Do Bidders Gain in Related Acquisitions? Some Evidence from UK

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Abstract

This study examines the performance of related bidders over short- and long-term horizons. Acquisitions are examined between companies within the same industry from a sample of completed UK takeovers between 1994 and 1998. Performance is compared to unrelated acquisitions and also size and industry control portfolios. We also examine the effects of form of financing and the preferred method of payment by larger and smaller related bidders. It is found that related takeovers occur mainly in underperforming industries. Significant differences are found in long-horizon performance with regard to bidder size and also the method of payment.

Keywords: mergers, acquisitions, event-study, synergy, bidder, horizontal

1. Introduction

Morck *et al*. (1988) distinguish between disciplinary takeovers, designed to remove underperforming management and takeovers that promote synergy by bringing together two firms that are able to perform more efficiently together. This paper focuses on a type of takeover that is motivated by management's pursuit of synergy. This is perhaps one of the most convincing motives as it is based on the notion that two firms combined operate more efficiently and are worth more together, than separate, (Bradley *et al*. 1988; Jensen and Ruback 1983; Healey *et al*. 1992). Economies of scale, improved sales and fresh management may generate synergistic benefits. However, a large body of evidence indicates that the target enjoys most of the gains (Jensen and Ruback 1983; and Bradley *et al*. 1988), and the post-acquisition abnormal return may not solely reflect the synergy value (Hietala *et. al.* 2003). After controlling for the bidder firm characteristics, Fuller *et. al.* (2002) documented by using the US data that bidders lost value in the acquisition of publicly listed targets firms, but gain value in private and subsidiary targets. In similar a study, by using UK data, Antoniou *et. al.* (2007) has found that bidders break even in the short run when acquiring public firms but gains in buying private and subsidiary targets. However, over the long run bidders experience wealth losses regardless of the types of targets. While these studies provide us general evidence of acquisition value loss for the bidder firms, the main limitation is that samples were not chosen based on the acquisition motives. Therefore, we still do not know if bidder looses value when acquisition is clearly driven by any synergy.

Given the evidence of bidders' value loss in the post-acquisition period, we re-examine the issue with a set of selected UK acquisitions that were supposed to be motivated by the operational synergy. Synergy can be created from a mainly managerial; financial; or operational integration. Managerial synergy could arise if bidder management is superior to that of the target. This relates to Manne's (1965) theory of corporate control where takeovers are disciplinary and remove ineffective management. Financial synergy can lower the costs of internal financing as compared to external financing. For example, financial efficiency would occur when one firm has excess cash, but little investment opportunities, while the other firm is in an opposite situation. Financial synergy can also arise from the debt capacity of combined firms being greater than when the firms are separate. Operational synergy can be seen from economies of scale and increased market power through larger production capacity to cater to increased demand (e.g., Gupta and Gerchak, 2002). For firms to benefit from operational synergy the takeover needs to be of a horizontal or vertical nature, which means the acquired firm needs to be related to the bidder's business. This paper classifies takeovers that are most likely to be linked with operational synergy and tests the impact of the takeover on the bidder in the short-term and the long-term. The paper tests a number of hypotheses regarding the impact related takeovers have for the bidder firm compared to firms involved in unrelated takeovers. The examination of related and unrelated takeovers requires a classification into the correct categories. Many firms have operations in many different domains. As a result, related and unrelated

characteristics may be evident at the same time within a takeover. This is perhaps one of the reasons for inconclusive evidence in this area of corporate control. The classification used in this paper is based on the firm's central competencies. The three- or four-digit SIC code provides the core industry and indicates whether horizontal takeovers have occurred.

The remainder of the paper is organised as follows: the next section presents the literature review and sets up the hypotheses concerning the impact of related acquisitions over the short and long-term. In the third section, the methodology and data are described. Section four presents the results. The final section provides summary and conclusions.

2. Literature Review

There is mixed evidence regarding bidder performance surrounding the announcement of a takeover. Sudarsanam *et al*. (1996) report that UK bidders lose approximately by 5% value although they earn about 2% return overall. Other UK studies by Franks and Harris, 1989; Limmack, 1991; Parkinson and Dobbins (1993); and Antoniou *et. al.* (2007) concluded that no gains were made by bidder shareholders. Support also comes from the US (e.g., Franks and Harris, 1988; Datta *et al*. 1992; and Fuller *et. el.,* 2002 among the earlier studies and Kedia *et al* 2009 among the recent studies) and from the other European Markets (Flugt, 2009). Overall, it is generally acknowledged that bidders do not gain value, except in certain situations such as when acquisition occurs in imperfectly competitive market and when firms invest in the specialized assets. It is also acknowledged that bidders do not substantially lose from a takeover bid announcement.

Several studies have examined the issue of related mergers and whether the expected gains from such takeovers are seen between firms in related industries. Limmack & McGregor (1992) reported that related mergers slightly underperform relative to the unrelated mergers when the wealth gains are examined. Seth (1990) and Slusky & Caves (1991) add to the inconclusive evidence as the findings from these studies show little difference between related and unrelated takeovers. Sudarsanam, Holl, and Salami, (1996) also examine if industry relatedness leads to operational synergies and finds that this is not the case. Flanagan (1996) uses a more robust method of identifying purely related mergers, where the bidder and target share the same SIC code at either the three of four-digit level and for purely unrelated mergers the bidder and target do not have similar SIC codes. The findings of Flanagan (1996) show that shareholder returns were higher for acquirers involved in related mergers compared to that of unrelated mergers occurring in the US between 1972 and 1990. Moreover, Morck *et al*. (1990) discuss the view that perhaps unrelated mergers are the result of management's pursuit of their own goals at the expense of the shareholders. Among others, Choi and Russell (2004) found within the US construction sector that the acquisition time, method of payment, or target status do not influence the market performance, through related mergers perform slightly better than unrelated ones. As whole, the evidence on short term wealth effect in the related and unrelated mergers is not yet clear, though in theory the related bidders should benefit from the operational synergy achieved by vertical or horizontal integration. The literatures presented above are mainly concerned with the short term wealth effects on the bidder firms. The studies on long term wealth effects are reviewed below.

Evidence regarding the long-term horizon returns for the bidder firms is mixed. Agrawal *et al*. (1992) find that bidders significantly lose by approximately 10% in a five-year post-merger period and that the firm size effect and beta estimation problems are not the cause of negative returns seen in the post period. However, some studies do not report underperformance in the post-acquisition period (Bradley & Jarrell (1988), and Franks *et al*. (1991)). Franks *et al*. (1991) note that the negative post-performance reported in the past has been mainly the result of benchmarking errors. However, Agrawal *et al*. (1992) studied four large time frames compared to the one time frame studied by Franks *et al*. (1991). Their findings show significant negative abnormal returns in the post-period to the bidder in three of the time-periods. One period showed no real deviation – the same period studied by Franks *et al*. (1991). Franks *et al*. (1988) report negative post-merger returns for bidders in the US and UK. Loderer and Martin (1992), by controlling for size effects and beta risk, report similar negative returns in the period of three years after the merger was completed. However, the authors report that the negative abnormal returns are prominent in the 1960's and diminishes through the years until no abnormal returns are seen in the 1980's.

Rau and Vermaelen (1998) also examine long-horizon bidder performance, and adjust for both firm size and book-to-market effects. Their findings show that bidders underperform control portfolios consisting of similar sizes and book-to-market ratios by approximately 15% in the period of 3 years after the merger. This is consistent with the findings of Agrawal *et al*. (1992) that report significantly negative cumulative abnormal returns (-13.58%) in the same time-period after the merger. Langeteig (1978) also reported negative long-term performance, but when compared to control firms in the same industry, no significant deviation was found. Regarding the method of

payment and long-term performance, Loughran and Vijh (1997), note that acquirers gain significantly in the five years after the merger was completed when payment was made by cash, whereas stock acquirers earned significantly negative abnormal returns. Most studies have reported negative performance for bidders in the years after acquisition. However, Healy *et al.* (1992) add to the varied evidence by studying the post-acquisition performance of the fifty largest US mergers that took place between 1979 and 1984. The findings were that industry-adjusted post-merger performance was positive. Among other studies, Ramaswamy and Waegelein (2003), Andre et al.(2004) Kling (2006), Megginson et al. (2004) and Zhu (2008) also investigated the long term performance of acquisitions in different internationals markets.

When these findings are all brought together there is mixed evidence regarding the long-term performance of bidders after completion of the acquisition, but in the majority of cases, bidders seem to underperform. This can be attributed to the differing methodologies and sample selection. In addition, studies such as Healy *et al.* (1992) note that industry conditions may also be an important factor to the final outcome and how the results can be examined and validated. Nevertheless, when comparing the industry factor to that of the bidder performance it is assumed that the bidder has the same profile as the industry as a whole. However, in the market for corporate control the bidder is more likely to be larger than the average company and may therefore affect the results.

This paper examines the impact of UK takeovers motivated by operational synergy on the wealth of the bidder shareholders immediately surrounding the bid announcement and also in terms of long-horizon performance. We use a similar methodology to that of Flanagan (1996) where three- or four-digit SIC codes are shared (not shared) between the bidder and target to identify related (unrelated) takeovers. The performance of related bidders is compared to a sample of unrelated acquisitions. Furthermore, the performance of each related bidders industry is also examined to shed light on whether related takeovers occur in underperforming industries. An additional tool used to measure the overall long-term performance of related bidders is to compare their performance against portfolios of firms of similar sizes. One last area that we felt required attention was the long-run performance of the related bidder and the method of payment that was used. Overall, we utilise a number of methods of analysis to understand how related bidders perform. There is also little evidence regarding the short- and long-term performance of related bidders in the UK and how these companies perform against comparable control samples. As a result, this study will be of benefit to both academia and practitioners. Finally, based on the above background, following two hypotheses are tested in this paper:

H1: The shareholders of bidders involved in 'related' takeovers experience significant wealth gains in the period surrounding the announcement of the bid as compared to unrelated acquisitions.

H2: The long-term horizon performance of bidders engaging in related takeovers is superior to that of unrelated acquisitions.

3. Data and Methodology

3.1 Data

A sample of 340 successful takeovers by UK public firms was obtained from 1994 to 1998. The daily share price data was collected from Extel's Equity Research and FT Prices. The dates and information content of the first bid announcement was gathered from a news search using McCarthy CD-ROM and FT News. All four-digit SIC codes of the acquiring and acquired firms were collected from FAME. To measure the short-term returns of related bidders, complete data was available for 95 related bidders and 95 unrelated bidders. Our sample size reduced in both cases when studying the long-term returns. Complete data was available for 80 related bidders and 75 unrelated bidders.

3.2 Returns Measures

To assess the market reaction at the announcement of related and unrelated acquisitions, standard event study methodology is used (Dodd, 1980). Daily stock returns are defined as:

$$R_{it} = (P_{it} - P_{it-1})/P_{it-1} \qquad (1)$$

Where, $P_{i,t}$ is the closing price on stock i at time t. The next step is to calculate the predicted or normal return ($ER_{i,t}$); this is the return that would be observed if no event occurred. In this case, $ER_{i,t}$ is represented by the return on the FTSE All-Share Index for each day in the event period.

Each bidder's abnormal return is calculated over each day of the event period as:

$$AR_{it} = R_{it} - ER_{it} \qquad (2)$$

The abnormal returns of the n bidder in each group (related and unrelated) are collected to determine the average abnormal return for each day as follows:

$$AAR_t = \sum_{i=1}^{n} AR_{it} \Big/ n \tag{3}$$

The final step is to calculate the cumulative average abnormal return for each day over the entire event window:

$$CAAR = \sum_{-15}^{+15} AAR_t \tag{4}$$

To test AAR_t for significance the following t-stat is applied:

$$t = AAR_t / S(AAR_t) \quad \text{where } S(AAR_t) = \left[\frac{1}{30} \sum_{-15}^{+15} \left(AAR_t - \overline{AAR_t} \right)^2 \right]^{1/2} \tag{5}$$

Finally, following Boehmer, Musumeci, and Poulsen (1991), we use the test statistic for the cumulative daily average abnormal return (CAAR), cumulating over the period specified and is computed as follows:

$$t = CAAR / S(CAAR) = \sum_{-15}^{+15} AAR_t \Big/ \sqrt{31} \, S(AAR) \tag{6}$$

3.3 Control Portfolio CAAR Approach

We classify our final sample of 80 related bidders (long-term study) into eight groups by market capitalisation. For each group we form a portfolio of firms of similar capitalisation. Thus we form control portfolios corresponding to the eight bidder groups. For example, control sample Portfolio1, consists of a random sample of firms that have market capitalisation greater than £5000M. We then carry out the process of determining which portfolio each related bidder's market cap falls into. Once we have identified which portfolio each bidder belongs to the next step is to treat each control firm in that specific portfolio as though it completed an acquisition at the same point in time as the related bidder. This process is carried out for each related bidder, i.e. 80 times. Therefore, returns are formed for each control firm within the specific portfolio, from a specific date - the announcement date of a related takeover. The average abnormal returns are calculated for the portfolio of firms for the same period of time as the related bidder, from the same point in time. This method allows us to take into account the size of the related bidder and compare how they perform against a range of similar sized firms over an identical time-period.

4. Results

4.1 Short-term Results

Figure I shows the cumulative average abnormal returns for both related and unrelated bidders from 15 days before the announcement of the bid to 15 days after the announcement of the bid. From inspecting Figure I and Tables 1 and 2, it is evident that the shareholders of bidders involved in related acquisitions experience significant wealth gains in the short period surrounding the bid announcement. This is in contrast to that of the unrelated acquirer shareholders who lose slightly over the same event-period.

Table 1. The behavior of share prices around the announcement date. (Related Sample)

Days	AAR	CAAR	Std. Dev.
-15	-0.00101	-0.00101	0.01397
-14	0.00010	-0.00091	0.01394
-13	0.00069	-0.00022	0.01321
-12	0.00039	0.00017	0.01356
-11	0.00264	0.00280	0.01502
-10	-0.00256	0.00025	0.02185
-9	0.00082	0.00107	0.01340
-8	0.00067	0.00174	0.01252
-7	0.00094	0.00268	0.01508
-6	0.00115	0.00383	0.01415
-5	-0.00167	0.00216	0.01689
-4	0.00213	0.00429	0.01283
-3	0.00290	0.00719	0.02589
-2	-0.00179	0.00541	0.01875
-1	0.00649	0.01189	0.05402
0	-0.00169	0.01021	0.02246
1	-0.00182	0.00839	0.02861
2	0.00420	0.01258	0.02226
3	-0.00067	0.01192	0.01700
4	0.00145	0.01336	0.01058
5	-0.00141	0.01195	0.01494
6	0.00201	0.01396	0.01594
7	0.00109	0.01506	0.01503
8	-0.00055	0.01451	0.01159
9	0.00118	0.01568	0.02024
10	0.00034	0.01603	0.01105
11	0.00093	0.01696	0.00899
12	-0.00035	0.01661	0.01531
13	0.00040	0.01701	0.01334
14	-0.00009	0.01692	0.01498
15	-0.00083	0.01609	0.01538

t-test on cumulative abnormal returns $\text{CAAR}_{-15,+15} = 0.01609$ (sig. at 95% one-tail level)

Table 1 presents the abnormal returns for the sample of bidding firms that have taken over a target in the same industry as itself. As Table 1 displays the CAAR over the event window is significantly positive. The CAAR results illustrate approximately a 1.6% increase over the period from fifteen days before through to fifteen days after the first bid announcement date. This is higher than has been noticed in past studies. Table 2 reports the abnormal returns concerning the sample of unrelated bidders, and Figure 1 illustrates the CAAR's over the event period studied. As Table 2 and Figure 1 demonstrate, the shareholders in this sample do not benefit from excess returns in the period surrounding the announcement date, and in fact slightly lose over the event-window. However, results are only significant for the related acquiring firms. The findings with regard to unrelated acquirers supports the previous studies of Barnes (1998), and Datta et al (1992) where no excess gains or losses are seen. The results from both related and unrelated samples emphasise the positive returns to the related bidder, and supports H1.

Table 2. The behavior of share prices around the announcement date. (Unrelated Sample)

Days	AAR	CAAR	Std. Dev.
-15	0.00097	0.00097	0.02863
-14	-0.00413	-0.00316	0.02158
-13	-0.00434	-0.00749	0.02229
-12	-0.00499	-0.01248	0.02258
-11	-0.00095	-0.01344	0.01727
-10	0.00158	-0.01185	0.01832
-9	0.00090	-0.01095	0.02925
-8	-0.00132	-0.01227	0.01679
-7	0.00254	-0.00973	0.02145
-6	0.00095	-0.00878	0.01898
-5	0.00023	-0.00855	0.02635
-4	-0.00177	-0.01033	0.02121
-3	-0.00157	-0.01190	0.01856
-2	0.00193	-0.00996	0.02391
-1	0.00093	-0.00903	0.03882
0	-0.00063	-0.00966	0.03400
1	0.00126	-0.00840	0.03408
2	-0.00152	-0.00991	0.02336
3	0.00026	-0.00965	0.01854
4	0.00321	-0.00643	0.02025
5	-0.00202	-0.00846	0.01746
6	-0.00197	-0.01042	0.01666
7	-0.00262	-0.01304	0.01677
8	0.00060	-0.01244	0.01893
9	0.00571	-0.00673	0.02604
10	-0.00077	-0.00750	0.01417
11	-0.00053	-0.00803	0.01555
12	-0.00078	-0.00881	0.01507
13	0.00044	-0.00836	0.02491
14	0.00032	-0.00804	0.01994
15	0.00055	-0.00750	0.02192

t-test on cumulative abnormal returns CAAR$_{-15,+15}$ = 0.00750 (not sig.)

Figure 1. Cumulative Aerage Abnormal Returns (CAARs) for Bidding Firms

4.2 Long-term Results

Figure II and Tables 3 and 4 present the post-acquisition performance of bidders involved in related and unrelated takeovers. In the three years after the completion of the acquisition, bidding firms experience significant negative abnormal returns. This is observed in both related and unrelated acquisitions during the years 1994 to 1998. Significant underperformance regarding the related sample is seen over the three years after the acquisition (CAAR -17.6%). Overall, the unrelated sample performs worse than the related sample (CAAR -18.9%). However, Figure II illustrates the superior performance of the unrelated sample to that of the related bidders over the first and second years after the acquisition. However, related bidders seem to have bottomed out and are gradually picking up towards the end of the event-period. Over a 5-year period these returns for related bidders may increase even further. Unfortunately, adequate data was not available to analyse returns over a 5-year post-takeover period.
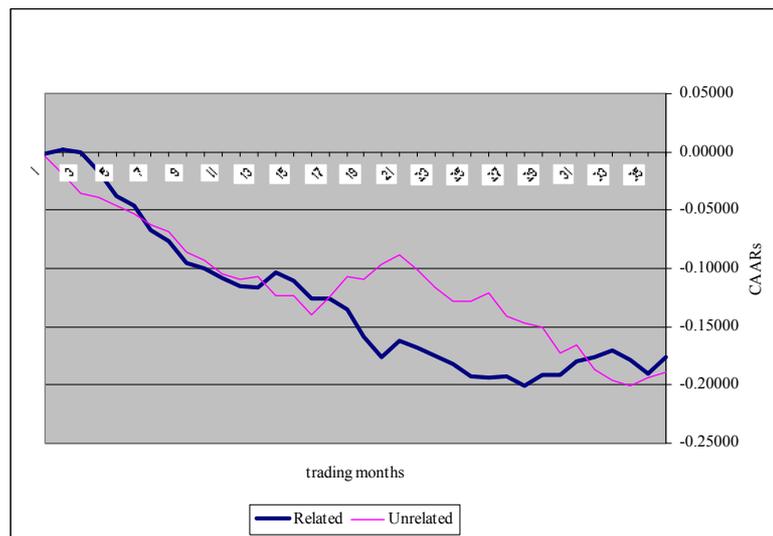

Figure 2. Long-term horizon performance for bidder firms

The findings of this study are similar to the studies of Agrawal *et al.* (1992) and Rau and Vermaelen (1998). Agrawal *et al.* (1992) find acquiring firms in mergers earn significantly negative cumulative abnormal of 13.58% over the three years after the merger. Furthermore, Rau and Vermaelen (1998) report

Table 3. The long-term performance behavior (Related Sample)

Months	AAR	CAAR	Std. Dev.
1	-0.00206	-0.00206	0.0227
2	0.00104	0.00145	0.0214
3	0.00379	-0.00081	0.0143
4	-0.00101	-0.01698	0.0145
5	-0.00049	-0.03738	0.0178
6	-0.00164	-0.04599	0.0162
7	-0.00164	-0.06748	0.0150
8	-0.00115	-0.07613	0.0136
9	-0.00206	-0.09533	0.0178
10	-0.00118	-0.10025	0.0287
11	0.00325	-0.10811	0.0331
12	-0.00032	-0.11567	0.0195
13	-0.00214	-0.11613	0.0177
14	-0.00037	-0.10327	0.0140
15	0.00007	-0.11003	0.0141
16	-0.00511	-0.12577	0.0208
17	0.00748	-0.12541	0.0709
18	0.00179	-0.13549	0.0182
19	-0.00249	-0.15849	0.0179
20	-0.00003	-0.17631	0.0161
21	-0.00107	-0.16256	0.0207
22	-0.00073	-0.16805	0.0175
23	0.00044	-0.17474	0.0151
24	0.00246	-0.18151	0.0187
25	-0.00112	-0.19292	0.0229
26	-0.00020	-0.19391	0.0192
27	0.00280	-0.19217	0.0182
28	0.00002	-0.20103	0.0185
29	0.00196	-0.19180	0.0185
30	-0.00190	-0.19184	0.0158
31	0.00479	-0.17956	0.0249
32	-0.00129	-0.17656	0.0184
33	-0.00173	-0.17033	0.0209
34	-0.00145	-0.17843	0.0391
35	0.00597	-0.19061	0.0222
36	-0.00145	-0.17618	0.0271

t-test on cumulative abnormal returns $CAAR_{0,+720}$ = -0.17618 (sig. at 99% conf. level)

Table 4. The long-term performance behavior (Unrelated Sample)

Months	AAR	CAAR	Std. Dev.
1	-0.00380	-0.00380	0.03350
2	-0.00251	-0.01911	0.01654
3	0.00027	-0.03579	0.01678
4	-0.00038	-0.03874	0.01616
5	-0.00019	-0.04585	0.01591
6	0.00332	-0.05277	0.02612
7	-0.00195	-0.06283	0.02389
8	0.00361	-0.06869	0.01629
9	-0.00148	-0.08540	0.01606
10	0.00386	-0.09312	0.04628
11	0.00153	-0.10501	0.01905
12	0.00247	-0.10963	0.02267
13	-0.00222	-0.10711	0.01835
14	-0.00337	-0.12287	0.02366
15	-0.00069	-0.12291	0.02394
16	-0.00309	-0.13984	0.02684
17	0.00341	-0.12406	0.01760
18	0.00107	-0.10761	0.02387
19	0.00847	-0.10952	0.03323
20	0.00002	-0.09617	0.01760
21	0.00297	-0.08838	0.02144
22	-0.00467	-0.10110	0.02133
23	0.00139	-0.11677	0.01877
24	-0.00087	-0.12760	0.02049
25	-0.00641	-0.12801	0.02606
26	-0.00111	-0.12067	0.01821
27	0.00116	-0.14047	0.01610
28	-0.00354	-0.14693	0.01730
29	0.00108	-0.15089	0.01811
30	-0.00334	-0.17323	0.01660
31	0.00403	-0.16592	0.01416
32	-0.00677	-0.18702	0.02637
33	-0.00076	-0.19627	0.02242
34	-0.00328	-0.20061	0.02884
35	0.00090	-0.19336	0.03532
36	0.00346	-0.18929	0.02448

t-test on cumulative abnormal returns $CAAR_{0,+720}$ = -0.18929 (sig. at 95% conf. level)

Bidders underperform by 15.23% compared to an equally weighted control portfolio. Our results show that in the first year after the acquisition both related and unrelated samples underperform by over 10%. This is different from the summarisation of seven studies by Jensen and Ruback (1983) that reports average abnormal returns of -5.5% in the year after the takeover. The differing findings may be the result of the period of study, as prior empirical evidence has highlighted.

Agrawal *et al*. (1992) also split the sample into conglomerate and non-conglomerate. They note that when the bidder and target have the same four-digit SIC code, then they are in the same industry, and define this merger as being non-conglomerate. Agrawal *et al*. (1992) report that both groups show negative performance over the five-year post-acquisition period. Perhaps surprisingly, they find that non-conglomerate merger performance is worse than the conglomerate sample. Furthermore, Agrawal *et al*. (1992) considered the possibility that non-conglomerate mergers were concentrated in industries that also underperformed in post-acquisition period studied. Agrawal *et al*. (1992) find this is not the case.

This paper also examines how the bidders in related takeovers have performed compared to the industry the company was concentrated in. Our findings are in contrast to that of Agrawal *et al.* (1992). Figure III and Table 5 display the performance of the related bidders against their respective industry.
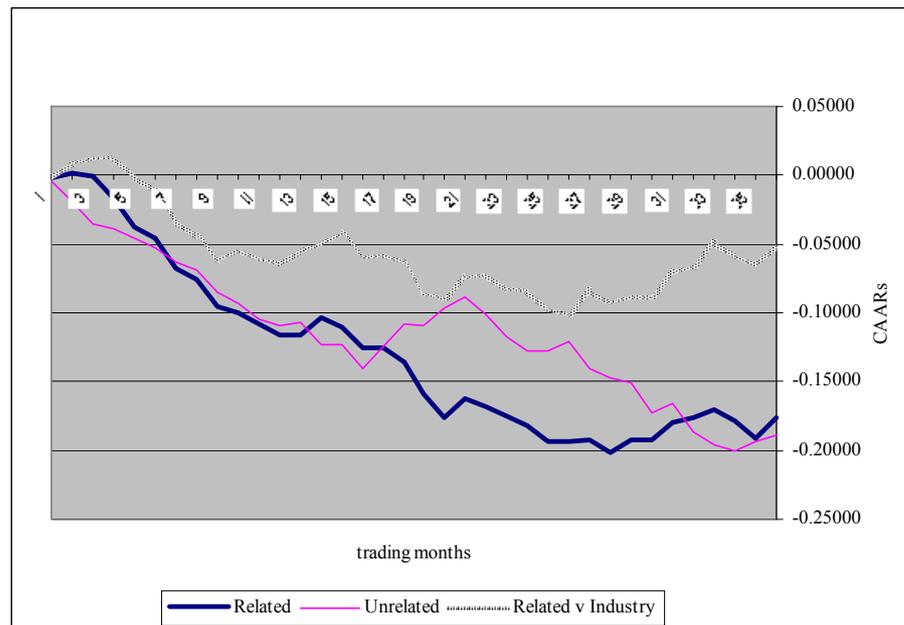

Figure 3. Long-term horizon performance for bidder firms

We find that the bidders in related takeovers underperform its industry counterparts by approximately 8.5% over a two year post-acquisition period, which picks up by around 3% in year three. It must be noted that when comparing the related bidder to its industry performance it is assumed that the profile of the bidder is the same as that of the industry as a whole. However, usually the bidder is larger than the average company within the industry and therefore may affect our results.

Table 5. The long-term performance behavior (Related v Industry)

Months	AAR	CAAR	Std. Dev.
1	-0.00231	-0.00231	0.02020
2	0.00172	0.00838	0.02282
3	0.00218	0.01153	0.01597
4	-0.00045	0.01309	0.01583
5	-0.00243	-0.00065	0.01682
6	-0.00145	-0.01124	0.01903
7	-0.00121	-0.03307	0.01504
8	-0.00191	-0.04439	0.01600
9	-0.00124	-0.06182	0.01640
10	0.00059	-0.05547	0.03171
11	0.00280	-0.06099	0.02019
12	0.00031	-0.06416	0.02003
13	-0.00192	-0.05489	0.01787
14	-0.00016	-0.05078	0.01386
15	-0.00001	-0.04208	0.01374
16	-0.00610	-0.05938	0.02109
17	0.00637	-0.05860	0.07806
18	0.00092	-0.06316	0.01777
19	-0.00411	-0.08646	0.01614
20	-0.00048	-0.09010	0.01571
21	0.00066	-0.07510	0.02003
22	-0.00394	-0.07201	0.01710
23	-0.00347	-0.08214	0.01480
24	0.00254	-0.08408	0.02111
25	-0.00130	-0.09757	0.02631
26	0.00089	-0.10148	0.02043
27	0.00331	-0.08410	0.02065
28	0.00165	-0.09293	0.01764
29	0.00403	-0.08823	0.02036
30	0.00044	-0.08869	0.01739
31	0.00241	-0.07164	0.01897
32	-0.00241	-0.06711	0.01791
33	0.00134	-0.04876	0.01866
34	-0.00382	-0.05882	0.04345
35	0.00377	-0.06542	0.02154
36	-0.00038	-0.05132	0.02904

t-test on cumulative abnormal returns $CAAR_{0,+480} = -0.08408$(sig. at 90% conf. level)

4.3 Firm-size Effects

To take into consideration that our sample of related bidders may be of various sizes and our results may be distorted, portfolios were formed according to market capitalisation. This is shown in Table 6.

Table 6.

Deciles			Related Sample		Control Portfolios by size
(by Market cap)		n	~CAAR (long-term)	n	~CAAR (long-term)
Portfolio 1	£5000M+	9	0.3148	16	0.2017
Portfolio 2	£5000M-2000M	15	0.0970	37	0.1163
Portfolio 3	£2000M-1000M	7	0.0904	24	-0.0158
Portfolio 4	£1000M-500M	4	0.0999	43	0.0719
Portfolio 5	£500M-300M	10	-0.2551	74	-0.0408
Portfolio 6	£300M-200M	10	-0.2205	67	-0.0361
Portfolio 7	£200M-100M	6	-0.0820	78	-0.0686
Portfolio 8	£100M<	16	-0.8359	38	0.0450
Total		77		377	

Table 7.

	Portfolios 1-4	Portfolios 5-8
Method of Payment		
Cash	65%	22%
Mixed	25%	15%
Share	10%	63%

As can be seen from Table 6, eight portfolios were produced. We find that on average bidders in related mergers underperform control portfolios of similar sizes by around 12% in a period of three years after the announcement of a successful takeover. However, Table 6 displays how the numbers of control firms within each specific portfolio compare to the related bidder counterparts. It can be seen that the portfolios consisting of much larger related bidder firms, portfolios 1-4, outperform firms of similar size in the majority of cases. Portfolio1 has an average CAAR of 0.3148 for the related bidder firms over 3-years as compared to 0.2017 for the control portfolio. A large difference is also seen in portfolio3. This is in stark contrast to the performance of related bidders in portfolios 5 through to 8 as compared to the range of control firms in the corresponding portfolios. Related bidders notably underperform the control firms in all four cases, especially in portfolios 5, 6, and 8. These findings may suggest that the smaller bidding firms have been the contributors to the overall negative performance of the related sample shown earlier in the study. This area requires further work to explain the reasoning and differences between larger and smaller related bidders. One suggestion may be that the larger bidders have the power to take over larger targets and subsequently increase their market power, which the market will view favourably.

4.4 Long-run Performance and Method of Payment

Prior research has indicated that the bidder performance is related to the method of payment used in the acquisition. Earlier studies are ambiguous with Firth (1979) and Dodds and Quek (1985) stating that a positive reaction around the announcement of the bid is seen in stock financed acquisitions and a negative impact from that of the announcement of cash financed deals. However, studies by Barnes (1984), Travlos (1987), Franks *et al*. (1988), Peterson and Peterson (1991), and Servaes (1991) find the opposite takes place. In terms of long-term performance of bidders Agrawal *et al*. (1992) also show that the post acquisition performance of bidders is weaker in stock acquisitions as compared to cash financed acquisitions in both mergers and tender offers. The more recent study by Loughran and Vijh (1997) also reports significantly higher returns for cash offers as compared to stock offers

The results of this study are comparable to what is found in the studies of Agrawal *et al*. (1992) and Loughran and Vijh (1997). Figure IV and Table 8 display our findings, where stock-financed acquisitions significantly lose by around 37% in the three years after the announcement of a successful takeover. Both cash and mixed offers show insignificant losses of around 8% and 5% respectively. Theory suggests that when management use their own shares for payment they are signalling to the market that they are spreading the risks towards the target shareholders and also that they may believe that their own shares are overvalued. Subsequently, the market will react negatively towards this action. From our sample of 80 related bidders, 30 paid by shares, 29 by cash, 15 with mixed offers, and information was not available on 6 of the company's payment methods. Emery and Switzer (1999) reported that bidders choose the method with the higher expected abnormal return, and that this was related to taxation effects and asymmetric information. Therefore, this brings into question why nearly 38% of related bidders use stock to finance the acquisition when it is generally well known that the market reacts in a far more negative manner to these acquisitions. The large majority of takeovers by shares are also counter to the findings of Fishman (1989) and Berkovitch and Nayaranan (1990) who report that there is greater potential for multiple-bidding when payment is by stock.
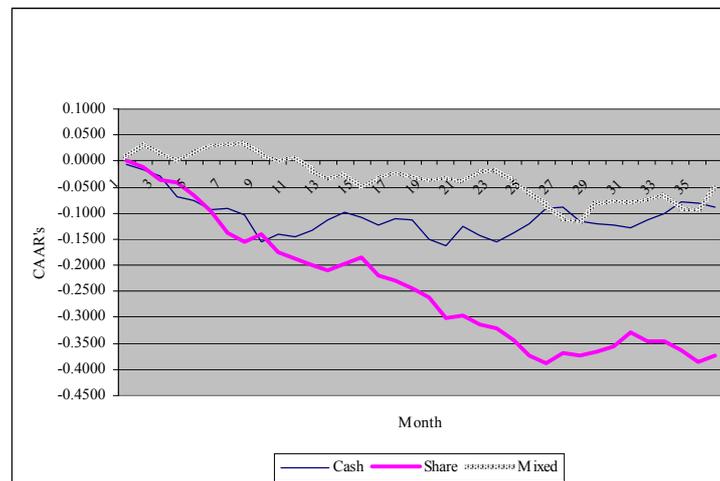
Figure 4. Long-term performance and method of payment of related bidders

Table 8. Long-term performance behavior (Related Sample & Method of Payment)

Month	*Cash offer CAR*	*Share offer CAR*	*Mixed offer CAR*
1	-0.0073	0.0018	0.0069
2	-0.0167	-0.0111	0.0343
3	-0.0295	-0.0364	0.0184
4	-0.0678	-0.0421	0.0006
5	-0.0758	-0.0658	0.0184
6	-0.0928	-0.0960	0.0310
7	-0.0910	-0.1376	0.0320
8	-0.1041	-0.1545	0.0355
9	-0.1553	-0.1409	0.0143
10	-0.1410	-0.1741	0.0015
11	-0.1463	-0.1886	0.0076
12	-0.1333	-0.2005	-0.0158
13	-0.1124	-0.2104	-0.0341
14	-0.0986	-0.1961	-0.0243
15	-0.1073	-0.1854	-0.0514
16	-0.1239	-0.2185	-0.0307
17	-0.1106	-0.2284	-0.0216
18	-0.1131	-0.2432	-0.0287
19	-0.1510	-0.2617	-0.0363
20	-0.1635	-0.3009	-0.0305
21	-0.1266	-0.2974	-0.0394
22	-0.1422	-0.3129	-0.0195
23	-0.1548	-0.3212	-0.0154
24	-0.1375	-0.3423	-0.0395
25	-0.1215	-0.3741	-0.0591
26	-0.0911	-0.3893	-0.0825
27	-0.0889	-0.3689	-0.1110
28	-0.1162	-0.3744	-0.1158
29	-0.1196	-0.3652	-0.0799
30	-0.1238	-0.3552	-0.0764
31	-0.1275	-0.3275	-0.0774
32	-0.1124	-0.3470	-0.0731
33	-0.1003	-0.3452	-0.0632
34	-0.0786	-0.3632	-0.0916
35	-0.0806	-0.3863	-0.0936
36	-0.0875	-0.3725	-0.0540
$CAAR_{0,+720}$ =	-0.0875	(0.3725)***	-0.0540

*** denotes significance at 99% level

When we categorise our related bidder sample by market capitalisation size and look at the method used to pay for the takeover, the results prove interesting. As indicated by Table 7, cash financing is the preferred method of payment for the larger companies (those companies in portfolios 1-4). Prior evidence has shown that cash financed takeovers gain positive returns. Our results support this by showing that the majority of related bidders in portfolios 1-4 gain over the long-term and use cash to fund the takeover. 65% of related bidders in portfolios 1-4 use only cash to finance the bid and a further 25% of this sample use some form of cash in a mixed bid. This is in contrast to the smaller bidder firms in our sample. Related bidders in portfolios 5-8 lose significantly in the three-year post takeover period. Table 7 shows that 63% of firms in this sample choose to pay by their own shares; this is compared to only 10% in portfolios 1-4. Martin (1996) finds support for the thought that the higher the acquirer's growth opportunities, the more likely that stock financing are the preferred payment. Those smaller firms in portfolios 5-8 resort to more share financing and support this theory. Smaller firms are expected to be involved in growth industries and once this growth stabilises, no excess cash will be available to fund the takeover and hence share are used to pay for the deal. Large firms with excess cash are more likely to be in mature industries. This may be in tandem with limited prospects and therefore these funds may be used to acquire firms, aiming for economies of scope, more power and larger profits.

5. Conclusions

This study employed a thorough categorisation process to identify related bidder and also unrelated bidders. The results indicate that shareholders of related bidders enjoy wealth gains whereas unrelated bidder shareholders suffer small losses. The long-term post-acquisition performance of the related bidders does not mirror the earlier success in the period of fifteen days surrounding the first public bid announcement. Related bidders underperform the market significantly over a three-year period. Related bidders also slightly underperform when compared to their respective industry. We find that shareholders lose around 18% in the three years after the acquisition, which is quite similar to that of the unrelated sample. This is similar to Agrawal *et al*. (1992) and Rau and Vermaelen (1998). Related bidders also underperform the industry they are in by approximately 8% over the same time frame, which is in contrast to that found in previous studies. Overall, the results of this study show that perhaps bidders in related takeovers overestimate the possible synergistic benefits from acquiring and once the market learns of this the share-price is adjusted downwards to reflect this. Therefore, this study supplements the earlier findings of Fuller, *et. al.* (2002) and Antoniou et al (2007) by adding that bidder firm losses value even though their acquisitions are motivated by the operational synergy.

Related bidder firms in the larger portfolios outperform firms of similar sizes, whereas the smaller bidder firms underperform firms of similar size to a great extent. There is also strong evidence that the larger bidders prefer to use cash to finance the bid, whereas the majority of smaller bidders fund the deal with their own shares. Furthermore, acquiring firms paying by stock, lose significantly in the long-term, far more so than cash and mixed offer acquisitions, raising the question why 38% of the sample in this study chose stock as the means of exchange.

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