

Impact of Optimism Bias on Investment Decisions in Mutual Funds

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Abstract

This research paper examined the impact of optimism biasness on investment in mutual fund industry comprising a sample size of over 200 investors. The foremost intention of the study was to explore optimistic level of mutual fund investors related to investment in mutual funds. Optimism bias was measured by three identified facets as confidence, hopefulness and over-estimation by using a questionnaire. This research makes use of primary data, Regression and statistical tool was applied to analyze respondent's feedback. The study finds a significant relationship between investment decision in mutual funds and optimism bias, indicating that optimism bias is one of a good predictor of investment decision in mutual funds. The study can be useful for the investors and mutual fund managers in devising policies and making decisions. The results suggested that optimism bias had a positive impact on investment decision in mutual funds.

Keywords: *Optimism, overconfidence, over-estimation, hopefulness, fund managers, investment decisions in mutual fund.*

Introduction

This research study aims to evaluate the intensity of fund manager's optimism and their hopefulness, confidence & overestimation are subject to return on investment and whether or not they change from less contemporary investors in their prospective susceptibilities. The level to which optimism and relevant character features such as confidence, hopefulness and over-estimation might well impose any obligation on mutual funds while determining their outcome. Reaction to such concerns may be significantly useful in evaluating skills of the fund managers while drawing comparison in evaluation to success controversy as well as the controversy on efficiency persistence.

A portfolio comprising of a share of resources obtained from multiple investors with sole objective of investing in such as securities and secondary market instruments. Working and performance of Mutual funds are managed by experts named as fund managers, whose task is to identify the avenues in which to invest the money in order to get both capital gain and principle stated amount at maturity. Portfolio of a mutual fund is arranged and managed to be aligned with investment objectives as illustrated in the research. Return on investment in mutual funds depends on expertise and skills of fund manager. A fund manager ensures healthy returns by investing the pooled amount in different stocks in order to diversify the risk factor. This helps a great deal in coping with risks that are associated with financial markets. A mutual fund is managed by a fund manager on whose discretion buying & selling of stocks takes place. Mutual funds are mainly considered as open ended, close ended, funds of funds, capital protected funds etc but here two main types will be elaborated that are traded extensively in financial markets; Open ended mutual fund are issued by Asset management firms or companies in primary market at Initial Public Offer and later on in secondary market, while they are redeemed back to issuing firm in secondary market, while Close Ended Mutual Funds are issued by Asset Management Firm at time of IPO in primary market while they are redeemed in secondary market by investor to a buyer other than the issuing firm or company.

Fund Managers of mutual fund over forecasts overestimate the earnings and profitability of investment in mutual fund due to the optimism bias. Fund managers of Mutual fund over predict and over calculate the income and success of investment in Mutual fund and due to the positive outlook tendency the mutual fund may under or over perform in the market.

Optimism refers to a phenomenon of forecasting expected returns both by investors or fund managers while dealing in a risk prone market, dynamic and vulnerable markets completely or partially bypassing the probability of low returns or complete loss. Discussing biasness in context of mutual fund industry refers to expectations that investors associate with investments in mutual fund industry ignoring the reality of no gains or loss of principle amount invested. As mentioned earlier the investment or returns of mutual funds depends greatly on expertise of a fund manager. Most of the investors and fund managers are very much biased towards the expected return or risks that are associated with investments they have undergone. The term optimism mean disposition or tendency to look on the more favorable side of events or conditions and to accept the most favorable outcomes or to believe that the good ultimately predominate over evil in the word and goodness pervades reality.

Optimism is closely related to the variance of prediction, for it shows people appetite to start overestimating the positives likely to happen to them rather than bad experiences. This variance of prediction can also be referred as valence as it refers to positivity and negativity of attitude or behavior of an individual. The net result that is achieved as a result of valence effects is referred to as thinking as per wishes of an individual. But, in certain situations, the perception about positive outcome may lead to a bias that may ultimately vary the outcome of events in one way or other. Lot or research has been done in this regard that has produced various explanations for these effects. In most of the cases these aspects have been manipulated in the context of motivational biases, which is an argument that tend the individuals to be motivated in order to hold unrealized positive self-perceptions with an aim to improve their own happiness level and well-being. There may be some assumptions, likely to take place in order to maximize their happiness. Likewise there have been another theory put forward by group of cognitive thinkers who claims that people most of the times want to succeed, and more often want to be credited with responsibility for their expected outcomes. In view of above said discussion investors tend to be vulnerable over optimism bias.

Literature Review

Psychological biases are very important factors which affect the investor's behavior and stock prices. They may or may not participate in the investment due to their past experiences. Muhammad (2011) has also discussed factors related to psychological biases effecting investor behavior and stock prices. The investors make their decisions on the basis of their participation in asset and security categories, investors individual loss adverse behavior, past performances as indicator of future performance, investors trading, status quo, efficient portfolios, investor's behavior and influence due to historical high or low trading stocks.

Investors may have perception that they can eliminate the risk and can safe their interests due to investment in mutual fund. There are lots of factors that may influence the investors to release the fund or keep the fund with them. Therefore, they used to switch towards this type of investment. There are enough evidences that show the investor's

ability to expose them to risk, financial markets knowledge, sentiments and credibility of market that influence the willingness of investor for releasing funds Nicolas and Holger (2011) has highlight the factors that influence the investors to start investment in mutual funds.

Fund managers play a vital role in the decisions of investors. They are the basic source of earning for them. Fund managers lead the investors and force them to invest in mutual fund industry which leads them towards yielding profitability. Funds managers may forecast the trend of over and undervalued stocks adversely. Malcolm, Lubomir, Wachter, and Jeffrey (2009), based their research on the assumption that the stocks which are selected by mutual fund managers usually outperforms the stocks which they dispose or sell off.

In contrast it is another opinion that in most of the cases the fund managers may invest in the underperforming mutual fund due to the lack of experience and information and skills. Malevergne and Sornette (2009) also discussed why investors are purchasing underperforming mutual funds that investors lack of expertise forced them to rely investing in underperforming mutual funds enabling the fund managers to charge them a certain fee. Simona and Massimo in 2007 have discussed the trend followed by investment banks that tend to force the analysts to develop biased reports to win hearts of potential investors and enhance credit ratings. They have studied recommendations of several such institutes spanning over a time period from 1995-2003 indicating that fund managers personal likings or affiliation with a certain mutual fund may also affects the ratings. Most of the times analysts prefer to opt for favorable stocks which are further dependent on other associated mutual funds which in turn affect lot of factors comprising of the investment banking affiliation. It was further concluded, that greater the size of portfolio, the risk gets diversified therefore ratings gets more optimistic in comparison to analysis conducted by unaffiliated analysts. As mutual have a lot of investor's money and stakes therefore it further decreases the optimism shown by the analysts. Nevertheless, 1999- 2001, analysts reported that the recommendations of analysts to select a certain portfolio always involves optimism particularly when they are referring stocks amongst a pool of affiliated mutual funds.

Overconfidence of fund managers and investment in mutual fund are closely interrelated. It affects the skills of fund managers which may influence the decisions of inventors in the portfolio which is associated with fund manager's overconfidence. Investigated by Arman (2011), and conclude that the impact of overconfidence and behavior that have a bearing on fund manager skills against the back drop of returns and risk associated with investing in a certain portfolio. They have further analyzed this phenomenon and derived the relationship between investment and fund managers overconfidence.

Investor's optimism towards financial markets and their belief in economy may be influenced by political climate. So, it creates behavioral bias among the investors and they improve their portfolio performance with a lot of faith and belief but they face risk due to political conditions. Yosef, Claremont, Kumar and Jeremy (2010), have proved that when opposition party is in power, investors undertake terrible decisions exhibit a lot of biasness and select funds with greater expense ratios.

The investors do not pay heed to reporter's information or analysis but they for sure take fund managers' report seriously they consider the report of fund managers more authentic and reliable as compare to others report including newspapers and magazines. Gideon

and Ronnie (2010) have differentiated equity hedge funds into three sources like newspapers, magazines and corporate communication. They observed that corporate covered funds out perform while general covered funds underperformed based on assumption that fund managers present conservative forecasts while reports present lenient views.

The decisions of mutual fund managers are often biased and vulnerable to the behavior and nature of investors. A study carried by Arman (2011) revealed the phenomenon which manager often faces in decisions which are biased in nature. It partially depends on fund managers skills, their luck as well as debate on performance. Their findings proved that fund manager's overconfidence diminishes mutual fund returns and are often biased to behavioral biases and their differences proved after annual report publications. This fund difference is stronger amongst the growth oriented funds rather than established funds in the industry.

Business relations among mutual funds and brokerage funds influenced analyst recommendations. They used a unique data set to disclose brokerage firms and their income derived from shareholders and investors. Michael, Lin, Liu and Xuan (2011), the analyst keeps stock recommendations which are not only subject to investor's sentiments but also to equally healthy ratings from analysts that are working in financial markets.

The causes of financial crisis on mutual fund industry, and over the world mutual fund industry was performing exceptional with consistent fruitful returns after 2000 but ever since the financial crisis deepened it got a toll on mutual funds and with an expected yield 30 percent plunged to such a depth that even a break even seemed to be a distant possibility. James and John (2008) have further drawn a line that started that caused a down ward slide in this industry. As in many instances a lot of investors abuse the fund industry through late and frequent trading thus damaging the true essence of mutual fund industry. This further led to competition even inside the industry, within the financial services and revenue sharing, did not led to a conclusive evidence of mutual funds performing in a better way. As understood in such an industry arbitrage does not exist but inferior products do exist with a clear sign of prosperity. All this discussion led to prospects of index funds and the role they play on sentiments related to mutual fund industry.

In most of cases both close ended mutual funds and stocks tend to be held by individual investors who pool their amount in a hope to get greater returns. The fluctuations in returns of mutual funds which were normally based on individual investor sentiments especially in closed ended mutual fund industry may be vulnerable. Charles, Shleifer, and Richard (1991) exhibit a trend in which the funds which are performing long ago in market are being at a premium and sometimes on a very little discount amount which are interrelated with prices of other securities as well. It is supported by these predictions.

The sell-side analysts have to suffer great competition and pressure from the hedge fund clients who tend to issue instructions as when to buy or at least sell their funds on the recommendations of fund managers. Sung and Melvyn (2010) investigates that the hedge funds take advantage of fluctuating reports by offloading their stock holdings. The researchers in this paper have found out similar conclusions with analyst upgrades or downgrades recommendations along with 12 month price targets. The analysts are somehow driven by brokerage commissions and to create or develop optimistic reports for stocks being held by high dollar turnover hedge funds over a certain period of fund

life. The research also suggest that in recent times the Wall Street research department have been forced to shed of investment bank revenues and are contend with new fund related conflicts of interests.

Financial markets are based on reforms aimed at attracting the foreign investors. Likewise it is an obvious reality that whenever the markets are integrated the funds need to be assigned or traded in national stock markets in close relation to their market capitalization. Previously it has also been concluded that lack of diversification will lead to lankness on part of international investors. Senda (2007), excessively under weighting of foreign assets is directly termed as equity home bias puzzle. The barriers to capital movements and subsequently information asymmetries along with behavioral factors have been studied and concluded that a much lucrative option for the investors is foreign market where most of people known to him have already invest thus they have studied the impact of social interaction on international mutual funds investment in the longer run.

The effect of optimistically biased future totally neglected the time value. Such an approach is adopted by individuals who focus on orientation. The prediction of future optimism is not a valid term for focused individuals. Lee and Yoon (2010), it has been further elaborated that only those individuals show sign optimism who are presented with an option with a decreased performance as in the past. Such effects are considered into realism by individuals to certain level of elaboration about potential outcomes of a contract.

The researchers have used sum of deviations from a certain bench mark that has been established in backdrop of a proxy serving as rage the fund managers boost up the confidence to such an extent and degree that they have to decrease it once disconfirming public signals. There are lots of dynamics of investors who suffers from the phenomenon of over confidence. Darwin and Dong (2010), this trend or assumption further leads to poor future underperformance mostly motivated by fund manager's choice of portfolios. The underperformance results from a certain biased attribution due to fund managers thinking, smartness in stock selection which others are less familiar or unknown.

The mutual fund managers forecast openly or publicly the earnings and in most cases they over estimate which are then later disclosed at annual earnings announcement. This is also referred to as untruthful reporting biased and bias somewhat cognitively. Willis (1998), such explanations draw a sharp contrast about the timings of changes that prevail between the forecasts alongside annual earnings duly announced. Findings of this paper are more consistent with optimism explanation; such findings are in matching with market manipulation resulting from this biasness. This phenomenon was not ideal to get rid of biasness related to decision making by managers to report a prediction in order to shrug off this perception that fund managers forecasts are biased.

There exists a close relationship between market and sustainability that is dependent on this particular design and it defines some of fundamental environmental issues. A lot of research has been carried out in this aspect that reveals that investors rate the demographics very high. Researcher has mentioned several issues along with biases dependent on cognition and the obstacles associated with investor perception. Sebastian Munteanu and Romania in 2007 concluded in the study that a multiple perception level and breakdown of profession priorities along with the farming effect tends to offer investor several choices. Further discussion concluded that when the optimism is lacking

the subsequent level of biasness can no more be conclusive, but when brings halo effect into consideration it becomes much clear. This study further explains some of factors that not only influences thinking of the investors with an agriculture background but also intends to acquire long term persistence and sustainability among the fund managers in order to develop financial instruments.

The difference of opinions and short selling trend in case of mutual funds may cause differences in opinions and panic or intentional short selling may result in asset over pricing. This formula is also applicable to criteria required to determine prices of mutual fund, which ultimately cause short selling of mutual funds. Cheng, Massimo and Zhang (2004), further concluded that investors often make up opinions about the skills of fund manager and in order to utilize services of fund manager they have to pay a certain fee for this service that fund manager offers while buying or selling of mutual funds. Further analysis of Berk & Green model helps to elaborate some common observations occurring and associated problems that are prevailing in mutual fund industry involving those funds that are not fetching any healthy returns along with price difference between actual fee and estimated fee.

The returns that are based on risk level are defined in light of agency models by defining beta and thus they are not dependent on Capital Asset Pricing model standards that maintains price as a set standard to determine the performance of mutual fund. If we analyze the fund industry we will come to the conclusion that some mutual funds tend to consistently fetch healthy returns for quite some time keeping in mind market tends. Jason (2004) discussed that investors have to keep a close look at certain funds by dividing fund industry in several sections. Further they calculate the aggregate of funds that translates the inflows from investing into mutual funds. As those funds that bear a high risk value provides managers with an opportunity to modify their portfolios venturing into more diverse ventures thus minimizing the beta risk periodic payments in relation to a greater value of beta. The aggregate of stocks performance is dependent on equity funds as it is always rated high both in terms of risk as well returns. High beta value in comparison to the cash trapped by investing in relative stocks is always in sharp comparison to overall stock market that is statistically not significant in terms of mutual fund industry.

The dynamics of investors over confidence can be calculated by using the values of absolute deviations while observing a particular bench mark index. Shares that actively take part in market are used as a dummy to calculate confidence showing a certain trend shown by the mutual fund managers by boosting their confidence to such an extent that seconds public signals rather than to further diminish it. Choi and Dong (2010), highlighted the performance of fund managers who lack in experience and are more vulnerable to risk as well as sentiments of investors. Poor performance of funds may sometime be expressed to this factor as well which is based on motivation provided by managers who have limited choices to choose from. This paper further discusses that underperformance that is a result of biasness can be contributed to manager's lack of experience as they stick to a particular industry to invest in their stocks rather than studying the industrial trends and overall trend.

The behavior of investors is attributed either to redemption fee that is a certain lesser than then purchasing price. Sometimes it is also, referred to the performance of funds during economic crisis. But Berk and Green (2004) totally disagreeing with this concept

suggested that investor's personal attitude and his irregular behavior plays a major role to explain the issues associated with buying and redemption of mutual funds. This does not depend on fund fee while truly competitive markets play a pivotal role considering mutual fund industry and that is still an unresolved mystery in mutual fund industry amongst the analysts who conduct qualitative analysis. Several studies such as Coates and Hubbard (2007) and Grinblatt, Ikhemo, and Keloharju (2008) argue competition do exist in mutual fund industry moreover charges charged by fund managers are always at par with prevailing market. Importantly this study revealed that keeping in mind returns on investment in mutual funds, risk aversion by opting to select a diverse portfolio and charges incurred by almost all US domestic equity, have always been in market previously or at present have some additional costs associated with them during the previous some years. Prior to this these investment in mutual funds renders a competitive handicap to index funds priced very less. This study also supports findings of School 1982, Freeman 2007, Freeman and Brown 2001 etc. that leads to a conclusion that fund manager's charge relatively more than market competitive prices as recommended by them. Therefore there is a need for a sterner competition and regulations in mutual funds industry. A comprehensive research was carried by Palmiter and Taha (2008) that further explored the studies published by the SEC. It basically depends on a common human deficiency of unsophisticated response of investors, while the SEC's regulations bound investors to reveal information is not well defined. This mainly is due to lack of financial knowledge.

Most of the investors are biased when they are dealing with their domestic markets. Market exposure, market knowledge and adequate opportunity to understand market dynamics is also an important issue. Barber, Odean, and Zheng (2005) and Choi, Laibson, and Madrian (2008) provide evidences that front end load and back end load are the two important aspects of dealing with buying and selling of stocks that attracts some seriousness as far as investor is concerned. But majority of investors are least bothered about ratios associated with mutual funds. Capon, Fitzsimons, and Prince (1996) and Alexander, Jones, and Nigro (1998) demonstrated in their respective studies that most common and basic terminologies associated with trading of mutual funds are unknown to investors, including charges they have to pay to fund managers. These facts clearly indicate deviation from irrationality which is very much in line with the focus on investor's expertise of industry. Funds markets are another important aspect investors lacking in that mostly leads them into self defined benchmarks such as returns on deposits in banks or other such investment schemes.

Optimism bias is mostly affected by the practices performed in industry that promotes the trading of fund shares. Since 1980, marketing and distribution fees have been charged by investors which previously were not directly deducted from returns of investment. Khorana and Servaes (2004) and Barber, Odean, and Zheng (2005) have identified another important impact of this fee on funds as it improves performance of mutual funds. Investment in equity fund seems to be a focus end to for all subsequent mutual funds as they tend to take advantage keeping in mind the international rules associated with diversification. This phenomenon is most of the times associated with non-centralized information among local and foreign investments. Murray (1991) explains several strategies that are used to enhance trading of mutual funds. When comparison is drawn across borders there is a certain variation in fees paid to fund managers across

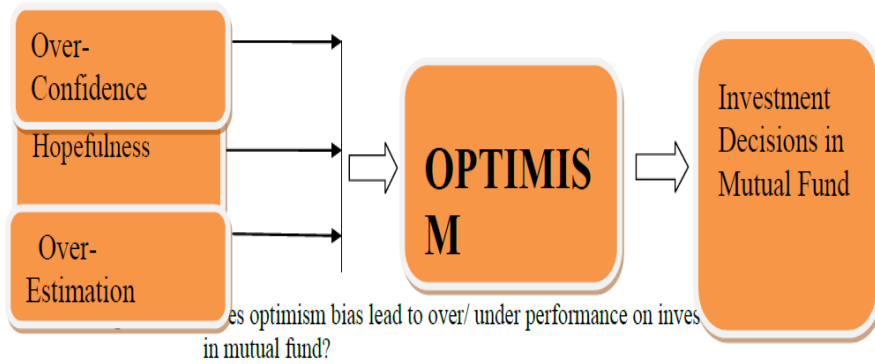
borders. Elton, Gruber, and Das (1993), Gruber (1996) and Chevalier and Ellison (2002) showed that funds which high expense ratios from investors do not offer healthy returns mostly. This may be interpreted as biasness shown in tandem to pool or portfolios of investors who are least bothered about fund performance.

Sometime there may be funds that charge lower fees in order to compete for and to attract more investors. This may be based on the theory of optimal contracts between managers and investors, by considering a variety of factors and mechanisms to explain fee charges and structure of portfolio services. Das and Sundaramb (2002) made a comparison amongst some symmetric and asymmetric models by selecting a group of investors. Stracca (2006) provides an excellent insight on this topic. The relationship between a manager and an investor formulates a scenario associated with example of the general principal agent problem. Following the work of Ross (1973) and Holmstrom (1979), numerous studies have applied the principal-agent model to various scenarios of economic exchanges between among investors and fund manager. To cut the discussion short an investor hires services of a fund manager while the structure of payment in case of mutual fund is the tool that is used in order to safeguard their interest, while maintaining the existing practices taking part in economic market. Mostly it is assumed that managers who have complete access to an investor's private information, whereas investors have no access to a manager's expertise level or his past performance related to financial markets. Information about fund manager is mostly revealed in fund manager monthly reports at end of a certain quarter. Optimal portfolio is defined as a mixture of the mutual fund investment and of other vehicles that investor himself has avoided to undertake. Sometime the fund manager utilizes the level of understanding of the investor's decision by utilizing the private sources to know the fee level that maximizes expected utility. The problems that is associated with additional informational disadvantage of the investor.

Provision of a common formula in order to conclude a fund's performance, by adjusting risk associated with fees payable to fund manager for his services. In sharp contrast to this, results do not require any restriction on in terms of fund's return distribution and the investor's utility function as long as it is a variant and converging. Over-optimism of investors translates into decisions which are made on the basis of limited or misguided information, ultimately leading to investments in funds that are not performing at par with equity funds. Furthermore, it is shown that investor's over-optimism can be explained either by the efforts shown by the persons working in sales department or by the investor's inappropriate selection of benchmarks, or by a combination of both, possibly due to the lack of sufficient investment knowledge. An innovation in optimism is also one of the important factors that investors keep in mind while undertaking any decision. Most of the investors undertake future investment decisions based mostly on specific information about asset as well as their information about any future economic growth. Patel studied in 2010 and he investigates the role of investor's optimism about their investment decisions based on future economic growth. The investor investment decisions are based on economic optimism and macro-economic conditions. Investors not only consider futuristic economic optimism in their decisions but also put greater weight on it when fund specific information seems uninformative and less valuable.

Basic Research Model

In this paper, several facets of optimism bias has been examined to influence the optimism bias of investors and to check the impact of the decision making on investment in mutual fund. Thus the model is as follows:



Hypothesis:

H₀: There is a positive relationship between Optimism bias and investment in mutual fund.

H₁: There is a negative relationship between Optimism and investment in mutual fund.

Objectives of the study

The research study investigated the dynamic relationship between investors and investment in mutual fund from behavioral perspective. The objectives of the study are to observe:

- The relationship between overconfidence and investment in mutual fund.
- The relationship between hopefulness and investment in mutual fund.
- The relationship between over-estimation and investment in mutual fund.
- The relationship between optimism and investment in mutual fund.

Significant of the Study

The significant of the study is to highlight the behavior and attitude of fund managers in the context of overconfidence, over-estimation and hopefulness. Fund managers are taking decisions on the behalf of the investors while investing in mutual fund and creating portfolio. Optimism bias is one of the important biases from the other factors of human behavior which can predict the direction in decision undertaken and in the selection of portfolio. All this will play a significant role for both the fund manager and investor simultaneously. The study will help the fund managers while devising policies regarding the decisions in mutual fund investment.

Theoretical Background of the Study

In generic terms this paper intends to explore the level of mutual fund investors which is at par to optimism biases and with an insight as to what extent it affects their investment mindset in a particular way. Specifically, optimism and the behavior associated with e.g. overconfidence, hopefulness, over-estimation and self-serving attribution bias may lead to any compulsion on the performance of fund which is of interest. The solution to these questions is of utmost importance and is informative to enhance the investor's skill minimizing the luck factor along with debate as well as the debate on consistency of performance. The questionnaire is motivated by the large areas of research, including the dynamic relationship between investors expressed optimism of with mutual fund and studies of professional investor psychology. This factor has been discussed in depth in the psychology literature. Odean, (2001) explained that investors wrongly contribute their healthy returns and loss to circumstances, this causes a sense of overconfidence in their approach. Overestimation is also sometime referred to as of one's investment skill that may result in diversified trading with a greater portfolio size, as documented in this research paper, despite the extensive literature examining optimism and overconfidence among individual investors, executives, traders, and individual investors.

A behavioral finance model mostly depends on concept of individual investors who are limited in terms of decision making and judgment to errors. By reviewing prior rational investors in efficient markets reveals how the psychological biases affect investor behavior and prices. A research study by Maheran and Muhammad (2007) also observed the same phenomenon and revealed that behavior exhibited by most investors while making investment decision is their participation in portfolios dealing in bonds and securities. Individual investors show a loss-averse behavior by analyzing their past performance serving as an indicator of future performance in decisions related to stock purchasing, moreover the investors normally trade too aggressively while keeping in mind the investors status quo and investors themselves cannot create an efficient portfolio. This does not necessarily show cost cutting means in order select a certain set of securities to avail better choices so that the market becomes more competitive and efficient. This involves regulations, overconfidence, and perhaps there needs to some steps taken to make advertising of mutual fund to become a standard norm.

A diversified portfolio helps to minimize the uncertainty of future investment plan so unit trust has become a more attractive option to the investors. The trend has arisen due to risks associated with over diversification and under diversification as a greater portfolio is difficult to handle while smaller portfolio does not safeguards against the risk. Zulkifli and Basaruddin (2007) discussed the risk associated with selection of portfolio on basis

of its size. They investigated as to what optimum number of stocks are enough to help investor maximize its profits in terms of diversification. They used Markowitz theory along with simplified approach in order to identify the ultimate diversification. By having a sample of 87-stocks they concluded that in Malaysian market 13 stocks are enough to avert risk and select a convenient portfolio.

Various researchers have tried to establish model in order to measure the investment trend along with investors own perception towards risks related to investment. In order to implement this a survey was carried on based on attitude of Taiwanese investors by Chou, Huang, and Hsu (2010) to find their previous investment experiences as a benchmark, with a record of their responses when they have to perform in a perfectly economic environment. This was used to develop a framework to interpret their relevant attitudes and behaviors. Extreme levels of perception about risk are indicated by investors in relation to their own investment experiences. Investors who have little or no experience working in stock markets and secondary markets are labeled as at highest echelon of risk. In this context model proposed by researchers is very much in line to find a positive correlation between experience and intensity of risk, although penalty is desired to be learnt in order to fully understand this. A deep thought to other financial instruments operating in financial markets each investor level of risk and expected returns shows significant but not a positive correlation that may be termed as negative as well. Eventually, as information is available, their perception on instruments operating in financial markets is lesser as compared to higher expected remuneration.

Some phenomenon when interpreted in the framework of motivational biases, an argument arises as the investors who are highly motivated to possess some positive perceptions with an objective to derive their own pleasure and survival are more vulnerable to biasness related risks. Some investors opt for a utilitarian way to maximize their happiness while others may look for cognitive means.

Research Methodology

Population and Sample

Population for the research is mutual funds investors in Pakistan and 200 investors of mutual funds in Islamabad have been chosen as a sample on the basis of convenient sampling.

Instruments Utilized

Primary data was used in the research. The study of questionnaire from Michael F Scheier & Charles, Carver of Optimism (1985) and Dr. Martin Seligman's book, "Learned Optimism" (2000) was used and developed. These instruments were distributed to gather the data for research purpose.

Quantitative Techniques

Regression model has been used to analyze the data. In this paper, researcher intends to find out the dynamic relationship between optimism biasness and the decisions related to investment in mutual funds were identified.

Brandt and Schmidt (2011) used an attitude behavior model which was developed by Schmidt (2010). The model was extended to identify the different predictions of willingness and interaction towards investment in mutual fund. To measure the interaction effect the researcher uses the regression model. Analysis through regression

model is used as products of the predictors. The predictors must be perfectly reliable to avoid the biased estimation of the regression co-efficient.

Regression Model

The following regression model was used to test the relation of investment decisions in mutual fund and optimism bias.

$$\text{IDMF} = f(\text{Optimism bias})$$

$$\text{IDMF} = f(\text{OC, HOP, OE})$$

$$\text{IDMF} = \alpha + \beta_1 \text{OC} + \beta_2 \text{HOP} + \beta_3 \text{OE} + \text{Error term}$$

Where:

IDMF = Investment decision in mutual fund.

OC = Overconfidence

HOP = Hopefulness

OE = Over-estimation

The above regression model was used for testing the hypotheses. Investment decision in mutual fund was used as dependent variable and independence was optimism which was calculated with three dimensions including overconfidence, hopefulness and Over-estimation. The measure captures the combined effect of investment in mutual fund and optimism bias.

Variable Definition and Measurement

There are the three main identified faces of optimism bias which has been incorporated to obtain level of relationship of optimism with investment in mutual funds. Variables that are used to measure optimism are given below;

Over-Confidence

Before defining variables it is important to have an insight of facets of optimism. Both from investor and fund managers perspective the terms “confidence”, “trust” and “belief” are unanimous to all of them and are somehow synonyms. Investigation further deeper into this philosophy “confidence is relates to trust. Whenever there are financial crisis may also be termed as a confidence lacking phenomenon and it is further derived from the Latin meaning to believe. Cumulative trust and confidence among the investors have a great significance which directly affects the financial markets. Most interesting aspect in this regard is dynamism between particular investors trust level varying from person to person.

This was stated by Akerlof and Shiller (2009), who proposed certain confidence multipliers that are based on the concept of Keynesian multipliers which further highlights how marginal propensity to consume spreads between a selected group of investors in relation to, decisions based on political or regulatory decisions. It is further discussed that subsequent change in a particular investor’s level of confidence in the financial markets also affects other investor’s confidence level by maintaining all other factors constant which are closely associated by confidence multiplier. This was further highlighted by a logical mathematical framework in order to determine a model as to how confidence or lack of confidence forces an investor and other financial agents to undertake a particular decision.

Over-Estimation

A look at literature related to psychology reveals that two different types of explanation for overestimation and its associated effects. From one perspective, these phenomena are in relation to biasness related to motivation, while this discussion leads to the point that are most of times willing to hold non realistic self-perceptions in order to derive maximum happiness and their own well-being. This assumption is related to the fact that investors tend to maximize their happiness in a utilitarian way. Alternatively, a different perhaps complementary view is put forward by cognitive psychologists who argue that investors always intend to bear healthy returns, and they intend to be responsible for the outcomes of their investments. These two factors play a pivotal role in determining investor's vulnerability to self-serving m

Overestimation normally refers to the over valuation of bonds and securities, experience, expertise, knowledge, competences available information and decision making. Over estimated value of micro and macro-economic factors influence the decisions of investors to great extent. It is human nature to learn about themselves and know their strengths by analyzing the outcomes of their deeds and in doing so, most of the investors overestimate the extent to which they may contribute to their own success. There are lot of factors that has to be discussed separately in this discussion. Van den Steen (2002) proved that investors attribute earnings to their own efforts while losses are attributed to external forces or bad luck. In the same manner ego-centric or self-centric bias reveals that investors opting for a joint venture that involves over-estimation that contributes to profits while overconfidence is related to both investors and general public over-estimates the accuracy of their expected outcomes and their actions while foremost of all the illusion of control is based on the fact that investors forecasts they have more saying rather than the results of a random or partially random event.

Overestimation can lead to overconfidence. This was further studied by Gervais and Odean (2001) who proved that most of the investors wrongly interpret their good performance in terms of retruns on investment, and likewise bad performances are attributed to chance, which is another aspect of being over confident. This overestimation of investment skill, in this regard sometimes result in excessive trading, as analyzed by Odean (1999). Regardless of the studies that lead to attribution and overconfidence among normal investors, professional experts, traders, and small investors, though there are just few researches that reveal the biases in fund manager performance. It is generally assumed that most of the investment in financial markets is not done by retail investors as they are solely responsible for their own investments, in fact it is made by the major institutes. Any co-relation between fund manager's performance and his potential overconfidence or susceptibility results in biasness which should be of great significance, not only to literature but also to financial markets as well.

Hopefulness

It is the phenomena of optimism in which the investors always have a positive hope regarding their investment decision. They think and assume the factors will positively affect the investment plan. They never compromise on think about the dark sides of the result. Investors expect that the prices of particular securities will hopefully increase. Sometime they take decisions in verse condition when the prices are in the diminishing trend and they invest in these securities with a positive hope.

Forster (2003) investigated about the positive emotions and thoughts of the people. The researchers indentified some positive assertions based on hopefulness including hopeful

attitude at work and school, hope of living for a long period of time with a good health, creativity in problem solving process, extra contribution in the society and having a happy life as compare to other. Is there any hope?

Hope is a construct which closely relates to optimism, although the two are not identical. Snyder, one of the leading specialists in hope, represents it as an ability to conceptualize goals, find pathways to these goals despite obstacles and have the motivation to use those pathways. To put it more simply people feel hope what they know what we want to be. They can think only within a range.

It is not hard to guess that being hopeful brings about many benefits. For example, we know that hope buffers against interfering, self-deprecatory thoughts and negative emotions, and is critical for psychological health. In the domain of physical health, we know that people who are hopeful focus more on the prevention of diseases (e.g. through exercising). Athletes with higher levels of hope are more successful in their performance. Furthermore, based on research with college students, it appears that hope bears a substantial relationship to academic achievement.

Snyder emphasis a cognitive rather than an emotional approach to hope, claiming that positive emotions are the result of concluding that we are pursuing goals successfully. This means that they see hope as a goal-pursuit thinking that causes emotions. As often happens in psychology, many other researchers would not subscribe to this view, conceptualizing hope as an emotion in itself.

Data Analysis

The descriptive statistics for the variables of 200 observations were made having mean values, standard errors, median and other descriptive statistics as mentioned in the table below;

Table 1
Descriptive Statistics

<i>IDMF</i>		<i>OC</i>		<i>HOP</i>		<i>OE</i>	
Mean	4.251	Mean	3.896	Mean	3.987	Mean	3.945
Standard Error	0.013	Standard Error	0.021	Standard Error	0.022	Standard Error	0.019
Median	4.266	Median	4.000	Median	4.000	Median	4.000
Mode	4.466	Mode	3.800	Mode	4.200	Mode	4.000
Standard Deviation	0.187	Standard Deviation	0.301	Standard Deviation	0.319	Standard Deviation	0.279
Sample Variance	0.035	Sample Variance	0.091	Sample Variance	0.102	Sample Variance	0.078
Kurtosis	-1.005	Kurtosis	1.500	Kurtosis	-0.350	Kurtosis	-0.064
Skewness	-0.398	Skewness	-1.021	Skewness	-0.259	Skewness	-0.484
Range	0.800	Range	1.600	Range	1.400	Range	1.400
Minimum	3.733	Minimum	2.800	Minimum	3.200	Minimum	3.000
Maximum	4.533	Maximum	4.400	Maximum	4.600	Maximum	4.400
Sum	875.800	Sum	802.600	Sum	821.400	Sum	812.600
Count	200.000	Count	200.000	Count	206.000	Count	200.000

The correlation coefficient shows the relationship between the variables. It has a range between +1 and -1, where +1 shows perfect positive correlation (moving in same direction) while -1 shows perfect negative correlation (moving in opposite direction).

The following table gives the correlation coefficient for the variables of the study.

Table 2

Correlation

	<i>IDMF</i>	<i>OC</i>	<i>HOP</i>	<i>OE</i>
IDMF	1			
OC	0.531381055	1		
HOP	0.676759217	0.371710362	1	
OE	0.525879449	0.316416077	0.449868993	1

Overconfidence and IDMF had a correlation coefficient of .531 which shows a positive relationship.

Hopefulness and IDMF had a correlation coefficient of .676 which shows strong positive relationship.

Over-estimation and IDMF had a correlation coefficient of .525 which shows the existence of positive correlation between the variables.

Since, the values of the correlation coefficients approve the presence of a positive relationship between IDMF and facets of optimism; we conclude that the optimism leads to over/ under investment in mutual fund industry.

Table 3

Regression Analysis

	CONSTANT	OC	HOP	OE
S.E	0.147435	0.030848	0.030934	0.034622
T	12.61	5.78	8.93	4.35
P	2.8E-27	2.83E-08	2.53E-16	2.09E-05
R Square	F	Significance F		
0.587629	95.95004	1.22E-38		

Results & Discussion

Table 3 shows the result of regression analysis for the investment and optimism bias. The overall results show that the regression model is highly significant. The value of significance f is far below given range of .05 which shows the high significance of the model. Similarly f statistics is 95.95004 which are high enough to reflect the significance of f statistics. R square of the model is .59 which means that 59% of the variations in dependent variable on independent variables are being explained by the model. The p-value is below the given range of .05 which clearly indicates that the independent variable is a tool to predict the dependent variable. Coefficient is the slope of regression line which tells the relationship between the variables. Larger the coefficient the more change in independent variable with respect to change in dependent variable.

The result shows the positive relationship between dependent and independent variables, therefore the H₀ i.e. Null hypothesis has been accepted.

Conclusion and Limitations

The study carried out to explore the impact of optimism bias on investment in mutual fund. The facets of optimism bias are confidence, hopefulness and over-estimation where the investment in mutual fund is dependent variable. The relationship shows the performance of the dependence variable due to the independent variable. The cross-sectional variations shows that previous good performance leads to an optimism as calculated by the regression model by using investor's responses which may also be a result of theoretical as well as market trends being used in mutual fund market. Regressions has been applied with dependent variable of investment in mutual fund and independent variable of optimism bias and the results suggesting that optimism does not indeed diminish the return of mutual fund and Regression coefficient is stronger which shows the significant change in investment in mutual fund with respect to change optimism bias.

Limitations

The research is limited to the relationship of mutual funds investors and optimism bias that investors are more tentative to be overoptimistic about future events and the subsequent result of their investment plans. This study is only concern with optimism bias which is a part of several other biases of behavioral finance. Only three different facets are optimism bias has been incorporated but there may other dimensions of optimism bias as well. The sample size of 200 investors in Islamabad can be extended and the research can be implemented on broad area.

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Book Review:

Decision Making & Problem Solving Strategies (2nd Edition, 2007) By. John Adair. Kogan Page. London

Reviewer: Dr. Naveed Akhtar, Faculty of Management Sciences, NUML Islamabad

Decision making & Problem Solving is the issue which management faces on each step of the business development. John Adair has written a very practical guide book which facilitates reader to understand the nature of decision making and problem solving. It elaborates different problem solving strategies, directs how to generate ideas before making the decision, and how to think creatively and how to develop thinking skills. This book is divided into seven parts.

The introduction part of this book talks about three forms of applied thinking: decision making, problem solving and creative thinking which are overlapping but are distinguishable. Decision making is about deciding what action to take; it usually involves choice between options. The object of problem solving is usually to find a solution, answer or conclusion. The outcome of creative thinking is to generate new ideas. The leaders aspire to take best decisions, optimum level of problem solving, and innovative ideas are generated for growth of businesses. Final step is to master the process of practical thinking which lie behind all the effective decision making, problem solving and creative thinking. One cannot guarantee the outcomes but can at least make sure that you use the well tried-and-tested processes of thinking to some purpose. One owns that responsibility and this book is aim of this book.

Author sates the words of Roy Thompson, „If I have any advice to pass on, as a successful man, it is this: if one wants to be successful, one must think; one must think until it hurts. The book explores I explore some practical ways in which you can improve your skills in this key area. By the time

you have worked through the book you should: working of mind, clear framework of decision making and its relationship with problem solving, using a model for decision making & problem solving, developing creative and thinking skills.

The first chapter discusses that behind the thinking human mind works. It states the difference between brain and mind. Brain works like chips in the computer and mind is what appears on the screen. This chapter explains few exercises which makes your mind work. This chapter also discusses three main functions of the mind; Analyzing, Synthesizing, and valuing. Analytical thinking is related to logical or step-by-step reasoning. Logic has two main parts: *deduction* and *induction*. It is the process of deducing a conclusion from what is known or assumed. More specifically, it is a question of inferring from the general to the particular. Induction works the other way round. It is the process of inferring or verifying a general law or principle from the observation of particular instances – the core of the „scientific method“. Synthesizing is putting or placing things together to make a whole. It is the reverse process of analysing. Synthesize means to assemble or make anything. All products and services are the results of syntheses. Nature is *holistic*. If analyzed into parts, they lose their essential holistic quality. Our mind has a holistic dimension. It can think holistically in terms of wholes

as well as analytically (taking wholes to bits). The third is valuing which means establishing success criteria, evaluating, appraising performance, and judging people e.g. in a selection interview. Criticism is a form of valuing. In the end depth mind exercise is given.

Second chapter talks about the art of effective decision making and explains classic five step approach to decision making; define the object, collect relevant information, generate feasible options, make the decision, implement and evaluate.

Third chapter dilates upon the sharing decisions with your teams. Leaders are supposed to learn three types of needs that play a significant role while sharing and making the decision: task needs, individual needs, team maintenance needs. Understanding these are incomplete without these leadership functions: Defining the task, Planning, Briefing, Controlling, Evaluating, Motivating, Organizing, and Providing an example.

The Fourth chapter explains the problem solving strategies. A bridge model is discussed. In fifth chapter different techniques of generating new ideas are discussed. One of the creative thinking techniques is Brainstorming which works better in groups. In brainstorming criticism is strictly prohibited and focus is only to generate as much as wild ideas. Later few workable ideas are chosen. Sixth chapter talks about how to explore other forms of thinking that is called lateral thinking which emphasizes wider look for solutions. This chapter discusses two themes Vertical thinking Lateral thinking. Last chapter takes note of developing thinking skills and states that if you truly want to develop your thinking skills then your task is essentially one of self-development. This chapter ends with few key points and one point says that don't think of thinking as being hard, painful or laborious – if you do that you certainly won't apply yourself to shaping and sharpening your thinking skills. Thinking is fun, even when – or especially when – we are faced with apparently insurmountable difficulties.