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Characteristics of Firms Going Private in the Malaysian Stock Exchange

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Abstract

The study empirically investigates the financial characteristics that discriminate firms that went private and firms that remain publicly traded. Based on the results of logit and probit model, companies that reverted to the private domain are characterized as having higher cash balance, higher degree of undervaluation, higher operating profit margin, lower dividend payout rate, and lower free float compared to public counterparts. The classification accuracy rates for in-sample and holdout sample are 69.17% and 65.38% respectively.

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1. Introduction

Going private transaction is no longer an unaccustomed term to mass investors. Many public firms are taken off the stock bourse one after another in Malaysia since 2005. Leveraged buyouts are widespread in US and UK since 1980s. However, going private phenomenon appeared in Malaysian equity market is different from the nature of leveraged buyouts and private equity (hereafter PE) backed deals which took place in many developed economies. PE led buyouts are still underway in Malaysia. In contrast, most of the going private proposals in Malaysia to date are undertaken by the largest dominant shareholders of the public corporations without the participation of PE players.

Vast literature, among others, are explored by Kaplan (1989), Lehn and Poulsen (1989), Weir et al. (2005a), Andres et al. (2007), Renneboog et al. (2007), and Stuart and Yim (2009) to examine going private buyouts driven by PE investors. Comparatively, research on going private transaction without the involvement of private equity sponsor is lacking.

Halpern et al. (1999) treated leveraged buyout as heterogeneous with the respect to the level of prior managerial shareholdings. Firms with higher insider shareholdings go private voluntarily in insider led buyout. Companies of this kind insulate themselves from being taken-over by hostile bidder. On the contrary, companies which have lower managerial stakes are subject to the threat of takeover (Halpern et al. 1999). This study holds similar view as Halpern et al. (1999) and Firdmuc et al. (2007) that public-to-private population is heterogeneous in terms of motivation of going private. Thus, this research excludes any PE backed deals in investigating the going private likelihood as we expect the reasons of taking the company private by the private equity players and controlling shareholders are distinct.

PE buyouts are highly levered than other buyouts and typically PE investors own significant shareholdings, have board seats and sometimes replace the incumbent managers in post-buyout firms. Additionally, PE firms take the company private for the purpose of restructuring and exiting it later through secondary buyout, reverse buyout and trade sale (Wright et al., 2006; Stromberg, 2009). PE investors participate in buyouts with the intention of realizing capital gains when they exit the buyout firm while controlling shareholders take the company private for long term strategic purpose. Moreover, insider led buyout tend to remain as private concern (Halpern et al., 1999).

Due to the discrepancies in the rationales of attempting going private transactions between PE investors and insiders, this paper focuses on going private transactions initiated by the dominant shareholders. To cover the whole population, outside strategic buyers who have acquired majority shares in friendly takeover previously from the dominant shareholders and later triggered the mandatory general offer to buyout the whole listed public corporation successfully are also included in the sample.

This paper contributes to the existing public-to-private takeover literature in the following respects. First, examination of the public-to-private transaction is constrained to the developed markets. Limited research examined going private transaction in developing countries such as Malaysia. Hence, this study is an initial attempt to find out the factors that drive buyouts in the Malaysian stock market. Second, this study excludes private equity sponsored transactions from the sample and provides evidence to the characteristics of dominant shareholder led buyout. Third, the ownership context in Malaysia is complicated with cross shareholdings and stock pyramidal ownership. This complicated arrangement of

ownership structure is different from the publicly traded corporations in US which are widely held and controlled by institutional investors (Gaughan, 2007). In the Malaysian market, the controlling shareholder may indirectly own the firm through related entities. This makes the controlling owners more entrenched as their voting rights may be greater than their cash flow rights in the target company held through related corporations. This shareholder structure is similar with many Asian countries, for example Taiwan, Singapore, Hong Kong and so forth. The research outputs may provide insights to capital markets which have similar concentrated and insider controlled shareholder structure about which kinds of firms are more likely to be privatized by the owner-managers. The remainder of the paper is organized as follows. Section 2 describes the data sources, sampling procedures and research methodology. This is followed by discussion of empirical findings in Section 3. The final section presents the concluding remarks.

2. Data, sample and research methodology

2.1 Data and sample selection

We identified firms that went private between 2000 and 2007 from the universe of listed stocks using the following screening procedures. First, we screened for firms that announced going private intent from corporate announcement deposited at Bursa Malaysia (www.bursamalaysia.com). Second, to avoid sample negligence, we also read the individual firm announcement at EquityTracker (www.klsetracker.com), an independent research portal. Third, to confirm the accuracy of our sample, we searched across a full list of de-listing firms provided by Bursa Malaysia library and also cross checked a list of firms which received takeover offers from 2000 to 2007 from EquityTracker portal. From the lists, companies which were de-listed due to reasons other than privatization were excluded. For example, firms involuntarily de-listed by Bursa Malaysia due to incompliance of listing requirement are eliminated. Furthermore, banks, real estate and insurance companies were excluded from analysis. It is because their reporting practices are different from other industries and inclusion of these firms may introduce heterogeneity in the sample (Sorensen, 2000).

The final sample comprises of 60 companies that went private spanning from the period 2000 to 2007. The 60 ex-quoted firms were matched by another 60 control firms which remain listed in 2007 based on the closest asset size and industry. If two and above going private firms were matched with the same public company, then the privatisation firm which failed the matching was matched with another public firm based on the next-to-closest total asset in the same industry. This matching process is identical with Lin and Wang (2007).

We obtained financial data and director shareholdings for going private sample and control group from the most recent annual reports prior to the first published going private announcement. For instance, PPB Oil Palms Berhad announced its intention to go private on December 14, 2006. Therefore, the financial statements of PPB Oil Palm and its matched sample- Asiatic Development Berhad for the financial year ended 2005 were analyzed. The financial figures and share prices were obtained from company annual reports, Datastream and EquityTracker.

2.2 Descriptive statistics

The summary of descriptive statistics is reported in Table I. The first column is the explanatory variables for going private likelihood, and the next four columns are average, median, maximum, minimum values for ex-quoted companies and the matched sample. The last column provides the t-statistic for the difference in mean.

Table I: Descriptive statistics for going private and non-going private sample

Variable	Going private company				Control sample				t-statistic
	Mean	Med.	Max.	Min.	Mean	Med.	Max.	Min.	
CASHPS	0.62	0.40	3.05	0.00	0.41	0.30	2.62	0.00	2.14**
INSIDER	23.00	4.39	86.37	0.00	30.56	33.31	74.29	0.00	-1.62
MB	1.48	0.92	17.83	0.14	1.30	0.80	6.51	0.23	0.53
OPM	0.14	0.11	0.49	-0.08	-0.06	0.06	0.45	-4.98	2.01**
PRICE2NTA	1.65	0.95	17.83	0.24	1.84	0.79	39.29	-4.84	-0.26
PRICE2SALES	1.76	1.03	10.02	0.05	1.89	1.30	14.22	0.03	-0.32
DIVPAYOUT	51.51	44.96	219.30	-269.23	214.25	25.80	8333.33	-31.25	-1.13
DE	1.11	0.63	6.91	0.02	1.21	0.82	6.37	0.01	-0.41
FRFLOAT	40.18	35.74	82.98	13.63	52.87	49.71	100.00	10.69	-3.64***

Notes: CASHPS is cash/number of shares outstanding; INSIDER is beneficial interest attributable to board of directors/total ordinary shares; MB is market price per share/book value per share; OPM is operating profit/sales; PRICE2NTA is price per share/net tangible asset per share, PRICE2SALES is price per share/sales per share; DIVPAYOUT is dividend per share/earnings per share; DE is debt/equity; FRFLOAT is free float which is derived by subtracting shareholdings of 5% and above from total issued capital.

The results in Table I show that going private sample has significantly larger cash per share than the public counterparts. This is consistent with the assertion that cash rich firms are more likely to be taken private. Directors' shareholdings above 20% for both ex-quoted firms and public firms indicate that public corporations in Malaysia are insider controlled. The average insider ownership for non-going private sample is higher (30.56%) than firms that went private (23%), but the difference is not significant.

On the other hand, the operating profit margin is significantly higher for the estimation sample than the matching sample at 5% confidence level. It may reflect that firms that underwent going private exercises are more efficient in core business and operation prior to the buyout relative to firms that remain publicly traded. Ex-quoted firms show lower dividend payout rate than its comparison sample, but there is no significant difference in their mean. The free float variable is significantly lower for buyout firms than matched sample at 1% level, suggesting that the ownership is more concentrated and fewer shares are held by the public for going private candidates.

2.3 Research method

Choice based sampling by matching the sample size and classifying the population based on outcome rather than random sampling is used in the study. It is because random sampling will result in a smaller number of cases falling into any one of the category (Amemiya, 1985). This matched sample design is also used in prior research (see Lehn & Poulsen, 1989; Song & Walkling, 1993).

Linear probability model is not pursued in the study as it will predict a value greater than 1 or less than 0. A logistic regression deals with limited dependent variable is employed to estimate the likelihood of going private. The dependent variable is qualitative, taking value of 1 if going private and 0 if otherwise. The logit model is given as follows:

$$\ln\left(\frac{P_i}{1-P_i}\right) = \beta_0 + \beta_1 CASHPS_i + \beta_2 INSIDER_i + \beta_3 MB_i + \beta_4 OPM_i + \beta_5 PRICE2NTA_i + \beta_6 PRICE2SALES_i + \beta_7 DIVPAYOUT_i + \beta_8 DE_i + \beta_9 FRFLOAT_i + \varepsilon_i \quad (1)$$

where:

$\frac{P_i}{1-P_i}$	= odd ratio in favour of going private;
P_i	= probability of going private for firm i;
$1-P_i$	= probability of not going private for firm i;
CASHPS	= cash/number of shares outstanding;
INSIDER	= beneficial interest attributable to board of directors /total ordinary shares;
MB	= market price per share/book value per share;
OPM	= operating profit/sales;
PRICE2NTA	= price per share/net tangible asset per share;
PRICE2SALES	= price per share/sales per share;
DIVPAYOUT	= dividend per share/earnings per share;
DE	= debt/equity;
FRFLOAT	= total issued capital in percent - sum of shareholdings with more than 5% owned by investors

Table II shows the proxy variables, variable definitions and expected signs for each independent variable. The likelihood of a firm to go private is expected to increase if the expected sign is positive and decrease if the expected sign is negative.

Table II: Going private characteristics and proxy variables

Variable	Definition	Expected sign
Cash per share (CASHPS)	Cash/number of shares outstanding	+
Insider ownership (INSIDER) (%)	Beneficial interest attributable to board of directors/ total ordinary shares	+
Market-to-book value (MB)	Market price per share/book value per share	-
Operating profit margin (OPM)	Operating profit/sales	-
Price-to-net tangible asset ratio (PRICE2NTA)	Price per share/net tangible asset per share	-
Price-to-sales ratio (PRICE2SALES)	Price per share/sales per share	-
Dividend payout (DIVPAYOUT) (%)	Dividend per share/earnings per share	-
Debt-to-equity ratio (DE)	Debt/equity	-
Free float (FRFLOAT) (%)	Total issued capital-sum of shareholdings with more than 5% owned by investors	-

3. Empirical results

3.1 Logit regression results

First, a general unrestricted logit model that includes all available regressors based on the prior empirical studies is tested. Due to too many independent factors that may introduce noise to the model and reduce the degree of freedom with the addition of each regressor into the model, the study simplifies the model by reducing parameters which are the least significant at each stage of testing procedure. The simplification process follows general-to-specific (Gets) modelling or London School of Economics Approach (LSE) (see Hendry, 1993; Campos et al., 2005). Although this approach is developed for time series data, it is also used in economic modelling which deals with qualitative variables (see Salavrakos & Petrochilos, 2003; Zinkovskaya, 2008). The final logit estimates are shown in Table III.

Based on Table III, the value of McFadden R^2 , one of the measures of pseudo R^2 , is 0.2013. The likelihood ratio statistic for the derived model is 33.4862. The result rejects the null hypothesis that all slope coefficients in the estimated model are simultaneously equal to zero at 1% level. Thus, it is concluded that all the regressors have significant effect on likelihood of going private. The McFadden R^2 in this study is quite low, however, it is typical to get a low R^2 for the limited dependent variable model but it does not indicate that the model is poor (Maddala, 1983). In predicting the characteristics of firms that went private for the period 1981-1992, Rao et al. (1995) reported that Maddala R^2 for probit model is 31.73%.

On the other hand, Cantarero and Pascual (2007) recorded Pseudo R^2 as low as 11.6% using binary choice model. Goodness of fit is of secondary importance when the dependent variable is dichotomous. For binary regressand model, the expected sign of coefficient regression and significance of the independent variable are more important (Gujarati, 2003). Mackey and Currie (2001) stated that McFadden R^2 underestimates the total variation explained by the model; therefore the predictive efficacy of the logit model is conservative. The value tends to be smaller than R-square. McFadden R^2 which is higher than 0.2 is considered satisfactory and a good fit (McFadden, 1974; Green, 2001).

Table III: Logistic regression of the going private probability

Explanatory variable	Estimate coefficient (Standard error)
Constant	1.6197*** (0.6765)
CASHPS	1.1892** (0.5533)
INSIDER	-0.0125 (0.0086)
MB	0.3382** (0.1563)
OPM	3.3957** (1.5158)
PRICE2NTA	-0.0700** (0.0338)
PRICE2SALES	-0.2542** (0.1296)
DIVPAYOUT	-0.0011* (0.0006)
DE	-0.2581 (0.1829)
FRFLOAT	-0.0373*** (0.0119)
LR Statistic	33.4862***
McFadden R^2	0.2013
Count R^2	0.6917
Sample Size	120

Notes: ***, **, and * indicate significant at 1%, 5% and 10% significance levels respectively. The standard errors are Huber-White standard errors which adjust for correlations of error terms across observations. LR statistic is a chi-square test for all slope coefficients jointly equal to zero.

From the logit model results, it is observed that the fraction of correct prediction for the entire sample (120 observations) is 69.17%. In particular, 71.67% of sample firms are correctly classified for going private cases while for non-going private sample, the classification accuracy is lower, which is 66.67%. Hair et al. (2006) mentioned that when there is two-group function such as going private and non-going private in this research, the classification accuracy of the model should be higher than that can be expected by chance. They suggested that at least one-fourth greater than the chance probability of 50% is considered as an acceptable level. Therefore, the overall classification accuracy for the estimated model (69.17%) is considered meaningful and significant in identifying the group membership. The prediction accuracies for targets and non-targets noted in this study are higher than 62.4% and 60.3% documented by Espahbodi and Espahbodi (2003) in predicting corporate takeovers.

Based on Table III, the coefficient of cash per share (CASHPS) is positive and significant at 5% level. A firm with large cash balance has greater likelihood to opt for going private transaction as the cash to finance buyout is readily available. When the market condition is weak, buyers may not be able to obtain enough external financing to fund the buyout transaction. A highly liquid firm can finance the acquisition using its cash reserve. If the target firms have large cash balance and their share prices are trading below fair values, the firms are very attractive in the eyes of bidders. In addition, firms with higher cash have a reduced need to access the capital market and thus higher propensity to go private. Empirical precedence found that liquidity is efficient in predicting going private or takeover targets (Evans et al., 2005; Gleason et al., 2007).

The coefficient of dividend payout is negative and statistically significant at 10% level. The results confirm the agency problem of free cash flow theory advocated by Jensen and Meckling (1976) and Jensen (1986). Due to separation of control and ownership in large public corporation, conflict of interest occurs between principal and agent. Managers put their personal goal ahead of organisational goal by not maximizing the wealth of shareholders. Instead, managers tend to increase their control over the firm resources by not disgorging cash dividend to equity holders. We found 18.03% of sample firms that exited Bursa Malaysia during 2001-2007 did not declare dividend one year before the going private proposals. Besides, Lowenstein (1985) stated that if firms do not distribute cash dividend, it may imply that there is information asymmetry between the insiders and outsiders. The insiders want to retain cash and later take the company private.

When stock prices fall and the market perception towards the company's future prospect does not improve, insider is motivated to take the company private. An undervalued company is a good buy for investors. Price-to-sales ratio (PRICE2SALES) and price-to-net tangible asset backing per share (PRICE2NTA), the proxy for undervaluation hypothesis, are statistically significant at 5% level. Both variables are of anticipated signs. This indicates that there is information gap between the true value of company between the insiders and uninformed market. Our finding is consistent with the assertion of Andres et al. (2004) and Weir et al. (2005b) that the propensity of a firm to be taken private increases with the degree of undervaluation.

As predicted, lower free float (FLOAT) increases the going private likelihood ($p = 0.01$). Lower free float implies that the ownership is concentrated and fewer shares are held in the hands of outside minority shareholders. It is consistent with the findings of Jansen and Klezmer's (2003) that positive relation between going private probability and concentration of ownership existed in German capital market from 1997 to 2001. With highly concentrated insider ownership and lower free float, it is easier for the incumbent management to take the firm private. Higher ownership concentration implies higher success rate of going private. External shareholders with smaller stake are more likely to accept the offer as shareholder intervention is costly and net gain from intervention is small (Kobayashi, 2007).

The coefficient of operating profit margin is statistically significant and positively correlated with going private probability. This finding implies that the lender will judge the historical financial performance of the pre-buyout firm. If the managers are efficient in managing the firm, the lender will have more confidence towards the going private decision. As a result, companies that possess the characteristics of higher profitability are more likely to be taken private successfully given the easiness to obtain financial assistance from banks. Outside buyer also prefers a target firm with higher operating margin as it serves as an

indicator of the company's future earning capability. This finding is aligned with the studies by Palepu (1986), Cudd and Duggal (2000) and Desbrières and Schatt (2002) but inconsistent with inefficient management or failing firm hypothesis advanced by Thomsen and Vinten (2006). In a more recent study, Brar et al. (2009) also found operating profit margin is positively significant in predicting takeover targets. The possible explanation is that a profitable company yet experiences lower valuation is more likely to go private. Despite larger cash and higher operating efficiency as evidenced in this paper, price-to-net tangible asset ratio and price-to-sales ratio which proxy for undervaluation hypothesis is significant at 5% critical level. This motivates the owner-managers to take the company private from being devalued by the market.

Insider ownership (INSIDER) and debt-to-equity ratio (DE) are found incapable in distinguishing target buyouts from firms that remain quoted. The variables are not significant at any conventional significance level. In addition, market-to-book value ratio is not of the expected sign although it is statistically significant.

3.2 Holdout sample analysis

Out-of-sample analysis is performed on 13 public limited corporations which announced their intention to go private in 2008 and 13 industry matched sample. The analysis is carried out to validate the predictive ability of logit model. Table IV illustrates that 10 out of 13 firms (76.92%) are correctly classified as going private cases. In the case of non-going private companies, classifications are correct for 7 out of 13 firms (53.85%). The overall prediction accuracy of the estimated model is 65.38% (17 correct classifications out of the total 26 holdout sample). The classification accuracy for holdout sample shown in Table IV (65.38%) is slightly lower than the in-sample prediction accuracy which is 69.17%.

Table IV: Out-of-sample model prediction results

Going private	0	1	Total
Count	0	7	13
	1	3	13
%	0	53.85	100.00
	1	23.08	76.92

Total number of correct prediction: 17
 Percentage of correct prediction: 65.38%.

3.3 Robustness checks

Further analysis is undertaken in an attempt to gauge the extent to which the results are robust using a different research method. Probit model is employed to check the consistency of the logistic regression results. Table V shows that the likelihood ratio statistic for probit model is 33.1328 and it is statistically significant at 1% level, rejecting the null hypothesis that all the parameters are simultaneously equal to zero. The fit of the regression, judged from the McFadden R^2 is 0.1992. The overall percentage correctly classified using probit regression for 120 firms (60 going private companies and 60 matched sample) illustrated in Table V is 68.33%.

Except for the significance level of dividend payout (DIVPAYOUT) which rises from 10% to 5% and price to sales ratio (PRICE2SALES) which declines from 5% to 10% level, the signs and significance levels for the other explanatory variables in Table V are same as

logit estimates. In sum, both probit and logit regression results confirm that firms which have higher balance sheet liquidity, higher profitability, more undervalued, lower dividend payout and lower free float are more likely to go private. The results are robust over the different binary response model.

Table V: Estimates of probit going private likelihood model

Explanatory variable	Estimate coefficient (Standard error)
Constant	0.9735** (0.4031)
CASHPS	0.6751** (0.3134)
INSIDER	-0.0071 (0.0051)
MB	0.1911** (0.0952)
OPM	1.9946** (0.8795)
PRICE2NTA	-0.0446** (0.0202)
PRICE2SALES	-0.1480* (0.0796)
DIVPAYOUT	-0.0007** (0.0003)
DE	-0.1501 (0.1062)
FRFLOAT	-0.0222*** (0.0069)
LR Statistic	33.1328***
McFadden R ²	0.1992
Count R ²	0.6833
Sample Size	120

Notes: ***, ** and * indicate significant at 1%, 5% and 10% significance levels respectively. The standard errors are Huber-White standard errors which adjust for correlations of error terms across observations. LR statistic is a chi-square test for all slope coefficients jointly equal to zero.

4. Summary and conclusion

Going private trend came into the limelight in Malaysia since 2005. The transaction value of mergers and acquisitions (M&A) in Malaysia jumped 132% to RM120.4 billion (equivalent to US\$32.9 billion) in 2006 compared to the previous year (PricewaterhouseCoopers, 2007). This big jump in the transaction value positioned Malaysia third in the Asian mergers and acquisitions after China and India (excluded Japan) (PricewaterhouseCoopers, 2007). Besides, the top five mega M&A deals in Malaysia involved going private transactions. Despite the growing popularity of public-to-private transaction, there is limited evidence provided in Malaysia. This study focuses on management buy-outs and management buy-ins and excludes any institutional buyout led by private equity players. The study suggests that companies which have larger cash balance, higher operating performance, higher degree of undervaluation, lower dividend payout and lower free float have greater likelihood to be taken private as comparable to the public counterparts. Using the logit and probit regression, the percentages of correct prediction are 69.17% and 68.33% respectively. In addition, the classification accuracy rate for validation sample is 65.38%.

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