Examining the Link Between Behavioral Finance and Portfolio Management Considering Disposition Effect as Mediating Role: Empirical Evidence from Pakistan (Karachi)

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Abstract - The aversion to loss realization phenomena and the tendency for selling the winners soon while holding the losers for long; the "disposition effect" might result in affecting management decisions. This study is conducted for examining the link between behavioral finance factors i.e.: regret aversion, self-control and mental accounting with portfolio management while keeping the disposition effect as mediator. In order to find out the empirical evidences, survey from fund managers has been conducted using the structured questionnaire. SPSS tool is being used to test the linear regression analysis and a total of 55 sample size is being taken in the study. Findings of the study confirmed there exists significant mediator impact of disposition effect between the three aspects and the portfolio management. However, the study suggests to remove the effect of disposition by creating benchmark for both the losses and gains as well.

Keywords: Regret Aversion; Mental Accounting; Self-Control; Disposition Effect; Portfolio Management

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INTRODUCTION

The uncertainty in analyzing the risk of investment against the expected returns of market which means the management of portfolio has been a thoughtful challenge for portfolio managers. Fund managers need to tilt their portfolio on regular intervals and must add style tilts. Fama & French (1992), indicated that although adding style tilts create risks but at the same-time it increases profitability of the firms and higher returns for investors (Raza & Mohsin, 2014) specifically, those having smaller size market capitalization and high book-to-market ratio (Raza & Mohsin, 2016). However, fund managers under or over weight their portfolio via different style tilts such as book-to-price ratio, dividend, EBITDA, etc. that helps the managers to make the accurate and risk-free tilting decisions (Darsinos & Satchell, 2004; Akram, Haq, Malik, & Mahmood, 2021).

The behaviors of investors play a significant role in managing the portfolio trading activities therefore keeping in mind the Pakistani stock markets in which uncertainty factor is common to arise, this research focuses on to examine the link between the portfolio management with the behavioral aspects i.e. regret aversion, mental accounting & self-control. Kahneman & Tversky (1979), proposed prospect theory which is a descriptive theory explaining the fact of making choices under uncertain circumstances. It suggests that disposition effect might arise in the market due to any factor and whether the investors are reluctant to realize their losses or not. Whereas, Thaler & Shefrin (1981), proposed a theory of self-control, acting as an interpersonal agent between the two players, rational (principal player) and an irrational (doer / agent player).

Thaler & Shefrin (1984), highlighted that the usage of reference point is being made by investors to compare their choices that is linked with the individual's mental accounting. Many of the previous researchers explored the several factors of

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behavioral finance that affect the investment decisions of investors but they haven't studied the concept of disposition effect (Kengatharan and Kengatharan, 2014; Abrar ul Haq, Sankar, Akram, & Siddique, 2021; Ul Haq, Victor, & Akram 2021; Hassan et al., 2017. Wu, Dutta, & Huang, (2018) investigated the disposition effect in bull, bear and neutral market but doesn't focus on the portfolio-tilting decisions. Hence, the main purpose of the study is the exploration of behavioral features that affect the portfolio tilting decisions of the fund managers such as; mental accounting, self-control & regret aversion. Study is significant to fund managers as well as investors to make a right decision regarding the portfolio investment and the portfolio management.

This study aims to investigate that to what extent the financial behaviors of fund managers play an important role in managing their portfolio. The process of managing the individual's investment that is associated with bonds, cash, shares, mutual funds etc. is referred to as portfolio management. Fund managers often reflect their financial behaviors that affect their tilting decisions so in this regard, actual market behavior needs to be analyzed in order to determine the behavior of fund managers regarding the tilting decisions of their portfolio as per the disposition effect arises in the market.

As the market is growing quite fast all over the world and in Pakistan the situation is more unpredictable so, when the disposition effect arises in the market, fund managers in order to averse the risk, tilt their portfolio with respect to their behaviors. However, few of the past researches have explored the several factors of behavioral finance that affect the investment decisions investors but they haven't studied the concept of disposition effect. Moreover, few of them investigated the disposition effect in bull, bear and neutral market but doesn't focus on the portfolio-tilting decisions of the investors so, in order to remove these deficiencies, this paper is an attempt to investigate the tilting decisions of the fund managers with respect to their behaviors while keeping the disposition effect as a mediator as both the institutional and the retail (individual) investors can be benefited from this research in order to make their investment decisions. However, the fund or the portfolio managers may also gain knowledge from this study to manage their portfolio trading activities while keeping in mind the behavior of different investors.

The significance of the study will give a brief description of the relationship between behavioral factors such as; aversion to regret and self-control and mental accounting with the portfolio management while keeping the disposition effect as mediator. The findings of the study will be beneficial for both institutional along with the retail (individual) investors for portfolio investments. However, the fund managers can also be benefited with this study in order to make right decisions regarding to manage their portfolio trading activities as per the behaviors that might affect their portfolio management. Main goal of the study is to find the link between behavioral finance and portfolio management considering disposition effect as mediating role so the purpose is;

1. To examine whether the influence of disposition effect exist between regret aversion and portfolio management.
2. To examine whether the influence of disposition effect exists between self-control and portfolio management.
3. To examine whether the influence of disposition effect exists between mental accounting and portfolio management.

LITERATURE REVIEW
Behavioral finance
This research is based on to examine the link between behavioral finance and portfolio tilting considering the disposition effect as mediator. Several researches have been conducted that explained the concept of behavioral finance like; De Bondt, Muradoglu, Shefrin & Staikouras (2008) defines behavioral finance as how the financial decisions of the households, markets and organizations is being affected by their psychology. Three main building blocks of behavioral finance are; sentiments (investor's error of belief), limits to arbitrage and behavioral preferences. As, independent variables that are used in the study are the main features of behavioral preferences.

So as per De Bondt et al (2008), behavioral preferences are actually the investor's preferences about risk and return that doesn't lie according to the attitudes and principles of expected utility theory. The main features that describe the behavioral preferences of investors were: regret aversion, self-control & mental accounting. Whereas, according to Razek (2011) behavioral finance consists of two building blocks namely; limits to arbitrage & cognitive psychology. Actually, cognitive denotes to how do people think whereas limits to arbitrage means under what circumstances the forces of arbitrage will be effective and it won't be. As the decisions of investors for investment reflect the way they think so cognitive biases explains several of them, one refers as mental accounting. Let's first discuss the independent variables (regret aversion, self-control, mental accounting) than moving on towards the mediating variable used in the study i.e., disposition effect and finally ended up by discussing the dependent variable i.e., portfolio management.

Regret Aversion

Shefrin & Statman (1985) defines regret as it is that sort of emotional feeling that are linked with the past (ex-post) information that the past taken decision might results better than one taken before the event (ex-ante). Or in other words, regret can be defined as the pain that the one could feel that their past decision turned out to be bad or results at a huge loss (Clarke, Krase, & Statman, 1994). However, De Bondt, Muradoglu, Shefrin & Staikouras (2008) defines regret aversion as when the investors used to make superior decisions in order to avoid the losses.

One positive counterpart of regret is the pride and as explained by Meir (1995) that both the pleasure feeling of pride and the feeling of pain for regret exists in behavioral investors that if the pain of regret is much more higher than the joy of pride than they will incurr the disposition effect (Natarajan, Abrar ul Haq, Akram & Sankar, 2021). Similarly, closing stock with losses encourages regret while closing stock with gains encourages pride so seeking for pride and evading the regret will lead the investors to diposition as they will hold those stocks that drops down in their value for avoiding regret and will sell off those stocks that have gain value to enjoy pride (Razek, 2011).

However, according to Raza & Mohsin (2014) pride is comparatively less important than the regret because as the time passes, pride of investor for having a winning stock may turned out in his regret if the value of that stock declined.

Self-control

Thaler and Shefrin (1981) proposed that people used to exhibit self-control in making their intertemporal choice with respect to their behaviors. In their study, they analyzed that people during making their choices are assumed to be both the farsighted planner (principal) and the selfish doer (agent) while the self-control used to act in between them as an interpersonal agent that give rise to the principal-agent conflicts. The principal player is the one who look after the overall outcomes / future benefits for making any decision whereas, agent player is the one who are emotional players. Whereas, De Bondt, Muradoglu, Shefrin & Staikouras (2008) defines self-control as the degree to which investors are willing to control their desires or impulses. So, in order to understand how self-control enhances the disposition effect, Shefrin and Statman (1984) developed a dividends theory and shows that those investors who are concerned with self-control will plan portfolios in a way in which consumption is carried via dividends rather from the sales of stock because such investors will hold those portfolios that contains little / no dividend-paying stocks that exhibits the disposition effect (Ul Haq, Malik, Akram, & Al Mutawa, 2020).

Strömbäck, Lind, Skagerlund, Västfjäll & Tinghög (2017) explored several psychological characteristics and studied the relationship of self-control with the financial well-being and the financial behaviors. They found positive relationship between them. Raza & Mohsin (2014) investigated the link between self-control and portfolio tilting and found a significant relationship. In their study they believe that fund managers are the one who used to suffer more from self-control phenomena mainly because if one the funds doesn't perform, they have to tilt their portfolio because of the investor's preferences despite knowing that the tilting may not be rational at that time.

Mental Accounting

De Bondt, Muradoglu, Shefrin & Staikouras (2008) defines mental accounting as how investors classify and evaluate the financial outcomes. However, according to Razek (2011) the structure of mental accounting for capitals and dividends consists of many frames. Investors often used to place the portfolio's money in different mental accounts / pockets. Clarke, Krase, & Statman (1994) identified that mental accounting framework is often used for asset allocations while constructing a portfolio. They explained that the usage of mental accounting framework under the portfolio construction is usually like a pyramid where the assets form a layers of the pyramids and layers are termed as mental accounts like cash are placed in liquidate mental account whereas bonds are placed in income mental account and stocks are usually placed in growth and income mental account. While studying the relationship between mental accounting and disposition effect, Pi-Chuan & Hsiao (2006) argued that although dividing all the outcomes into several parts are part of mental accounting but closing an account at loss are not efficient and investors are hesitant to sell those securities that have lost their value (Abrar ul haq, Jali, & Islam, 2019; Nawaz, Haseeb, Malik, Ali, & Malik, 2020; Abro, Shaikh, Abro, Soomro & Malik, 2020).

According to Raza & Mohsin (2014) mental accounting is the formation of separate mental accounts which may not occur at the same time. However creating these accounts does not reduce the effect of disposition but rather make the managers to hold their losers for longer period of time. Managers used to take help of reference point to compare their choices and take decisions in the editing stage (the stage in prospect theory where investors used to frame all their future dealings as potential losses or gains) and keeping the importance of this point and editing stage, a framework named mental accounting is formed by Thaler & Shefrin (1984).

Disposition effect

Kahneman & Tversky (1979) in their pioneer work, proposed a prospect theory. Basically, prospect theory is an alternative model of expected utility theory under which it shows how people (investors) used to make decisions under the risky situations. In the prospect theory, the gain area in the utility function represents by the concave portion while the loss area is represented by the convex side (Pi-Chuan & Hsiao, 2006). According to Munir (2018) prospect theory is the basis of disposition effect which states that investors overweight their loses with respect to their gains as a result it enables them to sell-off those securities whose prices are appreciated while holding onto those securities whose prices are depreciated (Khattak, Ul Haq, Akram & Malik, (2020). This phenomena is termed as "disposition effect" and Shefrin & Statman (1985) was the first to identify this phenomena. The two points of prospect theory used to describe the disposition effect; first that people used to compare their gains and losses as per the reference point (opening purchase price of share) and secondly, people (investors) seek for the risk when they are met with loses and avoid the risk when they are met with gains (Parveen, Siddique, & Malik, 2016).

Later on, Weber & Camerer (1998) in their study defines disposition effect as the phenomena or tendency for selling such assets that gained their value while holding those assets that lost their value and had investigated that whether subjects used to exhibit disposition effect during their securities trading or not. They found that subjects (investors) used to sell their fewer shares when their prices fall rather when their prices goes up. Muermann & Volkman (2006) investigated that investors used to anticipate both the regret and the pride while making their portfolio decisions that enables them to sell their winning stocks while holding their losing stocks. Moreover, Raza & Mohsin (2014) identified that the disposition effect might arise due to number of factors as it passes through different stages of prospect theory such as the editing stage and the evaluation stage (Akram, Abrar ul Haq, Natarajan & Chellakan, 2020). They highlighted that the tilting decisions of the fund managers are highly impacted by the disposition effect.

Portfolio management

According to Raza & Mohsin (2016) portfolio management is all about adding value to the overall wealth of the investors so in this regard fund managers must adopt such a strategy that doesn't only minimizes the risk but could also generate higher expected returns. Fund managers to overcome market inefficiencies, must manage the portfolios on a continuous basis. So as indicated by Fama & French (1992) that however adding style tilts to the portfolios can create risks but at the sametime it might results in a way that shows growth in the profitability of the firms that can ultimately ended up in generating higher returns for investors. Darsinos & Satchell (2004) suggested that fund managers in order to make the risk-free tilting decisions chooses different style tilts such as size, B/M ratio, dividend yield etc but as per Fama & French (1992) those portfolios that have smaller size market capitalization and high book-to market ratio ended up in generating higher returns for investors.

Raza & Mohsin (2014) suggested that an important role is being played by disposition effect when fund managers make tilting decisions. When one fund doesn't performed well, fund managers will tilt the portfolio in order to provide higher return, at that spot disposition effect is more likely to happen. Moreover, also indicated in their study that fund managers will sell their winners because of their different financial behaviors (Akram, Haq, & Ali Umrani, 2019). One reason is the mental accounting, as the decision is made to tilt the portfolio for all those that doesn't perform well so he might need to close the losers account. However, when losers account are closed in mind might create trouble because of one other behavioral factor i.e., regret aversion. Similarly, self-control is the another basis that allows the fund managers to sell their winners. Managers used to tilt their portfolio in order to enjoy the pride in their mind and also to attract more other investors by showing them the high performance of funds in a short period of time.
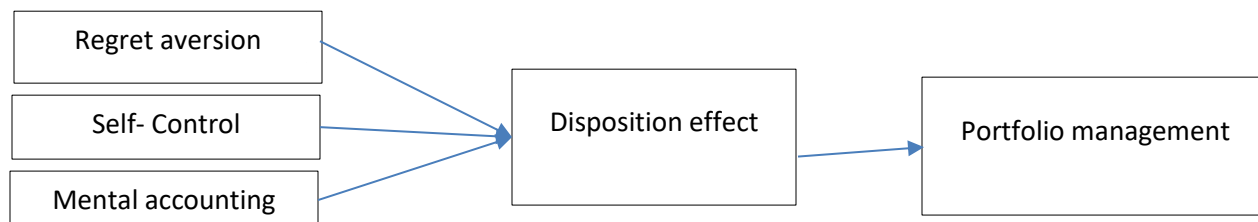
CONCEPTUAL FRAMEWORK

Figure 1: framework model

HYPOTHESIS

Following were the hypotheses used in this study along with the theoretical framework of the study;
H1: There exist a significant influence of regret aversion on disposition effect.
H2: There exist a significant influence of self-control on disposition effect.
H3: There exist a significant influence of mental accounting on disposition effect.
H4: There exist a significant influence of disposition effect on portfolio management.

METHODOLOGY
This research is conducted for examining the link between portfolio management by incorporating the behavioral aspects of fund managers while keeping the disposition effect as mediator in between them. There are almost 20 Asset Management Companies (AMCs) operating in Pakistan thus convenience sampling technique is being used in which only those fund managers are examined who might involve in the management of portfolios on regular basis. The sample size is being calculated by using the formula of Taro Yamane. Number of fund managers are almost 63 so around 55 of the sample size should be used to gain reliable data (while keeping the confidence & error level of 95% and 5% respectively) (Yamane, 1967).
The method for collecting data includes the survey of fund managers. As the research utilizes the quantitative method for its data collection so a set of structured questionnaires was developed to seek responses from the fund managers. However, an online questionnaire was also designed to gather the data. The questionnaire that is used in the study is the adapted version to conduct a survey of fund managers. The questionnaire that was developed was divided into two parts; one that consists of demographics information of the respondents while the other one consists of the five-point Likert scale questions that measures the items: mental accounting, self-control, regret aversion, disposition effect and portfolio management. For the purpose of primary data collection, responses from fund managers were taken via using Google.docx. Since, there exists a set of multiple hypotheses in this study for which the nature of relationship is complex so for the measurement of data, linear regression is use to tests the hypotheses using the SPSS software. The purpose of using linear regression analysis in the study is that it is considered as an appropriate method of finding out the relationships among independent and dependent variables. However, as it is stated by Tabachnick and Fidell, 1996; Field, 2013: SPSS is a powerful tool because any form of statistical analysis that are used in business world or in the context of social science etc. can be perform essentially via using SPSS tool. In this study, three variables i.e., regret aversion (RA), self-control (SC) and mental accounting (MA) are considered as independent variables while the portfolio management (PM) is taken as dependent variable. Mediator variable i.e., Disposition effect (DE) is being placed in between them.

DATA ANALYSES
Reliability Analysis
Table 1 shows the Reliability analysis which is used to determine the accurateness of a model. The above table shows the reliability statistics in which Cronbach's alpha is 0.870 and no. of items are 5, which shows that the model is considered to be acceptable and good. However, table 2 illustrates the internal consistency of each items. The Cronbach's alpha for item RA is 0.836, for item SC is 0.835, for item MA is 0.838, for item DE is 0.825 and for item PM is 0.870 thus it shows that the model is reliable for evaluating and predicting the model.

Table 1: Reliability Statistics

Cronbach's Alpha	N of items
0.870	5

Table 2: Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
RA	9.6436	6.395	.728	.836
SC	9.6800	6.598	.725	.835
MA	9.7491	7.060	.713	.838
DE	9.6873	6.859	.763	.825
PM	9.9818	8.396	.582	.870

Descriptive Analysis
Table 3 shows the descriptive analysis which illustrates the demographic statistics of respondents. First row are the statistics of N, Minimum, Maximum, Mean and standard deviation. The first left column is the label variable for descriptive. The N column specifies that all the variables have comprehensive data set of 55 therefore the Valid N (listwise) is also 55 as shown in table which shows that all the members had information for every one of the mentioned factors. The most useful column is the Mean column which helps to understand the percentage of participants fall into each of the groups. As the mean of gender is 1.0364, which indicates that the Minimum column shows 'Male' for a minimum and the Maximum column indicates the 'Female' for a maximum. However, the mean of age is 1.8545, which indicates that the minimum column of age shows '25 – 35 years' for minimum and the maximum column of age indicates 'above 55 years' for maximum. Similarly, the mean of working experience is 2.8545 which indicates that the minimum column of working experience 'less than 3 years' for minimum and the maximum column of working experience shows 'more than 10 years' for maximum.

Table 3: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Gender:	55	Male	Female	1.0364	.18892
Age:	55	25 – 35 years	above 55 years	1.8545	.93131
Working experience for:	55	less than 3 years	more than 10 years	2.8545	.86961
Valid N (listwise)	55				

Frequencies Analysis
The findings show the brief description regarding demographic profile of respondents in terms of gender, age and working experience. A total of 55 data were collected from respondents. The results drive from frequency analysis shows the demographic features of participants i.e., gender, age and working experience in a table separately. Table 4 shows the gender details in which 53 of the respondents (96.4%) were male whereas 2 of the respondents were female (3.6%). Moreover, table 5 shows the age details in which 26 of the respondents (47.3%) were belongs to age of 25 – 35 years, 13 respondents (23.6%) were aged between 36 – 45 years, whereas, 14 respondents (25.5%) belong to 46 – 55 age group and only 2 respondents (3.6%) belong to above 55 years of age group. Table 6 shows the working experience details in which 3 of the respondents (5.5%) were working for less than 3 years, 16 of the respondents (29.1%) were working for 3 to 5 years, whereas, 22 of the respondents (40.0%) has working experience for 5 to 10 years and 14 of the respondents (25.5%) has an experience for more than 10 years.

Table 4: Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
	25-35	26	47.3	47.3	47.3
	36-45	13	23.6	23.6	70.9
Valid	46-55	14	25.5	25.5	96.4
	above 55	2	3.6	3.6	100.0
	Total	55	100.0	100.0	

Table 5: Age

		Frequency	Percent	Valid Percent	Cumulative Percent
	Male	53	96.4	96.4	96.4
Valid	Female	2	3.6	3.6	100.0
	Total	55	100.0	100.0	

Table 6: Working experience for

		Frequency	Percent	Valid Percent	Cumulative Percent
	Less than 3 years	3	5.5	5.5	5.5
	3 to 5 years	16	29.1	29.1	34.5
Valid	5 to 10 years	22	40.0	40.0	74.5

More than 10 years	14	25.5	25.5	100.0
Total	55	100.0	100.0	

Regression Analysis

Two Regression analysis has been applied separately to test the hypotheses. One is with the independent variables to mediator variable and second is with the mediator to dependent variable. Results derived from this analysis is discussed below.

Regression 1: independent to mediator (considering it as dependent)

Table 7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.715[a]	0.511	1.480	0.55393

a. Predictors: (Constant), MA, RA, SC
b. Dependent Variable: DE

Table 7 illustrates that the R-value is 0.715 whereas the R-square value is 0.511 which indicates that independent variables that are used in model might predict 51.1% of change in the dependent variable which is slightly far from the flawless prediction but still significant. Moreover, as the value of adjusted R-square provides the more precise information related to the model fitness thus shows 0.480 which is slightly lower than the value of R-square. The last column shows the Std. error which actually measures the accuracy of predictions thus shows that there are only 0.55393 chances of error within the model.

Table 8: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	15.072	3	5.024	16.373	.000[b]
1	Residual	14.421	47	.307		
	Total	29.493	50			

a. Dependent Variable: DE
b. Predictors: (Constant), MA, RA, SC

Table 8 illustrates the result of ANOVA analysis which is used to determine that whether there exists some sort of statistically significant (non-zero) linear link between the independent and the dependent variables in the population. Moreover, the f-value is 16.373 and the p-value is 0.000 which is lower than the alpha value of 0.05 thus indicates that model is satisfactory for forecasting purpose and the independent variables in the model can be use for forecasting the dependent variable**.**

Table 9: Coefficients

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	1.796	0.608		2.956	0.005
	RA	0.732	0.336	0.227	2.177	0.035
1	SC	0.431	0.112	0.461	3.852	0.000
	MA	0.270	0.126	0.257	2.135	0.038

a. Dependent Variable: DE

Regression Equation: DE = constant (1.796) + RA (0.732) + SC (0.431) + MA (0.270)

Table 9 shows the coefficients of independent variables thus the coefficient for regret aversion (RA) is 0.732 which shows that for every unit increase in regret aversion, a 0.732 unit will increase in disposition effect (others remaining constant) and shows that its p-value is 0.035, which is less than 0.05 (alpha value) which means there exist a link between regret aversion and disposition effect. However, the coefficient for self-control is 0.431 which shows that for every unit increase in self-control, a 0.431 unit will increase in disposition effect (others remaining constant) and shows that its p-value is 0.000, which is less than 0.05 (alpha value) which means there exist a link between self-control and disposition effect. Moreover, the coefficient for mental accounting is 0.270 which shows that for every unit increase in mental

accounting, a 0.270 unit will increase in disposition effect (others remaining constant) and shows that its p-value is 0.038, which is less than 0.05 (alpha value) which means there exist a link between mental accounting and disposition effect. Results confirmed that all the three behavioral factors i.e., regret aversion, self-control and mental accounting have significant impact on disposition effect as stated by Raza & Mohsin (2014) that these behavioral factors give rise to disposition effect and thus highly effects the decisions of management.

Regression 2: mediator (considering it as independent) to dependent

Table 10: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.669[a]	0.447	0.436	0.43615

a. Predictors: (Constant), Unstandardized Predicted Value
b. Dependent Variable: PM

Table 10 illustrates that the R-value is 0.669 and the R-square value is 0.447 which indicates that independent variables that are used in model might predict 44.7% of change in dependent variable which is far from the flawless prediction but still significant. Moreover, studies that are used to explain human behaviors generally have R-square values lower than 50% as it is quite difficult to predict such phenomena which is related to human behaviors thus the above value of r-square derived in this study is also lower as it also measures the behaviors (Frost & D.D, 2017). Moreover, as the value of adjusted R-square provides the more precise information related to model fitness thus shows 0.436 which is slightly equal to the value of R-square. The last column shows the Std. error which actually measures the accuracy of predictions thus shows that there are only 0.43615 chances of error within the model.

Table 11: ANOVA

	Model	Sum of Squares	df	Mean Square	F	Sig.
	Regression	7.535	1	7.535	39.613	0.000[b]
1	Residual	9.321	49	0.190		
	Total	16.856	50			

a. Dependent Variable: PM
b. Predictors: (Constant), Unstandardized Predicted Value

Table 11 illustrates the result of ANOVA analysis which is used to determine that whether there exists some sort of statistically significant (non-zero) linear link between independent and dependent variables. Moreover, the f-value is 39.613 and p-value is 0.000 which is lower than the alpha value of 0.05 thus indicates that the model is satisfactory for forecasting purpose and the independent variable in the model can be used for forecasting the dependent variable.

Table 12: Coefficients

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.421	.284		1.482	.000
1 Unstandardized Predicted Value	.707	.112	.669	6.294	.000

a. Dependent Variable: PM

Regression Equation: PM = constant (0.421) + DE (0.707)

Table 12 shows the coefficient of mediator variable i.e. disposition effect thus the coefficient for disposition effect is 0.707 which shows that for every unit increase in disposition effect, a 0.707 unit will increase in portfolio management (others remaining constant) and shows that its p-value is 0.000, which is less than 0.05 (alpha value) which means there is relationship between disposition effect and portfolio management as stated by Raza & Mohsin (2014) that disposition effect plays a key part in the management of portfolios when disposition effect arises in the market, fund managers needs to tilt the portfolios for its better performance thus confirms that disposition effect has significant impact on portfolio management.

CONCLUSION

Main goal of the research is to investigate that to what extent the financial behaviors of fund managers play a significant role in managing their portfolio. For that purpose, this research studies the phenomena of disposition effect as mediator between the three behavioral factors i.e., regret aversion, self-control, mental accounting with portfolio management. A sample of 55 is taken and data were collected from fund managers. Two regression were run separately through SPSS in order to test the hypotheses. Results confirmed that the phenomena for selling winners too early while riding the losers for too long; the disposition effect, have significant impact on the management of portfolio and that tendency is due to the three behavioral factors that managers used to exhibit while making decisions. To avoid the feelings of being regret and to seek pride, rationale for different methods and for closing losers account in mind forces the managers to realize loss as a result of which disposition effect rises thus confirming the results and showing significant impact of these behaviors on disposition effect.

RECOMMENDATIONS
Following recommendations were made for the study:
1. Based on the findings, the study suggests for reducing the effect of disposition, investors must design a number of different policies for portfolios also number of different strategies must be adopted by managers such as: creating a benchmark for losses; in this way the managers will be able to operate or manage with hard and fast rule by not letting their losses exceed more than 10%.
2. Managers must not rely on hope against hope which means to continue hoping for something to happen rather it seems impossible to happen, instead they should be working via using pre-determined and specific policies or strategies, just like the benchmark for losses, they should construct the benchmark for gains too, in order to compare their gains and losses effectively. They must be brave enough to accept their losses and must continue to play every new game with more passionate spirit.

LIMITATIONS
A number of different limitations of the study might create room for further new studies. The number of respondents used in this study is 55 should be taken in generalizing the results which is restricted to only few fund manager's behaviors therefore, the results of this study cannot be same for generalizing the whole country's managers thus the conclusion of this study can only be viewed as tentative. Moreover, this study focuses on behavioral finance factors as the key role that give rise to disposition effect in managing the portfolios due to which certain limitations may include like the respondent's may be unaware of the behavioral factors and so on. Furthermore, future researches must be performed to examine different insights of disposition effect such as using several macro-economic factors and by using the unit holder's account level data in order to find out the frequencies of both losses and gains realization, researchers will be able to clarify the outcomes and benefits that the respective audience can avail.

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