IMPACT OF DISPOSITION EFFECT ON FINANCIAL DECISIONS AMONG WOMEN INVESTORS

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ABSTRACT

Disposition effect is crucial in making an investment decision rational. The disposition effect impacts the quality of decision of the investors. The study highlights the significance of the disposition effect on the investment pattern of women investors and attempts to understand the impact of disposition effect on decision making process of women investors and stock market. Related academic literature was reviewed and many remarkable associations of the disposition effect with related investment decisions among women investors were discovered. As a result, study constructs a theoretical framework after reviewing relevant literature. This framework will facilitate investors and stockbrokers to create awareness about effective investment decisions. The reviews encompass diverse studies wherein the relationships amid disposition effect among investor women and factors affecting it have been examined. The study provided guidelines to help women investors take better investment decision. Utilizing the anticipated logical conceptual framework, brokers can analyze and improve their marketing and promotional strategies successfully.

Keywords: Disposition Effect (DE); Women investors; Investment decisions; Stock market; Investor; Market decisions; Market efficiency; Financial crisis; Market structure.

INTRODUCTION

The disposition effect (DE) refers to bias in investor behavioral pattern in the stock market. The causes and consequences of the DE is crucial as according to the last quarter report of Saudi stock exchange at the end of the 2019 (Tadawul) total number of female investors were 1,008,054 out of 3,727,620 which represented 21% .In 2018 women investors were 1,352,546 out of 5,477,197 which represented 24.8% .However in 2019 ,it increased by 3.8% as compared to the women investors in 2018.The study of disposition effect of investors is important to understand their investment and risk-taking behavior. Perhaps the most studied behavioral bias is the disposition effect, the tendency to sell assets whose price has increased while holding those losing value (Barber & Odean, 1998). The disposition emerges from a combination of many features. First is the editing phase in which investor organize his all choices in terms of potential gains or losses. The second stage is the evaluation stage in which the investors employ an S-shaped which is concave area in the gains and convex in the loss area. It happens because investments in stock market is challenging task and demands investment awareness for brokers and investors. The DE is one of the robust facts in the financial markets around the world even though; evidence suggests that market investors are affected by behavioral bias. The investors can lose part of their investment if they behave irrationally, sell and hold the stock. Thus this study can contribute to retail investors to learn the factors and causes of DE to avoid it. A new

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theoretical model for future research is provided by this study that illustrates number of variables as predictor of disposition effect. Inter-linkages of disposition effect with context to women investors were examined with their influences on making investment decision. This study initially seeks to present a discussion paradigm for appreciating the significance of the disposition effect and how it impacts the investment decision in women. It is an attempt to utilize the pertinent studies to contribute to the benefit of future women investors whilst structuring and developing strategies for creating awareness about disposition effect among women investors. The academic literature supports the direct influences of socio-cultural variables, psychographics, and consumption orientations on disposition effect of women investors. The study has highlighted and discussed few recent empirical findings with respect to the linkage between disposition effect and factors affecting it. Though, literature findings also report some contradictory results. The study thus concluded and sketches the same by assimilating present studies into a theoretical framework. It is a useful conceptual framework that can be utilized by brokers as they formulate their investment strategies for targeting investors as well as enhancing their profits.

Objectives

1. To identify the significant factors affecting disposition effect among women investors.
2. To examine potential ways to measure the disposition effect through content analysis.
3. To provide guidelines to help women investors take better investment decision.

METHODOLOGY

The study is exploratory and qualitative in nature. A critical examination of empirical and theoretical literature relating to factors causing disposition effect in women investors was carried out. Although abundant studies are available in the literature, this rigorous review adds to the existing body of knowledge in many ways. Principally, literature was carried out to widen improved understanding of disposition effect, its dimensions and attributes. Secondly, the accessible literature is consolidated so as to identify all the significant factors affecting disposition effect in women investors. Furthermore, this study assists to examine the causes of disposition effect in women investors.

LITERATURE REVIEW

Followed by extensive literature to investigate this phenomenon a growing number of literatures confirm the existence of disposition effect in many markets all over the world.

Concept of Disposition Effect

Shefrin and Statman (1985) referred disposition effect as phenomenon that investors tend to prematurely sell assets that appreciated too soon, while holding onto depreciating assets too long. They developed a framework that illustrated the causes of disposition effect; the framework consists of four elements: prospect theory, mental accounting, role of emotion and self-control. According to prospect theory an investor would become more risk averse after experiencing

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gains and more risk seeking after experience losses. The second element is the mental accounting; in this the investors organize sources and uses of money in in their mind. It related to the feeling arising not only from the monetary compensation but also from the feeling associated with winning or losing a stock. The investor always wants to seek pride and to avoid the regret, subsequently leading to DE. Self- control explained why the DE is weaker at the end of the year, because investors getting rid of losses became easier by the end of the tax year.

Potential ways to measure the disposition effect

There are various theories help to get a clear picture of the occurrence of disposition effect. Barber and Odean (1998); and Weber and Camerer (1998) developed ratio-based method to measure disposition effect. Frydman and Wang (2020) used econometric techniques that rely on the estimation of a regression model (ordinary least squares regressions). This measure is helpful because it allow adding and controlling variables. Grinblatt and Keloharju (2001) used another econometric technique which is Logit regression model to check whether the DE interacts with past returns to modify the propensity to sell. Feng and Seasholes (2005) used hazard models that are well suited to check whether the holding period of an asset in the portfolio of an individual investor gets affected by changes in any factor. De Winne (2021), proved that the ratio based approach is sensitive measure to market trends and the logit regression model may lead to different results depends on the frequency the paper gains or losses, also the paper present that hazard models are the proper measure of DE because it show that how long an investor holds a position. Chui (2001) examined the disposition effect experimentally in Macau, China. The results stated that the DE is stronger under the modified version of the experiment designed by Weber and Camerer (1998). This study showed that some psychological factors such as the locus of control, can partly explain the DE. Kausting (2010) stated that prospect theory can predict holding losses and gains, thus the likelihood of a sale done should decrease as the stock moves away from the purchase price in both direction (up and down). Ingersoll and Jin (2013) developed a ductile model of realization utility that predicted several differences including, among others, the flattening of the capital market line and a negative price for risk, among a specific group of investors. Richards et al. (2018) study used survival analysis to measure DE, the study aimed to check investor susceptibility to disposition effect. The study focused on the stock characteristics and the demographic variables such as gender, experience, number of stop loss transactions and trading gain.

Determinants of Disposition Effect Among Women Investors: A Global view

Several literatures experimentally or empirically associated disposition effect with a variety of factors explained by different theories. The following determinants were identified during the review process.

Previous trading experience

Feng and Seasholes (2005); and Dhar and Zhu (2006) point out that disposition behavior is less significantly observed among investors who have more trading experience, rich financial resources, and more professional knowledge. Calvet et al. (2009) conducted their study on the individual stocks and mutual funds from households in Sweden; they found that people are significantly more prone to sell all their stocks after experiencing gains on their stock portfolio.

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Seru et al. (2010) found that experience measured by years spent investing has a small influence on reducing the disposition effect but experience measured by cumulative trading frequency has more influence at reducing this bias. Recent studies by Barberis & Xiong (2006) theorized that investors derive utility from selling winning stocks. They presented a model of ‘‘realization utility’. Locke and Mann (2015) provided evidence that professional futures floor traders appear to be subject to Disposition Effect. These traders as a group hold losing trades longer on average than gains during bear markets, which they attributed to “harsher financial consequences at such times”. Individuals alter their behavior to optimize their social image and convey a positive self-image when compared to their peers, the variable included in the study are female as a dummy variable, age, Experience, finance related major, guess and loss aversion (to be sure that the participants in the experiment have the same characteristics), using OLS regression. Hincapié-Salazar and Agudelo (2020) investigated the disposition effect appear in bonds trade and in stocks in Colombia from January 2008 to November 2016. The variables included in the study were experience, proxies for investor’s sophistication. They found that both institutional and individual traders would be reluctant to realize their losses, especially retail investors because of their lesser sophistication. Furthermore, they found a significant disposition effect for local individuals and family offices.

Investor Demographic Characteristics

A series of literature associated the DE with several factors such as investor heterogeneity or interaction variables, many literatures focus on investor’s characteristics, for instance Gender as a dominant factor.

Feng and Seasholes (2005) showed that the investor demographic variables reduce the tendency to realize gains and losses in the investors. In addition men were more likely to realize losses than women in the sample around 1500 Chinese investors (49% of the sample is females). The investors under 35 years were more realize losses than older above 35 years. On the group level the study reveals that the disposition effect is common in all investors but expresses itself stronger in less experienced individuals rather than among professionals. This indicates a possible influence on pricing. Ahn (2021) anatomized the trading records of 76,172 Korean retail investors from 2015 to 2018 and examined the relative importance of many factors that are associated with the disposition effect, the variables included in the study were (gender, age, investment objective, risk profile, loss aversion, income, experience, financial knowledge, and the financial market). The results revealed that gender, loss aversion, and investor sophistication are the key determinants of disposition effect. Lepone and Tian (2020) examined the impact of conditional order on the disposition effect in the Australian stock market, the study employs 46,289 proprietary retail investors accounts from October 2010 to August 2012, the total number of investors were 1676, 34.5% females and 65.5 males, they used propensity score matching method to isolate the impact of conditional orders from other factors that influence the DE. They included the variables such as gender, age, holding number, portfolio value, total orders, order value and stock price. They found that conditional orders decrease the disposition effect through increasing the sale of losers and decreasing the sale of winners. The study stated that devices, such as conditional orders, can help investors to significantly mitigate this behavioral bias and undesirable consequences. Cueva et al. (2019) conducted an experimental analysis to investigate whether the disposition effect is robust to realistic features for transaction costs and competitive payment schemes. They checked gender differences, experience, sophistication in finance, and

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financial literacy by using a balanced design. They found that transaction costs significantly reduce the propensity to sell both winners and losers. They found that women are more influenced by the DE. Bouteska and Regaieg (2018) investigated the relevance of the effect of disposition bias on individual investors in the Tunisian equities market, the sample of the study 925 Tunisian traders over the period 2009-2014, the variables included (internal and external factors); the study revealed that male and younger Tunisian investors displayed stronger disposition bias compared with female and mature investors. Regarding bull and bear market the study found that DE is more pronounced in bull markets. Duxbury et al. (2015) investigated two effect bias that coexist in a single stock market (disposition effect and house money effect), the variables included in the study were personal investor characteristics such as age and gender, Control variables were included to account for differences in investor characteristics. They found most investors (53.5%) simultaneously succumb to both effects; unrealized/realized and stock/portfolio level. Rau (2014) analyzed gender differences in DE. The results emphasized that female investors have significantly higher disposition effects and are more loss averse than men. Frino et al. (2015) examined the effect of demographics and Chinese ethnicity on trading behavior in Australian equities market causing disposition effect. The study concluded that behavioral biases are predictors of the disposition effect. Cheng et al. (2013) investigated how internal characteristics and the external factors can affect trading behaviour. They found that women and mature traders exhibit stronger disposition effect comparing with the male and younger counterparts. The disposition effect is stronger among traders who trade futures contracts in financial sector than those who trade futures contract in electronic sector. Dhar and Zhu (2006) aimed to identify the differences in the disposition bias across individuals and explained this phenomenon focusing on investor characteristics. The variables included in the study were financial literacy, trading frequency. The study revealed that differences in investor literacy and trading frequency were responsible in part for the variation in individual disposition effect. Using demographic and socioeconomic variables as proxies for investor literacy (age, profession, and income), they found empirical evidence that wealthier individuals and individuals employed in professional occupations exhibit a lower disposition effect. Trading frequency also tends to reduce the disposition effect. Ahn (2020) documented field evidence that retail investors learn more from gains than from losses, from 2015 to 2017 in Korea.

Investor Behaviour

Kahneman and Tversky (1979) suggested that investors display a disposition to sell winners and ride losers. Shefrin and Statman (1985) corroborated the presence of the disposition effect in investment decisions, in both experimental and real-world settings; Li et al. (2014) introduced the disposition effect into a multi-agent model, to research investor behavior and its impact on financial markets. Diego udel, explained how individuals select among alternatives involving risk when the probabilities outcomes are uncertain. They suggested that losses generate bias more than gains and indicate that investors are often judged relative. van Dooren and Galema (2018) investigated the interaction between socially responsible investment and the disposition effect, they analyzed trading and portfolio data from a large retail and business bank in Netherlands, the variables included in the study were (sophistication, gender ‘90% of sample are men’, age, income, transactions, investor invests 100% in socially responsible stocks). They found that socially responsible investors display a greater disposition effect by 7.9% than conventional investors. They found that the greater investor sophistication is associated with a

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lower disposition effect, trading experience is negatively associated with the disposition effect, more wealthy investors are less subject to the disposition effect. Male investors appear to display a smaller disposition effect than female investors; older investors display a greater disposition effect. Ziegler (2012) More women worked as traders because they are supposed to behave more risk-averse, which lead to less aggressive investments and thus may stabilize markets Brettschneider et al. (2021) focused on portfolios instead of individual stocks and investigated how the realization of gains and losses depends on the percentage of gains in the investors accounts, they estimated the disposition effect for active traders in US households trading records from 1991 to 1996. Furthermore, some Studies of investor behavior stipulate that women are more risk averse and perform fewer transactions than men, because the latter have high levels of overconfidence. Trejos et al. (2019) presented the causal relationship between disposition effect bias and overconfidence by using a simulation model that called micro world, representing an artificial financial stock market , the participants of the study was 77 mainly bachelor, master, PhD and postdoctoral students from Latin America and Europe (68% males and 31% females). Kadous et al. (2014) conducted two experiments to examine potential causes of the disposition effect. They showed only investors who own the stock behave as though prices will reverse. In Experiment 2, participants bought and sold securities over multiple periods. They studied the effect of gender, price change and investor status on the disposition effect. They resulted that the disposition effect is positively correlated to self-regard and investing confidence. Barber et al. (2007) results were driven by three behavioral factors: the representativeness heuristic, limited attention, and the disposition. Investors may also buy the same stocks simply because those stocks catch their attention. In contrast, when selling, the extrapolation of past performance and attention play a secondary role. This is because, when selling, there is a powerful countervailing factor - the Disposition Effect - a desire to avoid the regret associated with the sale of a losing investment. Thus, investors sell winners rather than losers. Chen et al. (2007) studied the existence of various biases among Chinese and US investors, they showed different behavior regarding different biases but were at par with the disposition effect. They found that Chinese investors are more prone to disposition effect than the US investors. Identified multi-bias relationship among various biases (disposition effect, overconfidence and a representativeness bias). They concluded that inexperienced investors are less prone to the behavioral biases. Moreover, the inclination of the disposition effect is more in individual investors comparing to the institutional investors. Thus, the investors in emerging countries like China exhibit more behavioral biases than that of the investors in USA. Barberis and Xiong (2008) contradicted the theory of Barber and Odean (1998) and contributed a different perspective to look at the decision making in the prospect theory. They found while people make trading decisions prone to behave opposite to the disposition effect. The investors want to attain a risk-return trade-off and breakeven on their gains and losses. investors always fear of losses, then they will never have the courage to buy any securities so, whenever they have been faced a certain amount of probability of returns in the future on some stocks, the investor seeks the equal amount of risk by investing in some securities to the extent of probable gains, thus setting off his risk by an equal amount of profit. They credited the disposition effect to the realization utility in addition the disposition lead to rise the momentum effect and other biases such as overconfidence, the prospective trading volume that lined to disposition effect. Cueva et al. (2019) checked the theories and causes explain the DE (indecisiveness, regret aversion, self-control, realization utility, willingness to take risks, competitiveness and enjoyment of winning), also studied psychological factors (optimism, confidence, and cognitive dissonance that explain the overtrading and

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momentum) through experimental analysis, they found that transaction costs significantly reduce the propensity to sell both winners and losers, they suggested that cognitive dissonance considered an important determinant of the DE. In addition, they found that optimism and difficulty recognizing mistakes are significant predictors of the DE that lead to increase the DE by reducing the willingness to sell losing asset.

Market Conditions

Few literatures focus on the market condition and types of security being traded. Kaustia (2004) investigated the Initial Public Offering (IPO) trading volume and disposition effect from 1980 to 1996. Brown et al. (2006) examined the Australian Stock Exchange data obtained from 480 investors in IPO and index stocks between 1995 and 2000 and found that the disposition effect, investors' reluctance to crystallize losses and relative eagerness to realize gains, is pervasive across investor classes. However, traders instigating larger investments tend to be affected less by the disposition effect. Barber et al. (2007) analyzed all trades made on the Taiwan Stock Exchange between 1995 and 1999 and provided strong evidence that, in aggregate and individually, investors have a Disposition Effect; that is, investors prefer to sell winners and hold losers. Da Costa Jr et al. (2013) analyzed whether the disposition effect is stronger in times when there are inexperienced private investors in the market than in times when mostly institutional investors participate. They found that during bull time, small private investors bring a good share of the observed disposition effect into the market, while in bear time, private investors are mostly absent and thus disposition effect is less or even not at all significant. Muhl and Talpseep (2018), examined how bull and bear market conditions affect the disposition effect and learning progress to investors and found that the disposition effect was occurred in both bull and bear markets, but stronger during bear markets. They found that investors are subject to the DE for each market phase but stronger propensity during the bear market. Gemayel and Preda (2018) investigated if a scopic regime environment reduces the disposition effect among retail traders. They found evidence of a weaker disposition effect among trade leaders in the scopic environment compared to traders in a traditional environment.

Environmental Factors

Li et al. (2020) found that air pollution significantly increases investors' disposition effects, the study included 247 cities in China .They stated that air pollution influence on female investors more than male and lead to disposition effect, also the less educated and experienced more exposed to the disposition effect.

CONCLUSION

After a critical review of previous researches the significant factors affecting disposition effect among women investors included previous trading experience, investor demographic characteristics, investor behaviour, market conditions and environmental factors. The more diversified the investor's portfolio, lesser is their inclination towards disposition effect. The time period of study of the disposition effect can substantially vary the occurrence of disposition effect. The longer the interval of time can be the possibility of reducing the losses arising from the disposition effect. Similarly, when studied among different markets, the disposition effect shows diversified results. The inter-market differences among the economies of the various

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countries exhibit diverse response to the disposition effect. Results emphasized that female investors realize less capital losses, higher disposition effects and are more loss averse than men, Effective ways to improve disposition effect in women investor in Saudi Arabia are as follows; all women investors should maximize the current and expected utility of their lifetime consumption

SUGGESTIONS

Guidelines to help women investors take better investment decision are the following:

The factors influencing investors is different for different categories of investors. Disposition effect is highly critical to know the different factors impacting different investors. Investors need to state a clear strategy and appropriate positioning based on stock market. Examining the investment strategy of investors in different markets helps to understand the investment behavior of investors who invest small amounts but who are very professional. Also, there are many investors with highly professional skills but less wealth in warrant markets. the disposition behavior do not affect only in the investors level focusing on their gains and losses but also effect on the aggregate level that called systematic disposition effect.

LIMITATIONS OF RESEARCH

The study is limited to the available literature. Even though it includes quality and high impact journals and publications, the inclusion of additional databases may perhaps improve the prospects of reaching to relevant literature. The exclusion criterion of current study's literature review includes book chapters/reviews, conference proceedings, and editorials, non-English manuscripts. Thus, all these exclusions criteria too are other limitations of the current study.

Another limitation was that since the findings of academic literature was contradictory, it was not possible to infer and also few studies made stand alone conclusion.

Since disposition effect is not defined by a uniform scale and moreover being multi-dimensional in nature, making comparisons or conclusions was complex.

FUTURE IMPLICATIONS OF RESEARCH

Future studies about learning in financial markets should consider the market environment as an important determinant because if the investors have the same or close characteristics then any variation in disposition levels between the two platforms can be attributed to the effect of the trading environment.

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