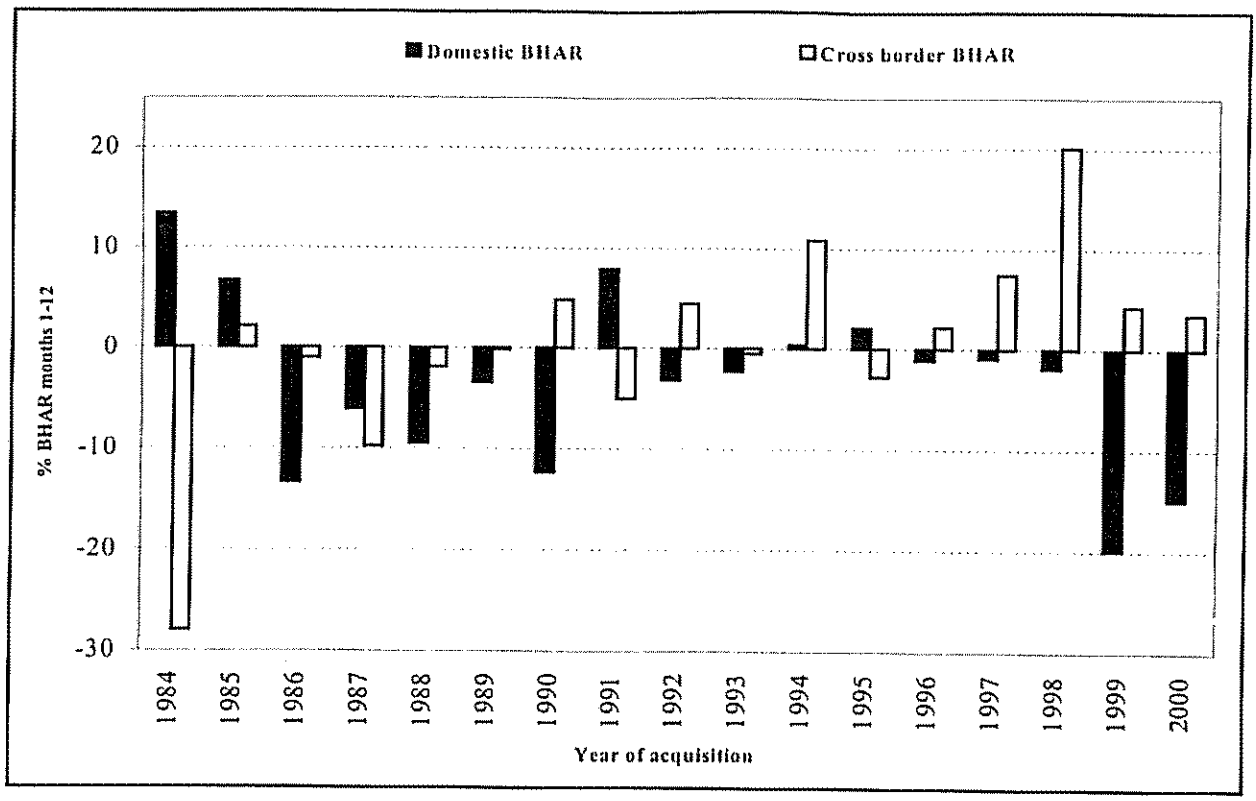


Figure 5

The 12 month post-takeover share return variance of domestic and cross-border takeovers according to takeover year

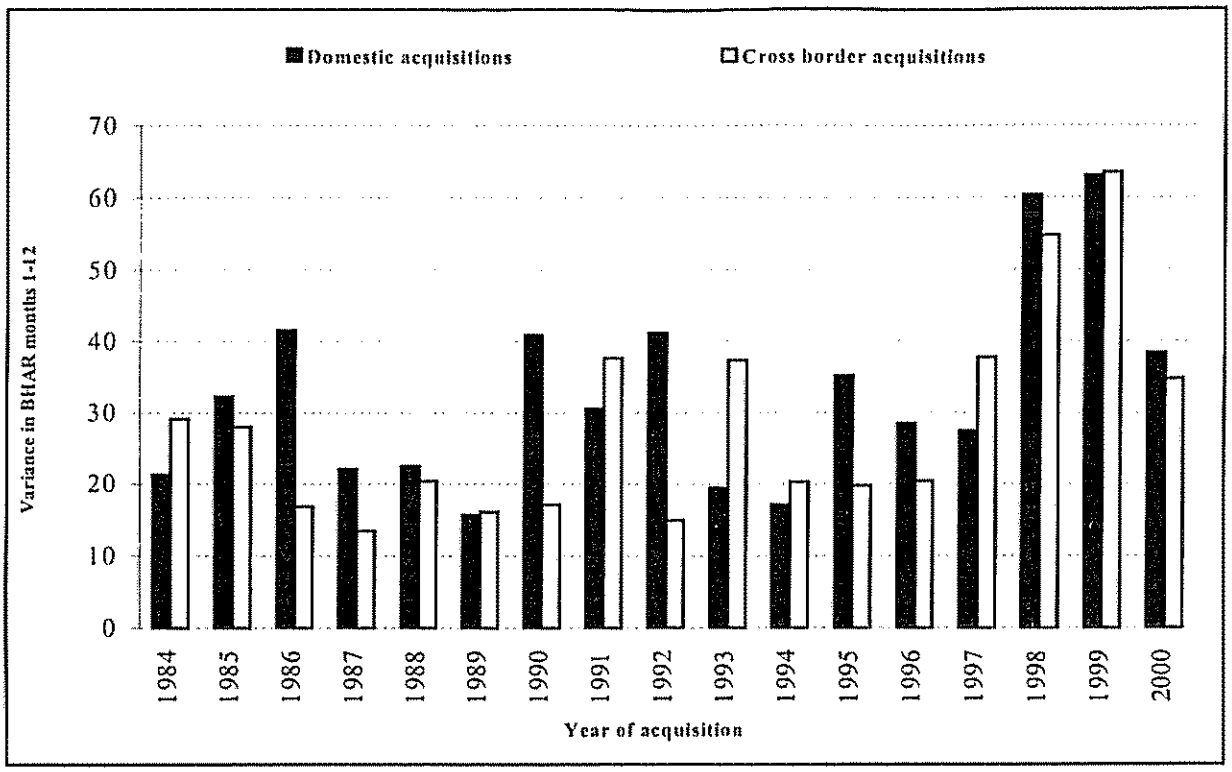


Figure 6

The 12 month post-takeover share returns of domestic and cross-border takeovers by acquirer industry

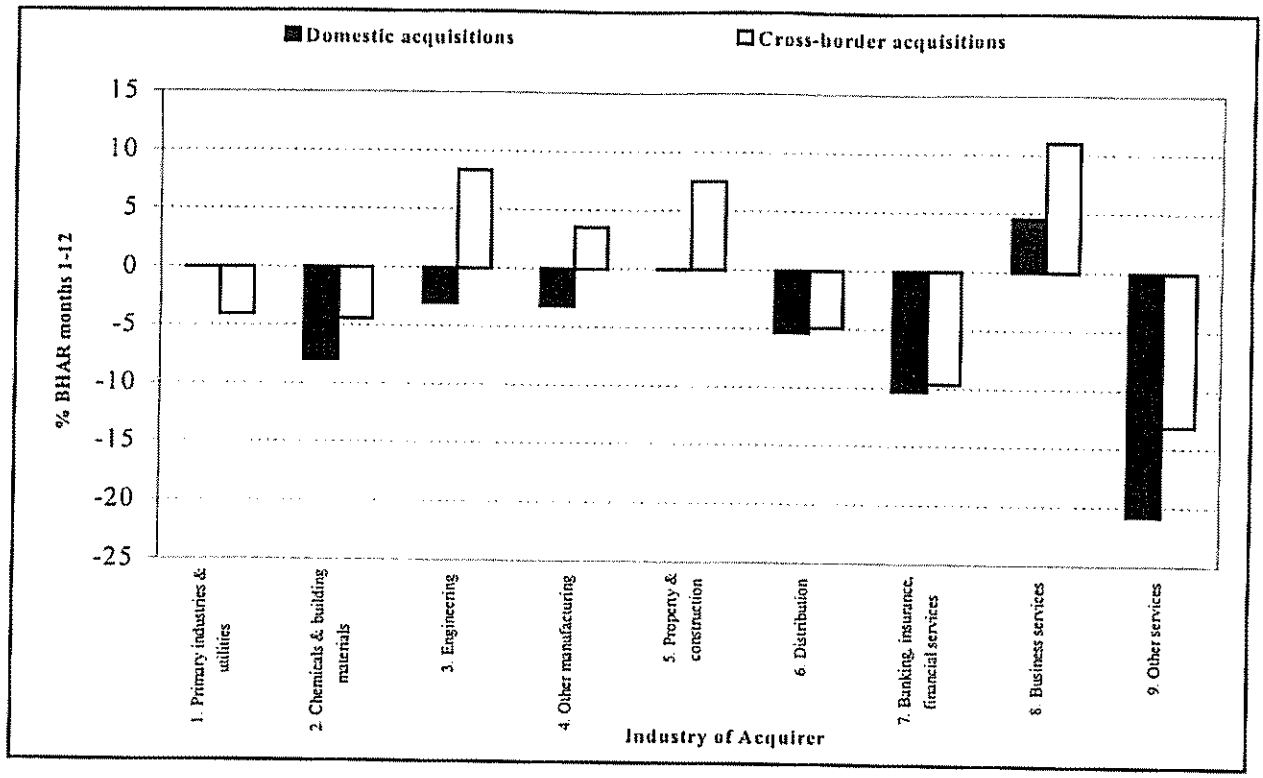


Table 1

Cumulative abnormal returns (CAR) for acquiring firms in international mergers from various studies, along with country of targets, date and size of sample, and model used to estimate normal returns.

Author(s)	Country(s) of Target	Sample dates & size	Model & interval	CAR short-run [a]	CAR long-run [b]
Panel A: US acquiring firms only					
Black et al., (2001)	Multiple	1985-95 360 firms	Market Daily	0.15*	
Cakici et al., (1996)	Multiple	1983-92 112 firms	Market Daily	0.28	
Conn-Connell (1990)	U.K.	1971-80 35 firms	Market Daily	-2.53* to 10.41*	-11.49* to 11.37* (+12)
Doukas (1995)	Multiple	1975-89 463 firms	Market Daily	0.41* (q>1) -0.18 (q<1)	
Doukas-Travlos (1988)	Multiple	1975-83 301 firms	Market Daily	0.08	
Eckbo-Thorburn (2000)	Canada	1964-83 394 firms	Market Monthly	0.22	-3.72* +1,+12 months
Erwin-Perry (2000)	Multiple	1985-97 185 firms	Market Daily	0.65 Horizontal 1.93 Diversifying	
Markides-Ittner (1994)	Multiple	1975-88 276 firms	Market Daily	0.32*	
Morck-Teung (1992)	Multiple	1978-88 322 firms	Index Daily	0.29	
Panel B: Primarily or exclusively non US acquiring firms					
Aw-Chatterjee (2000) (UK bidders)	UK, US & Europe	1991-96 79 firms	Market & MAR Monthly	-4.46* (+6)	-8.07* (+12) to -24.40* (+24)
Cakici et al., (1996) (Multiple countries)	US	1983-92 195 firms	Market Daily	1.96*	
Conn-Connell (1990) (UK bidders)	US	1971-80 38 firms	Market Monthly	-7.87* to 9.49*	-22.62* to 11.33* (+12)
Corhay-Rad (2000) (Dutch bidders)	US, W. Europe, E. Europe	1990-96 84 W. Europe 17 US 10 E. Europe	Market Daily	-1.10 W.Europe 1.97* US -1.27 E. Europe	
Danbolt (1995) (Multiple bidders)	U.K.	1986-91 71 firms	Market Index Monthly	0.23 0.80	-5.14* (+5) -2.45* (+5)
Eun et al., (1996) (Multiple bidders)	US	1979-90 225 firms	Market	-1.20*	
Kang (1993) (Japanese bidders)	US	1975-88 102 firms	Market Daily	.51*	
Mathur et al., (1994) (Multiple bidders)	US	1984-88 77 firms	Market Daily	-1.84*	
Servaes-Zenner (1994) (Multiple bidders)	US	1974-90 779 firms	Market Daily	0.05	

[a] Short-run varies from day of announcement to several days surrounding announcement in daily studies or one to 6 months in monthly studies.

[b] Long-run varies from +5 to +24 months after consummation.

* Significantly different from zero at least at 80 percent level.

Table 2

Recent studies of post merger returns to acquiring firms using long horizon methodology

Authors	Period & sample size	Methodology	Returns (BAHR or CAR)
Panel A: Domestic mergers			
Loughran-Vijh 1997	1970-89 947 US mergers	5 year holding period returns adjusted with matching firms based on size and MTBV	-25.00 for stock mergers +61.7 for cash tender offers, buy and hold returns vary by medium of payment & friendly/hostile
Gregory 1997	1984-92 420 UK mergers	6 different models: 1. Basic CAPM 2. Dimson-Marsh model 3. Size decile model 4. Multi-index SML 5. Multi-index HG 6. Fama-French 3 factor Using post merger period to estimate parameters	CAR & API over 24 months -17.73 -12.44 -12.52 -11.25 -11.82 -11.03 -14.29 - 9.18 -2.03 - 8.15 -18.01 -12.22 all significant at 99% alpha is negative (99%) in models
Higson-Elliot 1998	1975-90 830 UK mergers	Announcement to + 3 years monthly using BAHR	At announcement AR for Acquirer is zero (.43) AR at + 3 years is zero (.82) AR at +3 for largest 100 merger is positive (4.61) Some survivorship bias (+) but not significant Results sensitive to yr measured (positive during 1981-84) and negative in earlier and later years. Results sensitive to size-decile v. FTA benchmark due to changing performance of large firms. Hostile take-overs show larger AR at both announcement and +2 years (+12.8)
Cosh-Guest 2001	1985-96 Domestic UK Takeovers	Matched firms based on size and MTBV	4 year BAHR zero in hostile 4 year BAHR negative (-.22) in friendly
Baker-Limmack 2001	1977-90 595 UK Mergers	Matched firms & portfolios based on size, MTBV and prior performance. Fama-French 3 factor model	Negative AR for acquirers + 3 to +5 years after adjusting for biases from survivorship, selection and prior performance. Cash bids with zero AR and equity bids with negative AR
Panel B: Cross-border mergers			
Black et al., 2001	1985-95 361 US bidders	3-5 year BAHR adjusted with matching control portfolios based on size, MTBV & prior performance	-13 for 1 year -43 for 5 years

Table 3

Transaction statistics for domestic and cross-border takeovers announced between November 1984 and July 2000

Summary statistics for a sample of 3260 domestic and cross-border acquisitions made by U.K. public firms between 12/84 and 07/2000, where the acquirer was listed on the Datastream Database. Includes only transactions where acquisition value was at least 5% of acquirer total market value at announcement. Panel A reports the distribution by year of sample acquisitions. Panel B reports the method of payment used in the sample acquisitions. Panel C reports the acquisition value in £m sterling. Values in foreign currencies were converted to sterling using the exchange rate at the end of the announcement month. Panel D reports the acquisition value relative to the bidder's market equity at the beginning of the announcement month .

Panel A: Distribution of takeover years

Years	Domestic takeovers		Cross-border takeovers		All takeovers	% of cross-border
	Number	Percent of total	Number	Percent of total		
1984	6	0.27	6	0.56	12	50.0
1985	121	5.51	45	4.23	166	27.1
1986	198	9.02	65	6.10	263	24.7
1987	267	12.16	70	6.57	337	20.8
1988	327	14.90	124	11.64	451	27.5
1989	217	9.89	126	11.83	343	36.7
1990	132	6.01	81	7.61	213	38.0
1991	87	3.96	33	3.10	120	27.5
1992	71	3.23	33	3.10	104	31.7
1993	52	2.37	44	4.13	96	45.8
1994	125	5.69	47	4.41	172	27.3
1995	122	5.56	51	4.79	173	29.5
1996	117	5.33	72	6.76	189	38.1
1997	115	5.24	64	6.01	179	35.8
1998	128	5.83	84	7.89	212	39.6
1999	82	3.74	63	5.92	145	43.4
2000	28	1.28	57	5.35	85	67.1
Total	*2195*	*100.00*	*1065*	*100.00*	*3260*	*32.7*

Panel B: Method of payment

	Domestic takeovers		Cross-border takeovers	
	Number	Percent of total	Number	Percent of total
Cash	447	26.5 %	423	66.8 %
Equity	380	22.5	60	9.5
Equity and cash	465	27.5	109	17.2
Other	396	23.5	41	6.5
Total	*1688*	*100.0*	*633*	*100.0*
Unknown	507		432	

Panel C: Value of acquisition (£m) [a]

	Domestic takeovers	Cross-border takeovers
Mean	79.41	357.28
Maximum	23785.10	78331.64
Minimum	0.05	0.3
Median	5.75	18.50

Panel D: Sizes of targets relative to bidders prior to the takeover announcement [b]

	Domestic takeovers	Cross-border takeovers
Mean	0.3463	0.2348
Maximum	27.5000	5.5743
Minimum	0.0500	0.0500
Median	0.1461	0.1123

Table 3 (continued)

Panel E: Number of sample acquisitions made by sample acquirers [c]

	Domestic acquirers (No = 808)	Cross-border acquirers (No = 307)
Mean	2.68	2.41
Maximum	27	10
Minimum	1	1
Median	4	4

[a] Using the Mann Whitney test, the null hypothesis that the two types of takeover have the same median target value can be rejected at the 1% level. Cross-border acquisitions involve larger acquisition values than domestic acquisitions.

[b] Using the Mann Whitney test, the null hypothesis that the two types of takeover have the same median ratio of relative size of target to bidder can be rejected at the 1% level. Domestic acquisitions involve relatively larger targets than cross-border acquisitions.

[c] Using the Mann Whitney test, the null hypothesis that acquirers in the two types of takeover carry the same number of acquisitions cannot be rejected at the 5% level

Table 4

Sample acquirer statistics in domestic and cross-border takeovers completed between November 1984 and July 2000

Panel A reports the distribution of size quintile rankings of bidder firms by market valuation. Size quintiles are computed at the end of the calendar year prior to the year of announcement for all U.K. listed firms. Quintile 1 is the smallest. Panel B reports the distribution of prior share return (12 months) rankings of bidder firms. Quintiles are computed as with size. Quintile 1 is the lowest. Panel C reports the distribution of market-to-book quintile rankings, computed as with size. Panel D reports the industry groupings of the sample acquirers. The SIC codes for the industry groupings are as follows: Group 1: SIC CODES 1,2,10,11,13,14,37,40,41,60,61,62,63,64,76. Group 2: SIC CODES 24,25,26,27,28. Group 3: SIC CODES 29,30,31,32,33,34,35. Group 4: SIC CODES 15,16,17,18,19,20,21,22,68,69. Group 5: SIC CODES 45,55,70. Group 6: SIC CODES 50,51,52,71. Group 7: SIC CODES 65,66,67. Group 8: SIC CODES 72,73,74. Group 9: SIC CODES 75,80,85,90,91,92,93.

Panel A: Size quintiles of bidder prior to the year of the takeover [a]

Size quintiles	Domestic takeovers		Cross-border takeovers	
	Number	Percentage	Number	Percentage
1	278	12.7 %	22	2.1 %
2	482	22.0	80	7.5
3	572	26.1	171	16.1
4	522	23.8	356	33.4
5	341	15.5	436	40.9
Total	*2195*	*100.00*	*1065*	*100.00*
Mean (median) £m	228.48 (25.0)		1036.35 (110)	

Panel B: Prior performance (12 month returns) of bidder prior to the year of the takeover [b]

Prior performance quintiles	Domestic takeovers		Cross-border takeovers	
	Number	Percentage	Number	Percentage
1	304	13.8 %	124	11.6 %
2	345	15.7	192	18.0
3	429	19.5	239	22.4
4	488	22.2	250	23.5
5	629	28.7	260	24.4
Total	*2195*	*100.00*	*1065*	*100.00*
Mean (median)	39.60% (22.24%)		33.11% (19.62%)	

Panel C: Market-to-book quintile of bidder prior to the year of the takeover [c]

Market-to-book quintile	Domestic takeovers		Cross-border takeovers	
	Number	Percentage	Number	Percentage
1	313	14.8 %	134	12.8 %
2	352	16.6	128	12.2
3	478	22.6	212	20.2
4	464	21.9	278	26.5
5	512	24.2	296	28.2
Total	*2119*	*100.00*	*1048*	*100.00*
Mean (median)	9.07 (1.93)		6.86 (2.31)	

Table 4 (continued)

Panel D: Industry groupings of the bidder in the announcement month

Industry grouping	Domestic takeovers		Cross-border takeovers	
	Number	Percentage	Number	Percentage
1. Primary industries & utilities	80	3.6	50	4.7
2. Chemicals & building materials	330	15.0	223	20.9
3. Engineering	350	15.9	242	22.7
4. Other manufacturing	350	15.9	172	16.2
5. Property & construction	205	9.3	42	3.9
6. Distribution	274	12.5	81	7.6
7. Banking insurance & financial Services	184	8.4	44	4.1
8. Business services	244	11.1	169	15.9
9. Other services	176	8.0	42	3.9
10. Unknown	2	0.1	0	0.0
Total	*2195*	*100.0*	*1065*	*100.0*
Number of horizontal acquisitions (same 2 digit SIC)	746 (33.99%)		450 (42.25%)	

[a] Using the Mann Whitney test, the null hypothesis that the two types of bidder have the same median size can be rejected at the 5% level. Cross-border bidders are larger than domestic bidders.

[b] Using the Mann Whitney test, the null hypothesis that the two types of takeover have the same pre-takeover share returns cannot be rejected at the 5% level.

[c] Using the Mann Whitney test, the null hypothesis that the two types of bidder have the same median book-to-market can be rejected at the 5% level. Cross-border bidders have higher market-to-book ratios than domestic bidders.

Table 5

The announcement and post-takeover share returns of domestic and cross-border takeovers

This table reports buy and hold share returns for bidder for the month of announcement and the 36 months afterwards. The abnormal share returns are computed with reference to control firms matched on size and prior share returns.

	Period							
	0	1 - 12	13 - 24	25 – 36	1-24	0-24	1-36	0-36
Panel A: All takeovers								
No	3260	3254	3069	2673	3256	3260	3258	3260
Mean BHAR	1.22 [a]	-2.61 [a]	-4.95 [a]	-1.66	-5.66 [a]	-4.71 [a]	-6.89 [a]	-5.66 [a]
Median BHAR	0.41 [a]	-1.76 [b]	-2.79 [a]	-0.70	-3.71 [a]	-2.85 [a]	-3.83 [a]	-3.02 [b]
% BHAR > 0	51.75 [a]	48.56	47.41 [a]	49.31	47.24 [a]	48.19 [b]	47.67 [b]	48.10 [b]
Variance BHAR	1.77	30.17	26.77	29.85	74.84	78.86	120.75	126.50
Panel B: All domestic takeovers								
No	2195	2191	2087	1817	2192	2195	2193	2195
Mean BHAR	1.21 [a]	-4.90 [a]	-5.95 [a]	-1.48	-9.27 [a]	-8.36 [a]	-9.90 [a]	-8.83 [a]
Median BHAR	0.40 [a]	-3.23 [a]	-3.31 [a]	-1.04	-6.19 [a]	-4.71 [a]	-4.79 [a]	-3.40 [a]
% BHAR > 0	51.62 [b]	47.47 [b]	47.15 [b]	49.04	45.76 [a]	47.02 [a]	47.01 [a]	47.84 [b]
Variance BHAR	1.76	31.08	28.05	30.29	77.08	81.26	123.17	128.66
Panel C: All cross-border takeovers								
No	1065	1063	982	856	1064	1065	1065	1065
Mean BHAR	1.23 [a]	2.12	-2.84 [c]	-2.06	1.76	2.79	-0.68	0.87
Median BHAR	0.44 [a]	1.75	-1.89	-0.01	0.17	1.23	-1.68	-2.75
% BHAR > 0	52.02 [c]	50.80	47.97	49.88	50.28	50.61	49.01	48.64
Variance BHAR	1.78	27.99	23.99	28.95	69.49	73.16	115.31	121.54
Panel D: Univariate tests								
Panel B vs. Panel C								
Difference in mean BHAR	-0.03	-7.01 [a]	-3.10	0.58	-11.03 [a]	-11.15 [a]	-9.24 [b]	-9.68 [b]
Difference in median BHAR	-0.04	-4.98 [a]	-1.42	-1.03	-6.36 [a]	-5.94 [a]	-3.11 [c]	-0.65 [c]
Difference in variance BHAR	-0.02	3.09 [a]	4.07 [c]	1.33	7.59 [b]	8.10 [b]	7.86	7.12

[a, b, c] Significantly different from zero at the 1, 5% and 10% levels respectively, using a two tailed test

Table 6

The announcement and post-takeover share returns of domestic and cross-border takeovers according to takeover year

This table reports buy and hold share returns for bidder for the month of announcement and the 36 months afterwards. The abnormal share returns are computed with reference to control firms matched on size and prior share returns.

	Period							
	0	1 - 12	13 – 24	25 – 36	1-24	0-24	1-36	0-36
Panel A: Domestic 1984-89								
No	1136	1135	1080	950	1135	1136	1135	1136
Mean BHAR	1.32 [a]	-6.39 [a]	-4.48 [a]	-1.49	-10.82 [a]	-9.92 [a]	-11.52 [a]	-10.78 [a]
Median BHAR	0.56 [a]	-3.86 [a]	-2.63 [b]	-0.46	-5.78 [a]	-3.84 [a]	-4.79 [a]	-3.84 [b]
% BHAR > 0	52.20	46.87 [b]	48.15	49.37	45.46 [a]	47.45 [c]	46.08 [a]	47.18 [c]
Panel B: Domestic 1990-2000								
No	1059	1056	1007	867	1057	1059	1058	1059
Mean BHAR	1.09 [b]	-3.29 [c]	-7.52 [a]	-1.46	-7.59 [b]	-6.68 [b]	-8.17 [b]	-6.73
Median BHAR	0.32 [b]	-2.59	-4.54 [a]	-1.44	-6.84 [b]	-6.34 [b]	-5.14 [c]	-2.77
% BHAR > 0	50.99	48.11	46.09 [b]	48.68	46.07 [b]	46.55 [b]	48.02	48.54
Panel C: Cross-border 1984-89								
No	436	436	412	385	435	436	436	436
Mean BHAR	0.23	-2.90	-1.88	0.44	-3.48	-3.78	-4.25	-4.15
Median BHAR	-0.14	-1.95	-2.08	2.60	-2.37	-4.01	-4.04	-4.42
% BHAR > 0	48.39	47.48	47.82	52.99	47.59	47.48	47.02	46.33
Panel D: Cross-border 1990-2000								
No	629	627	570	471	629	629	629	629
Mean BHAR	1.92 [a]	5.60 [b]	-3.53	-4.11	5.38	7.36 [c]	1.80	4.34
Median BHAR	1.11 [a]	5.09 [b]	-1.81	-2.60	3.84	5.71	0.90	0.72
% BHAR > 0	54.53 [a]	53.10	48.08	47.36	52.15	52.78	50.40	50.24
Panel E: Univariate tests								
Panel A vs. Panel B								
Difference in mean BHAR	0.23	-3.1	3.04	-0.03	-3.23	-3.24	-3.35	-4.05
Difference in median BHAR	0.24	-1.27	1.91	0.98	1.06	2.5	0.35	-1.07
Panel C vs. Panel D								
Difference in mean BHAR	-1.69 [b]	-8.5 [a]	1.65	4.55	-8.86 [c]	-11.14 [b]	-6.05	-8.49
Difference in median BHAR	-1.25 [b]	-7.04 [b]	-0.27	5.2 [c]	-6.21	-9.72 [c]	-4.94	-5.14
Panel A vs. Panel C								
Difference in mean BHAR	1.09	-3.49	-2.6	-1.93	-7.34 [c]	-6.14	-7.27	-6.63
Difference in median BHAR	0.7	-1.91	-0.55	-3.06	-3.41	0.17	-0.75	0.58
Panel B vs. Panel D								
Difference in mean BHAR	-0.83	-8.89 [a]	-3.99	2.65	-12.97 [a]	-14.04 [a]	-9.97	-11.07 [c]
Difference in median BHAR	-0.79	-7.68 [a]	-2.73	1.16	-10.68 [b]	-12.05 [a]	-6.04	-3.49

[a, b, c] Significantly different from zero at the 1, 5% and 10% levels respectively, using a two tailed test

Table 7

The announcement and post-takeover share returns of domestic and cross-border takeovers according to the industry of the acquirer

This table reports mean buy-and-hold share returns for bidder for the month of announcement and the 36 months afterwards. The abnormal share returns are computed with reference to control firms matched on size and prior share returns. The industry groupings are described in Table 4.

Industry grouping		Period							
	No	0	1 - 12	13 - 24	25 – 36	1-24	0-24	1 - 36	0 – 36
Panel A: All domestic									
1. Primary industries & utilities	80	0.59	-0.04	-2.25	2.13	2.61	2.84	7.28	8.48
2. Chemicals & building materials	330	1.42 [a]	-7.95 [a]	-8.32 [a]	-1.45	-17.69 [a]	-16.48 [a]	-21.40 [a]	-19.80 [a]
3. Engineering	350	1.94 [b]	-3.03	-3.43	-5.08	-6.73	-5.50	-12.00 [b]	-10.53 [c]
4. Other manufacturing	350	-0.04 [b]	-3.20	-6.65	2.02	-9.32 [c]	-9.55 [c]	-10.59 [c]	-11.11 [c]
5. Property & construction	205	2.24 [b]	-0.04	-9.18 [b]	-2.10	-6.47	-3.46	-7.01	-4.73
6. Distribution	274	1.77 [b]	-5.33	-6.64 [b]	-2.22	-10.74 [b]	-9.92 [c]	-13.54 [b]	-12.95 [c]
7. Banking, insurance, financial services	184	0.50	-10.31 [b]	-15.18 [a]	-8.66 [b]	-17.31 [b]	-17.17 [b]	-20.41 [b]	-20.40 [b]
8. Business services	244	2.26 [a]	4.57	0.96	5.33	8.72	10.43	23.33 [a]	26.17 [a]
9. Other services	176	-0.54 [a]	-20.77	-1.67	-3.51	-21.16 [a]	-21.73 [a]	-23.20 [a]	-23.04 [a]
Panel B: All cross-border									
1. Primary industries & utilities	50	-0.69	-4.06	-3.87	-17.28	-2.56	-3.17	-9.70	-11.06
2. Chemicals & building materials	223	2.50	-4.42	-1.16	-3.66	-7.96 [c]	-5.04	-13.10 [b]	-10.03
3. Engineering	242	2.70 [a]	8.37 [b]	-4.49	-5.25	8.79	11.57 [b]	3.11	6.35
4. Other manufacturing	172	0.27	3.57	-1.90	6.61	3.04	3.22	11.77 [c]	12.85 [c]
5. Property & construction	42	-1.54	7.50	-3.69	-13.54	6.89	4.38	7.41	4.52
6. Distribution	81	-2.64	-4.90	-8.13	-11.86	-12.80	-15.66	-24.48 [b]	-26.95 [b]
7. Banking, insurance, financial services	44	-2.48	-9.65	-15.23 [c]	9.88	-28.96 [b]	-32.71 [b]	-19.97	-22.01
8. Business services	169	2.49 [b]	11.00 [b]	5.88	3.43	24.75 [a]	26.58 [a]	23.35 [b]	25.87 [b]
9. Other services	42	1.29	-13.11	-18.16 [b]	-6.13	-24.59 [b]	-25.32 [b]	-35.39 [b]	-34.45 [b]
Panel C: Panel A vs. Panel B									
1. Primary industries & utilities		1.28	4.02	1.62	19.41	5.17	6.01	16.98	19.54
2. Chemicals & building materials		-1.08	-3.53	-7.16 [c]	2.21	-9.73	-11.44 [c]	-8.3	-9.77
3. Engineering		-0.76	-11.4 [b]	1.06	0.17	-15.52 [b]	-17.07 [b]	-15.11 [c]	-16.88 [c]
4. Other manufacturing		-0.31	-6.77	-4.75	-4.59	-12.36 [c]	-12.77 [c]	-22.36 [a]	-23.96 [a]
5. Property & construction		3.78 [c]	-7.54	-5.49	11.44	-13.36	-7.84	-14.42	-9.25
6. Distribution		4.41 [b]	-0.43	1.49	9.64	2.06	5.74	10.94	14
7. Banking, insurance, financial services		2.98	-0.66	0.05	-18.54 [b]	11.65	15.54	-0.44	1.61
8. Business services		-0.23	-6.43	-4.92	1.9	-16.03	-16.15	-0.02	0.3
9. Other services		-1.83	-7.66	16.49 [c]	2.62	3.43	3.59	12.19	11.41

[a, b, c] Significantly different from zero at the 1, 5% and 10% levels respectively, using a two tailed test

Table 8

The announcement and post-takeover share returns of domestic and cross-border takeovers according to the method of payment

This table reports buy and hold share returns for bidder for the month of announcement and the 36 months afterwards. The abnormal share returns are computed with reference to control firms matched on size and prior share returns.

	Period							
	0	1 - 12	13 - 24	25 – 36	1-24	0-24	1-36	0-36
Panel A: All cash domestic takeovers								
No	447	446	420	340	446	447	446	447
Mean BHAR	1.70 [a]	-6.14 [b]	-3.43	-1.36	-9.88 [b]	-8.46 [c]	-9.62	-7.83
Median BHAR	0.00 [a]	-7.21 [b]	1.33	-0.09	-5.05 [b]	-4.70	0.55	1.25
% BHAR > 0	49.89	45.52 [c]	51.90	49.56	47.31	48.10	50.22	51.23
Panel B: All other payment domestic takeovers								
No	1241	1239	1189	1053	1239	1241	1240	1241
Mean BHAR	1.26 [a]	-4.41 [a]	-7.66 [a]	-1.14	-9.54 [a]	-8.34 [a]	-9.68 [a]	-8.46 [a]
Median BHAR	0.53 [a]	-2.75 [b]	-4.77 [a]	-0.77	-6.57 [c]	-5.43	-5.99 [a]	-4.60 [b]
% BHAR > 0	52.38 [b]	47.50 [c]	44.33 [a]	49.62	47.31	48.10	45.32 [a]	46.33 [b]
Panel C: All cash cross-border takeovers								
No	387	385	345	286	387	387	387	387
Mean BHAR	1.56 [b]	4.91 [c]	-1.62	-1.55	5.53	6.37	2.82	3.91
Median BHAR	1.20 [b]	2.21 [c]	-1.04	0.81	5.59	8.24 [c]	5.66	7.24
% BHAR > 0	55.04 [b]	51.68	48.55	51.05	55.04 [c]	54.26	53.75	53.23
Panel D: All other payment cross-border takeovers								
No	240	240	220	185	246	246	240	240
Mean BHAR	1.94 [b]	-0.16	-6.53 [c]	-4.45	-2.36	0.34	-6.77	-3.00
Median BHAR	1.14 [b]	-0.43	-3.56	-4.75	-0.14	1.45	-5.26	-5.77
% BHAR > 0	56.25 [b]	48.75	45.91	46.49	50.00	50.81	47.08	46.25
Panel E: Univariate tests								
Panel A vs. Panel B								
Difference in mean BHAR	0.44	-1.73	4.23	-0.22	-0.34	-0.12	0.06	0.63
Difference in median BHAR	-0.53	-4.46	6.1 [c]	0.68	1.52	0.73	6.54	5.85
Panel C vs. Panel D								
Difference in mean BHAR	-0.38	5.07	4.91	2.9	7.89	6.03	9.59	6.91
Difference in median BHAR	0.06	2.64	2.52	5.56	5.73	6.79	10.92 [c]	13.01 [c]
Panel A vs. Panel C								
Difference in mean BHAR	0.14	-11.05 [a]	-1.81	0.19	-15.41 [b]	-14.83 [b]	-12.44	-11.74
Difference in median BHAR	-1.2	-9.42 [a]	2.37	-0.9	-10.64 [b]	-12.94 [b]	-5.11	-5.99
Panel B vs. Panel D								
Difference in mean BHAR	-0.68	-4.25	-1.13	3.31	-7.18	-8.68	-2.91	-5.46
Difference in median BHAR	-0.61	-2.32	-1.21	3.98	-6.43	-6.88	-0.73	1.17

[a, b, c] Significantly different from zero at the 1, 5% and 10% levels respectively, using a two tailed test

Table 9

The announcement and post-takeover share returns of domestic and cross-border takeovers according to whether relative size of target to bidder is greater or less than the median relative size

This table reports buy and hold share returns for bidder for the month of announcement and the 36 months afterwards. The abnormal share returns are computed with reference to control firms matched on size and prior share returns.

	Period							
	0	1 - 12	13 – 24	25 – 36	1-24	0-24	1-36	0-36
Panel A: All domestic takeovers where target relative size is greater than or equal to median								
No	1098	1096	1044	918	1095	1098	1096	1098
Mean BHAR	1.02 [b]	-2.97 [c]	-7.66 [a]	-0.97	-8.01 [a]	-6.80 [b]	-6.94 [b]	-5.87
Median BHAR	0.27 [b]	-2.17	-4.74 [a]	-0.68	-6.08 [b]	-3.72 [c]	-2.11	-1.53
% BHAR > 0	50.91	48.91	44.93 [a]	49.29	46.21	48.09 [b]	48.08	48.91
Panel B: All domestic takeovers where target relative size is less than median								
No	1097	1095	1043	899	1097	1097	1097	1097
Mean BHAR	1.40 [a]	-6.82 [a]	-4.23 [a]	-2.00	-10.52 [a]	-9.92 [a]	-12.86 [a]	-11.79 [a]
Median BHAR	0.66 [a]	-5.22 [a]	-0.73 [c]	-1.23	-6.55 [a]	-5.02 [a]	-7.79 [a]	-6.12 [a]
% BHAR > 0	52.32 [c]	46.03 [b]	49.38	48.78	45.31 [a]	45.94 [b]	45.94 [b]	46.76 [b]
Panel C: All cross-border takeovers where target relative size is greater than or equal to median								
No	532	532	493	410	531	532	532	532
Mean BHAR	1.40 [b]	-0.12	-3.38	-1.33	-0.11	1.49	-2.20	0.13
Median BHAR	0.37 [b]	0.38	-1.47	-2.29	-1.69	0.43	-5.26	-5.37
% BHAR > 0	51.88	50.38	48.19	48.18	48.59	50.19	47.18	47.74
Panel D: All cross-border takeovers where target relative size is less than median								
No	533	531	489	446	533	533	533	533
Mean BHAR	1.06 [b]	4.36 [c]	-2.30	-2.74	3.63	4.10	0.85	1.60
Median BHAR	0.58 [b]	2.42	-2.25	1.09	1.52	1.89	0.47	-1.58
% BHAR > 0	52.16	51.22	47.76	51.45	51.97	51.03	50.84	49.53
Panel E: Univariate tests								
Panel A vs. Panel B								
Difference in mean BHAR	-0.39	3.85	-3.43	1.03	2.51	3.12	5.91	5.91
Difference in median BHAR	-0.39	3.05 [c]	-4.01	0.55	0.47	1.3	5.68	4.59
Panel C vs. Panel D								
Difference in mean BHAR	0.34	-4.48	-1.08	1.41	-3.74	-2.61	-3.05	-1.47
Difference in median BHAR	-0.21	-2.04	0.78	-3.38	-3.21	-1.46	-5.73	-3.79
Panel A vs. Panel C								
Difference in mean BHAR	-0.38	-2.85	-4.28	0.36	-7.9 [c]	-8.29 [c]	-4.74	-6.00
Difference in median BHAR	-0.10	-2.55	-3.27	1.61	-4.39	-4.15	3.15	3.84
Panel B vs. Panel D								
Difference in mean BHAR	0.34	-11.18 [a]	-1.93	0.74	-14.15 [a]	-14.02 [a]	-13.71 [b]	-13.39 [b]
Difference in median BHAR	0.08	-7.64 [a]	1.52	-2.32	-8.07 [a]	-6.91 [b]	-8.26 [b]	-4.54 [b]

[a, b, c] Significantly different from zero at the 1, 5% and 10% levels respectively, using a two tailed test

Table 10

The announcement and post-takeover share returns of domestic and cross-border takeovers according to whether the acquirer is a single or multiple acquirer

This table reports buy and hold share returns for bidder for the month of announcement and the 36 months afterwards. The abnormal share returns are computed with reference to control firms matched on size and prior share returns.

	Period							
	0	1 - 12	13 – 24	25 – 36	1-24	0-24	1-36	0-36
Panel A: All domestic "single acquirer" takeovers								
No	339	336	303	232	336	339	337	339
Mean BHAR	1.95 [b]	-9.14 [b]	-10.06 [a]	-3.19	-16.59 [a]	-14.08 [a]	-18.65 [a]	-15.49 [b]
Median BHAR	0.95 [b]	-4.63 [a]	-1.37 [b]	1.44	-9.21 [a]	-8.37 [b]	-11.52 [c]	-6.48
% BHAR > 0	52.51	46.29	47.52	51.50	42.56 [b]	43.66 [b]	44.21 [b]	46.61
Panel B: All domestic "multiple acquirer" takeovers								
No	1856	1855	1784	1585	1856	1856	1856	1856
Mean BHAR	1.07 [a]	-4.13 [a]	-5.25 [a]	-1.23	-7.94 [a]	-7.31 [a]	-8.31 [a]	-7.61 [a]
Median BHAR	0.36 [a]	-2.82 [a]	-3.69 [a]	-1.23	-5.49 [a]	-4.08 [a]	-3.99 [a]	-2.83 [b]
% BHAR > 0	51.45 [c]	47.68 [c]	47.09 [b]	48.68	46.34 [a]	47.63 [a]	47.52 [b]	48.06
Panel C: All cross-border "single acquirer" takeovers								
No	133	133	107	84	133	133	133	133
Mean BHAR	0.20	-3.21	-6.86	-10.80 [c]	-4.69	-3.95	-11.91	-9.66
Median BHAR	0.00	-3.27	-1.93	-6.97	2.83	-3.56	-3.23	-5.70
% BHAR > 0	49.62	47.37	47.22	44.05	51.88	48.12	47.37	43.61
Panel D: All cross-border "multiple acquirer" takeovers								
No	932	930	875	772	931	932	932	932
Mean BHAR	1.38 [a]	2.88 [c]	-2.35	-1.11	2.68	3.76	0.93	2.37
Median BHAR	0.54 [a]	1.89	-1.71	0.32	0.05	1.69	-1.65	-1.69
% BHAR > 0	52.36 [c]	51.29	48.06	50.52	50.05	50.97	49.25	49.36
Panel E: Univariate tests								
Panel A vs. Panel B								
Difference in mean BHAR	0.88	-5.01	-4.81	-1.96	-8.65	-6.77	-10.34	-7.88
Difference in median BHAR	0.59	-1.81	2.32	2.67	-3.72	-4.29	-7.53	-3.65
Panel C vs. Panel D								
Difference in mean BHAR	-1.18	-6.09	-4.51	-9.69	-7.37	-7.71	-12.84	-12.03
Difference in median BHAR	-0.54	-5.16	-0.22	-7.29	2.78	-5.25	-1.58	-4.01
Panel A vs. Panel C								
Difference in mean BHAR	1.75	-5.93	-3.20	7.61	-11.9	-10.13	-6.74	-5.83
Difference in median BHAR	0.95	-1.36	0.56	8.41	-12.04	-4.81	-8.29	-0.78
Panel B vs. Panel D								
Difference in mean BHAR	-0.31	-7.01 [a]	-2.9	-0.12	-10.62 [a]	-11.07 [a]	-9.24 [b]	-9.98 [b]
Difference in median BHAR	-0.18	-4.71 [a]	-1.98	-1.55	-5.54 [a]	-5.77 [b]	-2.34 [b]	-1.14 [b]

[a, b, c] Significantly different from zero at the 1, 5% and 10% levels respectively, using a two tailed test

Table 11

The announcement and post-takeover share returns of domestic and cross-border takeovers according to whether acquisition is horizontal

This table reports buy and hold share returns for bidder for the month of announcement and the 36 months afterwards. The abnormal share returns are computed with reference to control firms matched on size and prior share returns.

	Period							
	0	1 - 12	13 - 24	25 – 36	1-24	0-24	1-36	0-36
Panel A: All domestic horizontal takeovers								
No	746	745	699	593	744	746	745	746
Mean BHAR	1.31 [a]	-3.97 [c]	-5.26 [b]	-2.63	-8.39 [b]	-7.09 [b]	-10.14 [b]	-8.65 [b]
Median BHAR	0.78 [a]	-2.37	-2.55 [b]	-1.12	-6.18 [b]	-4.12 [c]	-6.64 [c]	-2.55
% BHAR > 0	52.55 [c]	48.72	47.07	49.58	45.83 [b]	47.32	47.25	48.66
Panel B: All domestic non-horizontal takeovers								
No	1449	1446	1388	1224	1448	1449	1448	1449
Mean BHAR	1.16 [a]	-5.38 [a]	-6.29 [a]	-0.92	-9.72 [a]	-9.01 [a]	-9.78 [a]	-8.92 [a]
Median BHAR	0.27 [a]	-3.63	-3.64 [a]	-1.01	-6.25 [a]	-4.71 [a]	-4.16 [a]	-3.58 [b]
% BHAR > 0	51.14	46.82 [b]	47.19 [b]	48.78	45.72 [a]	46.86 [b]	46.89 [b]	47.41 [c]
Panel C: All cross-border horizontal takeovers								
No	449	447	409	354	449	449	449	449
Mean BHAR	2.08 [a]	4.77 [c]	-1.06	-2.58	5.28	7.87 [b]	5.45	8.65 [c]
Median BHAR	0.42 [a]	3.87	0.00	-2.41	1.52	4.42	4.01	4.96
% BHAR > 0	53.23	53.45	50.00	47.89	51.00	52.56	52.12	52.34
Panel D: All cross-border non-horizontal takeovers								
No	616	616	573	502	615	616	616	616
Mean BHAR	0.61	0.19	-4.11 [a]	-1.70	-0.81	-0.91	-5.14	-4.80
Median BHAR	0.45	-0.66	-3.03	0.81	-0.53	-1.60	-5.08	-5.73
% BHAR > 0	51.14	48.86	46.53	51.29	49.76	49.19	46.75	45.94 [a]
Panel E: Univariate tests								
Panel A vs. Panel B								
Difference in mean BHAR	0.15	1.41	1.03	-1.71	1.33	1.92	-0.36	0.27
Difference in median BHAR	0.51	1.26	1.09	-0.11	0.07	0.59	-2.48	1.03
Panel C vs. Panel D								
Difference in mean BHAR	1.47 [b]	4.58	3.05	-0.88	6.09	8.78 [c]	10.59	13.45
Difference in median BHAR	-0.03	4.53	3.03	-3.22	2.05	6.02	9.09	10.69
Panel A vs. Panel C								
Difference in mean BHAR	-0.77	-8.74 [a]	-4.20	-0.05	-13.67 [a]	-14.96 [a]	-15.59 [b]	-17.30 [a]
Difference in median BHAR	0.36	-6.24 [b]	-2.55	1.29	-7.7 [b]	-8.54 [b]	-10.65 [a]	-7.51 [b]
Panel B vs. Panel D								
Difference in mean BHAR	0.55	-5.57 [c]	-2.18	0.78	-8.91 [b]	-8.1 [c]	-4.64	-4.12
Difference in median BHAR	-0.18	-2.97	-0.61	-1.82	-5.72 [c]	-3.11	0.92	2.15

[a, b, c] Significantly different from zero at the 1, 5% and 10% levels respectively, using a two tailed test

Table 12

The announcement and post-takeover share returns of domestic and cross-border takeovers according to whether the acquirer is a glamour or value stock

This table reports buy and hold share returns for bidder for the month of announcement and the 36 months afterwards. The abnormal share returns are computed with reference to control firms matched on size and prior share returns. Glamour acquirers are defined as those whose MTBV is in the highest three MTBV deciles of those stocks listed on Datastream at the beginning of the year of the acquisition. Value stocks are defined as those whose MTBV is in the lowest three MTBV deciles.

	Period							
	0	1 - 12	13 – 24	25 – 36	1-24	0-24	1-36	0-36
Panel A: All domestic "glamour" takeovers								
No	769	769	728	614	769	769	769	769
Mean BHAR	0.46	-7.27 [a]	-4.57 [b]	-0.91 [a]	-10.45 [a]	-10.29 [a]	-9.27 [a]	-9.15 [b]
Median BHAR	-0.41	-3.86 [a]	-3.07 [c]	-3.01	-8.05 [a]	-7.44 [a]	-4.71 [b]	-4.60 [b]
% BHAR > 0	47.59	46.42 [c]	47.33	47.64	42.91 [a]	44.34 [a]	47.20	46.81 [c]
Panel B: All domestic "value" takeovers								
No	470	468	447	388	469	470	469	470
Mean BHAR	2.26 [a]	-5.51 [b]	-1.92	-1.31	-4.87	-2.80	-7.31	-4.85
Median BHAR	1.54 [a]	-5.60	0.91	-0.02	-0.55 [a]	1.17 [a]	-3.87	-1.83
% BHAR > 0	54.26 [b]	45.63 [c]	50.89	49.49	42.91 [a]	44.34 [a]	46.91	47.87
Panel C: All cross-border "glamour" takeovers								
No	439	438	411	358	439	439	439	439
Mean BHAR	0.00	2.48	-2.92	-2.64	0.96	0.61	-2.29	-2.38
Median BHAR	0.00	1.85	-4.52	-2.71	-2.20	-5.89	-3.68	-5.89
% BHAR > 0	49.43	51.48	45.87	47.21	48.52	47.84	47.61	46.01
Panel D: All cross-border "value" takeovers								
No	189	189	168	145	189	189	189	189
Mean BHAR	3.14 [a]	6.60	-0.62	-6.40	12.42 [a]	15.40 [a]	6.99	11.27
Median BHAR	1.32 [b]	-2.01	1.90	-0.48	1.35	8.14 [c]	4.01	8.04
% BHAR > 0	56.08 [c]	47.62	54.17	49.66	50.26	52.38	51.85	52.38
Panel E: Univariate tests								
Panel A vs. Panel B								
Difference in mean BHAR	-1.8 [b]	-1.76	-2.65	0.4	-5.58	-7.49	-1.96	-4.3
Difference in median BHAR	-1.95 [b]	1.74	-3.98	-2.99	-7.5 [c]	-8.61 [b]	-0.84	-2.77
Panel C vs. Panel D								
Difference in mean BHAR	-3.14 [b]	-4.12	-2.3	3.76	-11.46	-14.79 [c]	-9.28	-13.65
Difference in median BHAR	-1.32	3.86	-6.42	-2.23	-3.55	-14.03	-7.69	-13.93 [c]
Panel A vs. Panel C								
Difference in mean BHAR	0.46	-9.75 [b]	-1.65	1.73	-11.41 [a]	-10.9 [a]	-6.98	-6.77
Difference in median BHAR	-0.41	-5.71 [c]	1.45	-0.3	-5.85 [c]	-1.55 [c]	-1.03	1.29
Panel B vs. Panel D								
Difference in mean BHAR	-0.88	-12.11 [a]	-1.3	5.09	-17.29 [a]	-18.2 [a]	-14.3	-16.12
Difference in median BHAR	0.22	-3.59 [b]	-0.99	0.46	-1.9	-6.97	-7.88	-9.87

[a, b, c] Significantly different from zero at the 1, 5% and 10% levels respectively, using a two tailed test

Table 13

The relation between acquisition share returns in domestic and cross-border acquisitions and various control variables

Ordinary least squares regression analysis of announcement month share returns and post-acquisition share returns, on the nature of the acquisition and various control variables. FOREIGN is a dummy which equals one if the acquisition is cross-border, zero otherwise. MULTIPLE is a dummy which equals one if the acquirer carries out more than one acquisition in our sample, zero otherwise. HORIZ is a dummy variable, which equals one if the takeover is horizontal, defined as being in the same 2-digit SIC. RELSIZE is the relative size of the acquisition value to the market value of the acquirer. MTBV is the market-to-book value of the bidder at the last accounting year prior to takeover. ALLCASH is a dummy variable, which equals one if the method of payment is an all cash offer. Each regression includes a dummy variable for each 2 digit SIC industry, and for each calendar year from 1984 to 2000. *t*-statistics are in parentheses.

	SAMPLE					
	Domestic takeovers		Cross-border takeovers		All takeovers	
Panel A: Dependent variable is the abnormal return over the announcement month						
Intercept	0.0185	0.0134	0.0023	0.0327	0.0118	0.01
	(1.494)	(0.908)	(0.129)	(1.342)	(1.144)	(0.845)
FOREIGN					-0.0034	0.00
					(-0.657)	(0.385)
MULTIPLE	-0.0106	-0.0081	0.0077	0.0003	-0.0048	-0.01
	(-1.299)	(-0.865)	(0.616)	(0.016)	(-0.701)	(-0.774)
HORIZ	0.0013	0.0020	0.0200 [b]	0.0154	0.0091 [c]	0.01
	(0.211)	(0.272)	(2.342)	(1.313)	(1.810)	(0.914)
RELSIZE	-0.0086 [a]	-0.0082 [c]	-0.0103	-0.0133	-0.0085 [b]	-0.01 [b]
	(-2.248)	(-1.954)	(-1.041)	(-1.092)	(-2.389)	(-2.134)
MTBV	0.0000	0.0000	0.0001	0.0001	0.0000	0.00
	(0.826)	(0.648)	(0.771)	(1.069)	(0.895)	(0.885)
ALLCASH		0.0084		-0.0080		0.00
		(1.051)		(-0.676)		(0.551)
F-statistic	2.03 [a]	2.00	1.62 [b]	1.02	2.07 [a]	1.91 [a]
p-value	0.001	0.001	0.022	0.440	0.001	0.002
Adjusted R^2	0.014	0.018	0.016	0.001	0.010	0.012
N	2117	1632	1047	627	3165	2260
Panel B: Dependent variable is the buy-and-hold abnormal return over months 1-12						
Intercept	-0.0899 [c]	-0.1139 [c]	-0.0094	0.1566	-0.0804 [c]	-0.1890 [a]
	-(1.710)	-(1.821)	-(0.130)	(1.620)	-(1.870)	-(3.402)
FOREIGN					0.0485 [b]	0.0539 [c]
					(2.237)	(1.849)
MULTIPLE	0.0337	0.0279	0.0661	0.1077 [c]	0.0468 [c]	0.0519
	(0.973)	(0.700)	(1.306)	(1.699)	(1.648)	(1.546)
HORIZ	0.0104	0.0429	0.0450	0.0675	0.0210	0.0439 [c]
	(0.390)	(1.371)	(1.306)	(1.450)	(0.999)	(1.702)
RELSIZE	-0.0341 [b]	-0.0166	-0.0251	-0.0525	-0.0314 [b]	-0.0209
	-(2.095)	-(0.933)	-(0.630)	-(1.087)	-(2.109)	-(1.260)
MTBV	0.0000	0.0000	-0.0002	-0.0009 [c]	0.0000	-0.0001
	(0.632)	-(0.650)	-(0.535)	-(1.681)	(0.600)	-(0.774)
ALLCASH		-0.0112		0.0546		0.0069
		-(0.329)		(1.160)		(0.257)
F-statistic	2.14	1.78 [a]	1.50 [b]	1.43 [c]	2.99 [a]	2.25 [a]
p-value	0.000	0.006	0.047	0.068	0.000	0.000
Adjusted R^2	0.015	0.014	0.013	0.020	0.019	0.017
N	2114	1630	1045	625	3160	2256

Table 13 (continued)

	Domestic takeovers		Cross-border takeovers		All takeovers	
Panel C: Dependent variable is the buy-and-hold abnormal return over months 1-24						
Intercept	-0.1399 [c]	-0.1423	0.0249	0.1900	-0.1238 [c]	-0.2577 [a]
	-(1.708)	-(1.452)	(0.224)	(1.321)	-(1.858)	-(3.002)
FOREIGN					0.0677 [b]	0.0716
					(2.016)	(1.591)
MULTIPLE	0.0873	0.0827	0.0768	0.0971	0.0901 [b]	0.0931 [c]
	(1.617)	(1.322)	(0.990)	(1.029)	(2.045)	(1.794)
HORIZ	-0.0008	0.0011	0.0454	0.0703	0.0128	0.0151
	-(0.019)	(0.022)	(0.861)	(1.015)	(0.394)	(0.379)
RELSIZE	-0.0341	-0.0228	-0.0919	-0.0913	-0.0398 [c]	-0.0289
	-(1.342)	-(0.819)	-(1.504)	-(1.268)	-(1.724)	-(1.129)
MTBV	0.0001	0.0000	-0.0007	-0.0024 [a]	0.0001	-0.0001
	(0.982)	-(0.270)	-(1.087)	-(3.041)	(0.911)	-(0.588)
ALLCASH		0.0017		0.1055		0.0338
		(0.032)		(1.506)		(0.820)
F-statistic	1.13	1.08	2.00 [a]	1.64 [b]	2.45 [a]	1.78 [a]
p-value	0.283	0.351	0.002	0.020	0.000	0.005
Adjusted R^2	0.002	0.001	0.026	0.029	0.014	0.011
N	2115	1630	1046	627	3162	2258
Panel D: Dependent variable is the buy-and-hold abnormal return over months 1-36						
Intercept	-0.1690	-0.1788	-0.0372	-0.1616	-0.1460 [c]	-0.2717 [b]
	-(1.616)	-(1.408)	-(0.254)	-(0.868)	-(1.698)	-(2.444)
FOREIGN					0.0543	0.0409
					(1.255)	(0.701)
MULTIPLE	0.0994	0.1166	0.1258	0.1371	0.1114 [c]	0.1256 [b]
	(1.443)	(1.439)	(1.236)	(1.123)	(1.963)	(1.869)
HORIZ	-0.0367	-0.0483	0.0750	0.1562 [c]	0.0043	0.0111
	-(0.691)	-(0.760)	(1.083)	(1.744)	(0.102)	(0.214)
RELSIZE	-0.0170	-0.0155	-0.0566	-0.0633	-0.0214	-0.0209
	-(0.523)	-(0.428)	-(0.706)	-(0.679)	-(0.720)	-(0.631)
MTBV	0.0001	0.0000	0.0005	-0.0014	0.0001	-0.0001
	(1.000)	-(0.266)	(0.584)	-(1.343)	(1.142)	-(0.368)
ALLCASH		0.0405		0.0750		0.0580
		(0.586)		(0.828)		(1.086)
F-statistic	1.84	1.67 [b]	1.88 [a]	0.99	2.57 [a]	1.64 [b]
p-value	0.004	0.013	0.004	0.479	0.000	0.014
Adjusted R^2	0.011	0.012	0.023	0.000	0.015	0.009
N	2116	1631	1047	627	3164	2259

[a, b, c] Significantly different from zero at the 1, 5% and 10% levels respectively, using a two tailed test

Table 14

The announcement and post-takeover share returns of cross-border takeovers according to target country

This table reports buy and hold share returns for bidder for the month of announcement and the 36 months afterwards. The abnormal share returns are computed with reference to control firms matched on size and prior share returns.

	Period							
	0	1 – 12	13 – 24	25 – 36	1-24	0-24	1-36	0-36
Panel A: US targets								
No	570	569	527	459	569	570	570	570
Mean BHAR	0.42	0.66	-1.16	1.03	1.38	1.09	1.82	1.73
Median BHAR	0.00	1.22	-1.68	2.14	-1.50	-1.05	-2.58	-3.69
% BHAR > 0	49.47	50.53	48.11	53.38	49.03	49.47	48.95	47.89
Variance BHAR	1.89	24.96	20.83	28.51	54.80	59.65	97.73	106.67
Panel B: Non-US English speaking targets (Eire, Canada, Australia, Hong Kong)								
No	90	90	83	74	90	90	90	90
Mean BHAR	0.52	8.83 [c]	-2.85	1.83	11.71	9.90	3.67	1.99
Median BHAR	0.31	3.81	2.16	0.58	1.33	-2.14	-1.01	1.74
% BHAR > 0	52.22	51.11	54.76	50.00	50.00	48.89	48.89	51.11
Variance BHAR	1.49	25.54	29.19	28.64	74.55	69.35	118.60	118.52
Panel C: European targets								
No	380	379	349	303	380	380	380	380
Mean BHAR	2.67 [a]	2.29	-2.64	-6.61 [b]	1.97	5.74	-3.01	1.72
Median BHAR	1.99 [a]	1.97	-1.85	-2.86	3.29	6.99	1.97	2.67
% BHAR > 0	56.05 [a]	51.32	47.86	45.57	53.16	53.68	51.05	51.05
Variance BHAR	1.71	32.42	24.94	28.49	84.13	87.38	136.58	139.59
Panel D: Rest of the world								
No	21	21	19	17	21	21	21	21
Mean BHAR	0.49	1.78	-38.75 [b]	-21.14	-32.31	-31.56	-27.27	-26.05
Median BHAR	0.00	-3.27	-41.85 [b]	-15.05	-42.59	-37.72	-62.81	-61.42
% BHAR > 0	47.62	47.62	21.05	35.29	38.10	38.10	19.05	19.05
Variance BHAR	0.88	20.80	42.74	46.03	92.46	116.03	158.17	198.63
Panel E: Univariate tests								
Panel A vs. Panel B								
Difference in mean BHAR	-0.10	-8.17	1.69	-0.80	-10.33	-8.81	-1.85	-0.26
Difference in median BHAR	-0.31	-2.59	-3.84	1.56	-2.83	1.09	-1.57	-5.43
Difference in variance BHAR	0.40	-0.58	-8.36	-0.13	-19.75	-9.70	-20.87	-11.85
Panel A vs. Panel C								
Difference in mean BHAR	-2.25 [b]	-1.63	1.48	7.64 [c]	-0.59	-4.65	4.83	0.01
Difference in median BHAR	-1.99 [a]	-0.75	0.17	5.00 [c]	-4.79	-8.04	-4.55	-6.36
Difference in variance BHAR	0.18	-7.46 [a]	-4.11	0.02	-29.33 [b]	-27.73 [b]	-38.85 [b]	-32.92 [b]
Panel A vs. Panel D								
Difference in mean BHAR	-0.07	-1.12	37.59 [b]	22.17	33.69	32.65	29.09	27.78
Difference in median BHAR	0.00	4.49	40.17 [a]	17.19	41.09 [c]	36.67 [c]	60.23 [a]	57.73 [a]
Difference in variance BHAR	1.01 [c]	4.16	-21.91 [c]	-17.52	-37.66 [c]	-56.38 [c]	-60.44	-91.96
Panel B vs. Panel C								
Difference in mean BHAR	-2.15	6.54	-0.21	8.44	9.74	4.16	6.68	0.27
Difference in median BHAR	-1.68	1.84	4.01	3.44	-1.96	-9.13	-2.98	-0.93
Difference in variance BHAR	-0.22	-6.88	4.25	0.15	-9.58	-18.03	-17.98	-21.07
Panel B vs. Panel D								
Difference in mean BHAR	0.03	7.05	35.90 [b]	22.97	44.02 [b]	41.46 [c]	30.94	28.04
Difference in median BHAR	0.31	7.08	44.01 [b]	15.63	43.92 [b]	35.58 [c]	61.80 [a]	63.16 [a]
Difference in variance BHAR	0.61	4.74	-13.55	-17.39	-17.91	-46.68	-39.57	-80.11
Panel C vs. Panel D								
Difference in mean BHAR	2.18	0.51	36.11 [a]	14.53	34.28 [c]	37.30 [c]	24.26	27.77
Difference in median BHAR	1.99	5.24	40.00 [a]	12.19	45.88 [c]	44.71 [c]	64.78 [b]	64.09 [b]
Difference in variance BHAR	0.83	11.62	-17.80	-17.54	-8.33	-28.65	-21.59	-59.04

[a, b, c] Significantly different from zero at the 1, 5% and 10% levels respectively, using a two tailed test

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