Initial Returns of Shariah-Compliant IPOs in Malaysia

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Abstract: This paper investigates the initial returns of Malaysian Shariah-compliant IPOs (comprising 86 per cent of the overall 386 Malaysian IPOs issued) between January 1999 and December 2007. Our preliminary results indicate that initial returns and other profiles of the Shariah IPOs, to a great extent, match those of the overall IPOs. Initial returns of Malaysian IPOs dropped substantially to 31 per cent from 95 per cent reported from the pre-crisis period of 1990 to 1998, a level more comparable to that reported in advanced markets. Despite the drastic change in the level of IPO under-pricing, the results of regression analyses show that initial returns are still driven by the same factors found in the earlier study. Specifically, initial returns of Shariah-compliant IPOs in Malaysia are found to be consistently and significantly explained by an over-subscription ratio. Overall, the finding of this study suggests that initial returns of the Shariah-compliant IPOs are driven by demand rather than the supply factor.

Keywords: IPO initial returns, over-subscription ratio, Shariah-compliant IPOs

JEL classification: G11

1. Introduction

1.1 *Under-pricing of IPOs*

Evidence on under-pricing of initial public offerings (IPOs) of stocks has been exceptionally persistent throughout different settings that it has been identified as one of the ten puzzles in finance literature. This anomaly has been comprehensively documented in Ibbotson and Ritter (1995) and Loughran *et al.* (1994; 2008), confirming earlier evidence found in Reilly and Hatfield (1969), Ibbotson (1975), Rock (1986), Allen and Faulhaber (1989), Grinblatt and Hwang (1989) and Chemmanur (1993). As also comprehensively documented in Yong (2007a), IPOs in Asian markets are no different from that of China (Su and Fleisher 1999) and Malaysia (Hiau Abdullah and Mohd 2004) in occupying a top position in the list. The universal phenomenon of IPO under-pricing invites differing explanations, mostly based on asymmetric information hypothesis. Rock (1986) and Levis (1990) propose winner's curse whereby to ensure full subscription, issuing firms use under-pricing to attract

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uninformed investors back into the market. They argue that informed investors have access to information regarding the true value of IPOs so they only subscribe to an IPO if the expected after-market price exceeds the offering price. The uninformed investors on the contrary subscribe to all IPOs indiscriminately so that they might end up purchasing the overpriced offerings as well. The only way for these investors to avoid the risk or curse is by avoiding the new issue market. In response to this, issuing firms must offer their IPOs at a deep discount prices to attract these investors back into the market. Allen and Faulhaber (1989), Grinblatt and Hwang (1989) and Chemmanur (1993) on the other hand argue that asymmetric information forces quality firms to signal their quality via under-pricing and upon gaining investor trust in their values, they have better chance to raise capital under better terms in the future. Hiau Abdullah and Mohd (2004) propose that large firms use under-pricing to signal their future prospects. Ibbotson (1975) and Tinic (1988) propose another explanation whereby under-pricing is strategically used to reduce the tendency of lawsuits by unsatisfied investors. Su and Fleisher (1999) argue that under-pricing in IPOs appeared to be unexploited for so many years because it may be deliberately used as a legal method of bribery.

1.2 Under-pricing of Malaysian IPOs

Evidence of under-pricing in Malaysian IPOs has been documented in several studies. Using 21 new issues for the period of 1978-1983, Dawson (1987) reports a positive average initial return of 166.7 per cent. In a separate study, Yong (1991) also reports that the initial return is 167.4 per cent, with an average oversubscription ratio of 45.9 times. Similarly, Ismail *et al.* (1993) who used 63 new issues from 1980 to 1989 report an average initial excess return (initial return adjusted for market movement) of 114.6 per cent. Among the country specific reasons commonly given for under-pricing of Malaysian IPOs are the pricing restraints applied by the Capital Issues Committee (since March 1993, its functions have been officially taken over by the Securities Commission) and uncertainty regarding the value of new issues (see Dawson 1994). With regard to procedures, public offerings in Malaysia are similar to those in Hong Kong, but with a governmental agency (i.e. Securities Commission) constraining the offering prices. As in Singapore and Hong Kong, over-subscribed issues are allocated on a pro rata basis (see also Dawson 1987). Usually, it takes less than six weeks from the last date of application for the IPOs to be listed or traded on the stock exchange.

The phenomenon of IPO under-pricing in Malaysia apparently requires a re-examination as a new trend seems to be emerging. In a recent study by Loughran *et al.* (2008) which covers the period of 1980 to 2006, the initial returns of Malaysian IPOs are reported to have dropped substantially to 69.6 per cent. A closer look at the trend indicates that the lower returns are attributes of the more recent years. That is, while the initial returns are still high (94.91%) for the period of 1990-1998 (Yong and Isa 2003)[1], the figures dropped to 37.23 per cent for the period of 1999-2003 (Yong 2007b). Given this background, this study seeks to record the level of under-pricing of IPOs in Malaysia over a more recent period than earlier

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[1] The initial returns reported in Hiau Abdullah and Mohd (2004) for the same period of 1990 to 1998 is slightly lower (79 per cent) practically due to the smaller sample size of 70 Malaysian IPOs.

studies cited above. IPOs are examined in the present study over the period from January 1999 to December 2007, which represents Malaysian stock market in its tranquil period in the aftermath of the 1997 Asian Financial Crisis. The second objective focuses on the possible factors which might have contributed to the levels of under-pricing recorded. The focus is on the company size and demand effect factors as well as type of offer (Kim *et al.* 1995). We hypothesise that the larger the size of the company, the smaller is the return to the investors, and that the higher the demand for the new issues, the larger is the return to the investors. In addition, this study also takes up one of the unresolved issues in the Asian IPOs (Yong 2007a), namely the size of the IPOs. As size of offer proxies the supply of the IPOs, we hypothesise that it affects initial returns negatively, considering that pressure on first trading day prices is less intense as more subscriptions (demand) can be fulfilled. Another issue that seems to be overlooked in the past studies is the potential impact of market timing in IPO offerings. Given the recent evidence of seasonality effect in Malaysian stock markets (Pandey 2002; Abdul Rahim and Mohd Nor 2007), we posit that the choice of month for listing the IPOs may have some impact on the prices on the first listing day of the IPOs. More importantly, this study could be the first of its kind to focus only on IPOs issued by Shariah-compliant companies and examines whether Shariah-compliant rules would alter the initial return patterns of the IPOs.

1.3 Shariah-Compliant IPOs

Basically, the rules of Islam or Shariah forbid any element of (i) *riba* or interest, (ii) *gharar* or uncertainty, and (iii) *maisir* or gambling in business transactions. When applied on investment, debt instruments for instance have been carefully restructured to generate interest-free Islamic bonds which are more commonly known as *sukuk*. Equity instruments[2] on the other hand must pass two set of filters (see Hakim and Rashidian 2004; El-Gamal 2000; Hayat 2006; OICU-IOSCO 2004) to be considered Islamically permissible investment. The first filter requires that the primary business activities of the company must be legitimate or *halal*.[3] The second filter requires that the financial management of the company must be free from *riba* (interest) and impurities. Due to difficulty in monitoring the use of free cash and interest-free debts among the companies, these rules are somewhat compromised by imposing several ratios.[4]

To a great extent, the first filter of Shariah-compliant investment is consistent with "socially responsible" investment in developed markets (Bauer *et al.* 2005; Hakim and Rashidian 2004; Hayat 2006; Jin *et al.* 2006). Such responsible investment quality is further reinforced by the second filter particularly on the use of debt capital as it implies that

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Investment in equity has been approved by the Council of the Islamic Fiqh (CIFA) in 1993 (Naughton and Naughton 2000).

Equity investments are considered illegitimate or *haram* if the primary business activities of the companies involve alcohol, tobacco, pork-related products, conventional financial services (banking, insurance, etc.), weapons and defense, and/or entertainment (hotels, casinos/gambling, cinema, pornography, music, etc).

Shariah-compliant companies must abide by the following criteria: (i) debt to total asset ratio of not more than 33 per cent, (ii) impure plus non-operating interest income to revenue ratio of not more than 5 per cent, and (iii) accounts receivable to total asset ratio of not more than 45 per cent.

Shariah-compliant firms should exhibit lower financial risks. A study by Hakim and Rashidian (2004) provides early support for this proposition as it finds that the Sharpe ratio (risk per unit of return) for DJIM US is less than its generic counterpart, Wilshire5000 Index. Other studies which conduct analysis specifically on socially responsible investments (Bauer *et al.* 2005; Jin *et al.* 2006), however, find that such labeling does not alter risk-return patterns. Further reference and comparison are rather difficult because existing studies on Islamic equity investment is still limited. While providing new evidence to the existing literature carries its own significance, this study is also motivated by the importance of Shariah-compliant status of Malaysian companies. This is proven by the fact that these companies apply for the Shariah-compliant status prior to the issuance of IPOs (Securities Commission 2007), suggesting that the status carries some weight for the targeted investors.

In brief, we hypothesise that if Shariah screening criteria serves as an additional monitoring mechanism as is the case for socially ethical or responsible investment (Bauer *et al.* 2005; Jin *et al.* 2006), then the status could be interpreted as a signal for lower risk and accordingly lower returns to its investors. On the other hand, attaining the status could be a strategy to grab opportunities or bandwagon effect from the growing intrest in Islamic investment and growing trend for international or global funds in Islamic equities. In this case, the status ensures membership of the IPOs in the increasingly popular Shariah-compliant equity investments which in turn create additional pressure on prices and therefore higher returns on these IPOs investment. The rest of this paper is organised as follows. Section 2 presents the data and methodology employed in this study. Section 3 reports and discusses the results and Section 4 concludes and discusses the implications.

2. Data and Methodology

The sample includes all IPOs listed on the Main Board, Second Board and MESDAQ of Bursa Malaysia from January 1999 to December 2007. IPOs in Malaysia are basically issued either in the form of a public issue, offer for sale, or combination of these two. Public issue refers to new shares of stocks offered to the public for the first time and therefore results in an increase in the paid-up capital of the issuing company. Offer for sale refers to shares that are already sold to the original stockholders, who in turn offer their shares for sale to the public. Accordingly, there is no change in the paid-up capital of the issuing company as the proceeds from sale go to the original owner. The purpose of offer for sale is to restructure the ownership structure of the company in line with the government's rules and regulations. Other less commonly issued IPOs are offers like private placement, restricted offer for sale, restricted public issue, restricted offer for sale to eligible employees, and restricted offer for sale to and restricted issue to Bumiputera investors. In the spirit of Yong (2007b), this study excludes IPOs that undertake only these types of offer.

The final selection of sample IPOs included in this study also depends on availability of data on offer, opening and closing prices, oversubscription ratio, units offered, types of offer, and listing month and board. These criteria provided us with a pool of 386 IPOs before we finally screened out IPOs that were issued by non Shariah-compliant companies and ended up with 333 Shariah-compliant IPOs. This 86.27 per cent representation is consistent with the percentage of Shariah-compliant companies currently listed in Bursa Malaysia (Securities Commission 2007). The data for this study is compiled from *Investors Digest*,

Bursa Malaysia, and websites of various securities management firms such as OSK and Malaysian Investment House (MIH) as well as *The Star*. The classification of IPOs into Shariah and non-Shariah-compliant issues is based on the list of Shariah-compliant companies published by Securities Commission (2007).

The initial returns (*IPORTN*) of the *i*th IPO is calculated in the following manner:

$$IPORTN_i^o = \frac{P_{i,o} - P_{i,l}}{P_{i,l}} x100 \tag{1a}$$

$$IPORTN_i^c = \frac{P_{i,c} - P_{i,l}}{P_{i,l}} x100 \tag{1b}$$

where P^l is the issue's offer price, P^o is the opening price and P^c is the closing price on the first listing day of the IPOs. Where there is a different offer price between retail and institutional investors, weighted-average of the offer prices is used. As presented in Table1, there are some slight differences in the characteristics of the IPOs issued by Shariah-compliant companies. While the overall averages suggest that IPOs of Shariah companies are smaller in size, they are only slightly more oversubscribed and barely show any difference with respect to returns compared to the all IPOs in general.

Given the limited evidence on Shariah IPOs, this study relies on prior studies on general IPOs as far as predictor variables are concerned. As stated in the earlier section, one such factor is the demand effect (*DEMAND*) which is proxied by the oversubscription ratio. Following Yong (2007b), the effect of the issuing company size (*COSIZE*) will be approximated based on the board of listing. The Main Board requires companies to have a minimum issued and paid-up capital of RM60 million and therefore represent large and least risky companies. Companies listed on the Second Board are required to have a minimum issued and paid-up capital of RM40 million and therefore may be considered medium in both size

Table 1. Characteristics of sample IPOs selected for the study(1999-2007)

Listing	Popu-lation		Offer size (mill)		Over-subscription		IPORTNᵒ (%)		IPORTNᶜ (%)	
Year	ALL	Shariah	ALL	Shariah	ALL	Shariah	ALL	Shariah	ALL	Shariah
1999	21	20	15	50.41	23.46	8.48	7.58	32.14	34.89	34.86	37.94
2000	38	38	32	25.38	24.18	32.15	31.85	58.10	59.64	58.17	59.47
2001	20	20	20	95.54	95.54	2.98	2.98	17.02	17.02	19.86	19.86
2002	51	49	42	133.64	77.78	16.82	16.76	25.38	25.01	19.13	19.88
2003	58	54	49	66.84	29.31	31.80	34.48	46.87	49.37	45.10	47.82
2004	72	67	55	54.68	63.79	59.89	56.82	36.60	29.62	38.35	30.40
2005	79	75	64	48.89	28.78	29.78	31.01	18.47	20.15	15.86	16.51
2006	40	39	37	20.42	16.66	30.69	32.20	21.72	22.92	20.03	21.19
2007	28	24	19	56.33	57.61	45.26	52.80	29.08	35.35	29.47	37.24
Sum/Ave	407	386	333	60.93	44.40	32.44	32.70	31.99	32.04	30.90	30.79

Notes: Figures in columns 2 to 4 represent sum whereas other columns are average. *IPORTNᵒ* = Equation (1a) and *IPORTNᶜ* = Equation (1b).

and riskiness. MESDAQ companies on the other hands represent the smallest and most risky companies (issued and paid-up capital of at least RM2.0 million). *COSIZE* takes the value 1, 2 and 3 if the IPO is listed on Main Board, Second Board and MESDAQ, respectively. The size of the IPOs (*OFSIZE*) is obtained by multiplying the offer price and the total units of IPOs offered. Seasonality effect on IPOs initial returns is examined by creating a dummy variable (*Dseason*) that takes a value of 1 if the listing month is February or December and zero otherwise. Type of offer is 1 if the offer is offer for sale, 2 if it is a public issue and 3 if it is a combination of Type 1 and 2. To quantify the role of the selected predictor variables on initial returns of IPOs, this study employs cross-sectional multiple regressions which is stated in the following equation:

$$IPORTN_i = \alpha + \beta_1 OFSIZE_i + \beta_2 DEMAND_i + \beta_3 COSIZE_i + \beta_4 OFTYPE_i + \beta_5 Dseason_i + \varepsilon_i \qquad (2)$$

3. Results and Discussion

Table 1 reports the characteristics of both the sample IPOs selected for this study, that is, issued by Shariah-compliant companies as well as those IPOs issued by non Shariah-compliant companies. To set the stage, we report in column 'ALL' the return profiles of all IPOs in general which clearly indicate a declining trend in the level of initial returns of IPOs in Malaysia. That is, the average initial returns of all 386 IPOs issued from 1999 to 2007 is 31.44 per cent. This figure is much lower compared to 69.6 per cent reported in Loughran *et al.* (2008) for the period of 1980 to 2006 but very much consistent with 33.23 per cent reported in Yong (2007b) for the period of 1999 to 2003. The finding of an earlier study by Yong and Isa (2003) however suggests that such a large difference in initial returns reported in Loughran *et al.* (2008) is contributed by the high initial returns recorded for IPOs issued in earlier periods. The former reports that the average initial returns are 94.91 per cent for the period of 1990 to 1998, with three years (1994, 1996 and 1997) reporting overwhelming high returns of more than 100 per cent. From earlier years, the initial returns of Malaysian IPOs are reported to be 166.6 per cent (Dawson, 1987), 167.4 percent (Yong, 1991) and 144.6 per cent (Ismail *et al.*, 1993).

We next concentrate on the return profiles of Shariah-compliant IPOs reported in column 'Shariah' in Table 1. Note that IPOs issued by Shariah-compliant companies report average initial returns of 31.42 per cent which barely differs from that of the overall average initial returns. While slightly differing in terms of offer size, the Shariah IPOs again show similarity to the general IPOs with respect to the over-subscription ratio. These results are somewhat expected since Shariah-compliant IPOs represent 86 per cent of all IPOs issued during the study period. This similarity has an important implication in that it allows us to compare the findings of our study with those of the earlier studies even if the rest of this study will focus only on Shariah-compliant IPOs.

Table 2 reports the descriptive statistics of both measures of initial returns (*IPORTN^O* and *IPORTN^C*), over-subscription ratio and size of offer for the sample IPOs, by board of listing. Of 333 Shariah-compliant IPOs used in this study, 93 are listed on the Main Board, 136 are listed on the Second Board while the remaining 104 issues are listed on MESDAQ. About 50 per cent of the issues in each board are of type 2 offer (i.e. public issue only),

Table 2. Descriptive statistics of IPOs highlighting profiles by types of offer and board of listing

	N	Min	Max	Mean	Std.Dev	t-stats	p-value
Panel A. Main Board IPOs							
Offer size							
1-Offer for sale	11	5.8E+06	2.0E+09	2.4E+08	5.9E+08	1.357	0.204
2-Public issue	39	5.5E+06	9.5E+08	8.4E+07	1.9E+08	2.819	0.008
3-Combination	43	1.3E+07	1.4E+09	1.2E+08	2.5E+08	3.160	0.003
All Main Board	93	5.5E+06	2.0E+09	1.2E+08	2.9E+08	4.006	0.000
Over-subscription							
1-Offer for sale	11	0.37 times	49.03 times	14.41 times	16.83	2.840	0.018
2-Public issue	39	-0.36 times	80.19 times	18.34 times	19.12	5.992	0.000
3-Combination	43	-0.94 times	201.50 times	22.57 times	35.03	4.224	0.000
All Main Board	93	-0.94 times	201.50 times	19.83 times	27.39	6.983	0.000
IPORTN°							
1-Offer for sale	11	0	48.80%	17.21%	16.02%	3.563	0.005
2-Public issue	39	-12.44%	137.50%	28.30%	33.10%	5.340	0.000
3-Combination	43	-24.24%	76.87%	18.57%	25.20%	4.832	0.000
All Main Board	93	-24.24%	137.50%	22.49%	28.20%	7.691	0.000
IPORTN°							
1-Offer for sale	11	-1.00%	60.00%	14.75%	19.56%	2.501	0.031
2-Public issue	39	-14.29%	139.02%	28.38%	38.34%	4.623	0.000
3-Combination	43	-28.89%	70.34%	15.34%	23.77%	4.232	0.000
All Main Board	93	-28.89%	139.02%	20.74%	30.81%	6.491	0.000
Panel B. Second Board IPOs							
Offer size							
1-Offer for sale	5	6.9E+06	2.2E+07	1.2E+07	6.7E+06	4.110	0.015
2-Public issue	58	2.3E+06	3.4E+07	1.3E+07	5.8E+06	16.624	0.000
3-Combination	73	5.8E+06	2.2E+08	2.7E+07	2.7E+07	8.711	0.000
All Second Board	136	2.3E+06	2.2E+08	2.0E+07	2.1E+07	11.298	0.000
Over-subscription							
1-Offer for sale	5	5.49 times	47.74 times	18.73 times	17.23	2.431	0.072
2-Public issue	58	-0.73 times	70.15 times	21.65 times	19.69	8.373	0.000
3-Combination	73	-0.66 times	377.96 times	26.36 times	47.42	4.750	0.000
All Second Board	136	-0.73 times	377.96 times	24.07 times	37.12	7.562	0.000
IPORTN°							
1-Offer for sale	5	34.67%	73.91%	50.08%	15.32%	7.310	0.002
2-Public issue	58	-26.67%	133.33%	37.04%	36.33%	7.764	0.000
3-Combination	73	-21.48%	144.44%	36.33%	32.43%	6.968	0.000
All Second Board	136	-26.67%	144.44%	26.45%	34.12%	10.877	0.000
IPORTN°							
1-Offer for sale	5	27.78%	58.57%	41.07%	14.06%	6.530	0.003
2-Public issue	58	-38.50%	194.12%	38.84%	45.42%	6.512	0.000
3-Combination	73	-33.33%	145.88%	24.92%	36.90	5.771	0.000
All Second Board	136	-38.50%	194.12%	31.45%	40.66%	9.021	0.000

Table 2. Continued from previous page

Panel C. Mesdaq IPOs (All type 2)							
Offer size	104	8.4E+05	1.8E+08	8.9E+06	1.8E+07	4.928	0.000
Oversubscription	104	0.02 times	277.01 times	55.51 times	63.60	8.902	0.000
$IPORTN^O$	104	-48.89%	194.12%	41.10%	51.44%	8.147	0.000
$IPORTN^C$	104	-51.11%	263.64%	39.27%	60.12%	6.661	0.000
Panel D. All IPO sample							
Offer size	333	8.4E+05	2.0E+09	4.5E+08	1.6E+08	5.095	0.000
Oversubscription	333	-0.94 times	377.96 times	32.71 times	47.57	12.547	0.000
$IPORTN^O$	333	-48.89%	194.12%	32.12%	39.58%	14.809	0.000
$IPORTN^C$	333	-51.11%	263.64%	30.90%	45.91%	12.283	0.000

Notes: Only type 2 IPOs are allowed for IPOs to be listed on MESDAQ. Symbols ***, **, and * indicate significance at 1% 5% and 10% levels, respectively. $IPORTN^O$ = Equation (1a) and $IPORTN^C$ = Equation (1b).

except for MESDAQ which only allows this type of offer. With respect to the profiles of the different types of offer, Panel A of Table 2 indicates that Type 3 offer reports the largest average offer size (MYR120 million) and highest over-subscription ratio (22.57 times). Nonetheless, it is the Type 2 offer that by far reports the highest initial returns ($IPORTN^O$ = 28.30% and $IPORTN^C$ = 28.38%).

As expected, the average offer size of the Second Board IPOs is smaller than that of the Main Board. However, unlike that for Main Board IPOs, the average size for Second Board IPOs is significantly different from zero. Similar to Main Board IPOs, Panel B of Table 2 shows that Type 3 offer also reports the largest average offer size (MYR27 million) and highest over-subscription (26.36 times). Only this time, the highest average initial returns are reported for Type 1 offer ($IPORTN^O$ = 50.08% and $IPORTN^C$ = 41.07%). It is rather interesting to note that only 5 Type 1 IPOs are offered by Second Board companies throughout the 9-year study period despite the large number of IPO issuances (N=136 IPOs).

Another interesting result in Table 2 is the highest over-subscription ratio (377.96) reported for IPOs issued by Aturmaju Resources for listing on the Second Board in February 2004. This Type 3 IPO was offered at MYR1.20/share for total proceeds of MYR12,064,800. The extremely high demand for the issues is reflected by the high opening (MYR2.04) and closing (MYR2.83) prices on the first day of trading, yielding its investors up to 135.83 per cent initial returns. Compared to the IPOs of the same category or listing board, such performance is apparently at the high end. As reported in Panel B of Table 2, the average initial returns of Second Board Type 3 IPOs is within the range of 26.45-36.33 per cent while for the overall sample, it is within the 24.92-31.45 per cent range. Panel D of Table 2 provides descriptive statistics of all sample IPOs used in this study, the details of which may be elaborated in a relative sense using results of independent *t*-tests reported in Table 3. For simplicity of comparison, we use Type 2 IPOs as the benchmark. Type 2 IPOs record the smallest average offer size (MYR24.6 million) but they are only significantly smaller than Type 3 IPOs. The over-subscription ratio is significantly higher for Type 2 IPOs compared to Type 1 and Type 3 IPOs and the demand effect is transformed into higher initial returns.

Table 3. Results of independent *t*-tests for differences in IPO profiles (1999-2007)

Panel A: Mean differences by types of offer

Measures	N	Mean	Std.Dev.	Public Issue	Combination
Offer size					
1=Offer for sale	16	MYR1.69E+08	4.92E+08	1.174 (0.259)	0.867 (0.399)
2=Public issue	201	MYR2.46E+07	8.74E+07		-2.321 (0.022)**
3=Combination	116	MYR6.18E+07	1.59E+08		
Over-Subscription					
1=Offer for sale	16	15.76 times	16.50	-4.169 (0.000)***	-0.842 (0.401)
2=Public issue	201	38.53 times	50.74		2.528 (0.012)**
3=Combination	116	24.95 times	43.12		
$IPORTN^{O}$					
1=Offer for sale	16	27.48%	21.93%	-1.577 (0.127)	0.507 (0.613)
2=Public issue	201	37.44%	44.39%		3.316 (0.001)***
3=Combination	116	23.53%	30.05%		
$IPORTN^{C}$					
1=Offer for sale	16	22.98%	21.60%	-2.148 (0.039)**	0.189 (0.850)
2=Public issue	201	37.03%	52.41%		3.266 (0.001)***
3=Combination	116	21.37%	32.87%		

Panel B: Mean differences by board of listing

Measures	N	Mean	Std.Dev.	Second Board	Mesdaq
Offer size					
1=Main Board	93	MYR1.20E+08	2.88E+08	3.313 (0.001)***	3.699 (0.000)***
2=Second Board	136	MYR2.05E+07	2.11E+07		4.421 (0.000)***
3=Mesdaq	104	MYR8.93E+06	1.85E+07		
Over-subscription					
1=Main Board	93	19.83 times	27.37	-0.940 (0.348)	-5.208 (0.000)***
2=Second Board	136	24.07 times	37.12		-4.491 (0.000)***
3=Mesdaq	104	55.51 times	63.60		
$IPORTN^{O}$					
1=Main Board	93	22.49%	28.20%	-2.259 (0.025)**	-3.191 (0.002)***
2=Second Board	136	31.83%	34.13%		-1.588 (0.114)
3=Mesdaq	104	41.10%	51.44%		
$IPORTN^{C}$					
1=Main Board	93	20.74%	30.81%	-2.265 (0.024)**	-2.763 (0.006)***
2=Second Board	136	31.45%	40.66%		-1.141 (0.255)
3=Mesdaq	104	39.27%	60.12%		

Panel C: Mean differences by listing month

Measures	N	Mean	Std.Dev.	Non-Seasonal Month
Offer size				
1=Seasonal	44	MYR2.6E+07	3.67E+07	-0.847 (0.398)
0=Non-seasonal	289	MYR4.7E+08	1.70E+08	

Table 3.Continued

Over-subscription					
1=Seasonal	44	44.32 times	61.61		1.743 (0.082)*
0=Non-seasonal	289	30.94 times	44.92		
IPORTN^O					
1=Seasonal	44	39.58%	40.68%		1.344 (0.180)
2=Non-seasonal	289	30.98%	39.35%		
IPORTN^C					
1=Seasonal	44	42.34%	54.29%		1.535 (0.131)
2=Non-seasonal	289	29.16%	44.34%		

Notes: Listing month is "seasonal" if listing is in February or December, otherwise "non-seasonal". Figures in the 5th and 6th columns are the *t*-statistics and *p*-values. Symbols ***, ** and * indicate significance at 1, 5 and 10% levels, respectively.

In the case of *IPORTN^O*, the initial returns on Type 2 IPOs are always higher than the other types, even though only significantly in the case of Type 3 IPOs. However, in the case of *IPORTN^C*, the Type 2 IPOs appear to significantly outperform Type 1 and Type 3 IPOs.

Panel B of Table 3 reports the differences between IPOs by board of listing. As expected, the offer size of the IPOs is significantly positively related to the board of listing. The average size of Main Board IPOs is significantly larger than that of Second Board and MESDAQ IPOs while the mean size of Second Board IPOs is significantly greater than MESDAQ IPOs. Despite the smaller size, MESDAQ IPOs report an over-subscription ratio which average is significantly higher than that of the Main Board and Second Board. Again, the high over-subscription ratio is transformed into higher initial returns. Both measures of initial returns show that highly over-subscribed MESDAQ IPOs have returns that are significantly higher than those of the Main Board IPOs. The returns of MESDAQ IPOs are also higher than those of Second Board, but insignificantly. The Second Board IPOs, even though their over-subscription ratio is not higher that of Main Board IPOs, also report initial returns that are significantly higher than the latter.

Another aspect that this study is interested in examining is evidence of market timing in the IPO market, that is, through month of listing when the returns on the IPOs will be realised by the investors. As reported in Panel C of Table 3, the size of IPOs listed in the seasonal month is on average smaller than those in the non seasonal month, with insignificant difference. The over-subscription ratio is significantly higher for listing in seasonal than in the non seasonal month. However, unlike earlier findings, such difference is not sufficiently significant to create an upward pressure on the prices in the first day the IPOs are listed. Consequently, initial returns are higher for IPOs listed in seasonal months, but the differences are not significant. Unlike the popular results from past studies (see Pandey 2002; Abdul Rahim and Mohd Nor 2007) which find evidence of abnormally high returns on stocks in February and December, our results (not reported) reveals that in the case of new stock issues, investors can only expect such high returns for listing in December (*IPORTN^O* = 53.11% and *IPORTN^C* = 40.22%).

Having set the profiles of potential predictor variables of initial returns on Shariah IPOs, we finally put the data through regression analyses to quantify the role of these variables. The results from using both measures of initial returns are reported in Table 4.

Table 4. Results of regressions of initial returns on selected predictor variables

Board	Constant	OSR	COSIZE	OFSIZE	OFTYPE	Dseason	Adj-R^2	D-W
Panel A: Dependent variable $IPORTN^O$								
All Sample	0.364 (3.18)***	0.003 (7.91)***	0.005 (0.189)	-2.51E-10 (-1.97)**	-0.069 (-1.90)*	0.042 (0.724)	0.198 (17.35)***	1.320
Main Board	0.275 (2.91)***	0.005 (4.74)***		-1.94E-10 (-2.12)**	-0.051 (-1.34)	0.017 (0.209)	0.232 (7.96)***	1.638
Second Board	0.539 (4.39)8***	0.003 (4.17)***		-8.72E-10 (-0.64)	-0.116 (-2.29)**	0.071 (0.923)	0.148 (6.88)***	0.901
Mesdaq	0.223 (3.31)***	0.003 (4.75)***		-7.78E-10 (-0.31)		0.012 (0.083)	0.163 (7.69)***	1.158
Panel B: Dependent variable $IPORTN^C$								
All Sample	0.366 (2.65)***	0.003 (5.94)***	0.009 (0.271)	-2.47E-10 (-1.61)	-0.077 (-1.75)*	0.093 (1.329)	0.129 (10.84)***	1.518
Main Board	0.302 (2.72)***	0.003 (2.90)***		-2.06E-10 (-1.91)*	-0.059 (-1.32)	0.031 (0.326)	0.109 (3.83)***	1.749
Second Board	0.547 (3.77)***	0.004 (4.62)***		-7.84E-10 (-0.48)	-0.130 (-2.17)**	0.060 (0.657)	0.160 (7.44)***	1.151
Mesdaq	0.223 (2.68)***	0.003 (3.10)***		-3.75E-10 (-0.12)		0.155 (0.868)	0.072 (3.65)**	1.352

Notes:

1. Abbreviations OSR = oversubscription ratio, COSIZE is company size defined as 1 = Main Board, 2 = Second Board, or 3 = MESDAQ, OFTYPE is offer type defined as 1= offer for sale 2 = public issue, or 3 = combination of 1 and 2, Dseason is a dummy variable that takes a value of 1 if the IPOs are listed either in February or December and zero otherwise, and D-W = Durbin-Watson statistics for autocorrelation tests. Variable OFTYPE is dropped from Mesdaq's regression model because only Type 2 IPO is allowed for these companies.

2. d.f. are 332, 92, 135, and 103 for all sample, Main Board, Second Board, and MESDAQ regression equations, respectively. Figures in parentheses are *t*-statistics or *F*-statistics and symbols ***, **, and * indicate significance at 1 5 and 10% levels, respectively.

3. The tolerance (T) and VIF are not reported but all independent variables show T ~ 0.90 and VIF ~1.00, indicating absence of collinearity problem.

Panels A and B indicate that only demand factor as proxied by over-subscription ratio has consistently a highly significant role in explaining variations in initial returns on IPOs, regardless of board of listing. Specifically, the coefficients of OSR are at least 2.9 standard errors from zero. The positive coefficient of listing board, which is our proxy for company size, is consistent with the patterns of average initial returns reported earlier in Panel B of Table 3 and earlier finding by Hiau Abdullah and Mohd (2004). Unlike this earlier study however, such patterns are lacking consistency to allow a significant role of listing board or company size in explaining initial returns. Unlike the demand effect hypothesis, the supply effect hypothesis is only marginally supported in this study. Specifically, the impact of offer

size (*OFSIZE*) is always negative as hypothesised, but it is only significant consistently in the case of Main Board IPOs. This result suggests that while larger size offers tend to produce lower initial returns, it is only in the case of Main Board IPOs that this relationship can be considered as a reliable trading rule. Compared to offer size, type of offer seems to have a greater role. The consistently negative coefficients suggest that higher returns are more common among IPOs in smaller number type of offer (2 or 1). Referring to the patterns of average initial returns in Panel A of Table 2, one may suggest that the high returns are more likely to be associated with IPOs of Type 2 (public issue).

To verify this proposition, we re-ran another regression analysis using a dummy variable (*D^{T2}*) that takes a value of 1 for Type 2 offer and zero otherwise. To conserve space, we only report the results from using the overall sample IPOs which are summarised as follows;

$$IPORTN^O = 0.182 - 2.3E\text{-}10(OFSIZE) + 0.003(DEMAND) - 0.004(COSIZE) + 0.075(D^{T2}) + \varepsilon$$
$$(3.119)^{***} \quad (-1.817)^* \qquad (7.996)^{***} \qquad (-0.133) \qquad (1.678)^*$$

$$\text{Adj-}R^2 = 0.197 \ (21.390)^{***}$$

$$IPORTN^O = 0.170 - 2.3E\text{-}10(OFSIZE) + 0.003(DEMAND) - 0.007(COSIZE) + 0.103(D^{T2}) + \varepsilon$$
$$(2.406)^{**} \quad (-1.482) \qquad (6.072)^{***} \qquad (-0.206) \qquad (1.889)^*$$

$$\text{Adj-}R^2 = 0.129 \ (13.290)^{***}$$

The results show that the coefficients of *D^{T2}* are always significant (even if only at conventional level) regardless of measures of initial returns explained. These results confirm that the high initial returns can consistently be associated with Type 2 offer, specifically public issue.

4. Conclusion and Implications

This paper examines the initial return profiles of Malaysian Shariah-compliant IPOs issued in the aftermath of the 1997 Asian financial crisis. The preliminary results show that the difference between initial returns of IPOs in general and Shariah-compliant companies are barely noticeable. These initial returns also tend to be much smaller compared to those prior to the 1997 crisis and quite similar to those in more mature markets. The results of the regression analyses indicate that initial returns of IPOs issued by the Shariah-compliant companies are explained by the same factor that has been found to explain initial returns of general IPOs, specifically over-subscription ratio. Since the impact of size of offer is only marginally significant, it is only appropriate at this point to suggest that under-pricing of Shariah-compliant IPOs in Malaysia is driven by demand rather than supply factors. Similarly, given that the impact of type of offer is only significant at conventional levels, we would suggest that further studies be conducted before any strong conclusion can be offered regarding its contribution to initial returns. Overall, the results of this study suggest that despite the emphasis given to the classification of Shariah-compliant companies, the status does not alter the patterns of initial returns of IPOs in Malaysia. This finding is somewhat expected in the case of Shariah IPOs in Malaysia merely because more than 86 per cent of the listed companies are Shariah-compliant. Still, the initiative of this study in examining Shariah-compliant IPOs must be continued in order to verify whether such a conclusion holds when the group of new issues are evaluated in a broader perspective. For instance, in

addition to using other variable such as market value of equity to better proxy for firm size, future studies need to address the limitations of this study which does not consider other important factors, such as the number of days from offering to listing, market conditions and financial variables, that in other markets have been identified to have an impact on initial returns of IPOs. The aftermarket behaviour of Shariah-compliant IPOs is also an interesting issue to explore.

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