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INFLUENCE OF BIG 5 PERSONALITY TRAITS ON THE INVESTMENT DECISIONS OF RETAIL INVESTORS-AN EMPIRICAL APPROACH

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ABSTRACT

The study aims to analyze the behavioral aspects of retail investors through the identification of personality traits and the construction of a model to determine the extent of influence of the stated factors. Emotions are pervasive and predictable drivers of decision making. The dynamic nature of human beings necessitates the analysis of how emotional factors impact the decision-making process. The study used empirical research methodology and hence a larger sample size was chosen (454 samples) and both primary and secondary sources of information were used extensively. For the Structural Equation Model (SEM), AMOS 18.0 version was used. Reliability and validity tools were utilized to analyze the model fit. The personality traits considered for the study are extraversion, agreeableness, conscientiousness, neuroticism and openness. A human being may not exclusively fall into one particular personality trait. An attempt was made to quantify the impact of the different personality traits on the investment decisions. The output showed that the model is fit and all the parameters fell within the accepted range of the model fit indices. Further, the study has provided empirical evidence to prove that the personality trait of conscientiousness has a significant influence on the investment decision making process of retail investors. The implication and recommendations based on this finding are discussed. The impact of social conditioning factors, behavioral bias,

herd behavior, environment of upbringing, moral values of investor, religious values of investor in affecting the investment decisions could be analyzed as there is a paucity of research in these areas.

THEORETICAL BACKGROUND

The efficient market hypothesis postulates that it is impossible to "beat the market" because stock market efficiency causes existing share prices to always incorporate and reflect all relevant information. This hypothesis is the basis for the traditional finance theory. Later post the 1980's behavioral researchers came up with the behavioral finance theory, that explains the understanding of the logical patterns of investors, including the psychological processes and the extent to which the decision-making process is influenced by them (Ricciardi and Simon, 2000). There were many researches using various dimensions to deal with the measurements of personality traits, such as internal/external personality proposed by J.B.Rotter (1996); investor types (i.e. BB & K model) proposed by T. E. Bailard, D. L. Biehl, and R. W. Kaiser (1986); and Myers-Briggs Type Indicator (MBTI) by I. B. Myers, and M. H. McCaulley (1985); Big 5 personality traits by P. T. Jr. Costa, and R. R. McCrae (1992).

This study is an empirical approach which tests the influence of the Big 5 personalities on investment decisions of retail investors. This study aims to investigate how the psychological characteristics of the population influence the choice of investment avenue of individual investors. This study is aimed at finding out the level of influence personality traits on investment decisions of individual investors.

Virtually every individual or institution is interested in employing their funds in various classesof financial assets to maximize their wealth. The choice of the investment avenue by a rational investor depends on factors such as; Expected rate of return, investment objectives,preferred holding period, risk aversion, financial literacy, market sentiments, mindset and the personality traits of the investor.

When these factors are not efficiently articulated, the investor makes an ignorant choice leading to suboptimal returns from their chosen portfolio. The factors that have been identified for the study are the Big 5 Personality traits,

a. Openness - Reflects the degree of intellectual curiosity
b. Conscientiousness - Tendency to be organized and dependable
c. Extraversion - Energy, positive emotions,surgency, assertiveness, sociability
d. Agreeableness - A tendency to be compassionate and cooperative
e. Neuroticism - People who are more prone to psychological stress

RESEARCH OBJECTIVES

1. To develop a model to determine the level of impact of the Big 5 personality traits on the investment decisions of retail investors.

NEED AND SIGNIFICANCE OF THE STUDY

A brief review of the literature available in this area has revealed that there is a paucity of empirical research in examining the influence of the Big 5 personality traits in the investment decisions of retail investors. This would be useful for investment advisors to make efficient choices for their clients and also for governmental agencies to design investment avenues based on the population.

SCOPE OF THE STUDY

Further research could be done to include the following factors,Behavioral bias, environment of upbringing, moral values of investor, historical oppression in affecting the investment decisions of the investor. Further studies can also be made to cover a much broader range of investments. Also, this study concentrates only on the retail investors, corporate investors are ignored.

LITERATURE REVIEW ON PERSONALITY TRAITS

Saloni Raheja (2017) focused on the relation between the investor personality traits, behavioral biases and investment decisions. The data was collected from 500 investors who invest through LSE Securities ltd in Punjab by using a structured questionnaire. Multiple Regression test was applied through SPSS to test the significance of relationship among the variables. The study found the relation of investment decisions with personality traits and behavioral biases to be statistically significant. The people preferred to invest in particular investment options according to their need and with certain objective in mind. The individual investor should not always follow where the majority goes. They should try to search about his investments before the investing in market. The people should develop the habit of making investment at any stage of life. The investor should be alert what, where, why, when and how to make investment in different investment options. Cliff Mayfield, Grady Perdue, Kevin Wooten (2008) indicate that extraverted individuals engage in short-term investing and individuals who are open are inclined to engage in long term investing.Chitra, K, Sreedevi, V Ramya (2011) argue that the influence of personality traits on investment decisions is more, as opposed to the demographic variables.Carducci and Wong (1998), find that persons with a Type A personality (Competitive and ambitious) are more willing to take higher levels of risk in all financial matters than Type B personality (Laid back and relaxed). Filbeck, Hatfield and Horvath (2005) utilise the Myers-Briggs Type Indicator and find that personality type does have a bearing on the investment behavior based on the level of risk tolerance attributable to the different personality traits.Cliff Mayfield, Grady Perdue and Kevin Wooten (2008) find that individuals who are more open to experience are inclined to engage in long-term investing; however, openness did not predict short-term investing

RESEARCH METHODOLOGY

The research uses both primary data (i.e) by administering a structured questionnaire and secondary data (i.e) through the extensive review of journals. The secondary data were collected through the thorough review of scientific articles leading to the identification the personality traits such as extraversion, agreeableness, openness, conscientiousness, and neuroticism which affect the risk profile and the investment objective and thereby the choice of portfolio and its performance. The type of research applied in the study is empirical research.

For the data analysis, SPSS 20 and AMOS 21.0 version were used. A two-tier approach was followed for the analysis. In the first phase a structural model was constructed. Post this the reliability and validity tools were used to analyze the best model fit.Around 454 self-administered questionnaires were circulated through various social media platforms to collect data from the respondents.The questionnaire was divided into 2 parts, the first part gathers information about the demographic factors, expected return on investment and preferred holding period. This was collected using close ended multiple-choice questions.The second part gathers information on the Big 5 personality traits (i.e) extraversion, agreeableness, openness, conscientiousness, and neuroticism (unobserved variables) using a 5-point Likert scale. The questionnaire also included a checklist question for the various sector of stocks in the investor’s portfolio. Multi-stage sampling technique was used to collect information. Structured questionnaire was framed and circulated through social media, mail and by printed copies. The sample size is 454 and the area of the study isChennai city.

RELIABILITY TEST

The Cronbach’s alpha coefficient was used to assess the inter-item consistency of our measures.Cronbach's alpha is a measure of internal consistency, that is, how closely related a set of items are as a group. It is considered to be a measure of scale reliability. A reliability value of 0.70 or greater is considered acceptable. As observed from the table the value of

Cronbach alpha is 0.716, hence it is acceptable and the measurements are reliable.

Table 1 showing the reliability statistics

Cronbach's Alpha	N of Items
0.716	18

DATA ANALYSIS AND INTERPRETATION

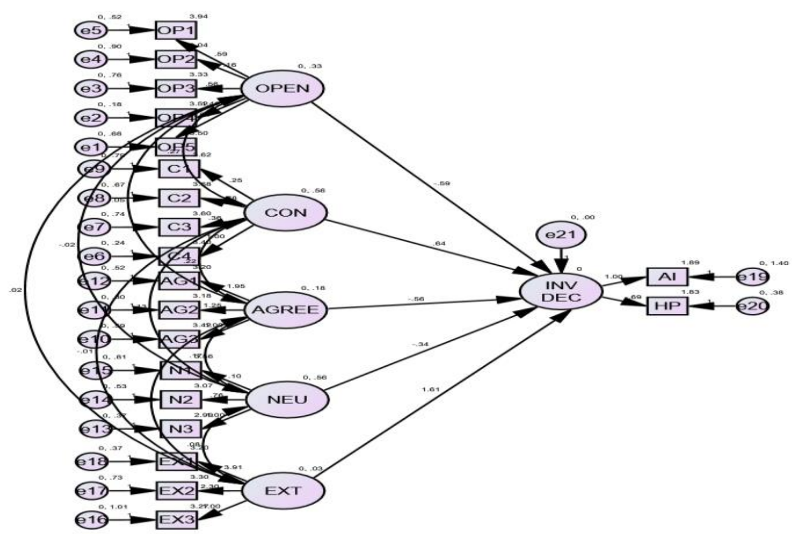

Figure 1: Structural Equation Model (SEM)

EVALUATION OF THE MODEL FIT

Several well-known goodness-of-fit indices were used to evaluate model fit: the chi-square χ2, the comparative fit index (CFI), the unadjusted goodness-of-fit indices (GFI), the normal fit index (NFI), the Tucker-Lewis Index (TLI), the root mean square error of approximation (RMSEA) and the standardized root mean square error residual (SRMR). Goodness-of-fit (GOF) indices provide "rules of thumb" for the recommended cut off values to evaluate data-model fit. Hu and Bentler (1999) recommend using combinations of GOF indices to obtain a robust evaluation of model fit. The criterion values they list for a model with good fit are CFI > 0.95, TLI > 0.95, RMSEA < 0.06, and SRMR < 0.08 for assessing fit in structural equation modelling. Hu and Bentler offer cautions about the use of GOF indices, and current practice seems to have incorporated their new guidelines without sufficient attention to the limitations noted by Hu and Bentler. Moreover, some researchers (Beauducel & Wittmann, 2005; Fan & Sivo, 2005; Marsh, Hau, & Wen, 2004; Yuan, 2005) believe that these cutoff values are too rigorous and the results by Hu and Bentler may have limited generalizability to the levels of misspecification experienced in typical practice. In general practice, a "good enough" or "rough guideline" approach is that for absolute fit indices and incremental fit indices (such as CFI, GFI, NFI, and TLI), cutoff values should be above 0.90 (0.90 benchmark) and for fit indices based on residuals matrix (such as RMSEA and SRMR), values below 0.10 or 0.05 are usually considered adequate. All analyses were conducted using AMOS 18.0.

S.No	**Measures of fit**	**Output**	**Acceptable level for good fit**
1.	Chi-square (□2) at p 0.05	.000	Significant
2.	Degree of freedom (d.f)	129	-
3.	Comparative fit index (CFI)	0.901	>0.90
4.	Bentler – Bonett Index or Normed Fit Index (NFI)	0.96	>0.90
5.	Root mean squared error of approximation (RMSEA)	0.067	<0.08
6.	Non Centrality Parameter (NCP)	412.8	-
7.	Non Centrality Parameter, Lower boundary(NCPLO 90)	344.9	-
8.	Parsimony adjusted NFI (PNFI)	0.679	-

9.	Parsimony adjusted CFI (PCFI)	0.709	-
10.	Minimum value of Discrepancy (FMIN)	5.43	-
11.	Lower Limit of FMIN (LO90)	3.48	-
12.	Upper limit of FMIN (HI90)	4.93	-

The above path diagram shows the influence of the dimension personality traits have five sub dimensions Openness (OPEN), Consciousness (CON), Agreeableness (AGREE), Neuroticism (NEU) and Extroversion (EXT). The RMSEA fit statistics for the model was 0.09, which is considered as a best fit model (Brown and Cudeck, 1993; Diamantopoulos and Siguaw, 2000). The path diagram shows the influence of personality traits on the financial decision of the investor. The dimension personality traits is explained by five variables such as Extraversion, Agreeableness, Consciousness, Neuroticism and Openness. If the estimate values are more than 1 it is implying that the dimension does not influence the other. The dimensions of personality traits are Openness (OPEN), Consciousness (CON), Agreeableness (AGREE), Neuroticism (NEU) and Extroversion (EXT). From the above path diagram, it can be read that all the five dimensions influence the personality traits of investors and out of these five dimensions the dimension Consciousness is the trait which is more influential as it has 64% influence on Investment decisions. Openness and Agreeableness have59% and 56% influence. Neuroticism hascomparatively less influence on the investment decision of 34% and the estimate value is negative for the trait extroversion. The above data implies that, investors who are consciously take investment decisions. Also, the trait of being conscious overtakes the trait of risk-taking. In today’s scenario, we can conclude that investors take conscious and calculative risks about a particular investment avenue. It is found from the path diagram that personality traits influence the investment decision. The regression weights, standardized regression weights and the model fit summary are given below.

Standardized Regression Weights: (Group number 1 - Default model)

	Estimate

INV_DEC	<---	OPE	-1.775
INV_DEC	<---	CN	2.487
INV_DEC	<---	AGREE	-1.231
INV_DEC	<---	NEU	-1.350
INV_DEC	<---	EXT	1.461
OP5	<---	OPE	.571
OP4	<---	OPE	.890
OP3	<---	OPE	.345
OP2	<---	OPE	.096
OP1	<---	OPE	.426
C4	<---	CN	.838
C3	<---	CN	.296
C2	<---	CN	.576
C1	<---	CN	.201
AG3	<---	AGREE	.482
AG2	<---	AGREE	.509
AG1	<---	AGREE	.752
N3	<---	NEU	.778
N2	<---	NEU	.616
N1	<---	NEU	.086
EX3	<---	EXT	.171
EX2	<---	EXT	.423
EX1	<---	EXT	.744
AI	<---	INV_DEC	.159
HP	<---	INV_DEC	-.207

MANAGERIAL IMPLICATIONS

The study provides empirical evidence that the personality trait of conscientiousness has a significant impact on the investment decisions followed by extraversion. The other three personality traits namely neuroticism, agreeableness and openness do not have an impact on the investment decisions. A conscientious person could be described as industrious and punctilious. It can be associated with an affinity to have thorough knowledge of the available alternative avenues of investments, characteristics of the investments etc. A conscientious person also strongly prefers investment in fixed income securities (i.e) bonds. The correlations of fixed income securities to common shares vary, but adding fixed income securities to portfolios is an effective way of obtaining diversification benefits. This is a positive sign for supranational organizations, sovereign governments, quasi government entities and companies. Since the distinguishing feature of a conscientious person with respect to investment decisions is his level of knowledge and attention to detail, the bond issuers, prior to the issue of fixed income securities, could capitalize on the same by effective robust campaign to the target investors. This coupled with timely reports on the performance of the portfolio and close monitoring of the present value would induce an element of conscientiousness in a potential investor thereby attracting the investor to the securities. From the point of view of investors, the bondholders are exposed to credit risk which is inherent to all debt investments. Hence this necessitates a certain level of introspection of the level of risk tolerance preferred, which is an element of openness. Depending on this an investment grade or non-investment grade would be preferred. Fixed Income securities are the most prevalent means of raising capital globally and since an element of conscientiousness could be triggered via the stated methods, this could be effectively utilized to spur economic activity.

CONCLUSION

A person's personality traits are a culmination of various factors such as environment of upbringing, moral values of the investor, religious beliefs of the investor, social conditioning factors applicable to the various social groups an investor identifies with. The findings of the study are a positive indicator to the various agencies in the investment management industry. Awareness about the investment alternatives is the need of the hour with a variety of innovative asset backed securities hitting the market every day. As an investor a brief analysis of the dominantpersonality trait could put the investment managers on the right track in designing the right portfolio. Effective portfolio selection translates to adequate bridging of gap between fund sources and fund usage, thus translating into robust economic activity in the economy.

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