ASIAN ACADEMY *of* MANAGEMENT JOURNAL *of* ACCOUNTING *and* FINANCE

AAMJAF Vol. 9, No. 1, 113–128, 2013

FLIPPING ACTIVITY AND SUBSEQUENT AFTERMARKET TRADING IN MALAYSIAN INITIAL PUBLIC OFFERINGS (IPOs)

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ABSTRACT

This paper examines the aftermarket trading volume following an initial public offering (IPO) in a sample of 243 IPOs listed on Bursa Malaysia between June 2003 and June 2008. Specifically, this study investigates the degree of flipping activity and its relationship with six ex-ante variables including IPO initial returns. Consistent with previous studies, the result of the cross-sectional multiple regression reveals a significantly strong positive relationship between initial returns and flipping activity for IPOs. Initial returns also seem to influence the subsequent week's trading volume, but the influence is completely absorbed by flipping activity. The results also show that both institutional investor participation and offer size have significant influences on flipping activity. The results of this study imply that the Malaysian IPO market experiences active flipping activity that, in turn, has a significant role in predicting the subsequent trading activity.

Keywords: Initial public offering (IPO), aftermarket trading volume, flipping activity, initial returns, Malaysian stock market

INTRODUCTION

Equity capital has been the main source of external financing for corporations in Malaysia, next to bank borrowings, particularly because the bond market in the country remains very limited. Therefore, firms' first issuances of equity to the public are always treated as a significant event by most corporations. Such events, which are more commonly referred to as initial public offerings (IPOs), are not only critical due to expectations regarding the generation of a large pool of funds from the public but also because IPOs are considered a gauge to measure the firm's actual market value. The market value is associated with the offer price of the IPO at point of placement and its aftermarket price.

An important phenomenon commonly associated with the issuance of the IPOs is significant underpricing, whereby IPOs are typically priced at substantial discounts from the values that prevail in the aftermarket (see Loughran, Ritter, & Rydqvist, 1994; Ritter, 2003). Apart from the positive abnormal initial returns, IPOs also exhibit an extremely high trading volume in the immediate aftermarket. The findings of Aggarwal (2003) demonstrate that trading volume in the first few days after an IPO is extremely high but drops off quickly. The study finds that trading volume in the first two days is on average 81.97%, with a median of 74.10%. Similarly, Ellis (2006) finds the mean and median numbers of shares traded against the size of the offering are 76% and 67%, respectively.

It is generally believed that a large proportion of the high initial trading volume is due to the 'flippers', as Aggarwal (2003) and Ellis (2006) term investors who receive allocations of IPO shares during the offering and immediately liquidate their allocations in the first few days after the IPOs begin trading. Ellis (2006) discovers that flippers tend to sell their shares to exploit the high prices in hot IPOs and stabilise their holdings in cold IPOs. An earlier study on flipping activities by Krigman, Shaw and Womack (1999) finds that, for the period of 1988–1995, flipping contributes to 45% of the first-day trading volume for cold IPOs, but only 22% for hot IPOs, in the US market.

In a study of the same market, between 1997 and 1998, Aggarwal (2003) finds contradictory results. First, Aggarwal finds that flipping accounts for only 15% of shares offered during the first two days of trading. This implies that flipping activities contribute to a smaller proportion of the actual trading volume. In addition, Aggarwal (2003) suggests that the flipped shares are traded several times, resulting in a churn in volume. Therefore, the high volume does not occur due to the proportion of shares sold by the original owners but is a result of trading churn by market investors. This finding is supported by another study on Australian IPOs by Bayley, Lee and Walter (2006). Defining flipping as the reselling of IPO shares during the first three days of trading, the study finds that flipping only accounts for a small proportion (22.07%) of trading volume. This result suggests that the small effect of flipping is not unique to NASDAQ IPOs, as reported by Aggarwal (2003). Bayley et al. (2006) also find that 51.9% of day trades are the result of post-listing trading. Another finding made by Aggarwal (2003) that differs from Krigman et al. (1999) is that hot IPOs are flipped more than cold IPOs.

Ellis (2006) also studies NASDAQ IPOs, but for a period that is one year ahead of those considered by Aggarwal (2003), and finds results that are more consistent with Krigman et al. (1999). Specifically, Ellis (2006) examines abnormal trading activities during the first two days after the IPOs are listed. The findings of the study demonstrate that most trading activities in hot IPOs are

driven by large investor interest, while trading volume in cold IPOs is primarily generated by flipper and interdealer trades.

Because previous studies, such as Aggarwal (2003) and Bayley et al. (2006), find that only a small proportion of the immediate aftermarket trading volume (henceforth, ATV) is due to flippers, other factors must exist that contribute to the enormous trading volume in the immediate aftermarket. The possible factors include the degree of initial return and the offering characteristics of the IPOs. Bayley et al. (2006) find that underpricing and hot issues have a positive impact, while size has a negative impact on trading volume. In Boehme and Colak (2012), low priced IPOs that are issued in a hot market but are not supported by venture capitalists and prestigious underwriters are found to suffer higher idiosyncratic risk and short sale constraints, while simultaneously enjoying higher liquidity. Similarly, Ellis (2006) finds that the relationship between initial returns and the compositions of trading volume is significantly positive, except for those involving interdealer selling. Other studies that report positive relationships between initial returns and flipping activity in the immediate aftermarket include Miller and Reilly (1987) and Schultz and Zaman (1994). Other than initial return, underwriter reputation and pricing revisions from the filing price to the offer price also explain IPO trading activity in the aftermarket.

Most studies in the literature on flipping activity and subsequent ATV of IPOs have focused on developed stock markets. Within the scope of our literature review, little attention has been devoted to studying this issue in emerging market IPOs, such as Malaysia. Previous studies on Malaysian IPOs, including Abdullah and Mohd (2004), How, Jelic, Saadouni and Verhoeven (2007), Jelic, Saadouni and Briston (2001), Wan-Hussin (2005), Yong (1996), Yong, Yatim and Sapian (2002) and Yong and Isa (2003), consider issues relating to factors that influence the initial premiums of IPOs. Similarly, Yong (2007) examines investor demand, size effects and the performance of IPOs; Yong, Yatim and Sapian (2001) examine the short term performance of IPOs, while Ahmad-Zaluki, Campell and Goodacre (2007), Dawson (1987), Ku Ismail, Zainal Abidin and Zainuddin (1993), Wu (1993), Yong (1997) and Yong et al. (2001) study the long term performance of IPOs. More recent studies attempt to explain IPO performance using contemporary issues, such as regulation (Mohd, 2007), shari'ah compliance (Abdul Rahim & Yong, 2010) and flipping activity (Yong, 2010). Others such as Low and Yong (2011) relate IPO underpricing and cold markets to interest (over-subscription) in the IPOs. The present study differs from previous studies, as it examines the IPO anomaly from the quantity (volume) perspective rather than the price (returns) perspective. Additionally, the present study differs from Yong (2010), as it focuses on the explanation of IPO aftermarket trading volume (immediate and subsequent) by associating it with flipping activity.

The paper addresses two issues concerning ATV. First, similar to Ellis (2006), Miller and Reilly (1987) and Schultz and Zaman (1994), this study examines whether price appreciation (initial return) influences flipping activity. This is accomplished by extending the list of predictor variables to include the supply (offer size) and demand (oversubscription rate) sides of the IPOs, the IPO risks (offer price), institutional investor participation and board of listing. Second, this study examines whether these variables have the same influence on the subsequent ATV and whether flipping activity mediates such influences.

The remainder of the paper is organised as follows. The next section describes the research methodology, followed by another section on discussion of the empirical findings. The last section provides the conclusions and implications of the study.

METHODOLOGY

Sample and Data Description

The population in this study comprises IPOs listed on the Main Board, Second Board and MESDAQ market of Bursa Malaysia, covering the period from 1 June 2003 to 30 June 2008. The Main Board is composed of listed companies that have a minimum issued and paid-up capital of at least RM60 million, the Second Board is reserved for listed companies that have a minimum issued and paid-up capital of RM40 million and the MESDAQ market is comprises listed companies that have a minimum issued and paid-up capital of at least RM2 million upon listing. The final sample of this study is composed of 243 IPOs that involve offering mechanisms of both fixed price systems and book building. This study excludes IPOs related to Real Estate Investment Trusts (REITs) and special restructuring, covering both corporate reforms and amalgamated companies.

The start of the period is 1 June 2003, which is in line with the structural change involving trading volume during this period. Specifically, after 26 May 2003, Bursa Malaysia re-defined the size of the tradable lots from 1000 units to 100 units. This measure was implemented to increase the participation and affordability of stock trading for retail investors, particularly for high priced stocks. Accordingly, this study limits the study period to include only IPO data for the new tradable lots to ensure conformity and standardisation in the trading volume in an effort to avoid unnecessary noise that may affect the outcome of this study.

The data employed in this study include trading volume, share prices, the oversubscription rate, the percentage of shares offered to institutional and

selected investors, the size of the offer and board of listing. The data are compiled from various sources, such as the websites of Bursa Malaysia and Malaysia Issuing House (http://www.shareinvestor.com.my), DataStream of Thomson Financial and local newspapers.

Variable Definitions and Analytical Method

Similar to Islam and Munira (2004), this study measures flipping activity based on the proportion of total trading volume during the first few days after the IPO listing to the total number of shares issued. Unlike Islam and Munira (2004), who track flipping activity over the first 7, 30 and 90 trading days, this study limits the period to the first 5 trading days. This period is longer than the 1–3 day period used by Krigman, Shaw and Womack (1999), Aggarwal (2003) and Bayley et al. (2006), as the thin stock trading on the Malaysian market is not likely to fully accommodate flippers' liquidation activity within short periods. Post-listing traders are not likely to liquidate within this short period because the net payoff is unlikely to be positive. Meanwhile, using such a proxy is necessary in the case of Malaysia and most emerging markets, as data on actual flipping activity are not made available in the same manner as in developed markets (cf. Aggarwal, 2003). In brief, this study will interpret the results based on immediate aftermarket trading being perceived as implying the presence of flipping activity in the Malaysian IPO market. The subsequent ATV is then measured based on the proportion of trading volume in the second week of trading relative to the total amount of new shares issued.

Flipping activity is then examined against six factors; initial returns of IPOs (UND), over-subscription rate (OSR), offer price (P_{OFF}), institutional participation in the issue (PRPLC), offer size ($SIZE_{OFF}$) and listing board (DBOARD). For initial returns, two commonly used measures are applied:

$$UNDO = \frac{\left(P_{OPEN} - P_{OFF}\right)}{P_{OFF}} \qquad \text{and}$$

$$UNDC = \frac{\left(P_{CLOSE} - P_{OFF}\right)}{P_{OFF}}$$

where P_{OPEN} and P_{CLOSE} are, respectively, the opening and closing prices of the IPO on the first day of trading. The offer price P_{OFF} is the price of IPO shares offered for subscription. This study hypothesises a positive relationship between initial returns and flipping activity. Investors who are allocated shares in the IPOs are more likely to sell or flip their new shares if they observe that the price appreciates when the IPOs are opened for trading. This would be regarded as an

opportunity to make a quick profit in the most immediate aftermarket. Additionally, the offer price, in itself, is expected to have a negative relationship with flipping activity and the subsequent ATV. Low offer prices are associated with high risk companies. This is consistent with a study by Bradley and Jordan (2002), who use the reciprocal of the offer price as a measure of risk. Moreover, the listing board is used to proxy for the viability or quality of the IPOs. As explained above, the listing board categorises companies based on their issued and paid-up capital, indicating their financial strength with respect to future growth. These companies are also required to possess good profitability track records. Accordingly, the type of listing board is expected to have positive relationships with flipping activity and the subsequent ATV of the IPOs. The effects are examined by creating a dummy variable that takes a value of 1 if the Main Board is the listing board of the IPO companies and 0 otherwise.

The over-subscription rate (OSR) is defined as the ratio of the number of IPOs subscribed to the number of IPOs offered and represents investor demand, as a high OSR indicates a large number of applications to subscribe to a particular IPO. The high demand is expected to be driven by the investors' confidence and optimism regarding the new issue. Therefore, *ceteris paribus*, a positive relationship is expected between OSR and flipping activity and subsequent ATV. The supply side of an IPO is proxied by the number of shares issued in a particular IPO. Commonly referred to as offer size, *ceteris paribus*, IPO supply is hypothesised to have a negative influence on flipping activity and subsequent ATV.

The last variable is institutional investor participation, which is expected to have a positive relationship with the flipping activity and ATV of the IPOs. Given the resources that are available for institutional investors to access and analyse information regarding the IPOs, they are normally considered to be informed investors. Greater participation by this group is expected to attract more demand for the IPOs from free-riders the moment they are eligible for trading. Institutional investor participation in an IPO issue is measured by the ratio of private placement issue to total shares issued. In the Malaysian IPO market, private placement refers to the proportion of IPO shares that are offered directly to institutional investors (Yong, 2011).

To examine the predictive power of the six variables in relation to flipping activity and subsequent ATV, this study employs cross-sectional multiple regression analyses that take the following forms:

$$FLIP_i = \alpha + \beta_1(UND_{i,j}) + \beta_2(OSR_i) + \beta_3(P_{OFF,i}) + \beta_4(PRPLC_i) + \beta_5(SIZE_{OFF\,i}) + \beta_6(DBOARD_i) + \varepsilon$$

$$ATV_i = \alpha + \beta_1(UND_{i,j}) + \beta_2(OSR_i) + \beta_3(P_{OFF,i}) + \beta_4(PRPLC_i) + \beta_5(SIZE_{OFF\,i}) + \beta_6(DBOARD_i) + \varepsilon$$

where

α	=	regression constant
β	=	coefficient estimates of the respective explanatory variables
FLIP	=	flipping activity
ATV	=	subsequent aftermarket trading volume
UND	=	initial returns, where *j* = UNDC or UNDO
OSR	=	over-subscription ratio
P_{OFF}	=	offer price
$SIZE_{OFF}$	=	offer size = P_{OFF} × number of new shares issued
PRPLC	=	percentage of institutional investor participation,
DBOARD	=	dummy variable for the listing board
ε	=	error term

Note that in this study, the offer size is considered in natural log form to minimise the effect of extreme data. Finally, to examine whether flipping activity influence the relationship between the six variables and ATV, the following multiple regression equation is applied:

$$ATV_i = \alpha + \beta_1(UND_{i,j}) + \beta_2(OSR_i) + \beta_3(P_{OFF,i}) + \beta_4(PRPLC_i) + \beta_5(SIZE_{OFF\,i}) + \beta_6(DBOARD_i) + \beta_7(FLIP_i) + \varepsilon$$

RESULTS AND DISCUSSIONS

Descriptive statistics

Table 1 presents a summary of the characteristics of the 243 IPOs used in this study. The average percentage of volume for the five days of trading (FLIP) is 169.3% (or 33.86% on a daily basis), while that for the second week of trading (ATV) is 64.3% of the total shares issued. There are several important observations that can be made from the findings. First, the percentage of trading volume for the first week suggests that shares that are initially allocated are

flipped and traded repeatedly during the first five trading days. This suggests that the Malaysian IPO market experiences flipping activity to a greater extent (on average 33.86% per day) than in developed markets. In the case of the US market, Aggarwal (2003) finds that flipping contributes to 15% of total trading. Even in the emerging market of Bangladesh, Islam and Munira (2004) find that the percentage is still lower (29.67%) over the first seven trading days. Second, the percentage of trading volume for the first week is much higher compared to that of the second week of trading. This pattern is consistent with the findings of other studies (Aggarwal, 2003; Chahine, 2007; Ellis, 2006). The substantial decline suggests that without the flippers, only approximately half of the IPO shares would change hands. Chahine (2007) explains that the announcement of the offer price provides information that causes investors to have heterogeneous and systematically diverse reactions on the listing date. The different reactions portray diverging opinions among investors regarding the issuing firm's prospects, which subsequently boosts trading volume immediately after the listing of the IPOs. The lower trading volume during the subsequent week reflects the settling behaviour of the stock market participants.

Table 1
Descriptive statistics

Variables	*N*	Mean	Median	Maximum	Minimum	Std. Dev.
FLIP	243	1.693	0.990	42.163	0.003	3.279
ATV	243	0.643	0.258	7.739	0.0009	1.101
UNDO	243	0.301	0.185	2.076	–0.672	0.418
UNDC	243	0.289	0.186	2.636	–0.666	0.480
OSR(times)	243	40.291	21.650	377.960	–0.303	53.627
P_{OFF}(RM)	243	0.841	0.700	3.650	0.160	0.558
PRPLC	243	0.321	0.119	0.967	0.000	0.350
$SIZE_{OFF}$(unit)	243	53,631,509	3,150,000	7.01E+08	3,706,000	88,740,892

The average initial return (UNDO) is 30.1%, with a minimum of -67.2% and a maximum of 207.6%. Moreover, the average initial return (UNDC) is 28.9% (ranging from -66.6% to 263.6%). These initial returns are substantially lower than the 166.7% reported in Dawson (1987); 167.4% reported in Yong (1991); 114.6% reported in Ku Ismail et al. (1993); 80.3% reported in Loughran et al. (1994); 72.85% (UNDO) and 75.03% (UNDC) reported in Yong (1997); 94.91% reported in Yong and Isa (2003); 78.44% reported in Abdullah and Mohd (2004); 83% reported in Wan-Hussin (2005); and 95.2% reported in Ahmad-Zaluki et al. (2007), whose collective study periods span from 1990 to 2000. However, the reported initial returns are consistent with those reported recently by Abdul Rahim and Yong (2010), for the period from 1999 to 2007, and Yong

(2010), for the period from 2004 to 2007. Given the findings of these previous studies, it is interesting to note that the average initial returns accrued by Malaysian IPO shareholders, while high, exhibit a declining trend.

The average OSR documented in this study is 40.29 times. Overall, the high average OSR suggests that investors perceive that the IPOs are offered at a price lower than the fair value or the IPOs are offered in period of positive market momentum. However, the level of OSR for IPOs differs dramatically across firms. For example, the highest OSR is 377.96 times, while the lowest is only -0.3 times the number of shares offered. A negative OSR indicates that the IPOs are not fully demanded by the investors, likely because the IPOs are overvalued or as a result of bad market timing. The average OSR reported in this study is only slightly lower than the OSR of 46 times reported by Dawson (1987) and Yong (1991) and the OSR of 43.71 times reported by Yong and Isa (2003). However, it is nearly twice the OSR of 22.03 times reported by Yong (2007) for IPOs issued between 1999 and 2003. Yong associates the low OSR rate with the 1997 Asian financial crisis, which adversely affected investors' financial capability and confidence in the stock market. The adverse effects of the 1997 crisis also explain the results obtained by Wan-Hussin (2005), who reports that the average OSR is 37 times for 154 IPOs for the period from 1996 to June 2000. However, for 87 IPOs listed after the crisis, the OSR declines to 18.51 times.

As the period covered in this study is from June 2003 to June 2008, the high average OSR correctly indicates that investors regained their confidence in the IPO market following the economic recovery from the 1997 crisis. In addition, the Malaysian Securities Commission (MSC) has imposed more stringent requirements for better corporate governance disclosure in assessing IPO proposals. This stringent approach, resulting in improved transparency, seems to be effective in elevating the confidence of investors regarding Malaysian IPOs. With respect to the other variables, the average offer price is RM0.84, the average investment by institutional investors is 32.1% of total IPO shares issued and the average offer size is RM53.6 million.

Results of Multiple Regressions for Flipping Activity

Table 2 presents the results of multiple regressions of flipping activity on the six predictor variables, where the role of initial premiums is tested using UNDO and UNDC, separately. As shown in Panel A and Panel B of Table 2, the initial premiums based on both UNDO and UNDC show significant influences on the flipping activity at the 1% level. The positive coefficient of the initial return indicates that the more the price appreciates, the more new shares are flipped.

Table 2
Results of multiple regressions of flipping activity

Panel A: Initial Premium (UNDO)			Panel B: Initial Premium (UNDC)		
Variables	Coefficient	*t*-stats	Variables	Coefficient	t-stats
C	11.211	8.465**	C	11.287	8.721**
UNDO	0.639	3.740**	UNDC	0.667	4.853**
OSR	–0.0002	–0.212	OSR	–8.32E-05	–0.065
P_{OFF}	0.124	0.862	P_{OFF}	0.126	0.896
PRPLC	0.587	2.671**	PRPLC	0.588	2.731**
$SIZE_{OFF}$	–0.686	–9.160**	$SIZE_{OFF}$	–0.691	–9.424**
DBOARD	0.217	1.175	DBOARD	0.200	1.103
Adjusted R^2	0.345		Adjusted R^2	0.369	
F Test Statistics	22.314**		F Test Statistics	24.673**	
Durbin-Watson	2.002		Durbin-Watson	1.949	
Jarque-Bera	221.9**		Jarque-Bera	248.03**	
Ramsey RESET Test			Ramsey RESET Test		
F Test Stats	1.432624		F Test Stats	0.990	
p-value	(0.2325)		*p*-value	(0.320)	

Notes: The asterisks ** and * indicate significance at the 1% and 5% levels, respectively. Offer size ($SIZE_{OFF}$) is in natural log form. Variance inflation factors for both models are less than 2.

The significant role played by initial return on the flipping activity is consistent with the findings of Miller and Reilly (1987) and Schultz and Zaman (1994), but contradicts that obtained by Islam and Munira (2004). This result can be attributed to the fact that the higher the initial return, the greater the tendency for first hand investors to sell their shares in the aftermarket to attempt to make an instant return. Associating it with the flipping activity, this result suggests that when the IPO is more significantly underpriced, flippers have more reason to liquidate their shares at the first available opportunity. This tendency is further supported by the extremely high percentage of shares traded (33.86% per day) within the first week of trading. This finding is particularly evident in the case of the Malaysian IPO market, where insiders or promoters of issuing companies are subject to a minimum 180-day mandatory lock-up period. As a proportion of the issued shares are prohibited from being traded during the lock-up period, having a daily average turnover of 33.86% of the new shares issued being turned over during the first week of trading suggests that the flippers must have some involvement in elevating the dynamics in IPO trading.

In addition to initial returns, the results in Panel A and Panel B of Table 2 also indicate that institutional investor participation in the new issues has a strong positive relationship with flipping activity and is significant at the 1% level. This means that the greater the involvement of institutional investors in the new issues, the more flipping activity occurs. This result is consistent with those of Aggarwal (2000) and Islam and Munira (2004). Islam and Munira (2004) argue that despite the general belief that institutional investors hold their investments for longer terms, they are as active as uninformed investors with respect to flipping their allocated shares. To a certain extent, the flipping behaviour of institutional investors can explain the extremely high first week trading volume in this market, as these investors typically hold large blocks of shares. In other words, the high trading volume during the first five days of trading can be partly attributed to the flipping activity of institutional investors.

However, the influence of offer size on flipping activity is negative. This finding is consistent with the results of Islam and Munira (2004), who report that the size of the issues has a significant negative influence on IPO flipping. The negative relationship obtained in the present study suggests that Malaysian investors are attracted to participate in IPOs in the secondary market, likely because they are continue to expect positive payoff from the issuance of the IPOs. The negative relationship must, therefore, be the result of the denominator (supply) of the IPO issued, i.e., given a constant number of shares traded, the larger (smaller) number of shares issued, and the smaller (larger) the resulting proportion of trading volume to total shares issued.

Results of Multiple Regressions of Subsequent Aftermarket Trading Volume

Table 3 presents the results of multiple regressions of the subsequent ATV on the same predictor variables. As shown in Panel A and Panel B of Table 3, the results are similar to those found in Table 2 for volume in the first week of trading. In brief, the results suggest that the factors important in determining flipping activities are also important in determining subsequent aftermarket trading activities.

We next re-run the multiple regression analysis on second week trading volume (ATV) by including the flipping activity as one of the explanatory factors. The results are reported in Table 4. It is interesting to note that all of the variables (UND, PRPLC and SIZEOFF) that are initially significant in influencing the first and second week trading volumes in Tables 2 and 3 lose their predictive power completely when flipping activity (FLIP) is incorporated in the model. Conversely, only FLIP is significant in predicting subsequent ATV. This result implies that the significant positive relationship between the initial returns and the subsequent ATV initially shown in Table 3 is caused by the enormous

trading activities that occur during the first week of trading. It is therefore argued that, in this case, the high flipping activity highly influence the relationship between initial returns (UND) and subsequent ATV. As the significant roles of PRPLC and $SIZE_{OFF}$ are also totally absorbed by FLIP, it is also appropriate to argue that flipping activity also facilitates the relationships between these variables and subsequent ATV.

Finally, the adjusted R^2 for all models shows that the six variables collectively explain 32.7 to 36.9% of the variations in flipping activity and subsequent ATV. Overall, the goodness-of-fit level is satisfactory, as suggested by the respective F-values, which are consistently significant at the 1% level. It is also important to note that the collective power of the six predictors increases to 67.4% when flipping activity is considered as an explanatory factor with respect to subsequent ATV. The constant term (alpha) also becomes insignificant, indicating that flipping activity is sufficient to predict subsequent aftermarket trading activities. The Ramsey RESET tests for model specification produces F statistics that are consistently significant, indicating that all of the models are correctly specified. The Durbin-Watson statistics produce values of approximately 2.0, indicating that an autocorrelation issue is unlikely in these models. The models also record variance inflation factors (VIF) that are consistently less than 2.0, reducing the potential for multicollinearity problems.

Table 3
Results of multiple regressions of subsequent aftermarket trading volume

Panel A: Initial Premium (UNDO)			Panel B: Initial Premium (UNDC)		
Variables	Coefficient	*t*-stats	Variables	Coefficient	*t*-stats
C	10.397	6.622**	C	10.547	6.837**
UNDO	0.813	4.013**	UNDC	0.785	4.790**
OSR	2.01E-05	0.012	OSR	0.0004	0.315
P_{OFF}	–0.057	–0.336	P_{OFF}	–0.055	–0.330
PRPLC	0.617	2.370**	PRPLC	0.611	2.380**
$SIZE_{OFF}$	–0.706	–7.949**	$SIZE_{OFF}$	–0.714	–8.175**
DBOARD	0.284	1.298	DBOARD	0.266	1.231
Adjusted R^2	0.327		Adjusted R^2	0.345	
F Test Statistics	20.676**		F Test Statistics	22.305	
Durbin-Watson	1.954		Durbin-Watson	1.917	
Jarque-Bera	8.504*		Jarque-Bera	8.307*	
Ramsey RESET Test			Ramsey RESET Test		
F Test Stats	0.054		F Test Stats	0.048	
p-value	(0.815)		*p*-value	(0.825)	

Notes: The asterisks "" and * indicate significance at the 1% and 5% levels, respectively. Offer size ($SIZE_{OFF}$) is in natural log form. Variance inflation factors for both models are less than 2.

Table 4
Results of multiple regressions of subsequent ATV on all explanatory variables including FLIP

Panel A: Initial Premium (UNDO)			Panel B: Initial Premium (UNDC)		
Variables	Coefficient	*t*-stats	Variables	Coefficient	*t*-stats
C	0.835	0.669	C	0.993	0.794
UNDO	0.268	1.845	UNDC	0.220	1.816
OSR	0.0002	0.236	OSR	0.0005	0.512
P_{OFF}	–0.163	–1.373	P_{OFF}	–0.162	–1.368
PRPLC	0.116	0.635	PRPLC	0.113	0.615
SIZEOFF	–0.120	–1.677	$SIZE_{OFF}$	–0.129	–1.790
DBOARD	0.099	0.648	DBOARD	0.096	0.632
FLIP	0.852	15.880**	FLIP	0.846	15.462**
Adjusted R^2	0.674		Adjusted R^2	0.674	
F Test Statistics	72.609**		F Test Statistics	72.562**	
Durbin-Watson	1.846		Durbin-Watson	1.850	
Jarque-Bera	0.351		Jarque-Bera	0.224	
Ramsey RESET Test			Ramsey RESET Test		
F Test Stats	1.256		F Test Stats	1.148	
p-value	(0.272)		*p*-value	(0.285)	

Notes: The asterisks ** and * indicate significance at the 1% and 5% levels, respectively. Offer size ($SIZE_{OFF}$) is in natural log form. Variance inflation factors for both models are less than 2.

CONCLUSIONS AND IMPLICATIONS

This study examines the degree of flipping activity and subsequent ATV of IPO shares listed on Bursa Malaysia for the period from June 2003 to June 2008. Flipping activity (subsequent ATV) is measured based on the proportion of total trading volume in the first week (second week) of trading to total shares issued. The study examines the relationships among flipping activity (and subsequent ATV) and six predictor variables: initial returns, OSR, offer price, institutional investor participation, offer size and board of listing. The preliminary results show that 169.3% (equivalent to 33.86% per day) of the IPO shares are flipped within the first week of trading. As Malaysian IPOs are subject to a mandatory lock-up provision, which prohibits insiders or promoters from selling their shares, the result suggests that flippers substantially contribute to the first week's trading activity. In the absence of the flippers, the trading activities slows down from 33.86% to 12.86% on a daily basis in the subsequent week.

Consistent with the findings of earlier studies, the results of the multiple regression analyses in this paper show that price appreciation (initial return) drives the behaviour of the flippers. It has the same influence on subsequent

ATV, but the influence is facilitated by flipping activity. As for institutional investor participation and offer size, their relationships with subsequent ATV are also significant. As with initial return, these relationships are also completely influenced by the flipping activity.

Overall, the results of this study imply that the Malaysian IPO market experiences active flipping activity, the momentum of which continues into the subsequent week. The level of flipping activity is rather high and should be cause for concern for stock market regulators. Excessive flipping activity could be detrimental to the secondary IPO market, as it creates artificial pressure on the IPO price. This creates an environment conducive for speculative activities at the expense of genuine investors.

With respect to investors, they should expect more flipping activity in firms that issue more significantly underpriced IPOs, allocate a larger percentage of their IPOs to institutional investors and offer a smaller number of new shares. The information on this flipping activity can then be used as a reliable indicator to predict the trading trend in the subsequent week. With respect to institutional investors' involvement in the flipping activity, it cannot be verified until and unless the actual information about the flippers is disclosed. For future studies, specifically on Malaysian IPOs, the influence of lock-up provisions and market conditions on flipping activity should also be examined. The former deters flipping activity in affected firms, as it prohibits a certain percentage of IPO shares from being flipped, while the latter deters flipping activity, as it influences investor sentiments regarding stock investment.

ACKNOWLEDGEMENT

This research is conducted under FRGS grant (grant no: UKMTOPDOWN-EP-05-FRGS0002-2011).

REFERENCES

Abdul Rahim, R., & Yong, O. (2010). Initial returns of Malaysian IPOs and Shari'a-compliant status. *Journal of Islamic Accounting and Business Research*, *1*(1), 60–74.

Abdullah, N. A. H., & Mohd., K. N. T. (2004). Factors influencing the underpricing of initial public offerings in an emerging market: Malaysian evidence. *IIUM Journal of Economics and Management*, *12*(2), 193–212.

Aggarwal, R. (2003). Allocation of initial public offerings and flipping activity. *Journal of Financial Economics*, *68*, 111–135.

Ahmad-Zaluki, N. A., Campell, K., & Goodacre, A. (2007). The long run share price performance of Malaysian initial public offerings (IPOs). *Journal of Business Finance & Accounting*, *34*(1 & 2), 78–110.

Bayley, L., Lee, P. J., & Walter, T. S. (2006). IPO flipping in Australia: Cross-sectional explanations. *Pacific-Basin Finance Journal*, *14*, 327–348.

Boehme, R., & Colak, G. (2012). Primary market characteristics and secondary market frinctions of stocks. *Journal of Financial Markets*, *15*(2), 286–327.

Bradley, D. J., & Jordan, B. D. (2002). Partial adjustment to public information and IPO underpricing. *The Journal of Financial and Quantitative Analysis*, *37*(4), 595–616.

Chahine, S. (2007). Investor interest, trading volume, and the choice of IPO mechanism in France. *International Review of Fnancial Analysis*, *16*, 116–135.

Dawson, S. M. (1987). Secondary stock market performance of initial public offers, Hong Kong, Singapore and Malaysia: 1978–1984. *Journal of Business Finance and Accounting*, *14*(1), 65–76.

Ellis, K. (2006). Who trades IPOs? A close look at the first days of trading. *Journal of Financial Economics*, *79*, 339–363.

How, J., Jelic, R., Saadouni, B., & Verhoeven, P. (2007). Share allocations and performance of KLSE Second Board IPOs. *Pacific-Basin Finance Journal*, 15, 292–314.

Islam, M. S., & Munira, S. (2004). IPO flipping and its determinants in Bangladesh. *Dhaka University Journal of Business Studies*, *25*(1). Retrieved from http://ssrn.com/abstract=1079589

Jelic, R., Saadouni, B., & Briston, R. (2001). Performance of Malaysian IPOs: Underwriters' reputation and management earnings forecast. *Pacific-Basin Finance Journal*, *9*, 457–486.

Krigman, L., Shaw, W .H., & Womack, K. L. (1999). The persistence of IPO mispricing and the predictive power of flipping. *The Journal of Finance*, *54*(3), 1015–1044.

Kuala Lumpur Stock Exchange Berhad (2003). *Annual Report*. Kuala Lumpur: Author.

Ku Ismail, K. N. I., Zainal Abidin, F., & Zainuddin, N. (1993). Performance of new stock issues on the KLSE. *Capital Markets Review*, *1*(1), 81–95.

Loughran, T., Ritter, J. R., & Rydqvist, K. (1994). Initial public offerings: International insights. *Pacific-Basin Finance Journal*, *2*, 165–199.

Low, S. W., & Yong, O. (2011). Explaining over-subscription in fixed-price IPOs: evidence from the Malaysian stock market. *Emerging Market Reviews*, *12*, 205–216.

Miller, R. E., & Reilly, F. K. (1987). An examination of mispricing, returns, and uncertainty for initial public offerings. *Financial Management*, *16*, 33–38.

Mohd., K. N. T. (2007). Regulations and underpricing of IPOs. *Capital Markets Review*, *15*(1 & 2), 1–27.

Ritter, J. R. (2003). Chapter 5: Investment banking and securities issuance. *Handbook of the Economics of Finance*, *1*(1), 255–306.

Schultz, P. H., & Zaman, M. A. (1994). Aftermarket support and underpricing of initial public offerings. *Journal of Financial Economics*, *35*, 199–219.

Wan-Hussin, W. N. (2005). The effects of owners' participation and lockup on IPO underpricing in Malaysia. *Asian Academy of Management Journal*, *10*(1), 19–36.

Wu, T. S. (1993). The long-run performance of initial public offerings in Malaysia. *Capital Markets Review*, *1*(1), 61–80.

Yong, O. (1991). Performance of IPOs of securities in Malaysia. *Malaysian Accountant*, 3–6.

Yong, O. (1996). Size of the firm, over-subscription ratio and performance of IPOs. *Malaysian Management Review*, *31*(2), 28–39.

Yong, O. (1997). Initial public offerings: The Malaysian experience 1990–1994. In T. Bos & T. Fetherston (Eds.), *Advances in Pacific-Basin Capital Markets* (vol. 3, pp. 177–188). Connecticut: JAI Press.

Yong, O. (2007). Investor demand, size effect and performance of Malaysian initial public offerings: Evidence from post-1997 financial crisis. *Jurnal Pengurusan*, *26*, 25–47.

Yong, O. (2009). The effect of investor demand, firm size and offer size on the initial return of IPOs: Evidence from Malaysia's MESDAQ. *Journal of Business Management*, *1*(1), 27–50.

Yong, O. (2010). Initial premium, flipping activity and opening-day price spread of Malaysian IPOs. *Capital Market Review*, *18*(1 & 2), 45–61.

Yong, O. (2011). Winner's curse and bandwagon effect in Malaysian IPOs: Evidence from 2001–2009. *Jurnal Pengurusan*, *32*, 21–26.

Yong, O., & Isa, Z. (2003). Initial performance of new issues of shares in Malaysia. *Applied Economics*, *35*, 919–930.

Yong, O., Yatim, P., & Sapian, R. (2001). Initial and long-run performance of new issues on the Malaysian stock market. *Corporate Finance Review*, *5*(6), 28–41.

Yong, O., Yatim, P., & Sapian, R. (2002). Size of offer, over subscription ratio and performance of Malaysian IPOs. *Malaysian Management Journal*, *6*(1 & 2), 35–51.