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IMPACT OF INVESTOR SENTIMENT ON STOCK MARKET RETURNS: A STUDY OF THE INDIAN ECONOMY FROM BOTH DOMESTIC AND GLOBAL PERSPECTIVE

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ABSTRACT

This paper is an attempt at studying the impact of local and global investor sentiment on stock returns in India over the 8-year period beginning from January 2010. Our results are based on the monthly data made available by National Stock Exchange (NSE) and State Street. In the first stage of our study, we identify six market factors as indicators of local investor sentiment, remove from them potential business cycle effects and then use them to create an index using principal component analysis. We then run an ordinary least square regression on excess market returns and the index thus constructed to determine if local sentiment can predict excess market returns. In the second stage, we use the monthly Investor Confidence Index (Asia- Pacific) estimates published by State Street as monthly indicators of global sentiment. We regress this index on excess market returns to understand if the former has a statistically significant influence on the latter. Our results suggest that while global sentiment has some predictive power, local sentiment doesn't. Additionally, we detect the existence of a positive relation between the two variables but this result does not conform to our expectations.

KEYWORDS

(OLS) Least square regression, (ICI) Investor confidence index, investor sentiment, stock markets, sentiment index, principal component analysis.

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INTRODUCTION

key tenet of conventional finance theory is that the participants in an economy are rational "wealth maximisers"; that they take reasonable decisions on the basis of the information available to them. However, this assumption is hardly realistic and thus, theories to which it is central are usually of little practical significance. Persuaded by their opinions and beliefs, investors often tend to take actions that contradict rational judgement. This essentially means that the inclusion of human behaviour to financial theories and strategies can increase the relevance of their conclusions and enhance the predictability of future outcomes.

Behavioural finance, which is a more contemporary field of study, challenges the assumptions of conventional finance theory and seeks to integrate behavioural theory with the former in an attempt to provide better explanations for irrational financial decisions. A key argument it puts forth is that investors are not necessarily rational because they are subject to exogenous sentiment waves. It also goes on to suggest that investors commit the same mistakes frequently and exhibit predictable patterns of behaviour, and that this predictability of behaviour is closely related to their optimism and pessimism about the market. The overall attitude of investors towards a specific security which can give rise to systematic risks and can affect asset price is called investor sentiment. The influence of this intrinsic human factor on share prices can be as significant as that of the classical risk factors and should be considered an integral part of related calculations.

Investors whose decisions to trade are based on sentiment are called noise traders. When investors expect the prices in the market to rise a bullish sentiment is said to prevail. Sentiment is bearish when share prices are predicted to fall.

Investor sentiment involves the analysis of human behaviour, expectations and is largely influenced by different socio and psychological factors such as culture, intelligence, region and gender. Humans being social animals are largely influenced by other investors which directs a positive or negative effect on the sentiment they hold towards the concerned security.

There has been a lot of research done on the predictability of stock returns based on the investor sentiment in the US and European markets. Most of these studies conclude that investor sentiment does have the power to influence stock returns. Some also report that stocks that exhibit certain characteristics particularly those that are harder to value or more difficult to arbitrage, are more sensitive to the influence of sentiment. A few studies decompose sentiment in order to assess if positive changes affect returns differently than negative changes do. Certain papers also delve into assessing the role of country specific factors in determining the influence of investor sentiment on returns, suggesting that emerging economies such as our own could respond differently to changes in sentiment as compared to more developed economies.

Though, the impact of investor sentiment on stock returns has been studied extensively in western parts of the world, it hasn't been quite enough in emerging economies. Hence, our goal is to study the impact of investor sentiment on stock market returns in one such economy. This study will lead us to conclude if returns respond the same way to investor sentiment in India as they do in countries where such studies have been conducted already.

There are two major hurdles that a researcher faces while measuring investor sentiment. First, it is necessary and important to separate the general market effects from investor sentiment as both are dependent on each other as is evident by the existence of noise traders. To understand this, consider a bullish market where prices are going up. The news of growing returns will attract more noise traders to invest in the market due to the increasing positive sentiment resulting in a greater demand of shares further pushing prices up. This forms a cycle of rising returns as increasing number of noise traders enter the market until a financial market bubble is formed.

Second, since investor sentiment is a behavioural factor, it cannot be measured or observed directly and thus, involves a certain degree of subjectivity. In order to resolve this problem, most researchers choose to employ different market factors as proxies indicative of the sentiment prevailing in the market. Most of them use the Consumer Confidence Index as an indicator. Other researchers choose to not use these factors directly and instead create their own conglomerate indices using principal component analysis looking for a common element comprising several variables.

Although, Reserve Bank of India releases data on investor sentiment by providing estimates of Consumer Outlook Index at the end of every quarter, we do not make use of this data and instead choose to create our own index of local sentiment in line with Baker and Wurgler (2006,2007) due to the lack of availability of month-wise estimates of COI. We do not create an index of global sentiment however; we use the data on Investor Confidence Index provided by State Street as an indicator of investor sentiment. We do this because it is difficult to identify consistent and relevant variables across countries as indicators of investor sentiment that can be used to create a common index.

LITERATURE REVIEW

P. Corredor, E. Ferrer and R. Santamaria (2015) conduct a comprehensive assessment of effect of investor sentiment on the stock market returns in the central European markets of Czech Republic, Hungary and Poland. They consider the investor sentiment index of the national economies and analyze it with respect to the returns from the stock markets of the three emerging economies through regression analysis.

Baker and Wurgler (2006, 2007) laid the groundwork of measuring and studying investor sentiment in the twenty-first century. They stated that the question is not whether investor sentiment has a significant effect on market returns or not; rather, it is a question of how to measure sentiment. Their usage of closed-end fund discounts, IPOs first-day returns, turnover ratio, number of IPO, equity-debt ratio and dividend premium to measure sentiment has stimulated interest among researchers to study the relationship between sentiment index and stock returns.

Seeking inspiration from the research conducted by Baker and Wurgler, Pramod Kumar Naik, Puja Padhi (2016) studied the relationship between investor sentiment and stock return volatility extracting monthly data from National Stock Exchange of India from July 2001 to December 2013 period. They constructed a market sentiment index using seven market related implicit indicators namely advance declining Ratios, put-call Ratios, net IPOs, PE ratios, turnover rate, trading volumes and mutual funds net flow and removing the implicit business cycle effects with the help of regression residuals and principal component analysis. They analyzed the given relation by employing four econometric techniques, namely ordinary least squares method, vector auto-regression, Granger causality and EGARCH-M models. By comparing and analyzing the data of the sentiment index thus created with the stock market returns from NIFTY index of NSE India, they have been able to conclude that the sentiment index significantly influences market excess returns. Their findings suggest that when investors are relatively optimistic about their investments they earn better market returns which in turns gives rise to speculation. The increase in investments given birth by speculation in turn leads to market return losses when the sentiment becomes bearish.

Several other researchers have studied the effect of sentiment index on stock market returns. Other publications, such as Verma and Soydemir (2009) concluded that various rational and irrational factors drive the changes in institutional and individual sentiments. Verma and Verma (2007) state that investor sentiment has a positive effect on stock returns, however it has a negative effect for both individual and institutional investors on market volatility. Their research also indicates that when noise traders who invest on speculation alone are bearish the rational investors are bullish and when noise traders are bullish the rational investors are bearish.

Zhu (2012) found that there is a strong correlation between the Shanghai stock market index and sentiment index. Li (2014) also showed that the Chinese stock market return can also be strongly predicted by the sentiment index.

PROBLEM STATEMENT

Accruing to the presence of investor sentiments impacting established indices in India, there is a need to understand the temporal dynamics between returns and the sentiments in the market. This paper aims to study the impact of investor sentiment on the stock market returns in the Indian context. The sentiment of the investors a two-fold phenomenon. Thus, this study encompasses the effect of investor sentiment under the purview of the sentiment within the Indian economy and at a global level i.e. within the Asia-Pacific region. The local and global dimensions have been taken into consideration in order to study the influence of the integrated investor sentiment on the fluctuations in the market.

OBJECTIVES OF THE STUDY

- 1. To study the impact of investor sentiment on stock market returns in India
- 2. To study the impact of investor sentiment in the Asia-Pacific region on stock market returns in India

RESEARCH METHODOLOGY

SOURCES OF DATA

The research is based on secondary data. For the collection of secondary data, relevance and reference to various literatures were used to identify the investor sentiments. The RBI Handbook of statistics on the Indian Economy and the SEBI Handbook of statistics on the Indian Securities Market were instrumental in sourcing the required statistics for the Indian dynamics. These sources are accurate and frequently used. The Stock returns and sentiment relationship is evaluated by using the Investor Confidence Index published by State Street as a proxy for Global Investor Sentiment. The risk-free rate of return is reflected by the 10-year Government bond yield, widely available on Bloomberg and market watch.com. Data regarding inflation has been extracted from Inflation.eu, a portal containing worldwide inflation data. The study has been conducted for an 8-year period, commencing January, 2010. The results are based on monthly data extracted from the aforementioned sources.

RESEARCH HYPOTHESIS

The hypothesis for undertaking the empirical analysis has been specified as follows:

Study 1: Impact of domestic investor sentiments on stock market returns in India

H₀₁: Domestic investor sentiment has an impact on stock market returns in India

H₁₁: Domestic investor sentiment does not have an impact on stock market returns in India

Study 2: Impact of global investor sentiments on stock market returns in India

H₀₂: Asia-Pacific investor sentiment has an impact on stock market returns in India

H₁₂: Asia-Pacific investor sentiment does not have an impact on stock market returns in India

EMPIRICAL APPROACH

1. CONSTRUCTION OF INVESTOR SENTIMENT INDEX

Observing and measuring investor sentiment directly is a complex task and thus there is no definitive indicator available that can be used to represent the confidence or sentiment of investors in the stock market.

Existing studies follow an approach of constructing an investor sentiment by adopting different proxies to represent investor sentiment.

The Investor Sentiment proxies have been determined by a review of the existing literature. Brown and Cliff (2004), in their study chose Advance and declining ratio, high and low ratio, margin borrowings, short interest, short sales, odd lot sales to purchase, put-call ratio, SPX future (institutional sentiment, activity of small traders), monthly forecast of commodity market returns, expected volatility relative to current volatility, closed-end fund discounts, mutual fund flows, fund cash, first-day IPO returns and number of IPO as proxies while Wang et al. (2006) considered Put-call trading volume ratio, put-call open interest ratio, ARMS index (advance decline ratio), survey data of American Association of Individual investors, investor intelligence index. Incorporating the shortfalls in the previous studies, Baker and Wurgler (2006,2007) used Principal Component Analysis and identified Closed-end fund discounts, number of IPO, IPOs first-day returns, turnover ratio, equity-debt ratios, and dividend premium as the relevant factors to quantify investor sentiment. Zhu (2012), after analysis of the existing literature, considered PE ratio, trading volume, turnover, closed-end fund discount, new account amounts, VIX index as the relevant factors. Changsheng and Yongfeng (2012) made a rather simplified model, accounting for IPO, closed-end fund discounts, turnover, number of new stock accounts. In a more recent study, Liu (2014), considered Closed-end fund discounts, turnover, number of IPO, number of Chinese A shares net-added accounts, relative degree of active trading in equity market, most of which were an addition to the existing literature.

Seeking inspiration from the work of Naik and Padhi (2016) and keeping in mind the availability of data, we select the following variables for the period 2010-2017: Advance Declining Ratio (ADR), Net IPOs (NIPO), Put-Call Ratio (PCR), PE Ratio (PER), Traded Quantity (TQ), Net Mutual Funds Flow (NFF) for the construction of a composite index for the purpose of the study.

ADR is a representation of the recent trend of stock market performance. It is the ratio of the number of advancing and declining stock on the market. An upward trend of the market is signified by a rising value of ADR while a downward trend is signified by a declining value.

NIPO is the net amount of initial public offerings in the market. It is believed that it shall be considered as a sentiment proxy as demand for IPOs is significantly sensitive to the market condition.

PCR is the ratio of traded volume of put and call volumes of the derivatives market. It has been observed that in bullish market conditions, PCR is low while in bearish market conditions, PCR is high.

PER has been observed to be generally positively correlated with the market indices. It reflects both the financial situation of the companies listed on the stock market and the market sentiment.

TQ represents the amount of stocks traded and is a representation of market liquidity as in a highly liquid market, irrational and irresistible investors trade very frequently thus raising the traded quantity.

It's a widely accepted observation that mutual fund investors tend to chase investments in high returns and hence is used as a sentiment proxy as mutual fund flow is considered as an economic substitute by the participants in the market.

These variables can be expected to contain both rational and irrational components and thus to eliminate business cycle effects we orthogonalise the data by regressing the raw data on four macroeconomic factors namely: Inflation, Exchange Rate (INR vis-à-vis USD), Net Foreign Institutional Investment and Growth in Industrial Production Index. The residuals thus obtained are considered to be a proxy of sentiment with the business cycle effects eliminated.

The aforementioned orthogonalisation process can be explained by the following equation: (equation 1)

$$Y_t = \alpha_0 + \beta_k \sum_{k=1}^k Funda_{kt} + \varepsilon_t$$

where, Y_t represents each of the aforementioned sentiment proxy, α_0 is the constant, β_k is the estimated parameter, Funda represents each of the aforementioned macroeconomic variables and ϵ_t is the error term.

Using equation (1) we obtain the orthogonalised sentiment proxies that we use in our subsequent analysis. It has been observed in existing literature that some sentiment proxies take longer to reveal their influence on sentiment. To account for this variation, we compute the lags of the six sentiment proxies and orthogonalise them with the lagged macroeconomic variables. This gives us a set of twelve variables including six original sentiment proxies and six lagged sentiment proxies.

We proceed to construct the sentiment index by applying dimension reduction: Principal Component Analysis to reduce the number of variables into a smaller set of linear combinations that account for most of the variable of the original data set. This gives us the factor loadings of the twelve sentiment proxies so we can proceed to construct the index.

We compute the raw sentiment index by the following equation: (equation 2)

SentIndex_t =
$$\sum_{j=1}^{k} a \frac{Y_t}{\sigma Y_t}$$

where a is the factor loading for the j-th item derived by principal component analysis, Y_t is the sentiment proxy used, σY_t is its respective standard deviation and k is the number of proxies used.

This gives us the following measure of raw sentiment index: (equation 3)

Raw_Index = 0.068ADR + 0.032ADRt - 0.138PCR - 0.116PCRt + 0.683NIPO + 0.628NIPOt + 0.902PER + 0.888PERt + 0.830TQ + 0.828TQt + 0.072NFF + 0.113NFFt To construct the final sentiment index, we choose one variable from each pair of variables (original and lag) by computing the correlation coefficient between the variables and the raw sentiment index. Whichever variable has a higher correlation from each pair is chosen to construct the final sentiment index. Through this process we choose the following sentiment proxies: ADRt (lag), PCR (original), NIPO (original), PERt (lag), TQ (original) and NFFt (lag).

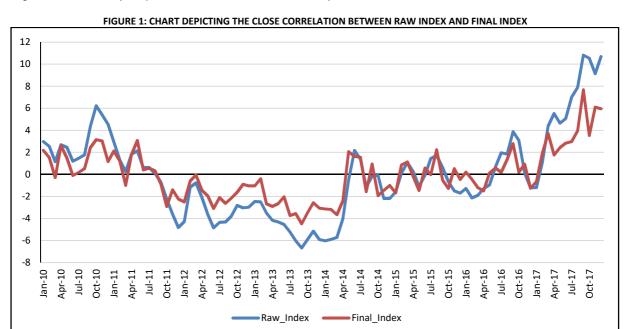
Principal component analysis of the aforementioned six variables is conducted and the first principal component explaining 39% variance is used to construct the following final sentiment index: (equation 4)

Final_Index = 0.249ADRt - 0.464PCR + 0.675NIPO + 0.865PERt + 0.878TQ + 0.3NFFt

It is observed that the correlation coefficient between the raw sentiment index and the final sentiment index is 0.935 suggesting that the risk of losing any significant information by choosing lags is very less. This close correlation is depicted in Figure 1.

The study has been undertaken to evaluate the impact of investor sentiment on the Indian economy. National Stock Exchange (NSE) of India based in Mumbai, the financial capital of the country has been chosen to represent the Indian economy and NIFTY 50 index of the NSE India has been chosen for calculations of market return.

NIFTY 50 is an index of the fifty largest companies covering twelve sectors with a market capitalisation of US\$ 2.27 trillion (As in April 2019) listed on the National Stock Exchange and has been widely accepted as an indicator of the Indian economy.



2. CALCULATION OF EXCESS RETURN

We have extracted the monthly average closing prices of the index of the period January 2010 to December 2017 from the Handbook of Statistics on Indian Securities Market 2015 and 2017 by SEBI.

The monthly average closing prices are converted into compound log return with the following formula: (equation 5)

$$r_n = \ln \frac{P_t}{P_{t-1}}$$

where rt is the compounded log return at time t, Pt and Pt-1 are the monthly stock indices at the two consecutive months t and t-1, respectively.

To obtain the excess market return, the risk free rate of return (10-year government bond yield) has been deducted from the compound log return thus obtained. This is represented by the following equation: (equation 6)

$$ER_t = r_t - r_t^f$$

Where ER_t represents excess return, r_t represents compounded log return and r_t represents the risk free rate of return.

3. ASIA PACIFIC INVESTOR SENTIMENT INDEX

There are very few studies that exist which investigate the impact of investor sentiment from both the domestic and the global perspective and, to our understanding and knowledge, none has investigated or analyzed the impact in third world countries such as India.

There have been several policy changes in the last decade advocating open trade which has liberalized the Indian economy and opened it up to investors abroad. With this increasing influence of Indian economy on a global scale and the vast inflow of foreign institutional investment in India we deem it crucial to investigate the impact of sentiment of investors abroad on the stock market returns in India.

Following the research of *P. Corredor, E. Ferrer & R. Santamaria (2015)* we have undertaken a study of the Asia-Pacific investor sentiment due to the high trade volumes that India and other nations in the region share enabling us to draw more meaningful conclusions from the study.

To enable us to proceed with this investigation from a global and more so Asian perspective, we have used the *State Street Investor Confidence Index®* as a proxy of investor sentiment all across the Asia-Pacific region.

State Street Investor Confidence Index® measures the confidence of institutional investors all across the world by using their portfolios to analyze the various level of risks undertaken by investors. The index was established by Harvard Professor Ken Froot and State Street associate director Paul O' Connell.

We have extracted monthly data on this index for the period January 2010 to December 2017 for the Asia-Pacific region directly from the State Street published reports.

EMPIRICAL METHODOLOGY

1. Domestic Perspective (NIFTY 50)

Once the sentiment index has been constructed and the excess returns of NIFTY 50 computed, econometric technique namely ordinary least square regression has been employed to test the impact of investor sentiment on stock market returns in the Indian economy.

We compute the OLS regression by forming the following regression equation: (equation 7)

$$ER_t = \alpha + \beta Final_Index_t + \mu_t$$

Where ER_t represents excess return, α is the constant, β is the parameter to be estimated, Final_Index refers to the final sentiment index constructed and μ_t represents the error term.

2. Global Perspective (State Street ICI)

We employ the same econometric technique i.e. ordinary least square regression to study the impact of investor sentiment from a global perspective on stock market returns in India.

For this purpose, we compute the following regression equation: (equation 8)

$$ER_t = \alpha + \beta ICI + \mu_t$$

Where ER_t represents excess return, α is the constant, β is the parameter to be estimated, ICI refers to the *State Street Investor Confidence Index®* and μ_t represents the error term.

EMPIRICAL RESULTS

Table 1 contains the results of fitting the OLS regression to the data on excess returns and the constructed sentiment index while Table 2 describes the result of regressing excess market returns on the State Street proxy for global sentiment.

For both the regressions, the Durbin Watson statistic is close to 2 and is thus, suggestive of the fact that there is no autocorrelation between the residuals at lag 1.

TABLE 1: RESULTS OF DOMESTIC OLS REGRESSION

Variable	Value		
R ²	0.0051		
Adjusted R ²	-0.0053		
Newey-West Standard Error	0.00131		
F Value	0.76		
Significance F	0.3866		
Coefficient	0.0011466		
t-stat	0.87		
P-value	0.387		

For the regression involving the constructed index, the value of the slope coefficient is statistically insignificant and so is that of the adjusted R squared when the level of significance is 5%. Thus, local sentiment does not seem to influence excess market returns.

The second regression however, does yield statistically significant values of the slope coefficient and the adjusted R squared at 5% level of significance.

TABLE 2: RESULTS OF GLOBAL OLS REGRESSION

ADEL E. MESOLIS OF GLODALE GLO MEGNESSIO			
Value			
0.047			
0.036			
0.00045			
4.84			
0.0303			
0.0010028			
2.20			
0.030			

We may thus, conclude that unlike its local counterpart, global sentiment could have some predictive power. The results also suggest the existence of a positive relationship between sentiment index and excess return, contradicting our expectations about the relationship being negative.

CONCLUSIONS

The study investigated whether the Indian equity market is driven by investor sentiment by considering the market returns of NIFTY 50, an index of the fifty largest firms listed on the National Stock Exchange of India. It also involved using sentiment proxies to measure investor sentiment which owing to its behavioural nature cannot be measured directly.

The dimension reduction method, principal component analysis has been used to construct the investor sentiment using six market related implicit sentiment proxies including net IPOs, advance-decline ratio, put-call ratio, price-earnings ratio, traded quantity and net mutual fund flows. By regressing the six sentiment proxies on macroeconomic variables including net flow of foreign institutional investors, inflation, growth rate of IIP and exchange rate we extracted residuals which represent the irrational component of investor sentiment independent of any business cycle induced effects. Excess returns have been calculated by deducting risk free rate of return from the compounded log returns of the monthly closing prices of NIFTY 50 index.

To analyse the effect of investor sentiment on stock market returns we employed ordinary least square regressions with Newey-West standard errors on the time series of investor sentiment index and excess returns over a period of eight years from January 2010 to December 2017.

When we set out to determine if investor sentiment could serve to predict market returns, we expected to observe a strong relationship between proxies for beginning-of-period investor sentiment and subsequent stock returns. While we did have sufficient evidence to confirm the existence of such a relationship between global sentiment and excess returns, we couldn't confirm that local sentiment had any predictive power. This is, as suggested by P. Corredor's research, most likely because "local indices fail to capture the full effect of investor sentiment which is generally of a more global nature". Our study also suggests that when sentiment is high and investors are optimistic about their investments, they tend to earn better returns. This result is in line with that of Naik and Padhi's (2016) paper. The two variable regression model we employ however, explains only a small percentage of variation in the stock returns as is indicated by the value of R squared.

Finally, the highly significant results of the Asia pacific component of our analysis show that looked upon from a broader perspective, the investor sentiment in the whole Asia-pacific region has a significant impact on the stock market returns in the country. This indicates that most of the effect of investor sentiment on stock market returns or stock price are due to variables with components reaching beyond the domestic environment

REFERENCES

- 1. Baker, M. and Wurgler, J. (2006), 'Investor Sentiment and the Cross-Section of Stock Returns'. The Journal of Finance, 61: 1645-1680. DOI:10.1111/j.1540-6261.2006.00885.x
- 2. Bloomberg, India govt. bond generic bid yield 10 year (GIND10YR:IND), https://www.bloomberg.com/quote/GIND10YR:IND
- 3. Chuangxia Huang, Xin Yang, Xiaoguang Yang, and Hu Sheng, 'An Empirical Study of the Effect of Investor Sentiment on Returns of Different Industries', Mathematical Problems in Engineering, vol. 2014, Article ID 545723, 11 pages, 2014. DOI: 10.1155/2014/545723.
- 4. Inflation.eu, Indian monthly inflation data, https://www.inflation.eu/inflation-rates/india/historic-inflation/cpi-inflation-india-2017.aspx
- 5. K.K. Moseki & K.S. M. Rao (2018) 'Empirical measures of symmetry of market sentiments', Cogent Economics & Finance, 6:1, DOI: 10.1080/23322039.2018.1430113
- 6. Li, B.H. (2014) 'Does investor sentiment predict stock returns? The evidence from Chinese stock market', Journal of System Science Complex, Vol. 27, pp.130–143
- 7. Malcolm Baker & Jeffrey Wurgler, (2007). 'Investor Sentiment in the Stock Market', Journal of Economic Perspectives, American Economic Association, vol. 21(2), pages 129-152, Spring
- 8. Market Watch, India 10 year government bond (LDBMKIN-10Y), https://www.marketwatch.com/investing/bond/ldbmkin10y/charts?countrycode=bx
- 9. Naik, P.K. and Padhi, P. (2016) 'Investor sentiment, stock market returns and volatility: evidence from National Stock Exchange of India', Int. J. Management Practice, Vol. 9, No. 3, pp.213–237.
- 10. P. Corredor, E. Ferrer & R. Santamaria (2015) 'The Impact of Investor Sentiment on Stock Returns in Emerging Markets: The Case of Central European Markets', Eastern European Economics, 53:4, 328-355, DOI: 10.1080/00128775.2015.1079139
- 11. Raissi, N. and Missaoui, S. (2015) 'Role of investor sentiment in financial markets: an explanation by behavioural finance approach', Int. J. Accounting and Finance. Vol. 5. No. 4. pp.362–401.
- 12. Reserve Bank of India (2015, 2017), Handbook of statistics on the Indian economy.
- 13. Securities Exchange Board of India (2015,2017), Handbook of statistics on Indian securities market.
- 14. Sehgal, S., Sood, G. S., & Rajput, N. (2009). 'Investor Sentiment in India: A Survey'. Vision, 13(2), 13–23. DOI: 10.1177/097226290901300202
- 15. State Street (2017), Investor Confidence Index, http://www.statestreet.com/content/dam/statestreet/documents/ici/ICI_HistData_EngOct18.pdf

- 16. Verma, R. and Soydemir, G. (2009) 'The impact of individual and institutional investor sentiment on the market price of risk', The Quarterly Review of Economics and Finance, Vol. 49, pp.1129–1145.
- 17. Verma, R. and Verma, P. (2007) 'Noise trading and stock market volatility', Journal of Multinational Financial Management, Vol. 17, pp.231–243.
- 18. Zhu, X. (2012) 'Investor sentiment and volatility of stock index an empirical analysis from the perspective of behavioural finance', Advances in Applied Economics and Finance, Vol. 3, No. 4, pp.627–629.

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