DOES ACCOUNTING METHOD CHOICE FOR BUSINESS COMBINATION INFLUENCE IPO VALUATION?

Wan Nordin Wan Hussin
Faculty of Accountancy
Nazmi Mohamed Zin
Graduate School
Universiti Utara Malaysia

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Abstract

There are numerous studies that examined the choice of accounting methods by IPO firms as a device to manage earnings prior to going public (Aharony et al., 1993; Friedlan, 1994; Neill et al., 1995; Black et al., 2002). This study extends Neill et al. (1995) by examining the association between accounting method choice and IPO valuation in Malaysia. However, instead of using accounting policies that are related to depreciation and inventory, this study looks at accounting method for business combination namely the purchase vs. merger method. By examining 62 IPOs during 2001 and 2002, the multivariate analysis shows that, consistent with the hypotheses, the liberal accounting method for business combination is positively associated with offer price and negatively associated with first day closing price and underpricing. However, none of the coefficients associated with accounting method are statistically significant. IPO offer price is positively influenced by forecasted earnings, net tangible assets and firm size. First day closing price is significantly influenced by forecasted earnings. IPO consists of exclusively new shares issue (i.e. participation ratio by IPO entrepreneurs equals zero) yields higher underpricing, consistent with Habib and Ljungqvist (2001). As expected, another important determinant of IPO underpricing is oversubscription rate with highly oversubscribed IPO generates greater underpricing.

1. Introduction

Initial public offering (IPO) or going public is an important milestone in a company's life cycle. In a typical IPO, a part of the company's shares are sold to public investors. Following the IPO, shares in the company are quoted on a stock exchange for the first time so that investors are able to trade them. Empirical evidence around the world conclusively shows that IPO investors on average earn positive initial returns from purchasing shares at the IPO offer price and selling them at the closing price on the first day of trading. In other words, IPOs are generally underpriced relative to the subsequent market value. IPO underpricing, or positive initial return, is defined as the premium earned by IPO investors on the first day of trading being the difference between aftermarket closing price and offer price divided by offer price.

The majority of previous work on IPO focused on explaining the IPO underpricing phenomenon and identifying its determinants. IPO underpricing represents a cost to the company going public because the company receives less financing than it would have had the IPO offer price been set close to the aftermarket price. An underpriced IPO means that more money is "left on the table" for the IPO investors and relatively less is available in proceeds for the issuing company. In other words, selling shares at IPO for less than their true value results in a wealth transfer from IPO company/selling shareholders to new IPO investors. Underpriced IPOs that are sold at a discount also imply higher losses to the pre-IPO shareholders from greater ownership dilution.

There are numerous studies that examined the determinants of IPO underpricing. The latest include Certo et al. (2001), Ang and Brau (2002) and Daily et al. (2003). Certo

et al. (2001) found that board reputation and board size have significant negative relationship with underpricing, but not board composition and leadership. Ang and Brau (2002) showed that previously leveraged buyout firms that go public again (therefore more transparent than first-time IPO firms) pay less, in all components of issuance costs (including underpricing), to go public. Daily et al. (2003) provided a meta-analysis of previous studies on IPO underpricing. Their findings showed that underpricing is significantly related to retained equity, underwriter prestige, auditor reputation, firm size, firm age, venture capital equity, offer price and IPO gross proceeds but not significantly related to number of risk factors and the uses of proceeds.

Unlike the above studies which examined IPO underpricing per se, Wan-Hussin (2002) and Klein (1996) focused on the determinants of offer price and first day closing price of IPOs, which are the two ingredients of IPO underpricing. Wan-Hussin (2002) showed that forecasted earnings is an important factor in pricing the IPOs. His result also showed that IPO subscription rate is a major determinant of IPO first day market valuation. Whilst Klein (1996) reported that offer price and aftermarket valuation are significantly related to financial variables such as earnings per share and book value of equity and non-financial variables such as underwriter prestige and number of risk factors. She also found that auditor type and firm age are not related to IPO pricing and aftermarket valuation.

There are also numerous studies that examined, either directly or indirectly, the choice of accounting methods by IPO firms as a device to manage earnings prior to going public (Aharony et al., 1993; Friedlan, 1994; Neill et al., 1995; Black et al., 2002).

With the exception of Neill et al. (1995), the other studies do not test the influence of accounting choices on IPO value. Neill et al. (1995) examined two accounting choices namely depreciation method (straight line or accelerated) and inventory method (LIFO or FIFO), and the association between accounting method choice and IPO proceeds and IPO underpricing. Their result indicated that the selection of liberal accounting methods that results in larger income and asset values is associated with higher initial proceeds from an offering. By applying the risk of litigation argument, their result also revealed that the presence of liberal accounting methods leads to higher level of underpricing.

This study extends Neill et al. (1995) by examining the accounting method choice and IPO valuation in Malaysia. However, instead of using accounting policies that are related to depreciation and inventory, this study focuses on the accounting treatments for business combinations and the resulting purchased goodwill, if any.[1] Firstly, there are little variations in choices of accounting methods for depreciation and inventory. And secondly, accounting for business combination is a common policy choice faced by IPO firms as restructuring through business combinations is often part and parcel of the listing exercise prior to an IPO. Out of 62 IPO firms during 2001 and 2002, 52 firms (or 84 percent) have merger and acquisition as part of the listing exercise. For all the sample companies, the average value of acquisition expressed as a percentage of fixed and current is about 43 percent.

[1] Purchased goodwill arises when a business acquires another as a going concern and the combination is accounted for as an acquisition (as opposed to merger). As an example if the fair value of A Bhd's net assets is RM10 million and B Bhd paid RM15 million to acquire a 100 percent equity interest in A Bhd, the purchased goodwill is RM5 million.

The rest of the paper proceeds as follows. Section 2 discusses the accounting for business combinations in Malaysia including the differences between the merger method (known as pooling-of-interests in the US) and acquisition method (known as purchase method in the US).[2] Section 3 reviews the relevant literature and develops the hypotheses. The sample selection, data source and the IPO valuation models are elaborated in section 4. The findings are discussed in section 5. Section 6 concludes.

2. Accounting for Business Combinations in Malaysia

According to Malaysian Accounting Standards Board (MASB) 21 that governs the accounting for business combinations in Malaysia, an acquisition is a business combination that is not a merger. It arises when one of the enterprises, the acquirer, obtains control over the net assets and operations of another enterprise, the acquiree, in exchange for the transfer of assets, incurrence of a liability or issue of equity. On the other hand, a merger is a business combination in which the shareholders of the combining enterprises combine control over the whole, or effectively the whole, of their net assets and operations to achieve a continuing mutual sharing of the risks and benefits attaching to the combined entity such that neither party can be identified as the acquirer.

Based on the above distinction between merger and acquisition, there are two methods available to account for business combinations namely the merger/pooling-of-interests method and the acquisition/purchase method.

[2] The terms merger method and pooling-of-interests are used interchangeably. The same goes for acquisition method and purchase method.

2.1 Acquisition / Purchase Accounting

According to MASB 21, under the purchase method, one company is viewed as having acquired the net assets and business of another. The acquirer records the assets acquired and liabilities assumed, based on their fair values at the date of acquisition. Any excess of total acquisition cost over the fair value of identifiable assets and liabilities is assigned to goodwill, which is generally amortized to expense in future periods.

In Malaysia, purchased goodwill is one of the most controversial areas of financial accounting and reporting in recent years. According to Tan (1992), there are three methods that are commonly used to account for goodwill; capitalization as a permanent item, capitalization and amortization and immediate write-off to reserve. He revealed that out of 155 companies that reported positive goodwill, 34% capitalized goodwill as a permanent item, 36% capitalized and amortized it and 27% wrote it off immediately against reserves.

Subject to the provisions of MASB ED 28, any excess, as at the date of the exchange transaction, of the acquirer's interest in the fair values of the identifiable assets and liabilities acquired over the cost of the acquisition, should be recognized as negative goodwill. To the extent that negative goodwill relates to expectations of future losses and expenses that are identified in the acquirer's plan for the acquisition and can be measured reliably, but which do not represent identifiable liabilities at the date of acquisition, that portion of negative goodwill should be recognized as income in the income statement when the future losses and expenses are recognized.

But, to the extent that negative goodwill does not relate to identifiable expected future losses and expenses that can be measured reliably at the date of acquisition, negative goodwill should be recognized as income in the income statement as follows; (i) the amount of negative goodwill not exceeding the fair values of acquired identifiable non monetary assets should be recognized as income on a systematic basis over the remaining weighted average useful life of the identifiable acquired depreciable/ amortizable assets; and (ii) the amount of negative goodwill in exeess of the fair values of acquired identifiable non monetary assets should be recognized as income immediately.

To the extent that negative goodwill does not relate to expectation of future losses and expenses that have been identified in the acquirer's plan for the acquisition and can be measured reliably, negative goodwill represent a bargain purchase i.e. the assets have been purchased for less than the aggregate of their individual fair values. Negative goodwill is thus a gain, which is recognized as income when the future economic benefits embodied in the identifiable depreciable/amortizable assets acquired are consumed. In the rare case that the amount of negative goodwill exceed the fair value of the non monetary assets, the excess pertains to bargain purchase of monetary assets. Under the latter circumstances, the excess is a gain that is recognized immediately.

2.2 Merger Accounting

The merger or pooling-of-interests business combination is accounted for as a combining of stockholder interests and the historical values of assets, liabilities and stockholders' equities of the pooling companies are combined as of the date of the

business combination. Because assets are not adjusted to fair value, the historical asset values carried forward usually result in lower future depreciation expenses than would have resulted from the purchase method. Also, goodwill is not established, and therefore there is no future goodwill amortization in a pooling-of-interests. The difference, if any, between the cost of the merger and the nominal value of the shares received in exchange should be shown as a movement in other capital reserves in the combined enterprise's financial statements.

Prior income statements are restated to combine the operations of the pooled companies as if the combination had always been in effect. Due to lower depreciation and amortization expenses, there is an incentive for companies to use the merger method as it resulted in higher reported earnings (income increasing) in future periods and higher reported returns on equity as a result of lower equity in the balance sheet.

To summarize, according to Vincent (1997), the main differences between merger method and acquisition method are as follows. Under the acquisition method the income statement for the combined enterprise incorporates the accounts of the target only from the date of the combination and includes increased depreciation on the excess of fair market value over book value of target's net assets as well as amortization of any acquisition goodwill from that date forward. Under merger method, the asset and liability accounts of the bidder and target are combined at book value as though the two firms had always been a single enterprise. Because merger method includes the target's income from the beginning of the year and does not recognize increased depreciation and amortization charges, net income in the year of the acquisition is generally greater under merger method than it is under acquisition

method (assuming the target reports net income and not a net loss). In years subsequent to the acquisition, financial statement differences due to the amortization of the goodwill and the increased depreciation of net assets with market values in excess of book values result in lower reported net income and greater reported net assets under acquisition accounting than under merger accounting.

Given the differential effects on income statements and balance sheet that emanate from the choice in accounting methods for business combinations, this study examines whether the purchase-pooling choice has any impacts on IPO pricing, IPO first day valuation and consequently IPO underpricing.

3. Literature Review and Hypotheses Development

One of the earliest studies on the purchase versus pooling choice was done by Gagnon in 1967. Gagnon was concerned with predicting whether a business combination would be accounted for as a purchase or as a pooling-of-interests. Given that post-acquisition income might differ based on the selected method, Gagnon argued that management might wish to account for the acquisition in a manner which best accomplished its goals. He stressed on two important hypotheses about accounting policy; they are the traditional hypothesis, where an accountants have traditionally believed that firms maximized their reported income and the income smoothing hypothesis, where the managers are interested in smoothing rather than maximizing reported income (Hepworth, 1953). His result indicated that when the price paid for the acquired firm exceeds book value of the acquired firm, there is a greater likelihood that firms chose pooling-of-interests method.

However, his study was criticized on the ground of timeliness of his data. Sapienza (1967) noted that during the sample period 1955-58 of Gagnon's study, the pooling-of-interests method was little understood. In addition, Wyatt (1967) gave evidence that a substantial erosion in the pooling guidelines had encouraged a steady trend to use pooling method of business combination. Another limitation in Gagnon's study is the assumption that if goodwill arising in a purchase combination is not amortized, so it will be reclassified as a pooling. This may be misspecified since the pooling method has many attributes other than non-recognition of goodwill. First, only a portion of any difference between fair values and asset book values may be attributable to goodwill. Thus, non-amortization of the goodwill under purchase method would not necessarily get the same effect on the post-combination income statement as would the use of pooling method.

Addressing the limitations in Gagnon's study, Copeland and Wojdak (1969) examined business combinations during 1966-67 period. They found a significant shift toward the pooling-of-interests method for business combination since 1958. They also found stronger support for the hypothesis that firms chose business combination method that maximizes reported income.

Continuing with the research theme on management's choice of accounting treatment for business combinations, Dunne (1990) provided evidence that economics and political considerations play a significant role in accounting choices. She tested four firm-specific characteristics associated with the choice of pooling-of-interests or purchase accounting and found that firm ownership structure, accounting-based

compensation plans, lending agreement and political visibility are related to accounting choice.

Gore et al. (2000) examined managers' preference for goodwill accounting methods in the UK. Their results indicated that debt covenant restrictions and profit-based management compensation plans seem to influence company preferences, consistent with the contracting theory advocated by Watts and Zimmerman (1986, 1990).

Aboody et al. (2000) looked at the firm's choices between the purchase and pooling methods in stock-for-stock acquisition. They found that in acquisitions with large difference between the acquisition price and the book value of the acquired firm's net assets (referred to as step-up), CEOs with earnings-based compensation are more likely to choose pooling and avoid the earnings 'penalty' associated with purchases. They also showed that there is no association between stock-based compensation and the purchase-pooling choice, suggesting that managers are not concerned about implications of large step-ups for their market-based compensation than for their earnings-based compensation. In addition, they also showed that managers of highly levered firms are more inclined to use the purchase method to account for large step-up acquisitions, consistent with its favorable balance sheet effects.

Based on the above studies, it appears that management's choice for a particular method to account for business combination or accounting goodwill is driven by various motives, among others, to increase reported income and compensation, avoid debt covenant restrictions and reduce political visibility.

In addition to the studies on the determinants of purchase-pooling choice, there are also studies that investigate whether differences in methods of accounting for business combination can influence analysts' and investors' valuation judgments and decisions. Hong et al. (1978) examined whether the method of accounting for mergers affect the stock prices of the acquiring firms. The conventional view is that investors believed that company using the pooling-of-interests method in an acquisition with positive goodwill have higher stock price because of the higher earnings they record when using this method. But, in contradiction with the popular belief, the researchers found no abnormal price movement in the period surrounding the merger or the earnings announcements immediately after the merger. Conversely, they found some evidence of higher stock prices in the period preceding a merger for a much smaller sample of companies using the purchase method. Overall the evidence supports the contention that the stock market is not fooled by the accounting method choice. Rather it can see through the window dressing effect of pooling.

Another study that investigated the effect of equity valuation from choosing between the purchase and pooling methods of business combinations is Vincent (1997). She wanted to know whether the total accounting difference between purchase and pooling method is reflected in share price and also whether the investors make any accounting adjustments in order to value purchase and pooling firms on an equivalent basis. Overall, her result suggested that the concerns about the negative valuation implications of purchase accounting are not unjustified. Firm applying the pooling-of-interest method of accounting enjoy a valuation premium relatively to those applying purchase accounting method. The premium enjoyed by them is largest in the year of acquisition and remains significant for two or three years following the acquisition.

Rather than using archival data, Hopkins et al. (2000) conducted an experiment on equity analysts to test whether various methods of accounting for business combinations affect analysts' stock price judgments. The three accounting treatments tested are (1) recorded and amortized purchase goodwill (the researchers labeled it as accounting acquisition premium or AAP) under the purchase method, (2) immediately expensed the entire AAP in the year of acquisition under the purchase method, better known as writing off acquisition premium as in-process research and development and (3) did not record the AAP because it applied the pooling-of-interests method. The results supported the anecdotal view that analysts' stock-price judgments were lowest when the company applied purchase accounting and amortized the AAP. Higher prices were estimated by the analysts when the company applied either pooling-of-interests accounting or purchase accounting with immediate write off of the acquisition premium as in-process research and development.

Hopkins et al. (2000) also investigated whether the year the business combination occurred gave an effects on the valuation judgments made by the financial analysts. The lowest price were estimated by the analysts when the company acquired its subsidiary three years before the current fiscal years and using the purchase method with ratably amortized goodwill. However, if the business combination had occurred in the most recent fiscal year, purchase accounting with goodwill amortization resulted in stock price judgments that were (1) higher than when the company used the same method of accounting to a three-year-old business combination, (2) lower than each case (i.e. one year and three years after the combination) of pooling-of-interests accounting and (3) lower than each case of purchase accounting with immediate write off of the acquisition premium as in-process research and

development. In addition, regardless of timing of the business combination, analysts' price judgment was no statistically different when comparing the pooling-of-interests accounting and purchase accounting with immediate write off of the acquisition premium as in-process research and development.

None of the studies reviewed above examined the consequences of purchase-pooling choice in the IPO context. This study fills such a gap. In the IPO context, there are several studies that examined (1) whether firms going public manage their earnings through discretionary accounting choice, and (2) the consequence of the accounting choices on IPO valuation, but none examine specifically the accounting choice for business combinations. Aharony et al. (1993) investigated whether managers behave opportunistically by manipulating firms' earnings before going public. They did not examine specific accounting methods but estimate earnings management using abnormal accruals. The evidence showed that earnings management is not pervasive among firms going public and is more pronounced for smaller firms and those with higher leverage, and is to a lesser degree related to the quality of underwriters and auditors. On the other hand, Friedlan (1994) documented that issuers of IPO, on average, use discretionary accruals to increase income prior to going public.

Unlike Aharony et al. (1993) and Friedlan (1994), Neill et al. (1995) examined earnings management prior to IPO by directly observing the accounting methods that firms selected prior to going public. Firms are categorized under "liberal" or "conservative" based on the accounting policies used for depreciation and inventory. Conservatives are firms that adopted accelerated depreciation method and predominantly used LIFO inventory methods that have income decreasing effects.

Liberals are firms that used neither accelerated depreciation nor LIFO inventory method. They examined the link between accounting method choice and IPO initial offering proceeds and by applying litigation risk, they also examined the relationship between accounting method choice and the level of underpricing. Using IPO proceeds as the dependent variable, their result showed that the accounting method choice variable indicating conservative (1) or liberal (0) is marginally significant (negative relationship), consistent with their prediction that firms choosing liberals method are priced more highly than those choosing conservative method. For the second test, they found that the liberal and conservative firms are significantly different from each other in terms of underpricing. As they predicted, there is a negative relationship between accounting method and underpricing, consistent with the view that underpricing is used as a vehicle to reduce litigation risk.

Based on the foregoing discussion, we expect that opportunistic managers choose liberal accounting method to boost the IPO offer price. However, investors are not fooled by the purchase-pooling manipulation and can see through the charade and accordingly "penalized" companies that use the liberal method with lower valuation on the first trading day. Consequently, the underpricing i.e. the difference between first day closing and offer price is expected to be minimal for liberal companies. The underpricing for conservative company is expected to be more compared to liberal company as the former does not engage in accounting "manipulation" to boost earnings in order to set higher offer price. Thus, the hypotheses (expressed in alternative form) are:

H1: There is a positive association between IPO offer price and liberal accounting method.

H2: There is a negative association between IPO first day closing price and liberal accounting method.

H3: There is a negative association between IPO underpricing and liberal accounting method.

4. Research Methodology

4.1 Sample Selection and Data Source

To investigate the relationship between accounting method choice and IPO valuation, all 64 IPO firms which were listed on the Main and Second Boards of KLSE in the years 2001 and 2002 were examined. From the population, two companies are excluded due to incomplete data. The final sample contains 62 IPO firms; 20 listed in 2001 and 42 in 2002.

The main data source is the IPO prospectus. The prospectus is supplemented with data from the annual reports and Investors Digest. The data collected for each IPO firm are closing price, offer or subscription price, auditor-cum-reporting accountant, major underwriter, sectoral classifications (i.e. industrial products, construction, consumer product, trading and services, properties etc), imposition of share moratorium, full 12-month sales for the most recent three years prior to IPO, total assets, number of primary shares issued in public issue, number of secondary shares offered for sale, utilization of IPO proceeds, net tangible assets, forecasted earning per share, board size and number of executive directors and non executive directors, oversubscription rate and accounting methods used for business combinations.

There are two accounting methods that IPO companies use to account for business combination; acquisition or merger methods. For companies that use acquisition method, there is a variety of treatments for the purchased goodwill (negative or positive). Positive goodwill are either amortized over 5, 10, 20 or 25 years, or not amortized at all. For companies that amortize the goodwill, they are classified as using income decreasing (conservative) method. While companies that choose not to amortize the goodwill or recognize negative goodwill immediately as income are classified as adopting income increasing (liberal) method. Companies that use merger method are also treated as liberals due to the absence of goodwill amortization and lower depreciation of net assets acquired. Finally, IPO firms that use acquisition method and have reserve on consolidation or show insignificant and immaterial amount of goodwill or are not involved in mergers and acquisitions immediately prior to IPO are classified as using the neutral accounting method. The classification scheme is summarized in Table 1.

Table 1: Accounting Method Classification

Accounting Method for Business Combinations	Circumstances
Conservative	Amortize goodwill over 5, 10, 20 or 25 years
Neutral	Negative goodwill shown as reserve on consolidation; positive goodwill is insignificant or immaterial; no information regarding the use of acquisition or merger method
Liberal	Negative goodwill immediately recognize as income; positive goodwill not amortize; use merger method

4.2 IPO Pricing and Valuation Models

The models to test the effects of accounting method on IPO valuation are expressed as follows:

OFFER = f [ACCMTD, EPS, NTA, GROWTH, NONEXEC, USEPROC, IPOTYPE, LN(TASSETS), AUD, UWRITER]. (1)

CLOSE = f [ACCMTD, EPS, NTA, GROWTH, NONEXEC, USEPROC, OVERSUB, LN(TASSETS), AUD, UWRITER]. (2)

UNDERPRIC = f [ACCMTD, NONEXEC, USEPROC, OVERSUB, IPOTYPE, MORAT, LN(TASSETS), AUD*UWRITER]. (3)

The variables are defined in Appendix 1. The main variable of interest is the accounting method used for business combination where ACCMTD=2 for liberal, ACCMTD=1 for neutral and ACCMTD=0 for conservative. We expect the ACCMTD coefficient to be positive in equation (1) and negative for both equations (2) and (3). The rest of the independent variables are control variables as they have been found to be significant in previous studies. Wan Hussin (2002) and Klein (1996) showed that the financial variables EPS and book value of equity or NTA and sales growth (GROWTH) are significantly related to the offering price and market price.

Board characteristics are also important in signaling a high firm value especially to firm's initial entry to the public market. The "quality" of the management is important to determine the firm's future performance potential. Certo et al. (2001) reported that board reputation and board size have significant negative relationship with underpricing, but not board composition and board leadership structure. In this study, one aspect of board characteristics that is examined in the proportion of non executive directors (NONEXEC).

The rationale for including the use of proceeds is because it may reduce the uncertainty regarding the value of shares. Study by Leone et al. (2003) showed that

there was a significant negative association between the use of proceeds specificity and IPO underpricing. This relation stems from the disclosure regarding the use of proceeds for financing and investing activities such as de-leveraging, capital expenditure and research and development as opposed to other operating activities (eg; advertising, marketing, promotion or sales).

The OVERSUB variable is included in model (2) because Wan Hussin (2002) showed that the overwhelming determinant of first day closing price is the oversubscription rate. The number of times an IPO is oversubscribed reflects the demand for the IPO shares from prospective investors.

Habib and Ljungqvist (2001) argue that IPO entrepreneurs care about underpricing to the extent that they stand to lose from it and that such losses are proportional to the number of primary (new) and secondary (old) shares being sold. They also argue that the issuers can affect the level of underpricing by promoting their shares. Their result suggested that owners who sell more shares during IPO have more possibility to decrease IPO underpricing as a way to minimize the transfer of wealth to IPO investors and they also can affect the level of underpricing through the cost that they spent on promoting the IPO. Wan Hussin (2002) also use the participation ratio by the IPO entrepreneurs (number of secondary shares offered in the IPO divided by number of pre-IPO shares) as an independent variable in his study where he expected that owner's participation ratio is positively associated with IPO subscription price. His result showed that the selling owners price the IPO more "aggressively" and thereby experience lower underpricing the more they participated in the IPO. In this study the owner's participation ratio is proxied by a dummy indicator IPOTYPE, whereby IPO

involving public issue only (i.e. no sales of secondary shares) is coded 0, and other types of IPO are coded 1 (offer for sale only or both public issue and offer for sale).

And finally, based on studies in the US that show that shares lockup (or shares moratorium in Malaysia) do affect IPO underpricing (Brav and Gompers, 2000; Mohan and Chen, 2001), the dummy variable MORAT to indicate the imposition of moratorium is included in equation (3). Share moratorium means that the major shareholders or promoters of the IPO companies are imposed with a restriction by the Securities Commission on selling, transferring, assigning or otherwise dealing with the securities, for a stipulated three-year period post-IPO. The share moratorium rules that are effective during the sample period prohibit the major shareholders of the affected company from selling, transferring or assigning 45 percent of their shares in the company for one year from the date of listing. Thereafter, they are allowed to sell, transfer or assign only up to a maximum of one-third per annum of the shares under moratorium (on a straight-line basis).

5. Findings

5.1 Sample Characteristics

Table 2 displays the characteristics of the IPOs (20 in year 2001 and 42 in year 2002), partitioned by board of exchange. There are 62 IPOs in the sample, comprising 26 on the Main Board (40 percent) and 36 on the Second Board (60 percent). Companies listed on the Main Board are on average more than three times and six times larger than companies listed on the Second Board in terms of sales and total assets respectively. The average market capitalization on the Main and Second Boards are RM930 million and RM80 million respectively. Main Board IPOs raised on average

RM217 million, whereas the average IPO proceeds accrued to Second Board companies is RM19 million. Two IPOs on the Main Board raised more than RM1 billion proceeds. They are Time dotCom Bhd. (RM1.4 billion in 2001) and Maxis Communication Bhd. (RM2.8 billion in 2002). On average, 30 percent of the IPO proceeds are used for capital expenditure and working capital.

The offer or subscription price ranged from RM0.65 to RM4.36 for the full sample, with an average of RM1.70. On average, Main Board companies fixed their IPOs at slightly higher offer price than Second Board companies (RM1.79 versus RM1.64). However, oversubscription rates and first day closing prices are higher for Second Board companies than Main Board companies (oversubscription: 18 times versus 6.6 times; closing price: RM1.95 versus RM1.89). The average oversubscription rate for the full sample is 13 times. Although not reported in Table 2, there are eight IPOs in the sample that are undersubscribed, four each on the Main and Second Boards. IPO underpricing ranged from negative 38.5 percent to 180 percent.

Although not reported in Table 2, twenty IPOs (almost one-third) have first day closing price lower than the IPO offer price; nine on the Main Board and 11 on the Second Board. Average IPO underpricing is slightly higher for Second Board companies than Main Board companies (23 percent versus 7 percent).

The average growth in sales are higher for Second Board companies than Main Board companies (25 percent versus 14 percent). The average EPS and NTA for the full sample are RM0.25 and RM1.31 respectively.

Table 2: IPO Descriptive Statistics Partitioned by Board of Exchange

	Main Board			Second Board			Overall		
	n = 26			n = 36			n = 62		
	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max
Sales (RM millions)	286.0	28.0	3030.0	81.5	25.4	275.0	167.0	25.4	3030.0
Total Assets (RM millions)	649.6	39.0	6028.2	94.4	6.1	263.7	327.3	6.1	6028.2
Ln (Total Assets) (RM)	19.3	17.5	22.5	18.2	15.6	19.4	18.7	15.6	22.5
Market Capitalization (RM millions)*	930.3	83.2	10690.0	80.1	36	160	436.7	36	10690.0
Proceeds (RM millions)	217.0	15.0	2840.0	18.8	5.8	58.7	102.0	5.8	2840.0
Use of Proceeds (%)	26.50	0.00	94.00	31.14	0.00	87.00	29.19	0.00	94.00
Offer Price (RM)	1.79	0.65	4.36	1.64	0.65	2.70	1.70	0.65	4.36
Closing Price (RM)	1.89	0.67	5.15	1.95	0.66	3.92	1.92	0.66	5.15
Oversubscription (Times)	6.6	-0.9	30.8	18.0	-0.7	73.0	13.2	-0.9	73.0
Underpricing (%)	7.12	-28.89	104.62	23.08	-38.50	180.00	16.38	-38.50	180.00
Sales Growth (%)	14.10	-13.17	61.83	25.21	-3.63	71.81	20.55	-13.17	71.81
EPS (cents)	26.02	6.00	71.59	23.35	9.19	52.23	24.47	6.00	71.59
NTA (RM)	1.33	0.64	1.96	1.30	0.58	1.68	1.31	0.58	1.96
Board Size (Members)	7.4	5.0	13.0	7.7	4.0	10.0	7.6	4.0	13.0
Independent Directors (%)	36.0	22.0	60.0	35.7	22.0	60.0	35.8	22.0	60.0
Non Executive (%)	54.6	33.0	100.0	52.59	29.0	86.0	53.4	29.0	100.0
Big 4 Auditor (%)	65.0	0.0	100.0	64.0	0.0	100.0	65.0	0.0	100.0
Prestigious Underwriter (%)	69.0	0.0	100.0	64.0	0.0	100.0	66.0	0.0	100.0
IPO Type (%)	62.0	0.0	100.0	56.0	0.0	100.0	58.0	0.0	100.0
Moratorium (%)	54.0	0.0	100.0	100.0	100.0	100.0	81.0	0.0	100.0

* Based on IPO Offer Price

In terms of board characteristics, the full sample have an average of 7.6 board members. The majority of board members are non-executive directors and 35 percent of board members are independent directors. Almost two-third of the IPOs are audited by Big 4 ("prestigious" auditors) compared to other audit firms. Two-third of the IPOs are also underwritten by three merchant bankers, namely Arab Malaysian Merchant Bankers, Aseambankers and Commerce International Merchant Bankers (CIMB). Given their domination in the IPO market, the three are regarded as "prestigious" underwriters in this study. Although not reported in Table 2, five IPOs

are brought to the market by both non-prestigious auditor and non-prestigious underwriter and 24 IPOs engaged both prestigious underwriter and auditor. Sixteen IPOs are advised by prestigious auditor but not prestigious underwriter and 17 IPOs are advised by prestigious underwriter but not prestigious auditor.

Nearly 40 percent of the IPOs comprise public issues only (i.e. sales of new or primary shares). There is one IPO which is offer for sales only (i.e. sales of existing or secondary shares) and the majority of the IPOs are combination of public issues and offer for sales. All IPOs on the Second Board have share moratorium imposed on the major shareholders/promoters. Fourteen out of 26 IPOs on the Main Board are subject to share moratorium.

Table 3 displays the IPO descriptive statistics partitioned by accounting method. As mentioned before, there are three types of accounting methods adopted by IPO firms namely liberal, neutral and conservative accounting methods. Liberal accounting method or income increasing method is when IPO firms recognize negative goodwill as income, or do not amortize purchase goodwill or use merger method to account for business combination. IPO firms that show reserve on consolidation, or show insignificant and immaterial amount of goodwill or do not disclose information on the choice of accounting method for business combination are classified as neutral. Lastly, conservative accounting method or income decreasing method is associated with companies that adopt the acquisition method and amortize the resulting goodwill over 5, 10, 20 or 25 years. Out of 62 firms in the sample, 21 firms (or 34 percent) use the conservative accounting method, 29 firms (or 47 percent) use neutral accounting method and 12 firms (or 19 percent) use the liberal accounting method.

Table 3: IPO Descriptive Statistics Partitioned by Accounting Method

		Conservative n=21	Neutral n=29	Liberal n=12	Total n=62	Chi-Square
Panel A :	By Year					
	2001	8 (40%)	8 (40%)	4 (20%)	20	
	2002	13 (31%)	21 (50%)	8 (19%)	42	
		21(34%)	29 (47%)	12 (19%)	62	0.623
Panel B :	By Board					
	Main	8 (31%)	13 (50%)	5 (19%)	26	
	Second	13 (36%)	16 (44%)	7 (20%)	36	
		21 (34%)	29 (47%)	12 (19%)	62	0.227
Panel C :	By Sector					
	Construction	0 (0%)	3 (100%)	0 (0%)	3	
	Consumer Product	5 (31%)	7 (44%)	4 (25%)	16	
	Industrial Product	7 (35%)	11 (55%)	2 (10%)	20	
	Infrastructure	1 (50%)	0 (0%)	1 (50%)	2	
	Plantations	0 (0%)	1 (100%)	0 (0%)	1	
	Properties	2 (33%)	2 (33%)	2 (34%)	6	
	Trading Services	6 (43%)	5 (36%)	3 (21%)	14	
		21 (34%)	29 (47%)	12 (19%)	62	9.709
Panel D :	By Auditor					
	Big 4	13 (32%)	19 (48%)	8 (20%)	40	
	Non Big 4	8 (36%)	10 (45%)	4 (18%)	22	
		21 (34%)	29 (47%)	12 (19%)	62	0.099
Panel E :	By Major Underwriter					
	Affin Merchant Bankers	1 (50%)	1 (50%)	0 (0%)	2	
	Alliance Merchant Bankers	2 (33%)	2 (33%)	2 (34%)	6	
	Arab Malaysian Merch. Bank	4 (33%)	6 (50%)	2 (17%)	12	
	Ascambankers	2 (18%)	6 (55%)	3 (27%)	11	
	CIMB*	8 (44%)	9 (50%)	1 (6%)	18	
	Hwang DBS Securities	1 (100%)	0 (0%)	0 (0%)	1	
	Malaysian Inter. Merchant	1 (25%)	2 (50%)	1 (25%)	4	
	Perdana Merchant Bankers	0 (0%)	1 (100%)	0 (0%)	1	
	RHB Sakura Merchant	1 (25%)	2 (50%)	1 (25%)	4	
	Southern Inv. Bank	1 (33%)	0 (0%)	2 (67%)	3	
		21 (34%)	29 (47%)	12 (19%)	62	NA
Panel F :	By Underwriter Prestige					
	Prestigious	14 (34%)	21 (51%)	6 (15%)	41	
	Non Prestigious	7 (33%)	8 (38%)	6 (29%)	21	
		21 (34%)	29 (47%)	12 (19%)	62	1.908
Panel G :	By IPO Type					
	Public Issue Only	11 (42%)	11 (42%)	4 (16%)	26	
	Others	10 (28%)	18 (50%)	8 (22%)	36	
		21 (34%)	29 (47%)	12 (19%)	62	1.497
Panel H :	By Moratorium					
	Imposition	17 (34%)	22 (44%)	11 (22%)	50	
	No Imposition	4 (33%)	7 (58%)	1 (9%)	12	
		21 (34%)	29 (47%)	12 (19%)	62	0.507

* CIMB – Commerce International Merchant Bankers Bhd.

The Chi-Square test statistics shown in Table 3 indicate that there are no association between accounting method and each of the following attributes; year of listing, board of exchange, sectoral classification, type of auditor, type of underwriter, IPO type and IPO moratorium. Table 3 also shows that more than 80 percent of the IPOs are listed under three business sectors; Consumer Product, Industrial Product and Trading and Services.

5.2 IPO Financial Statistics, Oversubscription and Underpricing

Table 4 presents the IPO financial statistics and oversubscription partitioned by accounting method. Table 4 indicates that companies with liberal accounting method have the highest average offer price, net tangible asset per share, earnings per share and price earnings multiple. The conservatives have the lowest offer price, closing price, net tangible assets per share, earnings per share and price earnings multiple. The liberals also have the lowest oversubscription and IPO underpricing. Companies that use neutral accounting method have the highest average oversubscription rate of 18 times compared to nine times for other accounting methods. Neutral companies also have the highest average first day closing price and underpricing. Based on Fisher test statistics on differences in means between the three subsamples, the only variable that differs significantly between the three accounting methods is net tangible assets per share. Net tangible assets is highest for liberals (RM1.49), followed by neutrals (RM1.34) and conservatives (RM1.18).

The following are the salient facts on IPO underpricing as shown in Table 5. Underpricing is slightly higher in 2001 (18 percent) compared to 2002 (15 percent). IPO underpricing on the Second Board is significantly higher than Main Board at the

10 percent significant level. IPOs underwritten by prestigious underwriter also have significantly higher underpricing at the ten percent significant level. This result is consistent with Beatty and Welch (1996) and Smart and Zutter (2003). Beatty and Welch (1996) focused on the selection and compensation of "expert" -the legal counsel, the auditor and the investment banker by an issuer of IPO. They found a positive relation between IPO underpricing and underwriter compensation (proxy for prestige) and the positive relation is only among firms with few risk factors. Smart and Zutter (2003) study the effects of dual-class ownership structures on IPO underpricing and found that one of the control variables that is IPOs underwritten by high quality underwriter experience greater underpricing.

Table 4: IPO Financial Statistics and Oversubscription by Accounting Method

ACCMTD	OFFER SIZE ($MM)	CLOSE SIZE ($MM)	UNDER PRIC (%)	NTA ($M)	EPS (Cent)	OFFER/ EPS (Times)	CLOSE/ EPS (Times)	OVERSUB (Times)
Conservative *N = 21*								
Mean	1.55	1.77	18.44	1.18	23.06	7.01	8.36	9.08
Min	0.65	0.66	-38.50	0.58	9.19	4.94	4.16	-0.89
Max	2.50	3.92	180.00	1.66	50.62	11.76	21.71	73.03
Neutral *N = 29*								
Mean	1.70	2.08	23.20	1.34	25.13	7.27	8.80	18.01
Min	1.10	1.20	-28.89	0.73	14.20	3.33	4.67	-0.75
Max	4.36	5.15	129.10	1.68	71.59	12.82	15.78	70.15
Liberal *N = 12*								
Mean	1.95	1.82	-3.69	1.49	25.35	11.04	9.69	8.72
Min	1.20	1.22	-33.33	1.00	6.00	4.96	4.38	-0.94
Max	3.30	2.59	31.88	1.96	52.23	55.00	40.50	50.53
Total N = 62								
Mean	1.70	1.92	16.38	1.31	24.47	7.91	8.82	13.18
Min	0.65	0.66	-38.50	0.58	6.00	3.33	4.16	-0.94
Max	4.36	5.15	180.00	1.96	71.59	55.00	40.50	73.03
F Test	1.546	1.017	2.140	4.929**	0.253	1.877	0.238	1.967

** Significant at 0.01 level

Table 5: Univariate Analysis of Underpricing

Panel A	By Year		(%)	(%)	(%)	(%)	*(Assume Unequal Variance)*
	2001	20	18.5	-38.5	180.0	59.8	
	2002	42	15.4	-21.1	104.6	24.6	0.22
Panel B	By Board						
	Main Board	26	7.1	-28.9	104.6	25.5	
	Second Board	36	23.1	-38.5	180.0	45.6	1.76#
Panel C	By Auditor						
	Big 4	40	11.4	-38.5	180.0	40.8	
	Non Big 4	22	25.5	-26.4	104.6	34.6	1.44
Panel D	By Underwriter Prestige						
	Prestigious	41	21.7	-33.3	180.0	43.3	
	Non Prestigious	21	6.1	-38.5	100.0	26.8	-1.74#
Panel E	Interaction (Auditor & Underwriter)						
	Both Prestigious	24	19.9	-33.3	180.0	49.7	
	Others	38	14.2	-38.5	104.6	40.0	-0.51
Panel F	By IPO Type						
	Public Issue Only	26	30.7	-38.5	180.0	52.2	
	Others	36	6.1	-33.3	73.3	21.1	2.28*
Panel G	By Moratorium						
	Imposition	50	18.2	-38.5	180.0	43.0	
	No Imposition	12	8.9	-9.5	30.8	11.2	-1.36
Panel H	By Sector						
	Construction	3	51.9	8.0	104.6		
	Consumer	16	20.9	-3.9	129.1		
	Industrial Product	20	20.5	-38.5	180.0		
	Infrastructure	2	-15.4	-26.4	-4.4		
	Plantations	1	18.5	18.5	18.5		
	Properties	6	-8.1	-28.9	8.3		
	Trading Services	14	12.6	-22.8	100.0		NA

** Significant at 0.01 level
* Significant at 0.05 level
# Significant at 0.10 level

Table 5 also indicates that IPOs comprising exclusively of sales of new shares with zero participation from the IPO entrepreneurs (public issue) have significantly higher

underpricing at the five percent level than IPOs that involved sales of existing shares by the IPO entrepreneurs, consistent with Habib and Ljungqvist (2001).

5.3 Regression Results

Table 6 shows the Pearson correlation matrix between the continuous variables used in the study. None of the independent variables have correlation coefficient more than 0.4. In brief, Table 6 shows that there is a positive association between; income increasing method and NTA, forecast EPS and NTA, and forecast EPS and sales growth. Offer price is positively correlated with EPS, NTA, sales growth and firm size. First day closing price is positively correlated with EPS and sales growth. IPO underpricing is negatively correlated with firm size and positively correlated with oversubscription rate.

Tables 7, 8 and 9 show the results for the multivariate analysis. Both the IPO pricing model (Table 7) and IPO first day valuation model (Table 8) have reasonably good fit, although the former has better explanatory power. The IPO underpricing model (Table 9) can only explain 10 percent of the variation and the F-statistic is mildly significant at 10 percent. In all the models, the variance inflation factor for the explanators do not exceed 2, suggesting that multicollinearity is not a problem. Consistent with the hypotheses, the variable of interest namely ACCMTD is positively associated with OFFER and negatively associated with CLOSE and UNDERPRIC. However, none of the coefficients are statistically significant. Consistent with the univariate results presented earlier, the main determinants of OFFER are the three financial variables EPS, NTA and FIRM SIZE. However, unlike the univariate results, GROWTH and AUD are not significant in the multiple

regression. As for the determinant of first day closing price, the only significant variable is EPS; higher EPS leads to higher first day valuation. And finally IPO initial return is determined by the level of oversubscription and owner's participation ratio, consistent with Habib and Ljungqvist (2001). Greater oversubscription and lower participation ratio generate deeper underpricing.

6. Conclusion

This study extends Neill et al. (1995) by investigating whether accounting method influences IPO valuation. However, unlike Neill et al. (1995), the accounting methods chosen are pooling versus purchase choice for business combinations. Consistent with the predictions, the results do indicate that IPO companies with liberal method have higher IPO offer price, consistent with managers' income maximizing motive. However, IPO investors are not fixated by such income "manipulation" that does not affect cash flow, and penalized liberal companies when the shares commenced trading with lower first day closing price. Consequently, IPO initial return or underpricing is lower for companies adopting the liberal method. Although the relationship between accounting method and IPO valuation are in the anticipated direction, none of the coefficients are statistically significant. Perhaps a larger sample size or a more refined liberal/neutral/conservative classifications can make a difference.

Table 6: Pearson Correlation Matrix

	ACCMTD	EPS	NTA	GROWTH	NONEXEC	USEPROC	OVERSUB	LN (TASSETS)	OFFER	CLOSE	SHARE PRICE
ACCMTD	0.082	0.378**	0.036	0.002	0.158	0.041	0.027	0.220	0.055	-0.166	
EPS		0.366**	0.314*	0.044	-0.037	-0.169	0.221	0.559**	0.445**	-0.062	
NTA			0.183	-0.064	0.122	-0.064	0.142	0.469**	0.245	-0.174	
GROWTH				0.134	-0.060	-0.244	0.210	0.317*	0.317*	0.079	
NONEXEC					0.208	-0.122	0.284*	0.199	0.204	0.013	
USEPROC						0.002	-0.046	0.080	-0.013	-0.070	
OVERSUB							-0.278*	-0.247	0.004	0.257*	
LN (TASSETS)								0.499**	0.208	-0.273*	
OFFER									0.656**	-0.231	
CLOSE										0.562**	

** Significant at 0.01 level

* Significant at 0.05 level

Table 7: Regression Results on the Determinants of Offer Price

Independent Variables	Coefficients	t-statistics	VIF
Constant	-3.59	-3.29	
ACCMTD	0.04	0.51	1.24
EPS	1.86	3.13**	1.35
NTA	0.54	2.43*	1.42
GROWTH	0.45	1.26	1.34
NONEXEC	0.36	0.93	1.21
USEPROC	0.11	0.54	1.17
IPOTYPE	0.19	1.53	1.22
LN(TASSETS)	0.19	3.05**	1.24
AUD	0.10	0.82	1.16
UWRITER	0.08	0.64	1.12

Adjusted $R^2 = 0.49$**

** Significant at 0.01 level
* Significant at 0.05 level
# Significant at 0.10 level

Table 8: Regression Results on the Determinants of Closing Price

Independent Variables	Coefficients	t-statistics	VIF
Constant	-0.89	-0.48	
ACCMTD	-0.01	-0.10	1.20
EPS	2.51	2.59*	1.35
NTA	0.29	0.79	1.40
GROWTH	0.86	1.56	1.21
NONEXEC	0.92	1.47	1.21
USEPROC	-0.11	-0.31	1.16
OVERSUB	0.01	1.03	1.24
LN(TASSETS)	0.05	0.51	1.25
AUD	0.03	0.15	1.20
UWRITER	0.21	1.00	1.13

Adjusted $R^2 = 0.17$*

** Significant at 0.01 level
* Significant at 0.05 level
# Significant at 0.10 level

Table 9: Regression Results of the Determinants of IPO Underpricing

Independent Variable	Coefficient	t-value	VIF
Constant	0.12	0.51	
ACCMTD	-0.06	-0.94	1.07
NONEXEC	0.19	0.60	1.11
USEPROC	-0.13	-0.76	1.13
OVERSUB	0.01	2.03*	1.05
IPOTYPE	-0.23	-2.39*	1.04
MORAT	0.10	0.78	1.10
INTERACT	0.07	0.67	1.05

Adjusted $R^2 = 0.10$#

** Significant at 0.01 level
* Significant at 0.05 level
# Significant at 0.10 level

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Appendix 1

Description of Variables

Variables	*Measurement*
EPS	Forecasted earning per share.
NTA	Net tangible asset per share post-IPO
GROWTH	Average growth in sales based on most recent three years
ACCMTD	Accounting method; 0-conservative, 1-neutral and 2-liberal
NONEXEC	Percentage of non-executive directors
USEPROC	The proportion of IPO proceeds utilized for working capital and capital expenditure
OVERSUB*	Number of times an IPO is oversubscribed
IPOTYPE	The type of IPO; 0-public issue only, 1-others
AUD	Auditor prestige; 0-non Big 4, 1-Big 4 (Ernst Young, KPMG, PricewaterhouseCoopers or DeloitteKassimChan)
UWRITER	Underwriter prestige 0-others, 1-major underwriter is either Arab Malaysian, Aseambankers or CIMB
INTERACT	AUD X UWRITER
MORAT	Share moratorium imposed by the Securities Commission; 0-not imposed, 1-imposed
LN(TASSET)	Logarithm of total asset of a firm
OFFER	IPO offer or subscription price
CLOSE*	First day closing market price
UNDERPRIC	(Closing price - Offer price) / Offer price

* Data are obtained from Investors Digest. The remaining data are obtained from IPO prospectus