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Does Growth Opportunity Matter In Explaining The Oversubscription Phenomena Of Malaysian IPO?

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Abstract

The oversubscription ratio of IPO prior to listing is an anomaly in countries that employed fixed price mechanism. According to the signaling theory argument, IPOs of good quality attract subscription from investors. An analysis was made to observe whether IPOs with growth opportunity (good quality) account for oversubscription. Using multivariate regression, it is found that there is a significant negative relationship between growth opportunity and oversubscription ratio. A significant negative coefficient of growth opportunity suggests that companies with high growth opportunity tend to have low risks and are not overly subscribed by investors as they provide low initial returns.

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Keywords: Oversubscription; growth; signaling; IPOs; size; leverage; institutional investors; initial returns.

1. Introduction

In Malaysia, the phenomenon of high oversubscription ratio (OSR) of initial public offerings (IPOs) is noticeable compared to other markets (Low & Yong, 2011; Taufil-Mohd, 2007). In this paper, we report an average OSR of 28.71 times for a sample of 204 Malaysian IPOs during the period 2005 to 2014. This figure is lower than the average OSR of 33.59 times reported by Low and Yong (2011), of 43.71 times as documented by Yong and Isa (2003) and an of 44

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times as stated by Dawson (1987). Though the OSR is reducing, however the anomaly still exists. OSR, which is associated with investors' demand, is an essential element in the success of an IPO due to its role in affecting the IPOs' aftermarket performance (Agarwal, Liu, & Rhee, 2008; Chowdhry & Sherman, 1996; Low & Yong, 2011). A number of studies have examined the factors that attract investors to subscribe to IPOs (Abdul-Rahim & Che-Embi, 2013; Agarwal et al., 2008; Chowdhry & Sherman, 1996; Chung et al., 2005; Low & Yong, 2011; Tajuddin, Mohd-Rashid, Abdullah, & Abdul-Rahim, 2015).

Normally, the investors would invest in a company that remains competitive and has growth potential, which make the company more profitable and their investment more secure (Bhabra & Pettway, 2003). Chung, Li, and Yu (2005) were of the view that if investors are optimistic of the competitiveness and future growth of a particular IPO, they would be keen to subscribe to the IPOs. Growth opportunities reflect that a firm is expanding and increasing its market share. Therefore in issuing an IPO, growth is an important criteria for a company and it must remain attractive to investors and analysts. To issue IPOs in Malaysia, information on the utilization of the gross proceeds must be fully disclosed in the prospectus, as required by the Securities Commission (SC). Some firms go for listing to obtain funds for liquidity purposes, to pay debts and for growth opportunities, such as capital injection, expansion and research and development (R&D). This study argues that disclosure of information in the prospectus might signal the quality of IPOs that could influence the demand for the shares as informed investors tend to subscribe to good quality issues. This is further supported by Leone, Rock, and Willenborg (2007) who examined the disclosure of intended use of proceeds and IPO underpricing. They noted that the disclosure of use of IPO proceeds would assist investors to analyze the value of the stock after listing. Meanwhile, Abdul-Rahim and Che-Embi (2013) found that growth motive and first-day returns have a positive relationship, i.e., growth motive could create excess demand for the IPOs. Their findings showed that the utilization of proceeds for growth provides a signal of the future prospects of a company. On the other hand, Vong (2006) was of the view that when investors subscribe to the IPOs, it shows that they believe in the firm's future prospects. Therefore, this study argues that if investors are optimistic of the growth potential of firms, then it is expected that they would be attracted to subscribe to the IPOs. However, no studies have been carried out to corroborate the relationship between growth opportunity and OSR empirically. This study is expected to shed light on the influence of growth opportunity in triggering excess demand. There is an earlier study on investors' demand (OSR) carried out by Low and Yong (2011). However, the determinant of OSR was very much focused on information related to firm's actions during the IPO process. Therefore, studies on OSR are still in the preliminary stages.

This study is triggered by Chung et al. (2005)'s argument that one of the reasons for investors to subscribe to the IPOs is the growth prospects of firms. This behavior implies that information on prospects of growth is more likely to draw investors to purchase an IPO and accordingly it would affect the level of OSR. Therefore, this study extends the previous study by Low and Yong (2011) by examining the influence of growth opportunity on OSR of Malaysian IPOs. The rest of this paper discusses the literature, methodology, findings and conclusions of this study.

2. Literature Review

As mentioned, one of the main reasons for firms to have higher OSR is that it signals the firm's future value. The signaling theory proposed by Akerlof (1970) argues that insiders are better informed about certain products of their firm. Therefore, they take the opportunity to sell low quality products at higher prices. Thus, uninformed investors get trapped into the information asymmetry problem (Leland and Pyle, 1977). The signaling models were formalized by Allen and Faulhaber (1989) and Welch (1989), who pointed out that firms of good quality receive very good response from investors for their respective IPOs. When the IPOs attract a large number of subscribers, the fair value of the firm would increase due to the increase in demand for the IPOs. Therefore, investors' demand is a vital component in influencing the success of the IPOs.

The independent variable of this study is growth opportunity. According to Chung et al. (2005) who argue that if investors are optimistic of the growth of the IPOs, it would influence the return of the IPOs. Their findings show that growth opportunities are positively related with the initial return of IPOs. Thus, the higher the demand from investors would increase the subscription rate subsequently reflects higher initial returns. Apart from growth opportunity, this study also acknowledges that other factors might influence the OSR such as firm size, debt, institutional investors, retail investors, risks and market conditions.

Based on empirical studies, Benveniste and Busaba (1997) and Mohd-Rashid, Abdul-Rahim, Yong and Mohd-Nor (2013) showed that issue size does make a difference when demand from investors is solid. However, Chowdhry and Nanda (1996) pointed out that high demand for IPOs are more often associated with small offer price (small companies), which are largely underpriced. Thus, we argue that size of the company, proxy by market capitalization, provides a signal to investors when making decisions to subscribe to the IPOs. Meanwhile, firms with high debt levels would experience financial distress costs when the profits from the investments are lower than the operating cash flow (Myers, 2001). Debt could signal the risks of the firms. High debt levels would denote threat of financial distress and accordingly investors might be reluctant to subscribe.

Involvement of institutional investors (informed investors) could be an indication that the firm has good future prospects. The winner's curse theory suggests that investors face less adverse selection problems if the IPOs have the involvement of largely informed investors (Rock, 1986). It implies that the demand from investors for the particular shares would increase if the proportion of shares held by institutional investors is large. According to Rock (1986), shares with large allocation to retail investors become a curse to uninformed investors and the shares would generate negative returns as they are overpriced. Therefore, investors tend not to subscribe to shares of firms with large allocation to retail investors.

Normally to attract adequate investors' subscriptions, the high risk issuer would fix a lower IPO offer price. Bradley and Jordan (2002) used IPO offer price as a reciprocal for the IPO risk. Their finding showed that there is a significantly positive relationship between offer price and initial returns. Beatty and Welch (1996) argued that investors are attracted to subscribe to IPOs of small companies as they normally have a lower offer price. Thus, if the lower offer price (high risk firms) is used to signal the quality of the IPOs, it would attract investors. Meanwhile, investors' optimism is also influenced by the hot market condition during the IPO listing. This argument is further supported by Ma and Faff (2007), Mohd-Rashid, Abdul-Rahim and Yong (2014), who affirmed that the market conditions play a role in influencing the investors' interest. Hence, market conditions not only affect the number of successful listings but are also vital in determining the demand for IPOs.

3. Data and Methodology

The sample of this study comprises 204 IPOs listed on Bursa Malaysia between 2005 and 2014. The data on IPOs were obtained from the Bursa Malaysia website, company prospectuses and The Star-online, whereas oversubscription ratios were obtained from the Malaysian Issuing House and various newspaper reports. To examine the impact of the growth opportunity on OSR, a cross-sectional regression model is applied as follows:

$$OSR_{i=} a + \beta_1 GOP + \beta_2 MKTCAP_i + \beta_3 DEBT_i + \beta_4 RETAIL_i + \beta_5 PRIVATE_i + \beta_6 RISK_i + \beta_7 MKTCON_i + \varepsilon_i \quad (1)$$

where OSR denotes oversubscription ratio, GOP the growth opportunity, and market capitalization ($MKTCAP$), debt ratio *(DEBT),* retail offering *(RETAIL)*, institutional investor involvement ($PRIVATE$), IPO risk ($RISK$), as well as market condition ($MKTCON$).

The dependent variable in this study is OSR which indicates the investors' demand and it measures the number of times IPOs are oversubscribed. A positive OSR indicates that the IPOs are demanded more than they are offered while a negative OSR implies lower investors' demand. The formula for OSR is as follows:

$$OSR = \frac{Total\ number\ of\ shares\ demanded\ from\ an\ IPO}{Total\ number\ of\ shares\ offered\ in\ an\ IPO}$$

The main independent variable is growth opportunity. This study defines growth opportunity as the utilization of the IPO proceeds for an investment opportunity, as suggested by Abdul-Rahim and Che-Embi (2013). Therefore, this study measures growth opportunity as the percentage of proceeds utilized for investment opportunities over total proceeds. Growth opportunity (*GOP*) is determined as follows:

$$GOP = \frac{Utilization\ of\ proceeds\ for\ investment\ opportunity}{Total\ proceeds}$$

This study also controls for other variables that might have an influence on OSR. The control variables (CV) in this study include market capitalization *(MKTCAP)* which is derived from the total number of enlarged issued and paid-up capital multiplied by the offer price to proxy firm size. *DEBT* is the debt ratio which is derived by dividing total liabilities with the total assets. *RETAIL* is the percentage of retail offering over the total number of shares issued. *PRIVATE* is the percentage of institutional offering over the total number of shares issued. *RISK* of the IPO is calculated as the reciprocal of the offer price, as suggested by Bradley and Jordan (2002). The sixth variable, prior market conditions, also influences the oversubscription ratio. As indicated by Agarwal et al. (2008), a hot market condition could result in OSR. To represent the market condition (*MKTCON*), we use the average of three months' EMAS index returns prior to IPO listing, as suggested by Mohd-Rashid et al. (2014).

4. Results and Discussion

Table 1 presents the descriptive statistics of the sample. The average OSR is 28.71 times and the minimum OSR is -0.50 times, indicating an undersubscription of 50% or subscription of only 50% of the overall issue while the maximum OSR is 315.17 times. This shows that OSR varies for each IPO issued in Malaysia.

Growth opportunity has a mean of 77.37%, with the lowest being 4.55% and the highest, 99.96%, implying most of the proceeds raised are to be used for investment purposes. Market capitalization, which represents company size, has a mean of RM639 million, with the lowest being RM19.9 million and the highest, RM40.4 billion. There is a large difference in the size of the companies that go for listing. On average, debt to assets ratio is 41.17%, with the lowest ratio at 1.73% and the highest at 114.43%, which might have been caused by accumulated losses of equity on the balance sheet.

The average allocation of IPOs to uninformed investors, normally associated with retail investors is 16.21% and the highest percentage of IPOs to retail investors is 73.29%. Meanwhile, the average allocation of IPOs with the involvement of informed investors (institutional investors) is 62.93% and the highest is 96.30%, indicating that the demand for IPOs is mainly from this group of investors. The risk of the IPO is on average 1.84, up to a maximum of 8.33, which shows a large variance between companies that have high and low risks. For market condition, reflected by the average returns of the three months' EMAS index prior to the IPO listing, the average is 4.17% with the highest being 35.59% and the minimum, a negative 29.13%.

Table 1: Descriptive statistics of variables (January, 2005 to December, 2014).

Variable	Mean	Median	Std. dev.	Min.	Max.
Oversubscription ratio (times)	28.71	12.42	48.10	-0.50	315.17
Growth Opportunity (%)	77.37	82.20	16.63	4.55	99.96
Proceed (RM mil)	107.00	17.82	451.00	3.26	4,460.00
Market Capitalization (RM mil)	639.00	85.07	3,300.00	19.90	40,400.00
Debt to Asset (%)	41.17	40.69	21.24	1.73	114.43
Retail Offering (%)	16.21	14.69	10.31	0.00	73.29
Private Placements (%)	62.93	70.00	25.16	0.00	96.30
Initial Returns (%)	19.00	8.09	50.93	-70.70	404.17
RISK (ratio)	1.84	1.53	1.24	0.20	8.33
Offer Price (RM)	0.86	0.66	0.71	0.12	5.05
Market Condition (%)	4.17	3.76	9.93	-29.13	35.59

Note: Oversubscription ratio (OSR) is the number of times the IPOs are oversubscribed. Growth opportunity (GOP) is the percentage of proceed to growth. Market capitalization (MKTCAP) is the number of pre-IPO shares multiplied by the offer price. Debt to asset (DEBT) is the percentage of total liability to total assets. Retail offering (RETAIL) is the allocation of the issued to

public (uninformed) investors. Private placement (PRIVATE) is the allocation of the issued to the institutional (informed) investors. RISK is reciprocal of the offer price. Market condition (MKTCON) is the average return of EMAS Index, three months prior to listing.

Table 2 presents the correlation matrix between the variables. Most of the independent variables have a correlation of less than 0.5, except for MKTCAP and RISK which show a significant negative relationship of 0.526.

Table 2: Pearson's correlation matrix between variables.

	OSR	GOP	MKTCAP	DEBT	RETAIL	PRIVATE	RISK
GOP	0.013						
MKTCAP	-0.301***	0.010					
DEBT	-0.209***	-0.173**	0.304***				
RETAIL	-0.281***	-0.387***	-0.126	-0.056			
PRIVATE	0.246***	0.229***	0.136	-0.022	-0.452***		
RISK	0.413***	0.091	-0.526***	-0.249***	-0.214***	0.164**	
MKTCON	0.062	-0.051	0.131	-0.023	0.128	0.034	-0.097

Notes: ***, ** and * denote statistical significance at the 1%, 5% and 10% levels respectively. GOP is a growth opportunity. MKTCAP is market capitalization. DEBT is the percentage of total liability to total assets. RETAIL is the allocation of the issued to public (uninformed) investors. PRIVATE is the allocation of the issued to the institutional (informed) investors. RISK is the reciprocal of offer price. MKTCON is the average returns of EMAS Index three months prior to IPO listing.

Table 3 displays the mean differences between the high and low investor demand groups. The level of OSR differs substantially across the high and low investor demand groups. The high investor demand group has an OSR of 74.9 times compared to the low investor demand group, which is only 2.9 times. Meanwhile, the high investor demand group has growth opportunity of 75.2% as compared to the low investor demand group, which is 78.8%. Nonetheless, they are insignificantly different. The results also show that there is high investors' demand for low growth opportunity companies. It shows that investors are more interested in subscribing to IPOs with lower offer price and small market capitalisation. In addition, there is greater involvement from institutional investors but less participation from retail investors in high demand IPOs. Furthermore, a high risk ratio is associated with high demand IPOs. The mean differences for oversubscription ratio, growth opportunity, market capitalization, debt ratio, retail investors, institutional investors, risk and market condition between the high and low investor demand groups are all significant at the 5% level or less.

Table 3: Mean values between high-demand and low-demand IPOs.

	OSR (times)	GOP (%)	Market Cap. (RM mil)	Offer Price (RM)	Debt (%)	Retail (%)	Private (%)	Risk (ratio)	Market Cond. (%)
High-demand IPOs	74.9	75.2	74.1	0.53	38.4	12.2	71.2	2.6	5.54
Low-demand IPOs	2.9	78.8	1,330	1.06	43.7	16.9	58.1	1.4	2.96
mean difference	72.0	-3.6	-1,255.9	-0.53	-5.3	-4.7	13.1	1.2	2.58
t-statistic	8.3***	-1.3	-1.8*	-4.7***	-1.4	-3.0***	2.9***	5.4***	1.29
Wilcoxon Z-statistic	-9.5***	-1.4	-5.9***	-5.3***	-1.0	-3.9***	-2.5**	-5.3***	-1.13

Notes: ***, ** and * denote statistical significance at the 1%, 5% and 10% levels respectively. Based on Fama and French (1993), we have segregated the high and low investor demand groups by taking IPOs with the lowest investors' demand quartile (30% lowest from the sample) and assigned them as low-demand portfolio, whereas IPOs in the highest investors' demand quartile (30% highest from the IPOs sample) to be assigned to high-demand portfolio.

The cross-sectional multiple regression analysis results shown in Table 4 quantify the role of growth opportunity in explaining investors' demand (oversubscription ratio). The coefficients reported were generated using the Newey-West procedure to correct for autocorrelation (Durbin-Watson was initially 1.44); whereas the heteroskedasticity

White test was used to detect heteroskedasticity problems using 'White consistent standard errors and covariance'. The variance inflation factors (VIF) result ranges from 1.1 to 2.6, which indicate that there is no multicollinearity problem. The results in Table 4 are consistent with the correlation analysis in Table 2. Overall, the adjusted R^2 shows that the independent variables in the model could explain 27% of the variations in OSR. It is found that growth opportunity (GOP) is significant and inversely related to OSR, indicating that companies with high growth opportunity received low OSR. In other words, companies with high growth opportunities are mostly established with the value derived for growth opportunities being highly certain as compared to small and young companies.

Table 4: Regression results for OSR model for 204 IPOs, listed from January 2005 to December 2014.

Dependent variable is oversubscription ratio		
Variable	Coefficient	t-statistic
GOP	-0.471	-2.895***
MKTCAP	-8.536	-4.187***
DEBT	-0.288	-2.080**
RETAIL	-1.146	-3.554***
PRIVATE	0.272	3.217***
RISK	7.983	2.385**
MKTCON	0.643	2.407**
Adjusted R^2= 0.277		Durbin Watson D= 1.449
F-statistic= 12.099***		

Note: ***, ** and * denote statistical significance at the 1%, 5% and 10% levels respectively. *GOP* is a growth opportunity, the percentage of proceed to growth. *MKTCAP* is market capitalization, the number of pre-IPO shares multiplied by the offer price. *DEBT* is the percentage of total liability to total assets. *RETAIL* is the allocation of the issued to public (uninformed) investors. *PRIVATE* is the allocation of the issued to the institutional (informed) investors. *RISK* is the reciprocal of the offer price. *MKTCON* (market condition) is the average returns of EMAS Index, three months prior to listing.

Company size *(MKTCAP)* is also found to be significant in explaining OSR. The negative coefficient suggests that small companies are associated with a higher OSR. The result is in line with Chowdhry and Nanda (1996) who found that small companies are associated with high demand IPOs. Similarly, debt ratio (*DEBT*) is also found to be negative and significantly related to OSR. This is not surprising since investors would avoid subscribing to IPOs which have high debt levels. The finding is consistent with Myers (2001) who found that firms with high debt levels face financial distress costs when the profits from the investments are lower than the operating cash flow. Thus, investors would lower their demand for such IPOs.

Meanwhile, the involvement of informed investors (*PRIVATE*) is positively significant in explaining OSR. The finding is in line with Rock (1986) who argued that informed investors are better informed of the true value of the firms. Thus, the higher the involvement of institutional investors, the higher the demand and returns on IPOs. In contrast, uninformed investors *(RETAIL)* are negatively significant in explaining OSR. The finding supports the winner's curse hypothesis (Rock, 1986). According to Rock (1986), shares with large allocation for retail investors become a curse to uninformed investors as the shares would generate negative returns as they are overpriced. Therefore, investors tend not to subscribe to shares of firms with a large allocation to retail investors since they might get trapped by the curse.

In general, large companies with high growth opportunities receive less investors' demand. Therefore, our hypothesis that companies with high growth opportunities have higher OSR is not supported. The negatively significant finding implies that companies with high growth opportunities are of less value to investors and less favored during the IPO listing.

5. Conclusion and Implications

The study of 204 IPOs listed on Bursa Malaysia between 2005 to 2014 shows that growth opportunity is negatively significant in explaining OSR of IPOs. It implies that companies with high growth opportunities are generally large companies which have less information asymmetry and low risk of uncertainty on the companies' growth prospects.

Therefore, large companies are predicted to compensate low initial returns for the low risk IPOs, which in turn tend to have less demand from investors.

The findings have several implications. For investors, to obtain benefits from underpricing, they could subscribe to IPOs with low growth opportunities, which are of high risk and expected to provide high initial returns during listing. For issuers, to achieve a higher level of liquidity, the IPO would need to be offered at a low offer price. For regulators, they should ensure the information disclosed in the prospectus is in line with the "Equity Guidelines", as this information does influence investors' decision.

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