DOES WINNER'S CURSE HYPOTHESIS EXIST IN EXPLAINING THE UNDERPRICING PHENOMENON OF MALAYSIAN SHARIAH-COMPLIANT IPOs?

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Abstract: The Shariah-compliant status seems to be the major concern of the Securities Commission (SC) even though in reality the Malaysian stocks market players and the public listed companies (PLCs) owners are dominated by non-Muslims. The need for Shariah-compliant status seems more significant when the SC in 2004 introduced the pre-IPO Shariah-compliant list for new issues. This study aims to examine whether the short-run performance of Malaysian IPOs experience winner's curse in a sample of 153 Shariah IPOs issued by Malaysian companies between January 2005 and December 2014. The study uses two alternative measures to test the presence of winner's curse; allocation rate (ALLOCT_j) or private place to institutional investors (DPRIVATE).The negative associations between both of these variables and initial returns suggest the existence of winner's cursein the Malaysian IPOs regardless of Shariah status and level of Shariah compliance. This reveals a phenomenon where the high initial returns are purposely created by the issuers (by offering the IPOs at a deep underpricing) to allure the uninformed investors into the markets to replace the lack of interest from the informed investors.

Keywords: Initial Public Offerings (IPOs) ·Winner's curse ·Underpricing ·Malaysian Shariah-compliant IPO

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Introduction

Equity capital still represents as the main source of external financing for many firms in Malaysia, next to bank borrowings, particularly because the bond market in the country remains relatively very small. Therefore, the firms' first issuances of equity to the public are always treated as a crucial event for issuers and underwriters to identify the extent of the success of the new issues. As such, this event which is more commonly referred to as initial public offerings (IPOs) is significant due to its role as major fund providers for listed firms in the process of expansion.

Initial returns of initial public offerings (IPOs), also known as underpricing, are referred to the abnormal initial return occurs when the IPO offer price is set much lower than the price on the first trading day or when the price on the first day of listing increases to a level much higher than the offer price. In Malaysia, even though there are quite a number of studies on IPO performance that have been conducted (Dawson, 1987; Yong, 1991; Wu, 1993; Ariff & Shamsher, 1999; Jelic et al., 2001; Nur Adiana & Kamarun, 2004; and Abdul Rahim & Yong, 2008), those that concentrates on the Islamic segment of the market is rather scant despite the fact that the emphasis on Shariah-compliant status and its impact towards the stock performance is on the rise (see for example, (Abdul Rahim, & Yong, 2012).

The Shariah compliance status means that the company's activities should be free from any form of interest based transactions, unethical elements and doubtful transactions. The Shariah-compliant status seems to be the major concern of the SC even though in reality the Malaysian stocks market players and the public listed companies (PLC) owners are dominated by non-Muslims. The need for Shariah-compliant status seems more significant when the SC in 2004 introduced the pre-IPO Shariah-compliant list for new issues. The increasing statistics on PLC with Shariah-compliant status (refer to Appendix A) traded in the Bursa Malaysian are consistent with the risk control elements in the Shariah status that attract both Muslim and non-Muslim investors.

One of the most widely cited findings that explain the underpricing phenomenon is the winner's curse hypothesis by Rock (1986). The study describes the adverse selection problem as the main problem that restrains the uninformed investors from entering the market. This leads to the underpricing of new issues by issuers in order to regain the interest of uninformed investors in the IPOs. Other relevant studies on the winner's curse include those by Baron (1982), Beatty and Ritter (1986), Balvers et al. (1988), Beatty (1989), and Levis (1990). A study by Chowdhry and Sherman (1996) on UK-style IPOs finds that underwriters have two reasons for underpricing such as to reduce the adverse selection problem and to reduce the probability that the issue will fail due to the leakage of adverse information.

Based on the above scenario, this study also suspects that investors' sentiments play a role in the performance of Shariah–compliant IPOs particularly in terms of the degree of underpricing. How far the issues of adverse selection that Rock (1986) describes as winner's curse play a role in the IPOs' aftermarket performance is among the issues that this study highlights. The study will focus on whether the initial performance of Shariah-compliant IPOs experiences the impact of winner's curse. The study uses the winner's curse hypothesis model on the sample of Shariah-compliant IPOs issued during the period of 2005 to 2014. This study might continue the effort of Rock (1986), Amihud et al. (2003) and Yong (2009) in exploring the existence of the winner's curse effect with the Malaysian IPO samples.

The remainder of the paper is organised as follows. Section 2 presents past studies on Malaysian Shariah-compliant IPOs and winner's curse model. Section 3 describes the research methodology, followed by section 4 reports and discusses on the findings. Section 5 provides the conclusions and implications of the study.

Literature Review

Listing Structure of Malaysian IPOs

Initial public offerings (IPOs) are defined as new issues that are sold to investors for the first time. The new shares are traded in a primary market. Due to the new issues perceived to be sold based on the offer price below the true values of the IPO, the activity of flipping[1] on the first day of trading in order to realize quick return is a common situation in most share markets. In order to examine the post listing performance, the structure of Malaysian share market trading should be clarified first, as every country's shares market has its own unique characteristics, such as the *Shariah*-compliant status and thirty percent of Bumiputra (indigenous people of Malaysia) mandatory requirement.

In IPO trading systems, there are three parties involved in IPO issuance which are the issuing firms, the underwriters and the investors. Basically, the players in the stock market are divided into two categories: individual investors (retail investors) and institutional investors. Institutional investors are regarded as informed investors while retail investors are considered uninformed investors. Investment banking plays an important role in IPO issuance. The bank acts as underwriter and helps to distribute a new securities issue in the primary market. Normally, their clients are the companies that will seek the investment banker's advice on how to get capital or on how to raise funds through equities.

In order to sell the IPOs, there are three types of selling mechanisms being used in share trading. These are auctions, book building concepts and fixed-priced offers. Basically, IPOs in Malaysia are sold using the fixed-price offer mechanism while other country like U.S.A uses book-building mechanism. In Malaysia, the application for IPO is submitted for approval to the Foreign Investment Committee (FIC), and Ministry of International Trade and Industry (MITI). It then is submitted to the SC for approval where it examines the company forecast profits and dividends. The SC limits the market's role in the determination of the subscription price. Most Malaysian IPOs fall within the category of three types of new issues: public issue, offers for sale or a hybrid of public issue and offer for sale. Public issues refer to the IPOs offered to the public for the first time. They are usually allocated to individual investors better known as retail investors. The implication of the issuance of these new shares will result in an increase in the paid up capital of the company. The public issues are known as primary shares. Currently, companies going for IPO must have 25% of shares in public hands and have *Bumiputras* holding 30% shares under FIC rules[2].

Offer for sale are basically shares allocated to the original shareholders (owners), but then offered to the public to buy. The owner is discouraged from selling shares before the expiration of the lock-up period. In Malaysia, the original shareholders cannot immediately sell and transfer the IPOs. The Securities Commission has already imposed the regulation on the original shareholder or the owner, pertaining to the sale of the shares that they own. This is somehow not imposed on the retail and institutional investors. In Malaysia, the owner-managers need to face the lock-up period of three years before they can proceed to sell their shares in the secondary market. The lock-up period basically is an agreement between the underwriter and the issuing firm prohibiting the sale of shares by insiders for a certain period of time. The lock-

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[25] Flipping refers to the immediate sale of IPO's after its listing process especially in the early days of trading.
[26] The new policies effective from the year 2009 will see the FIC scrapped the thirty percent rule for companies going for IPO.

up period averages around six months in other countries such as the U.S.A. Lastly, private placement refers to the IPOs offered to institutional investors.

Past Studies on Malaysian Shariah-Compliant IPOs

The uniqueness of the Malaysian Capital Market compared to the other countries in the Asian region is the issuance of Shariah–compliant equities. These equity instruments must comply with the rules of the Shariah Advisory Council (SAC). The two basic criteria for new IPOs to be listed as Shariah-compliant are that the primary business activities of the company must be halal and the financial management of the company must be free from *riba* (interest) elements. At the moment, there is a lack of studies that focus on Shariah–compliant IPOs that deal with underpricing, investors' sentiment, and the cold and hot market phenomenon. In general, studies on the shares' market performance that traded on Shariah-compliant counters versus conventional counters have been increasing in Malaysia (see, Abdul Ghafar & Nur Azura, 2004; Abu Sufian et al. 2004; and Sadeghi, 2008).

The Shariah-compliant IPOs performance is one of the new dimensions that the authors capture. This is part of the unique features of Malaysian IPOs. The study by Abdul Rahim and Yong (2008), however, find that the Shariah-compliant status does not alter the pattern of the initial return. The downward trend gives a mean initial return of 31.99 percent as compared to advanced markets. This could have been caused by the Asian financial Crisis and the FIC deregulation on pricing restraint. According to the authors, the Shariah-compliant IPOs are also driven by demand (over-subscription ratio) factors rather than (offer size) factors. Other than that, their study finds a positive relationship between the initial return and the type of offer (public issue).

Winner's Curse Hypothesis:

Nowadays, the basic fact about the underpricing of IPOs in the short run is well accepted but the cause of underpricing and the degree of underpricing in the IPO market is still being discussed and is a source of debate around the world. In past studies by Baron (1982), Rock (1986), Beatty and Ritter (1986), Beatty (1989), and Levis (1990), one of the reasons commonly given for underpricing is asymmetric information and the adverse selection problem. Among the widely cited findings that explain the underpricing phenomenon is the winner curse hypothesis of Rock (1986). The hypothesis divided the investors into two groups known as informed investors and uninformed investors. Asymmetric information leaves the informed group with information on the new issues' (IPO) true values. This useful information will help the informed investor to buy only the IPOs with a higher after-market price compared to their offer price.

On the other hand, the uninformed investor faces the possibility of subscribing to IPOs that have a lower aftermarket price compared to their offer price. The uninformed investor faces information disadvantage about the market value of new issues. Of course, they have a chance to win the large allocation of new issues when less proportion of informed investors subscribes the new issues. The uninformed investors realize that they face the probability of getting the winner's curse effect. Therefore, in order to ensure the success of issuers offering, they under-price the issues in order to compensate investors. The study also describes the adverse selection problem as the main cause of the underpricing of new issues by the issuer.

Among the supporters of this hypothesis are Chowdhry and Sherman (1996). They believed that the policy in share allocation in a number of countries[3] including Malaysia that they quoted favoured small investors. The policy plays its role in terms of the notion of fairness. This is because with the U.K system the underwriter is not given as much freedom as underwriters in the U.S. system in terms of the allocation of new issues. With these strategic allocations, the authors claim that the issuers have a chance to choose a higher offering price as there is no need for the issuers to compensate investors for the adverse selection problem. Such a policy, according to them, reduces the winner curse or adverse selection problem for uninformed investors. The degree of underpricing tends to be greater with the U.K system but is offset with the policy of favouring small investors.

Other supporters of this theory are Amihud et al. (2003). They conducted a study of adverse selection to test the theory of winner's curse on the Israeli IPO market. They find that underpricing is negatively related to the rate of allocation to subscribers and this result is consistent with the existence of adverse selection Rock (1986). According to the study, uninformed investors earned slightly less in initial returns compared to informed investors. In other words, the overpriced IPOs for uninformed investors show that the demand from this group for new issues is high. Other supporting study is by Yong (2009). He has found the existence of winner's curse effect in Malaysian IPOs market using the information on 120 Malaysian private placement IPOs from 2001 to 2006. The result shows that uninformed investors prefer a higher initial return when the percentage of informed investors entering the market is less. The winner's curse theory is, however, criticized by Welch (1992) who introduced the cascade model or bandwagon effect. The study believes that the potential investor will imitate earlier investors in making purchasing decisions.

Methodology

The data set consists of all *Shariah*-compliant IPOs' issued from January 2005 until December 2014 which is listed on the Main Market of Bursa Malaysia (previously known as the Kuala Lumpur Stock Exchange or KLSE). As in 2009, the first and second listing boards were then called as the Main Market while the MESDAQ was then introduced as the ACE Market. This study is fully aware on the effort by Bursa Malaysia and SC to upgrade the Malaysian equities market in 2004. Previously, the allocations of new issues for institutional investor were group together under the public issue category. However, the "private placement" category has been separated from public issue category in 2004. Since then, Malaysian IPOs are classified into offer for sale, public issue and private placement. This study also finds that in 2004 SC has introduced the pre-IPO Shariah status.

The data on subscription ratio and the quantity of IPOs allocated to the institutional investors and retail investors helps this study to observe the ideas in the theory of market sentiments such as the winner's curse hypothesis. By observing the initial return and allocation ratio, the study can gain a clear picture on whether they are consistent with the winner's curse effect theory or otherwise. The other two main variables are extracts from the company's prospectus as they comprise the data on ratio of growth funds to total IPO proceeds and IPOs earning's risk that

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[28] Chowdhry & Sherman (1996) identify that among the countries that tend to favour small investors are Hong Kong, India, Indonesia, Malaysia, Singapore, Thailand, Bangladesh, and the U. K. These countries use the U.K method that places the "Fairness Rule" in the allocation of shares which requires the fair treatment between investors on the basis of order size. This is in contrast with the U.S system that gives the underwriters considerable discretion in allocating new issues.

influence initial returns of IPOs. The objective is tested while taking into consideration control variables including ownership structure, underwriter reputation, company age, company size, offer size, and market condition.

Data are obtained from the Bursa Malaysia's website and customer service unit, Securities Commission website and it's Islamic Capital Market Unit, company's prospectus and annual report, Investors Digest, Star on-line and OSIRIS database. The Shariah status of the company is determined based on the list published by the *Shariah* Advisory Council (SAC) of Securities Commission and Knowledge Centre of Bursa Malaysia.

Main Variables Measurement

The dependent variable in this study is the initial return of IPO or underpricing. In order to examine the impact of winner's curse effect on the under-pricing level, the study focuses on two alternative measures of independent variables namely allocation rate and private placement. The study also uses six other independent variables as control variables which include firm size, firm age, offer size, ownership variables, underwriter reputation and lastly, market condition.

Dependent Variables: Initial Return of IPO (Underpricing)

The dependent variable in this study is the value of underpricing for IPOs. There are various studies that focus on the determinant factors of short-run performance of the IPO and the impact of those determinants on the underpricing level. The underpricing (initial return) result helps this study to develop a general pictures of the performance of the Shariah-compliant IPOs. The standard measure to calculate initial return in most studies is by calculating the percentage change in price on the first day of trading, between the offer price and the closing price (Ritter, 1998). Similarly, the Malaysian researchers also used the offer-to-close as the measurement of initial return (Dawson, 1987 and Yong, 1991). This method also applies in Agarwal (2008) who focuses on the closing price and subscription price on the first day of trading. In the spirit of Abdul Rahim and Yong (2008) and most of the current studies, two methods are used to calculate the underpricing on the first day of trading.

The first is the percentage change in price from the offer price to the opening price,

$$IPORTN_j = \left(\frac{P_{OPEN,j}}{P_{OFFER,j}} - 1 \right) x100$$

(Eq. 1a)

Where: $P_{OPEN,j}$ = opening price, and
$P_{OFFER,j}$ = offer price

The second is the percentage change in price from the offer price to the closing price.

$$IPORTN_j = \left(\frac{P_{CLOSE,j}}{P_{OFFER,j}} - 1 \right) x100$$

(Eq.1b)

Where: $P_{CLOSE,j}$ = closing price, and
$P_{OFFER,j}$ = offer price

The advantage of using both offer-to-open and the offer-to-close methods help the study to identify the pattern of underpricing in the beginning and at the end of the trading day. The study prefers to emphasize more on initial returns offer-to-open ($IPORTN^{OPEN}$) results rather than initial returns offer-to-close ($IPORTN^{CLOSE}$) results. The study agrees with Yong [24] that $IPORTN^{OPEN}$ is the pure initial return without the market element (noise). The outcomes of $IPORTN^{CLOSE}$ are still presented for reference purposes. In a few IPOs issuance, the study applies the weighted average offer price method to calculate the offer price due to difference quotation made for public issue and private placement issue.

Independent Variables: Allocation Rate and Private Placement to Institutional Investor

This study adapts and enhances the methods used in the Amihud et al. (2003) to test the existence of winner's curse by evaluating the adverse selection aspects in Malaysian Shariah-compliant IPOs. The evidence of adverse selection is assessed by examining the relationship between the allocation rate to subscribers and overpriced IPOs. The allocation is defined as the proportion of subscriber's order that is filled in the IPO. The data on reciprocal of oversubscription ratio is used to measure allocation rate. The data on "number of times oversubscribe" from 1999 to 2003 are obtained from Investors Digest. However, the data on "number of times oversubscribe" from 2004 to 2008 are prepared by the Bursa Malaysia through "event package" as Bursa Malaysia stop publish the Investors Digest in the middle of 2004. The logistic transformation of the allocation rate or ALLOCTj as suggested by Cox (1970) is described through the allocation model below:

$$ALLOCTj = \log (ALLOC + a) / (1 - ALLOC + a)$$

(Eq. 2a)

Where,
  i.   a= 0.5/N and, N is the sample size.
  ii. ALLOC = 1 / OVERSUBSCRIPTION RATIO   = NO. OF UNITS ISSUED / NO. OF UNITS SUBSCRIBE

(Eq. 2b)

This study also adapts Yong (2009) method to address the existence of the winner's curse by measuring the mean of initial return in the private placement and non-private placement issues. The data is obtained partly from Investors Digest and the rest are from Bursa Malaysia library and its customer service unit. The private placement allocations according to Yong (2009) are gained popularities since 2001 onwards. Therefore, no private placements for IPOs are detected in 1999 and 2000. This study enhance the previous method by creating a dummy variable taking a value of 1 if the offer includes private placement, otherwise the value is 0. The variables are known as DPRIVATE. The number of samples in Table 3 below already exclude out the IPO's with restricted or special issues and IPO's under REITS category.

Control Variables

There are six control variables that are used in this study which include company size, company age, ownership, offer size, underwriter reputation, and market condition.

Hypothesis Testing

H_1: There is no evidence of winner's curse in influencing the initial returns of IPOs regardless of Shariah status and level of Shariah compliance.

To test the hypothesis, this study employs cross-sectional multiple regression analyses that take the following forms;

$$IPORTN_i = \alpha + \beta_1 ALLOCT_i + \beta_J \sum_{j=1}^{J} CV_{j,i} + \varepsilon_i$$

(Eq. 3a)

$$IPORTN_i = \alpha + \beta_1 DPRIVATE_i + \beta_J \sum_{j=1}^{J} CV_{j,i} + \varepsilon_i$$

(Eq. 3b)

Where;

α	=	the regression intercept
β	=	the estimated coefficients
$IPORTN_i$	=	(Closing – Offer price) / Offer price or (Opening – Offer price)/ Offer price.
$ALLOCT_j$	=	The logistic transformation of the allocation rate.
$DPRIVATE_i$	=	The dummy variable takes a value of 1 if the offer includes private placement. Otherwise, the value is 0.
$CV_{j,i}$	=	Control variables which are:
Age	=	The number of years between the firm's year of incorporation and the IPO listing year.
Company size	=	The total assets that the company owns prior to listing
Offer size	=	The number of shares offered multiplied by the offer price.
Ownership	=	Percentage of shares owned by five largest shareholders after the new issue to the total number of shares outstanding after the IPO listing.
Underwriter reputation	=	The reputation of investment banks those are responsible for IPOs' offering. A dummy variable takes a value of 1 if the company has been advised by one of the five 'reputable' underwriters and 0 otherwise.
Market condition	=	Unusually high volume of offerings and high listing of new issues. The dummy variable takes a value of 1 if it is greater than the average amount volume of offering. Otherwise, the value is 0.
ε_i	=	Error term

Result and Discussion
Correlation Analysis

Overall, based on the entire sample of IPO groups, the study finds that there is a strong negative correlation between $ALLOCT_j$ and both measures of initial returns. Majority of the sample shows higher significance level ($p < 0.01$). The results as shown in Table 1 supports the study hypothesis because the low $ALLOCT_j$ is supposed to indicate less presence of informed investors. Therefore, the underwriters and issuers see more needs to under-price the new issues to attract more investors (especially the un-informed ones) into the market. This strategy results in higher initial returns. At the same time, the deeper underpricing also tends to create higher demand which translates into higher oversubscription ratio (and thus lower $ALLOCT_j$). The negative association between under-pricing (initial returns) and $ALLOCT_j$ is consistent with result by Amihud et al. (2003). As described by Amihud et al. (2003), such a negative association is a sign of the existence of winner's curse.

Table 1: Correlation analysis results among variables

Variables	ALLOCTj	LNOFF SIZE	LNAGE	LNTA	OWNER FIVE	DWRITER	DMKT
Panel A: Whole Sample							
IPORTN^{OPEN}	-0.3563**	-0.1888**	0.0973*	-0.1285**	-0.1289**	-0.0621	0.0069
Panel B: Non-Shariah Compliant IPOs							
IPORTN^{OPEN}	-0.4618**	-0.0864	0.0481	-0.0104	0.0360	-0.0174	0.3651*
Panel C: Shariah Compliant IPOs							
IPORTN^{OPEN}	-0.3437**	-0.2016**	0.1069*	-0.1394**	-0.1466**	-0.0658	-0.0137

Notes:
$ALLOCT_j$ is the logistic transformation of the allocation rate derived from the number of times over subscribe; LNAGE is the difference between the year of listing and year of incorporated (in natural log); LNOFFERSIZE is the number of shares offered multiplied by the offer price (in natural log); LNTA stands for company size. It is based on the consolidated total asset values that simplified through natural log; OWNERFIVE represents ownership concentration which based on the percentage of shares owned by top five shareholders; DWRITER a symbol for underwriter reputation. It is based on the top five ranking of underwriter in-terms of volume and units of shares sold posted in Bursa Malaysia website (2007 and 2008). A dummy variable takes a value of 1 if the company has been advised by one of the five 'reputable' underwriters and 0 otherwise; and DMKT is a dummy variable that represent market condition. Market condition is indicated by unusually high volume of offerings and high listing of new issues. The dummy variable takes a value of 1 if it is greater than the average amount volume of offering, otherwise, the value is 0.The symbol ** represents correlations that is significant at the 0.01 level (2-tailed) and * is correlations that significant at the 0.05 level (2-tailed).

Table 2: Descriptive statistics of initial return (offer-to-open) by year

Yr	N	Mean	Median	Std. Dev.	Skew.	Kurt.	Min.	Max.
Panel A : All samples								
2005	79	27.104	24.000	16.520	1.230	2.506	0.000	73.913
2006	40	63.322	50.000	40.092	0.379	-0.898	-6.383	144.444
2007	28	24.244	3.648	50.912	1.316	0.450	-26.667	133.333
2008	23	25.131	13.846	37.417	2.570	6.622	-5.714	161.905
2009	14	45.555	39.773	35.131	0.724	-0.151	0.000	140.000
2010	28	40.878	26.631	51.410	2.436	7.294	-12.037	275.000
2011	28	18.859	7.977	41.832	1.824	5.271	-66.667	194.118
2012	17	23.085	19.790	29.440	0.426	0.779	-37.398	95.122
2013	17	37.127	19.091	42.254	1.247	0.047	0.000	121.429
2014	15	-16.542	-7.346	25.903	-1.065	0.017	-68.132	15.862

Yr	N	Mean	Median	Std. Dev.	Skew.	Kurt.	Min.	Max.
Panel B: Shariah samples								
2005	48	28.2598	24.0372	18.1951	1.1460	2.0850	0.0000	73.9130
2006	23	64.1642	52.5000	40.4358	0.3260	-0.9410	-6.3830	144.4444
2007	15	27.2919	6.0465	51.1654	1.2540	0.2260	-26.6667	133.3333
2008	14	22.4330	13.8462	33.7285	3.0630	10.439	-5.7143	161.9048
2009	8	47.1024	41.7857	36.2687	0.6200	-0.3770	0.0000	140.0000
2010	8	38.4812	25.1316	49.3628	2.6350	9.0710	-12.0370	275.0000
2011	12	18.4606	7.9545	43.2125	1.8710	5.3590	-66.6667	194.1176
2012	8	24.1961	21.2121	30.0975	0.3630	0.7340	-37.3984	95.1220
2013	7	39.8393	19.0909	43.3310	1.1230	-0.3240	0.0000	121.4286
2014	10	-14.7252	-5.6000	24.3012	-1.1260	0.4860	-67.2727	15.8621

Yr	N	Mean	Median	Std. Dev.	Skew.	Kurt.	Min.	Max.
Panel C: Non-Shariah samples								
2005	24	23.867	24.000	11.592	0.758	1.561	10.000	41.667
2006	12	36.364	36.364	-	-	-	36.364	36.364
2007	11	-21.482	-21.482	-	-	-	-21.482	-21.482
2008	9	52.785	34.417	65.169	1.005	-0.513	2.308	140.000
2009	6	30.080	34.058	14.775	0.197	-1.167	13.333	50.000
2010	20	80.417	53.333	76.041	1.578	2.308	25.000	190.000
2011	16	21.645	11.435	32.386	1.050	0.344	-16.667	84.211
2012	9	11.603	5.263	22.278	1.177	-	-6.819	36.364
2013	10	10.000	10.000	14.142	-	-	0.000	20.000
2014	5	-25.627	-12.500	37.696	-1.377	-	-68.132	3.750

Notes:

1. Initial return (underpricing) is calculated as the return from the offer price to the opening price in the first trading day.

$$IPORTN_j = \left(\frac{P_{OPEN,j}}{P_{OFFER,j}} - 1 \right) x100$$

Weighted average offer price is use in a few cases when the retail investors' offer price differs from institutional investors' offer price.

Results of Multiple Regressions

As shown in Table 3 and 4, the two equations are different by only one factor, namely $ALLOCT_j$ (Amihud et al., 2003) or DPRIVATE (Yong, 2009) which is alternatively used to test the presence of winner's curse. The interpretation of the results with regard to both variables, $ALLOCT_j$ and DPRIVATE, are the same. Panel B of Table 3 begins with factors that explain initial returns on non-Shariah IPOs. Apparently, based on factors that have significant ($\alpha < 0.1$) coefficients, initial returns based on offer-to-open ($IPORTN^{OPEN}$) of this group are explained by ALLOCTj, DWRITER, and DMKT.

In the meantime, the $IPORTN^{OPEN}$ on Shariah IPOs are also explained by ALLOCTj, but that is the only similarity that the two groups show. As reported in Panel A of Table 3, other than ALLOCTj, $IPORTN^{OPEN}$ is explained by OFFERSIZE, AGE and OWNERFIVE, which are completely different than the other factors that influence $IPORTN^{OPEN}$ on non-Shariah IPOs.

The results in Table 3 have also highlighted another important finding pertaining $ALLOCT_j$, beside its role as the main determinant factor in influencing IPO performance. $ALLOCT_j$ has been consistently found to have negative coefficients in explaining the regression analyses. As suggested by Amihud et al. (2003), such a negative association between $ALLOCT_j$ and initial

returns is an indication of the existence of winner's curse effect. As previously explained when discussing the correlation analysis, the negative association suggests that initial returns are most likely to be higher for IPOs that have lower $ALLOCT_j$. Lower $ALLOCT_j$ suggests less participation by informed investors and accordingly underpricing has to be put in place to allure more uninformed investors into the IPO market.

This conjecture is also supported by the results of using private placement (DPRIVATE) as the alternative measure of winner curse as private placement represents subscription by institutional investors who are considered as informed investors. As reported in Table 4, DPRIVATE consistently shows significant negative coefficients in all two groups of IPOs.   Since DPRIVATE is 1 when IPOs are offered through private placement and 0 otherwise, a negative DPRIVATE coefficient means initial returns are higher when the IPOs are not offered through private placement. In other words, the participating investors of these IPOs are more likely to be among retail investors who are generally considered as the uninformed investors, subscription of which are satisfied because the IPOs are not taken by the informed investors. In short, such condition is referred as a winner's curse.

Table 3: Results of multiple regressions for winner's curse: ALLOCTj

$$IPORTN_S = \alpha + \beta_1 ALLOCT_i +$$

$$\beta_J \sum_{j=1}^{J} CV_{j,i} + \varepsilon_i$$

(3.4a)

Variables	Exp. (Sign)	Panel A: Shariah Sample		Panel B: Non-Shariah Sample	
		Coefficient	t-Statistics	Coefficient	t-Statistics
		$IPORTN^{OPEN}$		$IPORTN^{OPEN}$	
$ALLOCT_j$	-ve	-24.727	-3.884***	-38.591	-2.5569**
Control Variables (CV)					
LNOFFERSIZE	-ve	-7.845	-2.077**	-7.294	-0.586
LNAGE	+ve	5.261	2.051**	4.692	0.564
LNTA	-ve	1.678	0.424	10.346	0.803
OWNERFIVE	-ve	-0.375	-2.139**	0.564	0.755
DWRITER	-ve	-3.395	-0.827	-35.658	-2.076**
DMKT	(+/-)ve	-2.107	-0.308	34.815	2.002*
INTERCEPT		135.658	3.074***	-48.168	-0.394
Adjusted R-Squared		0.147		0.195	
F-Statistics		7.626***		1.969*	
F-Statistics Probability		0.000		0.084	
Durbin-Watson stat.		1.461		2.295	
VIF range		1.030-3.420		1.377-6.754	

Notes:
Autocorrelation and heteroskedasticity in the analysis are identified through Breusch-Godfrey Langrange multiplier test and corrected with Newey-West covariance estimator. The adjusted values are highlighted by symbol #. The symbols ***, **, * denote significance at the 1%, 5% and 10% levels respectively.

Table 4: Results of multiple regressions for winner's curse: DPRIVATEj

$$IPORTN_S = \alpha + \beta_1 DPRIVATE_i +$$

$$\beta_J \sum_{j=1}^{J} CV_{j,i} + \varepsilon_i$$

<div align="right">(3.4a)</div>

Variables	Exp. (Sign)	Shariah Sample (N=154)		Non-Shariah Sample (N=132)	
		Coefficient	t-Statistics	Coefficient	t-Statistics
		$IPORTN^{OPEN}$		$IPORTN^{OPEN}$	
DPRIVATE$_j$	-ve	-15.401	-2.623***	5.101	0.266
Control Variables (CV)					
LNOFFERSIZE	-ve	-7.732	-2.167**	-11.595	-0.833
LNAGE	+ve	4.731	1.852*	4.630	0.493
LNTA	-ve	-2.098	-0.608	11.315	0.747
OWNERFIVE	-ve	-0.383	-2.027**	0.476	0.564
DWRITER	-ve	-3.557	-0.837	-23.565	-1.283
DMKT	(+/-)ve	-6.121	-0.784	50.727	2.809***
INTERCEPT		207.393	5.181***	38.736	0.293
Adjusted R-Squared		0.077		0.003	
F-Statistics		4.190***		1.011	
F-Statistics probability		0.000		0.456	
Durbin-Watson stat.		1.379		2.158	
VIF range		1.030-0.742		1.376-7.545	

Notes:
Autocorrelation and heteroskedasticity in the analysis are identified through Breusch-Godfrey Langrange multiplier test and corrected with Newey-West covariance estimator. The adjusted values are highlighted by symbol #. The symbols ***, **, * denote significance at the 1%, 5% and 10% levels respectively.

Conclusion and Implications

It is noteworthy to highlight that in this study, ALLOCTj has consistently showed a significant negative relationship with the initial return performance which is consistent with the results of Amihud et al. (2003). In connection with the interpretation of this result, it basically shows the existence of the winner's curse effect in Malaysian IPOs, regardless of Shariah status. In short this study provides a strong evidence to reject the null hypothesis regarding winner's curse. This evidence also supports Rock's (1986) hypothesis of adverse selection (or the winner's curse) which argues that the informed investors (institutional investors) avoid overpriced IPOs. Therefore, the deeper underpricing is intentionally created by underwriters and issuers as a strategy to attract more investors (especially the uninformed ones) into the market.

For robustness, this study also tests another alternative measure of winner's curse which is DPRIVATE (Yong, 2009). The regression results obviously shows that DPRIVATE has significant negative coefficient which can be interpreted as suggesting that the initial returns are higher when IPOs are not offered through private placement. In other words, this result suggests that initial returns (underpricing) are higher when the IPOs are offered to non-institutional or retail investors who are generally taken as uninformed investors.

The findings on the consistent significant influence on ALLOCTj and DPRIVATE should provide alarming information to the investors in general. The negative associations between both of these variables and initial returns suggest the existence of winner's curse. This reveals a phenomenon where the high initial returns are purposely created by the issuers (by offering the IPOs at a deep underpricing) to allure the uninformed investors into the markets to replace the lack of interest from the informed investors. While grabbing the high initial returns might

be an opportunity that the uninformed investors should be willing to take, but at the same time these investors must be efficient enough not to hold the assets for long-term investment. This is because the lack of interest from the informed investors suggests the poor quality of the IPOs and in long term, the fair value of the IPOs will eventually be reflected by the market.

Of main focus is the consistent significant role of ALLOCTj in explaining initial returns. This finding implies the importance of winner's curse phenomenon in describing Malaysian IPO market as debated earlier by Yong (2009). It also indicates that Malaysian IPO market is no difference than other IPO markets such as Israel as discovered earlier by Amihud et al. (2003). To a certain extent, since the basis of ALLOCTj measurement is the reciprocal of the over-subscription ratio, this study indirectly supports findings of previous studies (Abdul Rahim and Yong, 2008; and Yong, 2008) which claim that initial returns are driven by the demand on IPOs.

Acknowledgements

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