Gender based study on the Implications of Behavioral Biases in Investment Decision making

Mahalakshmi T.N[1] **&** ***Anuradha N***[2]

[1]*Full Time Research Scholar, Department of Management Studies, B. S. Abdur Rahman Crescent Institute of Science & Technology, Vandalur, Chennai.*

[2]*Assistant Professor, Department of Management Studies, B. S. Abdur Rahman University, Vandalur, Chennai.*

Abstract

Decision making plays a vital role in all aspects of life. Savings and investments are the only shield to overcome uncertainties. But decision making differs from individual to individual, as they differ from each other. This paper deals with the psychological biases of male and female and its influence on decision making through review of literature. The objective of the study is to investigate whether an individual follows any behavioral pattern while making decisions. Behavioral pattern in the order of occurrence such as mental accounting, familiarity, local/home bias, representativeness, overconfidence, over optimism, over trading, loss aversion, disposition effect, regret, anchoring & herding are the variables used for the study. Risk acts as a mediator in the process of decision making. Findings of literature provide a foundation for individual investors to know their behavioural biases in each phase of investmentdecision which is the cause for inefficient investment strategy. This will help the individual investors to attain their investment objective irrespective of the risk and return trade off. Future research implication is also discussed in the study.

Key words: Behavioural biases, decision making, gender, investment strategy, risk.

1. Introduction

An individual is induced to save, to sustain the standard of living, satisfy future needs and to meet the uncertainties.Savings refer to the portion of income which remains after all expenses are met. The quantum of savings depends upon the level of income and the life style of an individual. Savings are needed for an individual to maintain either the same standard of living in times of crisis or tomeet an unexpected need (Vedantam &Sriram, 2008).

However, when one level of need is satisfied, human beings have the tendency of moving forward to satisfy the next higher level of need. For this, just savings for the future is not enough. Thesesavings need to bring in additional income to the individual, which can be done by investing the savings in some investments (Nurkse, 1954)

Investment is defined as “the commitment of money or capital to purchase financial instruments or other assets in order to gain profitable returns in the form of interest, income or appreciation of the value of the instrument”. Investments may be in the form of cash, bank deposits, gold, cash equivalents, financial instruments and money market instruments. There are both risk free investments and risky investments.An investor prefers to have marketability, liquidity and safety in all his investments in addition to risk and return characteristics (Ansari &Moid, 2013)

An individual achieves financial satisfaction through savings and investments

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(Sahi,2013) which leads to satisfaction in their life (Diener, 1984).This financial satisfaction can be achieved through proper management of cash, credits and savings (Xiao et al., 2009). These savingsled investments help the country to flourish with micro and macro economic growth (Anderson, 1990; Khan &Reinhart, 1990; Chow, 1993; Blomstorm et al., 1996; Narayan P.K. & Narayan S, 2006) as well as increase the personal wealth of an individual. The investor is at the discretion to decide, the type of investment to be made,so as to maximize his income and wealth.

Classical decision theory states that people are rational. An individual has more choices before him. He has to choose the one which gives him the maximum utility / satisfaction in the presence of constraints. But decision making in times of uncertainty,in addition to risk exerts great pressure to an individual as he/ she is risk averse and unable to predict the effect of uncertain situation. Under these circumstances, an individual prefers to select the one which provides maximum utility. (Ackert, 2014). Hence, investors consume time to make financial decisions so as to maximize returns and minimize risk (Jain et al., 2012)

Such decisions arepreluded by financialplanwhichmatches their investment objective but differs from individuals. Researchers found evidence that men and women exhibit differences in financial planning, allocation of funds for investments, preference towards an investment, risk profile and expected return which has an impact on the investment decision making (Shiller, 2004)Hence , the present study focuses on the impact of gender in the process of investment decision making. This will be helpful for the investors to better understand their biases and frame efficient investment strategy.

2. Behavioral Biases and Decision making:

Decision making plays an integral part while making investments. Previous researchers found that individuals deny processing the market information and stick to insights or follow herd behavior while making decisions, which leads to irrationality in their behavior (Jain et al.,2015). Hence decisions differ across gender & time (Hossain & Nasrin 2012), risk and other psychological factors such as mental counting,familiarity, local/home bias, representativeness, overconfidence, over optimism, over trading, loss aversion, disposition effect, regret, anchoring and herding.

2.1Mental Accounting:

In General an individual framesdomestic budgets and allocates funds for various expenses. The money kept aside for a particular task is not utilised for any other purpose, instead they borrow loans to meet other expenses.(Shiller, 1997; Abhijeet, 2010) Consequently, Individuals create separate mental accounts for variousinvestments (Shiller, 1997) allocate funds for the same, evaluates the outcome of such investments and monitor the trading activities (Thaler 1999 , Talha et al., 2015) with the intention that the investments will perform well. But if the same perform poor , then they consider the loss as annoyance and hesitate to sell it, rather they wait for the specific stock to perform well in the market (Thaler, 2001) as individual considers gains and losses as separate mental accounts (Shefrin & statman,1985; Thaler, 1985; Frazzini, 2006; Chang , 2008).

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However, individuals consider losses together and gains separately (Lim, 2006) The use of such mental accounts may lead to decision bias (Thaler, 1985) and could result in non- diversification of assets (Talha et al., 2015) Bias is referred to as a tendency or a feeling that is preconceived by an individual.

Before making investment decisions, an individual gathers information about investments, anlayse market conditions and then proceed to invest. But due to the accessibility of massive information, investors hesitate to analyse and act on the available information. They decide using mental shortcuts or rule of thumb, to process the information and ignore the element of risk which paves way for incurring losses. (Riccardi&Rice, 2000; Abhijeet, 2010; Jain et al.,2015)

2.1 Familiarity:

After the allocation of funds, an individual prefers to make investments in the assets which are familiar to them. They assume that familiar investments may acquire more returns as well as provide safety of funds (Ivkovi & Weisbenner, 2000; Benartzi & Thaler, 2001)This Familiarity bais leads an investor to prefer local stocks (Zhu, 2003)as it is an effortless task to obtain locally available information and make good returns out of it (Benartzi, 2001; Liang &Weisbenner, 2002) Studies also prove that around 50% of the stock market holdings in any investment portfolio is of local stocks(Ivkovi & Weisbenner, 2000). Individuals employ the past events to forecast the future of the stock marketalong with reference from family, friends, social media and expert advice for making investment decisions. They refer the past events as a bench mark to predict the future and make investment decisions without considering, the rationale for the happening of such events (Abhijeet , 2010; Jain et al.,2015; Talha et al., 2015)

2.3 Confirmation:

Many a times anindividual investor seeks information which is best suited for their belief, andthis leadsto Confirmation bias.This is done to evade the information which doesn't suit the beliefs (Lovric et al., 2008). By referring to such single sided information and not considering other aspects will not provide optimum returns and may lead to deprived decisions (Talha et al.,2015) Individual investors overreact or under react for the new information and frame a pattern on their own to make investments (Lovric et al., 2008)

2.4 Overconfidence:

Subsequent to the confirmation, an investor embarks to invest with over confidence to earn more returns with less risk. Over confidence is defined as "an overestimation of the probabilities for a set of events. Operationally, it is reflected by comparing whether the specific probability assigned is greater than the portion that is correct for all assessments assigned in that given probability" (Mahajan, 1992) In an investigation by Oberlechner& Osler, 2009 it was found that investors overestimate their predictive skills and underestimate uncertainty.

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2.5 Over Optimism:

An individual who is overconfident in his skills and predicting abilities (Odean, 1998; Torngren & Montgomery 2004; Tapia &Yermo2007) overreact to market information(Daniel et al., 1998; Barber & Odean ,1999) behaves Over optimistic, assumes that the market could be beaten,underestimate uncertainty (Torngren & Montgomery, 2004; Oberlechner & Osler, 2009) He /she is hesitant to find out the real outcome which is uncertain (Camerer & Lovallo,1999, Daniel et al., 2001, Glaser & weber, 2003,Tapia & Yermo,2007; Jain et al., 2015, Talha et al., 2015) and unable to predict the stock market (Torngren & Montgomery, 2004)

2.5.1 Overtrade:

Over optimism leads an individual to over trade in the market, which pushes an investor to decide whether to buy or sell shares (Odean, 1999; Jain et al., 2015). Overtrading will not fetch good returns over a period of time as the investor has to incur more brokerages and taxes, which eventually lead to low returns (Tapia & Yermo,2007; Talha et al., 2015; Jain et al., 2015)

2.6 Disposition Effect:

The decision to buy or sell vests in the hands of the investor. There is also a possibility of the market to downturn, wherein an investor has to face high risk which may lead to heavy loss (Talha et al., 2015) Forecasting done during such periods leads to misleading in investment decision (Jahanzeb et al., 2012)Due to market conditions, the stocks may not perform well and may incur loss. When the value of shares goes up, an investor prefers to sell the stock to earn good returns. But when the value of shares decreases, the investor tries to hold the stocks or purchase additional shares of the same expecting for a hike in the future (Bloomfield, 2006; Ambrose & Mutswenje, 2014). This, Disposition effect has an effect on price changes, which creates anomaly in the market (Hong & stein, 1999; Frazzini, 2006):

2.7 Regret & Loss Aversion

An investor is affected by this bias due to loss aversion, as the pain of loss is more than the pleasure of gain (Talha et al., 2015). But as the stocks are held for a long period of time, the value of shares goes downfurther which lead to heavy losses.

At this stage, an investor regrets that, he should have chosen another alternative, so that he would have escaped from loss. The loss incurred by an investor is an impact of his decision making (Ritov & Baron 1995; Fogel & Berry 2006) Decision making is influenced by the feeling of regret, which leads an investor to hold the stocks for a long time and earn low returns (Pareto, 1997;Riccardi& Helen, 2000; Talha et al., 2015)Investors even blame themselves for having made a bad decision (Connolly & zeelenberg, 2002) This type of error occurs due to the omission or commission of certain acts in trading (Chang, 2008; Jain et al., 2015).

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Fogel & Berry (2006) defines regret as a"negative emotion evoked by the knowledge that a different choice would have led to a better outcome and thus, regret can only be experienced fully after the fact, although it can be anticipated before an action". Regretis state of emotion experienced by an individual after realizing that they have made a wrong decision (Ambrose & Vincent, 2014; Abhijeet, 2010) It is observed as a factor of disposition effect in the frame work of Shefrin & Statman (1985)

2.8 Anchoring

When an individual designs for the subsequent investment plan,they fuse to previous information and are reluctant to change for the new information prevailing in the market. (Talha,2015; Hoguet, 2005) This is due to the effect of loss incurred in the previous investment, by the individual. Sometimes they under react to the new information thereby ignoring the risk involved in it (Jain et al., 2015; Abhijeet, 2010)Anchoring bias will lead an investor to miss a good investment opportunity or have a bad entry or exit in the market (Talha 2015)

2.9 Heuristics

Shefrin (2000) refers heuristics as the rule of thumb which is used by an individual while processing information and they make investment decisions in a trial and error method. While making investment decision, an individual pass through beliefs and preferences. Out of the available alternatives, he may choose according to his preference with the belief that the particular stock may perform well in the market, though risk is involved in it. But there exists a bias between the stage of belief and preference (Lovric et al. 2008; Tversky&Kahneman, 1974) found that biases such as representativeness, anchoring and availability are involved in the process of decision making under uncertainty.

2.10 Herding

Generally, individuals follow other investors which leads to herd behavior or make decisions on rule of thumb. Contrary to this findings, Jaiswal &Kamil, 2012 found that investors may follow others but the choice of investments differ from each other. The tendency of herding is to conceal the loss incurred by them in their investment or to neglect a quantitative or fundamental analysis of the securities traded in the stock market or frame an investment strategy on their own (Jaiswal&Kamil, 2012) Herding behavior of the individual influences fluctuations in the stock market. (Bikhchandani & Sharma, 2001; Talha, 2015)

3. Risk and Decision making:

As risk perception and the ability to take risk differs among individuals, the level of risk that can be tolerated has to be assessed before making investment decisions**.** Individuals prefer to have a minimum acceptable return in all investments. When this limit turns downside, they consider it to be risk (Chandra &Abhijeet, 2010) Individuals earn more returns when the level of risk and time horizon is more and vice versa (Donkers et al.,2001; Lovric et al.,2008) Kahneman&Tversky, 1979 classified individuals as risk averse, risk tolerant and risk neutral. Risk averse behavior arises out of the pain experienced in the past and risk seeking attitude arises out of the pleasure of rewards earned during the past

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investments. (Camerer et al, 2005; Lovric et al., 2008) Longer the period of investments lesser will be the portfolio risk (Donkers et al., 2001)

4. Gender and decision making:

The propensity to take risk depends on age and gender. An individual prefers less risk when he/she becomes older. (Byrnes et al., 1999, Donkers et al., 2001; Lovric et al., 2008) and prefers to invest on less risky assets so as to ensure safety of investments. Barber &Odean (2001) evidenced that male trade frequently than women. It is also proved that male are overconfident than women in making investment decisions. (Kumar & Goyal, 2016)

5. Discussions & Suggestions

Individuals begin their investment process by allocation of financial resources through mental accounting and aim for high returns over a period of time. Further apportioning of funds to various investments is done based on reference groups information, familiarity towards a product, past experience etc. After such allocation, an individual identifies various avenues of investments, then select the alternatives for investments.

Because of ascertaining much information, before investments an individual becomes overconfident in his decision and initiates to trade too much which involves more transaction cost and brokerages which inturn leads to poor returns. At times, an individual makes incorrect decision of holding the losing stocks, to escape from immediate loss and selling the winning stocks to earn immediate gains. They hassle about future gains and losses, as they are risk averse and loss averse. The feeling of disposition effect makes them regret their past decisions.

They try to follow other investors through herd behavior or makes decisions on rule of thumb without analysing the informations. They even make decisions on trial and error methods. All these are caused due to the effect of the emotional and psychological biases which exists among each individual.

Thus, Emotional and psychological biases, which is also referred as behavioural biases influences an individual in the process of investment decision making. These baises not only confound them in decision making, but also leads them to earn poor returns or to meet up with heavy losses. The effect of such losses definitely will have an impact on future investment decisions, leading to the same biases, irrespective of the type of investments they choose. To overcome these biases and achieve their investment objective, research has to be carried out to compare the behavior of male and female, identify whether they are affected by the same biases and the extent to which they are affected by these biases are to be studied. Moreover, cross cultural samples and cross sectional samples can be tested for the study.

6. Conclusion:

Savings leads to investments which help an investor to earn more returns, satisfy all needs and lead a better life. But decision making for investments is a tedious task.

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An individual prefers to have maximum utility in addition to the risk and return characteristics involved in an investment. Maximum utility leads to maximum satisfaction, which can be derived through proper investment plan. Individuals are expected to act rational to achieve this satisfaction. But they behave irrationally under certain circumstances due to biases involved in the process of decision making.

In the initial phase, an individual allocates limited funds (mental accounting) to achieve hisinvestment objective. They prefer investment avenues which are familiar to them (familiarity bias) and give more importance to local stocks (home /local bias), with reference to family, friends, Social Medias, expert advice and depend on past events (representativeness) to make investment decisions. An individual alsotries to find out the informations which suits his investment decision (confirmation bias)

At this stage, an individual considers himself to be more knowledgeable and skilled and thinksthat he can beat the market (overconfidence).He also believes that, the stocks will always perform well in the market (over optimistic) and trades too much, which leads to more brokerages, moretaxes and less returns.

There is a possibility of the stocks to underperform in the market and the price of the stocks may decrease. At this stage, an individual investor tries to hold the losing stocks and sell the winning stocks (disposition effect). The investor continues to hold the stock for long period of time as he /she is risk averse, expecting the price of the stocks to increase in the near future (loss aversion). But if the prices of the stocks do not increase, they incur heavy loss. The investor feels that he/she should have chosen a better alternative so that, there wouldhave been a possibility of earning good returns (regret aversion)

In the next phase of investment, he is anchored by the past events (anchoring) of the stock performance and tries to follow other investors (herding) so as to avoid losses. He doesnot consider the factors or the events in the past, which made the stocks to perform well or perform poor in the market. The investor tries to justify the judgment in consideration with other investors, as he /she is not willing to convey that they have incurred loss in their investments (availability bias) Thus an individual investor is influenced by these factors in the process of decision making. To overcome these biases, they should frame an effective investment strategy considering the need to make investments on such stocks, duration of investments, expected return from such investments, the reaction of the individual when the stocks over performs or underperforms in the market , the level of risk that can be tolerated, the effect of disposition at that point of time etc., After evaluating such constructs, an individual investor is able to rectify the errors committed during the process of decision making which will help them in reducing mental mistakes. (Helen, 2000) which in turn lead them to achieve their investment objective.

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