

The Nexus Between Hedge Funds Investments in India and Stock Market Returns: A Study of Indian Stock Market

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Abstract

Indian economy is among the top list in investors for the Hedge Funds' managers in 2019 as the Indian Market gets bullish on emerging market assets like equity and fixed income. According to a survey by global investment firm Credit Suisse; there is a sharp increase in Hedge Fund references for India as investment destinations. This study analyzes the dynamism of Hedge Funds' Investments in India and stock market returns. To represent the Indian Stock Market, S&P CNX Nifty has been taken as the benchmark. Quarterly returns of S&P CNX Nifty and quarterly Hedge Funds' Investments in India have been used for a period of 5 years from 31st March 2013 to 31st March, 2018. To find short run and long run relationship between the studies variables, Descriptive Statistics, Correlation Analysis, Regression Analysis and Granger Causality Test have been used.

Key Words: Hedge Funds' Investments; S&P CNX Nifty, Indian Stock Market.

1. Introduction

India has always been compared to develop nations in terms of growth in financial markets. The size of the Indian economy ten years ago from now was approximately USD 1 trillion and now Indian economy is expected to reach 60% of the size of the US economy by the end of the year 2025. The main trigger behind this expectation is major initiative taken by the Government of India of introducing Category III of Alternative Investment Funds (AIF) in the year 2012 by SEBI i.e. Hedge Funds. India today needs its financial market to be developed strategically so as to achieve its goals to become a superpower by 2025.

In the year 2018, SEBI allowed Alternative Investment Funds (AIFs) to operate from International Finance Services Centre (IFSC). After Private Equity Funds, Venture Capital Funds, and Real Estate Funds, Hedge Funds are a new investment vehicle in India and are expected to generate returns in volatile markets. AIF's are highly attractive because there is

low correlation among different classes of AIFs, hence, giving a significant opportunity to Hedge Funds (<https://www.businesstoday.in/opinion/columns/the-scope-of-alternative-investment-in-india-as-ore-indians-turn-risk-seekers/story/356054.html>). Also, the Reserve Bank of India (RBI) allowed Hedge Funds to accept foreign capital on 16 November 2015 (www.quora.com). Standard & Poor's CRISIL NSE Index 50 or S&P CNX Nifty is also known as Nifty 50 or Nifty. It is the leading stock market index in India for large companies on the National Stock Exchange. It comprises of 50 stocks of large companies for 23 sectors of the India (www.nseindia.com).

2. Review of Literature

Hedge Funds are those type of investments which are not statutorily defined but still are privately organized and are less open to common public (The President's Working Group on Financial Markets, 1999). Hedge Funds are usually informational driven and hedge away maximum risk not relating to the speculation (Connor and Woo, 2004). Hedge Funds are organized as limited partnership where the fund managers are the general partners and the investors are taken as limited partners (Fung and Hsieh, 1999). Hedge Funds also involve wide variety of strategies like short selling; derivatives and so on and also pay performance fees to their managers (Karun, 2004). Hedge Funds' managers have important personal stake in order to enhance returns and manage the risk more better (Agarwal and Naik, 2002). Hedge Funds during the time of technology bubble on NASDAQ didn't attack the event; in fact, assisted the price discovery. This made the managers understand that the prices of the stock would be decreasing (Brunnermeier and Nagel, 2004). An absolute return objective; unique strategies and; performance related compensation are few of the special characteristics of Hedge Funds (Jobman, 2002). Hedge Funds also employ separate risk management techniques. The portfolio managers were separated from the risk managers, auditors and the pricing departments (Black, 2007).

3. Rationale of the Study

The Indian financial industry is expected to anticipate and manage shifting investor demands. For justification, the investors seek a comprehensive awareness about the new investments of Hedge Funds in India. Dearth of research studies in this regard made imperative to study the relationship of Hedge Funds' investments in India and stock market of India.

4. Objectives of the Study

To Check the Normality of Hedge Funds' Investments in India and S&P CNX Nifty Returns.

To Study the Relationship between Hedge Funds' Investments in India and S&P CNX Nifty Returns.

To Study the Impact of Hedge Funds' Investments in India on S&P CNX Nifty Returns.

To Study Cause and Effect Relationship between Hedge Funds' Investments in India and S&P CNX Nifty Returns.

5. Null Hypothesis

To test the above objectives following null hypothesis were made:

H₀₁: Hedge Funds' Investments in India and S&P CNX Nifty Returns are Normally Distributed.

H₀₂: There Exist no Significant Relationship between Hedge Funds' Investments in India and S&P CNX Nifty Returns.

H₀₃: Hedge Funds' Investments in India have no Significant Impact on S&P CNX Nifty Returns.

H₀₄: NIFTY_RETURNS does not Granger Cause HF_INVESTMENTS.

H₀₅: HF_INVESTMENTS does not Granger Cause NIFTY_RETURNS.

6. Research Methodology

The Study

The study empirically tested dynamism of relationship between Hedge Funds' Investments in India and S&P CNX Nifty Returns. The Hedge Funds Investments on quarterly basis in India were considered for the study. S&P CNX Nifty Index is a bench mark index that was used to measure the stock market returns.

Data and Sample Size

The present study is based on secondary data. Data of Hedge Funds Investments and S&P CNX Nifty Returns were used. The data were collected from websites like <http://www.sebi.gov.in> and yahoofinnce.com. The period of the study was from 31st March, 2013 to 31st March 2018.

Tools for Analysis

Descriptive Statistics was used to check the normality of the data series. Correlation Analysis was carried out to find and study the relationship between Hedge Funds Investments and S&P CNX Nifty Returns. Regression Analysis was used to study the impact of Hedge Funds Investments on S&P CNX Nifty Returns and Granger Causality Test was applied to determine the directional relationship between the variables.

7. Results

Descriptive Statistics

The Descriptive Statistics are used to examine the normal distribution of returns. The ideal values for normal distribution for Skewness; Kurtosis and Jarque-Bera are at 0; 3 and 0 respectively. On application of Descriptive Statistics on Hedge Funds Investments and S&P CNX Nifty Index Returns, it was found that the value of Skewness and Kurtosis were not equal to 0 and 3 respectively. The value of Jarque-Bera was not equal to 0. So, the null hypothesis, **H₀₁**: Hedge Funds' Investments in India and S&P CNX Nifty Returns are Normally Distributed was **rejected**. It indicates that the Hedge Funds' Investments in India and S&P CNX Nifty Index Returns were not normally distributed during the study period.

Table 1: Results of Descriptive Statistics

Variables	Hedge Funds' Investments	S&P CNX NIFTY
Skewness	1.2941	0.5445
Kurtosis	3.5289	2.8539
Jarque-Bera	6.1066	1.0566
Probability	0.0472	0.5895
Observations	21	21

Correlation Analysis

Karl Pearson Coefficient of Correlation was being applied to study the relationship between Hedge Funds' Investments in India and S&P CNX Nifty returns at 5% level of significance. As per Table 2 and analysis, it was conferred that, Hedge Funds' Investments in India had negative correlation (-0.1293257 < -0.5) with S&P CNX Nifty Returns. Thus, the null hypothesis, i.e., **H₀₂**: There exists no Significant Relationship between Hedge Funds' Investments in India and S&P CNX Nifty Returns was **rejected**.

Table 2: Results of Correlation Analysis

Variables	Hedge Funds' Investments	S&P CNX NIFTY
Hedge Funds' Investments	1	-0.1293257
S&P CNX NIFTY	-0.1293257	1

Regression Analysis

The Regression Analysis studies the impact of Hedge Funds' Investments in India on S&P CNX Nifty Index Returns as shown in Table 3 below. It was observed that the value of r^2 was 0.016725, indicating only 1.67% variations in S&P CNX Nifty Index were due to changes in Hedge Funds' Investments in India when S&P CNX Nifty Index was studied as dependent and Hedge Funds' Investments in India as independent variable but the p value being > 0.05 indicated that there was no impact of dependent variables on independent variables and thus the null hypothesis i.e., H_{03} : Hedge Funds' Investments in India have no Significant Impact on S&P CNX Nifty Returns was **accepted** on the basis of P value. The Regression Model is satisfactory as its present good fit ($r^2 = 0.016725$) is justified.

Table 3: Results of Regression Analysis

Variables	Coefficient	Std. Error	t- Statistics	Prob.
C	0.959141	0.969148	0.989675	0.3348
Hedge Funds' Investments	-7.32E-05	0.000129	-0.568492	0.5764
R- squared	0.016725	Mean Dependent var		0.598063
Adjusted R-squared	-0.35026	S.D. Dependent var		3.297218
S.E of regression	3.354466	Akaike info criterion		5.348855
Sum squared residuals	213.7963	Schwarz criterion		5.448333
Log likelihood	-54.16297	Hanna-Quinn criterion		5.370444
F-statistic	0.323183	Durbin- Watson Stat		1.673809
Prob (F-statistic)	0.576359			

Granger Causality Test

Granger Causality Test, as shown in Table 4 below, indicated the directional bilateral relationship among the studied variables. The study inferred that the p value was > 0.05 in the case 1 at lags 2. This proved that in the null hypothesis: H_{04} : Hedge Funds' Investments in India do not Granger Cause S&P CNX Nifty Returns was **accepted**. It showed that Hedge Funds' Investments in India do not granger cause S&P CNX Nifty Returns. Also, in case 2, p

value > 0.05, at lags 2. This proved that in the null hypothesis: H_{05} : S&P CNX Nifty Returns do not Granger Cause Hedge Funds' Investments in India was also **accepted**. It showed that S&P CNX Nifty Returns do not granger cause Hedge Funds' Investments in India.

Table 4: Results of Granger Causality Test

Null Hypothesis	Observation	F-Statistic	Lag	Probability
NIFTY_RETURNS does not Granger Cause HF_INVESTMENTS	19	1.98817	2	0.1738
HR_INVESTMENTS does not Granger Cause NIFTY_RETURNS	19	0.44064	2	0.6523

8. Discussions

The non-existence of positive co-relationship may also be because of Indian markets not yet being highly sensitive to the new set of information about Hedge Funds. One cannot interchangeably use the two markets. It is also interpreted that the non-existence of positive correlation indicates their dependency on each other, so one cannot shift from one market to another if required at same level of returns and risk. They are contradictory to each other and both may not be incorporated together into one larger asset and wealth portfolio. But the Regression Model showed that S&P CNX Nifty is not putting impact upon the Hedge Funds' investments in India and vice-versa. The regression analysis is somehow complimentary with correlation analysis. Also the Indian companies comparatively may not be exposed to a lot of Hedge Funds' investments and their exposure, like companies in developed countries are. It is found that Indian stocks as well as Hedge Funds are highly sentiment driven and stocks of certain companies and strategies of Hedge Funds may change for no reason. There are few qualitative factors that influence stock prices and Hedge Funds like speculation and investor confidence level. So, S&P CNX Nifty Returns do not Granger Cause Hedge Funds' Investments in India and Hedge Funds' Investments in India do not Granger Cause S&P NIFTY Returns seems to be justified.

9. Conclusions

Descriptive Statistics indicated that the Hedge Funds' Investments in India and S&P CNX Nifty Index Returns were not normally distributed; Correlation Analysis indicated negative correlation between Hedge Funds' Investments in India and S&P CNX Nifty Returns;

Regression Analysis depicted that Hedge Funds' Investments in India have no significant impact on S&P CNX Nifty Returns on the basis of p value and; Granger Causality Test revealed Hedge Funds' Investments in India Granger Cause S&P CNX Nifty Returns also S&P CNX Nifty Returns Granger Cause Hedge Funds' Investments in India.

10. Suggestions

On the basis of existence of negative correlation between Hedge Funds' Investments in India and S&P CNX Nifty Returns investors may take note while investing either in stock market or Hedge Fund sector. For long term investments one may take a note of non existence of long term relation between the Hedge Funds' Investments in India and S&P CNX Nifty Returns. Hence in long term portfolio both types of investments may be placed together. The results of Granger Cause may infer that the securities and stocks in S&P CNX Nifty do not seem to be similar with that of Hedge Funds' in India, which is subject to further confirmation. Furthermore, stock market returns and Hedge Funds' Investments in India belong to same economy, hence, note of this may be undertaken for risk reduction into the portfolio.

11. Implications

It is implicated that there is an existence of very low but negative correlation between Hedge Funds' Investments in India and S&P CNX Nifty. This may be used while shifting or changing portfolio vehicle. Directional causality is not present i.e. to say Hedge Funds' Investments in India do not Granger Cause S&P CNX Nifty Returns and vice-versa. In long run Hedge Funds' Investments in India and S&P CNX Nifty works independently. Hedge Funds' Investments in India may not affect stock market; also stock market may not affect Hedge Funds' Investments in India. It can also be inferred that one can even directly invest into Hedge Funds because of their uniqueness.

12. Limitations and the Scope of Further Study

The study has not taken Hedge Funds' Sectoral Investments in India. Also the study has taken only S&P CNX Nifty as a benchmark index to represent Indian Stock Market. Sectoral Hedge Fund's Investments in India and Sectoral Indian Stock Market indices may also be taken in further studies.

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