

BEHAVIOURAL FINANCE: AN INTROSPECTION OF INVESTORS PSYCHOLOGY

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ABSTRACT

Purpose: Investors always try to make rational decision while analyzing and interpreting information collected from various sources for different investment avenues to arrive at an optimal investment decision. But at the same time they are influenced by various psychological factors that influence them internally and bias their investment decision. Linter (1998) studied the various factors that influence internally the informed investment decision and included them under the discipline of behavioural finance. Behavioural finance studies how people make investment decision and influenced by internal factors and bias. The main purpose of the paper is to assess impact of behavioural factors over mutual fund investment decision made by investors in Raipur city.

Design/methodology/approach: The researchers conducted a survey on factors of behaviour of investors with respect to investment in mutual fund industry from 300 investors of mutual funds across different demographic profiles in Raipur city.

Major Result / Findings: The researchers assessed that factors like perception, motivation, incentive potential, intensity of cues play major role in formation of intention to invest which further influence investors in Raipur city to take investment decision that determines their satisfaction with mutual fund which is based on performance and growth of a particular mutual fund.

Implications: This paper helps in analyzing the factors which influence formation of intention to invest and further direct towards investment in a particular mutual fund. Various mutual fund companies can concentrate on these factors to devise strategies to pull investors to invest in their mutual fund.

Originality/value: This a fairly original paper which has tested the model developed by researchers using SEM.

Paper type: Empirical and descriptive

Keywords: Behavioural finance, investment decision, intention to invest, mutual fund, SEM.

Introduction:

Financial decisions are basically rational decisions. Traditionally financial institutions in and across India have always based their selling strategies around this premise. Investment is a financial decision which is based on the standard principle which states that risk is directly proportional to return in the long run. The relationship between risk and return can be calculated on the basis of availability of information. Information in financial market is abundant but right information is

scarce thus it is difficult for individual investors to decipher financial information. Therefore, calculation of risk and corresponding return is a complex calculation which is difficult for investors in financial markets. Rational decisions are always based on the study of cause and effect relationship but the equation that governs this relationship is difficult to comprehend. Thus, many researchers and academicians all over the world who are carrying out studies in order to understand the phenomenon of financial decision making believe that Investment is a

psychological decision. Kahneman and Smith (2002) discussed the relationship between financial economics and psychological decision making and coined the term behavioral finance. Linter (1998) has defined behavioral finance as study of how human interprets and act on information to make informed investment decisions. Olsen (1998) asserts that behavioral finance seeks to understand and predict systematic financial market implications of psychological decision process. Frankfurter and McGoun,(2002) described "Behavioral finance, as a part of behavioral economics, is that branch of finance that, with the help of theories from other behavioral sciences, particularly psychology and sociology, tries to discover and explain phenomena inconsistent with the paradigm of expected utility of wealth and narrowly defined rational behavior. Behavioral economics is mostly experimental, using research methods that are rarely applied in the traditional, mainstream finance literature". Hirschey and Nofsinger (2008) indicated that whenever financial decisions lack rationality then chances of accumulating losses increases due to emotional biasness. On the other hand Statman(1999) believes that emotional cognition plays in important role in financial decision making by helping an investor assess the investment type and take investment related judgments. Shiller (1998) opined that financial markets function on efficient market theory which perceives that investors are rational being who take judgments based on available information and not on the basis of emotional cognition which are directed towards self interest. In the above backdrop the paper wishes to study the following fundamentals: (i) Concept of Behavioral Finance, (ii) Impact of Behavior Equation of Financial Decision making.

Concept of Behavioral Finance:

The concept of behavioral finance is basically an integration of sociology, economics and psychology. The concept of behavioral finance starts when the financial institutions are interested in understanding the group and individual behavior of individuals towards investment as a whole in a basic society. Further the instincts of psychological studies helps in understanding group and individual behavior to devise appropriate strategies which can influence investors to make purchases. Economics on the other hand is responsible for analyzing the relationships between risk and return which will provide financial information to take judgment. Gilovich and Griffin (2002) opined that behavioural finance is basically behavioral economics where investors take economic decisions irrationally when they apply emotional appeals to decide their transactions related with spending, borrowing and investing. Further Shefrin (2000) indicated that when psychological aspects affect the decision making process of financial

practitioners, it is the study of behavioral finance. Fromlet, (2001) on the other hand reestablishes that fact that financial decisions are rational decisions based on both market practices and financial theories combined with psychological aspects of investing behavior. Sewel (2010) stated that Behavioral Finance, challenges the theory of Market efficiency by integrating emotional cognition of financial practitioners with investment decisions. Forbes (2009) defined *behavioral finance as a science regarding how psychology influences financial market. This view emphasizes that the individuals are affected by psychological factors like cognitive biases in their decision making, rather than being rational and wealth maximizing.* Shefrin (2000) defined the The Four Key Themes which forms the basis of behavioral finance theories are namely – (i) Heuristics, (ii) Framing, (iii) Emotions and (iv) Market Impact

- (a) **Heuristics:** Heuristics are referred as rule of thumb, which applies in decision making to reduce the cognitive resources to solve a problem. Rule of thumb is basically related with choosing best alternatives amongst the available alternatives by applying heuristics like representativeness, anchoring & adjustments, familiarity, overconfidence, regret aversion, conservatism, mental accounting, availability, ambiguity aversion and effect.
- (b) **Framing:** The perceptions of choices that people have are strongly influenced by their frame of reference. There can be a right answer to a wrong question but there cannot be a wrong answer to a right question. The psychological path taken by an investors for decision making is always frame based which is dependent upon the kind of information available to investors. Psychologists refer this behaviour as 'frame dependence'. As Glaser, Langer, Reynders and Weber(2007) show that investors forecast of stock markets is based upon the frame of fundamental and technical analysis which report the financial performance.
- (c) **Emotions:** Akerlof and Shiller, (2009) opined that our feeling determine psychic reality which affect investment judgment emotions and associated human unconscious needs, fantasies, and fears drive much decision of human beings. The choice of investment avenue, company amount and timing of investment are many times based upon our past experiences, fear and aspirations.
- (d) **Market Impact:** Economist like Shleifer and Robert (1997); Barberies and Thaler (2003) studied the influence of emotional judgments on financial markets and indicated that a market is divided between rational and irrational investors. The emotional investors take decisions based upon emotional frame disturb the equilibrium of market than rational investors provides balance

with their rational decision thus balancing the market impact to some extent. But still the rationality of rational investor prevents them from correcting price deviations from fundamental value. This leaves open the possibility that correlated cognitive errors of investor could affect market prices. Therefore, opening the market to absorb the impact of behavioral finance.

Impact of Behavior Equation of Financial Decision making:

The researchers considered behavioral equation model proposed by Howard (1965) related with decision making process. Howard suggested that decision making is an equation which is the outcome of intensity of need, cues, returns and satisfaction. The model was modified by researchers with respect to investment decisions in mutual fund industry.

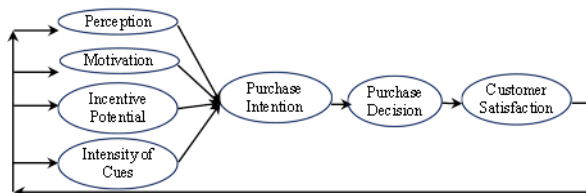


Figure 1: Theoretical Model

The researchers after extensive literature review concluded that purchase intention of investors in mutual fund industry is the outcome of intensity of perception of investors, motivation of investor, incentive provided by investment in mutual fund and intensity of cues. Intention leads to purchase decisions which can provide positive or negative satisfaction. If the investors are satisfied then repeat purchases take place in mutual fund industry.

Research Methodology:

The researchers based on review of related literature conducted a survey on factors of behaviour of investors with respect to investment in mutual fund industry from 300 investors of mutual funds across different demographic profiles in Raipur city. The researchers formulated the following hypothesis.

- H_{1a}: There is significant relationship between investors Perception of particular mutual fund and intention to invest in a mutual fund by investors.
- H_{1b}: There is significant relationship between Motivational factors and intention to invest in a mutual fund by investors.
- H_{1c}: There is significant relationship between Incentive Potential and intention to invest in a mutual fund by investors.
- H_{1d}: There is significant relationship between Intensity of Cues and intention to invest in a particular mutual fund by investors.

H₂: There is significant relationship between investors Intention to invest in a particular mutual fund and investment decision.

H₃: There is significant relationship between investors Investment decision and their satisfaction towards a mutual fund.

The researchers proposed the following research model based on behaviour equation and the review of related literature conducted by them which was empirically tested by using structural equation modeling (SEM).

Data Analysis and Interpretation:

Procedures: First phase of data analysis was devoted to calculate mean, SD, Cronbach's alpha reliability and Karl Pearson's to explore the relationship between the variables. The second phase is subdivided into two stages in analyzing structural equation modeling (SEM) as suggested by Anderson and Gerbing (1992). In first step, confirmatory factor analysis (CFA) was conducted to identify goodness-of-fit index for the variables. In step two hypothesized model was tested with structural equation modeling (SEM) using AMOS 21 software to identify the relationship between constructs. Different scale fit indices and factor loadings were checked such as Chi square, Chi square / df, Goodness-of-fit index (GFI), Comparative Fit Index (CFI), Tucker Lewis Index (TLI), and Normed Fit Indices (NFI), Incremental Fit Index (IFI), and Root Mean Square Error of Approximation (RMSEA) in this study according to the guidelines of Hu and Bentler (1999); Byrne (2010).

Descriptive Statistics and Validity of the Model:

Descriptive statistics, shows strong correlation between constructs ($r = -.15$ to $.78$, $p < .01$) as per the guidelines of Cohen (1992). Various reliability tests of the structural model have been conducted by researchers. Cronbach's alpha was found .87. Further construct validity of the model is tested which includes factor loadings, convergent validity, composite reliability and discriminant validity. According to Hair et al. (2010) convergent validity measures whether variable loadings on a particular factor are high or not. In this study only those variables which have high loadings on a factors have been included and variables with low loadings have been dropped. Composite reliability of all construct variables were above 0.70 which is indicative of good scale reliability as per the rule of thumb suggested Hair et al (2010). Discriminant validity shows the extent to which a construct is truly distinct from other constructs (Hair et al., 2010). Discriminant validity is calculated while comparing average variance extracted (AVE) and correlation squared. The discriminant value between two constructs was found less than the average variance extracted for a specific construct which is in accordance with the rule of thumb.

This gives evidence at preliminary level to support the hypothesis. Correlation analysis followed by SEM was conducted. CFA was performed to test the distinctiveness of constructs used in the study with the help of AMOS software. Different constructs were included and CFA was conducted to establish the distinctiveness of the measures in the model. It was established that all the variables have distinct character from each other. Five sub variables namely regulatory framework, awareness, risk, benefit, and financial performance were averaged to create a single factor Perception (PER). Similarly Factor Motivation (MOT) includes sub variables namely tax savings, return, need, NAV, ranking. Factor Incentive Potential (IP) include liquidity and growth as sub variables. Intensity of Cues (IC) include feelings, advice, forecasting, confidence and bias as sub variables. Mutual Fund Investment Decision includes time horizons, scheme category, type of investment, and choice of AMC.

Table 1: Goodness -of- Fit Indices for Structural Model

Fit Indices	Accepted Value	Model Value
Chi square	245.289	
df (Degree of Freedom)	128	
Normed Chi square	< 3	2.438
IFI	>.9	.932
NFI	>.9	.967
TLI	>.9	.929
CFI	>.9	.954
RMSEA	<.08	.062

Source: Survey Data

Table No. 1 represents the fit indices of the structural model which shows that there is good match between the data and the model. Whereas, Table No. 2 shows the summary of hypothesis testing results which supports the structural model and establish the significant relationship between constructs.

Table 2: Summary of Hypothesis Testing Results

Path Coefficient			Estimates	S.E.	C.R.	P	Standardised Estimates	Result
ITIM	<---	PER	.674	.300	1.974	***	.874	Supported
ITIM	<---	MOT	.736	.851	3.202	***	.953	Supported
ITIM	<---	IP	1.249	.726	3.054	***	1.000	Supported
ITIM	<---	IC	.256	.597	2.653	***	.378	Supported
MID	<---	ITIM	1.000			***	.618	Supported
ISM	<---	MID	1.321	.694	3.217	***	.824	Supported

Source: Survey Data

Thus it can be interpreted from the overall results that perception, motivation, incentive potential, intensity of cues significantly influences Intention to invest in a

mutual fund, which further influence investors to take investment decision that determines their satisfaction with mutual fund which is based on performance and growth of a particular mutual fund.

Conclusion:

The study revealed that demographic factors like gender, income and occupation cannot be associated with degree of awareness that an investor has about the mutual fund market and its mechanics. It was found that investors of service class dependent upon the fund performance to make the investment decisions whereas investors from business class or professional believed in assessing the regulatory framework of their AMC. It can be concluded that heuristics and frame of mind play an important role while deciding to choose a mutual fund in Raipur City. The investors from service class evaluate the past performance and choose the best performing mutual fund across the available alternatives and apply the rule of thumb. On the other hand the professionals and business men choose the best mutual fund based on its rating by rating agencies. The underlining assumption that higher the risk higher the return and mutual fund are less risky in comparison to equity investment due to its ability to diversify risk helps in forming the frame of mind of the investors while making investment decisions. These factors indicate that positive perception about the mutual fund industry with respect to lower risk and higher return in comparison to other equity investment has helped investors in choosing mutual fund investment. Further high rate of return, income tax rebate, investment and precautionary motive and wealth maximization were the major factors which motivated investors to invest in mutual funds. It was seen that after the advent of new pension scheme companies operating both in public sector and private sector are providing options to its employees to investment in mutual funds through them. Thus mutual fund has emerged as a viable option for investors of young age. Income tax rebate and option to invest monthly through SIP were basic triggering cues which

influenced the investors to invest in mutual funds. Informational and utilitarian influence of the reference groups has also acted as triggering cue for the investors to invest in mutual funds. Many investors indicated that customer engagement activities of

mutual fund companies inform through SMS and email alerts, regular reports and counseling by AMC (Asset Management Company) has acted as non-triggering cues for investors which has indirectly influenced them to trade with a specific AMC for investing in mutual funds.

The performance of Indian companies and the belief that the new government will devise policies which will resurrect the Indian capital markets and will lead to higher profits for companies and will in turn provide higher NAV (Net Asset Value) and increase in unit value has acted as an incentive potential for investors to invest in mutual fund markets. The study reveals that the investors have limited knowledge about the mutual industry and they basically depend on their financial consultant or investment and brokerage firms to take purchase decision on their behalf. The investment in mutual fund for them is based upon limited criteria chosen by them like, past performance, return and dividend, analyst reports based on heuristics, Framing, emotion and market impact which is suggested by their reference group. It was further found that the investors basically depend on the advice given by their respective agents or personal advisers to choose a sachema and basically wish to invest for a period of three years in the close ended mutual funds schemes. The most preferred investment schemes are either of growth equity kind or tax benefits kinds. The findings indicate that investment in mutual fund is not related with speculation but it is an investment decision on the part of investors. The asset management companies must devise mutual fund option around these dependent criteria to increase the penetration of mutual funds in Indian markets.

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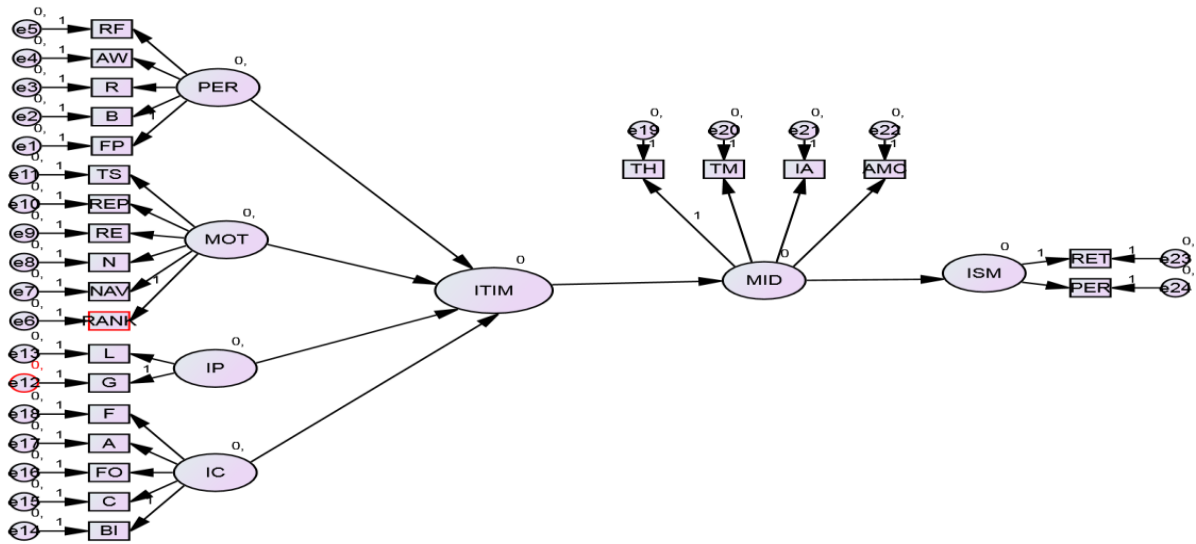


Figure 2: Proposed Model
