WHAT DETERMINES FLIPPING BEHAVIOUR IN AN EMERGING MARKET?

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ABSTRACT

This study explores the behaviour of initial public offerings (IPOs) investors in the immediate aftermarket. Specifically, this study investigates the role of investors' heterogeneity of opinion and IPO initial return in determining their flipping activities in Malaysia. The results from the first model show that both IPO initial return and heterogeneity of opinion have a significant positive effect on flipping activities. Furthermore, the effect of heterogeneity of opinion is more pronounced than IPO initial return, which drives us to conclude that the former is the main explanatory variable of investors' flipping activities in the immediate first-day aftermarket. The results of the second model show that most flipping activities happen when the price range is at its highest level in the secondary market. Finally, the study concludes that investors' flipping activities in the Malaysian IPO market are driven by quick and riskless capital gains.

Keywords: Initial public offerings (IPOs), Quantile regression, Heterogeneity of opinion, Flipping activities, Fixed-price method, Malaysia.

1. INTRODUCTION

The present study examines the immediate first-day aftermarket flipping behaviour in Malaysia, a phenomenon that is used as a proxy to understand investors' aftermarket trading behaviour in the IPO markets (Yong, 2010; Chong, 2009). Flipping refers to the direct selling of an IPO allocation

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in the aftermarket (Yong, 2010; Che-Yahya et al., 2014; Chong, 2009; Bayley et al., 2006). The bulk of the flipping literature has been documented in the US, where the focus is mainly on the aftermarket stabilisation activities conducted by underwriters (Che-Yahya et al., 2014; Chong, 2009; Yong, 2010). Furthermore, the understanding of IPO investors' behaviour in the immediate aftermarket in developing markets is still lacking (Islam & Munira, 2004). This lack of understanding is especially pronounced in the Malaysian context (Che-Yahya et al., 2014), where securities in these developing markets differ from developed ones with respect to market size, investors' behaviour, and regulatory framework (Islam & Munira, 2004).

Moreover, the current study proposes that the Malaysian IPO market is expected to exhibit different behavioural tendencies that explain investors' aftermarket trading behaviour. Firstly, according to Yong (2010), the institutional arrangements in the Malaysian IPO market are very different from those in the US. Underwriters in the US play an important role in stabilizing the aftermarket through active trading and the exercise of over-allotment options. Furthermore, US underwriters would often take the position of the market maker by providing liquidity to offset downward price pressures due to flipping activities (Yong, 2010; Chong, 2009; Aggarwal, 2003). However, such stabilization mechanisms are non-existent in the Malaysian market (Yong, 2010; Chong, 2009; Che-Yahya et al., 2014). The absence of such a mechanism implies that the Malaysian IPO market is vulnerable to excessive flipping activities that could create disappointment among future investors as the stock price may fall below the psychological level of the offer price (Aggarwal, 2000; Gounopoulos, 2006b). On top of that, flipping activities may also put downward pressure on the long-term performance of the shares (Che-Yahya et al., 2014; Aggarwal, 2003).

The Malaysian IPO market has tried to overcome excessive flipping activities by implementing a mandatory lock-up period first introduced on May 3, 1999. The Securities Commission (SC) has imposed a mandatory lock-up period of one (1) year or six (6) months on the insiders of the issuing firm to protect traders from excessive flipping (Albada et al., 2018; Yong, 2010; Che-Yahya et al., 2014). The lack of stabilization mechanisms and the mandatory lock-up period differentiates the Malaysian IPO market from other developed (especially the US) and developing markets (Yong, 2010; Che-Yahya et al., 2014; Mohd Rashid et al., 2014).

Another unique feature of the Malaysian IPO market is implementing a fixed-price method – one of the most common methods used in pricing IPOs in the local context (Albada et al., 2020; Low & Yong, 2013; Yong, 2015; Yong & Albada, 2018). The fixed-price method was popular during the 1980s in Europe (e.g., France, Italy, the Netherlands, Portugal, Sweden, Switzerland, and the United Kingdom) and in the 1990s in Asia (e.g., Japan, Malaysia, Singapore, Taiwan, and Turkey). However, the US book-building method has recently overtaken the place of the fixed-price method as the most popular method for pricing IPOs in these countries (Huang et al., 2017). The reasons behind the popularity of the fixed-price method in the Malaysian IPO market stemmed from the focus on encouraging small and young companies to raise capital through IPOs (Badru & Ahmad-Zaluki, 2018). Small issues have an advantage in the fixed-price method over the book-building method as they are exposed to lower risks and fixed costs (Benveniste & Busaba, 1997). Moreover, according to Tajuddin et al. (2015), uninformed investors in the fixed-price method face lower adverse selection costs than in book-building. This is because most traders in the Malaysian IPO market are not well equipped with information, a challenge that will be compounded by the higher uncertainties involved in determining IPO prices using the book-building method (Chong, 2009). Furthermore, Yong (2010) and Chong (2009) characterised the Malaysian IPO market as "not-so-

liquid" with a limited degree of disclosure. Loughran et al. (1994) argued that in any market with such characteristics, issuers tend to favour the fixed-price method.

Moreover, in the fixed-price method, the offer price is negotiated between the issuing firm and the lead investment banker without considering prospective investors' evaluations (Albada et al., 2019b; Low & Yong, 2013). This allows the issuing firm and the lead investment banker to decide the offer price (Tajuddin et al., 2015). This freedom is quite limited in the book-building method, where the offer price is determined through the compilation and comparison of bids among groups of investors (Yong & Albada, 2018). However, the freedom associated with the fixed-price method comes at a cost, which is represented by a higher drift in the price of the listing firm during the first day of listing. This drift is caused by the high level of opinion heterogeneity among investors (Vega, 2006; Low & Yong, 2013; Yong & Albada, 2018). Houge et al. (2001) found a positive relationship between investors' flipping activities and heterogeneity of opinion. Furthermore, the literature suggests that the high initial return in the Malaysian IPO market is due to the large drifts in the price caused by diverse heterogeneity of opinions (Yong, 2015; Mohd Rashid, 2014; Abdul-Rahim & Yong, 2010). In addition, Bayley et al. (2006) argued that under-pricing is expected to affect investors' selling decisions in the aftermarket within markets that depend on the fixed-price method and has minimal to no interference from an underwriter that stabilises the aftermarket. Past research within the literature also suggests that investors' flipping activities are rational responses to the capital gains in the immediate aftermarket (Chong et al., 2009; Yong, 2010; Che-Yahya et al., 2014).

These findings have led us to believe that investors' heterogeneity of opinion may explain their flipping activities in the Malaysian IPO market. The flipping behaviour is due to the fixed-price method that subjects prospective investors to high ex-ante uncertainty regarding the true value of the listing firm's IPO shares (Albada et al., 2019a; Badru & Ahmad-Zaluki, 2018). Moreover, the uncertainty also leads to a high level of mispricing that is associated with excessive under-pricing (Badru & Ahmad-Zaluki, 2018; Yong & Albada, 2018). According to Chowdhry and Sherman (1996), most Asian countries that use the fixed-price method exhibit more severe under-pricing vis-à-vis countries that use the book-building or auction offering methods. The higher incidence of underpricing is due to the higher level of investors' divergence of opinion due to the fixed-price method (Chahine, 2007). Building upon this observation, we argue that the Malaysian IPO market is suitable for investigating the relationship between investors' flipping activity and heterogeneity of opinion.

The current study contributes to the literature by extending the work of Yong (2010) and Chong et al. (2011) by scrutinizing the direct effect of investors' heterogeneity of opinion on flipping activities. This study investigates the indirect effect of ex-ante information on investors' behaviour in the immediate aftermarket (proxied by investors' flipping activities and heterogeneity of opinion). The results from the first model demonstrate that both IPO initial return and heterogeneity of opinion have significant positive effects on flipping activities. Furthermore, the effect of heterogeneity of opinion is more pronounced than IPO initial return. This finding drives us to conclude that investors' heterogeneity of opinion is the main explanatory variable that may justify investors' flipping activities in the immediate first-day aftermarket. The results of the second model suggest that most flipping activities happen when the price range is at its highest level in the secondary market. Finally, the study concludes that investors' flipping activities in the Malaysian IPO market are driven by quick and riskless capital gains.

The remainder of this paper is organised as follows. Section 2 presents the literature review, while Section 3 outlines the data and methodology employed in this study. The results are expounded in Section 4. Finally, Section 5 concludes.

2. LITERATURE REVIEW

In recent years, more research related to flipping activities has started emerging in the Malaysian IPO literature due to this topic's uniqueness. Unlike the US market, stabilization mechanisms are virtually non-existent in the Malaysian IPO context (Chong, 2008; Yong, 2010; Che-Yahya et al., 2014). The flipping literature in the US is more geared toward the effective role of the underwriters' stabilization act in countering flipping activities. The US literature found that underwriters' role is significant in containing flipping activities through over-allotment options, penalty bids, and short covering (Boehmer & Fishe, 2000; Fishe, 2002; Ellis et al., 2000). On the other hand, the flipping literature in the Malaysian IPO context has focused on using behavioural finance theory to explain flipping activities. Chong et al. (2009) and Chong (2009) investigate the influencing consequence of noise and disposition effects on flipping activity. Both effects were proxied by initial returns and have been reported to have significant effects on investors' flipping activities. Furthermore, the researchers concluded that investors in Malaysia prefer to flip their issues at the earliest opportunity as this allows them to benefit from the quick capital gain. Furthermore, the researchers are of the opinion that this decision appears to be the wisest for both winning and losing IPOs investors.

Yong (2010) investigated the indirect effect of some ex-ante information on IPO initial return and investors' immediate aftermarket behaviour. The ex-ante information is represented by investors' demand (proxied by over-subscription ratio), firm size, type of offer, and offer size. On the other hand, the first-day price spread and flipping activities were used as proxies for investors' immediate aftermarket behaviour. Yong (2010) concluded in his study that a higher level of flipping activities is associated with IPOs that do not involve institutional investors and exhibit high investors' heterogeneity of opinion. This is because such IPOs come with higher initial returns. However, Abdul-Rahim et al. (2013) reported that institutional investors' participation in the new issues has a strong positive relationship with flipping activities, indicating that high trading volume can be partly attributed to the flipping activity by institutional investors. Che-Yahya et al. (2014), on the other hand, investigated if institutional investors' involvement has a stabilisation effect on flipping activities. They discovered that institutional investors' involvements help in reducing flipping activities. This phenomenon is due to the fact that allocating a large proportion of new shares to institutional investors helps in creating an artificial downward pressure on the IPO price (Aggarwal & Dahiya, 2005). The existence of such downward pressure is based on the assumption that institutional investors are long-term investors. As such, they are less likely to flip their allocated IPOs in the immediate aftermarket.

Chong et al. (2011) used the average initial returns of the three most recently-listed IPOs as a proxy for heuristics representation. The researchers have done so to examine heuristic representation's effect on flipping activities and first-day price ranges. They found a positive relationship between representative heuristics and opening-day spread, which is driven by investors' optimism that led to higher valuation and price range on the opening day. Furthermore, they found that representative

heuristics is negatively related to flipping activities. This is because they investigated IPOs listed on the Main Market that are associated with lower initial returns due to lower risk (Yong, 2010). Much of the Malaysian literature has focused on investigating the role of institutional investors in influencing flipping activities (Abdul-Rahim et al., 2013; Chong, 2009; Chong et al., 2009; Che-Yahya et al., 2014). Nonetheless, Yong (2010) and Chong et al. (2011) used the first-day price range and investors' flipping activities as proxies for their immediate aftermarket behaviour. The present study differentiates itself from the previous literature by exploring the relationship between investors' heterogeneity of opinion and flipping activities.

2.1. *Heterogeneity of Opinion*

Heterogeneity of opinion is a phenomenon commonly referred to in the finance literature as the divergence of beliefs among prospective investors regarding the future distribution of returns. These diverse investor opinions cause extreme price movement following an event – such as an IPO (Wang & Liu, 2014; Miller, 1977). Furthermore, in the field of behavioural finance, Goldberg and Nitzsch (2001) argued that the behaviour of investors in reaction to their interpretation of available information about an asset is reflected in the price of the asset. The same analogy can be drawn in the context of an IPO issue, where investors' interpretations of available information will likely affect their willingness to buy the IPO. Furthermore, the overall investors' decisions are reflected in the range of trading prices, as shown by the first-day price range (Yong, 2015; Low & Yong, 2013) and flipping activities (Yong, 2010; Chong, 2009; Chong et al., 2009).

There are various theoretical explanations regarding investors' heterogeneity of opinion. For example, Beatty and Ritter (1986) argued that ex-ante information that is available to the public helps in increasing investors' heterogeneity of opinion regarding the true value of the listing firm's issues. Each investor may evaluate the listing firm's issues differently as each one of them interprets the available ex-ante information differently. Finally, the researchers concluded that the presence of ex-ante uncertainty among prospective investors influences the level of IPO under-pricing or the degree of price drift for the new issues. Another theoretical explanation is provided by Rock's (1986) winner curse model. Rock argued that an IPO with under-priced issues receives subscriptions from both informed and uninformed investors, while over-priced ones only receive subscriptions from uninformed investors.

2.2. *Relationship between Flipping and Heterogeneity*

This study is interested in understanding investors' heterogeneity of opinion as we believe that this variable has a significant relationship with investors' trading activities. Each investor is driven by their expectation of the true value of the IPO. This expectation causes the investors to behave in a manner that reflects their opinions regarding the IPO. This is because each investor evaluates the ex-ante information available to them uniquely (Hong & Stein, 2007; Fama & French, 2007). Yong (2010) concluded that IPOs with high initial returns and first-day trading volume in Malaysia are speculative. The researcher also expounded that these IPOs are usually accompanied by a large divergence of opinions regarding their true values among investors. This heterogeneity of opinion disrupts the market efficiency by influencing the demand and supply of the issues causing its price to deviate from the market value (Daniel et al., 2002). According to Tuyon and Ahmad (2017), market players must pay extra attention to investors' heterogeneity of opinion due to their ability to influence asset price formation and returns generation. This can be represented through investors'

willingness to buy and sell the listed firm's issues, reflected in the range of first-day trading prices (Yong, 2015; Low & Yong, 2013). The price range allows us to investigate whether investors agree or disagree with the current value of the IPO. The lowest price represents pessimistic investors, and the one represents otherwise. Therefore, the current study argues that investors' heterogeneity of opinion may influence IPO prices, causing an increase in the first-day initial returns. This increase would, in turn, encourage investors who are driven by the first-day capital gain to engage in flipping activities.

Yong (2010) argued that IPO investors would participate in a flipping activity guided by superior available information or opening trade performance. Furthermore, Abdul-Rahim et al. (2013) documented that investors in Malaysia hastily flipped their issues as trading started to gain quick profits in the most immediate aftermarket. Moreover, in their influential paper, Allen and Faulhaber (1989) argued that under-pricing can be used by the firm to attract investors as only high-quality firms can withstand the under-pricing cost. This means that IPOs with higher initial returns have more demand from investors (Low & Yong 2011) and face higher investors' heterogeneity of opinion (Yong 2015). Furthermore, issues with higher initial returns are more prone to flipping than others, as investors in Malaysia are driven by the capital gain (Chong, 2009; Chong et al., 2009; Yong, 2010; Abdul-Rahim et al., 2013). Investors with heterogeneous beliefs will undoubtedly exhibit different behavioural tendencies when the IPO issue starts trading (Yong, 2015; Yong & Albada, 2018).

Various studies have argued that investors' flipping activities are natural responses to the high initial returns (Reese, 1998; Gounopoulos, 2006a; Chong, 2009; Chong et al., 2009; Yong, 2010; Abdul-Rahim et al., 2013; Che-Yahya et al., 2014). This shows that flippers are taking advantage of the high IPO initial return as they see flipping as a riskless way to gain quick profits (Che-Yahya et al., 2014). Some even argued that it is the smartest decision for both winners and losers (Chong, 2009; Chong et al., 2009). According to Abdul-Rahim et al. (2013), investors are quick to flip their issues to take advantage of the immediate capital gain, most likely via secondary market trading. Therefore, the present study differentiates itself from past ones by dividing the IPO initial return (offer-to-close) into two distinct periods: opening initial return (offer-to-open); and secondary initial return (open-to-close). The offer-to-open period is efficient in providing a clear answer on the beneficiary of short-run under-pricing (Barry & Jennings, 1993). Meanwhile, the open-to-close (or secondary market) helps in determining whether the benefits of under-pricing are accrued almost entirely to the subscribers. The open-to-close also helps to determine whether the secondary market traders may participate in the return (Yong, 2007). This division of the initial return (offer-to-close) into two periods allows us to investigate if investors' flipping activities happen directly after the IPO starts trading or when the price reaches its peak for investors to profit from the capital gain. Building on Chong's (2009) argument, we conjecture that investors wait until the IPO issues start trading in the secondary market to then begin flipping to make sure that they benefit from the capital gain.

Based on the arguments above, we propose the following hypotheses:

H1: Investors' heterogeneity of opinion and IPO initial return have a positive effect on investors' flipping activities.
H2: Investors' heterogeneity of opinion has a higher effect on flipping activities than IPO initial return.

H3: Investors' flipping activities are better explained by the secondary initial return than the opening initial return.

2.3.   Control Variables

The Malaysian IPO literature has shown that some ex-ante information is effective in influencing investors' flipping activities. Therefore, the current study takes into consideration four control variables, which are:

1. **Demand for IPOs:** the literature suggests that the oversubscription ratio (OSR) has a positive relationship with IPO initial return. In other words, an IPO with a high OSR ratio has higher demand. This indicates the confidence and optimism that pre-IPO investors have about the new issue (Yong 2010; Che-Yahya et al. 2014). However, Yong (2015) and Low and Yong (2013) concluded that the higher the OSR is, the higher the investors' heterogeneity of opinion. Therefore, we argue that issues with a high OSR ratio are expected to have high flipping activities.

2. **Private placement:** IPOs with a larger proportion of institutional investors are expected to have lower investors' heterogeneity. This is, in turn, associated with lower flipping activities (Che-Yahya et al., 2014).

3. **Offer size:** The offer size may represent investors' speculative activities. A large offer size is expected to have a negative relationship with flipping activities (Yong, 2010; Abdul-Rahim et al., 2013).

4. **Lock-up period:** Che-Yahya et al. (2014) found that the lock-up period has a significant negative effect on investors' activities based on signalling theory.

3.   DATA AND METHODOLOGY

3.1.   Data

The study's population consists of 377 IPOs listed on the Bursa Malaysia, covering the period from January 2004 to December 2015. The data were collected manually from various sources, namely: (1) the Bursa Malaysia website; (2) Yahoo Finance Singapore; and (3) the Star Online website. The data on the over-subscription ratio is not readily available. Therefore, the researchers had to rely on various newspapers' reports, such as Star Online and 1-million-dollar-blog. Furthermore, the final study sample excludes various restrictive IPO issues as such issues are not available for subscription by the public. According to Mohd Rashid et al. (2014), such restrictive issues may provide less meaningful outcomes; therefore, they should be dropped from the study sample.[1] Moreover, the final study sample excludes Real Estate Investment Trust (REIT) as this type of issue presents its financial statements in a different format than the regular new issues (Che-Yahya

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[1] Examples of these issues are tender offers, restricted offer-for-sale, special and restricted issues to Bumiputra investors (Bumiputra refers to Malays and indigenous people), restricted offer-for-sale to eligible employees, restricted offer-for-sale to Bumiputra investors, restricted public issue, and special issues.

et al., 2014). Finally, the study sample focuses on fixed-price IPOs, excluding book-building ones. Throughout the period of this study, there were less than ten IPOs that used the book-building pricing method.

The study population and the final sample are summarised in Table 1. The final sample consists of 281 IPOs.

Table 1: Distribution of the study sample based on the year of listing (from 2004 to 2015)

Listing Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Population	79	79	40	30	23	14	29	21	17	17	15	13	**377**
Final sample	66	67	30	18	12	12	21	20	9	9	10	7	**281**

3.2. Methodology

The current study employs two regression models – QR regression and ordinary least square (OLS) regression – to investigate two issues. The first issue involves the question of whether investors' flipping activities are driven by investors' heterogeneity of opinion and IPO initial return (offer-to-close) – represented by Equation (1). The second issue revolves around the question of whether investors start flipping their issues as soon as the issues start trading or whether they prefer to wait until the issues start trading in the secondary market. This is investigated by segregating the IPO initial return (offer-to-close) into opening initial return (offer-to-open) and secondary initial return (open-to-close), represented by Equation (2).

$$\text{Flipping} = \alpha + \beta_1 Range_i + \beta_2 IR_i + \beta_3 LP_i + \beta_4 OSR_i + \beta_5 PRIV_i + \beta_6 OfferS_i + \varepsilon_i \qquad (1)$$

$$\text{Flipping} = \alpha + \beta_1 Range_i + \beta_2 OIR_i + \beta_3 SIR_i + \beta_4 LP_i + \beta_5 OSR_i + \beta_6 PRIV_i + \beta_7 OfferS_i + \varepsilon_i \qquad (2)$$

where Flipping represents investors' flipping activities, a proxy that is calculated by dividing the opening first-day trading volume by the total number of shares issued (Che-Yahya et al., 2014). *Range* is the proxy for investors' heterogeneity of opinion, calculated as the difference between the maximum and the minimum price during the first day of trading, divided by the closing price of the first day of trading (Yong & Albada, 2018). IR represents IPO initial return, calculated as the difference between the first-day close price and the offer price, divided by the offer price (Abdul-Rahim et al., 2013). OIR is the opening initial return, calculated as the difference between the first-day open price and the offer price, divided by the offer price (Yong, 2010). *S*IR is secondary initial return, calculated as the difference between the first-day close price with the first-day open price, divided by the first-day open price (Chang et al., 2008).

LP is the lock-up period that is represented by a dummy variable that takes the value of one for a lock-up period of 360 and above and zero otherwise (Mohd Rashid et al., 2014). *OSR* represents investors' demand for an IPO, proxied by the over-subscription ratio (Yong, 2010; Low & Yong, 2013). Equation 3 is a representation of the OSR (Tajuddin et al., 2015). *PRIV* is the institutional

investor involvement, calculated by dividing the private placement by the total number of shares issued (Abdul-Rahim et al., 2013; Tajuddin et al., 2018). OfferS represents the offer size, proxied by a dummy variable that takes a value of 1 for IPOs with an offer size that is higher than the average yearly offer size and zero otherwise (Low & Yong, 2011).

$$OSR = \frac{Total\ number\ of\ IPOs\ Subscribed}{Total\ Offer\ Units} \qquad (3)$$

Finally, the current study utilized the QR regression method because of its ability to overcome several shortcomings of the ordinary least-square (OLS) method. These shortcomings include the inability of OLS to accommodate cases of non-normality of data and heteroscedasticity. Furthermore, a QR model is also robust to outliers as it is able to explain the low and high points of the dependent variable. Through a quick normality test, the researchers have determined that Flipping is not normally distributed. The results for the normality of residuals through the Shapiro-Wilk W test return a p-value less than 0.01, rejecting the null hypothesis of normal distribution of flipping activities. Figure 1 display the variations in the mean, maximum, and minimum values of investors' flipping activities.

Figure 1: Quantile plot for investors' flipping activities
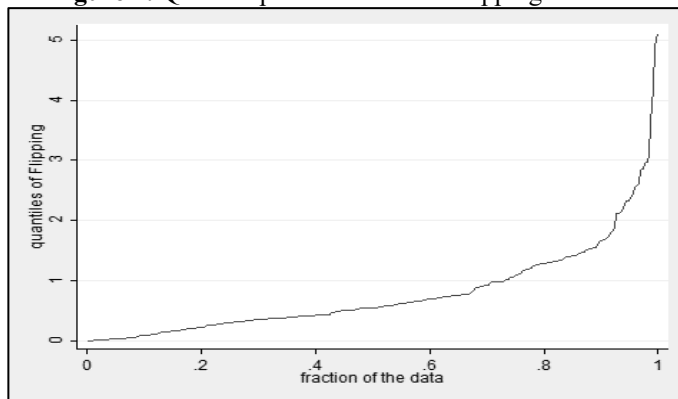
4. RESULTS

4.1. *Descriptive Statistics*

The descriptive statistics are presented in Table 2. The study reports an average initial return (offer-to-closing) of 24.99 per cent, a figure that is close to the reported average initial return of 23.19 per cent by Che-Yahya et al. (2014). However, this study's reported average initial return is higher than Ammer and Ahmad-Zaluki's (2016) average initial return of 21 per cent covering the period from 2002 to 2014. The study's average initial return is also lower than Mohd Rashid et al.'s (2014) average initial return of 29 per cent covering the period from 2000 to 2012. Furthermore, the current study reports an average opening initial return (offer-to-open) of 26.58 per cent, similar to the average initial return (offer-to-open) reported by Yong (2011) covering the period from 2001 to 2009. Moreover, the study reports an average first-day price range of 23.0 per cent, a figure that

is close to the reported first-day price range of 24.64 per cent and 20.06 per cent reported by Low and Yong (2013) and Yong (2015), respectively.

In addition, the current study reports an average flipping of 78.81 per cent. This figure is much higher than the average reported by Che-Yahya et al. (2014) of 38.88 per cent, covering the period from January 2000 to December 2012. This shows an increase in investors' flipping activities in the Malaysian IPO market by 51 per cent between December 2012 to the study period. The increase could be attributed to the drop in total listed IPOs (79 IPOs in 2004 and 13 IPOs in 2015). In other words, investors are competing among themselves to profit from the capital gain from what is already a scarce commodity. This higher level of competition causes investors to be speculative about the IPO issues, resulting in an increase in the level of heterogeneity of opinion, which would lead to an increase in price drift. The same conclusion may be inferred from the increase in the first-day price range, especially after 2006. Therefore, this observation leads us to believe that investors' flipping activities have increased as they aim to exploit of the quick and readily available capital gain. According to Chong (2009), investors in Malaysia flip their issues in the immediate aftermarket to reap higher initial returns compared to holding and disposing of their issues in three years' time.

Table 2: Correlation between QM and Customer Satisfaction

Variable	Obs.	Mean	Std. Dev.	Min	Max
Closing initial return (%)	281	24.99	52.24	-66.67	404.17
Opening initial return (%)	281	26.58	45.46	-66.98	288.89
Secondary initial return (%)	281	-0.86	19.74	-59.05	142.5
Offer price (MYR)	281	0.75	0.47	0.12	3.00
First-day open price (MYR)	281	0.90	0.63	0.19	4.00
First-day close price (MYR)	281	0.89	0.64	0.21	4.18
First-day price range (%)	281	23.0	24.0	0.00	183.0
First-day high price (MYR)	281	0.91	0.65	0.11	4.38
First-day low price (MYR)	281	0.77	0.56	0.10	3.94
Flipping activities (%)	281	78.81	78.07	0.26	511.63
First -day trading volume (million)	281	34.40	38.4	0.094	223.00
Total unit offered (million)	281	64.00	87.50	3.706	787.00
Offer size (MYR million)	281	47.70	85.90	1.80	849.00
Over-subscription ratio (%)	281	36.85	55.18	-0.54	377.96
Private placement (million)	281	35.70	76.80	0.00	920.00

Notes: Malaysian ringgit (MYR).

The pairwise correlations among the study variables are reported in Table 3. The initial results show that the first-day price range, closing initial return, and secondary initial return have a significant positive relationship with investors' activities. Furthermore, the results in Table 3 show that the closing initial return, opening initial return, and secondary initial return exhibit significant positive correlations with the first-day price range. These initial results show that investors'

heterogeneity plays an important role in explaining IPO initial returns, which would, in turn, affect investors' activities. Regarding the control variables, only OSR and offer size have positive and negative correlations with investors' flipping activities, respectively. Finally, the lock-up period, OSR, and offer size exhibit significant correlations with investors' heterogeneity of opinion.

Table 3: Correlation between QM and Customer Satisfaction

#	Variables	Flipping activities	2	3	4	5	6	7	8
2	First-day price range (%)	0.21**	1						
3	Closing initial return (%)	0.18**	0.17**	1					
4	Opening initial return (%)	0.088	0.16**	0.80**	1				
5	Secondary initial return (%)	0.23**	0.13**	0.40**	-0.05	1			
6	Lock-up period (D)	0.11	0.14**	-0.02	-0.02	-0.00	1		
7	Over-subscription ratio (%)	0.19**	0.29**	0.35**	0.35**	-0.01	0.16**	1	
8	Private placement (%)	0.08	0.11	0.05	0.02	0.01	-0.07	0.08	1
9	Offer size (D)	-0.29**	-0.23**	-0.05	-0.10	0.09	-0.23**	-0.23**	-0.07

Notes: ** denotes statistical significance at the 5 per cent level. D stands for a dummy variable.

4.2. Regression results and discussions

The effect of investors' heterogeneity of opinion and IPO initial return (offer-to-close) on flipping activities is shown in Table 4. The OLS and robust OLS results suggest that both investors' heterogeneity of opinion and IPO initial return have significant positive effects on investors' flipping activities. This effect is also visible in the lower and medium quantiles (25th and 50th). The findings support H1 that postulates that both investors' heterogeneity of opinion and IPO initial return increase investors' flipping activities. This positive effect of initial return on investors' flipping activities is also consistent with Yong (2010), Abdul-Rahim et al. (2013), and Che-Yahya et al. (2014). Yong (2010) argued that IPOs with high investors' heterogeneity of opinion are associated with high flipping activities. On top of that, the value of the coefficient for investors' heterogeneity of opinion is higher than IPO initial return. This indicates that investors' heterogeneity of opinion carries a bigger weight in influencing investors' flipping activities. Therefore, H2 is also supported. H2 postulates that investors' heterogeneity of opinion is more influential in determining flipping activities than IPO initial return.

Table 4: Influencing effect of first-day price range and the closing price on investors' flipping activities

Variables	OLS	Robust OLS	QR		
Dependent: Flipping activities			25th	50th	75th
First-day price range	0.364*	0.364*	0.373***	0.656***	0.381
Closing initial return	0.0389**	0.0389*	0.0212**	0.0447**	0.0495

Table 4: continued

Lock-up period	**0.0603**	**0.0603**	**-0.106***	**-0.0615**	**0.0618**
Over-subscription ratio	0.000723	0.000723	0.00128**	-0.0000912	0.000521
Private placement	0.0696	0.0696	0.0137	-0.0404	0.0355
Offer size	-0.408***	-0.408***	-0.156**	-0.265***	-0.631***
Constant	0.645***	0.645***	0.264***	0.480***	0.970***
	(6.29)	(5.93)	(4.37)	(5.04)	(6.05)
Number of obs.	281	281	281	281	281
R-squared	0.132	0.132			

Notes: ***, **, * denote significance at the 1 per cent, 5 per cent, and 10 per cent levels, respectively; and τ-statistic in parentheses.

As a second step, we have segregated IPO initial return (offer-to-close) into opening initial return (offer-to-open) and secondary initial return (open-to-close). The results from both the OLS and QR regressions show that the secondary initial return has a significant positive relationship with investors' activities (see Table 5). On the other hand, the opening initial return is only significant at the lower quantile (25th) – at the 5 per cent level. This evidence may be interpreted as investors waiting until the IPO starts trading in the secondary market to gain benefit from higher initial returns. This is also shown by the first-day highest price in Figure 2. According to Che-Yahya et al. (2014), investors are more inclined to let go of their investment to optimize their returns since the ''price is right''. These results would therefore support H3, which hypothesized that investors' heterogeneity of opinion is better explained by the secondary initial return than the opening initial return.

Figure 2: First-day yearly average open, highest, lowest, and close prices
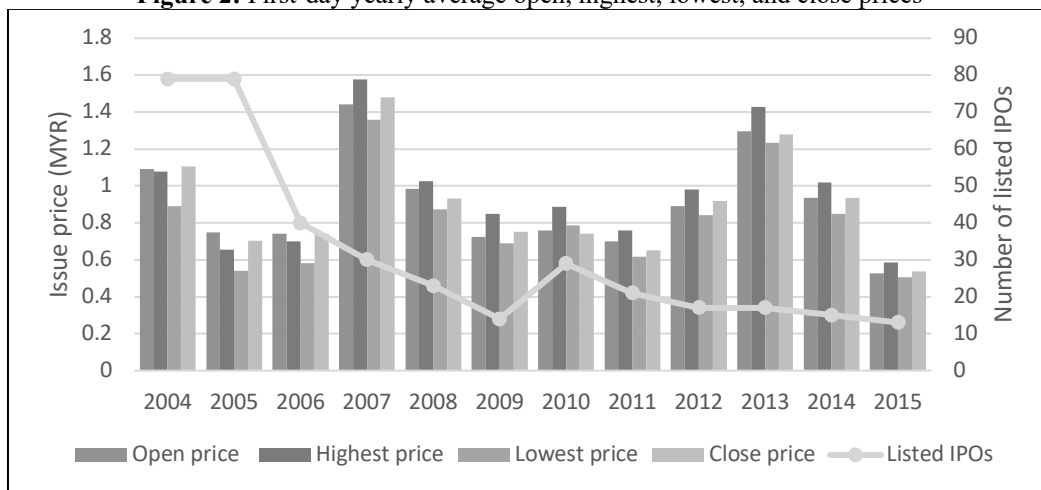
The study has four control variables, namely the lock-up period, OSR, private placement, and offer size. Both the lock-up period and OSR – in Tables 4 and 5 – have significant negative and positive effects on the lowest quantile (25th), respectively. Che-Yahya et al. (2014) argued that the lock-up period might signal the quality of the issuing firm to investors, leading them to hold on to their

allocated shares. This means that the lock-up period is expected to have a negative effect on investors' flipping activities. However, in this study, we argue that the lock-up period is incapable of signalling the quality of the issuing firm to investors due to the forced lock-up period of at least one year or six months in the Malaysian IPO market. This explains the insignificant results from the OLS and the median and higher quantiles (50th and 75th). Furthermore, the positive effect of OSR on investors' flipping activities can be explained by the supply and demand theory. Higher demand leads to a higher price and, subsequently, higher initial returns (Che-Yahya et al., 2014; Yong, 2010). Finally, the offer size has a significant negative effect on investors' flipping activities in both the OLS and QR regressions. According to Yong (2010), offer size is a significant indicator of investors' flipping activities, as listing firms with large offer sizes are less prone to speculative activities than the ones with smaller offer sizes. This observation implies that large offer IPOs would typically entice lower flipping activities, explaining the negative effect of offer size on investors' flipping activities.

Table 5: Influencing effect of first-day price range and the closing price on investors' flipping activities

Variables	OLS	Robust OLS	QR		
Dependent: Flipping activities			25th	50th	70th
First-day price range	0.264	0.264	0.311***	0.633***	0.682**
Opening initial return	0.00981	0.00981	0.0242**	0.0214	0.00898
Secondary initial return	0.0840***	0.0840***	0.0272**	0.0543***	0.0916***
Lock-up period	0.0449	0.0449	-0.110**	-0.0988	0.0372
Over-subscription ratio	0.00132	0.00132	0.00120**	0.000610	0.00233
Private placement	0.0694	0.0694	0.0331	-0.0872	0.0323
Offer size	-0.458***	-0.458***	-0.152**	-0.299**	-0.645***
Constant	0.753***	0.753***	0.264***	0.578***	0.986***
Number of obs.	281	281	281	281	281
R-squared	0.178	0.178			

Notes: ***, **, * denote significance at the 1 per cent, 5 per cent, and 10 per cent levels, respectively; and τ-statistic in parentheses.

5. CONCLUSION

In this study, we argue that investors' heterogeneity of opinion is the main explanatory variable of investors' flipping activities. This is because high heterogeneity of opinion leads to higher IPO price drift, motivating investors to flip their allocated shares in the immediate aftermarket to reap the benefits of higher initial returns. To validate these hypotheses, the researchers manually collected information regarding 281 IPOs listed on Bursa Malaysia from January 2004 to December 2015 from various sources. Furthermore, the study employs two regression methods to

investigate the proposed hypotheses, namely the OLS and QR regression methods. The QR method was selected due to its ability to overcome the shortcomings of OLS, allowing the study to investigate the effect of the independent variables on the dependent variable at different points of the distribution. This was made possible through the ability of the QR method to present the distribution of the dependent variable through different quantiles (e.g., 25th, 50th, and 75th).

The study investigates the relationship between investors' heterogeneity of opinion and investors' flipping activities in two stages. The first stage helps in answering the question of whether investors' flipping activities are influenced by investors' heterogeneity of opinion or IPO initial return (or both). The results show that both heterogeneity of opinion and IPO initial return play an important role in explaining the increase in flipping activities in the Malaysian market. Furthermore, the results suggest that investors' heterogeneity of opinion is the major explanatory variable that expounds investors' flipping activities. Investors in the fixed-price method can draw different interpretations of the ex-ante information, prompting them to become speculative regarding the true value of the firm in the future. This would then leave them with one conclusion – reaping the profits early through flipping generates higher returns than holding on to the new speculative issues. The findings also indicate that capital gain is the main motive behind investors' flipping activities in the Malaysian IPO market due to the uncertainty regarding the listing firm's future, prompting investors to have the opinion that flipping is the wisest and less risky choice to make. The third stage of the study involves the segregation of IPO initial return (offer-to-close) into opening and secondary initial returns to gain a deeper understanding of investors' behaviour in the Malaysian IPO market. The results show that investors do not start flipping their allocated shares as soon as the market opens for trading. Investors typically prefer to wait until the price of their issues reaches its max to then start flipping their shares to reap the highest capital gain available. These findings contribute to the behavioural literature by concluding that investors' heterogeneity of opinion is the major explanatory cause of investors' flipping activities in the Malaysian IPOs' immediate aftermarket.

The findings of this study provide useful insights to IPO investors and market regulators. Firstly, investors in Malaysia are still able to profit from flipping their shares during the first day of trading due to the existence of high initial returns. This implies that IPO investors are more interested in reaping the profits from capital gain by implementing a short-term investment strategy that relies on flipping activities than relying on a long-term strategy that bets on stock growth and dividend payments. Furthermore, the study managed to identify investors' heterogeneity as the main driver behind their short-term investment strategies. This implies that IPO investors lack the information needed to identify good investment opportunities. Therefore, for market regulations to minimise speculative activities in the IPO market and maintain investor confidence in the IPO process, the study suggests that the regulators should dictate that reliable information that signifies the quality of the issuing firm must be included within the material listing information. The regulators should also make such information readily accessible to investors to ensure that they are adequately informed to make good investment decisions. Future studies should therefore be focused on investigating the influencing effects of prestige signals on flipping activities due to their role in signifying the quality of the issuing firm and reducing investors' heterogeneity of opinion.

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