 ISBN : 978-0-9742114-5-9

THE ANALYSIS OF SHORT-RUN AND LONG-RUN PERFORMANCE OF PRIVATIZATION INITIAL PUBLIC OFFERINGS IN MALAYSIA

Isnurhadi, PhD
Dr. Syamsurijal AK
Umar Hamdan
Dr.Diah Natalisa
Herianto Puspowarsito, PhD

Economics Faculty, Sriwijaya University, Palembang, INDONESIA

Corresponding author: Isnurhadi, email: isnurhadi@yahoo.com, phone: 62-81367703535

ACKNOWLEGEMENT

I would like to thank several people who have contributed either directly or indirectly to the completion of this paper. Without supports, advices, helps and sacrifices from and made by those many peoples, it would be impossible to complete this research. Here, I am happy to extend my gratitude to the peoples involved.

First, I want to express my gratitude to my supervisors, Dr. Suhaimi Shahnon and Assoc. Prof. Dr. Zamri Ahmad who have been very supportive and helpful during my doctoral candidacy. Second, I would like to thank Assoc. Prof. Dr. Yusserrie Zainuddin, Professor Dr. Datuk Daing Nasir Ibrahim. Assoc. Prof. Dr. Datin Ruhani binti Ali, Dr. Roselee Shah bin Shaharudin, Dato' Professor Mansor MD. Isa, Assoc. Assoc. Prof. Zainal Ariffin Ahmad who have given some suggestion and made corrections during the Tenth Colloqium at the School of Management, Universiti Sains Malaysia. Third, I wish to thank , Prof. Dr. Badia Perizade, Rector of Sriwijaya University and Dr. Syamsurijal Ak, Dean of Faculty of Economic, Sriwijaya University who have provide aids my attendance at 8th GCBE, Dr. Diah Natalisa, Umar Hamdan and Dr. Heriyanto Puspowarsito as coauthors who have written some parts of the paper and made some suggestions elsewhere. Finally, I also would like to thank to Master of Management Program at the Sriwijaya University that provide funding for the study.

 ISBN : 978-0-9742114-5-9

ABSTRACT

Privatization is a government policy of transferring state ownership of state-owned enterprises to private. It is a multipurpose program aimed at improving the performance of state-owned enterprises. One methods of privatization is selling stocks in a capital market. The objective of this article is to evaluate the performance of privatization initial public offerings (IPOs) in Malaysia and to investigate the determinants of the short-run and the long-run of IPOs performance. Data used in this study comes from single country which is more homogeneous. In addition, this study uses a theory on IPO introduced by Perotti and Enrico (1995) which specifically deals with privatization IPOs. Finally, this study produces information about the degree of initial excess return and long-run return of privatized IPOs up to five years and their determinants which are valuable to investors in designing their security selection processes. The evidence indicated that, on average, the IPOs are underpriced. This is in line with the evidences from private sector IPOs. On the other hand, the IPOs show a pattern of underperformance (negative returns) in the long-run up to five years. However, the statistical evidence showed that in the long-run the IPOs are neither under nor overpriced. Through statistical analysis of the dependency of several independent variables it is found that the percentage of share sold, the uncertainty about the future value of the firm, the market index fluctuation, the size of firm and the value of issue on the first day of trading are significantly influence the initial excess returns. On the other hand, the degree of the initial returns is the only variable that significantly affects the long-run IPOs performance.

Keywords: Privatization, IPOs, Excess Returns, Buy and hold abnormal returns (BHAR)

1. INTRODUCTION

Over the last twenty years, privatization has become one of the most popular economic policy moves both in the West (starting in the United Kingdom) and in the East. Privatization has a solid theoretical foundation and various explanations have been developed to provide a scientific justification of the superiority of private entrepreneurship in the dynamic economic environment of the late twentieth century. Over the last one and half decade, privatization of state-owned enterprises (SOEs, hereafter) has been going on at an increasing rate, particularly in developing countries. One of the most important and visible aspects of this has been the enthusiasm with

 ISBN : 978-0-9742114-5-9

which governments of all political persuasions have sold their SOEs to private investors in hopes that the generally unsatisfactory economic performance of these firms can be improved by the discipline of private ownership. This process, given its current title of "privatization" has transformed the role of the state in the economy of industrialized nations to developing countries (Megginson, Nash & van Randenborgh, 1994).

The Malaysian Privatization program began in 1981, when the government started a scheme that involved the transfer of equity in 45 companies to Permodalan Nasional Berhad (PNB) and Amanah Saham Nasional (ASN). Equity in another 120 companies was transferred to private parties. The actual privatization program however began in 1983, with the introduction of a privatization policy. Guidelines on Privatization were produced two years later to explain in detail the objectives of the policy.

The privatization program had positive implication for public sector financial management besides meeting other objectives such as inducing greater efficiency in the economy and enhancing the quality of services and accelerating the process of equity restructuring. The privatization program also complemented government efforts to modernize and right size the civil service. As a result of privatization, the government was able to transfer more than 100,000 workers into the privatized entities. This is reflected in terms of expenditure savings in emoluments, and supplies and services.

Comment [MSOffice1]: Find better term

One mode of privatization in Malaysia is share issue privatization. So far, 41 privatizations have taken place i.e. Malaysia Airlines, Telekom Malaysia Berhad and the national shipping industry. Some others were new projects, mostly water supply and other infrastructure

Comment [MSOffice2]: Maybe without Some

development projects, including Malaysian TV, PLUS and the operation of an international resort.

The Malaysian privatization, according to proponents, has been an astounding success but critics describe it as an unmitigated disaster. While critics are scathing in their assessment, the government argues that privatization has been powering the country's decade-long economic boom before the regional financial crisis in 1997. As a consequent of the unfinished debates, there is an urgent need to focus on the post-privatization performance facing the former SOEs.

This paper presents the results of a study using a sample of 37 privatization IPOs (PIPOs, hereafter) in Malaysia. The objectives are twofold. First, to document the extent of short-run underpricing of these privatization offering and test alternative explanations of the determinants of the short-run underpricing drawing on various models in the literature and second, to document the long-run aftermarket performance of PIPOs and test the alternative explanations of the determinants of long-run aftermarket performance.

2. THEORIES AND EMPIRICAL STUDIES ON IPOs

The empirical literature on IPOs has shown some irregularities two of which are short-run underpricing and long-run aftermarket underperformance. The first, known as short-run anomaly, is that IPOs are, on average, substantially underpriced in the first day of trading. Second, what appears to be underpricing in the short-run turns to be overpricing in the long-run. In this article, we examine both the short-run and the long-run IPOs performance.

Comment [MSOffice3]: I don't think established is the right word here

2.1 Theory and Empirical Study on IPO Underpricing

The international evidence on IPOs reveals strong underpricing in the short-run and inconclusive results in the long run. Some studies showed overpricing (negative returns) while others revealed underpricing (positive returns). A large number of evidences of IPO underpricing in the short run come from studies of U.S. capital market (Ibbotson and Jaffe, 1975; Ritter, 1991; Ibbotson, Sindelar, and Ritter, 1994) as well as other developed countries such as European countries (Husson & Jacquillat, 1990; Levis, 1993; Kunz & Aggarwal, 1994). In Canada, Kooli and Suret (2001) report that IPOs underperform significantly in comparison to seasoned firms with the same market capitalization. By comparison, IPOs in developing countries show even greater initial excess returns e.g. Malaysia 166.67% and Singapore 39.4% (Dawson, 1987). In Chile, average initial return is 16.3% (Aggarwal et. al., 1993). In UK, Privatization IPOs offer a significant underpricing of 38.7% compare to 3.4% for private sector issues (Menyah & Paudyal, 1996). Paudyal et. al. (1998) found that privatization IPOs in Malaysia were underpriced more than private sector IPOs. In short, most evidences show that in the short-run IPOs are underpriced either in developed or emerging economies.

Baron (1982) suggested that the issuer wants to maximize net sale proceeds, and offers a delegation contract to the underwriter, who sets the price and distributes the shares. Both issuer and underwriter are risk neutral. The issuer is less informed than the underwriter, in that it does not observe some demand parameter prior to contracting, and it cannot monitor the underwriter's distribution effort. In this setting, Baron shows that the optimal offer price is a decreasing function of the issuer's uncertainty about the capital market conditions.

Rock (1986) assumes that there are two groups of investors, and one group is better informed than the other group and the issuer about the actual value of the company. The better

informed investors subscribe to the not overpriced issues where as the uninformed investors subscribe to the whole issues. This is called winner's curse. To overcome this winner's curse, the offers have to be underpriced on average otherwise; the uninformed investors will not participate in IPOs. More asymmetry of information about the value of the issue will require more underpricing.

Beatty and Ritter (1986) analyzed the effects of investment bank reputation and share value uncertainty on IPO underpricing. The share value uncertainty is referred to "ex-ante uncertainty". They argue that the greater the degree of ex-ante uncertainty, the higher the degree of underpricing. Beatty and Ritter (1986) suggested that underwriters play an important role in enforcing an equilibrium whereby the relatively riskier companies are underpriced more. Underwriter selects to offer prices which are neither too high nor too low in order to maintain their market share in underwriting IPOs. Using (log [1+number of uses]) and inverse of gross proceed as proxies for ex-uncertainty, the results reveal that underpricing was positively related to ex-ante uncertainty.

Allen and Faulhaber (1987), Grinblatt and Hwang (1989), and Welch (1989 model the underpricing in IPOs as a signal of the firm's value. In these models, the issuer knows the true value of the offer, while investors are uninformed. The high value firm optimally signals its type through underpricing in the initial sale, because this will allow charging higher prices in subsequent offers. Here, underpricing occurs in partial sales.

Leland and Pyle's (1977) model is one of the first signaling models which described the issuer's function in the IPO process. Their model is a simple static equilibrium model where the ownership retention rate signals to investors the quality of the issuer. They argue that the level of

retention of shares by original shareholders can be a convincing signal of the firm value to outsiders. This idea is very much tied to the principal-agent conflict which should be less of a problem when owners of the company retain a large amount of shares after the IPO, thus these companies are regarded as high quality ones. Investors are expected to make their IPO purchasing decisions based upon this crucial information. This model lacks empirical support, but it is the basis for which Titman and Trueman (1986), Grainblatt and Hwang (1989) and Allen and Faulhaber (1989) build their conceptual framework.

Allen and Faulhaber (1989) used the bivariate signaling model which is an extension of Leland and Pyle's (1977). In addition to ownership retention rate being a signal of a company's quality, the issuer deliberately undervalues his IPO as a second signal to convey the high quality of the company to investors. By doing this, the issuer conveying the message that it is financially sound and will be able to recoup losses incurred by undervaluing the issue.

2.2 Theory and Evidence on the Long-run Performance of IPOs

Several authors have studied aftermarket long-run performance of IPOs from a number of countries. In the U.S., empirical evidence shows that, in the long-run, IPOs is underperformed relative to the overall market. Ritter (1991) find the matching firm adjusted cumulative average returns in three years –29.1%. Aggarwal and Rivoli (1990) reports market adjusted returns –13.7% from first day of trading to the 250 days of trading.

In other countries, the findings are consistent with those of U.S. Levis (1993) reports a long-run underperformance of –30.59% by the third year after the offer in the U.K. Finn and Higham (1988) reports –6.5% one-year market adjusted returns in Australian. However, Dawson

(1987) reports interesting evidence that in the long-run, IPOs on average outperform the overall market by 18.20% in one year. Other researchers reporting similar results are Ljungqvist (1997) for Germany and Aussenegg (1999) for Poland.

In contrast, Kim et al. (1995a) using a sample of 169 firms listed on the Korea Stock Exchange during period 1985-1989, report that Korean IPOs outperform seasoned firms with similar characteristics. Lee et al. (1996), examination of Singapore IPOs made between July 1st, 1973 and December 31st, 1992, shows that the long-run average returns for Singapore IPOs are insignificantly different from an efficient market expectation.

There were several studies comparing long term privatization IPOs and private sector IPOs. Menyah and Paudyal (1996) found that long-run performance of privatized IPO is 60.97% (significant) in contrast to only 3.01% (not significant) for private sector IPO. However, in Malaysia Paudyal et al. (1998) find that long-run performance over the first three years shows no significantly positive or negative performance for both privatization and private sector IPOs. Furthermore, Dewenter and Malatesta (1997) find that based on data from eight countries, there are no significant differences in the underpricing of these two groups. In summary, the international evidence of long-run IPOs performance reveals mixed results. In developed capital market, it seems that in the long-run IPOs performances are significantly negative but in emerging capital markets it is in contrast.

Two theories have been proposed to explain the phenomenon of the long-run underperformance of IPOs. Miller (1977) present an explanation based on changes in the divergence of opinion among investors. According to him, IPOs are usually subscribed by investors who are the most optimistic about the issue and their prices are set by this group rather

than the appraisal of the typical investor. Further, the greater the uncertainty about the value of the IPO, the higher is the price that optimistic investors are willing to pay relative to pessimistic investors. If underwriter price on the basis of their own best estimates of the values of comparable seasoned securities, they will underprice new issues. In the long-run, as more information about the issuing firm becomes available, the divergence of opinion between these two groups of investors will narrow and, consequently, the market price will drop. Thus, Miller predicts that IPOs will generate abnormal returns in the short-run but they will have smaller price appreciation than the seasoned firms (i.e. underperformance) in the long-run. He also expects an IPO's long-run return to be negatively related with its ex ante uncertainty.

Comment [MSOffice4]: Tak paham lah

More recently, Shiller (1990) proposed that market for IPOs is subject to fads. IPOs are underpriced by investment bankers to create the appearance of excess demand. Shiller's hypothesis anticipates that the long-run performance of IPOs should be negatively related to the short-run underpricing. Fads hypothesis from Miller (1990) is consistent with Aggarwal and Rivoli (1990) who establish the possibility that the aftermarket is not immediately efficient in valuing newly issued securities and that the abnormal returns that ensue to IPO investors are the result of a temporary overvaluation by investors in the early trading. Levis (1995) reports that the highest initial returns has the worst aftermarket performance. This is consistent with Aggarwal et al. (1993) finding for Brazil IPOs and Paudyal et al. (1998) for Malaysian IPOs. In addition, Paudyal et al. (1998) found that the long-run performance of IPOs is positively related to the underwriter reputation.

2.3 Malaysia Evidences on IPOs Short-run and Long-run Performance

There have been some studies about IPOs underpricing in Malaysia. but studies focusing on the long-run performance of IPOs are scare. Dawson (1987) using 21 Malaysia IPOs for period of 1977-1983 find an initial underpricing of 167% and an 18.2% twelve month holding period return. Sufar (1993) reports an average initial return of 140.5% for 43 Malaysian IPOs, however a loss of 10.9% over 12 months in the aftermarket. Similarly, Wu (1993) reports positive monthly returns in the first 11 months and negative returns thereafter. Mohammad, Nassir, and Ariff (1995) report lucrative average excess returns on the first trading day of 135%. However, for investor holding new issues over three year gains only 21% per annum. Mohamed et al. (1994) examine the initial and the long run performance of 65 IPOs over the 1975-1990 periods and finds that in the three year after offering date; Malaysian IPOs neither outperform nor underperform the market.

Study on privatized firms' stock performance in Malaysia is limited and not comprehensive. Several studies that include some Malaysian firm are Megginson, Nash, and Randenborg (1994) on two firms, Boubakri and Cosset (1998) on eight firms, Dewenter and Malatesta (1998) on three firms, and D'Sousa and Megginson (1999) on two firms. The studies are inconclusive because they represent only a small portion of privatized firms.

Sun, Tang, and Tong (2001), using a sample of 26 SOEs going through share issue privatization in Malaysia drawn from the period of 1983 to 1997,report that upon privatization, increase in profitability and dividend payout are not significant though increase in output and a decline in financial leverage are significant. They also find that share prices have not improved for five years after privatization. Sun, Tang, and Tong (2001) study supports Boardman and

Vining (1992) who find that possibly SOEs could even have better performance than that of mixed-ownership firms that are common ownership structure of privatized firms in Malaysia.

In another line of studies, Paudyal, Saadouni, and Briston (1998) examine initial public offering (IPO) of share issue privatization of Malaysian enterprises to see whether SIP offers significantly higher initial return than other IPOs. They find that privatization IPOs are more underpriced than private sector IPOs. In short, there are too few studies about privatization in Malaysia. However, from empirical literature review of IPOs in general, the average initial returns of IPOs in Malaysia are underpriced however the results are mixed for long-run.

Comment [MSOffice5]: Not necessary

3. HYPOTHESIS

To examine factors that are possibly responsible to the variation on the degree of underpricing and long-run aftermarket performance of IPOs, several hypotheses were developed according to the theories presented previously. First of all, a group of variables are hypothesized to the level of underpricing. Then, those variables combined with degree of underpricing are hypothesized to the long-run aftermarket performance. The hypotheses are arranged as follows.

Hypothesis of Short-run Underpricing (hypothesis A):

Hypothesis A1: Risk of firm as a proxy for ex-ante uncertainty is positively related to underpricing.

Hypothesis A2: Market Index volatility prior to IPO issue is positively related to underpricing.

Hypothesis A3: Size of firms is negatively related to underpricing.

Hypothesis A4: Value of issues on the first trading day is significantly positively related to underpricing

Hypothesis A5: Companies age is significantly negatively related to underpricing.

Hypothesis of long-run aftermarket performance (hypothesis B):

Hypothesis B1: Level of underpricing is negatively related to long-run IPO performance.

Hypothesis B2: Risk of firm is negatively related to long-run IPO performance.

Hypothesis B3: Market Index fluctuation prior to and around an IPO issue is negatively related to long-run IPO performance.

Hypothesis B4: Size of firms is positively related to IPO long-run performance.

Hypothesis B5: Value of issues on the first trading day is significantly negatively related to IPO long-run performance

Hypothesis B6: Age of a company is positively related IPO long-run performance.

4. DATA AND METHODOLOGY

4.1 Data

Data for this study were collected from various sources, mostly from Bursa Malaysia library, e.g. stock issue prospectuses, Annual Companies' Handbooks, KLSE on disk, daily diary and individual annual company report. Other data are collected from internet sources such as, Bursa Malaysia website, KLSE-RIS website, and individual companies' websites. Some data on stock price are procured from commercial data companies e.g. Dataquest in Pulau Pinang and Pusat Komputer Professional in Kuantan, Pahang .

Comment [MSOffice6]: You don't use such as when referring to all

This research is an empirical study in nature. The subject of the research is privatized SOEs in Malaysia. Thus, the unit of analysis is individual firm. The sample represents the whole population of privatized SOEs that are fully and partially privatized through share issue privatization (SIP). The sample comprises of approximately 37 SOEs listing on the Bursa Malaysia Main Board.

4.2 Empirical Methodology on IPO Underpricing

To analyze the IPOs abnormal initial return, I compute the initial returns of IPOs. Initial return on stock *i* is defined as the percentage return from the offering price to the first market price available:

$$r_{i1} = \frac{P_{i1} - P_{i0}}{P_{i0}} \times 100\%$$

Where P_{i1} is the first day post-issuance market price of stock *i* and Pi_0 is the initial offering price of stock *i*. Here, the initial return has not been adjusted for overall market movement so it is called "raw" return. To calculate initial abnormal returns of IPOs, the raw return has to be adjusted with the return of market index.

The return on market index during the same time period is calculated as follows:

$$r_{mt} = \frac{P_{m1} - P_{m0}}{P_{m0}} \times 100\%$$

Where P_{m1} is the market index value at time the first after market trading and P_{m0} is the market index value on the price-setting day. To compute initial abnormal returns, then the following formula is applied:

$$A\,R_{it} = r_{it} - r_{mt}$$

To test the null hypothesis of zero mean raw and adjusted initial returns (*t*-statistic), the following formula is used:

$$t = \frac{Average\ return\ or\ average\ excess\ return\ at\ time\ t}{S\ \{Average\ return\ or\ Average\ excess\ return\ at\ time\ t\}}$$

S{AR or AERt} is the standard deviation of *ARt or AERt* at time *t* and calculated as follows:

$$S\{AR\ or\ AERt\} = \sqrt{\frac{\sum_{i=1}^{n}(ER_{it} - AER_t)^2}{(n-1)}} \times \frac{1}{\sqrt{n}}$$

To examine variables that are associated with the IPO underpricing that have been reviewed theoretically and empirically in the literature, a model that regresses the variables on levels of underpricing is developed follows:

$$MAIR = \alpha + \beta_1\,(RISK) + \beta_2(INDEX) + + \beta_3(SIZE) + \beta_4(ISSUE) + \beta_5(AGE) + e$$

where:

MAIR = Market adjusted initial return

RISK = Proxy for ex-ante uncertainty about future value of firm.

INDEX = Market index fluctuation month prior to official listing.

SIZE = Size of the firm before the offering.

ISSUE = Market value of offer on the first day of trading.

AGE = Age of firm from established to time of issue.

4.3 Empirical Methodology on Long-run Aftermarket Performance

The Long-run aftermarket performance is examined by computing buy-and-hold returns (BHRs). Then buy-and-hold abnormal returns (BHARs) for one to twelve, eighteen, twenty-four, thirty, thirty-six, forty eight and sixty month periods are computed. According to Barber and Lyon (1997) the researchers should calculate abnormal returns as a simple buy-and-hold return on a sample firm less the simple buy-and-hold return on a reference portfolio or control firm. In addition, buy-and-hold returns accurately reflect the actual return that investors received from their investments.

From the work of Kothari and Warner (1997), Barber and Lyon (1997), Lyon, Barber, and Tsai (1999) amongst others, there are three biases in estimating of the long-run returns, that is, 1) new listing bias, 2) rebalancing bias, and 3) skewness bias. Lyon, Barber, and Tsai suggest several methods to control for miss-specification; however, there is no one correct method. They conclude that the analysis of long-run returns is treacherous. Consequently, CAR is also employed to calculate long-run performance as a comparison for BHAR.

The buy-and hold return for company "i" is defined as

$$BHR_{i,T} = \left[\prod_{t=1}^{T}\left(1 + r_{i,T}\right)\right] - 1$$

where $r_{i,T}$ is the return of company i in period t, $t=1$ indicates the first trading day in the aftermarket and T is the aftermarket trading day at the third anniversary of aftermarket trading. The buy-and-hold returns for the corresponding benchmark of company i are defined as

$$BHR_{B,i,T} = \left[\prod_{t=1}^{T}\left(1 + r_{B,i,T}\right)\right] - 1$$

where $r_{B,i,T}$ is the return of the benchmark of company i in period t, $t = 1$ indicates the first trading day of company i in the aftermarket, T is the aftermarket trading day at the third

anniversary of aftermarket trading. Therefore, buy-and-hold abnormal returns over identical intervals are calculated for each company and its corresponding benchmark as follows:

$$BHAR_{i,T} = BHR_{i,T} - BHR_{B,i,T}$$

Then, the average buy-and-hold total returns are given by:

$$BHAR_T = \frac{1}{N}\sum_{i=1}^{n} [BHAR_{iT}]$$

To test the null hypothesis of zero mean buy-and-hold return, the skewness-adjusted *t* statistic proposed by Lyon et al (1999) was used. The *t*-statistic is formulated as follows:

$$t = \sqrt{n} \times (S + \frac{1}{3}\acute{y}\, S^2 + \frac{1}{6}\, n\, \acute{y}$$

$$S = \frac{Mean\ (BHAR)_t}{\delta\ (BHAR)_t}\ ; t = 1 - 12, 18, 24, 30, 36, 48, 60\ months$$

$\acute{y}$ is an estimate of the coefficient of skewness.

To examine factors that are associated with the long-run stock return performance that have been reviewed theoretically and empirically in the literature, models that regress BHAR for one, three and five year periods that takes the form of cross-sectional regressions are presented as follows:

$$BHAR12,36,60 = \alpha + \beta_1(MAIR) + \beta_2(RISK) + + \beta_3(INDEX) + \beta_4(SIZE) + \beta_5(ISSUE) + \beta_6(AGE) + e$$

where:

BHAR12,36,60 = Buy and Hold Abnormal Return for a period of twelve, thirty six and sixty month

 ISBN : 978-0-9742114-5-9

MAIR = Market adjusted initial return

RISK = Proxy for ex-ante uncertainty about future value of firm.

INDEX = Market index fluctuation month prior to official listing.

SIZE = Size of the firm before the offering.

ISSUE = Market value of offer on the first day of trading.

AGE = Age of firm from established to time of issue.

5. RESULT

5.1 Descriptive Statistic of Underpricing Model

To calculate degree of underpricing, market adjusted initial return (MAIR, hereafter) is employed. Market adjusted initial return is computed by subtracting the offer price from the price at first day of trading divided by the offer price and is adjusted by the market return. Market return is calculated from return of KLSE composite index (KLCI, hereafter) from the date of prospectus to the first day of trading. The descriptive statistic of the level of underpricing is reported in Table 1.

Table 1 reveals that both average raw initial returns (IR) and average market adjusted initial returns (MAIR) are different from zero at 1% level indicating that the IPOs of privatized state-owned enterprises (SOEs) in Malaysia are underpriced. There is only little difference in the means of underpricing between IR and MAIR. They are 70.26 percent for IR and 69.70 percent for MAIR with standard deviations of 71.29 percent and 70.33 percent respectively.

From 37 samples of companies, 34 companies had positive raw initial returns and 3 companies had negative raw initial returns. Of the 34 companies having positive initial returns, twelve were from the trading/service sector, three were from the industrial sector, two were from the consumer sector, five were from property sector, two were from plantation sector, four were from infrastructure, and two were from finance sector. Of the three companies having negative initial return of IPOs, two were from trading/service sector and one was from infrastructure sector.

Similarly, 34 companies have positive market initial adjusted returns and 3 negative market adjusted returns. Of the 34 IPOs which have positive average raw initial returns (underpriced), the highest level of underpricing was 254.17 percent which was recorded for the IPO of Bina Darulaman Berhad, a property-sector company listed in January 1996, whilst the lowest underpricing level experienced was 1.33 percent of UDA Holding Berhad, a property-sector company listed in November 1999. Of the three IPOs which have average raw negative initial returns (overpricing), the company which had the highest level of overpricing on the first day of trading was Padi Beras Nasional Berhad, a trading/service-sector company listed in August 1997 with overpricing of 30.00 percent whilst the lowest level of overpricing was 9.50 percent by Bintulu Port Berhad.

The standard deviation MAIR is 68.21 percent. MAIR ranges 280.16 (from -27.68 percent to +252.48 percent). Overall distribution is fairly skewed with a skewness coefficient of 0.757.

5.2 Regression Result of Underpricing Model

 ISBN : 978-0-9742114-5-9

As seen in Table 2 the MAIR model is significant at 1 percent level with a slightly F-value of 4.5476 and the ability to explain the variation of dependent variable is quite high with R^2 of 53.33 percent (adjusted R^2 = 40.82%). Three out of five independent variables are significant at 1 percent level i.e., RISK, SIZE and ISSUE.

The result of the study reveals that the average level of underpricing is about 69.60 percent. The mean was tested found to be significantly different from zero. This result is consistent with several previous empirical studies on the Malaysia market and other market. However, this level of underpricing is lower in magnitude compared to those studies of Nazir and Zin (1998) who found that the average level of underpricing is about 78 percent, Uddin et. al. (2000) 104.9 percent, Ong (1987) 97.14 percent, Tay Seng Wu (1993) 107.14 percent, and least but not last Ismail, Abidin and Zainuddin (1993) 114 percent. In addition, this finding is directly comparable to the study by Paudyal, Saadouni and Briston (1998) which studied the privatization IPOs in Malaysia. Using 95 samples consisting of 18 IPOs for privatized firms and 77 IPOs for public-sector firms, they found initial return of about 61.8 percent (raw return) and 62.1 percent (market-adjusted return) for all IPOs, 104.7 percent (raw return) and 103.5 percent (market-adjusted return) for privatization IPOs and 53.7 percent (raw return) and 52.5 percent (market-adjusted return) for public-sector IPOs. Therefore, this finding is not different from finding of previous studies for Malaysia market.

On the international scene, this finding is also consistent with Ritter (1991) for the US market with average underpricing level of 16.4 percent, Lewis (1993) for UK market with 14.30 percent, Lee, Taylor and Walter (1996a) for Australia market with 11.80 percent, Lee, Taylor and Walter (1996b) for Singapore market with 30 percent, Kiymaz (2000) for Turkey market

Comment [MSOffice7]: I don't think it is the correct word choice

Comment [MSOffice8]: Tak paham lah

Comment [MSOffice9]: Do you mean last but not least?

with 13.60 percent, Mok and Hui (1998) for Shanghai Stock Exchange with 289 percent for A-Share and only 26 percent for B-Share and Huang and Levich (1998) for international sample with 25.60 percent. This finding demonstrates that level of underpricing in Malaysia to be higher compared to other developed and emerging markets except for China market. Finally, this study enriches a literature about underpricing which is proven to be a common phenomenon in all capital market in the world.

A model is developed to examine factors to be possibly responsible on the degree of underpricing. Taken together, the independent variables are capable of explaining 52.33 percent (adjusted R^2 = 40.82%). This finding is in line with the results reported from other markets such as, Paudyal, Saadouni and Briston (1998) for Malaysian capital market and Ljungqvist (1997) for German capital market.

The first explanatory variable in model is RISK and it is predicted to positively affect degree of underpricing. This study finds that RISK strongly affects degree of underpricing for which its coefficient is significant at 1 percent level both for IR and MAIR model. This finding supports Kunz and Aggarwal's (1994) study of Switzerland capital market, Carter, Dark and Singh (1998) for US market and Loffler, as well as Panther and Theissen (2005) for Germany. However, there are several studies which report contradicted finding. Among others are Paudyal, Saadouni and Briston (1998) who find no significant effect of ex-ante risk on underpricing for privatized-IPOs but significant effect for private-sector IPOs and all IPOs, Ausseneg (1999) Poland capital market and Su (2004) for China market. There is an interesting difference in finding of this study and that of Paudyal, Saadouni and Briston (1998) for the same capital market. Because the two studies are comparable in nature, so an explanation is provided

here. The different result of this study and that of Paudyal, Saadouni and Briston (1998) could be due to sample size or operational definition of the proxy for ex-ante uncertainty. This study employs 37 privatized-IPOs whereas, Paudyal Saadouni and Briston (1998) uses 18 privatized-IPOs. Ex-ante uncertainty is computed as a standard deviation of return one month following official listing for this study whereas one year following official listing for Paudyal, Saadouni and Briston (1998).

The second explanatory variable the fluctuation of index during one month prior to listing (INDEX) is hypothesized to positively affect initial return. The result shows that INDEX has negative sign and statistically insignificant. This result is consistent with the result reported in Su (2004) who find a insignificant and negative relationship between standard deviation of market return 30 days prior to official listing. Other study which reports similar result is Omran's (2002) study in Egyptian stock market. Chan, Wang and Wei (2004) report similar results that market index between the offering and listing date affect degree of underpricing negatively for A-share IPOs in China. On the other hand, this finding is not consistent with Kiymas' (2004) study for Istanbul stock market which find market index return one month prior to listing affects level of underpricing positively and significantly at 1 percent level. The result also is not consistent with the finding by Loffler, Panther and Theissen (2005) who find positive relationship between index return for 60 days prior to listing for German market and Lyn and Zychowicz (2003) which reports a positive and significant relationship between INDEX and degree of underpricing for Hungary and Poland market. Thus, the result of the effect of INDEX on the level of underpricing varies, suggesting that more and more studies are warranted.

The third explanatory variable included in the model is SIZE and it is expected to influence degree of underpricing in negative way. Size of the firm is taken as a natural logarithm of net asset value before privatization. The result shows that the hypothesis is accepted and statistically significant at 1 percent level. This finding is in line with the finding of Chi and Padgett (2005) who report a similar result that Lnsize has negative and significant effect on underpricing. Kiymaz's (2003) study for Istanbul Stock Exchange reports that size of the firm has a negative sign and is statistically significant at 1 percent level. Other study, Chen, Firth and Kim (2004) report a negative relationship but insignificant for china capital market. On the other hand, Jelic, Saadouni and Briston (2001) reports that the coefficient for LnSIZE is positive but is statistically not significant. Thus, the finding supports a proposition that the larger the firm the more information discloses to the market. The more information about the firm discloses, the less risky the firm which in turn the less premium the investors need. Thus, the larger the firm, the less underpriced it will be.

The fourth explanatory variable in the model (ISSUE) is predicted to effect level of underpricing positively. The variable ISSUE is a proxy for uncertainty about value of stocks which is measured as the market value of the issue on the first day of trading. The result shows the coefficient of ISSUE is positive and statistically significant. It means that hypothesis is strongly accepted at 1 percent level. This result supports the finding of Ausseneg's (1999) study for Poland market for all-IPO sample but not for privatized-IPO sample. It suggest that ISSUE which represents share value uncertainty and is one of many proxies for ex-ante uncertainty proposed by Beatty and Ritter (1986) has a positive impact on level of underpricing. Thus,

investors facing uncertainty during offer period of IPO need extra premium to lure them to participate in IPO market.

AGE of the firm which is defined as time from the firm established to the time of going public is the sixth explanatory variable in the model. Similar with size of the firm, age of the firm is predicted to have negative impact on degree of underpricing. This finding documents an opposite result where the coefficient of AGE has a positive sign but not significant. This finding is in line with the finding of Jelic, Saadouni and Briston (2001). Using a sample of 182 IPOs on KLSE Main Board over the period January 1980 to December 1995, they find that the coefficient of LnAGE is negative and insignificant. Chan, Wang and Wei (2004) reports similar result for B-Share (but not for A-Share) in Chinese market. However, this finding is not inline with the finding reported in Chen, Firth, and Kim's (2004) study which reports a negative but insignificant coefficient of age. It is possibly that the longer the operation history of a firm, the more information acquired by investors. Because a firm to be privatized is usually having long operation history, so when this particular firm offers stock to public, investors having "enough" information about the firm just do not take into account this information. In short, investors do not view age as useful information in deciding whether or not they are going to participate in IPO market.

5.3. Long-Run Performance Model

To measure long-run aftermarket performance of IPOs, Buy and Hold Abnormal Return (BHAR) is used. Figure 1 and Table 3 report the results of long-run aftermarket performance using BHAR for sixty months together with their t-statistic. The table shows that up to forty-first month,

privatization IPOs (PIPOs) still underperformed the market. It means RM1 invested at the closing price at the first day of trading decreases in value as much as 0.39 percent at forty-first month. However during that forty-first month, there were eight months where PIPOs outperformed the market, i.e. ninth and tenth month, sixteenth and seventeenth month, twenty-sixth and twenty-eight month, and thirty-fourth and thirty-fifth month. After forty-first month PIPOs steadily become positive. BHAR reaches its highest positive figure at month 43 with 19.13 percent. It means RM1 invested at the closing price at the first day of trading increases in value as much as 19.13 percent at the forty-third month. Beyond month 41, the PIPOs outperform the market except for fifty-sixth month and sixtieth month. It means that an investor who spends RM1 buying a portfolio that consist of 37 state-owned company shares in Malaysia loss 2.97 percent of his wealth at fifty-sixth month and 2.36 percent at the sixtieth month. However, when we look at the respective t-statistic, only the first two months the PIPOs are significant at 5 percent level. It means that the other months were not different from zero for the population. Thus, in the long run PIPOs in Malaysia were not under or overperformed the market except for the first and second month of seasoning.

5.4 Regression Results of Long-run Aftermarket Model

There are three regressions of BHAR model. They are classified according to the period of measurement of dependent variable BHAR, that is, BHAR12, BHAR36, and BHAR60 whereas the independent variables are the same, that is, IR, SOLD, RISK, INDEX, SIZE, ISSUE, AGE and TIME. The estimation result of three regressions is presented in Table 4.

Table 4 reveals that the first regression as a whole is significant 5 percent level with F-test of 2.7538. Furthermore, R^2 equals to 0.4403 which indicates that this model is able to explain the variation of dependent variable BHAR12 as much as 44.03 percent. However, out of eight independent variables, only four are significant. Those four are IR that is significant at 1 percent, RISK at 1 percent, SIZE at 5 percent and AGE at 10 percent level. The second model (regression B2) is not significant overall with F-test of 1.8723 and probability F-statistic of 0.1050 however this model is able to explain 34.85 percent variation in dependent variable BHAR36. Independent variable IR is the only variable that remained significant at 5 percent out of 8 variables. Third model (regression B3) is also not significant overall with F-test of 0.1960 and probability F-statistic of 0.6142 and could only explain the variation of dependent variable BHAR60 as much as 16.50 percent. Partially, IR with t-value of -2.43 is the only independent variable that is significant at 5 percent level.

What appears to be underpriced in the short-run turns out to be overpriced in the long-run. This contention has been verified in a quite number of studies conducted mostly in developed market of US and Europe. However, the result reported from studies in developing and emerging countries has not been conclusive. Kim, Krinsky and Lee (1995) reports the long-run mean matching firm-adjusted return for the first 24 months of seasoning is equal to 59.01 percent, indicating that Korean IPOs outperform seasoned firms with similar characteristics.

This study, which uses a sample of mainly privatized companies in Malaysian stock market, is expected to add another strand of literatures and hopefully could enrich and provide remark on the previous finding. With BHAR as a measurement of long-run aftermarket

performance, this study documents negative returns for one-year, two-year, three-year and five-year period of -1.80 percent, -1.05 percent, -0.89 and -2.36 percent respectively; only four-year return shows a positive return of 8.65 percent. The results suggest that investor buying privatized IPO from the market on the first day of trading would not, on average, receive any significant excess return over the first three years and at the end of fifth year; only at the end of fourth year investors will reap 18.65 percent return. However, all period returns are not statistically significant. Thus, this study rejects the hypothesis that aftermarket performance of privatized IPOs in Malaysia is overpriced in the long-run. This finding is in line with the result reported in Paudyal, Saadouni and Briston (1998) who finds no statistically significant returns for privatized IPOs over three years. In addition, Kooli and Suret (2001) for Canadian market report no significant equal-weighted buy and hold return (EW-BHAR) for one-year up to five-year period but they find one-year return is to be significant when using volume-weighted buy and hold return (VW-BHAR).

To examine factors possibly responsible on the variation of long-run return, a model with three dependent variables is developed. One-year, three-year and five-year return are used as dependent variables with independent variables comprising of IR, SOLD, RISK, INDEX, SIZE, ISSUE, AGE, and TIM. The result of one-year model shows that it has an ability to explain 44 percent the variation in one-year return (adjusted R^2 = 28.04%). However, the explanatory power of this model decreases substantially to 35 percent (adjusted R^2 = 16.24%) for three-year return and 20 percent (adjusted R^2 = -5.14%) for five-year return. This finding is comparable with the estimates of 6 percent explanatory power of one-year model and 19 percent for three-year model of Paudyal, Saadouni and Briston (1998) for Malaysian market. It implies that these variables

more capable of explaining the variation of short-run return rather than long-run return. Furthermore, this model is comparable to Kiymaz's (2003) model for Turkey capital market which reports that one-year model has explanatory power of 20.91 percent and three-year model of 22.92 percent. Model by Kooli and Suret (2003) for Canadian market reports explanatory power of only 6.60 percent, 5.10 percent and 7.40 percent for one-year, three-year and five-year model.

The one-year model has four explanatory variables statistically significant i.e., IR, RISK, SIZE and AGE while another four factors i.e., SOLD, INDEX, ISSUE and TIM are not statistically significant. However, when the explanatory variables taken together are applied to three-year and five-year return, the total significant explanatory variables are reduced substantially to only one independent variable IR which its coefficient is statistically significant at 1 percent level. IR has consistent significant impact on three-year and five-year return. The result supports the proposition that IPO which is experienced heavy underpricing will in the long-run have difficulty to recuperate. This is the reason why degree of underpricing strongly affects long-run aftermarket return.

Degree of underpricing is the variable that strongly affects the one year aftermarket performance of privatized IPOs. This variable has strong explanatory power not only for one year performance but also for three and five year aftermarket performance.

Variable, RISK which represents the fluctuation of return during the first month of trading affect the one-year returns. However, this relationship does not remain stable over time as this variable is statistically insignificant for three-year and five-year model. The result suggests that the post-listing variations has great impact on for short-run performance but loss

impact on the long-run performance, as implied of highly significant determinant of first day and one-year performance. This finding is consistent with finding reported in Kiymaz (2003) for Turkey market which shows a 1 percent significance for one-year, 5 percent significance for two-year and insignificant for three-year model.

Total assets of firm before privatized as measurement for size of firm has positive sign as predicted and statistically significant at 5 percent level for one-year model. However, the impact of this variable on the long-run return is not consistent as the coefficients for three-year and five-year model are not statistically significant. The significant positive impact of size on one-year model is in accordance with the proposition that the bigger the company the more information release to public. This situation reduces the ex-ante uncertainty about the IPO which in turn reduces the premium imposed by investors. However, size losses its explanatory power as time passes.

Variable ISSUE to capture ex-ante uncertainty of the value of issue on the first trading day is predicted to have negative impact on long-run return. The result shows that the coefficient of ISSUE is as predicted but none is statistically significant for all models. It suggest that investors take into account this variable in the short-run perspective only but not for long-run as evidenced in underpricing model which is significant at 1 percent level.

Like size of the firm, length of time in operation for a company is predicted to have positive impact on long-run return. This study reports that age of a company affects long-run return positively for one-year model but not for three-year and five-year model. It seems that investors do not take into account the reputation of a company when they choose a stock for

investment in the long-run. However, there is possibility that age does not represent reputation as exact, so investors just overlook this variable in their investing decision.

6. CONCLUSION

Investors can reap abnormal returns by investing in the privatization IPOs market. The anomaly of privatization IPO market is similar to that of private IPO market in general. Though this phenomenon is against efficiency market hypothesis (EMH), this reality indicates that the anomaly still occurs. Out of five independent variables in the model only RISK, SIZE and ISSUE significantly affect market adjusted initial returns.

Furthermore, the long-run privatization IPOs performance from first year up to fifth year measured by buy and hold abnormal return (BHAR) is outperformed by the market except for the forth year. However, they are statistically insignificant. Out of six independent variables in the model, IR, RISK, SIZE and AGE significantly affect BHAR12 but only IR significantly affects BHAR36 and BHAR60. Finally, using cumulative abnormal return (CAR) the privatization IPOs performance from the first year up to fifth year outperform the market but all are statistically insignificant.

REFERENCES

Aggarwal, R., R. Leal, and F. Hernandez (1993). The Aftermarket Performance of initial Offerings in Latin America. Financial Management, 22, 42-53.

Aggarwal, R. and P. Rivoli (1990). Fads in the Initial Public Offering Market. Financial Management, 19, 45-57.

Allen, F. and G.R. Faulhaber (1989). Signalling by Underpricing in the IPO Market, Journal of Financial Economics, 23, 303-323.

Aussenegg, W. (1999). Going Public In Poland: Case-by-case Privatizations, Mass Privatization and Private Sector Initial Public Offerings, Working Paper Number 292.

Barber, B. and J. Lyon (1997). Detecting Long-run Abnormal Stock Returns: the Empirical Power and Specification of Test Statistics, Journal of Financial Economics ,43, 341-372.

Baron, D. P. (1982). A model of the demand for investment banking advising and distribution services for new issues, Journal of Finance, Vol. XXLVII, 955 – 976.

Beatty, R.P. and J.R. Ritter (1986), Investment Banking, Reputation, and The Underpricing of Initial Public Offerings. Journal of Financial Economics, Vol. 15, 213-232.

Boardman, Antony E. and Aidan R. Vining (1992). Ownership vs Competition: Efficiency in Public Enterprises, Public Choice 73 (2).

Boubakri, Narjess and Jean-Claude Cosset (1998). The Financial and Operating Performance of Newly Privatized Firms: Evidence from Developing Countries, Journal of Finance, 53, no. 3, 1081-1110.

Boubakri, Narjess and Jean-Claude Cosset (1999). Does Privatization Meet Expectation? Evidence from African Countries. December 1999 Plenary on Privatization and Corporate Governance African Economic Research Consortium biannual research workshop, Nairobi, Kenya.

Boubakri, Narjess and Jean-Claude Cosset (2000). The Aftermarket Performance of Privatization Offerings in Developing Countries, Paper, HEC School of Business and Laval University, Canada.

Carter, Richard and Steven Manaster (1990). Initial Public Offerings and Underwriter Reputation, Journal of Finance, Vol. 44, No.4, 1045-1067.

Choi, Seung-Doo and Sang-Koo Nam (1998). The Short—Run Performance of IPOs of Privately and Publicly-Owned Firms: International Evidence, Multinational Finance Journal, vol.2, no.3, 225-244.

Dawson, Steven M. (1987). Secondary Stock Market Performance of Initial Public Offerings, Hong Kong, Singapore and Malaysia: 1978-1984, Journal of Business, Finance and Accounting, 14 (1), 65-76.

Dewenter, Kathryn L. and Paul H. Malatesta (1997). Public Offerings of State-Owned and Pravately-Owned Enterprises: An International Comparison, Journal of Finance, vol. 52, no.4, 1659-1679.

D'Souza, Juliet and William L. Megginson (1999). The Financial and Operating Performance of Privatized Firms during the 1990s. Journal of Finance, 54, no.4, 1397-1438.

Finn, F. J. and Higham, R. (1988). The Performance of Unseasoned New Equity Issues-cum-stock Exchange Listings in Australia. Journal of Banking and Finance, 12, 333-351.

Firth, M. (1997). An Analysis of the Stock Market Performance of New Issues in New Zealand. Pacific-Basin Finance Journal, 5, 63-85.

Firth, M. and Chee Keng Liau-Tan (1997). Signalling models and the valuation of new issues: An examination of IPOs in Singapore, Pacific-Basin Finance Journal, 5, 511-526.

Grinblatt, Mark and Chuan Yang Hwang (1989). Signalling and the Pricing of New Issues, Journal of Finance,VI, No.2, 393-420.

Gujarati, Damodar N. (2003). Basic Econometrics, Fourth Edition, GcGraw Hill, New York, NY.

Huang, Qi and Richard M. Levich (1998). Underpricing of New Equity Offerings by Privatized Firms: An International Test. Working Paper.

Husson, B. and Jacquillat, B. (1989). French new issues, underpricing and alternative method of distribution. Dlm, Guimaraes, R.M.C., Kingsman, B.G. & Taylor, S.J. (pnyt.). A reappraisal of efficiency of financial markets, (pp. 349-368), Berlin: Springer-Verlag.

Ibbotson, R. G. and Jaffe, J. F. (1975). Hot Issue Market, Journal of Finance 30, No.4, 1027-104.

Ibbotson, R., Sindelar, J.R., & Ritter, J.R. (1988). Initial public offerings, Journal of Applied Corporate Finance, 1, 37-45.

Isa, Mansor and Rubi Ahmad (1996). Performance of New Issues on the Malaysian Market, Malaysian Journal of Economic Studies 33, 53-66.

Jelic, Ranko, Saadouni, Brahim and Richard Briston (2001). Performance of Malaysian IPOs: Underwriters reputation and management earnings forecasts, Pacific-Basin Finance Journal, 9, 457-486.

Jelic, Ranko, Richard Briston, and Wolfgang Aussenegg (2003). The Choice of Privatization Method and the Financial Performance of Newly Privatized Firms in Transition Economies, Journal of Business Finance & Accounting, 30 (7) & (8), 905-941.

Kamal, S. and A.Y. Zainal (1989). Overview of the new Economic Policy and Framework for the Post-1990 Economic Policy, a paper presented at the National Conference on Post-1990 Economic Policy, National Chamber of Commerce and Industry of Malaysia and Malaysian Institute of Economic Research.

Kim, J., I., Krinsky, and J., Lee (1995a). The Aftermarket Performance of Performance of initial Public Offerings in Korea, Pacific-Basin Finance Journal, 3, 429-448.

Kim, J., I., Krinsky, and J., Lee (1995b). The Role of Financial Variables in the Pricing of Korea Initial Public Offerings, Pacific-Basin Finance Journal, 3, 449-464.

Kiymaz, Halil (2003). Long-run Performance of IPOs: Case of Istanbul Stock Exchange, Working Paper, University of Houston-Clear Lake.

Koh, F., & Walter, T. (1989). A direct test of Rock's model of the pricing of unseasoned issues, Journal of Financial Economics, 23, 251-272.

Kooli, Maher & Jean-Marc Suret, 2001. The Aftermarket Performance of Initial Public Offerings in Canada, CIRANO Working Papers 52, CIRANO.

Kothari, S, and J., Warner (1997). Measuring Long Horizon Security Price Performance, Journal of Financial Economics, 43, 301-339.

Ku Ismail, Ku Nor Izah, Faudziah Zainal Abidin and Nasruddin Zainuddin (1993). Performance of New Stock Issues on The KLSE, Capital Market Review 1, No.1, 81-95.

Kunz, Roger M. and Reena Aggarwal (1994). Why initial public offerings are underpriced: Evidence from Switzerland, Journal of Banking and Finance, 18, 705-723.

Lee, Philip J., Stephen L. Taylor, and Terry S. Walter (1996b). Expected and Realized Returns for Singaporean IPOs: initial and Long-run Analysis, Pacific-Basin Finance Journal, 4, 153-180.

Leland, H. and D. Pyle (1977). Information Asymmetries, Financial Structure, and Financial Intermediation, Journal of Finance 52, 371-387.

Levis, M. (1993). The long-run performance of initial public offerings: The UK experience 1980-1988, Financial Management, Vol.22/1, 28-41.

Megginson, William L., Robert C. Nash, and Matthias van Randenborgh (1994). The Financial and Operating Performance of Newly Privatized Firms: An International Empirical Analysis, Journal of Finance, 49. 411-452.

Menyah, K and Paudyal, K (1996). Share Issue Privatizations: the UK Experience. In Mario Lewis (Ed.) Empirical Issues in Raising Equity Capital: Advance in Finance, Investment and Banking, Elsevier, Amsterdam.

Miller, E. (1977). Risk, Uncertainty and Divergence of Opinion, Journal of Finance 32, 1151-1168.

Muscarella, C. J., & Vetsuypens, M. R. (1989). A simple test of Baron's model of IPO underpricing, Journal of Financial Economics, 25(1), 125-135.

Nazir, Norita Mohd. and Roslita Mat Zin (1998). The Examination of the Underpricing of Initial Public Offerings (IPOs) In Malaysia: 1990-1995, Capital Market Review 6 (1), 55-68.

Omran, Mohammed (2003). Initial and Aftermarket Performance of Share Issue Privatization in the Egyptian Stock Market, Working Paper, Arab Academy for Science & Technology, College of Management & Technology, Alexandria, Egypt.

Paudyal, K., B. Saadouni, and R. Briston (1998). Privatization Initial Public Offering in Malaysia: Initial Premium and Long-Term Performance, Pacific-Basin Finance Journal, 6, 427-451.

Perotti, Enrico C. 1995. Credible Privatization, American Economic Review, Vol. 85, No.4, 847-859.

Ritter, J. (1991). The Long-run Performance of Initial Public Offerings, Journal of Finance, 46, 3-27.

Rock, Kevin (1986). Why New Issues are Underpriced, Journal of Financial Economics, 15, 187-212.

Shamsheer and Annuar (1995). Underpricing of Government-Linked and Private New Issues, in Stock Pricing in Malaysia, corporate financial & investment management; Ariff, Shamsheer and Annuar, Ed., Universiti Putra Malaysia Press, Serdang, 1998.

Shiller, Robert J. (1990). Speculative Prices and Popular Models, The Journal of Economics Perspectives vol. 4, issue 2, 55-65.

Sufar, S. B., (1993). Performance of New Issues: The Malaysian Case. Understanding the Behavioral Patterns of Stock Prices, A Collection of Readings on Selected Far Eastern Stock Markets. Leeds Publication, 162-171.

Sun, Qian, Yuen-Kin Tang, and Wilson H.S. Tong (2001). Privatization does not always Work- An Empirical Study of Malaysia Share Issue Privatization, Google, 14 February 2002.

Titman, S. and B. Trueman (1986). Information Quality and the Valuation of new issues. Journal of Accounting and Economics 9, 159-172.

Welch, Ivo (1989). Seasoned Offerings, Imitation Costs, and the Underpricing of Initial Public Offerings, Journal of Finance, Vol. 44, No.2, 421-443.

Wu, Tay Seng, (1993). The Long-run Performance of Initial Public Offerings in Malaysia, Capital Market Review, 1 (1), 61-80.

Yong, Othman (1991). Performance of New Issues of Securities in Malaysia, the Malaysian Accountant, 3-6.

Yong, O. (1997). Initial public offering: The Malaysian experience 1990-1994 in Advances in Pacific-Basin Financial Markets (Bos, T. & Fetherston, T. (pnyt.)), 3, 177-188.

 ISBN : 978-0-9742114-5-9

Table 1

Descriptive statistic of market-adjusted initial returns of 37 privatized initial public offerings in Malaysia

	MAIR		
Mean (%)	69.60***	Skewness	0.757
t-statistic	6.29	Kurtosis	0.037
Median (%)	61.46	Minimum (%)	-27.68
Standard Deviation (%)	67.36	Maximum (%)	252.48

***significant at 1% level

 ISBN : 978-0-9742114-5-9

Table 2

Multivariate regression analysis of cross-sectional variation in degree of underpricing of 37 privatized initial public offerings in Malaysia

IV \ DV	Beta	t-statistic
Constant	10.81	0.05
RISK	18.68	3.20***
INDEX	-8.72	-1.27
SIZE	-45.84	-2.95***
ISSUE	44.77	3.73***
AGE	24.70	1.27
R^2	0.5139	0.5233
Adj R^2	0.3965	0.4082
F-test	4.3789***	4.5476***

Significant : *** at 1%, ** at 5% and * at 10%

Table 3
BHAR of 37 privatized initial public offerings in Malaysia

Month	BHAR	t-statistic	Month	BHAR	t-statistic
1	-0.0464	-2.3420*	31	-0.0232	-0.2605
2	-0.0624	-2.0858*	32	-0.0124	-0.1432
3	-0.0541	-1.4191	33	-0.0103	-0.1035
4	-0.0347	-0.7945	34	0.0127	0.1719
5	-0.0459	-1.0375	35	0.0406	0.4298
6	-0.0577	-1.3933	36	-0.0089	-0.0522
7	-0.0134	-0.2653	37	-0.0446	-0.3959
8	-0.0092	-0.1591	38	-0.1002	-0.9456
9	0.0014	0.0599	39	-0.0530	-0.4792
10	0.0106	0.2186	40	-0.0743	-0.6855
11	-0.0108	-0.1688	41	0.0039	0.0882
12	-0.0180	-0.2954	42	0.0141	0.1626
13	-0.0236	-0.4090	43	0.1913	1.1422

14	-0.0156	-0.2285	44	0.1641	1.0904
15	-0.0317	-0.4435	45	0.1058	0.7676
16	0.0100	0.1831	46	0.1326	0.8907
17	0.0002	0.0396	47	0.1104	0.7527
18	-0.0223	-0.2628	48	0.1865	1.1108
19	-0.0189	-0.2047	49	0.0507	0.3759
20	-0.0402	-0.4868	50	0.0609	0.4096
21	-0.0418	-0.4887	51	0.0465	0.3495
22	-0.0460	-0.5512	52	0.0126	0.1485
23	-0.0489	-0.6364	53	0.0195	0.1796
24	-0.0105	-0.1261	54	0.0250	0.2074
25	-0.0063	-0.0614	55	0.0343	0.2661
26	0.0105	0.1559	56	-0.0297	-0.1239
27	-0.0041	-0.0301	57	0.0112	0.1311
28	0.0051	0.0801	58	0.0346	0.2605
29	-0.0175	-0.1864	59	0.0200	0.1774
30	-0.0053	-0.0422	60	-0.0236	-0.0607

Significant * at 1%, ** at 5% and *** at 10%

Table 4

Multivariate regression analysis of cross-sectional variation in BHAR12 BHAR36 and BHAR60 of 37 privatized IPOs in Malaysia

IV \ DV	**BHAR12**	**t**	**BHAR36**	**t**	**BHAR60**	**t**
Constant	-115.62	-1.36	-43.55	-0.21	165.23	0.45
IR	0.42	-4.27***	-0.63	-2.60**	-0.77	-2.43**
RISK	11.02	3.00***	7.40	0.80	13.75	1.20
INDEX	-2.97	-0.54	-1.43	-0.11	-12.45	-0.60
SIZE	19.33	2.53**	14.95	0.83	24.63	1.00
ISSUE	-15.86	-1.84	-16.84	-0.89	-32.05	-1.17

 ISBN : 978-0-9742114-5-9

AGE	18.72	2.00*	27.47	1.62	10.55	0.45
R^2	0.4403		0.3485		0.1960	
Adj R^2	0.2804		0.1624		-0.0514	
F-test	2.7538		1.8723		0.7923	

Significant: *** at 1%, ** at 5% and * at 10%
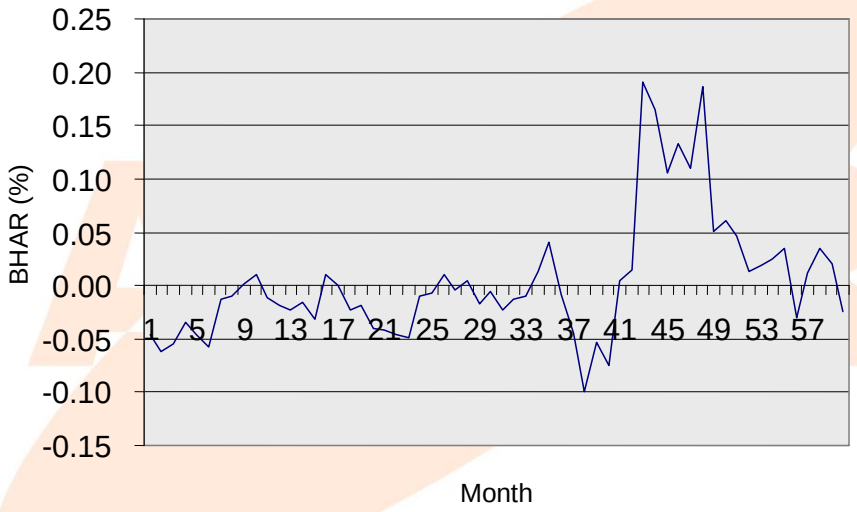
Figure 1
BHAR of 37 privatized initial public offerings in Malaysia