

## **Disposition Effect, Endowment Effect, Attachment Bias and Investment Advisers**

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**Abstract:** *In the context of stock market decision-making and investment processes, the impact of the disposition effect, the endowment effect and the attachment bias is great. The present research, based on answers given by 81 certified stock exchange executives, demonstrates the effect of the above biases on the subjects' rational investment decisions and choices and the significant role of certified executives in the operation and processes of the stock market.*

**Keywords:** *Behavioral Finance, Disposition Effect, Endowment Effect, Attachment Bias, Investment Advisers, Stock Market*

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### **I. Introduction**

Behavioural Finance is the most comprehensive financial theory. Based on other disciplines (sociology, psychology) enables the description of the impact of emotional errors and biases on investment choices. Unlike the efficient market hypothesis, it has demonstrated that investors do not always aim at rationality, profit making and maximum utility, but rely on irrational and wrong investment decisions. In addition, markets are not entirely efficient, but are likely to operate inefficiently for long periods of time, as often demonstrated by stock bubbles and recurring stock crashes.

The extant literature of behaviour is focused on three major biases, which have significantly affected and hampered rational investment decision making.

Recognizing the significance of the disposition effect, the endowment effect and the attachment bias, and the impact they have on the investment decisions and choices of the surveyed certified stock exchange executives, we discover the import of the Behavioural Finance and its dominant position among other financial theories.

### **II. Disposition effect**

The disposition effect is defined as people's tendency to make irrational choices and decisions, which is mainly explained by the fact that "people dislike incurring losses much more than they enjoy making gains" (Shefrin, Statman, 1985).

In the context of capital investment, the disposition effect describes the investors' tendency to hold on to stocks which have lost value (in terms of current stock market prices) and are willing to sell those which have risen in value (Montier, 2007).

Investors favour safe gains and satisfaction rather than risk-seeking choices. In this respect, when they realize that their stocks are losers, they do not tend to sell, but opt for holding on to loss-making choices until they yield gains.

### **III. Endowment effect**

The endowment effect involves the individuals' tendency to attach extra value to the objects or assets they own. People often demand a much higher price when they sell than they would be willing to pay to buy it (Nofsinger, 2001), which is also true for the stock market, where stocks and, in general, securities are valued higher when they are in the possession of investors rather than when they are not. On the other hand, investors tend to keep the securities they inherit instead of investing in new investment products, which are most suited to their own needs (Nofsinger, 2001).

#### **IV. Attachment bias**

The attachment bias describes people's tendency to be emotionally attached to other people, objects or situations, and to act irrationally due to their attachment. During decision making processes people are subconsciously affected by their relationship with other people or even objects and cannot make impartial and unbiased evaluations.

Nofsinger (2001) discussed this biased investor behaviour in relation to corporate bonds. Investors develop an irrationally emotional relationship with specific stocks, overlook negative aspects and news, and focus only on the positive points to act accordingly.

Biased attitudes towards specific stocks result in keeping stock data in their portfolios for a long time, despite any loss, strongly based on the belief that stock declining is temporary and reversible.

#### **The research**

The research investigates the disposition and endowment effects and the attachment bias via questionnaires addressed to stock market executives certified by the Capital Market Commission, working in stock exchange companies in Athens, from February 6th to March 19<sup>th</sup> 2015.

Sampling allows for satisfactory dispersion and representativeness of the researched population:

- 23 participating companies (43% - of a total of 53 companies)
- Representativeness: the surveyed companies are responsible for managing ~ 75% of the total amount of transactions (ASE, HELEX - March 2015).

The questionnaires, based on the ample extant literature on Behavioural Finance, include 9-item scale questions and were answered by 81 respondents.

The question surveying the disposition effect was formulated on the basis of Kahneman and Tversky's (1979 - Prospect theory: An analysis of decision making under risk), and Barberis and Xiong's, (2009 - What Drives the Disposition Effect?) approaches, whereas to investigate whether the participants are affected by the endowment effect, Thaler (1980 - Mental Accounting and Consumer Choice) and Kahneman, Knetsch, & Thaler (1991 - Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias) were used.

Finally, the question investigating the attachment bias is based on Nofsinger (2001 - The Psychology of Investing), Ferguson and Hronsky, (2011, Accountants are humans too – the problem of 'attachment bias') and Chapters, Crofts, Ferguson & Hronsky, (2011, Professional Independence and Attachment Bias: An Exploratory Study).

#### **V. Research results**

##### **5.1 Disposition effect**

The question investigating the disposition effect attempts to identify the participants' attitudes towards a loss and aims at providing evidence of the impact of the disposition effect:

*"Do you usually opt for readily selling stocks which have lost value rather than stocks that have gained value? Answer on a scale from 1 to 9, where 9 implies "I definitely sell stocks which have lost value more readily" and 1 "No, I definitely do not."*

The results demonstrated that 65% of the certified stock market executives (the total of percentages for items 7, 8 and 9 on the scale) find it easier to sell gains, as successful investment choices imply selling stocks and yielding profits.

Although in the stock market jargon 'gain' means "money in my pocket", gains directly contradict the utility theory, which suggests that investments must aim at producing the highest returns. Quick sales may ensure gains, but may also deter acquiring goodwill.

It is worth noting that the specific respondents' attitude derives from their desire for immediate success and satisfaction. Successful sales, even at an earlier time than usual, imply a professional achievement and also emotional satisfaction, despite the fact that this may prove wrong in the long term when investments keep producing additional goodwill over a long period of time. In addition, this irrational behaviour is directly related to loss aversion. Easy gains are the result of fear for a loss, which is possible under different conditions.

The disposition effect has proved to be crucial in stock trading. Accordingly, when gains are recorded, executives are likely to get involved in unnecessary stock trading, which is evidently a meaningless process producing lower returns (due to additional trading commissions) compared to those when maintaining an initial investment for a longer period.

The participants corroborate Kahneman and Tversky's Prospect theory (1979) by asserting that they have been trapped in losing positions, have held on losses, and lost short-term profit-making securities. The results demonstrate that the participants do not only readily sell gains, but they also keep a loss for a long time.

A lower percentage (15% - item 5) of the respondents who gave neutral answers also demonstrates rationality. The respondents exhibit a similar attitude towards gains and losses, free from emotions, fear, loss

aversion to investment or also happiness and pleasure deriving from profit-making investments, which may affect overall portfolio performance.

Similarly, the percentage of subjects who do not readily sell profit-making assets is also low (9% - items 1, 2 and 3), and, in addition to the percentage of neutral answers (9% + 5%) it comes to 14%, which demonstrates that the respondents are rational and do not sell gaining positions more readily than losing ones.

It is also worth highlighting that 60% of the participating investment advisors have a positive attitude towards selling gains compared to losses, similarly to stockbrokers (46%), whereas the percentage of stock analysts who opt for selling gains rather than losses comes to 75%. The executives with a more aggressive attitude (57%) decide to sell gains after successful investment choices.

Finally, the number of subjects who answered that they definitely do not sell gains is small for all items on the scale. Thus, only 2% of the number of the participating investment advisors and those having a 10 to 20-year experience state that they definitely do not sell gains, whereas the percentage of PHD and Master degree holders who have an absolutely negative attitude comes to 3%.

Overall, investors exhibiting positive attitudes towards investment choices and overlooking maximum utility, are emotionally irrational, and are led to wrong investment choices.

## **5.2 Endowment effect**

The question asked to certified executives was aimed at investigating whether they attach value to financial assets simply because they are part of their portfolios:

*“Do goods or assets directly gain more value simply because they are your endowment / bequest?”*

Of the sample, 17% of the respondents (the total of percentages for items 7, 8, and 9, T3B) add value to a stock, derivative or other securities simply because they own them. In addition to the percentage of positive attitudes (11% -item 6) the specific rate of answers comes to 28%, which also provides evidence of irrational attitudes in non-rational portfolio valuations. When a portfolio asset is their endowment, it automatically gains more value, thus, investors are willing to sell higher than the current market price.

The securities which are not properly evaluated in the capital market have a negative impact on the final valuation of the total securities. Rejecting sales causes irrationally holding on positions, and, consequently, no liquidations and also poor investment opportunities.

It is also worth noting that 43% of the participating executives (the total of percentages for items 1, 2 and 3, L3B) have a negative attitude towards the endowment effect and a wrong emotional attachment and reluctance to sell securities. For these executives, the value of investment products does not change, as the specific securities are part of their own assets; thus, they act rationally and their behaviour does not generate wrong investment decisions. In addition, 22% (item 5) of the respondents who gave neutral answers also stated that they are not affected by the endowment effect and, hence, exhibit a rational attitude as regards the valuation of investment products.

Remarkably, the results corroborate Knetsch's (1989) view that this behaviour would disappear if individuals were exposed to a market environment offering ample learning opportunities. The greater their professional experience, the higher the number of those stating that there is no additional goodwill. Executives with experience of up to 10 years have a negative attitude towards the endowment effect (33%), whereas rates appear to be higher for those whose experience is 20 years (44%); similar rates were also observed for executives with experience more than 20 years. It is also worth noting that Master or PhD degree holders do not give a higher value to their endowments (47%). Finally, investment advisors are rationally disposed to the endowment effect (45%), similar to stockbrokers (46%).

Overall, irrational valuation of stocks and, in general, securities results in irrational investment behaviour and processes.

## **5.3 Attachment bias**

The question exploring whether there is an emotional attachment between the subjects and their investment choices was:

*“Have you been emotionally engaged in corporate investments, regardless of the investment objectives they have set?”*

The results demonstrate that 30% of the subjects (the total of percentages for items 7, 8 and 9 on the scale), assert there is an emotional bias towards their assets. If 12% (item 6) of those who exhibit a positive attitude towards emotional involvement is also added, it appears that 42% (30% + 12%) of the sample suggest an irrational attachment to the stocks they own.

Despite the fact that the executives' attitudes should be free from emotions and biases and must be impartial and self-determining, the research results demonstrate that there is an emotional attachment to investment decision making and reveal wrong methods of investment management.

Biased behaviour, stimulated by emotional criteria in investment choices, causes irrational behaviour and failure to achieve the ultimate unique goal of maximizing profits.

Biased behaviour in decision making processes may also be reflected in the overall investment behaviour. In order to satisfy their customers' desires and create conditions of illusionary happiness, stock market executives tend to agree - always unreasonably- and provide them only with the information they wish to hear.

Customers are not always right, especially in the stock market. Their poor investment experience and knowledge should be boosted by support and guidance. Conflicts are frequently necessary when rational decisions and gains should be made.

The results also demonstrated that 46% (the total percentages for items 1, 2 and 3 on the scale) opt for rational rather than emotional choices. In addition, 10% of the respondents (neutral answer) exhibit a rather indifferent attitude to emotional involvement, and state that absence of emotions is required in the harsh reality of stock markets. Their actions and behaviour is always rational, and their prudent portfolio management maximizes profits.

Executives of a high or higher educational status make unbiased decisions (56% and 45%, respectively), whereas the percentage of executives with unbiased behaviour is also high for those who receive and transmit orders (48%), stockbrokers (54%) and investment advisors (40%).

Overall, successful investments imply unbiased and, thus, rational attitudes towards investment processes and tools.

## VI. Conclusions

Biases and cognitive and emotional errors prevent rational investment decision making and choices, and, thus, fail to maximize successful investment outcomes. In this context, biases, such as the disposition and endowment effects and the attachment bias, have been thoroughly researched by behavioural theorists.

The results of the present research investigating the behaviour and attitudes of certified stock exchange executives enhance the significance and substantial impact they have during investment processes.

The survey demonstrates that the participating executives tend to sell gains as a result of their desire for immediate success and satisfaction. In addition, they add goodwill to shares, derivatives or other securities simply because they own them, and, thus, by not making rational evaluations of their financial tools they are unable to rationally adjust portfolios. Finally, they are emotionally attached to their shares, and all their investment choices and decisions are biased rather than rational.

The significance of the research is enhanced by the fact that it investigates the attitudes of stock exchange executives who, apart from their own portfolios, are responsible for managing a large number of other investors' portfolios, offering advice and exerting influence on stock markets. However, further research should include longitudinal studies in order to investigate whether executives keep making choices and decisions under the influence of specific biases or whether they act rationally. In addition, further research should also be focused on different areas of the country.

To conclude, the research corroborates one of the fundamental principles of Behavioural Finance, that investors' actions and decision making are not rational because they are affected by biases. In addition, it enhances the significant role of the new theory of behaviour, which is the most comprehensive financial theory of investment decisions.

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