## **SUMMARY**

The discrepancy between the rational hypothesis and reality of investment made the researchers focusing on behavior and psychology, as an important part in financial theory. How investors should behave and what are they doing, created the questions among the researchers which is the platform of behavioral finance (BF). BF is formulated as a new branch of theory, combining the knowledge of psychology, economics and other social sciences (Bernheim, Douglas, 2008). When making decisions under uncertainty and risk conditions, people experience the effect of different illusions, emotions, false perception of information and other "irrational" factors (Guzaviciusa, et al, 2014).

First chapter introduces my research topic. Due to the integration of various scientific knowledge, this research studies individual investors' behavior as an alternative way to study the stock market anomalies rather than efficient market theories. The author investigates the tendency of Bangladeshi investors to hold losers too long and sell winners too soon which is known as disposition effect (DE). Among the other behavioral heuristics, DE is the most documented bias all over the world. Disposition effect is caused by a combination of prospect theory, mental accounting, regret aversion, self-control issues and mean reversion.

The results demonstrate that Bangladeshi individual investor has a historical preference for realizing their winning investments more than their losing one's. This study also tests the disposition effect of traders on the basis of acquired and inherent experiences and then judges the role of investors' personal and demographic characteristics on trading decision. The main objective of this study is to find out the differences in this bias across individuals and their relationship with personal characteristics.

On the basis of the findings of previous researches, I predict that differences in investor sophistication and trading frequency are responsible for the variation in individual disposition effect. Using financial and occupational variables as proxies for investor sophistication, I find empirical evidence that wealthier individuals and individuals employed in professional occupations exhibit a lower disposition effect. Consistent with experimental economics, trading frequency also tends to reduce the disposition effect. This study provides guidelines for investment advisors, regulators, and investment communities to utilize our findings and help investors make better decisions. The study would be also useful for the investors group who are actively involved in stock market and the group of people who are thinking to start investment in stock market.

The next chapter presents an overview on the Bangladeshi stock market and the investors. As an emerging market, Bangladeshi investors are less experienced. In the recent years, Bangladesh capital markets have been witnessing a good growth phase. Two exchanges, Dhaka Stock Exchange (DSE) and Chittagong Stock Exchange (CSE), have been more organized and active during the recent years. As trading volume and amount are increasing rapidly, riskiness and volatility have also gone up in the stock markets. Therefore, with the increasing size and volatility of the markets, the need to study the psychology of individual investors in terms of risk perception, investment, stock market environment, has become very important in order to predict the future direction or future possible movement of the market.

The market capitalization, official procedures to maintain a BO account for foreigner and Bangladeshi investors are described here. Investors demographic characteristics like sex, age, account age, target profit, account value, education level etc. are presented here.

The following chapter reviews some literatures about the discovery of disposition effect. Started with Shefrin and Statman (1985) a list of researchers has studied the presence of disposition effect on the basis of hard evidence and influence of individual investor's sophistication. Recent researchers have tried to find out the factors or determinants that provoke the magnitude of disposition effect.

Next, the data, methodology and hypothesis are provided. I calculate 125 individual investors' daily transactions using a large brokerage account database between 2011 and 2016 in Bangladesh. Dhaka Stock Exchange and Chittagong Stock Exchange daily stock file are used for price determination and for the calculation of loss and gain. Descriptive statistics and summary statistics on investors are mentioned here. For calculation, I follow the odean's (1998) method. The main hypothesis is that investors tend to sell their winners and hold their losers. That means proportion of gains realized (PGR) should be greater than proportion of losses realized (PLR). In equation it is stated as: PGR > PLR (For the entire period). There are other three bilateral hypotheses to be tested. Trading frequency is reversely related to the magnitude of the disposition effect. (1) Trading frequency is reversely related to the magnitude of the disposition effect. (2) Experience related to sophistication lowers the disposition effect. (3) Individual with professional occupation and higher income show less DE than individual with non professional and lower income.

The following chapter consists of empirical results and discussion. For finding out the DE, I calculate PGR and PLR for the entire data set. I also estimate PGR and PLR where the data is partitioned by sex and trading activity. Disposition effect is calculated when the entire position in a stock is sold and when no new stock is purchased within three weeks of sale. Calculation of average returns provides an overview of evidence on the performance of all gaining and losing

stocks. Then I perform regression analysis to analyze the relationship between investor personal and demographic characteristics and the disposition effect. From the findings, it is established that Bangladeshi investors show a historical preference for gain realization. Male, aged and wealthy investors are more inclined to realize gain. Again, professional and investors with high income show more preference.

Finally the last chapter provides the conclusion of the findings of the study. The author gives some recommendations on the strategies for the development of stock business and for making profit of individual investors.

## 学位論文審査の概要と結果

報告番号	東アジア博 甲 第 /20 号	氏 名	Dipu Rani Bhomik
論文題目	An empirical analysis on dis Bangladeshi stock market	position effect	t and investor performance in

## (論文審查概要)

Dipu 氏の研究目的は投資家が利益を早く確保し、損失をなかなか実現しないという disposition effect がバングラディッシュでも存在するかを明らかにすることである。

論文は 6 章からなる。第 1 章では行動ファイナンス理論と伝統的ファイナンス理論の違いと disposition effect の理論的根拠である、プロスペクト理論を含む 4 つの理論を説明した後、研究目的 とその検証結果について要約を行っている。

第2章では、バングラディッシュ株式市場と投資家の概要と特徴を説明している。

第3章では Disposition effect がバングラディッシュ以外の国でも存在するかどうかの文献サーベイを行っている。そこでは、アメリカ・ヨーロッパの市場で観察されるだけではなく、中国などのアジア地域でも観察できることを文献に基づき紹介している。また、経験、職業、性差、年齢等などの個人投資家の特性の違いが disposition effect にいかなる影響を及ぼすかの研究を行っている文献をサーベイしている。

第4章では、データの紹介。先行研究に基づく方法論の説明。投資家は利益を早く売り、損失をなかなか実現しないという主要な disposition effect 仮説の説明。個人投資家の特性(取引頻度と性差、経験、職業と所得)によって disposition effect に違いがあるかの仮説を説明している。

第 5 章では、実証結果の章である。バングラディッシュ個人投資家全体でみると、平均して disposition effect が観察された。個人の特性によって分類して観察すると、男性投資家よりも女性 投資家が、頻繁に取引する投資家よりもめったに取引しない投資家の方が disposition effect は大きかった。投資年数を示す経験値が高いほど disposition effect は小さくなっている。専門職者は学生、年金受給者などの非専門職者よりも disposition effect は小さくなっている。同様に所得が高い投資家はそうでない投資家よりも disposition effect は小さくなっている。

また、disposition effect と類似する投資家行動である、平均回帰やリバランスを取り除いた後でも disposition effect は存在することを明らかにしている。

結論の章である第 6 章では、実証結果を踏まえ、disposition effect が大きい投資家へのファイナンス教育の重要性並びにそれら投資家に対する専門家のサポートの重要性について述べている。

Dipu 氏は世界各地で観察される disposition effect に注目しバングラディッシュでも存在するかどうかを検証した。さらに、投資家の特性によって disposition effect の有無があるかどうかを3つの仮説を立てそれぞれを追加検証した。この種の研究はこれまでバングラディッシュでおこなわれてなくDipu 氏が初めてであり、貢献は明らかである。以上の理由により、創造性の点においては達成できている。

先行研究をサーベイしたのち、先行研究の方法を用い仮説検定を行い、一貫性のある検証結果が導き出されたことにより、論理性は達成できている。

disposition effect 理論並びに実証に関連する先行研究を渉猟し、バングラディッシュ金融機関より独自に入手した投資家データを用い、投資家全体では、disposition effect が有意に観察された。さらに、投資家の特性に応じて分類し頑健性チェックを行うことで、投資家間によって disposition effect の強弱が観察された。以上の理由により、厳格性についても達成できている。

世界各地とは異なるバングラディッシュ固有の特徴については十分な論証は展開できなかった。今後どのように発展させるかについてはさらに検討の余地はある。その意味で、今後の検討課題として新たなデータの人手や文献渉猟等により研究を発展させる可能性が高いものと思われる。

審査委員会の審査委員の合議により全体の評価は「達成できている」とする。以上の理由により、論文審査結果を「合」とする。

## 論文審査結果



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