

Corporate Take-overs in Malaysia: Determinants of Post Acquisition Values of Acquiring Firms

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Abstract: This study investigates acquiring firms' value before and after take-overs using Tobin's q measure. The effect on acquiring firms' value of variables such as the identity of the dominant owner, characteristics of the acquired firms and transaction characteristics were examined. The findings show that acquirers had higher q value relative to control firms prior to a take-over but it declined subsequently. Ownership variable was found to have greater explanation for post take-over firm value than the target firm characteristics and transaction characteristics. The findings also show that acquiring firms which are family-owned create more value than firms with other forms of ownership structure, implying that there is less agency problem in the former.

Keywords: Corporate takeovers, Tobin's q , ownership structure, target firm characteristics, Malaysia

1. Introduction

In the last two decades, corporate take-overs have actively taken place around the world. The activities have been especially significant in emerging countries such as Malaysia. Malaysia accounted for about 40 per cent of the merger and acquisition activities in South East Asia (Metwalli and Tang 2002). However, limited empirical evidence has been offered on the effect of take-overs in this market (Song 2007).

Past studies, especially from the US and UK markets, have shown take-overs add value to the combined entities. A high level of wealth gain, however, was enjoyed by the shareholders of the target firms. The shareholders of acquiring firms were no better off or even lost upon the announcements of the business combinations. In the long run, acquirers lost even more as highlighted by Agrawal *et al.* (1992), Franks and Harris (1989), and Andrade *et al.* (2001). Conflicting results, on the other hand, were found in accounting-based studies in assessing

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the post take-over performance. Ravenscraft and Scherer (1989) and Ghosh (2001) who examined earnings performance concluded that merged firms had no operating improvement whereas Healy *et al.* (1992), Powell and Stark (2005), and in Malaysia, Abdul Rahman and Limmack (2004), and Song *et al.* (2005) found positive cash flow returns as a result of the business combination.

Recent literature has also highlighted that dominant ownership in a corporation affects its performance. Anderson and Reed (2003) found that dominant ownership by a family would have a positive effect on firm performance. This is against the views by Claessens *et al.* (1998), and Johnson *et al.* (2000) that family ownership in East Asian corporations had led to the expropriation of minority shareholders by tunnelling out resources from corporations. Thus, the ownership characteristics and the attribute of corporate take-overs such as the target firm and transaction characteristics would provide further evidence to the agency theory in relation to the conflict of interests (or alignment of interest) between the dominant owners and minority shareholders in developing countries.

Therefore, this study seeks to investigate the effect of the identity of the dominant ownership as well as target firm and transaction characteristics on post take-over acquiring firms' values. Control-adjusted Tobin's q was used as an alternative measurement to assess the effects of the take-overs.

The following sections are structured as follows: Section 2 discusses related literature and hypotheses development. Section 3 describes variable definition, model specification, and data used, after which the findings are highlighted in Section 4. Section 5 concludes.

2. Literature

2.1 Dominant Owners Characteristics

Existing literature has shown that corporations in East Asia, including Malaysia, have high concentration of ownership especially in the hands of family members (Claessens *et al.* 1998; La Porta *et al.* 1999). Semkow (1989) contended that firms with dominant ownership by family are more likely to have a larger agency problem. The weaknesses in family-owned firms includes promotion of family members who are not talented to senior management or board positions, confusing and unstable organisational structure as a result of the complexity of the family relationship (especially if the family business also involves extended family member such as nephews, cousins, and others), and reduced probability of take-overs by other agents, thereby reducing the value of the firms. These firms are also perceived as capable of expropriating wealth from the firm through excessive compensation, related party transactions, or special dividends (Shleifer and Vishny 1997). Generally, past literature suggests that family-owned firms may pursue actions that maximise the owners-managers utility and the potentially sub-optimal policies pursued by family firms may result in poor firm performance relative to non family-owned firms.

Although the above studies suggest that family ownership and control generally led to poor firm performance, the benefits of family ownership have also been put forward by other researchers. For example, Stein (1989) highlighted that as the wealth of a family is tied to its firm performance, the family would have greater incentive to monitor managers, more willing to invest in longer-term projects, and less likely to forgo good investments to boost current earning. The sustained presence of families and its reputation also suggests that suppliers

or providers of capital are more likely to lower cost of debt financing compared to non family firms (Anderson and Reeb 2003). Mishra *et al.* (2001) and McConaughy *et al.* (1998) found similar findings that firms run by family performed better than non family firms in the US and in Norway, respectively.

Other major types of investors in the Malaysian capital market are investors from state-owned investment arms, investors from financial institutions (who usually hold shares in the form of nominee accounts) and foreign investors. Generally, state investment arms are perceived as passive (Nurani 2003) in corporate governance. As contended by Suto (2003), it is likely that the representatives from the public portfolios have less incentive to monitor the firms as they can escape fiduciary responsibility owing to government intervention in fund management. Foreign ownership, like most domestic institutional ownership, does not play an active role in corporate governance. In fact, under the Banking and Financial Institutions Act (1989), financial institutions are not allowed to assume any management role or take up a board position. Institutional investors, especially foreign investors on the other hand, would rather sell their shares than go for costly intervention in problem companies (Short and Keasey 1997).

Although there are weaknesses in the family ownership structure, and given the weak legal protection for the minority shareholders in developing countries such as Malaysia, firms run by families with concentrated ownership are expected to have greater firm value than others. Thus, acquirers with family ownership structure are expected to be driven more by strategic rationales, that is, the motives for take-over are based on the expected synergy that would increase the firm value of the combined firm. Thus, the following hypothesis was formulated:

H1: Family-owned firms have greater firm value compared to their control firms after take-over events.

2.2 Characteristics of the Target Firms: Motivation of Acquirers for Take-overs

Several studies have documented the motivation for a take-over by acquiring firms (Abdul Rahman 2002; Ali and Gupta 1999; Jensen and Ruback 1983; Roll 1986; Sundarsanam *et al.* 1996). Generally, the characteristics of a target firm reflect the motivation of the acquiring firms in an acquisition. For instance, Sundarsanam *et al.* (1996) highlighted that the motivation for operational synergies may lead the acquirer to acquire targets having similar businesses to that of the acquirer. The business relatedness between the acquirer and target, allows the combined firms to enjoy economies of scale and scope and thus results in producing more output at a reducing cost and increased market shares, margin and profitability (Healy *et al.* 1992; Abdul Rahman 2002).

Managerial synergy, on the other hand, may be reflected in the pre take-over performance of the target firms. Managerial synergy arises when the managers of acquirers possess superior managerial skills that would benefit the performance of target firm via managerial-disciplinary type of take-over. Alternatively, the acquirer might opt for managerial-synergy motive if the targets have superior technical knowledge and excellent performance that would increase the firm value of the acquiring firms (Martin and McConnell 1991; Matsusaka 1993). The latter is a more likely alternative in developing countries as the market for corporate control is not that well-developed to play a disciplinary role on target managers.

Financial synergy, on the other hand, most probably would be reflected in the difference between the leverage levels of the acquiring firms and target firms. The differences in the debt levels would enable the acquirer to get a tax shield, increase debt capacity, lower the costs of capital and allocate capital more efficiently in the combined firms. Thus, these three characteristics of a target should enhance the firm value of the combined firms. The following hypotheses were formulated:

- H2: Business relatedness between target and acquirer enhances the firm value of the acquiring firm.
- H3: The pre take-over target performance enhances firm value of the acquiring firm.
- H4: Leverage gap between the acquirer and target enhances firm value of the acquiring firm.

2.3 Transaction Characteristics

Past studies have shown that cash tender offers had the best returns compared to stock offers. Myers and Majluf (1984) highlighted that this reflects information asymmetries between managers and outside investors. Managers issued stock to finance an acquisition if they perceived that their shares were overpriced. This was supported by Loughan and Vijn (1997) and Rau and Vermaelen (1998) that share acquisitions yielded negative abnormal returns. In the long run, the market will adjust the share price downwards to its intrinsic value if shares are used as the medium of payment (Limmack 2003).

The effect of the method of payment, however did not receive a uniform view. Chang (1998) found that if acquirers acquired privately-held targets, stock offers generated positive abnormal returns. He argued that this was due to the creation of new large blockholders in the acquiring firm from the target if common shares were issued to the target shareholders. These blockholders can serve as effective monitors of managerial performance. As most of the target firms were privately held, the following hypothesis was formulated:

- H5: Equity financing increases firm value of the acquirers.
- H6: New large blockholders in the acquiring firms enhances the value of the acquiring firms.

Another transaction characteristic in a take-over is the take-over premiums, which are paid in excess of worth of the company. This is to induce the existing shareholders to relinquish their ownership so that they can gain control of the corporation. Thus, the acquirer not only acquires the stock but also has the right to control and change the direction of the company. The premiums paid also represent the expected synergies that the acquirer will gain if the two firms are combined. Roll (1986) and Sirower (1997), however, contended that the higher the levels of premiums paid, the greater is the value destruction from the acquisition strategy. This is because managers often suffer from hubris that leads them to make mistakes in evaluating potential targets. They may pay too much for the over-estimated synergies. The direction of the sign of the coefficient was undetermined. The hypothesis was formulated as follows:

- H7: There is a relationship between premiums paid and firm value.

2.4 Tobin's q

This study uses the market-based performance measure of Tobin's q to assess the effects of take-overs on the value of the acquiring firms. Tobin's q has been a widely accepted measure

of corporate performance. McConnell and Servaes (1990) and Morck *et al.* (1988) used Tobin's q as a proxy for firm value and examined how it was affected by a different class of owners. Berger and Ofek (1995), and Lang and Stulz (1994) used Tobin's q to analyse the relation between corporate diversification and firm performance. Thus, in order to capture the effect of managerial action on the post take-over performance, adjusted Tobin's q was used in this study.

The increase in take-over activities in Malaysia during the period of study as highlighted by Song (2007) was due to the expansion of the economy and the capital market. It was also driven by government initiative in stimulating growth in the industrial, trading and services sectors. Many corporations were seen to have diversified into either related or unrelated business in tandem with the growth in those sectors. This study hypothesised that the impact of take-overs in the 1990s should have a positive impact on the firm value of the acquiring firms due to the ownership, firm and transaction characteristics shown above. Control firms were used to isolate the effects of other economic or industry factors that could distort the impact of take-overs. Thus, the hypothesis was formulated as follows:

H8: The value of an acquiring firms improves after a take-over event.

3. Methodology

3.1 Variable Definition

3.1.1 Tobin's q

Although Tobin's q has been widely used as a proxy for the performance of a firm and its value, the definition for the measure varies as the replacement cost of the assets of a firm is subject to subjective interpretation. Various proxies for the measure have been developed, for example, the Lindenberg and Ross (1981), Lang and Lintzenberger (1989), Lewellen and Badrinath (1997) and Chung and Pruitt (1994) models. For the current study, Chung and Pruitts' model was used as it is simpler and requires only basic financial and accounting information as compared to other models that require complex calculations. Furthermore, this model is able to explain at least 96.6 per cent of the variations in the Lindenberg and Ross model, which claims to measure the exact q ratio. Thus, the Tobin's q value of the acquiring firms, BTQ is measured as follows:

$$BTQ_i = \frac{BMVE_i + BPS_i + BDCA_i}{BASET_i} \quad (1)$$

where BMVE is the product of the share price of the acquiring firm and the number of common stock shares outstanding, BPS is the value of outstanding preferred stock of the acquiring firm, BDCA is the short-term liabilities of the acquiring firm net of its short-term assets plus long-term liabilities, and BASET is the book value of the total assets of the firm. The subscript i stands for the i th firm.

We benchmarked the pre and post take-over firm value of the acquirers to the control firms' pre and post-take-over firm value. The Tobin's q for the control firm is

$$CTQ_i = \frac{CMVE_i + CPS_i + CDCA_i}{CASET_i} \quad (2)$$

where CMVE is the product of the share price of the control firm and the number of common shares outstanding. CPS is the value of the outstanding preferred stock of the control firm, CDCA is the short-term liabilities of the control firm net of its short-term assets plus long-term liabilities, and CASET is the book value of the total assets of the control firm.

Thus, using the market-based assessment, the control-adjusted pre take-over performance or the excess q value before a take-over (B_C_TQB) is the difference between the average BTQ before a take-over for the acquiring firms ($BTQAVBEF$) and average CTQ before the take-over for the control firms ($CTQAVBEF$):

$$B_C_TQB_i = BTQAVBEF_i - CTQAVBEF_i \quad (3)$$

The control-adjusted post take-over performance or the excess q value after a take-over event (B_C_TQA) using the market-based assessment is the difference between the average BTQ after a take-over for the acquiring firm ($BTQAVAFT$) and average CTQ after the take-over for the control firm ($CTQAVAFT$):

$$B_C_TQA_i = BTQAVAFT_i - CTQAVAFT_i \quad (4)$$

B_C_TQA was used to assess the post take-over market valuation of the acquiring firm and was used as the dependent variable in the market-based models. B_C_TQB , on the other hand, was used to control for the influence of pre take-over firm value on post take-over firm value in the market-based models. A comparison of B_C_TQB and B_C_TQA would indicate whether the market perceived the take-over as favourable or otherwise.

3.1.2 Dominant Owner's Characteristics

As the majority ownership as held by family in Malaysia, this study classified the largest ownership stakes (LOWN) into two categories: family and others. A dummy value of 1 was assigned to variable FOWN if the LOWN was from family, otherwise a zero is indicated. The cut-off point for widely held ownership (WOWN) was at 20 per cent (no shareholders controlled more than 20 per cent of the voting rights of the corporation) so as to make comparison with earlier studies, for example, Claessens *et al.* (1998). Furthermore, while 33 per cent voting power would in fact give *de facto* control, in reality, a 15-25 per cent control over voting rights was sufficient for control (Loh 1996). La Porta *et al.* (1999) considered 20 per cent of voting right (direct or indirect) as enough to give effective control of a company.

3.1.3 Characteristics of the Target Firms: Motivation of Acquirers for Take-overs

Relatedness of business refers to the acquirer and target operating in the same industry or industries with very high overlap in their principal activities as described in the KLSE Annual Companies Handbooks or 'Circular to Shareholders' documents. The motive for operational synergy arises if acquirers acquire the target from related business (Sudarsanam *et al.* 1996). A dummy value of 1 was assigned to this variable (RELATE) if a acquirer acquired a related business.

If the profits of the targets were below average before a take-over, the take-over implies that acquirers were trying to exercise their managerial expertise to transform the company. The higher the profitability of the targets, however, implies that acquirers could gain expertise from targets and enhance their earnings base. Therefore, the average net income of

target deflated by its total assets for three years prior to the take-over was used as a proxy for the motive of the acquirer for managerial synergies (AVGROA).

If the acquirers and targets had substantial differences in the levels of debt which the acquirers could claim a tax shield or increase their debt capacity, financial synergies could be the motivation for a take-over. The proxy for financial synergies (ABTDTA) would be the absolute difference between total debts over total assets of the target (TDTA) and acquirer (BDTA).

3.1.4 Transaction Characteristics

A dummy value of 1 was assigned for take-over transaction involving cash payment (MPAY), otherwise a 0 was assigned. If the take-over results in the formation of a new dominant ownership in the acquiring firms (NEWBLOC), a dummy value of 1 was assigned to the variable, otherwise a 0 was assigned.

The computation of premiums paid (LNPREM) in this study followed the measure used by Palia (1993) and Shawky *et al.* (1996) who used the ratio of the offer price divided by the book value of the target. This measure was used as most of the targets in the sample were non public listed firms. This ratio gives an indication of how many times the acquirer is willing to pay for the target firm above its book value. Natural log transformation was used to normalise the distribution.

3.1.5 Control Variable

The pre-take-over excess q value (B_C_TQB) was used to capture if the pre and post take-over performance relationship persisted.

3.2 Model Specification

The control-adjusted Tobin's q (B_C_TQA) was used as the dependent variable in this study in order to assess the effect of take-overs on the value of the acquiring firms as compared to the control firms. Multiple regressions were used to assess the effect of ownership, characteristics of target firms that motivate acquirers to take-over the firm, and the transaction characteristics. The models were controlled for pre take-over firm value (B_C_TQB). The motives for take-overs were assessed through three characteristics of the target, namely, their relatedness of business to acquirers (RELATE), managerial expertise (AVGROA) and financial gap (ABTDTA). The transaction characteristics included method of payment (MPAY), new equity block in acquirers as a result of the take-over (NEWBLOC), and premiums paid (LNPREM). The base model is specified as follow:

Firm value = f (control variable, dominant ownership, target characteristics, and transaction characteristics)

The final model was specified as follows:

$$B_C_TQA = \alpha + \beta_1 B_C_TQB_i + \beta_2 FOWN_i + \beta_3 RELATE_i + \beta_4 AVGROA_i + \beta_5 ABTDTA_i + \beta_6 MPAY_i + \beta_7 NEWBLOC_i + \beta_8 LNPREM_i + \varepsilon_i$$

Six assumptions, namely linearity of the relationship between dependent and independent variables, normality of the distributions of the data and error terms, heteroscedasticity, multicollinearity, and autocorrelations were examined. The initial distributions exhibited po-

Table 1 summarises the variables used in this study.

Variable used			
Variable	Name/Proxy	Literature	Measurement
<i>Performance</i>			
B_C_TQA	Control adjusted Tobin's q After take-over (excess q) Proxy for post take-over performance	(Chung and Pruitt 1994)	Difference between the average TQ_i of acquiring and control firms after take-over event
<i>Control variables</i>			
B_C_TQB	Control-adjusted q value Proxy for pre take-over performance		Difference between the average Tobin's q value of acquiring and control firms before take-over event
<i>Ownership</i>			
FOWN	Family ownership	(Claessens <i>et al.</i> 1998; La Porta <i>et al.</i> 1999)	Dummy =1 if largest shareholder was an individual or family, otherwise =0
<i>Target firm characteristics: motives</i>			
RELATE	Operational synergies Potential for economies of scale and scope, enhanced market power	Sudarsanam <i>et al.</i> (1996)	Dummy = 1 if acquirer and target operated in the same or related industry, 0 = otherwise)
AVGROA	Managerial synergies Potential disciplinary impact of acquirer on target's management		Average 3-year pre-take-over Return on asset of the target
ABTDTA	Financial synergies Potential for cheaper capital		Absolute difference in Total debt/ Total asset ratio between target and acquirer
<i>Transaction characteristics</i>			
MPAY	Method of payment Proxy for asymmetry of information and signalling	Myers and Majluf (1984)	Dummy=1 if it involved cash payment, otherwise =0
NEWBLOC	New dominant block created	(Chang, 1998)	Dummy =1 If the take-over resulted in the creation of a large new block of equity in the acquiring firm, otherwise = 0
LNPREM	Premiums paid Proxy for potential hubris and expropriation/ synergies	Palia(1993), Roll(1986), Sirower(1997)	Log (purchase price/ book value of targets)

tential presence of heteroscedasticity, weighted least squares method [weighted by the market value of the acquiring firms (BMVE1)] was employed to eliminate the heteroscedasticity (Gujarati 1995). The distribution of the data was found to have satisfied the assumptions of multiple regression analysis and thus we proceeded with the analysis.

3.3 Data

The initial take-over announcement list was identified from the *Investors Digest* published by the KLSE (various issues). The actual combinations of the firms were confirmed by checking through the *Companies Announcement Files*, *Annual Reports* and the *KLSE Annual Companies Handbook*.

Financial data and market data for the quoted firms were obtained from the *KLSE Annual Companies Handbook* while data for the non quoted targets were obtained from the *Companies Announcement Files* of the acquirers. The pre take-over performance data were collected for three years prior to take-over and 4 years for the post take-over performance. Thus, the data collected spread from 1987 to 2003, covering a period of 17 years. As actual combinations of the businesses took sometime to materialise after the announcement dates, the financial characteristics of the acquirers were further confirmed using the corporate handbooks or annual reports.

The ownership data were obtained one year prior to the take-over announcement and the new block created was examined after the take-over year. If the dominant owner was a company, the owner of the dominant owner was traced further using the records kept by the Companies Commission of Malaysia (CCM, formally Registrar of Companies) in order to get the ultimate owner.

Control firms for the acquirers were drawn from the public listed companies that match the size of the acquirer, the type of industry and their principal activities around the date of announcements. The control firms should not experience any major Mergers & Acquisitions (M&A) activities during the period of measuring the post take-over performance of the acquiring firm (4 years after the take-over period), in order to provide a performance benchmark to the effects of take-overs.

The population of this study included all acquirers from companies listed on the KLSE from 1990-1999 while the targets comprised public listed and non public listed firms. Only successful take-overs were used in the analysis. As the majority of the targets were from non listed companies (87 per cent), which were relatively smaller and closely held, only those with more than 51 per cent acquisition stakes were included. This was to ensure that the take-over would result in a change in control of the targets. Although the Malaysian Code on Take-overs and Mergers was meant for public listed companies, pursuant to Practice Note 3 of the Malaysian Code on Take-over and Mergers (1987 and 1998), it also applies to private limited companies having shareholders' fund of more than RM5 million or where the purchase consideration was more than RM10 million. It was later increased to RM10 million in book value and purchase consideration of not less than RM20 million in 1998. Thus, for the purpose of this study, the selected target should have a purchase price of not less than RM5 million as too small a target would not have any significant impact on the acquirers (Seth 1990).

Minority buyout or situations where the controlling parties purchased the remaining shares of the firms from the minority shareholders were excluded as the impact of these kinds

Table 2. Sample selection criteria

Criteria		Total
<i>Announcement</i>		781
Confirmed take-overs	466 (60%)	
Lapsed	315 (40%)	781
<i>Types of Targets</i>		
Targets from non-public listed companies	376 (81%)	
Targets from public firms	62 (13%)	
Targets from foreign firms	28 (6%)	466
<i>Purchase Price</i>		
Purchase price more than RM5 million	313 (67%)	
Purchase price less than RM5 million	81 (17%)	
Incomplete information	72 (16%)	466
<i>Purchase Stake</i>		
Purchase stake more than 20% for public listed companies	58 (12%)	
Purchase stake more than 50% for non-public listed companies	321 (69%)	
Others and foreign companies	87 (19%)	466
Purchase stakes of more than 20% for public listed companies and purchase price more than RM5 million	44 (16%)	
Purchase stakes of more than 50% for non-public listed companies and purchase price more than RM5 million	225 (84%)	269
<i>Minus</i>		
Financial statements of targets were not available / with major Confounding Events	110	
Total available targets		159
<i>Minus</i>		
Negative book values and incomplete transaction information		23
Total available targets		136
<i>Minus</i>		
Multiple bids	55	
Banks, other finance and utilities companies	18	
Total available matched acquirer-targets for analysis		63

of acquisitions on the performance of acquirers would not be as apparent. As for the publicly listed firms that were relatively larger, only those with more than 20 per cent acquisition stakes were considered. This is because a 20 per cent purchase stake is sufficient to effect a change in control of the public listed corporation (Loh 1996). Table 2 shows the selection criteria for the targets that are included in this study.

4. Findings

4.1 Descriptive Statistics

Table 3 shows the descriptive statistics of the variables used in the study. The average Tobin's q for the acquiring firms was 1.667 but dropped to 1.185 after the take-over event (BTQAVAF). The Tobin's q value of the control firms also dropped from a mean of 1.47 before the event to 1.24 after the event. As a result, the excess q values were lower for the post take-over period. This implies that using the market-based assessment, take-over event in Malaysia did not increase the value of the firms compared to their control firms. Thus, Hypothesis 1 was not supported. This is in contrast to the accounting-based model used by Abdul Rahman (2002) and Song *et al.* (2005).

Panel 2 of Table 3 shows the distribution of the ownership identity and concentration. In contrast to the disperse ownership found in the US and UK, the majority of the firms displayed very high concentration ratios. Only 17.5 per cent of the largest ownership stakes were below 20 per cent. In other words, 82.5 per cent of the acquiring firms had ultimate owners who controlled the companies directly or indirectly. The average holding by the large shareholders was at 32 per cent. The maximum shareholding was at 84.85 per cent (The shareholder spread of a minimum of 25 per cent only affects companies that have sought to be listed on the KLSE after February 1998). As a result, it was not surprising to find that most of the deals were on a friendly basis. There were very few cases of hostile take-overs found in the sample.

Panel 3 of Table 3 shows the target firm characteristics. The majority of the acquirers (57 per cent) acquired firms from related industries. Most of the acquirers came from the industry sector while the targets came from the trading and services and property sectors. This corresponds to the increasingly important role played by the trading and services, and property industries in the 1990s compared to other sectors such as manufacturing, plantation and mining.

The debt ratios of the acquirers and target firms were not significantly different before the take-over. Both ratios were at about .55. Thus, the motive for financial synergy was not apparent here. In terms of the profitability of the target firms, only five out of the 63 targets were suffering losses when they were acquired. The rest of the targets were performing well prior to acquisition with a median ROA of 3.8 per cent. This shows that the disciplinary role of market for corporate control did not really take place here. The take-over could have been motivated by the prospect of broadening the earnings base of the acquirers as the majority of the acquisitions were in the trading and services sector which was booming in the 1990s. In fact, the trading and services sector had overtaken manufacturing and agricultural sectors as the major contributor to the gross domestic products (GDP) of Malaysia in the 1990s.

Panel 4 of Table 3 provides the descriptive statistics of the transaction characteristics. Only about 25 per cent of takeover of the targets were financed by cash. The rest were non-cash deals or financed solely by equity. If the target was big, the owners of the targets would then become blockholders in the acquiring firms after the business combination if the take-over was financed by equity. This study found that in 16 per cent of the cases, the owners of the target firms eventually became the dominant shareholders in the combined firms. Basically, this resulted in a reverse take-over of the acquiring firm.

The premiums paid as measured by the offer price divided by the book value of the

Table 3. Descriptive statistics

	N	Mean	Median	Std. deviation	Skewness	Minimum	Maximum
<i>Panel 1: Firm value</i>							
B_C_TQB	60	0.203	0.125	1.604	2.81	-3.533	9.171
B_C_TQA	63	-0.058	-0.1	1.047	0.724	-3.492	4.277
BTQAVBEF	60	1.667	1.321	1.473	3.89	0.306	10.402
BTQAVAFT	63	1.185	0.987	1.007	3.886	0.23	7.28
CTQAVBEF	63	1.471	1.223	1.038	2.725	0.367	6.416
CTQAVAFT	63	1.243	0.992	0.9	1.951	0.177	5.03
<i>Panel 2: Ownership</i>							
FOWN	63	.730	1	.447	-1.063	0	1
LOWN	63	32.063	29.850	16.316	1.009	9.240	84.850
WOWN	63	.175	0	.383	1.756	0	1
<i>Panel 3: Target firm characteristics</i>							
RELATE	63	.571	1	.499	-0.296	0	1
AVGROA	63	1.615	.038	12.213	7.936	-.120	97.009
TDTA	63	.547	.579	.282	-0.286	.000	1.090
BDTA	63	.559	.532	.427	3.526	.023	2.824
ABTDTA	63	.322	.187	.422	3.831	.002	2.685
<i>Panel 4: Transaction characteristics</i>							
MPAY	63	.254	0	.439	1.158	0	1
NEWBLOC	63	.159	0	.368	1.914	0	1
LNPREM	63	1.314	1.248	1.224	.363	-.927	4.413

B_C_TQA is the control-adjusted post take-over performance or the excess q value after a take-over event. B_C_TQB is the control-adjusted pre-take-over performance or the excess q value before a take-over. BTQAVBEF is the average q value before a take-over for the acquiring firms and CTQAVBEF is the average q value before the take-over for the control firms. BTQAVAFT is the average q value of the acquirer after a take-over. CTQAVAFT is the average q value after the take-over for the control firm. LOWN is the largest ownership stakes of the acquiring firm. FOWN denotes family ownership stakes while WOWN denote widely held ownership stakes. RELATE denotes acquirer acquired a related business. AVGROA is the average ROA of targets before taken over by the acquirer. ABTDTA is the absolute difference between total debts over total assets of the target and acquirer. MPAY is set as Dummy =1 if the transaction involved cash payment, otherwise a 0 was assigned. NEWBLOC is set as Dummy =1 if the take-over results in the formation of a new dominant ownership in the acquiring firms, otherwise=0. LNPREM= ratio of the offer price divided by the book value of the target.

target shows that about 10 per cent were transacted at a discount (premiums less than 1). The majority were transacted at a premium with a mean of 3.72 times. This is much larger than those found in the developed countries (Hanouna *et al.* 2001, 1.3x; Shawky *et al.* 1996, 2.24x; Slusky and Caves, 1991, 1.5x; Walkling and Edmister, 1985, 1.5x).

4.2 Multiple Regression Analysis

Multiple regressions were employed to investigate the determinants of the post take-over firm values of the acquirers. Specifically, the models seek to identify factors that have contributed to the variations in the q values of the acquiring firms compared to the control firms.

Table 4. Results of the multiple regressions

	Model 1			Model 2			Model 3			Model 4			
	B	t		B	T		B	t		B	t		VIF
(Constant)	.037	.312		-.356	-1.555		-.066	-.264		-.435	-1.475		
B_C_TQB	-.294	-3.403	***	-.326	-3.800	***	-.297	-3.511	***	-.217	-2.561	**	1.130
FOWN				.522	1.980	**	.641	2.452	***	.635	2.567	**	1.127
RELATE							-.435	-1.913	*	-.373	-1.666	*	1.273
AVGROA							.003	.152		.001	.029		1.020
ABTDTA							-.690	-1.786	*	-.502	-1.356		1.093
MPAY										-.264	-1.110		1.122
NEWBLOC										.523	1.881	*	1.260
LNPREM										.167	1.529		1.137
Dependent Variable: B_C_TQA													
Weighted Least Squares Regression - Weighted by bmvel													
d.f. : 59													
R Square:	.166			.220			.311			.420			
Adjusted R Square	.152			.193			.248			.329			
F Statistics	11.580	***		8.041	***		4.883	***		4.618	***		

B_C_TQA is the difference between the average q value of the acquirer and control firms after take-over event. B_C_TQB is the difference between the average q value of acquiring and control firms before take-over event. FOWN is set as Dummy =1 if largest shareholder was an individual or family, otherwise =0. RELATE is set as Dummy = 1 if acquirer and target operated in the same or related industry, 0 = otherwise. AVGROA is the average 3-year pre take-over Return on Asset of the target. ABTDTA is the absolute difference in Total debt/Total asset ratio between target and acquirer. MPAY is set as Dummy=1 if it involved cash payment, otherwise =0. NEWBLOC is set as Dummy =1 If the take-over resulted in the creation of a large new block of equity in the acquiring firm, otherwise = 0. LNPREM is the Log of Purchase price/ Book value of targets.

* Significantly different from zero at the 10 per cent level, using a two-tailed test.

** Significantly different from zero at the 5 per cent level, using a two-tailed test.

*** Significantly different from zero at the 1 per cent level, using a two-tailed test.

Model 1 to Model 4 in Table 4 show the regression results of the four groups of variables. Generally, the *F*-statistics were significant at the one per cent level for all models. The adjusted R Squares were at .152, .193, .248, and .329 for Models 1, 2, 3, and 4, respectively.

Model 1 shows the relationship between the control variable, pre take-over firm value and the post take-over firm value of the acquiring firm. The relation was found to be negative. In other words, the firm value of the acquiring firms did not persist following a take-over event. If a acquiring firm suffered a lower firm value compared to its industry counter part before a take-over event, its firm value would increase after the take-over event. We have also attempted to control for take-overs during the crisis period; however, it was found that the variable was not significant.

Model 2 shows that family ownership contributed positively towards the firm value of the acquirers. This supports Hypothesis 2 that family-owned firms increase the firm value of the acquirers compared to the control firms. Thus, the findings support the findings by Anderson and Reeb (2003), Mishra *et al.* (2001), and McConaughy *et al.* (1998).

Model 3 shows that the business relatedness characteristic and financial gap between acquirer and target had a negative impact on post take-over firm value. The pre take-over target performance on the other hand did not affect the firm value of the target firms. Thus, Hypotheses 3, 4 and 5 were not substantiated.

In terms of the transaction characteristics as in Model 4, only the new block created in the acquiring firms had a significant positive impact on the firm value of the acquiring firms. Payment involving cash shows lower impact than payment by equity as the coefficient of MPAY was negative. The sign of LNPREM was positive indicating that premiums paid enhances the value of the acquiring firms. These two variables (MPAY and LNPREM), however, were not significant at the conventional levels. Thus, for the transaction characteristics (Hypotheses 6, 7, 8), only Hypothesis 7 was supported.

5. Concluding Remarks

Corporate take-overs have gained substantial popularity in recent years in Malaysia. The main thrust of a take-over is to leverage on the strengths of others so as to remain competitive in the market place. This study was undertaken to investigate if the firm value of the acquirers on Bursa Malaysia increased following a take-over event. This study also seeks to investigate the possible factors that may cause the variations in the firm value of the acquiring firms by looking into the largest ownership stakes of the acquiring firms, target firm characteristics, and transaction characteristics of the deals.

It was found that firm value of the acquirers decreased as a result of the take-over event. The finding was similar to those found by the US and UK studies using the market-based assessments (Agrawal *et al.* 1992; Franks and Harris 1989) that acquirers did not benefit from a take-over. It contradicted, however, the accounting based studies by Abdul Rahman and Limmack (2004), Song *et al.* (2005) using the Malaysian sample.

Although Tobin's *q* is deemed a more superior measure than the other market-based assessments such as abnormal returns using event study method, we need to interpret the results with caution given the background of the Malaysian market in the 1990s. During this period, the Malaysian market was characterised as being highly speculative (SC 2004:58). Retail investors who accounted for 70 per cent of the total transactions dominated the Malaysian capital market (SC 2004: 58). Besides the speculative activities by the market

players, insider trading (Mat Nor and Mohd Zin 1996), as well as improper disclosure and dissemination of false information were also prevalent (SC 2004: 55). These activities have distorted the pricing efficiency that is required in an efficient market. Further research is needed to isolate the effect of this distortion.

In explaining the variations in the firm value of the acquirers, family ownership was found to contribute positively to the post take-over firm value. This is in line with the findings by Anderson and Reed (2003), Mishra *et al.* (2001), and McConaughy *et al.* (1998) that firms run by families are more long-term focused and thus add value to the firm. The above findings, however, do not support the findings by Claessens *et al.* (1999) and Faccio *et al.* (2001) that the use of dual class shares, stock pyramiding, and cross-holding by East Asian Firms (especially family-controlled firms) resulted in lower market values for these firms. They argued that East Asian countries, including Malaysia, have weak shareholder protection, inadequate financial disclosure, inefficient judicial system, weak market incentives and a high degree of corruption. Therefore, there is a possibility of conflict of interests between dominant shareholders and minority shareholders that eventually enables the expropriation of minority shareholders.

Nevertheless, in the case of Malaysia, the severity of the expropriation problem is less compared to other countries. Millar *et al.* (2005) noted that Malaysia appears to maintain international standards in corporate governance and has developed a more sophisticated and adequate legal system to protect property rights compared to other emerging countries. The problem lies more on the weak enforcement of the law and regulations (La Porta *et al.* 1998), which is a serious challenge to the authorities. As highlighted by the Companies Commission of Malaysia, the compliance rate was only at 70 per cent in year 2005 (Hiew 2006).

The findings that acquiring related business has a lower value compared to unrelated business is most probably due to the fact that the booming economy in the first part of the 1990s posed more attractive opportunities for the acquiring firms to acquire targets in the fast growing sectors such as the Trading and Services sector, than the sector of the acquirers. Diversifying into unrelated business might also be a way to capture profit opportunities induced by government incentives during that period. For instance, in the process of industrialising the country and initiating the privatisation programme, the government had given out exclusive licences for companies involved in selected sectors such as utilities, sewage system, or ICT businesses, and so forth. In addition, the government also gave a wide range of incentives including preferential credit and tax exemption to eligible companies.

Financial gap as measured by the leverage differences between the target and acquiring firms had a negative impact on the firm value of the acquiring firm. This could be due to the fact that an extremely high level of debt in either acquirer or target could pose more risks to the acquirers instead of generating financial synergies.

The pre take-over performance of the target did not have a significant impact on the excess q of the acquiring firm. Similarly the transaction characteristics, such as the method of payment and premiums paid, did not have significant impact on the excess q of the acquirer. However, if the method of payment has resulted in the creation of large dominant shareholders in the combined firms, it had a positive impact on the firm value of the acquiring firms. This is in line with the expectation that these blockholders will monitor the management (Chang 1998). The willingness of the privately held targets to hold stock of the acquir-

ing firms also signaled that shareholders of the privately held targets were well informed of the prospects of the acquiring firms. Thus, we can infer that agency factor, namely the ownership characteristic of the acquiring firms has greater explanation than the target and transaction characteristics.

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