INDIVIDUALS INVESTORS BEHAVIOR: A STUDY OF COMMODITY MARKET

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ABSTRACT

The finance is being studied for thousands years and behavioral finance which considers human behaviors in finance is a quite new area. Behavioral finance theories, which are based on the psychology, attempt to understand how emotions and cognitive errors influence individual investors' behaviors (investors mentioned in this study are referred to individual investors).

Under the concept of behavioral finance, it is presumed that information structure and characteristics of capital market participants systematically influence the decisions as well as market outcomes. As the investor's investment decisions in any one particular market tend to rely more on their behavior derived from psychological principles of decision making, a better understanding of behavioral processes and outcomes is important for financial planners.

This article is focusing on exploring the factors influencing the behavior of investors towards commodity market in India. The study is based on primary data and adopted survey approach to measure the investors' behavior. The respondents are individual / retail investors selected randomly in Mysore district. Questionnaire has being prepared with 15 items for measuring the behavior was distributed and the total number of respondents was 300. Cronbach alpha method was applied to check reliability and validity of the data. The main components underlying are those that have greater influence on the investors' behavior were ascertained by multivariate analysis called Principal component method of Factor analysis with varimax rotation. The descriptive analysis was also used to explore the degree of influence of main components on the behavior of investors. The results of analysis has four major factors that have greater influence on the behavior of investors, viz., low risk, informational asymmetry, high return and objective knowledge.

Keywords: Behavioral Finance, Capital Market, Investor's Behavior, Psychological Principle, Decision Making

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INTRODUCTION

Behavioral finance is emerging as a new concept in the research area in recent times. This concept is presumed that information structure and characteristics of capital market participants (individual / retail investors) systematically influence their own decisions as well as market outcomes. In our country the information content of the market and the change of economic climate systematically influence individuals' investment decisions as well as market outcomes. However, an investor's investment decisions in any one particular market, say commodity market, tend to rely highly on their behavior derived from psychological principles of decision making as only this psychological principle of decision making can explain why people buy or sell particular commodity. Therefore a better understanding of behavioral processes and outcomes is important for financial planners, because an understanding of how investors generally respond to market movements will help investment advisors in devising appropriate asset allocation strategies for their clients. Hence, the present article focuses on exploring the factors influencing the behavior of investors towards commodity market.

Literature review

According to **Kent and Siew (2001)**, common behavior the most investors do when making investment decision are: not participating in all asset and security categories; exhibiting loss-averse behavior; using past performance as an indicator of future performance in purchase decisions; trading too aggressively; behaving on status quo; not always forming efficient portfolios; behaving parallel to each other; and getting being influenced by historical high or low trading stocks.

Hussein (2006) in his study tries to identify the factors influencing the UAE investor behavior on the Dubai Financial Market and Abu Dhabi Securities Market. Questionnaire was used in which thirty-four items that belong to five categories (self-image / firm-image coincidence, accounting information, neutral information, advocate recommendation and personal financial needs) were used to collect data. He identified six most influencing factors by order of importance, viz., "expected corporate earnings", "get rich quick", "stock marketability", "past performance of the firm’s stock”, “government holdings”, “the creation of the organized financial markets”; and five least influencing factors such as, “expected losses in other local investments”, “minimizing risk”, “expected losses in international financial markets”, “family member opinions” and “gut feeling on the economy”.

Henrik and Stephan (2009) stated that the cross-sectional heterogeneity is the key measure of investment behavior into genetic and environmental influences. They found that up to 45 percent of the variation in stock market participation, asset allocation, and portfolio risk choices are explained by a genetic component.

Nagy and Obenberger (1994), a questionnaire was prepared that included 34 factors influencing individual investors’ behavior such as expected corporate earnings, diversification needs, feelings for firm’s products and services, past performance of stocks, past performance of their own portfolio and stock broker recommendations to name a few.

Merikas and Prasad (2003) adopt a modified questionnaire to analyze factors influencing Greek investor behavior on the Athens Stock Exchange (ASE). According to their findings, individuals base their purchase decisions on economic criteria combined with other diverse variables.

Statement of the problem

The commodity market in India has its effect on economic growth and development. The growth of commodity market is vital factor for country’s economic growth and trend in this market is defined by the decisions of investors, it is important to explore behavior factors influencing the decision of individual / retail investors. Further, an understanding of investors’ behavior and outcomes through behavior process in the form investment decision is much important for financial planners and market brokers, because it would help them devise appropriate asset allocation strategies to their clients. Identifying factors play an important role in determining the behavior of investors would affect the future policies and strategies of the financial planners and market brokers as well as the government. Though there are many studies available sightseeing the behavior of investors towards equity markets, similar studies on commodity market are scanty. The present research work is undertaken to fill gap in this direction.

Significance of the study

The study is made to identify the major factors contributing to the investor behavior in commodity market that could help the present and future investors to change their behavior towards this market. The financial planners and market brokers will also get to know pulse of the investors in the study area. The study is one of much significance not only for present / future investors, but also for financial planners and market brokers.

Objectives

The study has been conducted with following objectives:

1. To identify the major factors which have greater influence on the behavior of commodity market investors
2. To assess the investors' perception about extent of influence of factors on behavior of investors towards commodity market.

Methodology

The present research on individuals' investors of commodity market is being done by adopting survey approach for collecting the primary data from target population comprising individual / retail investors in MysoreCity. The questionnaire was used to collect data comprising 15 items with 5-point scale of 'strongly disagree', 'disagree', 'neither disagree nor agree', 'agree' and 'strongly agree' with values 1 to 5 respectively was used to obtain the opinion of the respondents and analysis.

The questionnaire was distributed to 300 randomly selected individual / retail investors and only 278 responses were received. The response rate was stood at 93 per cent. The high response rate is due to the fact that most of the questionnaires were completed on one-on-one basis.

As the present research work is aimed at examining certain behavioral factors that seem to exercise greater influence on individual commodity market investors, multivariate analysis was attempted on the data. The multivariate analysis is used here to combine all psychological attitudes considered in the questionnaire (all 15 items measuring the behavior of commodity market investors) in order to reduce them into a few main behavioral constructs that will describe the behavior of the Indian individual commodity investors. Each construct would regroup all the correlated factors, such that the main construct resorted would be independent and sufficient to explain the biggest portion of data variance. To achieve the multivariate analysis, the study uses the principal component method of factor analysis with varimax rotation. The principal component method of factor analysis allows searching for underlying dimensions in the various sets of variables considered in the questionnaire and lets us determine which factors or underlying variables have the greatest impact on the subjects.

Results and discussion

Table 1: Eigenvalues of Factors Underlying the Items Measuring the Influential Factors for Investors' Behavior

Factors	Eigenvalue	% of Variance	Cumulative variance
1	4.1352	27.5680	27.568
2	2.6328	17.5520	45.1200
3	1.4731	9.8207	54.9407
4	1.3272	8.8480	63.7887
5	0.9721	6.4807	70.2693
6	0.6733	4.4887	74.7580
7	0.5715	3.8100	78.5680
8	0.5573	3.7153	82.2833
9	0.5412	3.6080	85.8913
10	0.4345	2.8967	88.7880

11	0.4126	2.7507	91.5387
12	0.3891	2.5940	94.1327
13	0.3671	2.4473	96.5800
14	0.2972	1.9813	98.5613
15	0.2158	1.4387	100.0000

From table 1 it is evident that the first four factors out of 15 possible factors are found with eigenvalue more than one and together explaining 63.78 percent of the variance in the original data. The amount of total variance explained individually by first, second, third and fourth factor is 27.56 per cent, 17.55per cent, 9.82 per cent and 8.84 per cent before maximization (using varimax rotation) respectively. So, these four factors are found to be the main factors that have greater influence on the behavior of commodity market investors.

Table 2: Items' Loading with Valid Factors Influencing the Behavior of Commodity Market Investors

Item No.	Description of Items	Factor			
		1	2	3	4
1	Get rich quickly	0.0812	0.1074	0.3917	**0.854**
2	Gut feeling of economy	0.1312	0.0687	0.1398	**0.871**
3	Earnings are more than that of equity market	0.2142	0.0071	0.1391	**0.891**
4	Initial investment is less	0.1121	0.0137	**0.816**	0.2233
5	Coverage in media	0.064	**0.817**	0.0893	0.018
6	Statements of market experts	0.198	**0.896**	0.0351	0.0641
7	Risk is minimum compared to equity market	**0.7994**	0.0219	0.1724	0.1269
8	Growing presence of financial investors	0.0165	0.1196	0.2267	0.0819
9	Less speculative than equity market	**0.8131**	0.0071	0.1358	0.0023
10	Commodity market is less volatile	**0.8492**	0.1789	0.1261	0.0901
11	Limited losses	0.0922	**0.837**	0.1129	0.026
12	Rising trend in worldwide demand of commodities	0.0375	**0.778**	0.0676	0.0452
13	Low brokerage fee	0.06345	0.0451	**0.825**	0.0086
14	Returns from investments in commodity market is more than financial market	0.087	0.2132	**0.854**	0.0587

15	Volatility is less compared to equity market	**0.8241**	0.1266	0.0951	0.1386
Explained Variance		4.38315	4.2373	4.2266	3.4997
Percentage of total variance		25.78	24.93	25.86	23.43
Cumulative variance		25.78	50.71	76.57	100.00
Factor label		Low risk	Information Asymmetry	High returns	Objective Knowledge

From the above factor loading items with four factors as shown in Table 2, it can be understood that the first factor characterizes the 'low risk' as items 10 (Commodity market is less volatile), 15 (Volatility is less compared to equity market), 9 (Commodity market is less speculative than equity market), 7 (Risk is minimum compared to equity market) and 11 (Losses are limited), which measures the risk in the market, are highly loaded with this factor relative to other remaining three factors.

The second factor, with high loading of item 6 (Statements from market experts) and 5 (Coverage in the media) followed by 12 (Rising trend in worldwide demand of commodities) is labeled as "informational asymmetry".

The third factor component, which possesses most of the essence of item 14 (Returns from investments in commodity market is more than financial market), 13 (Low brokerage fee) and 4 (Initial investment is less) compared to that of those items with any other remaining factors, factors is named as "High return" from low investment.

The fourth and final factor is highly correlating with item 3 (Earnings are more than that of equity market), 2 (Gut feeling of economy) and 1 (Get rich quickly). That is, the fourth factor possesses most of the characteristics of items that are associated with objective knowledge of the investors. Therefore the factor is identified as "objective knowledge".

Table 3: Extend of Determination of Factors on Behavior of Investors - Perception of Entire Sample

Major factors determining behavior	Mean	Standard deviation	95% CI	
			Lower	Upper
High return	3.92	0.64	3.72	3.83
Low risk	3.48	0.67	3.58	3.70
Knowledge	3.63	0.61	3.73	3.83
Informational Asymmetry	3.76	0.65	3.73	3.84

An extent of determining power of the above four factors on behavior of investors is explored by descriptive analysis of the factor scores (obtained by averaging the scores of highly items). As presented in Table 3, the mean values, 3.92 for high return, 3.48 for low risk, 3.63 for objective knowledge and 3.76 for information asymmetry are all in 'agree' range (>= 3.50 and < 4.50). Moreover, the lower and upper bound values in 95 per cent confidence intervals lie within 'agree range'. Hence, it can be said with 95 per cent confidence that the behavior of commodity market investors is significantly determined by 'high return', 'low risk', 'knowledge' and 'information asymmetry'. From the comparison of mean values, it is further understood that the degree of influence of information asymmetry, objective knowledge and high return on the behavior of investors towards commodity market is little higher than that of low risk.

Conclusion

It can be concluded that results of the factor analysis and descriptive statistics have led that there are multiple factors that have greater influence on the behavior of commodity market investors in India. The main factors that have such greater influence are: information asymmetry, objective knowledge, high return and low risk. The influence of all these four factors on the commodity market investors' behavior is found to be significant with 95 per cent confidence level.

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