

Disposition Effect and Flippers in the Bursa Malaysia

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This paper discusses whether investors' decisions to flip or to hold on to their initial public offerings (IPOs) in the immediate aftermarket are subject to the disposition effect as introduced by Shefrin and Statman [1985]. Using 132 IPOs listed on the Main Board of the Bursa Malaysia, this study found that the disposition effect did indeed exist among IPO investors in the Bursa Malaysia. Investors were found to be 2.64 times more willing to flip winning compared to losing IPOs. Further, after scrutinizing the long run ex-post performance of the winners' and losers' portfolios, it was found that the tendency for investors to flip winning IPOs arising from their "fear of regret" was justifiable. Nonetheless, an investor's decision to hold on to losers was found to be a suboptimal behavior. This was because the ex-post performance of the losers was not significantly better than their initial performance. Finally, this study also uncovered that investors' mean revert anticipation was not justified by the ex-post return.

Keywords: Flippers, Disposition effect, IPO, Fear of regret, Mean revert

INTRODUCTION

In recent years, there has been increasing interest among researchers pertaining to investors' aftermarket trading behavior in the initial public offering (IPO) market, particularly in the United States. This is attributable in part to the resurgence of behavioral finance. Among the main reasons prompting the resurgence of behavioral finance were the inability of the efficient market hypothesis to explain a number of anomalies and that investor behavior could be one of the determinants of an investment's performance.

This paper discusses the flipping activities in the Malaysian IPO market from the perspective of the disposition effect theory. The disposition effect is a behavioral finance theory put forward by Shefrin and Statman [1985]. The disposition effect theory states that to avoid regret from making the wrong investment decision, investors tend to hold on to their losing investments for too long and to sell off their winning investments too soon. Flipping in this paper refers to the immediate sale of IPOs on commencement of trading. Many practitioners and academics condemned flipping as a detrimental activity which depressed the early stage aftermar-

ket performance of IPOs (Fishe [2002], Aggarwal [2003]). It was believed that investors with IPO shares flipped either on the basis of superior information or the opening performance. Besides assessing whether flippers are subject to the disposition effect, this paper also examines whether the two motivators, namely the fear of regret and mean revert anticipation which are claimed to drive disposition, are justifiable by the ex-post performance of the Malaysian IPOs.

This study of the behavioral aspect of the Malaysian IPO market is significant because, according to *Bursa Malaysia Research & Data Centre*, on average up to 91.35% of investors during the period covered by the study comprised individual traders who were normally not well-informed and who conducted trades based on noises from all possible sources (Chen, Hung and Wu [2002]). Based on this investor profile plus the fact that it is a developing market, the Malaysian stock market could be considered to be relatively illiquid and with a limited degree of disclosure (Campos, Newell and Wilson [2002]). Indeed, numerous researchers have provided support on the inefficiency of the Malaysian stock market (Mat Nor, Lai and Hussin [2002], Lai, Guru and Mat Nor [2003], Husni [2005]). Furthermore, anomalies such as initial underpricing and long-run underperformance in the Malaysian IPO market are well-known (Dawson [1987], Isa and Ahmad [1996], Leong, Vos and Tourani-Rad [2000]).

This article is organized as follows: the second section is a discussion of the relevant literature. The third section describes the data and the methodology employed in this

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study, while the empirical results and analysis are presented in the fourth section. This is followed by the summary of the results and the conclusions in the final section.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Studies on flipping activities have become common, especially in the United States (Krigman, Shaw and Womack [1999], Aggarwal [2000], Ellis, Michaely and O'Hara [2000], Fische [2002], Aggarwal [2003]). Most of these studies have focused on the aftermarket stabilization activities of U.S. underwriters, who often played the role of the market maker to provide liquidity to offset downward price pressure due to flipping, especially for weak IPOs.

Modern financial markets depend on trading volume for their existence. While flipping provided liquidity to the IPOs' initial aftermarket, excessive flipping was mostly frowned upon, as it was deemed detrimental to the initial performance of an IPO. In fact, as part of the effort to protect minority shareholders' interest, the Malaysian Securities Commission imposed a moratorium to prohibit substantial shareholders, who were normally the promoters of new listings, from disposing of their shares immediately upon listing.

In the United States, in addition to the imposition of a similar lock-up period, underwriters were permitted to "stabilize" the initial price through various activities aimed at reducing selling pressure from severe flipping. Among others activities, underwriters are allowed to buy back and retire IPO shares up to 35% (Fische [2002]). This over-allotment option is known as the Green Shoe Option. Ritter and Welch [2002] confirmed that almost all IPOs contain an over-allotment option for up to 35% of the shares offered. Besides the Green Shoe Option, another aftermarket price stabilization method used by underwriters was to apply penalty bids to restrict IPO supply to flippers (Aggarwal [2000]). The fear of losing market share due to excessive overpricing or underpricing of an IPO (Beatty and Ritter [1986]) could be the main motivator for an underwriter's active involvement in stabilization activities.

In addition to price stabilization during heavy flipping, another precautionary activity of underwriters to restrict heavy flipping is allocating more IPOs to "strong hands," that is, to investors who would commit to retain the allocation rather than the "weak hands" who are likely to flip for profit shortly after the issue (Aggarwal and Rivoli [1990]). In Malaysia, the strong hands are allocated with IPOs via private placements. If the strong hands flip, they will likely not be included in future initial offerings. Nevertheless, stabilization activities are prohibited in Malaysia.

Not many studies had been carried out on flipping activities in Malaysia. Likewise, studies of behavioral finance are limited. Given the high risks and inefficiency of the IPO market in Malaysia, a study to determine whether investor

flipping behavior was subjected to disposition was needed. The disposition effect postulated that investors are predisposed to holding losers too long and selling winners too early.

Based on a study of secondary stock dealing history and mutual fund trades, Shefrin and Statman [1985] showed that disposition prevailed in the capital market rather than only in the laboratory, as documented by Kahneman and Tversky [1979]. Other researchers such as Odean [1998], Barber and Odean [1999], and Chui [2001] had examined this theory based on the behavior of individual investors in the stock market and provided support for it.

A related study by Kautia [2004] found that for negative initial return IPOs, trading below the offer price was withheld compared to trading above the offer price. This provided support to the prevalence of the disposition effect in the losers' portfolio. However, he posited that trading volume of the winner IPOs did not offer support for the disposition effect, as the trading volume for winners was found to increase on the day their prices first fell below the offer price. Moreover, Kautia [2004] highlighted that at IPO time, investors used a common purchase price, namely the offer price, as a reference point in forming their "mental accounts" for both winners and losers. This eliminates the potential distortions caused by the choice of reference point in a given situation, and the disposition effect should be at its strongest. In the context of flipping, whether or not investors' decision to flip or hold an IPO is subjected to the disposition effect would depend on whether they are willing to flip more of the winners compared to the losers.

Therefore, this study proposes the following hypothesis:

H1: The flipping ratio of the winners' portfolio is higher than that of the losers' portfolio.

In a related light, numerous explanations have been put forward by researchers pertaining to the causes of the disposition effect. Shefrin and Statman [1985], Giorgi and Hens [2006], and Muermann and Volkman [2006] contended that regret theory explained investors' disposition behavior. Shefrin and Statman [1985] interpreted regret aversion as "an emotional feeling associated with the ex-post knowledge that a different past decision would have fared better than the one chosen" (p. 781).

Similarly, Shiller [1999] suggested that regret theory may be interpreted as implying that:

... investors avoided selling stocks whose price had gone down in order not to finalize the error they make and not to feel the regret. They sold stocks whose price had gone up in order that they cannot regret failing to do so before the stock price later fell, should it do so. (p. 1312)

To investigate whether these beliefs or explanations were justifiable by the ex-post performance of the IPOs, the following hypotheses are proposed:

H2: The ex-post performance of the IPOs in the winners' portfolio deteriorates significantly in the long-run.

H3: The ex-post performance of the IPOs in the losers' portfolio performs significantly better in the long-run.

On the other hand, Odean [1998] suggested that the behavior of holding on to losers was associated with investors' mistaken belief that losers would bounce back and outperform winners eventually due to mean revert. In the context of the Malaysian stock market, Lim [1992] profiled Malaysian investors as short-term investors in bull markets while reverting to long-term gains in a bear market. Therefore, there is a need to assess whether this characteristic of investors leads to disposition. Hence, H4 is proposed:

H4: The ex-post performance of the loser's portfolio is superior to that of the winner's portfolio due to mean revert.

DATA AND METHODOLOGY

The sample used in this study comprised 132 IPOs listed on the Main Board of the Bursa Malaysia (Malaysian Stock Exchange). The Main Board is the funding avenue for bigger Capitalized Companies. The criteria adopted for sample selection were that the new listings were listed on the Main Board between 1991 and 2003 and that all the requisite information was available. Samples were only chosen from the Main Board as they were subjected to similar quantitative and qualitative listing requirements. The IPO samples and required data were drawn from various sources, namely the Securities Commission, Bursa Malaysia Research and Data Centre, Central Bank of Malaysia, and their relevant publications.

To investigate H1 on whether flippers were subjected to the disposition effect, the approach of Barber and Odean [1999] was adopted, whereby IPOs were categorized into losers' portfolios (IPOs with negative initial return) and winners' portfolios (IPOs with positive initial return). The reference point was the subscription price. Flipping activity was measured using the flipping ratio, defined as the percentage of opening day trading volume divided by the number of shares offered for subscription (Miller and Reilly [1987], Aggarwal [2003]).

Subsequently, Barber and Odean's [1999] proportion gain realized (PGR) is equivalent to the flipping ratio of the winner's portfolio while the proportion loss realized (PLR) is equivalent to the flipping ratio of the loser's portfolio. These proportions were calculated as below:

$$\text{Flipping ratio (winner's portfolio)} = \frac{\text{Total units traded}}{\text{Total units offered for subscription}}$$

$$\text{Flipping ratio (loser's portfolio)} = \frac{\text{Total units traded}}{\text{Total units offered for subscription}}$$

TABLE 1
Descriptive Statistics of 132 IPOs Listed from 1991 to 2003.

Variables	Mean	Std. Dev	Maximum	Minimum	Skewness
Market-adjusted Initial Return (MAIR) (%)	66.51	0.5375	212.00	-21.00	0.394
Equally Weighted MABHR (%)	0.66	0.0351	25.14	-3.67	3.457
Value-weighted MABHR (%)	0.0021	0.00016	0.07	-0.05	1.604
Flipping Ratio (FR) (%)	7.66	0.4857	21.52	0.01	0.540

A comparison of the two ratios above will determine whether investors sold a higher proportion of winners or losers. The disposition effect exists when the flipping ratio of the winner's portfolio is significantly higher than the loser's portfolio.

The ex-post returns were examined to determine whether regret aversion and mean reverts anticipation are justifiable. Ex-post returns refer to the market adjusted buy-and hold returns (MABHR) 3 years after the listing of the IPO. The MABHR is calculated as the difference between the closing price at the first day of trading and the closing price on each subsequent thirtieth day over a 36-month period; this difference is thereafter adjusted for the return on the market portfolio. Price data for the period from 1991 to 2006 was used to calculate the MABHR. To ensure robustness of the results, both equally weighted (EW) and value-weighted (VW) MABHR were used.

ANALYSIS AND RESULTS

Summary Statistics

Table 1 shows the descriptive statistics of the samples used in this study. The mean market-adjusted initial return (MAIR) was 66.51% with a minimum of -21.00% and a maximum of 212.00%. In terms of the 3-year market adjusted buy-and-hold return, an average of 0.66% EW buy-and-hold return (EWMABHR) was recorded for the study period. The highest 3-year EWMABHR was 25.14% while the lowest was -3.67%.

At a later stage, this variable was transformed into Natural Logarithm (LN) EWMABHR for further analysis due to its positive skewness. The VW market-adjusted buy-and-hold-return (VWMABHR) recorded a slightly lower mean at 0.0021%. As in the case of the EWMABHR, the VWMABHR was transformed into LN VWMABHR for further analysis due to its positive skewness. The maximum flipping ratio was calculated to be 21.52% while the minimum was 0.01%.

TABLE 2
T-test Results for Equality of Means for Flipping
Ratios of Winners' and Losers' Portfolios.

Flipping ratio of winners (%)	8.44
Flipping ratio of losers (%)	3.20
t-statistic	-7.528**
Mean difference (%)	5.24

Note: **Significant at 5% level.

EMPIRICAL RESULTS AND ANALYSIS

Table 2 presents the empirical results for H1. The mean flipping ratio for the loser's portfolio was about 3.20% but was much higher at 8.44% for the winner's portfolio. The results showed that investors in winners were approximately 2.64 times more willing to flip their IPOs compared with those who invested in losers. The *t*-statistic calculated was -7.528 and it was significant at the 95% confidence level. The findings supported H1; that is, the flipping ratio of the winner's portfolio was significantly higher compared to the loser's portfolio.

The results also suggest that Shefrin and Statman's [1985] disposition effect prevails among IPO investors in Bursa Malaysia; that is, Malaysian investors were more willing to sell to realize quick profit while delaying their realization of losses. These results were also consistent with Bayley, Lee, and Walter's [2006] claim that underpriced IPOs had a positive association with flipping.

Table 3 presents the t-test results for H2. In Table 3, the winner's portfolio had a mean MAIR of 78.12% and a mean EWMABAHR of 0.59%. On average, the ex-post return of new listings from the winner's portfolio deteriorated by 77.53% compared with the initial return. The paired differences test statistic (*t*) was -10.185 and was significant at the 95% confidence level. The mean for VWMABAHR was 0.0014% while its mean difference with MAIR was 78.12%. The paired differences statistics was 6.682 and was significant at the 95% confidence level.

TABLE 3
Paired T-test Results for Winner's Portfolio Initial
Returns Versus 3-year EWMABAHR and
VWMABAHR.

	EWMABAHR	VWMABAHR
N	112	112
Mean MAIR (%)	78.12	78.12
Mean MABAHR (%)	0.59	0.0014
Pair means difference (%)	-77.53	-78.12
Standard deviation (Pair)	0.9294	0.49599
t-statistic	10.185**	6.682**

Note: **Significant at 5% level (one-tail test).

TABLE 4
Paired T-test Results for Loser's Portfolio Initial
Returns Versus 3-year EWMABAHR and
VWMABAHR.

	EWMABAHR	VWMABAHR
N	20	20
Mean MAIR (%)	1.50	1.50
Mean MABAHR (%)	1.06	0.0061
Pair means difference (%)	-0.44	-1.49
Standard deviation (Pair)	0.7560	0.1935
t-statistic	1.759	0.352

Note: **Significant at 5% level (one-tail test).

These results supported H2, namely, the ex-post performance of new listings in the winner's portfolio deteriorated significantly. In other words, the investor's fear of regret for not flipping the winners on the listing day is not a "wrong belief." Indeed, flipping the winners in the immediate after-market had enabled them to reap higher returns compared to holding and disposing them off 3 years later.

On the other hand, the validity of H3, that the fear of regret was the motivator behind the investor's behavior to ride on the losers, was analyzed using the loser's ex-post performance. The results of this analysis are presented in Table 4.

As shown in Table 4, the loser's portfolio had a mean MAIR of 1.50% and a mean 3-year EWMABAHR of 1.06%. This implied that an average loser's aftermarket return was almost similar to its initial return. However, when the data were scrutinized on a case-by-case basis, about 60% of the losers recorded negative EWMABAHR 3 years after listing. Moreover, based on the results exhibited in Table 4, the average loser's performance was worse off by approximately 0.44% 3 years after listing, and the *t*-statistics also indicate that there was not enough evidence to support the proposition that losers performed significantly better in the ex-post when the MAIR is compared with the EWMABAHR.

On the other hand, a mean 3-year VWMABAHR of 0.0061% was reported for the loser's portfolio. The average loser's return deteriorated approximately 1.49% 3 years after listing when VWMABAHR was used in the analysis. Nevertheless, similar to the test using EWMABAHR, the results showed that the paired mean differences of the MAIR and VWMABAHR were insignificant. Therefore, an investor's fear of regret for not flipping losers on the listing day, as the losers might perform significantly better in the ex-post, was a wrong belief.

In other words, the test results had revealed that loss aversion due to fear of regret offered a good explanation for an investor's predisposition toward holding on to losers in the context of the Malaysian IPO market. In addition, this finding was consistent with that of Kautia [2004].

Finally, Table 5 gives the test results for H4, which assessed whether mean revert anticipation was justifiable by the

TABLE 5
T-test Results for Equality of Means for Mean Revert
by Portfolio.

	EWMABAHR	VWMABAHR
Mean MABAHR for Winners (%)	0.59	0.0014
Mean MABAHR for Losers (%)	1.06	0.0061
Mean Difference (%)	0.47	0.0047
t-statistic	0.332	0.352

Note: **Significant at 5% level (one-tail test).

ex-post return. From the t-statistics reported in Table 5, there was insufficient evidence to support the proposition that the ex-post performance of the loser's portfolio was superior to that of the winner's portfolio due to mean revert. This conclusion applies when either EWMABAHR or VWMABAHR between the loser's and winner's portfolio are used for analysis. Therefore, findings indicate that the anticipation of a mean revert by investors which had driven them to exhibit disposition, was unjustifiable.

SUMMARY AND CONCLUSIONS

The findings of this study revealed that there was evidence of disposition among Malaysian IPO investors whether in flipping or in holding on to their new issues. Generally, the investors were risk averse for winners and risk seeking for losers. An assessment of the ex-post performance of the IPOs showed that it was wiser to flip for both winner and loser IPOs in the Malaysian market. In addition, investor behavior, which demonstrated a strong propensity to realize gains, appeared to be optimal behavior, while the preference to hold on to losers was irrational, as the ex-post performance of the losers was not significantly better than their initial performance. Furthermore, their anticipation of a mean revert was proved to be a "misbelief" which did not materialize.

In addition, findings of this study also implied that investors' decisions on whether to flip or hold their IPO shares, especially for the losers, was attributed to their misbeliefs and hesitancy rather than rationality. Because of the fear of regret, investors harvested winners quickly, while waiting for losers to rebound or to outperform the winners so investors could harvest another round. Paradoxically, investors' propensity to realize gains at the earliest opportunity seemed to make them appear wise. This is because the ex-post returns of the winners performed significantly worse than their initial returns, which was precisely as investors feared. Nevertheless, it could be argued that the significantly worse ex-post returns of the winners constituted a self-fulfilling prophecy as investors' decisions to flip in order to realize gains quickly in the immediate aftermarket were detrimental to and exerted downward pressure on the ex-post returns.

Besides the regret adverse explanation, investor behavior in holding on to losers in the immediate aftermarket might be attributed to their initial over-optimism of the losers' ex-post performance. As documented by Ritter and Welch [2002], "optimistic" accounting could cause investors to face difficulties in disentangling hidden problems with the quality of the firm and to be unable to forecast a firm's performance accurately.

Finally, despite the difference in the study period, the findings from this study provided further support to Lim's [1992] study that profiled Malaysian investors as short-term investors in bull markets while reverting to long-term gains in a bear market. In other words, Malaysian stock market investors tended to harvest fast and leave the market when they invested in a "bull" stock while holding on to their "bear" stocks in the hope they would rebound in the long run.

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