CHAPTER 4

RESEARCH RESULTS

General Overview

The sample of acquirees consists of 22 companies which were acquired by others during the period of 1989 to 1991 and have at least 2 years of financial results after the acquisition. A total of 22 non-acquired comapnies of the same sectors and comparable size as the sample acquirees are selected as control group for this study. The selected acquirees and the control companies are listed in Appendix 1.

Table 1 shows the composition of the sample acquirees by industry sectors and market capitalisation. As can be seen from the table, the trading sector has the highest incidence of takeovers, with 9 cases representing about 40% of the sample group. It is followed by properties and industrial sectors which has 5 and 4 cases respectively. These 3 sectors accounted for approximately 80% of the sample acquirees studied. Out of the 7 sectors, construction has the largest average company size at the time of acquisition, followed by trading in which average company size is approximatedly RM 319 million in term of market capitalisation. Since the construction sector has only one sample and the sample company is Renong Berhad, a very large investment company controlled by a ruling political party, we can safely say that this is not representative of the average company size of the construction industry.

Table 1 : Composition of Acquirees Sample

Sector	Number of companies	Percentage	Market capitalisation ('RM million) Year 0	Year 1	Year 2
Construction	1	4.55	1,924	1,685	1,599
Finance	1	4.55	118	525	2,437
Hotels	1	4.55	408	675	675
Industrial	4	18.18	948	1,123	2,940
Mining	1	4.55	89	72	122
Properties	5	22.73	751	1,475	2,428
Trading	9	40.91	2,878	4875	9,466
Total	22	100.00	7,119	10,433	19,669
Controls' market capitalisation			6,003	7,050	14,927

Table 1 indicates that the market capitalisation of acquiree group increases rapidly in the years following the acquisitions. In the first year after acquisition, market capitalisation increased from RM 7 billion to RM 10.4 billion, a significant jump of 46% as compared with the 17% increase in the control group. In the second year, the increase is even more spectacular, with an increase of RM 9 billion over the previous year. However, this increase is less significant when compared with the control group which also recorded a sharp increase of almost RM 8 billion. A quick check on the method of takeovers shows that many of the acquirees were taken over via injection of assets from

the acquirers and this assets injection caused the increase in market capitalisation. This may explain the larger increase of market capitalisation in the acquirees group. As for the Year 2, the increase could be mainly due to the better performance of the local securities maket since both the sample and control group recorded comparable increase in the same year.

Characteristics of Acquirees Prior to Acquisition

Table 2 shows the financial characteristics of both the acquirees and control companies prior to acquisition. The result shows that most of the differences in the financial ratios of the two groups are statistically insignificant except for the total asset turnover and dividend times covered ratios. The total asset turnover and dividend times covered ratios of the acquirees are lower than those of the control group. Despite that the differences of the groups are not statistically significant at significance level 0.1, the calculated means depicted that the acquirees recorded poorer performance in most of the aspects prior to the acquisition. The three profitability ratios, namely net profit margin, return on capital employed and return on investment are consistently lower than the non-acquired companies. While the debt-equity ratio of acquirees is considerably higher than the non-acquired firms, the acquirees appeared to be using less long term loan than the non-acquired companies.The acquirees also appeared to be more liquid than the non-acquired counterpart. However, the valuation and price earnings ratios of the acquirees out-performed the non-acquirees considarably. This could be the result of the sharp appreciation of share prices of the acquirees on news of the the acquisition.

Table 2 : Financial Characteristics Prior to Acquisition (Year 0)

	Acquirees	Control	% difference	p-value
Valuation ratio (@ ave price of calendar year)	9.494	2.513	278	0.1089
Price earning ratio (@ ave price of calendar year)	18.461	8.306	122	0.6997
Acid test ratio	1.866	0.964	93	0.2109
Gearing ratio	0.108	0.143	-24	0.5837
Debt-equity ratio	8.446	1.371	516	0.2952
Net profit margin	-116.2	-4.6	-2426	0.1872
ROCE	0.0436	0.0786	-44	0.1946
ROI	0.0047	0.0357	-87	0.1625
Earnings per share	0.0925	0.1567	-41	0.3667
Total assets turnover	0.4515	0.9916	-54	0.0620*
Dividend yield	1.3428	3.0655	-56	0.1329
Dividend times covered	0.6245	1.8664	-66	0.0257*
Net tangible asset backing	1.5296	1.2905	18	0.6069

* denotes significance @ $p < 0.10$

Trend of Financial Ratios of Acquirees

Table 3 shows the means of the financial ratios over the four years for both the acquirees and control companies. The outcomes of the statistical tests on the financial ratios are also indicated in the table. It is noted that despite the apparently large absolute difference between the means of both groups, the student t-test indicated that the difference between the means of the groups is not significant for most of the financial ratios over the years with alpha = 0.1. Of the 13 financial ratios analysed, only ROCE, ROI and total asset turnover ratios showed that there were significant difference in two of the four years. In the case of ROCE and ROI, the differences between the means were significant for Year 2 and 3. As for total assets turnover ratio, the differences were significant in Year 0 and 1. On the other extreme, eight of the financial ratios indicated no significant difference at all for the four years and these ratios are PER, acid test ratio, gearing ratio, debt-equity ratio, net profit margin, EPS, dividend yiel and NTAB. A closer examination of the statistical output revealed that the variances of one or both of the groups are very large. This may explain the lack of significant differences between the means despite their apparent big differences.

The means of the financial ratios for the two groups are plotted in Figure 1, Panel a to Panel m. These graphs illustrate the general trends on the performance of acquired companies as compared to their control. The curve with solid squares represents the acquired companies while the controls are represented by the small square boxes.

Table 3 : Means and Variances of Financial Ratios

	Year 0	Year 1	Year 2	Year 3
Price ratio				
Valuation ratio (@ ave price of calendar year)				
Sample mean	9.4943	4.6256	3.4498	4.2372
Control mean	2.5137	2.2582	2.1786	2.8232
Variance of sample	397.7780	71.9900	8.7495	19.6217
Variance of control	1.7239	1.7658	1.7061	2.6412
p-value	0.1089	0.2031	0.0723*	0.3647
Price earnings ratio (@ ave price of calendar year)				
Sample mean	18.4612	41.1029	19.9915	22.0372
Control mean	8.3064	34.0187	33.8184	76.0466
Variance of sample	9715.8608	5282.4053	1674.8474	1939.4352
Variance of control	5319.4124	17939.0565	9951.2793	23809.6512
p-value	0.6997	0.8284	0.5508	0.1708
Liquidity ratio				
Acid test ratio				
Sample mean	1.8662	2.0195	1.6095	2.1910
Control mean	0.9643	1.4280	1.1113	1.1543
Variance of sample	10.4878	17.3171	2.7040	4.3449
Variance of control	0.5996	4.5941	2.1994	2.9937
p-value	0.2109	0.6500	0.2974	0.2082
Leverage ratio				
Gearing ratio				
Sample mean	0.1082	0.1545	0.1393	0.1469
Control mean	0.1437	0.1403	0.1579	0.1527
Variance of sample	0.0280	0.0483	0.0335	0.0327
Variance of control	0.0629	0.0272	0.0387	0.0488
p-value	0.5837	0.8097	0.8425	0.8428
Debt-equity ratio				
Sample mean	8.4464	1.1244	0.8593	0.8422
Control mean	1.3711	1.3372	1.2381	1.4477
Variance of sample	979.0454	1.7303	0.2714	0.7904
Variance of control	1.0150	0.9397	0.9788	2.7480
p-value	0.2952	0.5446	0.1196	0.1911

Table 3 : Means and Variances of Financial Ratios (continue)

	Year 0	Year 1	Year 2	Year 3
Profitability ratio				
Net profit margin				
Sample mean	-116.2100	11.9987	159.8817	121.8716
Control mean	-4.6336	6.9147	7.6393	8.5568
Variance of sample	150200.1249	945.0329	444238.8460	170809.4602
Variance of control	2135.9617	145.8874	68.8794	350.6120
p-value	0.1872	0.4743	0.2902	0.2834
Return on capital employed				
Sample mean	0.0436	0.0887	0.1328	0.1441
Control mean	0.0786	0.0787	0.0756	0.0698
Variance of sample	0.0093	0.0162	0.0131	0.0097
Variance of control	0.0062	0.0028	0.0021	0.0013
p-value	0.1946	0.7352	0.0352*	0.0434*
Return on investment				
Sample mean	0.0047	0.0446	0.0831	0.0955
Control mean	0.0357	0.0372	0.0377	0.0337
Variance of sample	0.0070	0.0114	0.0065	0.0054
Variance of control	0.0034	0.0013	0.0010	0.0008
p-value	0.1625	0.7614	0.0186*	0.0157*
Earnings per share				
Sample mean	0.0925	0.1651	0.2920	0.3454
Control mean	0.1567	0.1503	0.1431	0.1536
Variance of sample	0.0308	0.0375	0.1912	0.1519
Variance of control	0.0782	0.0292	0.0222	0.0398
p-value	0.3667	0.7903	0.1380	0.1368
Activity ratio				
Total assets turnover				
Sample mean	0.4515	0.5038	0.5323	0.5577
Control mean	0.9916	0.9207	0.8601	0.7677
Variance of sample	0.1565	0.1561	0.2892	0.2266
Variance of control	1.5893	0.8328	0.6128	0.3958
p-value	0.0620*	0.0559	0.1131	0.2763

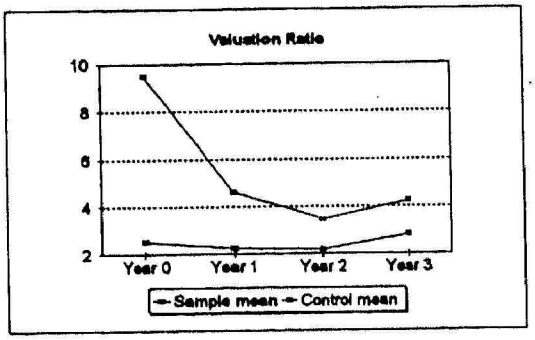
Table 3 : Means and Variances of Financial Ratios (continue)

	Year 0	Year 1	Year 2	Year 3
Dividend policy				
Dividend yield				
Sample mean	1.3428	1.7705	2.4341	2.0456
Control mean	3.0655	2.3677	2.1709	2.6318
Variance of sample	4.8037	3.3963	8.1204	4.2234
Variance of control	22.9906	4.9624	3.0719	7.1347
p-value	0.1329	0.3381	0.7140	0.4359
Dividend times covered				
Sample mean	0.6245	2.7568	4.3441	5.0356
Control mean	1.8664	2.1305	2.6918	2.8441
Variance of sample	1.1520	31.2713	15.1082	14.7061
Variance of control	5.1905	2.7147	9.5800	6.8674
p-value	0.0257*	0.6169	0.1263	0.1549
Other ratios				
Net tangible asset backing				
Sample mean	1.5296	1.6137	1.8621	2.1364
Control mean	1.2905	1.3910	1.4431	1.4763
Variance of sample	3.4543	4.0413	5.3106	7.2794
Variance of control	1.2258	1.1189	1.6178	1.1767
p-value	0.6069	0.6480	0.4595	0.4817

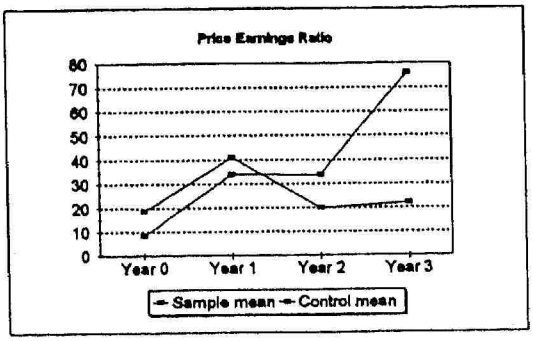
* denotes significance @ $p < 0.10$

Figure 1 : Trends of Performances of Acquirees and Controls After Acquisition

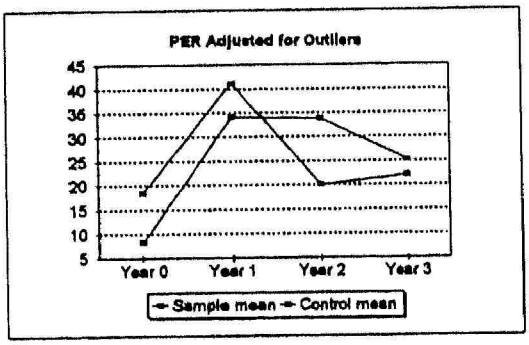
Panel a



Panel b



Panel b-1



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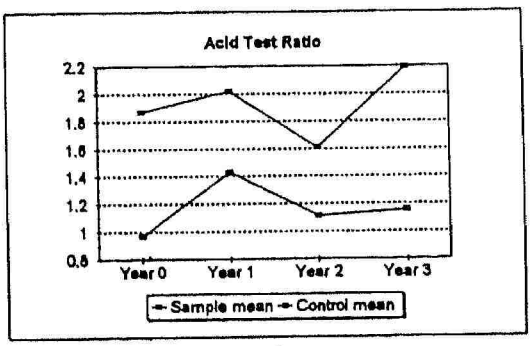
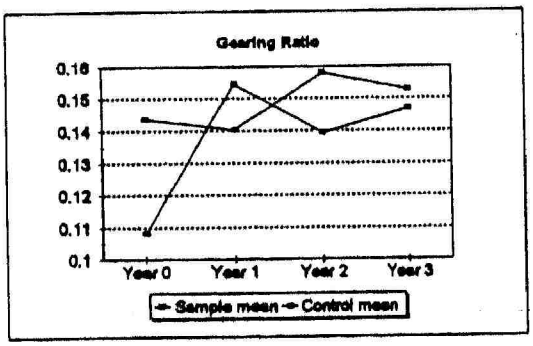


Panel d



Panel e

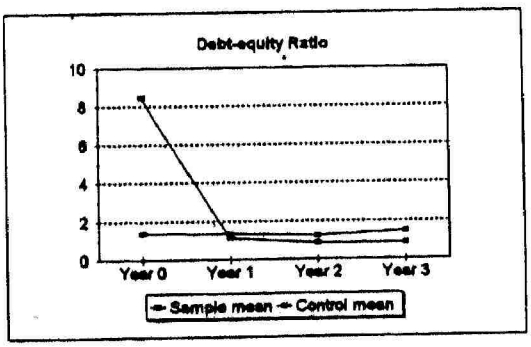
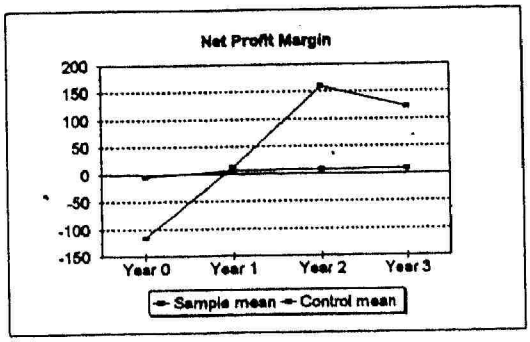
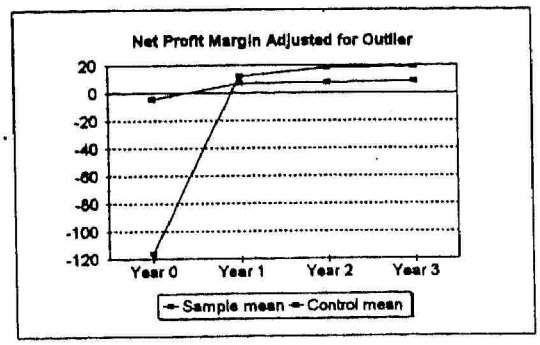


Figure 1 : Trends of Performances of Acquirees and Controls After Acquisitions (continue)

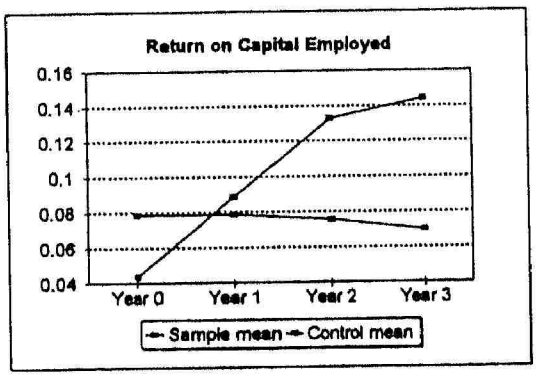
Panel f



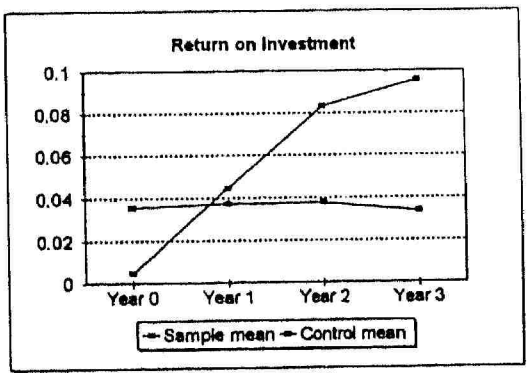
Panel f-1



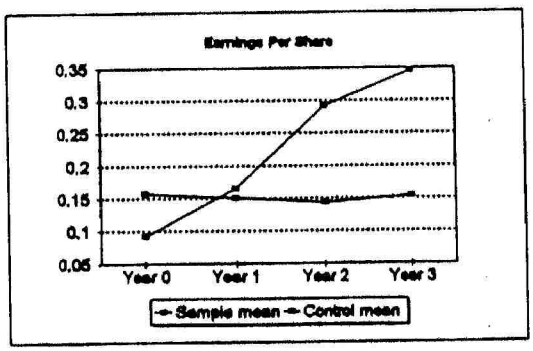
Panel g



Panel h



Panel i



Panel j

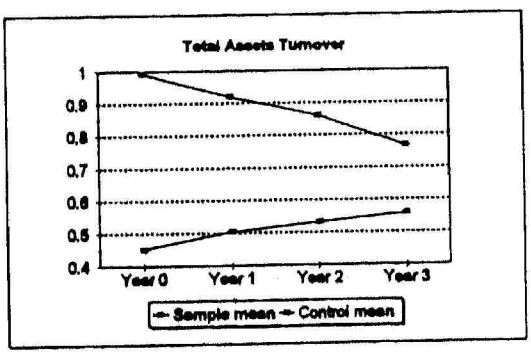
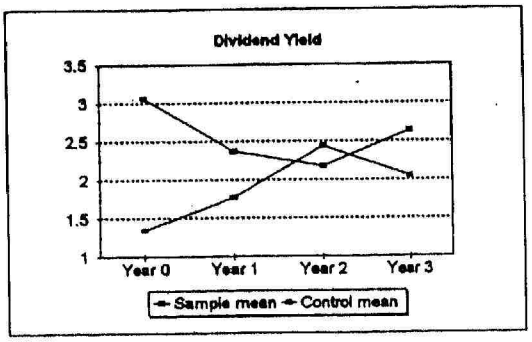
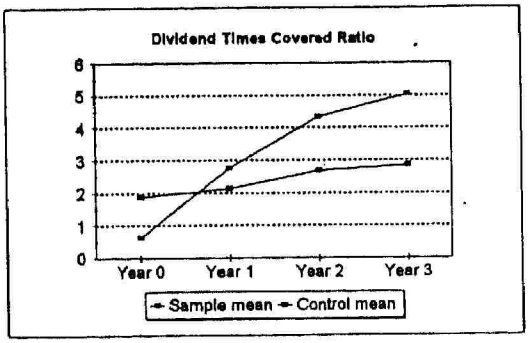


Figure 1 : Trends of Performances of Acquirees and Controls After Acquisitions (continue)

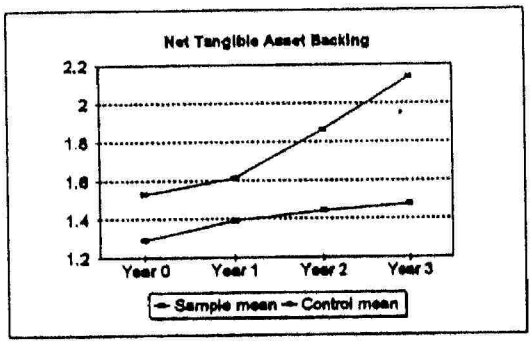
Panel k



Panel l



Panel m



Valuation Ratio (VR)

From Panel a, we can see that the valuation ratio of acquired companies is almost four times higher than the non-acquired companies in the acquisition Year 0. Other researches have shown that share prices of the acquired companies are generally very high prior to the acquisition (Mansor, 1994). In this study, the valuation ratio is calculated from the average of the highest and the lowest prices of the calendar year rather than the price of a specific date with respect to the announcement of acquisition. This method will help to minimise the possible distortion of calculated VR as the prices of the stock could be very different at different points of time leading to the acquisition announcement.

The VR of the acquired companies started to drop in the following year, reaching the lowest in Year 2 and then climbing back up slightly. However, the final VR of acquired companies continued to be higher than the non-acquired companies. The sharp decline in the Year 1 is not unexpected as other studies had shown that prices generally fall after the announcement. The higher VR of 4 in Year 3 reflects that the shares are either over-priced against their net assets or investors has great confidence in the acquired companies.

Price Earnings Ratio (PER)

Panel b shows the trend of the PER of both the acquired companies and controls over four years. The PER of acquired companies stayed at around 20 except for Year 1 when it shot up to 40. The PER of control is rather interesting as it started at around 8 and climbed up to 34 in Year 1 and Year 2. The increase of 16 times is quite comparable to the 13 times as found in the acquirees' PER increase in Year 1. However, the PER of control increased to a spectacular high in Year 3. A close examination of the PER of the

control companies reveals that the high average PER is caused by the exceptionally high PER of Amalgated Industrial Steel Berhad and Petaling Tin Berhad, which are 512 and 291 respectively. If these two outliers are excluded from the analysis, the mean of PER for control group in Year 3 reduces to 25.17 which is slightly higher than acquirees' 22. The trend of PER after excluding outliers is shown in Panel b-1.

Acid Test Ratio

As can be seen on Panel c, the acquired companies appeared to have higher liquidity than the control companies. The acquired companies' liquidity fluctuated around the average of 1.92 while the control moved around 1.16. The high liquidity of a firm may make itself an attractive target for takeover. This is especially true if the acquisition of the firm is via issuance of the acquirer's shares in exchange for the acquired firm's shares. In such situation, the acquirer will have ready access to the liquid assets of the acquired firm.

Gearing Ratio

Panel d shows that the gearing ratio of acquired companies is lower than the controls in the year of acquisition. However, it increases to the level comparable to the control in the subsequent years. The low gearing ratio of the acquired companies prior to acquisitions implied that the companies were either conservative in long term committment or unable to raise long term loan.

Debt-Equity Ratio

Panel e shows that the debt-equity ratio of the acquired companies is six times higher than that of the control in the year of acquisition (Year 0). However, the debt-

equity ratio decreases sharply in Year 1 to the same level as the control. It continues to decrease slightly in Year 2 and 3. For the control companies, their debt-equity ratios remain relatively unchanged over the years. The sharp drop of the debt-equity of acquired companies in Year 1 could be the result of assets injection by the acquirers in their bid for the takeover of the companies.

As we have noted earlier, the gearing ratios of acquired companies are lower than those of the control companies in the year of acquisition. The high debt-equity ratios of acquired companies prior to acquisition could be the reason for their low gearing. Due to their high debt-equity ratios, these companies may find it difficult to raise long term loan.

Net Profit Margin

As shown in Panel f, the net profit margin of acquired companies is negative (-116%) in the year of acquisition. However the margin improves slightly above zero in Year 1. The NPM continues to improve to 150% in Year 2 before declining to about 100% in Year 3. The net profit margin of the controls stays below 10% through out the four years. The large surge in NPM for the acquirees from Year 0 to Year 2 requires an additional investigation. A closer examination of the data shows that Tronoh Mines Malaysia Berhad reported a net profit margin of 3140% and 1670% in Year 2 and Year 3 respectively. These unrealistically high profit margins may be the result of the use of a particular accounting procedure in their reporting of earnings. For example, the use of "completion method" in property development's accounting will only recognise profit at the end of the project. These unrealistic high margins have therefore distorted the overall result. If these data are excluded from the sample, the net profit margin of the acquired companies will be around 18%. The result of the adjusted sample is shown in Panel f-1.

The acquirees' return to profitability in Year 1 means that the acquired companies can be turnaround in the short period of one year under the new owner or management. The short turnaround period will also mean quicker returns to acquirers on their investment in acquired companies.

Return on Capital Employed (ROCE)

Panel g shows that the ROCE of acquired companies is lower than the controls at the time of acquisition. However, it increases steadily after the acquisition to 14.4% in Year 3. In the case of control companies, their ROCE declines very slighly from 8% in Year 0 to 7% in Year 3. As noted earlier, the differences between the means of the two group are significant in Year 2 and 3. This means that the ROCE of acquirees is better than that of the control in Year 2 and 3 and that this better performance is statistically significant in those 2 years.

Return on Investment (ROI)

Since the ROI is very closely related to ROCE, the trend of ROI in Panel h also follows closely that of ROCE. In essence, the ROI of acquired companies improved after the acquisitions while the control companies experienced slight decline. The continued divergence of the trends leads to the significant differences between the means of the two groups in Year 2 and 3 as in the case of ROCE.

Earnings Per Share (EPS)

Panel i shows the trends in the EPS of acquired and control companies. While the average EPS of control companies remains relatively constant at RM 0.15, the average

EPS of acquired companies continues to rise in tandem with the increase in their profitability. EPS of the acquirees increases from the low of RM 0.1 per share in Year 0 to the high of RM 0.35 in Year 3. The upward trend of EPS of acquired firms reflects that the acquired firms improved in performance after acquisitions, not only against their controls, but also against their previous year's performance.

Total Assets Turnover

Panel j shows that the total assets turnover of acquired companies increases gradually while the turnover of control companies is declining. This trend is rather consistent with the trend of ROCE and ROI as higher turnovers will generally lead to higher returns to the companies. As discussed earlier, the means of total assets turnover of the acquired companies were significantly lower than that of the controls in Year 0 and 1. However, the narrowing of their differences in Year 2 and 3 has diminished that significance. The continued increase in total assets turnover of acquirees indicates the improved efficiency in the utilisation of the firms' assets in generating sales after acquisition. This improved efficiency is reflected by the corresponding increases in NPM, ROCE and ROI.

Dividend Yield

Panel k shows the converging trend of the dividend yields between the acquirees and the control group. It appears that the improved profitability of the acquired companies leads to higher dividend payout and hence higher yield. The trend for the control companies is the reverse of the acquirees group. It is noted that both groups eventually pay out a dividend yield of around 2.3% which appears to be the Malaysian market norm

on dividend yield.

Dividend Times Covered Ratio

In Panel l, we can see that the dividend times covered ratio of acquired companies increases at a faster rate than that of the control companies. This indicates that the earnings of the acquirees increase at faster rate than increase in their dividend payout.

Net Tangible Asset Backing (NTAB)

Despite the fact that acquired companies have a high debt-equity ratio at the time of acquisition, they still have a higher NTAB than the control companies, as shown in Panel m. The NTAB of acquired companies continues to rise at a faster rate than control companies. This trend is related to increase in ROCE, ROI and earnings per share. Because of the increase in profitability of the acquirees, the NTAB will also increase through retained earnings by the companies. However, it should be noted that NTAB is more of an accounting ratio given by the companies rather than a financial ratio determined by the market price.