

## **The Signaling Power of the Investment Banks' Reputation on the Performance of IPOs on Bursa Malaysia**

*(Kesan Reputasi Bank Pelaburan Ke Atas Prestasi IPO di Bursa Malaysia)*

Lin Yong Tong  
Rubi Ahmad

(Faculty of Business and Accountancy, Universiti Malaya)

### **ABSTRACT**

*This study examines the extent of the investment banks' (IB) reputation, both high and low, affect the performance of the initial public offers (IPOs) on the Malaysian Main Board, Second Board and the MESDAQ market. Conventional and modified methodologies are used to measure the abnormal returns of the Malaysian samples between 2002 and 2008. The regression results based on the modified methods demonstrate that the reputation of IBs have significant influence over the performance of IPOs. However, the positive impact of the high reputation IBs (High IBs) is restricted to the Second Board over the short and medium terms but the negative influence of the low reputation IBs (Low IBs) is confined to the MESDAQ companies over the medium and the long terms. Contrary to many prior empirical studies, the reputation of the IBs does possess the signaling power to infer the future performance of IPOs.*

*Keywords: IPO; investment bank; reputation; performance; abnormal returns; certifications*

### **ABSTRAK**

*Kajian ini mengkaji sejauh mana reputasi bank pelaburan (IB) mempengaruhi prestasi nilai harga saham terbitan awam (IPO) yang berdaftar di Papan Utama, Papan Kedua dan MESDAQ Bursa Malaysia. Metodologi konvensional termasuk juga yang diubahsuai digunakan untuk mengukur pulangan tidak normal bagi sampel IPO Malaysia yang berdaftar dari tahun 2002 dan 2008. Hasil regresi kajian daripada model yang diubahsuai ini menunjukkan bahawa reputasi IB mempengaruhi prestasi IPO. Namun begitu, IB yang bereputasi tinggi memberi kesan positif yang signifikan ke atas nilai IPO yang berdaftar di Papan Kedua manakala IB yang bereputasi rendah memberi kesan negatif ke atas IPO yang berdaftar di MESDAQ bagi jangka masa sederhana dan panjang. Bertentangan dengan kajian empirikal yang lepas, reputasi IB mempunyai kuasa penentu untuk menganggarkan prestasi masa hadapan IPO.*

*Kata kunci: IPO; bank pelaburan; reputasi; prestasi; pulangan tidak normal; pensijilan*

### **INTRODUCTION**

The evaluation of Initial Public Offerings (IPOs) proposals is a complex process. Most investors rely on quantifiable information such as the financial statements certified by the auditors, the valuers' reports as well as the business prospects described in the prospectus to make investment decisions. However, companies may possess off-balance sheet assets such as know-how and

human capital values which may not be disclosed in the prospectus. Furthermore, the issuers may wish to cash out while the values are still high. In short, the issuers and the IBs know the actual value of the companies better than outside investors. Therefore, astute investors need more than the quantifiable information to stay ahead in their investment endeavors.

In view of the complexities involved in the evaluation of the IPO proposals, this study proposes to utilize the reputations of the Investment Banks (IBs) as signals to infer the future performance of firms with the aim of increasing the investor's chance of picking the winner IPO. Signals are subtle messages; knowingly or unknowingly sent by the issuers through actions taken by them during the offer process which are expected to have repercussions on the future values of the IPOs. Janney and Folta (2003) explained that signals are "snapshots" of firms at a given time and clarified that the utilization of signals on the study of IPO performance help to reduce information asymmetry and transactional hazards without divulging firms' competitive advantages. Since financial signals are readily available, Ross (1977) suggested that it would be worthwhile to use them to evaluate IPO proposals.

According to Ritter (1998), the reputation of agents such as the auditors and IBs engaged to float companies help to reduce the information asymmetry between the issuers and the investors. Booth and Smith (1986) emphasized that the reputation of the underwriters (IBs) serve to certify the quality of the IPO firms. This certification function provides clues on the quality of the firms and can emit signals to the investors on the future performance of the IPOs. On this basis, the objective of this study is to test whether the reputation of the IBs is able to act as a signaling mechanism to infer the future performance of IPOs.

Prior to the year 2001, the MESDAQ was an independent exchange with only five companies listed on it. Since it was taken over by Bursa Malaysia Berhad (Bursa), the number of IPO had surged. On the other hand, the Second Board was absorbed by the Main Board in 2009 and in the same year, the MESDAQ market was renamed as the ACE market. Between the years 2002 and 2008, Bursa is the only stock exchange in the country that offers three separate boards for companies to list. These three boards are the Main Board, the Second Board and the MESDAQ market; each with differentiated listing requirements. Among notable differences in the listing requirements among these three boards are that the Main and the Second Board IPOs are required to exhibit profit records and the minimum paid up capital (PUC) of 60 and 40 million Malaysian Ringgit (RM) respectively. The MESDAQ IPOs however, are not required to exhibit a profit stream but must be backed up by a promising business plan (Miranda 2004).

This paper makes a small but crucial adjustment in the methodology used to measure the longer term performance of the IPOs which are based on the offer price instead of the conventional first day closing price. This modification is expected to better reflect the returns of the IPO investors and enhance the regression results of the study. In addition, the High and Low IB are analyzed as separate variables to determine their respective influence on the performance of IPOs. Furthermore, by analyzing the data on a consolidated basis as well as by the individual boards, the specific influence of the IBs on the respective boards could be identified. Not many studies compare the results of the three boards concurrently because the Second Board and the MESDAQ companies coexisted on Bursa for only 8 short years.

It is important to note that there are differences in the terminology used in this study; papers before 1990s refer the main agent responsible to float companies as the underwriter, but recent articles refer the agent as the IB. In this study, the underwriter and the IB refer to the same agent.

## LITERATURE REVIEW

The notion of IB reputation having influence on the performance of IPOs, stems from the endogenous factors that exist within the IBs. Beatty and Ritter (1986) found that IBs have reputation capital at stake and are expected to balance the interest of investors and issuers to ensure continuous success. Otherwise, their future market share would suffer. However, from time to time, IBs do misjudge the aftermarket prices of IPOs. Ritter (2003) further elaborates that High IB has vested capital and legal risk at stake and thus prefers to take on less risky clients. This legal risk concern is again highlighted by Aharony, Lin and Loeb (1993) where they confirm that the highly ranked underwriters (High IBs) and auditors have greater incentive to provide accurate information on IPO valuations because of the potential law suit and the risk on their reputation capital. In addition, only the superior firms can afford the high fees charged by the High IBs.

Firm which inspire to be publicly listed usually consult an IB when the idea of floatation is first mooted. The roles play by IBs at this appraisal stage is to assess the eligibility of the issuers. During the listing process, IBs have ample opportunities to evaluate the quality of the firm and concurrently, the potential issuers are actively assessing the capability of the IBs. This behavior often leads to a phenomenon whereby the sizeable and superior IPOs are usually managed by the High IBs and vice versa. This phenomenon is confirmed by Fernando, Gatchev and Spindt (2004) with their Mutual Choice Model.

Owing to the vested capital and the legal risk consideration, High IBs impose stricter practice standards compared to the Low IBs when floating companies. Investors view this practice as a certification function whereby IPOs managed by High IBs are considered superior in quality. Therefore theoretically, these superior IPOs are expected to yield lower first day returns due to more accurate valuation but perform better in the long term.

Past studies have so far helped to establish the fact that in theory, the reputation of the IBs are expected to have influence over the post listing performance of IPOs due to the certification function. However, the results demonstrated by empirical studies have not been as conclusive. While some studies found that the reputation of IBs lead to positive values, some studies identified negative associations, while others find poor correlations.

Carter and Manaster (1990) study on 262 High IB and 239 Low IB IPOs in the US between 1979 and 1983 found that the first day returns of the High and the Low IBs are 13.16% and 19.50% respectively, significant at 5% and with the Pearson correlation of -56.08%. According to them, the prestigious IBs protect their reputation by only associating with IPOs of low dispersion in values, thus resulting in the low short term returns. As a consequence, these low risk IPOs do not attract informed investor as they expect higher first day returns. On the other hand, Michaely and Shaw (1994) study on 947 US IPOs between 1984 and 1988 found that High IB leads to lower underpricing but the long term returns are significantly positive. However, in another US study, Carter, Dark and Singh (1998) concluded from a sample of 2292 IPOs between 1979 and 1991 that High IB is negatively correlated to both the short and long term performances of IPOs. In the same study, Carter et al. (1998) also discovered that the long term performances of IPOs are generally poor and those managed by the non-high ranked IBs perform even worse. Hence, the reputation of IBs in the US does possess the signaling power to infer the future performance of IPOs but the relationships are not homogeneous.

On the other hand, the Australian experience with the IB's reputation is different. Based on 380 Australian industrial IPOs between 1994 and 2004, Dimovski, Philavanh and Brooks (2011) found significant positive correlation between the underpricing and the High IBs. In addition, other positively correlated variables involve market sentiment and the underwriter's option.

In a Malaysian study using 18 privatization and 77 regular IPOs between 1984 and 1995, Paudyal, Saadouni and Briston (1998) found that firms which engaged the services of the low ranking underwriters (Low IBs) underperform the market. Conversely, the performance of the High IB IPOs outperformed the market 18 months after listing. At the end of the second and the third year, the abnormal returns were 21.2% and 31.1% respectively, both significant at 5%. The authors concluded that the engagement of High IBs is able to signal to the market the superior long term performance of IPOs.

On the other hand, there are studies that refute the reliability of the IB's reputation as a credible signal. Aggarwal, Bhagat and Rangan (2005) used 1655 US IPOs between 1986 and 2001 and found that IB's reputation could not serve as a signaling mechanism. This finding is supported by Ang and Brau (2003) where they also reached to the same conclusion. Ang and Brau (2003) used a bigger US sample of 1837 IPOs from 1980 to 1997 to conclude that IBs and venture capitalists involvements did not have any certification and third party monitoring effect on the newly listed firms. However, in another US study, Doukas and Gonenc (2003) found that venture capitalists' participation did contribute to the long term performance of 456 IPOs listed between 1989 and 2000 but the influence by IBs was not significant.

In an European study, Reber, Berry and Toms (2005) used 172 UK IPOs between 1992 and 1996 and found that the value enrichment through advisors' reputation (including IB's) was illusory. Nevertheless, they discovered factors that have significant contributions to value enhancement which include the owner's retention, the amount of proceed raised and the board's experience.

Ironically, many Malaysian studies have not found IB's reputation to have strong impact on the performance of IPOs. Chong, Ruhani and Zamri (2009) studied 232 Main Board IPOs from 1991 to 2003 and found that the two control variables that are significant are the market conditions and the offer size. The underwriters's (IB) reputation was found to be weakly correlated to firm's value. In the study by Nur-Adiana and Kamarun (2004) on 70 Main and Second Board IPOs between 1992 and 1998, it was found that IB's reputation and the age of the firms have little effect on the performance of IPOs. In another Malaysian study that utilized 182 IPOs between 1980 and 1995, Jelic, Saadouni and Briston (2001) initially proposed that the high quality underwriters (High IBs) can serve as a signaling tool, but only found weak relationship on the first day of listing.

The review of the literature demonstrates that the hypothesis of IB's reputation is rational and it is expected to impact the future values of IPOs. However, a high number of empirical findings especially in Malaysia did not find strong relationships. A close examination reveals that one possible reason is the inconsistency in measuring of the investors' returns. Previous studies measure the first day returns based on the offer price but the longer term returns are based on the first day closing price. This treatment segregates the investors into two groups; the first group is the IPO investors who obtain the shares at the offer price and the second group is the post listing investors who purchase the shares at the first day closing price. For consistency, this study proposes to use the offer price as the common base to measure both the short and the long term returns. Since the offer prices are generally lower than the first day closing prices due

to frequent occurrence of underpricing, this modified method is expected to yield more robust results and help to align the empirical findings to the theoretical concept.

#### DATA COLLECTION

This study used secondary data which include the offer prices, daily closing prices, the entitlement announcements and market indices for the computation of the dependent variables downloaded from the Bloomberg financial data service provider. On the other hand, the proceeds raised and the information of the lead IBs engaged by the companies to derive the independent variables are collected from the prospectuses.

#### JUSTIFICATION OF THE STUDY PERIODS SELECTED

The number of IPOs successfully floated on Bursa and the numbers of usable observations between the years 2002 and 2008 are illustrated in Table 1.

TABLE 1. Composition of IPO sample across three boards from 2002 to 2008.

Year	<i>Main Board</i>		<i>Second Board</i>		<i>MESDAQ</i>		<i>Total</i>		%
	IPO	Sample	IPO	Sample	IPO	Sample	IPO	Sample	
2008	7	4	8	8	8	8	23	20	87
2007	15	15	8	8	3	3	26	26	100
2006	10	9	8	7	22	22	40	38	95
2005	16	13	17	15	46	45	79	73	92
2004	15	13	26	27	31	26	72	66	92
2003	16	14	22	22	20	18	58	54	93
2002	22	21	22	19	8	6	52	46	88
Total	101	89	111	106	138	127	350	322	92
%	88%		95%		93%		93%		

\* Source: Bursa website

\* The IPO columns list the population size and the sample columns indicate the number of usable samples collected. The success rate of sample collection is 88%, 95% & 93% for the Main, Second Board & MESDAQ respectively.

The justifications for the study period selected from the years 2002 to 2008 are two folds. Firstly, this period is sandwiched between the post Asian financial crisis and the Subprime debacle. It is considered a high activity period whereby 350 companies were listed. Secondly, the results of this period allow for direct comparison among the three boards of listing.

#### RESEARCH METHODOLOGY

This study adopts the conventional statistical analysis technique such as the Cross Sectional Ordinary Least Square (OLS) to determine whether there is any significant relationship between the post listing performance of IPOs and the reputation of IBs engaged to float the companies. Before establishing the regression model, we first discuss the derivation of the dependent variables and follows by the independent variables.

#### THE DERIVATION OF THE DEPENDENT VARIABLES

To ensure robustness, two proven methods, the Cumulative Abnormal Return (CAR) and the Buy and Hold Abnormal Return (BHAR) are used as the primary methods to measure the IPO's

returns up to three years. CAR and BHAR utilize the Market Adjusted Abnormal Return (MAAR) as the common component to derive the over and under performance of the sample companies. MAAR is the difference between the closing price movements of the sample firm and the changes in the corresponding market index. The purpose of deriving MAARs is to determine whether the sample firm has over or underperformed the market. The method to derive MAARs is adopted from Nurwati, Campbell & Goodacre (2007) and is illustrated in a three step procedure below.

The first step is to calculate the raw returns of the individual sample company using the adjusted daily closing price.

$$R_{it} = (P_{it} - P_{it-1}) / P_{it-1} \quad (1)$$

In equation 1,  $R_{it}$  is the raw return for firm  $i$  at time  $t$ . It is derived by taking the net difference between the adjusted closing price  $P_{it}$  and the adjusted closing price of the same firm on the previous trading day,  $P_{it-1}$ , divided by the base of  $P_{it-1}$ . The adjusted closing price is the market closing price after taking into account all the shareholders' entitlements. Shareholders' entitlements may include a combination of dividend, bonus issue, right issue, share consolidation and split. The resultant is the raw return of a sample firm for a single trading day. A positive  $R_{it}$  indicates that this stock has made a raw gain over the previous day and vice versa but it does not demonstrate whether it has under or over performed the market.

Step two is to derive the market returns of the firm for the corresponding trading day.

$$R_{mt} = (P_{mt} - P_{mt-1}) / P_{mt-1} \quad (2)$$

The return of the market  $m$ , at time period  $t$  is represented by  $R_{mt}$ . It is derived by dividing the difference between the closing market index,  $P_{mt}$  and the same of the previous trading day,  $P_{mt-1}$  by  $P_{mt-1}$ . The resultant is the market gain or loss for one trading day. The market index adopted in this study is the FBMEMAS. The FBMEMAS is the index that has the broadest coverage among the indices on Bursa as it is made up by all Main Board companies.

The final step is to derive the MAAR for firm  $i$  on trading day  $t$  as illustrated in equation 3.

$$MAAR_{it} = R_{it} - R_{mt} \quad (3)$$

After taking these three steps, the MAAR of one firm for one trading day is established and is abbreviated as  $MAAR_{it}$ . A positive MAAR means this stock has beaten the market and vice versa. This process is repeated using daily data for each sample IPO firm up to three years.

However, for the derivation of MAAR on Day 1, often referred to as the Initial Return (IR) or in this study, the Market Adjusted Initial Return (MAIR), the components of the calculation are illustrated in Equation 1 require some fine tuning. This adjustment is necessary because on the first day of trading (D1), the previous day's closing price  $P_{it-1}$  is not available. Instead, the offer price of the IPO is substituted for  $P_{it-1}$  to derive the MAIR. The MAIR equation is illustrated in equation 3a.

$$MAIR_{i,D1} = [(P_{i,D1} - Offer\ Price_{i,t}) / Offer\ Price_{i,t}] - R_{mt} \quad (3a)$$

Once the series of MAARs utilizing daily data up to 3 years are calculated, CAR and BHAR are applied to derive the abnormal returns for the various windows. The short term windows include the first day (D1), one month (M1), three month (M3) and six month (M6). The long term windows are one year (Y1), two year (Y2) and three year (Y3).

The formula of CAR is depicted in equation 4.

$$CAR_{i,t} = \sum_{t=M1}^{Y3} MAAR_{i,t} \quad (4)$$

*i = Sample IPO, t = M1, M3, M6, Y1, Y2 & Y3 windows.*

The CAR technique accumulates the daily MAARs for each of the sample IPO for each window periods up to Y3. A positive value means that the sample company has made abnormal gain above the market and vice versa.

The BHAR methodology utilizes the same data source as the CAR to derive the performance of IPOs. Instead of arithmetically adding up the gains and losses of the daily MAARs as in CAR, BHAR assumes that investors hold on to the investment and only cashes out at the end of a specific window period. At the end of the specific window, BHAR assumes that investors dispose of the shares and realize the abnormal gains or losses that represent the performance of the sample firm.

The formulation of BHAR is depicted in equation 5.

$$BHAR_{i,t} = \left[ \sum_{t=M1}^{Y3} (1 + R_{i,t}) \right] - \left[ \sum_{t=M1}^{Y3} (1 + R_{m,t}) \right] \quad (5)$$

*i = sample IPO, t = M1, M3, M6, Y1, Y2 & Y3 windows.*

However, because the abnormal returns calculated for D1 is based on the offer price but the returns beyond D1 adopt the D1 closing price as the base, this inconsistency in the methodology implies that IPO investors sell out on the first day of listing to realize the gains and losses. However, some other investors purchase the same shares on D1 with the closing price and hold them to the end of the respective windows. To overcome this inconsistency which is expected to have a negative impact on the reliability of the results, this paper adopts a minor but crucial modification to the methodology of deriving MAARs base consistently on the offer prices as depicted in equation 3b.

$$MAAROP_{i,t} = MAAR_{i,t} + MAIR_{i,D1} \quad (3b)$$

*i = sample IPO, t = M1, M3, M6, Y1, Y2 & Y3 windows.*

The initial return MAIR<sub>i,D1</sub> from equation 3a is added to the daily MAAR<sub>i,t</sub> from equation 3 to derive at the daily market adjusted abnormal returns measured from the offer prices for windows

beyond D1 as illustrated by equation 3b. The new series of the abnormal returns measured from the offer prices are referred to as the Market Adjusted Abnormal Returns from the Offer Price (MAAROP). After the new series of MAAROP are calculated for all the sample companies, CAR and BHAR in equation 4 and equation 5 are regenerated for the various windows for analyses. The new series of the CAR and BHAR which reflect the returns from the offer prices are referred to as CAROP and BHAROP respectively. In summary, CAR, CAROP, BHAR and BHAROR for the seven windows form the four sets of dependent variables for analytical purpose.

#### THE DERIVATION OF THE INDEPENDENT VARIABLES

The independent variables are the High and Low IB dummies which are derived by first compiling the proceeds raised by each lead IB by multiplying the total number of shares offered to investors by the offer price. The proceeds raised by the lead IBs are then accumulated and ranked from high to low as proposed by Megginson and Weiss (1991). There are altogether 15 lead agents within the study period engaged to float companies. However some of them are technically stock broking houses but for the purpose of this study, they are regarded as IBs. The proceeds rank is subsequently broken into three equal segments each containing five IBs to be assigned 1 in each of the segment. The respective segments are referred to as the High, Medium and Low IB dummies as illustrated by Table 2.

TABLE 2. The categorizing of investment bank reputation into high, medium & low dummies

		Proceed Raised in RM	High IB Dummy	Medium IB Dummy	Low IB Dummy
1	CIMB IB	5,914,561,875	1	0	0
2	RHB IB	2,793,478,138	1	0	0
3	AmInvestment IB	2,588,550,085	1	0	0
4	Aseambankers IB	1,423,684,769	1	0	0
5	MIMB IB	1,200,633,509	1	0	0
6	ECM Libra	644,044,080	0	1	0
7	Alliance IB	615,025,861	0	1	0
8	OSK Sec	555,082,325	0	1	0
9	Hwang-DBS	367,169,886	0	1	0
10	Southern IB	253,340,410	0	1	0
11	Avenue Sec	216,742,033	0	0	1
12	Public IB	200,166,583	0	0	1
13	Kenanga	179,926,425	0	0	1
14	Affin IB	128,089,600	0	0	1
15	KL City	10,240,000	0	0	1
	Total	17,090,735,579			

Source: IPO Prospectus.

The ranking procedure is based on the Megginson & Weiss's method of aggregating proceeds raised by the IBs between 2002 & 2008.

Only the High and Low IB dummies are used as the independent variables to be regressed against the performances of the IPOs. The Medium IB dummy is not taken into account because it is not expected to generate any significant influence.

#### MODEL CONSTRUCTION



The first stage of the cross-sectional univariate OLS involve regressing the High and Low IBs with the four methods of measuring abnormal returns over the seven windows separately. These simple models are illustrated by equation 6 and equation 7 respectively.

$$CAR_{i,t}, CAROP_{i,t}, BHAR_{i,t}, BHAROP_{i,t} = \alpha_0 + \alpha_1 \text{High IB}_i \quad (6)$$

$$CAR_{i,t}, CAROP_{i,t}, BHAR_{i,t}, BHAROP_{i,t} = \alpha_0 + \alpha_1 \text{Low IB}_i \quad (7)$$

$i = \text{sample IPO}, \quad t = D1, M1, M3, M6, Y1, Y2 \text{ \& } Y3 \text{ windows.}$

In addition, a multivariate analysis consisting of both the High and Low IB dummies are regressed to uncover the relationships. This model is demonstrated in equation 8.

$$CAR_{i,t}, CAROP_{i,t}, BHAR_{i,t}, BHAROP_{i,t} = \alpha_0 + \alpha_1 \text{High IB}_i + \alpha_2 \text{Low IB}_i \quad (8)$$

$i = \text{sample IPO}, \quad t = D1, M1, M3, M6, Y1, Y2 \text{ \& } Y3 \text{ windows.}$

## FINDINGS

The universal trend of the performance of IPOs have been established by past researchers to have high initial returns (IRs) on the first day but followed by underperformances over the longer periods (Carter et al. 1998). The descriptive statistics display in Table 3 demonstrates the uniform high IRs by the four methods of measuring firms' performances. These IRs are 28.5%, 18.7%, 22.6% and 40.4% for the Consolidated, Main Board, Second Board and the MESDAQ respectively. Evidently, IRs are much higher amongst the smaller companies due to the higher participation by the informed investors. However, when the windows are extended, the performance of IPOs based on CAR and BHAR begin to diverge. The performance of CAR on Y3 for the Consolidated market is 3.9% but the corresponding performance based on BHAR is a contrasting -37.4%. A close examination reveals that this incongruity arises from a feature inherent within the CAR methodology when deriving the abnormal returns of the low value firms. The cumulative nature of CAR tends to overstate the returns when share prices decline to a very low level. Whenever the prices become extremely low, the percentages of the increment far exceed the retreat because of the denominators used. This inadequacy of CAR gives the false observations that the returns are high even though prices have only just reverted back to the preceding levels. Since the samples used in this study are dominated by the low priced MESDAQ counters, the performances calculated by CAR need to be interpreted with care. Nevertheless, since the longer term performances derived by BHAR are mostly negative and conform to the global trend, the BHAR method is expected to produce more reliable results.

TABLE 3. The descriptive statistics of the performances of the Malaysian IPOs

<i>Conso</i>	D1	M1	M3	M6	Y1	Y2	Y3
CAR	0.2853	-0.0395	-0.0362	-0.0224	-0.0124	-0.0494	0.0396
CAROP	0.2853	0.2458	0.2491	0.2629	0.2729	0.2359	0.3249
BHAR	0.2852	-0.0336	-0.02167	0.0333	0.0352	-0.1321	-0.3743
BHAROP	0.2852	0.2516	0.2635	0.3185	0.3204	0.1531	-0.0891
<i>Main Board (89 samples)</i>							
CAR	0.1869	-0.0350	-0.0223	-0.0418	-0.0399	-0.0565	-0.1311
CAROP	0.1869	0.1519	0.1646	0.1450	0.1470	0.1304	0.0557

BHAR	0.1869	-0.0319	-0.0161	-0.0295	-0.0328	-0.0748	-0.1836
BHAROP	0.1869	0.1719	0.1729	0.1493	0.1062	0.0236	-0.1294
<i>Second Board (106 samples)</i>							
CAR	0.2264	-0.0355	-0.0319	-0.0265	-0.0032	-0.0643	-0.1127
CAROP	0.2264	0.1909	0.1945	0.1999	0.2232	0.1621	0.1136
BHAR	0.2260	-0.0388	-0.0300	0.0129	-0.0090	-0.1414	-0.2691
BHAROP	0.2260	0.1873	0.1961	0.2389	0.2170	0.0846	-0.0431
<i>MESDAQ (127 samples)</i>							
CAR	0.4035	-0.0460	-0.0495	-0.0053	-0.0009	-0.0320	0.2864
CAROP	0.4035	0.3575	0.3539	0.3982	0.4026	0.3715	0.6899
BHAR	0.4035	-0.0304	-0.0187	0.0943	0.1197	-0.1644	-0.5958
BHAROP	0.4035	0.3731	0.3848	0.4978	0.5232	0.2391	-0.1923

The abnormal returns by CAR & BHAR adjusted by FBMEMAS based on 322 observations across 3 boards and over the 7 windows between 2002 to 2008. CAROP & BHAROP are the respective modified version which measure returns from the offer prices.

On the other hand, when the performances are measured by CAROP & BHAROP which are based on the offer prices, the mean abnormal returns of the longer terms remained positive except on Y3 by BHAROP. This set of results helps to demonstrate the advantages of measuring the longer term performance with CAROP and BHAROP because from the IPO investors' perspective, their costs of investment are the offer prices and not the day one closing prices. As a consequence, these results help to correct a misconception that the longer terms performances of IPOs are negative but in reality, the returns have diminished over time but remained mostly positive over most windows.

The descriptive statistics of the High and Low IB dummies are illustrated in Table 4. The results show that on average, more issuers engage the services of High IBs as the lead manager. The results of the consolidated market indicate that High IB and Low IB get 0.624 and 0.139 of the IPO market share based on the proceeds raised. The Pearson correlation between the High and Low IB is -0.519. When examined by the individual board, the bigger Main Board IPOs engage the services of High IB more frequently than the Second Board and the MESDAQ companies at 0.831, 0.736 and 0.386 respectively. On the contrary, the small scale MESDAQ IPOs utilizes the services of the Low IBs more regularly at 0.276 compared to the Main and Second Board's of 0.045 and 0.057 respectively. Evidently, to a large extent, the Mutual Choice Model described by Fernando, Gatchev and Spindt (2004) is supported as the bigger and higher quality Malaysian IPOs do exhibit the tendency to engage the services of the High IBs and vice versa. In addition, these statistics fall in line with Ritter's (2003) observation that High IBs have vested capital and legal risk at stake and thus prefer to take on less risky clients.

TABLE 4. The descriptive statistics of the High & Low IB Dummies.

Consolidated	Mean	Median	Maximum	Minimum	Std. Dev.
High IB Repute	0.624224	1	1	0	0.485077
Low IB Repute	0.139752	0	1	0	0.347269
<i>Main Board</i>					
High IB Repute	0.831461	1	1	0	0.376465
Low IB Repute	0.044944	0	1	0	0.208355
<i>Second Board</i>					

High IB Repute	0.735849	1	1	0	0.442975
Low IB Repute	0.056604	0	1	0	0.232182
<i>MESDAQ</i>					
High IB Repute	0.385827	0	1	0	0.488718
Low IB Repute	0.275591	0	1	0	0.448581

The High & Low IB dummies represent the top & bottom one third of the cumulative IPO proceeds raised by the IBs between 2002 and 2008. The Medium IB dummy is not reported.

The univariate regression results of the High IB presented in Table 5 indicate that with the engagement of High IB, the overall performances of IPOs as illustrated by the consolidated segment are generally negative in the short terms but improve into the longer terms. These results are consistent with the findings of Michaely and Shaw (1994). However, the Second Board IPOs managed by High IBs defy this trend to generate a high IR of 16.6%, significant at 10% and continue to grow into the medium terms. Utilizing BHAROP, the highest coefficient is positive 37.8% significant at 5% recorded in Y2. Overall, five out of the seven windows display positive coefficients significant at 5% and 10%. The results indicate that the Second Board IPOs managed by High IBs outperformed the market by a significant margin. The Second Board issuers appear to have successfully utilized the certification power of the High IBs to convey to the potential investors about the superior qualities of their firms.

TABLE 5. The univariate regression results of the High IB for All Markets

	OLS : CAR = $\alpha_0 + \alpha_1$ IB High				OLS : CAROP = $\alpha_0 + \alpha_1$ IB High			
	Conso	Main	Second	MESDAQ	Conso	Main	Second	MESDAQ
D1	-0.069	-0.084	*0.164	-0.049	-0.069	-0.084	*0.164	-0.049
M1	**0.059	0.034	*0.057	0.084	-0.01	-0.05	**0.221	0.035
M3	**0.091	0.016	**0.104	*0.126	0.021	-0.068	**0.268	0.077
M6	0.052	0.033	0.053	0.112	-0.017	-0.051	*0.218	0.062
Y1	0.047	0.119	-0.059	0.133	-0.023	0.036	0.105	0.084
Y2	0.053	*0.271	-0.086	0.106	-0.016	0.187	0.079	0.057
Y3	-0.15	*0.291	-0.111	-0.008	*-0.219	0.207	0.053	-0.058

  

	OLS : BHAR = $\alpha_0 + \alpha_1$ IB High				OLS : BHAROP = $\alpha_0 + \alpha_1$ IB High			
	Conso	Main	Second	MESDAQ	Conso	Main	Second	MESDAQ
D1	-0.069	-0.084	*0.166	-0.049	-0.069	-0.084	*0.166	-0.049
M1	*0.049	0.043	0.048	0.075	-0.020	-0.041	**0.214	0.026
M3	**0.095	0.039	*0.095	*0.160	0.026	-0.044	**0.261	0.111
M6	0.050	0.061	0.139	0.112	-0.019	-0.023	*0.305	0.063
Y1	0.042	0.122	0.006	0.196	-0.026	0.038	0.172	0.147
Y2	0.132	0.166	0.213	0.054	0.063	0.083	*0.378	0.005
Y3	***0.295	0.273	0.255	0.072	*0.226	0.189	0.421	0.023

The OLS results of the High IB Dummy as the independent variable against the performance of IPOs between 2002 and 2008. The dependent variables are CAR & BHAR which measure returns from D1 closing prices & their respective modified versions, CAROP & BHAROP based on the offer prices are presented for windows from D1 to Y3. The Consolidated market consists of 322 samples made up by the Main Board (89), Second Board (106) & the MESDAQ (127). The probability significance of 10, 5, & 1% are denoted by \*, \*\* & \*\*\* respectively.

On the other hand, the results of the univariate regression of the Low IB against the IPOs performance indicate that the overall market reacts negatively to the appointment of the Low IB as most of the coefficients are negative (refer to Table 6). The strong set of negative correlations tends to congregate in the MESDAQ market over most windows when the returns are based on the offer prices. Measured by BHAROP, there are five significant negative coefficients out of the seven windows. The worst performance is recorded in Y1 where the Low IB managed MESDAQ IPOs underperform the market by 54.5%, significant at 5%. This result implies that on average, a RM 1.00 invested drops to RM 0.455 after one year, severely underperform the market by any standard.

In addition, the performances of the Low IB IPOs of the Second Board have become mostly negative which are in direct contrast to the High IB Second Board IPOs illustrated in Table 5. This observation is consistent to the findings of Paudyal, Saadouni and Briston (1998) whereby they found that Low IB managed IPOs perform poorly.

TABLE 6. The univariate results of the Low IB for all markets

	OLS : CAR = $\beta_0 + \beta_1$ IB Low				OLS : CAROP = $\beta_0 + \beta_1$ IB Low			
	Conso	Main	Second	MESDAQ	Conso	Main	Second	MESDAQ
D1	-0.056	-0.062	-0.24	-0.157	-0.056	-0.062	-0.24	-0.157
M1	*-0.069	-0.046	-0.024	-0.085	-0.125	-0.108	-0.264	*-0.242
M3	**-.0114	-0.01	-0.087	*-0.138	*-0.170	-0.071	-0.327	**-.0295
M6	-0.106	0.051	-0.145	-0.157	*-0.163	-0.01	*-0.385	**-.0314
Y1	-0.116	-0.016	0.017	-0.192	-0.172	-0.078	-0.223	**-.0349
Y2	-0.015	0.011	0.147	-0.077	-0.072	-0.051	-0.093	-0.234
Y3	**0.315	0.089	0.306	0.122	0.259	0.027	0.065	-0.035

  

	OLS : BHAR = $\beta_0 + \beta_1$ IB Low				OLS : BHAROP = $\beta_0 + \beta_1$ IB Low			
	Conso	Main	Second	MESDAQ	Conso	Main	Second	MESDAQ
D1	-0.056	-0.062	-0.240	-0.157	-0.056	-0.062	-0.240	-0.157
M1	*-0.063	-0.050	-0.020	-0.088	-0.120	-0.111	-0.260	*-0.245
M3	**-.0125	-0.019	-0.083	*-0.172	**-.0181	-0.081	-0.323	**-.0329
M6	-0.114	0.023	-0.227	-0.197	-0.171	-0.039	-0.466	*-0.354
Y1	*-0.244	-0.089	-0.298	-0.389	*-0.301	-0.151	*-0.538	**-.0545
Y2	-0.223	0.210	-0.377	-0.250	-0.279	0.148	*-0.616	-0.407
Y3	**-.0355	0.038	-0.345	-0.220	**-.0411	-0.024	-0.585	**-.0377

The OLS results of the IB Low Dummy as the independent variable against the performance of IPOs between 2002 and 2008. The dependent variables are CAR & BHAR which measure returns from D1 closing prices & their respective modified versions, CAROP & BHAROP based on the offer prices are presented for windows from D1 to Y3. The Consolidated market consists of 322 samples made up by the Main Board (89), Second Board (106) & the MESDAQ (127). The probability significance of 10, 5, & 1% are denoted by \*, \*\* & \*\*\* respectively.

Lastly, the pair-wise OLS indicates that the performance of IPOs handled by the High IBs clearly outperform their Low IBs counterpart, refer to Table 7. The regression results demonstrate the general patterns that IPOs managed by High IBs outperform Low IBs across most boards and most windows. This pattern is evidenced by some of the significant positive coefficients found in the Main and the Second Board High IB IPOs. On the other hand, a strong set of negative correlation is found in the Low IB IPOs in the MESDAQ market measured by BHAROP. As a consequence, the aggregated results of the Low IB of the consolidated market

have been negatively impacted. This set of results confirms that High IB IPOs outperform the Low IB counterpart.

TABLE 7. The Pair-Wise regression results of the High & Low IBs.

OLS : CAR = $\alpha_0 + \alpha_1 \text{High IB} + \alpha_2 \text{Low IB}$								
	Conso		Main		Second		MESDAQ	
	High IB	Low IB	High IB	Low IB	High IB	Low IB	High IB	Low IB
D1	*-0.124	*-0.146	-0.130	-0.175	0.136	-0.135	-0.157	*-0.241
M1	0.046	-0.035	0.028	-0.022	*0.062	0.024	0.06	-0.053
M3	0.066	-0.066	0.017	0.005	*0.102	-0.007	0.085	-0.093
M6	0.017	-0.094	0.060	0.104	0.027	-0.124	0.054	-0.129
Y1	0.005	-0.113	0.150	0.114	-0.067	-0.034	0.061	-0.16
Y2	0.065	0.032	**0.356	0.321	-0.065	0.097	0.094	-0.027
Y3	-0.045	0.282	**0.410	0.446	-0.055	0.263	0.061	0.154

  

OLS : CAROP = $\alpha_0 + \alpha_1 \text{IB High} + \alpha_2 \text{IB Low}$								
	Conso		Main		Second		MESDAQ	
	IB High	IB Low	IB High	IB Low	IB High	IB Low	IB High	IB Low
D1	*-0.124	*-0.146	-0.13	-0.175	0.136	-0.135	-0.157	*-0.241
M1	-0.078	*-0.181	-0.102	-0.197	*0.198	-0.11	-0.097	** -0.294
M3	-0.057	** -0.212	-0.114	-0.17	**0.238	-0.142	-0.072	** -0.333
M6	-0.106	** -0.240	-0.07	-0.071	0.162	-0.259	-0.103	** -0.369
Y1	-0.119	** -0.259	0.019	-0.061	0.069	-0.169	-0.096	** -0.400
Y2	-0.059	-0.114	0.226	0.146	0.071	-0.038	-0.063	-0.267
Y3	-0.169	0.136	0.28	0.271	0.08	0.128	-0.096	-0.086

  

OLS : BHAR = $\alpha_0 + \alpha_1 \text{IB High} + \alpha_2 \text{IB Low}$								
	Conso		Main		Second		MESDAQ	
	IB High	IB Low	IB High	IB Low	IB High	IB Low	IB High	IB Low
D1	*-0.123	*-0.146	-0.130	-0.175	0.137	-0.133	-0.049	-0.136
M1	0.034	-0.038	0.038	-0.016	0.053	0.021	0.075	0.023
M3	0.067	-0.077	0.045	0.020	0.093	-0.011	*0.160	0.079
M6	0.010	-0.107	0.087	0.099	0.109	-0.141	0.112	-0.038
Y1	-0.066	*-0.292	0.128	0.022	-0.069	-0.352	0.196	-0.051
Y2	0.068	-0.173	0.290	0.462	0.159	-0.253	0.054	-0.204
Y3	*0.224	-0.193	0.368	0.358	0.218	-0.175	0.072	-0.117

  

OLS : BHAROP = $\alpha_0 + \alpha_1 \text{IB High} + \alpha_2 \text{IB Low}$								
	Conso		Main		Second		MESDAQ	
	IB High	IB Low	IB High	IB Low	IB High	IB Low	IB High	IB Low
D1	*-0.123	*-0.146	-0.130	-0.175	0.137	-0.133	-0.157	*-0.241
M1	-0.089	*-0.184	-0.092	-0.192	*0.190	-0.112	-0.110	** -0.303
M3	-0.056	** -0.222	-0.086	-0.156	**0.230	-0.144	-0.048	** -0.355
M6	-0.113	-0.253	-0.043	-0.077	0.246	-0.274	-0.126	*-0.421
Y1	-0.189	** -0.438	-0.003	-0.154	0.068	-0.485	-0.129	*-0.614
Y2	-0.055	-0.319	0.159	0.286	0.296	-0.386	-0.234	-0.531
Y3	0.101	*-0.338	0.238	0.183	0.355	-0.308	-0.192	** -0.479

The OLS results of the pair-wise analysis for the independent variables IB High & IB Low dummies against the performance of IPOs between 2002 and 2008. The dependent variables are the four methods of performance measurements, CAR & BHAR which measure returns from D1 closing prices and CAROP & BHAROP which are based on the offer prices are presented for

windows from D1 to Y3. The Consolidated market consists of 322 samples made up by the Main Board (89), the Second Board (106) & MESDAQ (127). The probability significance of 10, 5, & 1% are denoted by \*, \*\* & \*\*\* respectively.

The three sets of regression results demonstrate that High IB managed Second Board IPOs outperform the market while the Low IB managed MESDAQ IPOs underperform the market. In addition, the results of this study demonstrate that the regression results are enhanced when the performances are measured from the offer price, analysis carried out in accordance to the respective board of listing and the reputation of IBs are separated into the High and Low dummies.

## CONCLUSION

Contrary to most Malaysian studies which did not find strong relationship between the reputation of IBs and the performances of IPOs, the results of this study managed to align the theoretical expectation with the empirical findings and reinforce the tenet that the reputations of the IBs are able to signal to the investors on the post listing performance of the IPOs. With these credible signals, investors could maximize their returns by investing more in the High IB managed Second Board IPOs and at the same time avoid the Low IB managed MESDAQ IPOs. However, whether the characteristics inherent in these firms had continued to manifest and generate the similar influences especially after the Second Board has been absorbed into the Main Board, only more research utilizing post 2009 data could unveil.

The two modified methods of measuring the abnormal returns, the CAROP and BHAROP which are based on the offer prices are, not only helped to enhance the regression results but have also helped to correct a misconception that the long term performances of stocks are poor. In view of this, these two methods may bring new lights to the other areas of the stock market research that was previously found to be low correlated.

However, the findings derived in this study do have its limitations. Although the regression outputs demonstrated that the reputation of the IBs has influence over the performance of IPOs, these findings are not meant to replace but to supplement the conventional method of evaluating IPOs. Furthermore, due to the dissimilar rules imposed by the regulators of the different exchanges and the fact that the stock market itself is a dynamic field, the results obtained in one study is generally applicable to the same market over the similar time horizon. In other words, the conclusions derived in this study are not recommended to infer the outcome in a different environment. However, any additional research into this field will definitely make some contribution and solve another piece of puzzle in the comprehension of stock market investment.

## REFERENCES

- Agarwal, S., Liu, C. & Ghon Rhee, S. 2008. Investor demand for IPOs and aftermarket performance: Evidence from the Hong Kong stock market. *Journal of International Financial Markets, Institutions & Money* 18: 176-190.
- Aggarwal, R., Bhagat, S. & Rangan, S. 2005. *The impact of fundamentals and signalling on IPO valuation*. Unpublished article from Leeds School of Business, University of Colorado, CO 80309-0419.
- Ang, J.S. & Brau, J.C. 2003. Concealing and confounding adverse signals: Insider wealth-maximizing behavior. *Journal of Financial Economics* 67: 149-172.

- Aharony, J., Lin, C.J. & Loeb, M.P. 1993. Initial public offering, accounting choices, and earnings management. *Contemporary Accounting Research* 10(1): 61-81.
- Arthurs, J.D., Hoskisson, R.E., Busenitz, L.W. & Johnson, R.A. 2008. Managerial agents watching other agents: Multiple agency conflicts regarding underpricing in IPO firms. *Academy of Management Journal* 51(2): 277-294.
- Beatty, R.P. & Ritter, J.R. 1986. Investment banking, reputation and the underpricing of initial public offers. *Journal of Financial Economics* 15: 213-232.
- Bhattacharya, S. 1979. Imperfect information, dividend policy, and “the bird in the hand” fallacy. *The Bell Journal of Economics* 10(1): 259-270.
- Booth, J.R., Booth, L.C. & Deli D. 2010. Choice of underwriters in initial public offerings. *Journal of Business and Policy Research* 5(2): 131-158.
- Booth, J.R. & Smith, R.L. 1986. Capial raising, underwriting and the certification hypothesis. *Journal of Financial Economics* 15: 261-281.
- Brau, J. & Fawcett, S. 2006. Initial public offerings: An analysis of theory and practice. *The Journal of Finance* 61(1): 399-436.
- Butler, A.W., Keefe, M. & Kieschnick, R. 2009. What can one million regressions tell us about IPO underpricing? School of Management, SM 31, The University of Texas at Dallas Richardson, TX 75083-0688.
- Carter, R.B., Dark, F.H. & Singh, A.K. 1998. Underwriter reputation, initial returns and the long run performance of IPO Stocks. *The Journal of Finance* 53(1): 285-311.
- Carter, R. & Manaster, S. 1990. Initial public offerings and underwriter reputation. *The Journal of Finance* 45(4): 1045-1067.
- Chong, F., Ruhani, A. & Zamri, A. 2009. Heterogeneous investors’ expectation and performance of Malaysian initial public offerings. University Teknologi MARA, Sarawak, Malaysia.
- Dimovski, W., Philavanh, S. & Brooks, R. 2011. Underwriter reputation and underpricing: Evidence from the Australian IPO market. *Review of Quantitative Finance and Accounting* 37(4): 409-426.
- Doukas, J.A. & Gonenc, H. 2003. Long-term performance of new equity issuers, venture capital and reputation of investment bankers. Department of Finance, Stern School of Business, New York University, New York, NY.
- Fabrizio, S. 2000. Asymmetric information and underpricing of IPOs: The role of the underwriter, the prospectus and the analysts. An empirical examination of the italian situation. University Business School of Chicago.
- Fernando, C.S., Gatchev, V.A. & Spindt, P.A. 2004. Wanna dance? How firms and underwriters choose each other. Michael F. Price College of Business, University of Oklahoma.
- Janney, J.J. & Folta, T.B. 2003. Signaling through private equity placements and its impact on the valuation of biotechnology firms. *Journal of Business Venturing* 18: 361-380.
- Jelic, R., Saadouni, B. & Briston R. 2001. Performance of Malaysia IPOs: Underwriters reputation and management earnings forecasts. *Pacific-Basin Finance Journal* 9: 457-486.
- Lee, S.M. & Ryu, K. 2003. Management ownership and firm’s value: An empirical analysis using panel data. The Institute of Social and Economic Research, Osaka University.
- Leland, H.E. & Pyle, D.H. 1977. Information asymmetries, financial structure and financial intermediation. *The Journal of Finance* XXXII(2): 371-387.

- Loughran, T. & Ritter, J.R. 2002. Why has IPO underpricing changed over time? *Financial Management* 33(3): 5-37.
- Meggison, W.L. & Weiss, K.A. 1991. Venture capitalist certification in initial public offerings. *The Journal of Finance* 46(3): 879-903.
- Michaely, R. & Shaw, W.H. 1994. The pricing of initial public offerings: Tests of adverse-selection and signaling theories. *The Review of Financial Studies* 7(2): 279-319.
- Miranda, G. 2004. *The MESDAQ Market on the KLSE*. Petaling Jaya, Selangor: Leeds Publication.
- Nurwati, A.A., Campbell, K. & Goodacre, A. 2007. The long run share performance of Malaysian Initial Public Offerings (IPOs). *Journal of Business Finance & Accounting* 34(1) & (2): 78-110.
- Nur-Adiana Hiau Abdullah & Kamarun Nisham Taufil Mohd. 2004. Factors influencing the underpricing of Initial Public Offerings in an emerging market: Malaysian evidence. *IIUM Journal of Economics and Management* 12(2).
- Paudyal, K., Saadouni, B. & Briston, R.J. 1998. Privatisation Initial Public Offerings in Malaysia: Initial premium and long-term performance. *Pacific-Basin Finance Journal* 6: 427-451.
- Reber, B., Berry, B. & Toms, S. 2005. Firm resources and quality signaling: Evidence from UK Initial Public Offerings. *Applied Financial Economics* 15: 575-586.
- Ritter, J.R. 1998. Initial Public Offerings. *Contemporary Finance Digest* 2(1): 5-30.
- Ritter, J.R. 2003. Differences between European and American IPO Markets. *European Financial Management* 9(4): 421-434.
- Ross, S.A. 1977. The determination of financial structure: The incentive-signaling approach. *The Bell Journal of Economics* 8(1): 23-40.
- Stoughton, N.M. & Zechner, J. 1998. IPO-mechanism, monitoring and ownership structure. *Journal of Financial Economics* 49: 45-77.
- Westerman, J.W., Geiger, S.W. & Cyr, L.A. 2008. Employee equity incentives and venture capitalist involvement: Examining the effect on IPO performance. *Journal of Developmental Entrepreneurship* 13(4): 409-423.

Lin Yong Tong (corresponding author)  
Faculty of Business and Accountancy  
Universiti Malaya  
50603 Kuala Lumpur, MALAYSIA.  
E-Mail: flinyt@yahoo.com

Rubi Ahmad  
Faculty of Business and Accountancy  
Universiti Malaya  
50603 Kuala Lumpur, MALAYSIA.  
E-Mail: rubi@um.edu.my