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A Study on Impact of Macro-Economic Factors on Equity Investment Decisions of Retail Investors in Indian Stock Market

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Abstract

In the present research works the researcher recognizes the various factors that are impacting and affecting individual investor trading actions in the equity segment in the Indian stock market. In order to recognize these factors, individual investors' primary data has been gathered from those who belong to varied groups of age, expertise in their field and demographic profiles. The results recommend that aspects such as agent assistance, individual examination, equity stock's present value, references of financial analysts' predisposition to online trading, and investor's assurance in guidance provided by financial advisors act as a main role in inducing and affecting retail investors behavior. The outcome of the learning provides understanding to organizations providing financial facilities in developing economies such as our country to consider these aspects while providing financial products and services while aiming retail investors of the Indian equity market.

Keywords: Equity Market, Retail investor, Financial advisor, Demographic profile

1. Introduction

The capital market is a vital constituent of any economy, including India's. It simplifies the obtaining and retailing of long-term financial instruments, such as stocks, bonds, and other securities. This market acts predominantly in channeling funds from savers to entities that require financing for business expansion, infrastructure development, and other investment opportunities. Here's an explanation of the capital market in India along with some citations from notable authors, further the capital market in India can be defined as a market for long-term funds, including both debt and equity securities. It comprises

primary and secondary markets where various financial instruments are traded. According to Jayanth R. Varma, a prominent Indian economist, "The Indian capital market consists of the markets for equity securities, debt securities, derivatives, and hybrid securities. Capital markets are integral to India's economic development." According to Dr. Raghuram G. Rajan, former Governor of the Reserve Bank of India (RBI), "A well-functioning capital market is crucial for economic growth as it facilitates efficient allocation of financial resources and encourages entrepreneurship." The Securities and Exchange Board of India (SEBI) is the supervisory body which controls the capital markets in India. As stated by S. S. Gulshan, "SEBI plays a pivotal role in ensuring fair and transparent operations in the Indian capital market through regulations and supervision, ensuring investor protection is paramount in the Indian capital market. According to P. R. Ramesh, "Safeguarding investor interests is vital for maintaining market integrity and fostering investor confidence, which are essential for the growth of the capital market." Market efficiency is a key concept in the capital market. According to Dr. Ajay Shah, "Efficient capital markets in India ensure that prices of securities reflect all available information, promoting fair and orderly trading." technological advancements have transformed the Indian capital market landscape. As highlighted by Shashank Udupa, "The adoption of technology has led to the development of electronic trading platforms and settlement systems, enhancing market liquidity and efficiency."

2. Review of literature

Three schools of thought can be distinguished in the subject of finance, which has developed over time (Haugen, 1999; Ramiah et al., 2015). (a) Longstanding finance, where the primary emphasis was examination of financial statements, taking into account the type of financial claims that were made. (b) Modern finance, where asset pricing and valuations based on participants' coherent commercial conduct are main areas of emphasis. (c) New Finance, which uses behavioral models to address inefficient markets. The status quo of finance scholars is challenged by proponents of behavioral finance, who make the following implicit assumptions about the rationality of investors' behavior: (a) Investor sentiment De Long et al., state that it is impossible, exceedingly dangerous, and potentially costly to speculate against sentimental investors. Research from throughout the world indicates that investor confidence is a key factor in a financial market's health. Even though the study on the significance of investor behavior in the Indian capital markets is still in its infancy, behavior patterns of investors are undeniable. According to a 1998 Economist article, the problems facing financial markets are controlling crises, bolstering the financial system, and promoting transparency. These problems are not easily resolved. In his study, Odean (1998) provides empirical evidence linking high trading volume to overconfidence among investors. Rebuilding investor trust is critical to the success of ASEAN countries in the wake of the crisis and the unstable macroeconomic climate, as noted by Loong (2000). Oliver (2002) points out that over 50% of Canadians own investments, A number of circumstances, including a severe bear market, corporate scandals, insider trading scandals, exorbitant CEO compensation, and inaccurate

publicly released financial statements, can have an impact on stock market investments, particularly on the psychological state of small retail investors. McCall (2002) notes that investor confidence and corporate accountability are critical to the integrity of the financial markets and the nation's economy. According to Stiglitz and Weiss (1981), every group of newcomers to the market brings deceptions with them. While individual investors are aware of this, they are unable to recognize the scams. Islamoğlu et al. (2015) used data from Bartın bankers to examine issues influencing the behavior of individual investors. They discovered that investments in other asset classes, income, awareness, information updates, banking and payment methods, religion and society, and information updates all had a significant impact on individual investor behavior. In their research, Ramiah et al. (2015) examined the literature on the actions of noise traders, examined the effects of their presence in the market, and determined the potential connections between noise trading and specific market factors. In this research, we examine the variables that impact and determine the trading habits of individual investors in the Indian equity market.

3. Objectives of the study

To understand the impact of Macro-economic Aspects on the investment behavior of retail Investors in the equity market.

4. Research Methodology

The major goal of this study is to examine the aspects that impact and determine the trading behavior of retail investors in the Indian equity market. To do this, primary data from retail investors across various age groups, professional backgrounds, and demographics in India will be gathered. We conducted a survey utilizing a questionnaire as a source to extract pertinent answers in order to obtain primary data. The replies were gathered from retail individual investors who voluntarily agreed to give up their time and participate in the study, implying a convenience sample of individuals with a range of professional backgrounds and age ranges. The survey employed a five-point Likert scale (Aziz, 2011). The study's geographic bounds were restricted to Bangalore City in India.

The first section of the questionnaire examined the variables that impact and determine the trading behavior of retail investors in the Indian equities market. Factor analysis and the second segment of the questionnaire were used to analyze the data. The second section of the International Journal of Business involved attempting to pinpoint actions that investors believed would increase their trust in the Indian capital markets; the poll was carried out in December 2014. The percentage of participants was around 79.23%. We were able to obtain valid responses from 382 retail investors out of 400 survey questionnaires, and SPSS was used to analyze the data.

5. Data Analysis and Interpretation

5.1. Demographic Profile of the Retail Investors

TABLE 1. Demographic profile of the retail investors.

Age	Frequency	Percent
22–35 Years	212	55
36–45 years	70	18
46–55 Years	60	16
Above 56 Years	40	10
Total	**382**	100
Marital Status		
Married	223	58
Unmarried	96	25
Divorced	63	16
Total	**382**	100
Educational Qualification		
SSLC	50	13
PUC	80	21
UG	172	45
PG	60	16
Others	20	5
Total	**382**	100
Work Experience		
less than 2 Years	60	16
3 years to 5 years	90	24
6 years to 9 years	60	16
10 years to 13 years	50	13
More than 13 Years	122	32
Total	**382**	100

5.2. Interpretation

These results are representing demographic information about the retail Investors of Bangalore City gathered through a survey or study:

1. **Age Distribution**: 55% of the population surveyed falls within the age range of 22 to 35 years, 18% are aged between 36 and 45 years, 16% are aged between 46 and 55 years. 10% are above 56 years old. Hence the Majority of them belong to 22 to 35 years.
2. **Marital Status**: 58% of the respondents are married, 25% are unmarried.16% are divorced. Hence the Majority of them are Married.
3. **Educational Qualification**: 13% have completed SSLC (Secondary School Leaving Certificate). 21% have completed PUC (Pre-University Course). 45% have an undergraduate (UG) degree. 16% have a postgraduate (PG) degree and finally 5% of them

have qualifications categorized as "Others." Therefore, it is clear from the above analysis that the majority of the respondents have completed their under graduation.

4. **Work Experience**:16% have less than 2 years of work experience. 24% have between 3 to 5 years of experience. 16% have between 6 to 9 years of experience, 13% have between 10 to 13 years of experience. 32% have more than 13 years of experience. Hence it is clear that the majority of them have experience between 10 to 13 years. Further, these interpretations provide insights into the age, marital status, educational background, and work experience distribution within the surveyed population. Such data could be used for various purposes such as market research, policy-making, or resource planning.

5.3. Exploratory factor analysis:

It is a "Multivariate statistical method aiming at discovering and finding abstractly significant variables/factors/dimensions by the congregation of associated variables collectively" is the definition of factor analysis. By selecting a small number of factors from a large number of factors, factor analysis seeks to reduce facet count and exclude dependence (Polat, 2012). There are two forms of factor analysis: confirmatory factor analysis and exploratory factor analysis. When a researcher is oblivious to the links among the variables under consideration for the study, it makes sense to do exploratory factor analysis.

To find the significant aspects in this study, an exploratory factor analysis is conducted using vari-max rotation and principal component analysis. Irrelevant elements were eliminated from each rotation, and the process was then repeated. The literature suggests that the optimal sample size is five times the number of questions asked, that at least 50 observations be taken into account, that the validity of applying factor analysis should be examined using Bartlett's test of sphericity, and that Kaiser-Meyer-Olkin (KMO) should have its sampling adequacy checked (İslamoğlu, 2011; İslamoğlu et al., 2015).

The KMO measurement assesses the suitability of the sampling strategy by indicating the percentage of the variables' variance that may be attributable to the underlying causes. Factor analysis might be helpful for the data under consideration if the KMO statistic value is close to 1, and if it is less than 0.5, it suggests that factor analysis most likely won't be helpful. The premise that the association matrix is an individuality matrix demonstrating whether the variables considered are dissimilar is established using Bartlett's test of sphericity. Minor values with a significance level of less than 0.05 indicate that factor analysis would be acceptable and cooperative for the collection of facts under consideration.

TABLE 2. Bartlett's test of sphericity and KMO test results.

KMO.		**.735**
Bartlett's Test of Sphericity	Approx. Chi-Square	217.624
	Df	17
	Sig.	.000

Table 2 indicates that the data's *p*-value was determined substantial, and that the KMO degree is 0.735, indicating suitability for the use of exploratory factor analysis technique which suggests that the sample is reasonably adequate for factor analysis. Generally, a KMO value above 0.6 or 0.7 is measured as satisfactory.

5.3.1 Bartlett's Test of Sphericity

With a view to check the variables are correlated and appropriate for factor analysis, Bartlett's test evaluates that the correlation matrix differs noticeably from the identity matrix. With 212.624 degrees of freedom (Df) and a *p*-value (Sig) of 0.000 (almost 0), the test statistic is 0.735, The statistics are appropriate, because of the incredibly low *p*-value (Sig), which shows that the correlation matrix differs greatly from an identity matrix. In conclusion, the KMO measure and Bartlett's test both imply that the dataset is appropriate for factor analysis, meaning that the sample size is sufficient and the variables are associated.

TABLE 3. Results of Exploratory Factor Analysis.

		Explained
Factor 1: Performance of Company	4.23	19.23%
Factor 2: Personal Analysis	2.46	9.87%
Factor 3: Social Media Influence	1.02	8.2%
Factor 4: Share prices	1.50	4.26%
Factor 5: Financial Analysts advise	2.2	3.46%
Announced total variance		45.02
KMO measure of sampling adequacy		0.702
Bartlett's test of sphericity (Chi-square value)		642.132
Degree of freedom		121
Significance		0.000

5.5 Interpretation:

Table 3 depicts the various results generated from exploratory factor analysis and it is presented below:

1. **Factor Loadings:** Factor 1 (Performance of Company): This factor has the highest loading of 4.23, explaining 19.23% of the whole discrepancy. Factor 2 (Personal Analysis): It has a loading of 2.46, explaining 9.87% of the overall discrepancy. Factor 3 (Social Media Influence): It has a loading of 1.02, explaining 8.2% of the overall discrepancy. Factor 4 (Share prices): It has a loading of 1.50, explaining 4.26% of the total variance. Factor 5 (Financial Analysts advise): It has a loading of 2.2, explaining 3.46% of the total variance.
2. **Total Variance:** The entire variance explained by all the factors combined is 45.02%.
3. **KMO Measure:** Measure tests the sampling adequacy for the analysis. A value closer to 1 indicates that patterns are relatively easy to discern. Here, the KMO measure is 0.702, suggesting that the sample is suitable, although it could be improved.

4. **Bartlett's Test of Sphericity:** This test determines whether the correlation matrix is an identity matrix, which would indicate that the variables are unrelated. The significance value (*p*-value) associated with Bartlett's test is 0.000, demonstrating that the associations amongst variable quantity are adequately great for factor analysis to be suitable.
5. **Degree of Freedom:** The degree of freedom associated with Bartlett's test is 121.

Overall, these results suggest that the performance of the company, personal analysis, and social media influence are significant factors contributing to the variance observed in the dataset.

TABLE 4. Growth of NSE in terms of Capitalization.

Year	Months	Number of Companies Listed	Securities Traded (In Lakhs)	Traded Quantity (in Lakhs)	Turnover (₹ Crores)	Average Trade Size	Demat Securities Traded (in lakhs)	Market Capitalisation (in Crores)
	Mar-22	2065	2715	5,52,376	13,84,861	29355	5,52,376	2,61,81,064
	Feb-22	2060	2534	5,40,330	11,68,843	26190	5,40,330	2,50,53,580
	Jan-22	2051	2706	7,11,168	12,83,551	26175	7,11,168	2,62,19,159
	Dec-21	2053	2550	6,68,874	12,32,735	27416	6,68,874	2,64,02,579
	Nov-21	2035	2515	4,88,238	13,39,630	29278	4,88,238	2,55,37,038
	Oct-21	2016	2773	6,64,262	16,27,217	30811	6,64,262	2,57,37,783
	Sep-21	2005	2481	6,72,136	14,39,017	30923	6,72,136	2,58,06,565
	Aug-21	2002	2442	5,61,918	13,21,391	29760	5,61,918	2,48,28,178
	Jul-21	1988	2619	6,31,590	13,15,716	28669	6,31,590	2,33,55,719
	Jun-21	1981	2549	8,64,175	15,54,694	30647	8,64,175	2,28,14,761
	May-21	1973	2441	7,54,338	15,67,915	33604	7,54,338	2,21,51,945
2022-21	Apr-21	1968	2544	5,00,847	13,30,687	34560	5,00,847	2,05,56,972
	Mar-21	1968	2424	6,45,482	13,98,947	32341	6,45,482	2,02,95,813
	Feb-21	1951	2533	7,16,614	16,27,464	35707	7,16,614	1,99,63,826
	Jan-21	1965	2412	7,10,574	14,49,445	35543	7,10,574	1,84,74,450
	Dec-20	1962	2490	7,39,170	13,74,552	33627	7,39,170	1,86,46,769
	Nov-20	1959	2438	5,30,520	13,37,272	38895	5,30,520	1,72,71,31
	Oct-20	1959	2378	4,18,798	10,98,884	34535	4,18,798	1,55,87,903
	Sep-20	1946	2356	5,74,786	12,23,329	34015	5,74,786	1,53,04,722
	Aug-20	1943	2557	6,59,450	12,82,557	33897	6,59,450	1,52,34,207
	Jul-20	1941	2403	6,67,758	13,48,521	34136	6,67,758	1,46,29,659
	Jun-20	1944	2426	8,45,760	13,50,681	31382	8,45,760	1,38,04,601
	May-20	1947	2435	4,93,359	10,00,456	29271	4,93,359	1,25,16,960
2021-20	Apr-20	1949	2405	4,27,308	9,05,802	25118	4,27,308	1,27,38,626

2020-19	Mar-20	1949	2493	5,88,414	10,06,249	24065	5,88,414	1,12,43,112
	Feb-20	1961	2326	3,95,475	7,96,768	30220	3,95,475	1,45,52,074
	Jan-20	1959	2354	4,07,694	8,05,347	30910	4,07,694	1,55,17,107
	Dec-19	1955	2438	3,91,115	6,81,983	30483	3,91,115	1,54,31,967
	Nov-19	1951	2336	4,83,353	8,34,252	32114	4,83,353	1,53,15,478
	Oct-19	1949	2319	4,08,051	7,52,931	29102	4,08,051	1,52,47,730
	Sep-19	1955	2452	3,46,963	7,10,498	28376	3,46,963	1,45,73,003
	Aug-19	1952	2312	3,34,019	6,73,633	26670	3,34,019	1,39,76,16
	Jul-19	1950	2301	3,35,053	7,12,821	27879	3,35,053	1,40,05,417
	Jun-19	1945	2358	3,02,572	5,96,030	27779	3,02,572	1,50,31,415
	May-19	1942	2283	3,72,712	7,88,184	28822	3,72,712	1,52,54,361
	Apr-19	1938	2338	3,08,636	6,40,115	29811	3,08,636	1,50,43,275

(Source: NSE Official Website)

6. Findings of the study

- In the present study, it is understood that the majority of the investors belong to the 22 to 35 years of age group.
- 58% of the respondents are married, 25% are unmarried.16% are divorced. Hence the majority of them are Married who are the respondents of this study.
- It is clear from the above analysis that the majority of the respondents have completed their undergraduate studies. It is found from the present study that the majority of them have experience between 10 and 13 years.
- The data's *p*-value was determined, substantial and that the KMO measure was 0.735, indicating suitability for the use of exploratory factor analysis technique which suggests that the sample is reasonably adequate for factor analysis. Generally, a KMO value above 0.6 or 0.7 is considered acceptable.
- Bartlett's test evaluates whether the correlation matrix differs noticeably from the identity matrix. With 212.624 degrees of freedom (Df) and a *p*-value (Sig) of.000 (almost 0), the test statistic is 0.735, The data are appropriate for factor analysis because of the incredibly low *p*-value (Sig), which shows that the correlation matrix differs greatly from an identity matrix. In conclusion, the KMO measure and Bartlett's test both imply that the dataset is appropriate for factor analysis, meaning that the sample size is sufficient and the variables are associated.
- Overall, the results generated from the exploratory factors analysis suggest that the performance of the company, personal analysis, and social media influence are significant factors contributing to the variance observed in the dataset.

7. Conclusion

Global capital markets have greatly aided in the transformation of people's investments and throwaway revenue to investments in technologically advanced and emerging countries. The Indian capital market is expanding, and many individual investors are taking part in

it with great enthusiasm. Financial service firms have a great opportunity to reach retail investors in the Indian equity market by offering products and services that specifically highlight the factors that have been found to influence retail investors' trading behavior. By doing this, the firms can reap significant benefits from their marketing campaigns directed toward retail investors in the Indian equity market. Numerous scholarly investigations have concentrated on the psychological predispositions of individual stock market traders, without truly pinpointing the elements influencing the trading conduct of individual retail investors.

In this study, the researcher has used primary data gathered from retail investors with a range of age groups, professional backgrounds, and demographics in India to identify the factors that impact and influence their trading behavior in the Indian equity market. The study's findings indicate that a variety of factors, including the company's performance, social media influence, individual analyses, the price of equity stocks at the time of trading, a preference for trading online, investor's faith in the guidance of their financial advisor, pointedly affect the behavior of retail investors. The study's results help companies providing financial services in emerging economies like India by enlightening them on the importance of keeping these aspects in mind when launching new goods and services or concentrating their publicizing energies on the Indian equities market.

Conflict of Interest: The authors declare that there are no conflicts of interest regarding the publication of this paper.

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