CHAPTER 4 RESULTS AND ANALYSES

The analysis tools used in this study include SPSS 13.0 for Windows and Microsoft Office Excel 2003.

Figure 4-1 provides information on the distribution of the number of merger and acquisition (M&A) announcements by sector and time in a sample composition of 20 M&A announcements. These merger announcements all took place among publicly traded firms in Malaysia during the period 1998–2004. A majority of the M&A deals in the sample occurred in the financial, property and construction sectors.
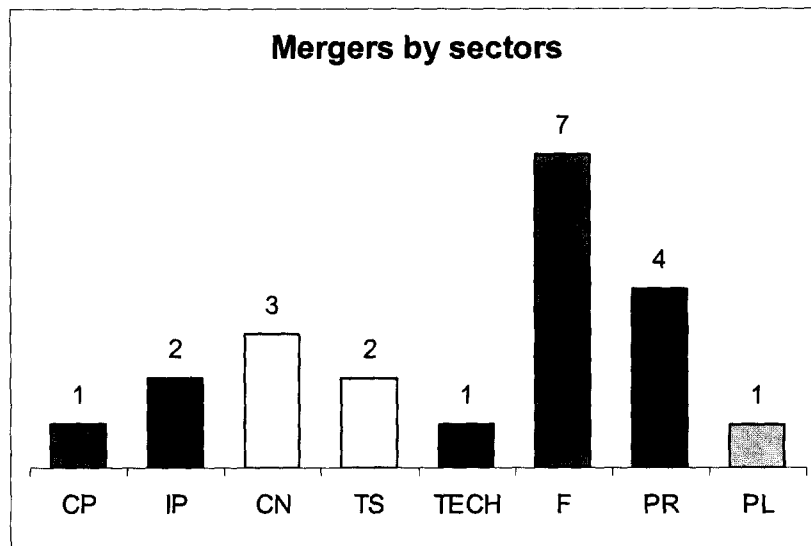

Figure 4-1 Sectoral breakdown of mergers based on acquirer firms

».1 Overall results

Cumulated abnormal returns (CAR) were measured for three different parameters: shareholders of acquirer firms, shareholders of target firms, and total CAR from the merger, which are the average of the corresponding measures to both firms weighted by their relative market capitalisations. Appendix D shows the computed market capitalisations of all firms and their respective weightings.

The sample exhibits a wide range of returns to both acquirers and target. The standard deviation tends to increase as the event window size increases. In terms of acquirer firms, its returns range from -2.41 percent to 31.96 percent with a standard deviation of 7.79 for $t \pm 1$. The range increases from -40.47 percent to 32.89 percent with a standard deviation of 17.55 for $t \pm 30$ (refer to Table 4-1).

Table 4-1   Descriptive statistics for acquirer firms

	Acquirer firms					
	± 1	± 2	± 5	± 10	± 20	± 30
Mean	3.11	2.86	4.09	1.31	1.26	-1.29
S.D.	7.79	8.43	11.57	13.31	13.62	17.55
Min.	-2.41	-10.31	-17.03	-12.84	-19.92	-40.47
Max.	31.96	28.83	39.27	47.16	35.06	32.89

In terms of target firms, its returns range from -6.01 percent to 31.57 percent with a standard deviation of 11.22 for $t \pm 1$. The range increases from -32.08 percent to 70.69 percent with a standard deviation of 24.05 for $t \pm 30$ (refer to Table 4-2). Around 75% of the target firms show positive cumulated abnormal returns.

Table 4-2 Descriptive statistics for target firms

	Target firms					
	± 1	± 2	± 5	± 10	± 20	± 30
Mean	6.13	7.37	11.54	9.92	10.24	8.11
S.D.	11.22	15.18	18.91	23.30	23.30	24.05
Min.	-6.01	-17.05	-21.05	-24.98	-25.29	-32.08
Max.	31.57	53.45	52.28	86.61	82.55	70.69

The cumulative average abnormal returns for acquirers range from around -1% to 4 while the targets gain from 6% to 12% (see Table 4-3). The weighted average CARs for acquirers and targets range from between 1.5% to 5.5%.

Table 4-3 Differences in cumulative abnormal returns by window length

Event window (days)	± 1	± 2	± 5	± 10	± 20	± 30
Acquirer firm	3.11	2.86	4.09	1.31	1.26	(1.29)
Target firm	6.13	7.37	11.54	9.92	10.24	8.11
Combined	*3.65*	*3.44*	*5.50*	*3.10*	*3.36*	*1.54*

The abnormal performance of the mergers and acquisitions (M&A) in Malaysia from 1998 to 2004 are consistent with those generally found in event study literature and supports the findings that acquirer firms gain zero or slightly positive cumulative abnormal return. The result follows that of previous studies conducted in the Western countries and is consistent with expectations in a competitive take-over market.

The t-statistic of acquirers for event window t ± 10 is 0.44, t ± 20 is 0.41 and t ± 30 is -0.33, which are not significantly different from zero. On the other hand, the t-statistic for event window t ± 1 is 1.63, t ± 2 is 1.52 and t ± 5 is 1.58 (refer to Appendix E for t-test results). Furthermore, $p > 0.05$ for all event windows which

ans the CARs are not significantly different from zero based on the two-tailed

st. This result is consistent with a majority of previous studies that acquirer

ms gain zero or slightly positive cumulative abnormal returns and M&As in

lalaysia also reflect those findings.

The cumulative abnormal returns for target firms are somewhat lower than the

range of 12% to 24% reported in the literature such as Goergen and Renneboog

(2004) or Beitel et al. (2002). However, the sampling period of M&As for these

two studies date back to as early as 1985 and 1993. The result from this study,

although slightly higher, is much closer to that of Campa and Hernando (2004)

which incidentally also began from 1998 onwards. This suggests that returns

might have been declining over time which supports the evidence collected by
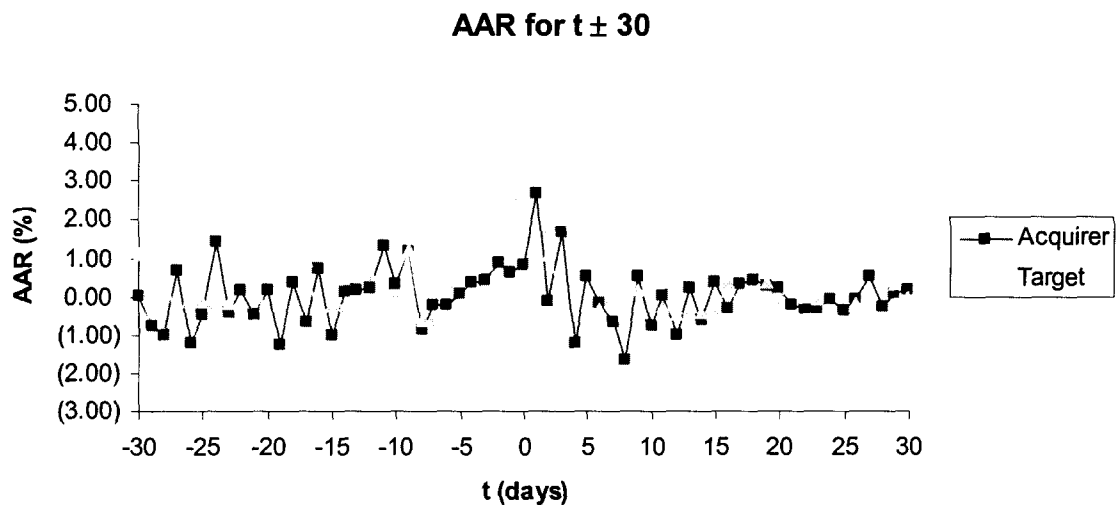
Bruner (2002).

AAR for t ± 30

Figure 4-2   Average abnormal returns for t ± 30

A positive run-up is also observed in the five days leading up to the formal

announcement as shown in Figure 4-2, which contains the plot of average

⊃normal returns for each day in the range t ± 30. However, significant negative hanges are observed after the announcement which suggest the acquirer ιverestimated in the evaluating the take-over opportunity. Another possibility is ςecond thoughts' by acquirers or release of unfavourable new information about the deal.
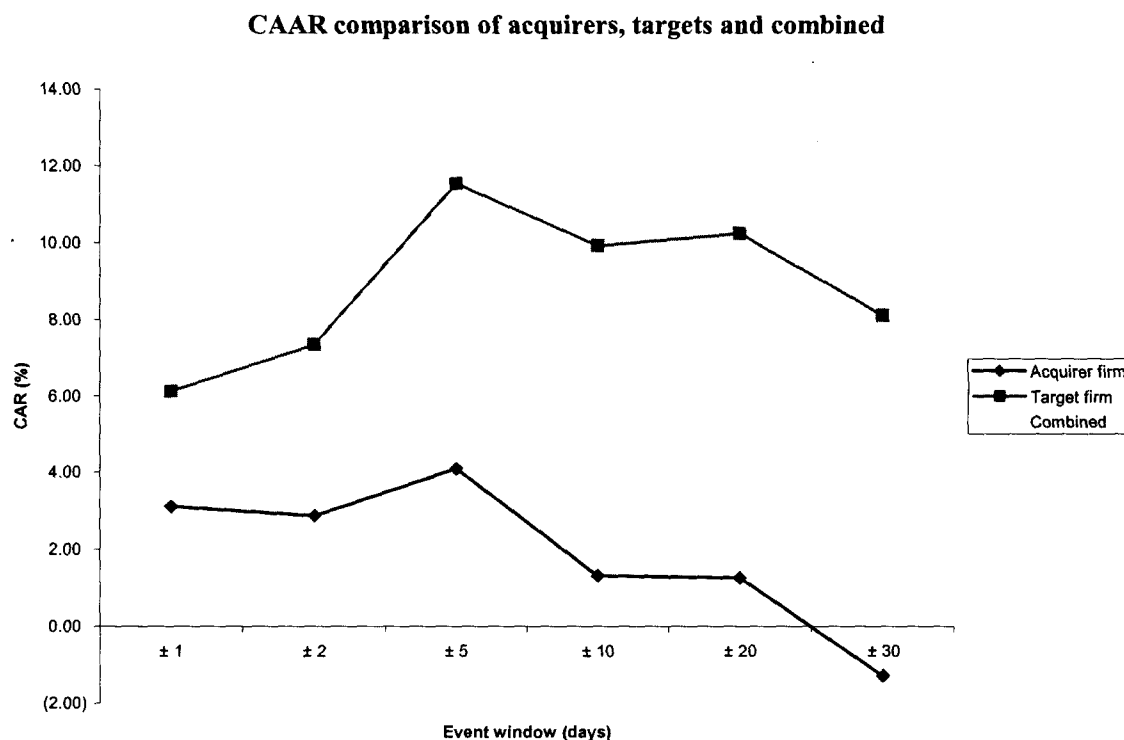
CAAR comparison of acquirers, targets and combined

Figure 4-3   Cumulative average abnormal returns for acquirers, targets and combined

Figure 4-3 shows the graphical comparison of cumulative average abnormal returns between acquirer firms, target firms and the combination of both. Target firms' shareholders gain significantly higher abnormal returns than the acquirers. The overall results support Hypothesis 1. It also indicates that on the whole Malaysia M&As generate added value to shareholders and the efficiency theory should be applicable in Malaysia too.
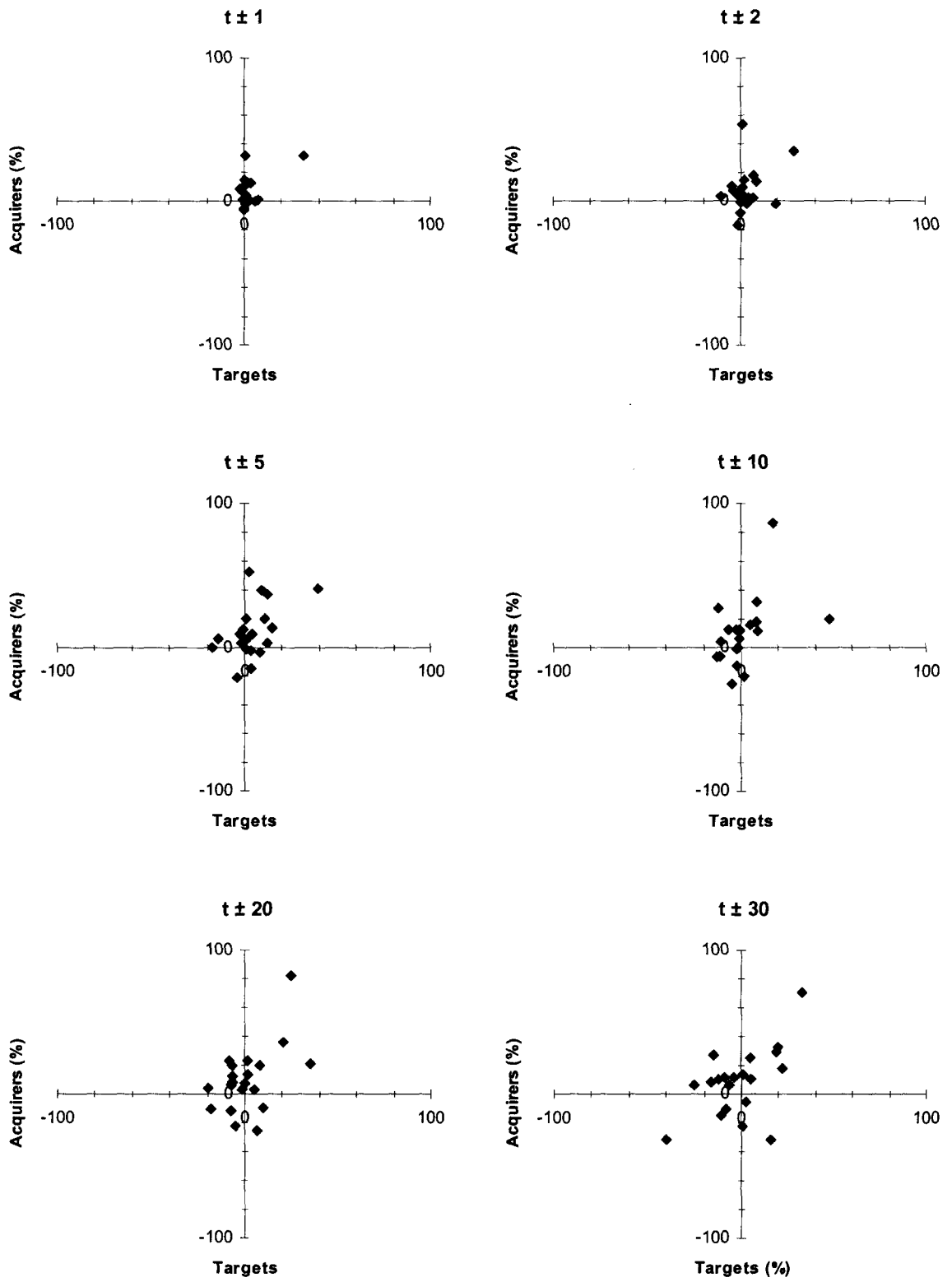
Figure 4-4   Abnormal returns to acquirer and target firms centred on *t*

Figure 4-4 shows the distribution of cumulative abnormal returns to acquirers and targets for the six defined event windows. The scatter plots clearly show that the range of the distribution of returns increases with the size of the window.
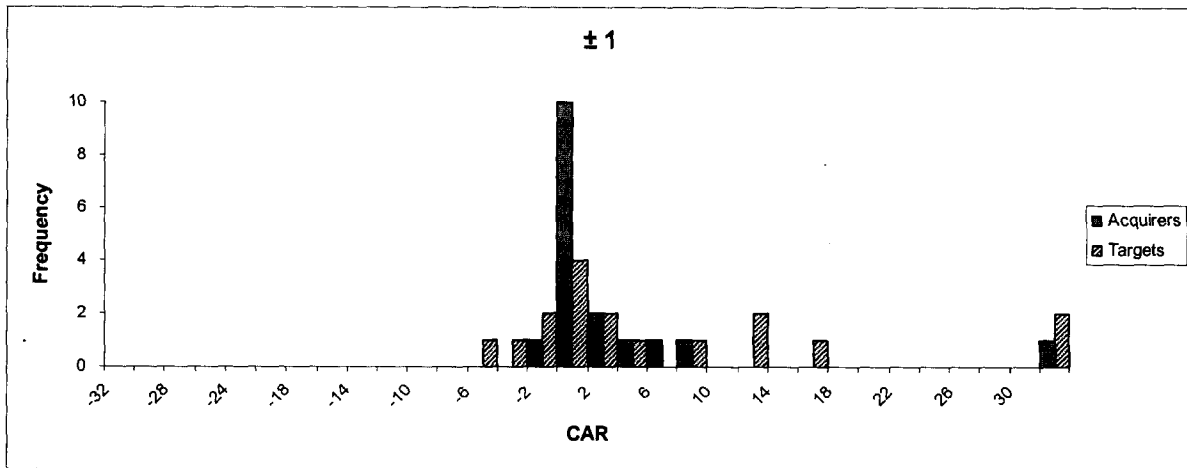

Figure 4-5   Distribution of cumulative abnormal returns for event window t ± 1

The differences in distribution of cumulative abnormal returns for small and large event windows are further highlighted in the histograms below. For period t ± 1, the CAAR, especially in the case of acquirer firms, is mostly centred on zero (see Figure 4-5).

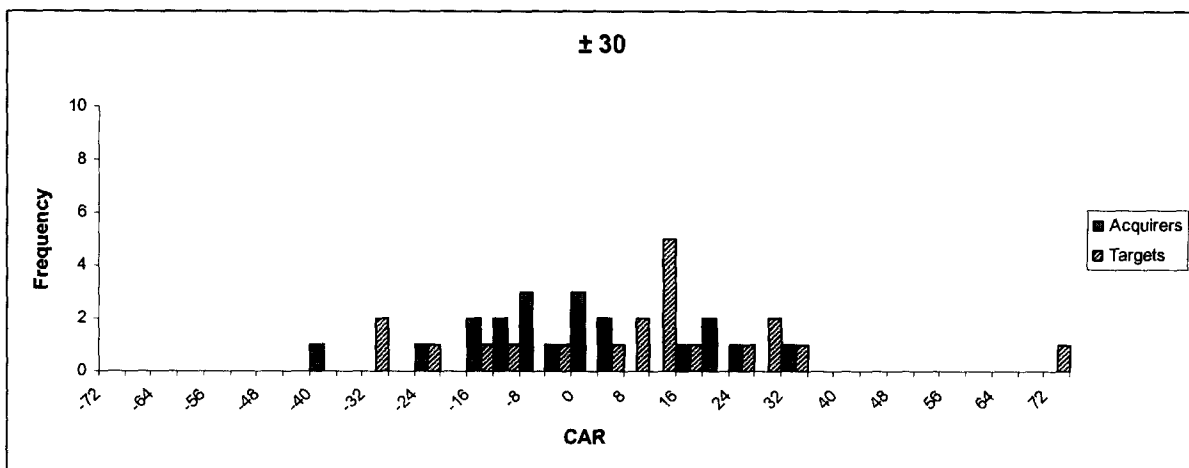Figure 4-6   Distribution of cumulative abnormal returns for event window t ± 30

On the other hand, the distribution for period t ± 30 is highly dispersed as shown

in Figure 4-6.

Another measure of cumulative average abnormal returns is based on summing

the average abnormal returns for each day over an interval. Figure 4-7 shows the

cumulative average residuals over the period of t ± 30. A price run-up was

observed in a 10 day period starting from day t – 6 until t + 3 which suggest the

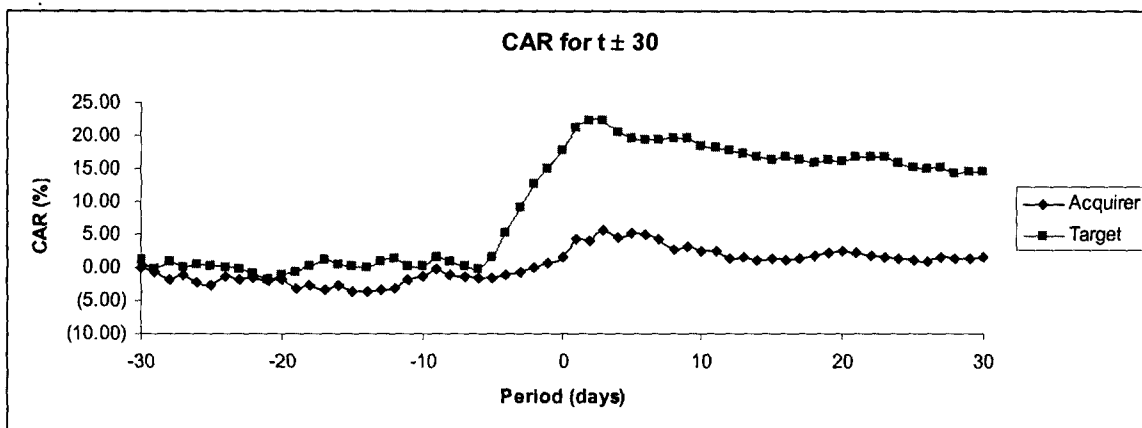occurrence of information leakage and possible insider trading.

Figure 4-7   Cumulative average residuals over t ± 30

Short-term cumulative abnormal returns reflect changes in the expected future

cash-flows to shareholders resulting from future synergies in the merged entity or

from wealth redistribution among shareholders. The latter is particularly true as

targets gain a significant amount of goodwill from the acquisition which has to be

borne and amortised by the acquirers.

In Figure 4-7, the cumulative abnormal residuals are higher than the period

before information leakage (t - 30 to t – 7). This implies that take-over in Malaysia

create major to shareholders to acquirer firms and appear to facilitate resource allocation within the Malaysian economy.

4.2 Payment method

The next part of the analysis evaluates the different forms of payment, which can be either cash payment, stock swap or a combination of both. Cash payments have been found to be the most popular medium of transaction in this study which is again in contrast to the findings of Fauzias (1993) who found that share issuance appeared was the most common method of payment of acquisitions in Malaysia. In the sample of twenty local mergers and acquisitions (M&A), ten were paid for with cash. On the other hand, stock swaps accounted for six M&As while the remaining four were transacted with cash and/or stocks (see Figure 4-8).
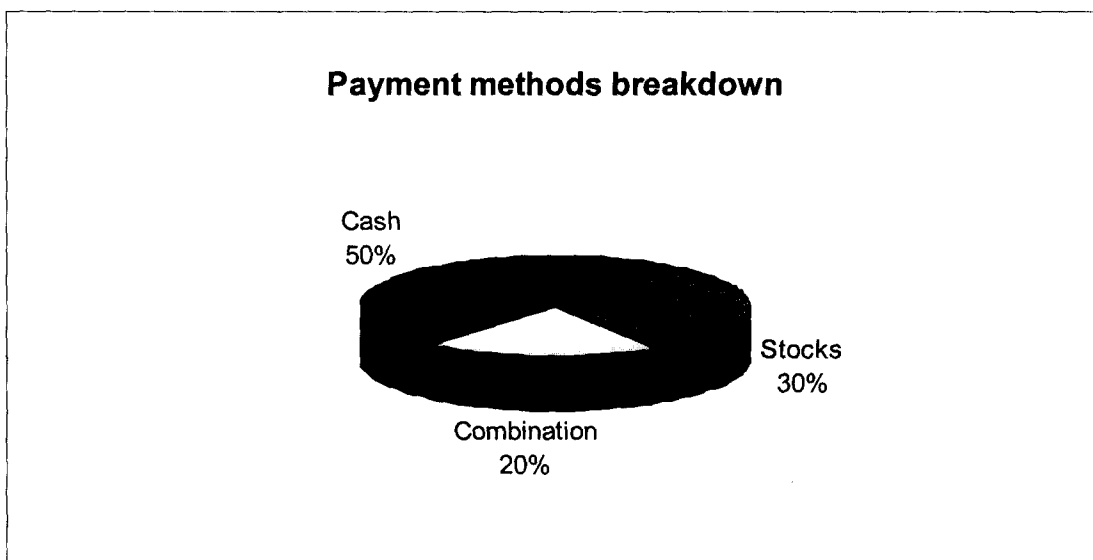
Payment methods breakdown

Cash
50%

Stocks
30%

Combination
20%

Figure 4-8   Breakdown of the different forms of payment

4.2.1 Cash payment

Table 4-4 shows the cumulative abnormal returns for the six different event windows using cash as the payment method. Both acquirer and target firms exhibited significant positive returns. For period t ± 1, acquirers gain 4.9% while targets gain 7.0%. On the other end of the scale, acquirers gain 7.2% while targets gain 11.4%. Consistent with previous studies, the cumulative abnormal returns to the target firms are higher, which is around two to four percent higher in this case.

Table 4-4   Cumulative abnormal returns derived from cash transactions

Event window (days)	± 1	± 2	± 5	± 10	± 20	± 30
Acquirer firm	4.91	5.87	7.37	6.06	6.63	7.20
Target firm	7.02	8.02	10.96	10.26	10.94	11.43

Figure 4-9 clearly shows an increasing trend on returns as the event window becomes larger.
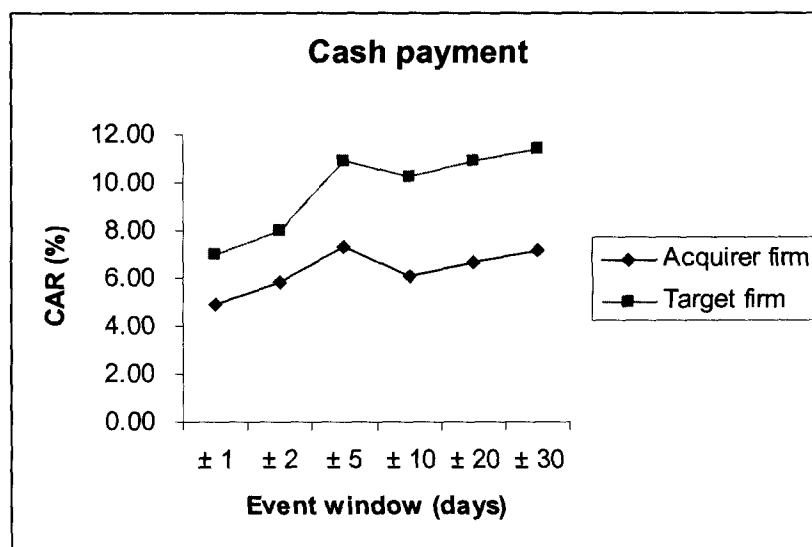

Figure 4-9   Cumulative abnormal returns for cash transactions only

4.2.2 Stock swap

In terms of mergers and acquisitions (M&A) that utilize stock swaps, acquirer firms tend to gain negative returns. From an insignificant gain of 0.25% in the event windows t ± 1, acquirers are worse off by -14.8% for t ± 30 (see Table 4-5). Target firms show positive abnormal returns throughout the range but the figures are generally smaller than cash transactions.

Table 4-5   Cumulative abnormal returns derived from cash transactions

Event window (days)	± 1	± 2	± 5	± 10	± 20	± 30
Acquirer firm	0.25	(1.00)	(0.16)	(5.90)	(9.14)	(14.76)
Target firm	4.11	5.20	13.70	10.22	6.92	2.44

Figure 4-10 shows the graphical trend of the cumulative abnormal returns for stock-based transactions which is mostly negative in the case of acquirer firms.
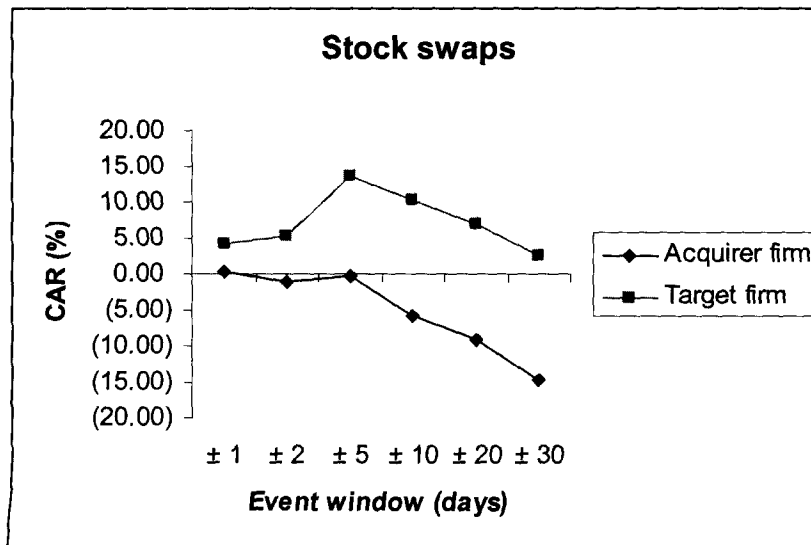

Figure 4-10   Cumulative abnormal returns for stock transactions only

The downward trend illustrates the likelihood of a reversal of overstated earnings in the quarter preceding to the stock swap as suggested by Louis (2002). Stock

acquisitions are also generally viewed unfavourably because it indicates the acquirer has trouble financing the acquisition and it leads to dilution of control among shareholders.

4.2.3 Cash and stock

The third form of payment method analysed here involves a combination of cash and stocks. The payout to the target firms' shareholders can either be in the form of both cash and stocks or the shareholders were given the option of selecting either one. Cumulative abnormal returns to acquirers are generally insignificant. On the other hand, target firms' gains are lower than cash payment but higher than stock swaps. This result is expected since the payment method is a mixture or combination of cash and stock transactions and thus the returns should lie in between (see Table 4-6).

Table 4-6   Cumulative abnormal returns from cash and stock transactions

Event window (days)	± 1	± 2	± 5	± 10	± 20	± 30
Acquirer firm	1.29	1.14	2.27	0.23	3.45	(2.33)
Target firm	6.74	9.01	9.74	8.62	13.49	8.34

Figure 4-11 shows the differences in cumulative abnormal returns for the six event windows when the combination of cash and stocks are used as payment for acquisition of the target firm.
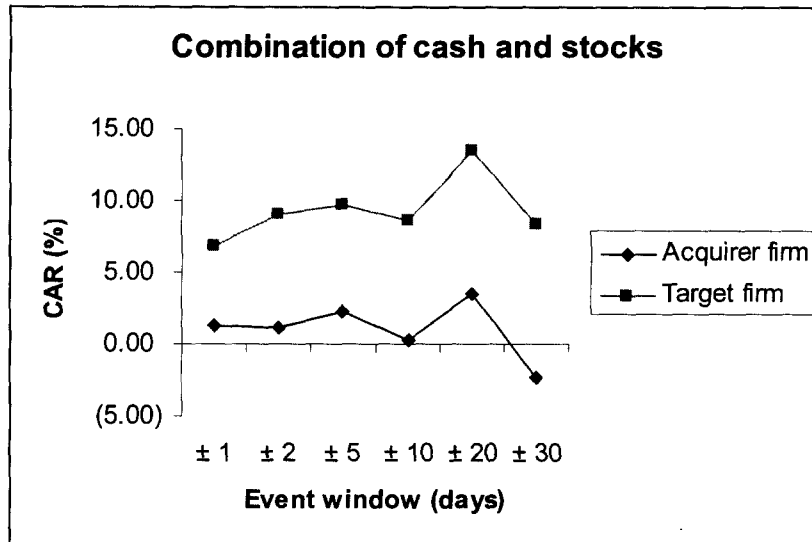
Figure 4-11　Cumulative abnormal returns for cash and/or stock transactions

The results shows that cash bids generate much higher abnormal returns than stock swaps and this supports Hypothesis 2. Furthermore, the intermediate performance of mixed payments lends weight to this finding.

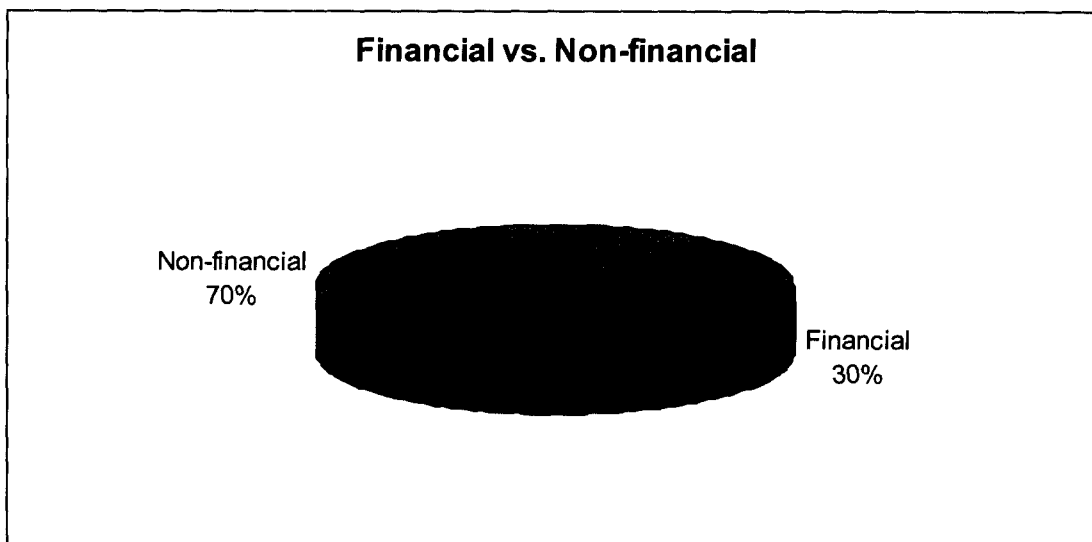## 4.3　Financial vs. non-financial

Figure 4-12　Breakdown of financial and non-financial M&As

Figure 4-12 shows the breakdown of financial mergers and acquisitions (M&A) in the sample, which constitutes 30%, compared to non-financial ones.

4.3.1 Financial

It should be noted that mergers and acquisitions (M&A) related to the finance industry especially bank mergers exhibited much lower cumulative abnormal returns for both acquirer and targets. The summary results of financial M&As are shown in Table 4-7.

Table 4-7   Cumulative abnormal returns for financial M&As

Event window (days)	± 1	± 2	± 5	± 10	± 20	± 30
Acquirer firm	1.68	(0.82)	(1.10)	(3.70)	(3.76)	(11.54)
Target firm	5.63	7.47	7.90	7.21	5.54	1.95

It was mentioned earlier that the processes for this regulated industry is much lengthier and the fact that banks need to seek approval from the central bank meant that the market is already aware of a merger negotiations even before the sales and purchase agreement is signed and the share price reflects this probability in the days leading up to the confirmed announcement. In effect, this lowers the potential gains around the agreement date and in a few cases both acquirer and target firms received significant negative cumulative abnormal returns. Figure 4-13 shows that cumulative abnormal returns are much lower than usual in the financial sector.
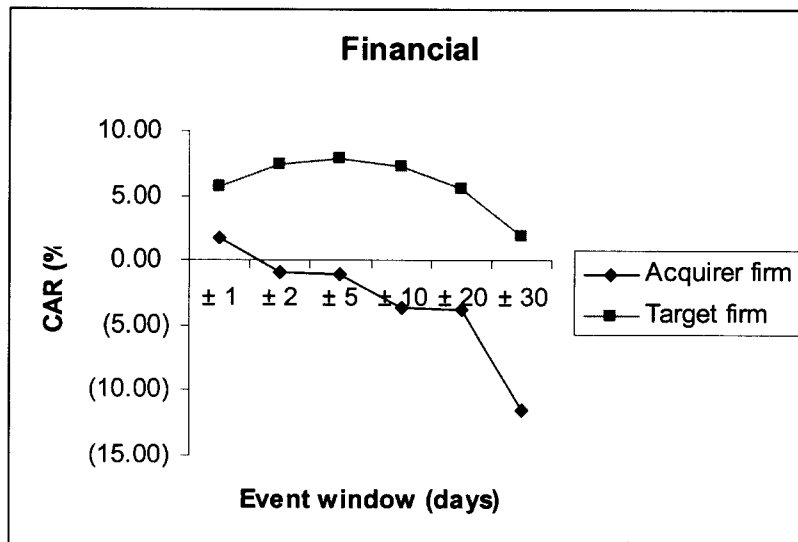
Figure 4-13   Cumulative abnormal returns for finance sector M&As

4.3.2   Non-financial

In terms of non-financial mergers and acquisitions (M&A), the cumulative average abnormal returns to acquirers' increases to over 3% while target firms have considerably higher gains as shown in Table 4-8.

Table 4-8   Cumulative abnormal returns for non-financial M&As

Event window (days)	± 1	± 2	± 5	± 10	± 20	± 30
Acquirer firm	3.71	4.44	6.32	3.45	3.41	3.10
Target firm	6.34	7.33	13.09	11.09	12.26	10.75

Figure 4-14 illustrates the high gains garnered by the non-financial M&As. This result is consistent with the observations of previous studies in the Western countries.
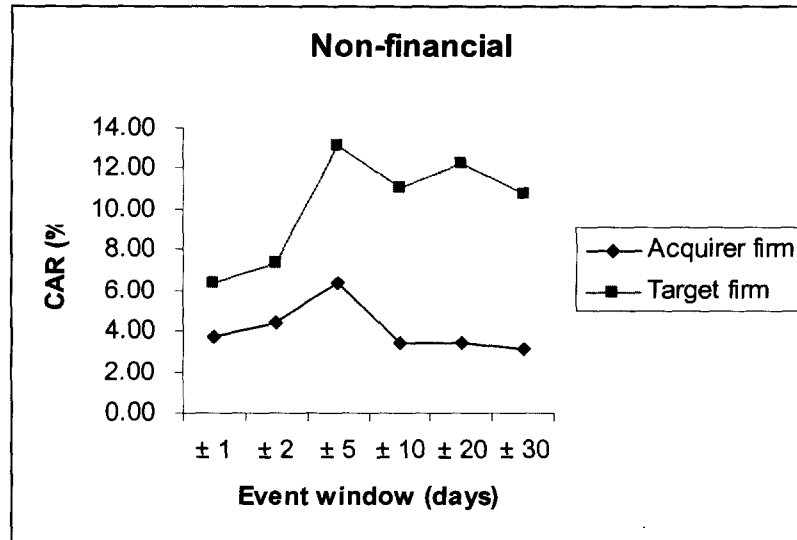
Figure 4-14   Cumulative abnormal returns for non-financial M&As

The results support Hypothesis 3 which states that non-financial M&As show better abnormal performance than financial M&As.

4.4   Conglomerate vs. non-conglomerate

Figure 4-15 shows the breakdown of conglomerate and non-conglomerate mergers and acquisitions (M&A) in the sample. Non-conglomerate M&As accounts for 80% of transactions which directly opposes the findings by Fauzias and Takiah (1986) of around 21%. Although the samples size of this study is relatively small, it does exhibit a difference in trend since the Asian financial crises occurred. During the 1980's, most Malaysian firms were keen on diversification but after having learnt the lessons from the crises, companies are more cautious about such moves and in fact have focused on specialisation and building on their core competencies.
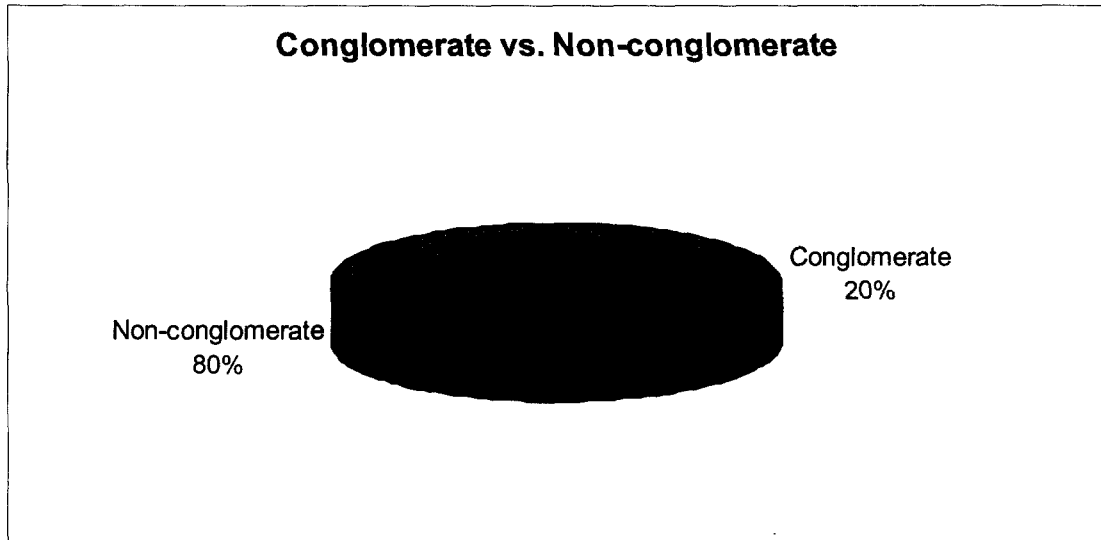
Figure 4-15   Breakdown of financial and non-financial M&As

4.4.1 Conglomerate

Conglomerate mergers and acquisitions (M&A) are those in which the acquirer companies merge with or acquire firms in industries that are unrelated to theirs. The summary results for conglomerate mergers are shown in Tables 4-9.

Table 4-9   Cumulative abnormal returns for conglomerate M&As

Event window (days)	± 1	± 2	± 5	± 10	± 20	± 30
Acquirer firm	9.77	12.16	14.50	10.52	8.09	7.60
Target firm	12.14	9.02	9.00	3.73	0.99	3.93

Figure 4-16 shows the graphical representation of cumulative abnormal returns to conglomerate M&As. There is no significant trend between the event windows although in this case, the acquirer firm gain higher returns that target firms which is unusual. However, the sample size of conglomerate mergers is too small to garner any meaningful results.
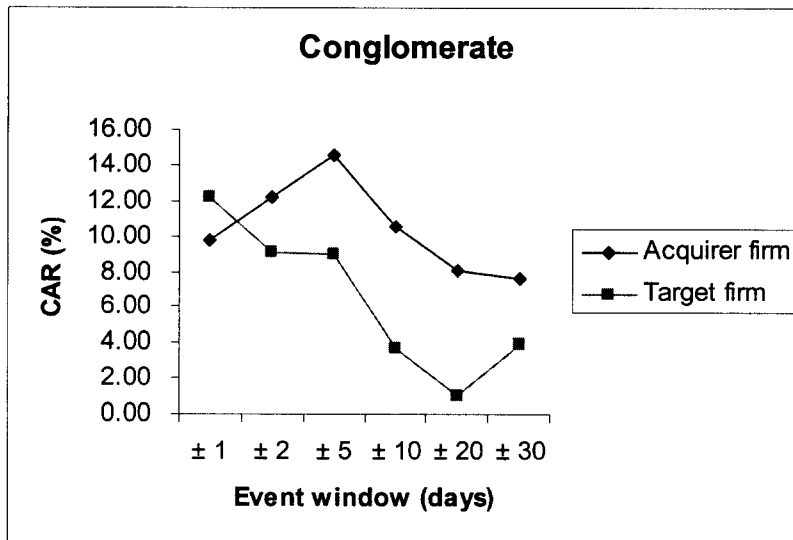
Figure 4-16   Cumulative abnormal returns for conglomerate M&As

4.4.2   Non-conglomerate

The results for non-conglomerate mergers are shown in Table 4-10.

Table 4-10   Cumulative abnormal returns for non-conglomerate M&As

Event window (days)	± 1	± 2	± 5	± 10	± 20	± 30
Acquirer firm	1.06	0.54	1.49	(1.00)	(0.45)	(3.51)
Target firm	4.28	6.40	11.61	11.24	12.49	8.91

Figure 4-17 shows the line plots of non-conglomerate M&A returns. Acquirer firms show negative gains for t ± 30 which is contrary to the expectations that related acquisitions result in the creation of synergies. The Malaysian market does not appear to favour acquisitions in related industries.
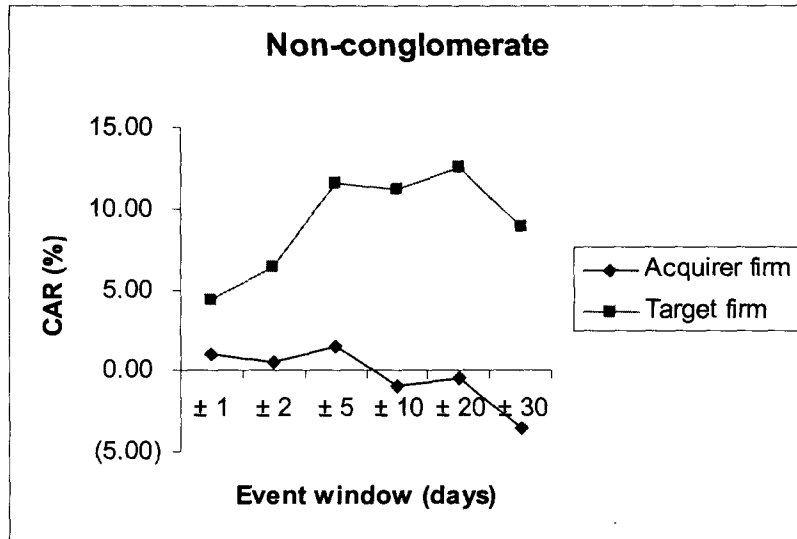
Figure 4-17   Cumulative abnormal returns for non-conglomerate M&As

The results here do not support the findings of previous studies conducted abroad and hence Hypothesis 4 is not supported by this study.
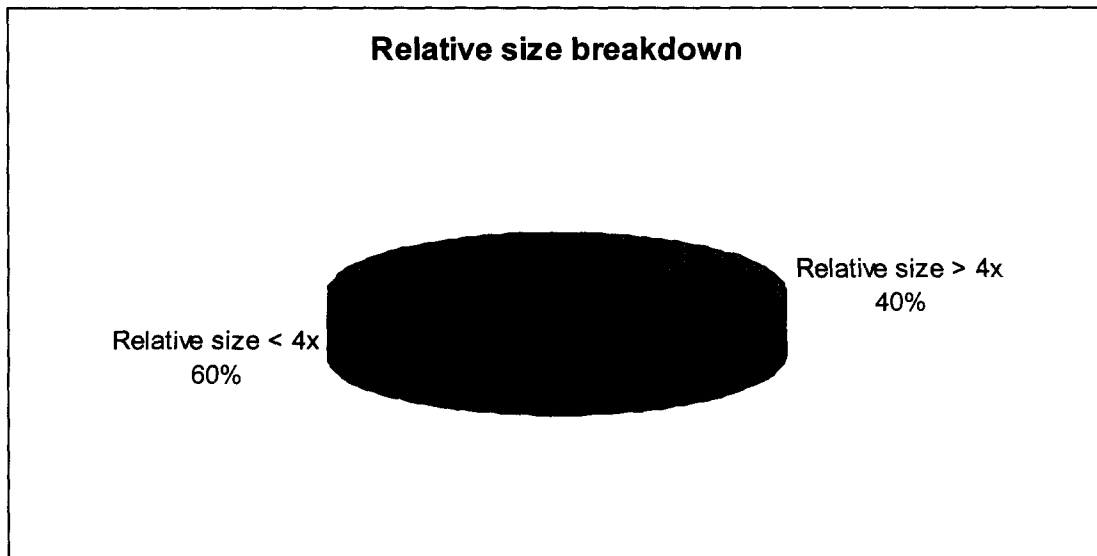
4.5   Relative size

Figure 4-18   Cumulative abnormal returns for non-conglomerate M&As

Relative size of merging firms can be a factor in terms of abnormal returns to acquirer and target firms. The sample is divided into merging firms with relative sizes of greater than four times and less than 4 times respectively. Overall, 60% of acquirer firms are less than 4 times larger, in terms of market capitalisation, than the targets acquired as illustrated in Figure 4-18.

4.5.1 Small size disparity

The results for M&As where the acquirer firms are less than four times the size of the target firms are shown in Table 4-10.

Table 4-11   Cumulative abnormal returns for small size disparity M&As

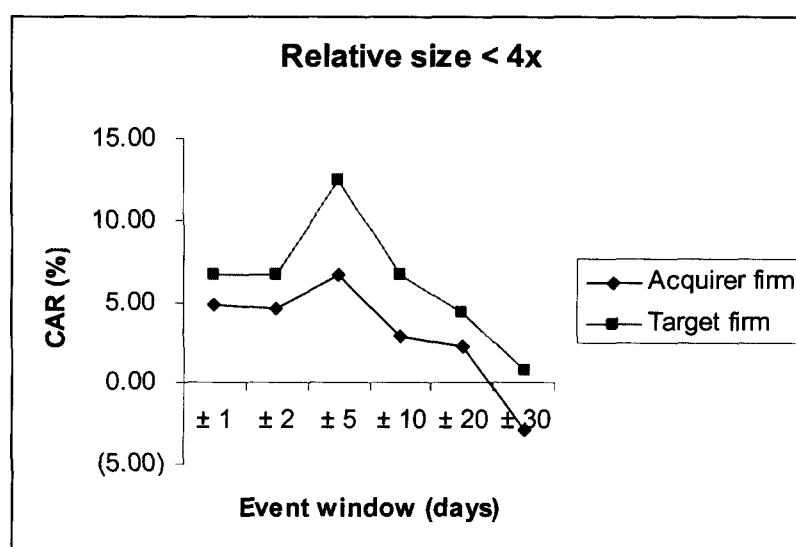| Event window (days)	± 1	± 2	± 5	± 10	± 20	± 30
Acquirer firm	4.76	4.51	6.64	2.81	2.24	(2.91)
Target firm	6.70	6.70	12.43	6.63	4.35	0.73

Figure 4-19   Cumulative abnormal returns for small size disparity M&As

Figure 4-19 shows a negative trend as the event window size increases. Targets earn slightly higher CARs than acquirers but the outlook is only favourable within a few days around the announcement date for "marriages" of more even-sized firms. Such M&As are viewed as more difficult to manage due to the significant amount of funds that needs to be raised through borrowings or share issues as well as problems over ownership and control.

4.5.2 Large size disparity

The results for M&As where the acquirer firms are at least four times the size of the acquired targets is shown in Table 4-12.

Table 4-12   Cumulative abnormal returns for large size disparity M&As

Event window (days)	± 1	± 2	± 5	± 10	± 20	± 30
Acquirer firm	1.25	0.40	0.27	(0.95)	(0.21)	1.13
Target firm	5.49	8.38	10.19	14.86	19.08	19.19

Both acquirer and target firms are expected to gain from such takeovers since smaller targets are supposed to be easier to manage and potential exploitation is greater as mentioned by Chatterjee (1986). However, the results show that significant gains only accrue to the target firms while the acquirers make zero gains as shown in Figure 4-20. The target firms' shareholders are seen to benefit from the synergies created from linking up with large firms as a result of the efficiencies especially in terms of management and scale as a result of the acquisition.

Relative size > 4x

CAR (%)

25.00
20.00
15.00
10.00
5.00
0.00
(5.00)

± 1 ± 2 ± 5 ± 10 ± 20 ± 30

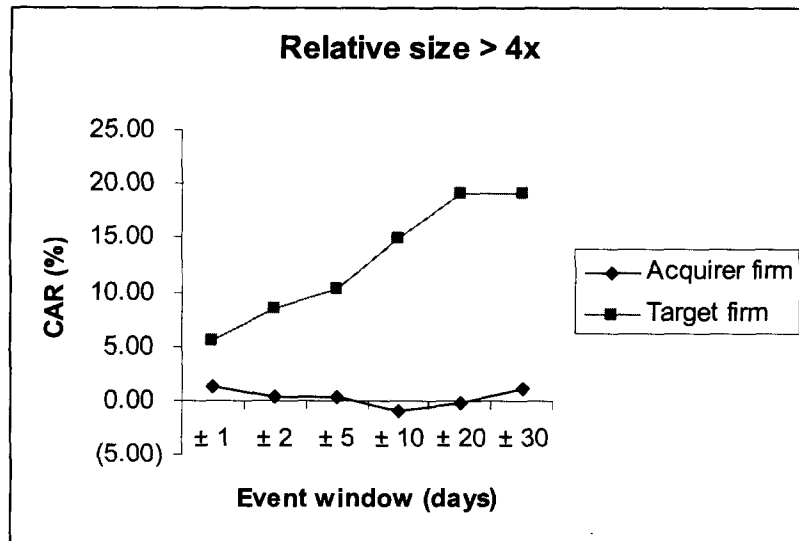**Event window (days)**

—♦— Acquirer firm
—■— Target firm

Figure 4-20   Cumulative abnormal returns for large size disparity M&As

The computed results of relative size of merging firms in relation to abnormal returns partially validate Hypothesis 5. Although acquirer firms do not gain from the exercise, the combined gains with the target firms are generally higher where the acquirer is at least four times the size of the target. Moreover, the fact that the acquirers bear much larger market weighting means that the targets contribution would not amount to much.