The Difference between the Returns to Shareholders of UK Acquirers Involved in Domestic and Cross-border Mergers and Acquisitions

Maha Ayoush
Business School, Al-Zaytoonah University of Jordan, 130 Amman 11733 Jordan.
mahaayoush@gmail.com

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Abstract:
This paper examines the difference between the reaction of the market to the announcement of domestic and cross-border mergers and acquisitions by focusing on the returns to acquirers' shareholders around the announcement date. Based on a sample of 585 domestic and foreign acquisitions made by UK public acquirers over the period 1996-2003, and after applying the event study methodology using three benchmark methods which are the mean-adjusted method, the market model method and the market-adjusted method; the results in general show significant positive returns to shareholders in domestic mergers and acquisitions whereas insignificant negative abnormal returns to shareholders in cross-border mergers and acquisitions. Overall, cross-border acquisitions result in lower announcement returns than domestic acquisitions.

1. Introduction:
Mergers and acquisitions whether being domestic or cross-border are of great importance for the companies to survive in this competitive global world. The success and failure of these transactions are of great significance and have enormous consequences for the companies themselves as well as for the other constituencies and shareholders in them (Sudarsanam, 2003).
However, the terms 'merger' and 'acquisition' are often used interchangeably since they are defined generally by Sudarsanam (2003) as the combination of two companies so as to achieve certain strategic and business objectives.
It can be seen that cross-border mergers and acquisitions are more popular nowadays, with companies acquiring targets all over the world. Both the number and value of international mergers and acquisitions has increased dramatically. The overall value of cross-border acquisitions in the world has increased from 0.5% of world wide GDP in the mid-1980s to reach over 2% in the year 2000 (Georgen and Renneboog, 2004; Conn et al., 2005).
Also in the UK, both the number and value of cross-border acquisitions have increased significantly over the years. By the year 2000, the value of the UK acquisitions was the highest over the other years and also the UK was the largest acquiring country in cross-border deals with a value of 30% of the total value of all cross-border acquisitions in the world (Conn et al., 2005; UNCTAD, 2000).
The figures below show the number and value of cross-border merger and acquisition purchases made by UK acquirers compared with the world total values and numbers from the year 1987 to 2007.
It can be seen that the number and value of the world's total mergers and acquisitions increased in a large scale during the period 1990 till 2000. For the UK, the pattern was similar to the world's movements taking into consideration that the UK shares of the world total number of cross-border purchases remain within 12% to 14% since 1991 till now, which shows that the UK is participating in an active way in cross-border mergers and acquisitions. This recommends more examination for the merger and acquisition phenomenon by comparing domestic and cross-border acquisitions, especially after the increase in the number of companies that cross-borders and go abroad to acquire other firms rather than stay in their home country.

Figure 1: Number of Cross-Border M&A Purchases 1987-2007

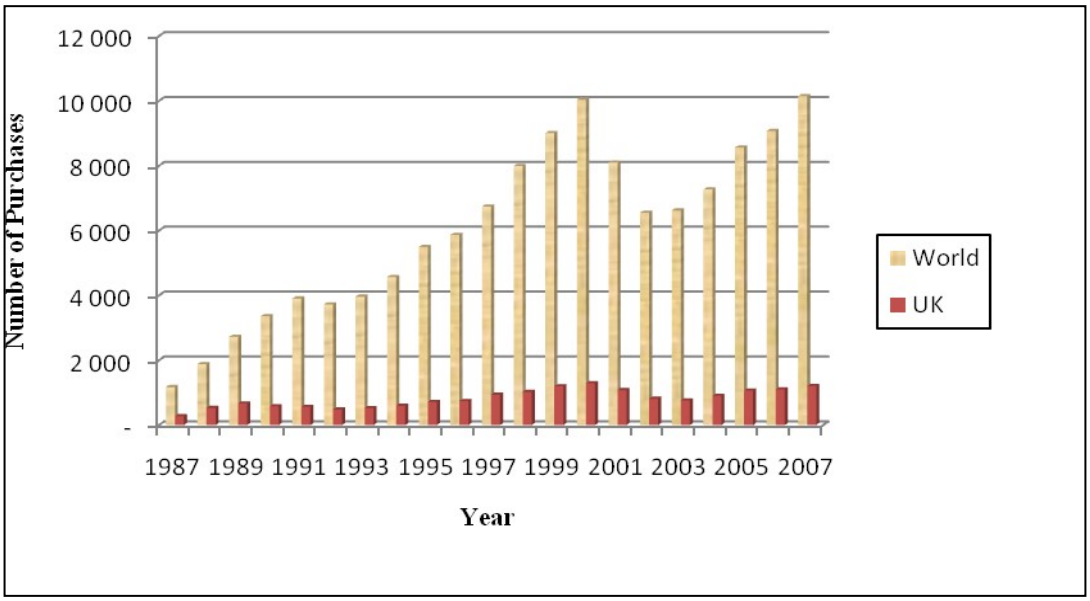
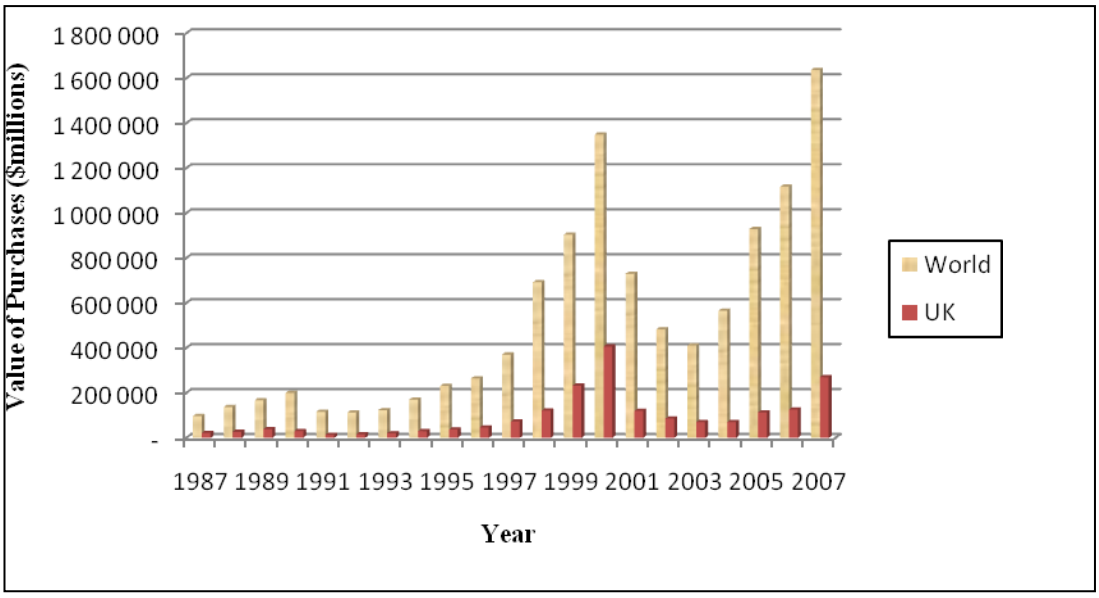


Figure 2: Value of Cross-Border M&A Purchases 1987-2007



Therefore, since cross-border mergers and acquisitions have become an increasingly important strategy used by a large number of firms across the world, this strategy needs to be analyzed thoroughly. Many studies tried to answer many of the questions and assumptions concerning this phenomenon, but there are still some gaps in the literature that need to be covered and filled.

Although some research has been conducted regarding the returns to shareholders, most of the previous literature has examined either the domestic mergers and acquisitions or cross-border mergers and acquisitions separately. However, the approach in this study differs from those previous studies that dealt with the examination of the takeover activity in a way that it compares directly between the domestic and cross-border acquirers' returns.

Moreover, many of the previous studies were conducted using acquisition transactions based on data and samples covering time periods during the eighties and early nineties which make their results not up-to-date in reflecting the rapid changing of global business environment nowadays, whereas the sample here covers a very important and recent period in the merger and acquisition activity.

The paper is organised as follows: Section 2 discusses the previous theoretical and empirical literature on domestic and cross-border mergers and acquisitions. Section 3 describes the data sample and methodology. Section 4 reports and discusses the empirical results. Section 5 which is the final section summarizes the key findings, conclusions and recommendations for future research.

2. Literature Review:

This section commences by reviewing the theoretical and empirical studies of the motives for mergers and acquisitions and then discusses the theoretical and empirical results of returns to shareholders in domestic and cross-border mergers and acquisitions.

2.1 Motives for mergers and acquisitions:

Theoretical research and studies over the years have been providing several explanations for the M&A strategy by examining various motives for mergers and acquisitions in general.

There have been a lot of possible reasons which were suggested as an explanation for why a company chooses M&A as a way of growth. In general, the most common cited motive is to create and achieve synergy. However, there are several other motives such as diversification, market power, improved management or tax motives (De Pamphilis, 2005).

However, most researchers agree that in reality, there are a number of different motives that drive mergers to take place and not only one motive (Ravenscraft and Scherer, 1987; Trautwein, 1990; Hopkins, 1999; DePamphilis,2008).Therefore; it was useful to group these motives into various categories (Mukherjee et al. , 2004). For example, Trautwein (1990) classifies the theories for merger motives into seven categories which are efficiency, monopoly, raider, valuation, empire-building, process and disturbance theory. However, most of these theories haven't got enough empirical results which support them. Berkovitch and Narayanan (1993) and Seth et al. (2000, 2002) indicate three major motives for the mergers which are the achievement of the synergy, hubris and agency problem.

Mueller and Yurtoglu (2007) divide them to synergy, market for corporate control, managerial discretion, overvaluation and the hubris hypotheses. Mukherjee et al. (2004) mentioned some other motives which include diversification, management incentives and tax considerations.
However, there are numerous theories that explain the reasons why mergers and acquisitions take place. The most common ones of them which are the synergy or efficiency theory, the hubris, managerialism or agency theory will be discussed below with some of the empirical findings on them.

2.1.1 The Synergy Hypothesis

The synergy hypothesis suggests that the motive for the acquisitions exists when it is a value increasing event which means that the value of the firm after the combination is larger and greater than the values of the individual firms operating separately (Bradley, Desai and Kim, 1988; Seth et al., 2000). This means that improving the efficiency of the combining firms is a popular explanation for acquisitions (Sharma and Ho, 2002). Therefore, it follows that managers of acquirers and targets intend to maximize shareholder wealth and would engage in the combination only if it results in gains and positive wealth effects for the shareholders of the acquirer and target firms (Berkovitch and Narayanan, 1993; Goergen and Renneboog, 2004).
The sources of value from synergy could be classified into three types which are: operational synergy, managerial synergy and financial synergy.
The synergy hypothesis was supported by the results of some of the empirical studies. Berkovitch and Narayanan (1993) examine a sample of US firms engaged in domestic deals and find that the synergy is the primary motive for these takeovers supported by the positive total gains.
Goergen and Renneboog (2004) also investigate an intra European sample which contains acquirers and targets from the UK and Continental Europe (UK, Ireland, Germany, Austria, Switzerland, France, Scandinavia, Benelux, Southern Europe and Central Europe) to examine whether the most common reason for takeovers is synergy, agency problem or managerial hubris. They find a significantly positive correlation between target shareholder gains and total gains as well as between target gains and bidder gains. This suggests that synergies are the prime motivation for bids with targets and bidders sharing the wealth gains. Therefore, although the rationale may differ from one merger to another, there's a common measure of success for mergers which is efficiency gains through synergies and the increased value of the combined firms (Mukherjee et al., 2004).

2.1.2 The Hubris Hypothesis:

The hubris hypothesis maintains that acquisitions are the result of managers' mistakes in evaluating target firms and that the synergy gain is zero (Roll, 1986). Consequently, when managers make errors of overestimating the synergies of the merger or the acquisition, the takeover may take place and as a result there will be an overpayment for the target.
However, since the synergy is assumed to be zero, then the higher the gain for the target, the greater will be the loss to the acquirer firm and the total gain will be zero. Therefore, we may say in this case that there is a negative correlation between the targets' and the acquirers' gain, whereas no correlation between the target and the total gain (Berkovitch and Narayanan, 1993; Goergen et al., 2004). Berkovitch and Narayanan (1993) found evidence of hubris in a sub-sample of US takeovers and Firth (1990) also found evidence of hubris that was reflected by positive gains to target firms while examining a sample of UK firms.

2.1.3 The Agency Hypothesis (Managerialism):

The agency hypothesis or problem proposes that takeovers are motivated by the acquirers' management self- interest (Goergen and Renneboog, 2004). Therefore, unlike the hubris hypothesis, the acquirers' management here will knowingly overpay in takeovers to maximize their own wealth and corporate growth rather than the firm shareholders' wealth (Seth et al., 2000).
In comparison with the previous hypotheses, there will be a negative correlation between the targets value and the bidders' value, and negative correlation between the targets value and the total value (Goergen and Renneboog, 2004). Using a sub-sample of US takeovers which took place during 1963-1988, Berkovitch and Narayanan (1993) found evidence for the managerialism hypothesis which was reflected by the negative correlation between target and total gains.

2.2 Theory of cross-border mergers and acquisitions:

Within this global environment and the increase in globalization of businesses, lots of opportunities have emerged for the firms and more pressure is put on them to engage in cross-border mergers and acquisitions (Hitt et al., 1998).

Dunning (1993) has developed an eclectic model which is relatively known as the OLI Paradigm as an attempt to create an overall framework which covers numerous theories to explain why firms invest outside their home countries and the motivations behind that.
The OLI Paradigm explains the FDI decision process which leads to cross-border acquisitions. It divides the process into three decisions which are: the Ownership, Location and Internalization decision (OLI).

2.2.1 The Ownership decision:

The ownership decision states that the firm must have some competitive advantages in its home market in a form that can be exploited and transferred to foreign subsidiaries. These must be firm-specific and not easily copied by other firms so as to allow the firm to create value through the foreign production decision. Also, these proprietary or ownership advantages are generally costly to create in the home country, whereas having low costs if transferred to new locations (UNCTAD, 2000).

2.2.2 The Location decision:

The location decision states whether or not the firm is attracted to a foreign location that is superior to the location in the firm's home country and best meet the deployment of their ownership assets. If so, the firm should be able to get use of the characteristics of the foreign market that will allow it to exploit and make the most of its competitive advantages in that market.

2.2.3 The Internalization Decision:

Under the internalization decision the firm must decide whether or not it can maintain its competitive position under the foreign acquisition or through alternative modes such as licensing or strategic expansion.

According to the previous theories, there are a lot of perils as well as opportunities accompanied with cross-border acquisitions which may affect their performance in comparison with domestic acquisitions.
Therefore, there have been a number of theories and reasons why acquirers in cross-border deals are expected to underperform or outperform their domestic rivals.

2.3 Review of the empirical studies:

Mergers and acquisitions are of significant importance to all the stakeholders in the merging firms whether being shareholders, employees, consumers or the wider community (Sudarsanam, 2003). Thus, the assessment of the success of these mergers and acquisitions is very important and can be achieved in several ways.
One of the ways for assessing the success of mergers and acquisitions is by focusing on the shareholders' value since the shareholders are the controlling power in the organization and the residual owners of the company (Martynova and Renneboog, 2008).
A number of empirical studies have been carried out to examine the issue of the returns to shareholders in mergers and acquisitions. These studies have been conducted either for the short run or the long run.

Cross-border vs. Domestic M&A

Some theories expect more gains and returns in international deals in comparison with domestic ones, whereas others show different conclusions, which are the outperformance of domestic acquirers over international acquirers.
However, evidence till now on whether cross-border transactions have a relatively positive or negative effect on bidder CAR compared to domestic acquisitions is still mixed depending on the country of the acquirers and the time period covered in the previous studies.
For example, Gregory and McCorriston (2005) conducted a study to examine the short- and long-run performance of UK acquiring firms following foreign acquisitions using a sample of 343 acquisitions in the time period 1984-1994. In their short-run study they applied the market model considering two event windows which are a five-day window (-3, 1) and a longer window (-10, 10). Their results show that for the first window (-3, 1) the foreign UK acquisitions as a whole resulted in negative but not statistically significant CARs of -0.022%. For the US acquisitions, the short-run returns were positive (0.2372%), for the EU negative (-0.719%) and for the rest of the world were negative (-0.2026%), but none of the three is statistically significant.
Goergen and Renneboog (2004) investigate the short-term returns for large European (Continental Europe and the UK) domestic and cross-border mergers and acquisitions for the period 1993-2000. Their sample which included 178 mergers and acquisitions with deals value more than $100 million

had both a European bidder and target. They measure the short-term wealth effects for the firms using the market model and apply six different measures of beta using several event windows which are (-1, 0), (-2, +2), (-40, 0) and (-60, +60). They find announcement effects of 9% for the target firms compared to a statistically significant announcement effect of only 0.7% for the bidders.
Moeller and Schlingemann (2005) examined the stock and operating performance for a sample of US acquirers involved in domestic and cross-border acquisitions between 1985 and 1995. They applied the market-adjusted returns model for the (-1, +1) event window around the announcement day. For the cross-border sample the CARs are insignificant 0.307% whereas for the domestic sample the returns are a significant 1.173% and so US acquirers in cross-border transactions have lower announcement returns than acquirers in domestic transactions.
Conn et al. (2005) examine the announcement and post-acquisition share returns of UK firms as acquirers of domestic and foreign targets, considering both public and private targets for a sample of acquisitions that occur during 1984-1998. For the announcement period returns they use a 3-day window (-1, 1) around the announcement date and use the market-adjusted model to calculate the abnormal returns. In their results for the domestic acquisitions they find significantly positive returns of 0.68% and the cross- border acquisitions also result in significant positive returns of 0.33%. These positive returns result from mergers with private targets rather than public targets. In the long-term, they find that acquiring firms' shareholders in cross-border transactions experience significant negative long-term returns after acquisition of private targets.
Therefore, the previous results in general show overperformance of domestic acquisitions in comparison with cross-border acquisitions.

However, some of the previous studies constrained their studies through limiting their sample by only selecting the large mergers in their examination, which may lead to results that cannot be generalized across all sizes of mergers (see, Aw and Chatterjee (2004); Goergen and Renneboog (2004)).
Also, it can be seen from the literature that most of the previous studies were conducted using acquisition transactions based on data and samples covering the 1980s and early 1990s such as Conn et al. (2005) who used a sample of UK acquirers between 1984 till 1998, Gregory and McCorriston (2005) who used a sample between 1984 till 1994 of UK acquirers and Moeller and Schlingemann (2005) who examined a sample of US acquirers between 1985 to 1995. Therefore, the results of these studies are not up-to-date in reflecting the rapid changes in the global business environment nowadays.
However, Goergen and Renneboog (2005) use a recent and up to date sample of European acquirers that covers the years 1993 till 2000, but the main reason for their study is to examine a specific time period which covers the fifth merger wave which may have effects on the results of their study.
Therefore, it can be said that the sample in this study is distinguished in covering a recent and very important and interesting period in the merger and acquisition activity that hasn't been studied before, in a try to fill the gap for one of the recent critical periods in the history of mergers and acquisitions.

3. Data Sample and Methodology:

3.1 Sample selection and data sources

This study examines a sample of UK public acquirer companies that are engaged in domestic and cross-border mergers and acquisitions, completed between January 1, 1996 and December 31, 2003.
The cross-border sample contains UK bidders and non-UK targets, while the domestic sample has both UK bidders and UK targets. The information about the firms involved in the merger activities is collected manually from the Thomson Financial magazine Acquisitions Monthly. The deals section of this magazine most of the time records the announcement dates, the names of the firms involved in the acquisition, the value of the transaction and the type of deal (merger, acquisition, acquisition of majority/minority control, or divestiture).
Other additional information, such as the means of payment in the offer, the status of the bid (hostile or friendly), multiple-bidder involvement and the industry codes (SIC) are also frequently reported in the Acquisitions Monthly magazine.
Daily stock returns for the acquiring firms in the sample and daily market index returns (FTSE-All Share Index) are extracted from the Datastream database.
Also to be included in the sample, transactions must fulfil the following conditions:

- Acquirers are UK firms publicly traded on the London Stock Exchange (LSE) and have returns data for at least 240 days prior to the announcement date and 40 days after the announcement date of the acquisition for the short-run analysis available from the Thomson Financial Datastream database.
- Deals values are available, which are defined by the acquisitions monthly as the total value of consideration paid by the acquirer, excluding fees and expenses.

3.2 Sample Description:

The requirement for the presence of some essential data such as the announcement dates and the returns data reduced the total number of companies collected in this research, which makes the final sample size to be 585 pairs of companies engaged in domestic and cross-border mergers and acquisitions.

Table 1 highlights the salient features of the sample and breaks down the full sample into two parts according to whether the deal is a domestic or cross-border acquisition made by UK acquirer. Consistent with the UNCTAD numbers, the sample shows that the number of merger and acquisition transactions by UK acquirers increases over the years then a decrease happens after the millennium followed by another increase again.

With regard to the method of payment, the takeovers here are classified into three groups which are pure cash, pure equity and mixed payment. The sample shows that the cash is the primary medium of payment in cross-border acquisitions and equity is less often used as a form of payment, which is consistent with other previous studies such as Conn et al., 2005 and Moeller and Schlingemann, 2005.

Table 1: Distribution of Sample M&As by Year and Deal Characteristics.

Panel A: By Year of M&A							
		CB M&A		**Domestic M&A**		**Total**	
		N	**%**	**N**	**%**	**N**	**%**
1996		28	9.24%	35	12.41%	63	10.77%
1997		31	10.23%	48	17.02%	79	13.50%
1998		58	19.14%	74	26.24%	132	22.56%
1999		61	20.13%	49	17.38%	110	18.80%
2000		54	17.83%	31	11.00%	85	14.53%
2001		26	8.58%	11	3.90%	37	6.32%
2002		20	6.60%	8	2.84%	28	4.80%
2003		25	8.25%	26	9.21%	51	8.72%
Total		303	100.00%	282	100.00%	585	100.00%
Panel B: By Deal Characteristics							
		CB M&A		**Domestic M&A**		**Total**	
		N	**%**	**N**	**%**	**N**	**%**
Payment Method	**All Cash**	105	34.65%	108	38.30%	213	36.41%
	All Shares	11	3.63%	13	4.61%	24	4.10%
	Mix	78	25.75%	101	35.82%	179	30.60%
	Not Available	109	35.97%	60	21.27%	169	28.89%
	Total	303	100.00%	282	100.00%	585	100.00%
Country of Target	**UK**	0	0.00%	282	100.00%	282	48.21%
	US	126	41.58%	0	0.00%	126	21.54%
	EU	108	35.65%	0	0.00%	108	18.46%
	RoW	69	22.77%	0	0.00%	69	11.79%
	Total	303	100.00%	282	100.00%	585	100.00%
Relatedness	**Related**	139	45.88%	143	50.71%	282	48.21%
	Non-related	126	41.58%	90	31.91%	216	36.92%

	Not Available	38	12.54%	49	17.38%	87	14.87%
	Total	303	100.00%	282	100.00%	585	100.00%
Target Status	**Public**	89	29.37%	77	27.30%	166	28.38%
	Private	214	70.63%	205	72.70%	419	71.62%
	Total	303	100.00%	282	100.00%	585	100.00%

Concerning the country of the target, it is clearly seen that the UK acquirers in cross-border deals show preference for targets in the industrialized and English speaking countries, with the majority of their targets located in the United States (41.58%) followed by Europe (35.63%).
Acquisitions between firms in related industries (which are defined here as the same 2-digit standard industrial trade classification code or SIC code) occur in 45.88% of the cross-border sample and 50.71% of the domestic sample.
Finally, consistent with other previous studies, private targets are much more numerous than public targets with more than seventy percent of the transactions involving privately held target companies.

3.3 Event Study Methodology:

In this section the event study methodology is applied to derive the short-run returns around the event date and to calculate the cumulative abnormal returns (CARs) for different periods around the announcement date using three different approaches to calculate the normal returns.
In general, the first step in conducting an event study is to define the event of interest which is here the announcement of the merger and acquisition deal, whether being domestic or cross-border. Then, to identify the event window, which covers the period over which the share prices of the firms involved in the merger and acquisition event will be examined which will allow for capturing all the effects of the event on the stock prices.
Although there is no overall consistency between the event windows chosen in existing studies, ranging from short- to long- run windows, the short- run window is used here because even though longer periods will make sure that all the effects are captured, but the estimate may be subject to more noise in the data.
In this study, five event windows around the announcement date will be taken into consideration so as to capture some of the windows used in previous studies for the later comparison of results. These windows are (-1, +1), (-2, +2), (-5, +5), (-10, +10) and (-40, +40) in days.
After deciding the event windows chosen for examination, the abnormal return for the firms can be calculated, which is defined as the return for the firm in day *t* minus the expected or normal return for the firm in day *t* ,

$$AR_{jt} = R_{jt} - [E(R]_{jt}) \qquad (1)$$

The next step is to calculate the predicted or normal return for each day and each firm in the event period. These normal returns represent those returns that would be expected if no events occur.
To calculate the normal or predicted returns there are basically three known methods that are used in this study. These are the mean- adjusted return method, the market model method and the market-adjusted return method.

3.3.1 The Mean Adjusted Return Method

The expected return for security j in time t is given by:

$$[E(R]_{jt}) = K_{-} \qquad (2)$$

Therefore, according to this method, the expected return on any security is constant across time but can differ across securities. And the procedure for this method is as follows:
The first step in this method is to choose a clean period which includes days on which no information related to the event is released. This period may be before or after the event period or both. In this study, a pre event clean period is used which covers the days from -240 to -41 days which is similar to

that used by many other previous studies such as the 250-days prior to the announcement used by Gregory and McCorriston (2005) and Sudarsanam and Mahate (2003).
Then the average daily return for every firm in the sample is estimated for this clean period and is called the expected return.

$$\hat{R}_{jt} = E(R_j) = \frac{\sum_{t=-240}^{-41} R_{jt}}{200} \quad (3)$$

3.3.2 The Market Model Method:
This model assumes that stock returns are determined using the following ordinary least squares (OLS) equation:

$$R_{jt} = \alpha_j + \beta_j R_{mt} + \epsilon_{jt} \quad (4)$$

with the expected stock returns being given by:

$$E(R_{jt}) = \hat{R}_{jt} = \hat{\alpha}_j + \hat{\beta}_j R_{mt} \quad (5)$$

where:
E (R_{jt}): the expected return on security j in time period t
$\hat{\alpha}_j, \hat{\beta}_j$: coefficients estimated using an ordinary least squares regression of returns on security j against the returns on the market index, and
R_{mt} : the return on the market index.

Since this model involves a regression of the firm returns series against the market index, the calculation must have a clean period that is not included in the event window as in the previous method which is the returns for 200 trading days before the announcement day from -240 to -41 days .These returns are then regressed against the market index which is represented here by the FTSE All Share from the Datastream.
The abnormal returns (residuals) in the market model are given by:

$AR_{jt} = R_{jt} - E(R_{jt})$ which is equal to $AR_{jt} = R_{jt} - \hat{\alpha}_j - \hat{\beta}_j R_{mt}$
(6)

3.3.3 The Market- Adjusted Return Method (MAR):
Brown and Warner (1980, 1985*)* suggest that while this model is very simple, it is actually as powerful as other more complex models in deriving expected and abnormal returns. The MAR works on the assumption that the expected return for all securities are the same and equal in any period to the expected market return in that period. Hence, the expected return for a security in period *t* would be equal to the market return in period *t*.

$$E(R_{jt}) = R_{mt} \quad (7)$$

The market return is defined as the percentage change in the FTSE All Share return in two successive days, which is collected from the Datastream.

$$R_{mt} = \frac{RI_{mt} - RI_{mt-1}}{RI_{mt-1}} \quad (8)$$

Once the measures of abnormal returns have been estimated using the three different methods, average abnormal returns and cumulated average abnormal returns have been calculated and the results are interpreted. Then, within a certain level of confidence we can infer whether these abnormal returns and cumulative abnormal returns are different from zero. This is done by calculating the t-statistic for different time periods for the domestic, cross-border and full samples.
The corresponding test statistic for the hypothesis that the cumulative average abnormal returns equals zero for *n* number of firms and over an event period extending from t = **t** to t = **T** is as follows:

$$\frac{CAAR}{\hat{S}(CAAR)} = \frac{\sum_{t=t}^{T} AAR_t}{\sum_{t=t}^{T} \hat{s}(AAR)} = \frac{\sum_{t=t}^{T} AAR_t}{\sqrt{(T-t+1)}\hat{S}(AAR)}$$
(9)

4. Empirical Results:

This section presents the results of the tests conducted on the whole sample, domestic sample and cross-border sample of UK acquisitions. The analysis begins by examining acquirer announcement returns as measured by the Cumulated Average Abnormal Returns (CAAR) around the announcement period with the examination of the significance of the CAAR for the whole, cross-border and domestic acquisitions. After that an equality test is conducted with simple mean and median-difference tests for the cross-border and domestic samples. Then a regression equation is estimated to examine the impact of some of the deal and acquirer characteristics on the returns to shareholders of bidding firms.

4.1 Short-run Returns and Significance test

The figures below show the cumulative average abnormal returns for UK acquirers using the three methods mentioned earlier over different event windows. The results in general are mostly similar using the three models even though the market- adjusted model shows more negative results for the cross-border sample, but none of the results is statistically significant.

Figure 3: CAAR for Cross-Border UK Acquirers

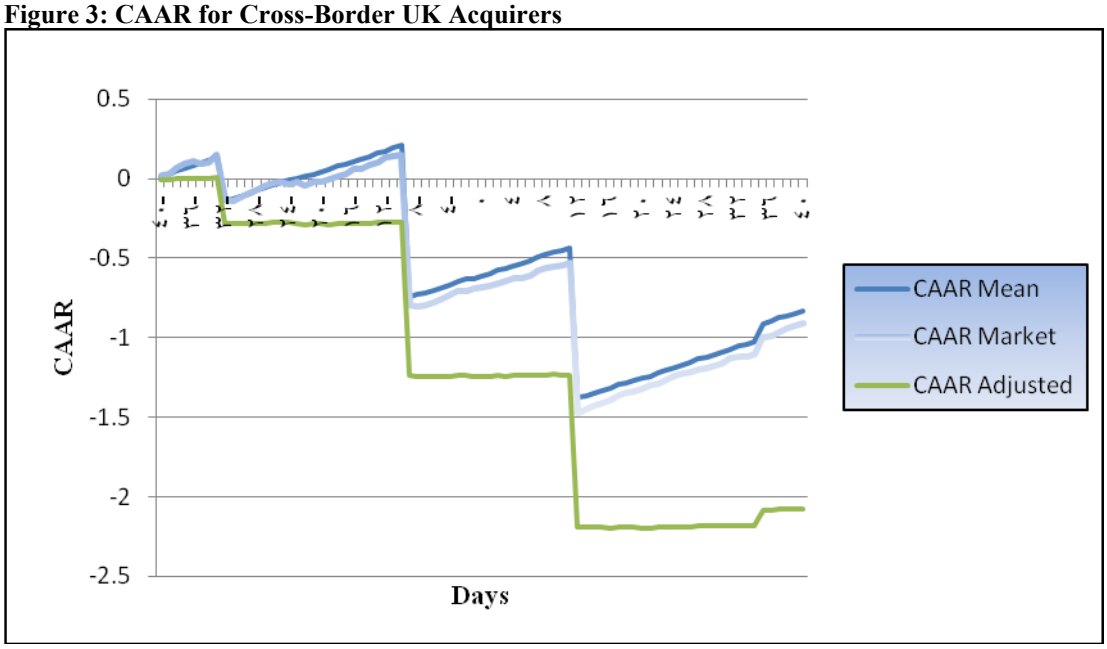


Figure 4: CAAR for Domestic UK Acquirers

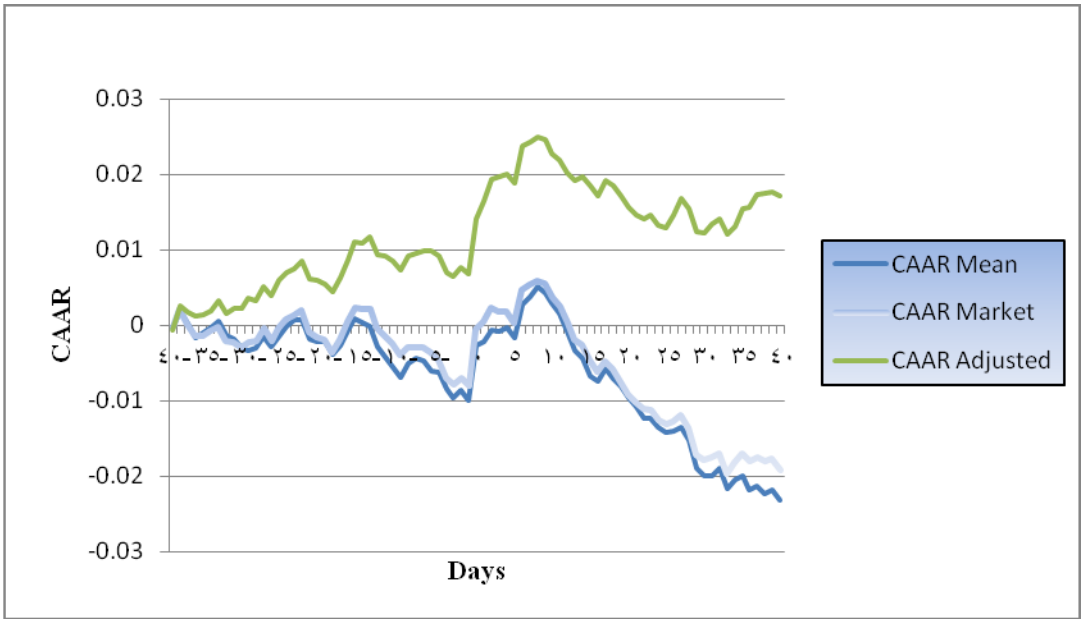
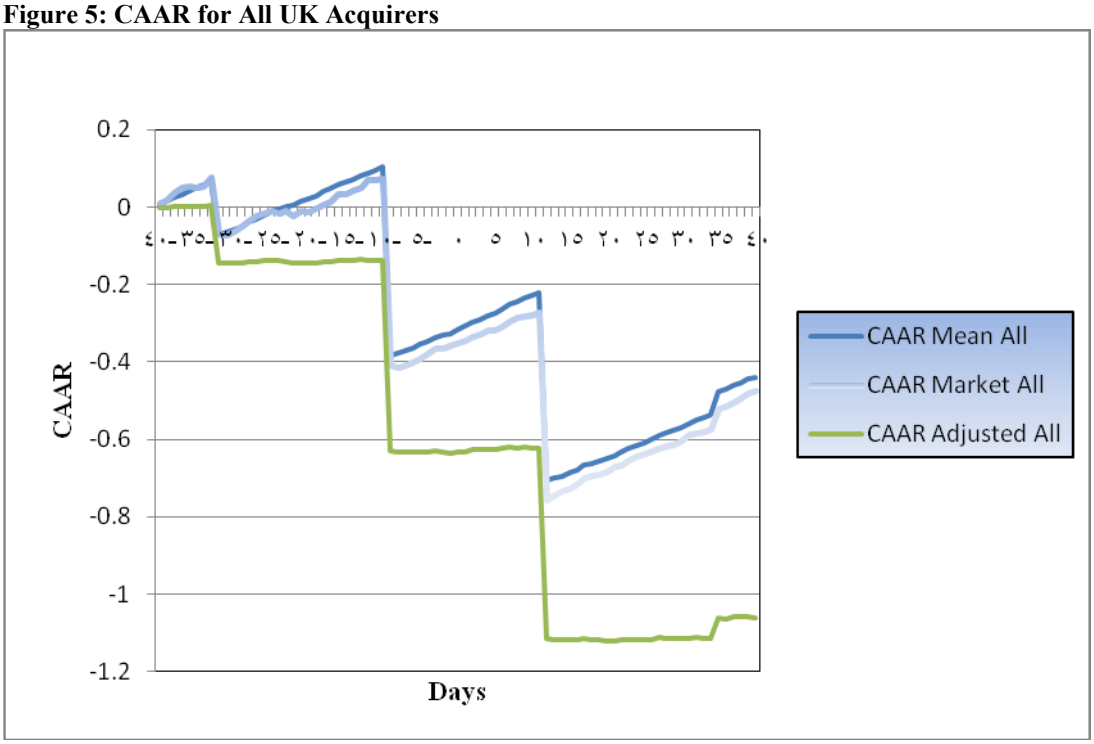


Figure 5: CAAR for All UK Acquirers



Therefore, it can be said that on average the bidding companies experienced significant as well as insignificant small abnormal gains and losses over the research period with most of the significant results appearing for the domestic sample. These results are in great similarity to the results from previous studies which showed mixed results of small positive and negative returns and others showing zero returns for acquirer shareholders (Sudarsanam, 2003; Sudarsanam and Mahate, 2003).

4.2 Equality Test:

Means and medians for the cumulative abnormal returns CARs for the sample of 303 cross-border transactions are compared with the means (medians) of the 282 domestic transactions using the three models and different windows around the announcement date. The significance of differences between means and medians of the two samples is conducted, t-tests are used for equality in means and a Wilcoxon /Mann–Whitney test is used for equality of medians.

Panels A and B of Table 2 report the results using the mean-adjusted method and the market model method. The results in general show no significant differences between means for cross-border and

domestic acquisitions whereas significant negative differences between medians using the three-day and five-day windows around the announcement dates.
On the other hand, when using the market-adjusted model, the results in Panel C of Table 2 show that in general there are some significant results for the underperformance of the cross-border acquisitions in comparison with domestic acquisitions which is similar to the previous results of the studies conducted for UK acquirers such as Conn et al. (2005).

Table 2: Univariate Analysis

% Cumulative Abnormal Return				
	CB (1)	D (2)	Difference (1-2)	p-value
Panel A: Mean-Adjusted Model				
(-1,+1)	3.447 (-0.151)	0.602 (0.125)	2.845 (-0.267) ***	0.480 (0.076)
(-2,+2)	6.947 (-0.598)	0.878 (0.529)	6.069 (-1.127) *	0.438 (0.006)
(-5,+5)	17.380 (0.253)	0.411 (0.018)	16.969 (0.235)	0.354 (0.652)
(-10,+10)	-64.361 (-0.321)	0.816 (0.588)	-65.177 (-0.909)	0.322 (0.166)
(-40,+40)	-0.838 (-0.021)	-0.024 (-0.003)	-0.814 (-0.018)	0.323 (0.249)
Panel B: Market Model				
(-1,+1)	3.218 (-0.256)	0.693 (0.036)	2.525 (-0.292)**	0.483 (0.047)
(-2,+2)	5.006 (-0.623)	1.043 (0.487)	3.963 (-1.11)*	0.482 (0.004)
(-5,+5)	15.373 (0.713)	0.423 (0.169)	14.95 (0.544)	0.347 (0.764)
(-10,+10)	-69.060 (-6.36e-05)	0.630 (0.389)	-69.69 (-0.309)	0.328 (0.380)
(-40,+40)	-0.912 (-0.028)	-0.019 (0.000)	-0.893 (-0.028)	0.327 (0.154)
Panel C: Market- Adjusted Model				
(-1,+1)	-1.069 (-0.103)	0.826 (0.180)	-1.895 *** (-0.283)***	0.086 (0.051)
(-2,+2)	-0.616 (-0.230)	1.310 (0.545)	-1.926 ** (-0.775)*	0.011 (0.010)
(-5,+5)	0.520 (0.359)	0.937 (0.564)	-0.417 (-0.205)	0.564 (0.754)
(-10,+10)	-96.474 (0.687)	1.521 (0.386)	-97.995 (0.301)	0.332 (0.924)
(-40,+40)	-2.097 (0.003)	0.021 (0.025)	-2.118 (-0.022)	0.331 (0.121)

The difference tests are based on t-tests for equality in means and a Wilcoxon-test for equality of medians.
*Statistical significance at the 1% level
**Statistical significance at the 5% level
***Statistical significance at the 10% level

4.3 Regression Analysis:

The theoretical and empirical literature on acquisition activity in general presented some of the bids' characteristics that may affect the bidder's returns. Therefore, it would be very useful to examine the impact of some of these characteristics on the bidders' returns by running a regression test with event period (short-run) abnormal returns which includes employing standard ordinary least squares analysis.
The variables which are examined here are: whether the merger is a domestic or cross-border, the payment method, whether the target is a public or private firm, the country of the target in cross-border deals, the size of the deal value, acquirer size (market value of equity), relative size (deal size multiplied by the acquirer's market value of equity) and the industrial relatedness.

The results in general show significant positive effect from the deal value on the domestic acquirers' returns, whereas negative significant impact from the market value of equity (which represents the acquirers' size) on the domestic acquirers' returns using all the three methods and during all event windows .Table 3 below shows the results over the three-day event window (-1,+1). However, other tables covering regression analyses over event windows (-2, +2), (-5, +5), (-10, +10), (-40, +40) are also conducted in this study and have given similar results.

Table 3: Regression tests of determinants of event period returns (-1, +1)

Panel A: Mean Model (-1, +1)			
Independent Variable	Full Sample	Cross-border Sample	Domestic Sample
Constant	-0.216865 (-1.025221)	-0.413874 (-0.988470)	-0.031008 (-0.879276)
CB	-0.022730 (-0.306689)		
US	0.089099 (1.100121)	0.070437 (0.604293)	
EU	0.014928 (0.184178)	0.025981 (0.227736)	
Cash Payment	0.070253 (1.275327)	0.145562 (1.416483)	0.001313 (0.151569)
Mix Payment	0.013496 (0.234376)	0.010440 (0.092703)	-0.000848 (-0.098438)
Relatedness	0.050707 (1.146776)	0.082148 (0.933158)	0.003073 (0.464811)
Private	-0.064748 (-1.308295)	-0.135530 (-1.385425)	-0.004255 (-0.578876)
Log (Deal Value)	0.011258 (0.818665)	0.017223 (0.676701)	0.004499*** (1.914895)
Log(MV)	0.004157 (0.299477)	0.015185 (0.541939)	-0.005803* (-2.671215)
Relative Size	-0.000132 (-0.268920)	-8.54E-05 (-0.117678)	-0.007610 *** (-1.923303)
Adjusted R-squared	-0.001416	-0.005874	0.008835
F-statistic	0.924218	0.822851	1.333645
Sample Size	585	303	282

Panel B: Market Model (-1, +1)			
Independent Variable	Full Sample	Cross-border Sample	Domestic Sample
Constant	-0.202275 (-1.069047)	-0.380761 (-1.017151)	-0.033534 (-0.946167)
CB	-0.023359 (-0.352356)		
US	0.084655 (1.168555)	0.068060 (0.653097)	
EU	0.017251 (0.237952)	0.026855 (0.263290)	
Cash Payment	0.062216 (1.262660)	0.129401 (1.408441)	-0.000138 (-0.015835)
Mix Payment	0.013760 (0.267145)	0.012741 (0.126540)	-0.000951 (-0.109848)
Relatedness	0.044515 (1.125499)	0.072262 (0.918135)	0.002501 (0.376370)
Private	-0.057325 (-1.294944)	-0.119451 (-1.365760)	-0.004488 (-0.607423)
Log (Deal Value)	0.010974 (0.892179)	0.016355 (0.718728)	0.004688 ** (1.985319)
Log(MV)	0.002825 (0.227466)	0.012344 (0.492742)	-0.005585 ** (-2.558336)
Relative Size	-0.000127 (-0.287843)	-8.75E-05 (-0.134881)	-0.006233 (-1.567379)
Adjusted R-squared	-0.001279	-0.006093	0.005131
F- Statistic	0.931543	0.816287	1.193048
Sample Size	585	303	282

Panel C: Market-adjusted Model (-1, +1)			
Independent Variable	Full Sample	Cross-border Sample	Domestic Sample
Constant	0.070669 (1.230814)	0.138042 (1.258718)	-0.032421 (-0.902575)
CB	-0.000513 (-0.025522)		
US	-0.025655 (-1.166999)	-0.024014 (-0.786572)	
EU	1.93E-05 (0.000879)	-0.004000 (-0.133858)	
Cash Payment	-0.007645 (-0.511324)	-0.019193 (-0.713055)	-0.001363 (-0.154420)
Mix Payment	0.007999 (0.511782)	0.019446 (0.659208)	-0.001418 (-0.161475)
Relatedness	-0.017610 (-1.467281)	-0.033270 (-1.442868)	0.004067 (0.603890)
Private	0.008630 (0.642459)	0.022502 (0.878203)	-0.001834 (-0.244967)
Log (Deal Value)	-0.001672 (-0.447925)	-0.004723 (-0.708523)	0.004426 *** (1.849416)
Log (MV)	-0.005451 (-1.446497)	-0.007430 (-1.012386)	-0.005280 ** (-2.386464)
Relative Size	-9.65E-06 (-0.072283)	-1.24E-05 (-0.065435)	-0.004014 (-0.995905)
Adjusted R-squared	0.005156	-0.001107	-0.000776
F- statistic	1.277794	0.966455	0.970988
Sample Size	585	303	282

Dependent variables are the cumulative abnormal returns CARs over the period (-1, +1) around the announcement period using the mean, market and market-adjusted models.
Numbers in parentheses are t-statistics.
* Represents significance at the 1% level,
** represents significance at the 5% level and
*** represents significance at the 10% level.

5. Conclusions and Recommendations:

The emphasis in this study is on the examination of the announcement performance of a sample of 585 acquisitions made by UK public acquirers that were announced between 1996 till 2003. The sample includes acquisitions of both domestic and cross-border targets for the reason of the comparison between the reactions of the market to the announcement of each kind of acquisition by focusing on the returns to acquirers' shareholders for both of these two kinds of acquisitions around the announcement date.

The sample period in this study is distinguished in being recent, not studied before and being up to date with the rapid changing global world within the vast increase in the number and value of cross-border acquisitions.

Event study methodology is conducted in this chapter and three different benchmark methods are applied to calculate abnormal returns which are the mean- adjusted method, the market model method and the market-adjusted method.

In general, the results for the full and cross-border samples show insignificant positive cumulative abnormal returns up to eleven-day window around the announcement date whereas insignificant negative returns when extending the event window to twenty-one and eighty-one days around the announcement day using both the mean-adjusted and the market models. However, the domestic sample shows significant positive returns for most of the periods with significant negative returns when extending the event window to (-40, +40) days around the announcement day.

On the other hand, the market- adjusted model shows more negative results for the cross-border sample being significant using the twenty-one and eighty-one day windows.

Also, regression analyses were conducted over different event windows to check the impact of some of the deal and the acquirers' characteristics on the bidders' returns. The dependent variable is the cumulative abnormal share return (CAR) for each company using the mean, market and market-adjusted models over different windows around the announcement day. The results in general show significant positive effect from the deal value on the domestic acquirers' returns, whereas negative

significant impact from the market value of equity (which represents the acquirers' size) on the domestic acquirers' returns using all the three methods and during all event windows.
Finally, other issues are also important and need to be examined and explored alongside with the shareholders returns so as to have a wider view about the difference between domestic and cross-border mergers and acquisitions, which therefore becomes the major work in my next papers.

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