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Role of Mutual Fund for Developing Indian Stock Market in an Innovation Driven Global Economy: An Empirical Study

*Dr. Harmender Singh Saluja
**Dr. N. K. Totala
***Dr. Sunita Totala
*Professor & HOD, MBA Programs
Maharaja Ranjit Singh College of Professional Sciences
**Reader, Institute of Management Studies
Devi Ahilya University
***Assistant Professor
Shree Cloth Market Kanya Vanijya Mahavidyalaya
Indore, M.P., India

Abstract

Mutual funds play vital role in capital formation from small savings and its transformation, allocation, and financing to new investment initiatives. Today mutual funds have become widely popular and effective way for investors to participate in financial markets in an easy and low-cost fashionable way. Mutual fund industry plays a dynamic role in developing competencies in terms of market efficiency by mobilizing savings and skillfully channeling the funds in the stock market, which lead development of stock market and its efficiency.

The present study attempts to test the Strong Form of Market Efficiency of Indian Stock Market by evaluating performance of mutual funds and comparing it with benchmark BSE SENSEX index returns. The study also tries to explore the role of mutual funds for developing Indian Stock Market in an innovation driven global economy. For this, returns from daily closing NAV's of open ended equity diversified mutual funds and BSE SENSEX Index from April 2010 to March 2017 were used. The performance of mutual funds was measured by using Risk and Return Analysis, Sharpe's Measure, Treynor's Measure and Jensen's Measure to test the efficiency as a reflection of competing in an innovation driven global economy.

Keywords: *Indian Stock Market; Strong Form Market Efficiency; Open Ended Equity Diversified Mutual Funds; BSE SENSEX Index.*

Introduction

Mutual funds industry has been growing fast since the globalization of the economy in 1990 -91. Mutual funds play an important role in the process of conversion of savings of individual small savers into investment. Mutual funds are a best investment alternative for those who do not have much knowledge about how to trade in stock market. Mutual funds offer a fortune of benefits to the small investors. Fund managers gather and process information, collect savings, identify suitable opportunities for investment, make best possible investment strategies and then invest funds accordingly. They continuously monitor the progress of these investments. Mutual funds are supposed to become the best investment vehicle for small investors who once upon a time were interested in direct equity investment.

Mutual funds play vital role in capital formation from small savings and its transformation, allocation, and financing to new investment initiatives. Today mutual funds have become widely popular and effective way for investors to participate in financial markets in an easy and low-cost fashionable way. Mutual fund industry plays a dynamic role in developing competencies in terms of market efficiency by mobilizing savings and skillfully channeling the funds in the stock market, which lead development of stock market and its efficiency.

Concept Of Mutual Fund

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A Mutual Fund is a trust that pools the savings of a number of investors who share a common financial goal. The money so collected is then invested in capital market instruments such as shares, debentures and other securities. The income earned through these investments and the capital appreciations realized are shared by its unit holders in proportion to the number of units owned by them. Thus a Mutual Fund is the most suitable investment for the individual investor as it offers an opportunity to invest in a diversified, professionally managed basket of securities at a relatively low cost (Nimalathasan and Gandhi, 2012).

Why Investments In Mutual Funds?

A mutual fund is an entity that pools money from various investors and invests the pooled money in different types of securities and assets. Mutual Funds are primarily helpful to small investors who have small or moderate investible money available with them. By investing in Mutual Funds, small investors get the benefits of diversification, liquidity, safety, professional management etc. A mutual fund in India has fund sponsor, trustees, asset management company, custodians, distributors and registrar and transfer agents.

Role Of Mutual Funds In Indian Stock Market

In the financial market ecosystem, asset management companies facilitate financial intermediation and portfolio diversification. Besides providing financial stability, they help investors diversify their assets more easily and can provide financing to the real economy. The Indian mutual fund industry is one of the fastest growing and most competitive segments of the financial sector. In the last two decades the mutual fund industry has shown impressive growth not just in the scale of assets under management (AUM) but also in terms of schemes and products.

Mutual funds witnessed impressive growth in terms of net resource mobilization and assets at the end of the financial year 2016-17. The gross resources mobilized by all the fund houses stood at Rs.1,76,15,549 crore in 2016-17 as compared to Rs.1,37,65,555 crore in the previous year, showing a tremendous increase of 28.0 per cent. Correspondingly, redemption increased by 26.7 per cent to Rs.1,72,72,500 crore in 2016-17. The mutual fund industry saw net inflows to the tune of Rs. 3,43,049 crore in 2016-17, demonstrating an increase of almost 3 times from 2015-16. The net annual inflows in income oriented funds in the year ending March 31, 2017 stood at Rs. 2,13,154 crore, which is 6.5 times more than the annual inflows in the year ending March 31, 2016 (SEBI Annual Report 2016,2017).

S&P Bse Sensex Index

The Indian Stock Market is considered to be one of the earliest in Asia and is regarded as the barometer of the health of the Indian economy. Indian Stock Market is represented by two major stock exchanges i.e., Bombay Stock Exchange (BSE) and National Stock Exchange (NSE), and their representative indexes are SENSEX, currently known as S&P BSE SENSEX and S&P CNX Nifty, respectively. S&P BSE SENSEX or Standard and Poor's Bombay Stock Exchange Sensitivity Index is a value-weighted index that was started on January 1st, 1986. The S&P BSE SENSEX is regarded as the pulse of the domestic stock markets in India. It consists of the 30 largest and most actively traded stocks, representative of various sectors, on the Bombay Stock Exchange (www.bseindia.com).

Efficiency Market Hypothesis (Emh)

Efficient market hypothesis is the idea that information is quickly and efficiently incorporated into assets prices at any point in time and cannot be used to foretell future price movements. Consequently, three versions of efficient market hypothesis are based on the level of available information. Weak form efficiency hypothesis basically asserts that one cannot use past price changes to achieve abnormal profits out of transaction costs. Semi-strong form of efficiency hypothesis enhances information sets to include all current and publicly available information. Under this form, all publicly available information is quickly incorporated to stock prices to

prevent investors trading on this piece of information from extra profits in a stock market. According to strong-form efficiency stock prices reflect all information whether publicly available or not. Strong-form efficiency implies no inside information is useful to yield excess profit in an efficient capital market by investors (Fama, 1965, 1970).

Literature Review

An study measure the performance of 138 open ended equity mutual funds managed by 17 asset management companies in Thailand during the period of 2002-2007. The performance of mutual funds was measured using Treynor ratio, Sharp ratio and Jensen's alpha. Study concluded that the performance of Thai open ended mutual funds significantly outperform the market. Soongswang, Amporn (2009). Another study evaluated the performance of mutual fund schemes and compared with benchmark return. The study used a sample of 23 schemes for the period from April 2002 to March 2007. The study used the methodology of Sharpe, Jensen and Fama for the performance evaluation of mutual funds. Study found that that 13 schemes out of 23 schemes selected had superior performance than the benchmark portfolio in terms of Sharpe ratio, 13 schemes had superior performance of Treynor ratio and 14 schemes had superior performance according to Jensen measure. The Fama's measure indicated in the study that the returns out of diversification were less. Finally, it was concluded that the mutual funds outperformed the benchmark of stock market (Prabakaran and Jayabal, 2010).

Another study uses the approach to testing efficiency of Indian Capital Markets by developing a mutual fund index, developed on the basis of NAV changes of 20 selected funds, existing in the last 11 years. Such an index's performance is then compared with the performance of CNX NIFTY index using statistical tools like descriptive statistics and a student's t-test. Study concluded that the outperformance of mutual funds over market are statistically insignificant and the Indian Stock Market is found to be efficient and does not provide a consistent abnormal return earning opportunity to any market participant (Tanksali and Kumar, 2014). A study was conducted to compare the performance of selected equity funds, debt funds and hybrid funds in India for the period of 2009-10 to 2013-14. It was found that the average return generated by mutual funds of selected Indian companies was above the risk free return of 91 day t-bill and the benchmark return. Further, the equity mutual funds scheme of selected Indian companies had outperformed the benchmark index i.e. BSE SENSEX by large margins. The debt mutual funds schemes of selected Indian companies were also outperformed. Hybrid Mutual funds schemes also generated the average return above the benchmark CRISIL balanced fund index. Finally it was concluded that the performance of mutual funds of selected Indian companies outperform the market (Adhav and Chauhan, 2015).

Research Methodology

The Study

The present study is an empirical study. It attempts to test the Strong Form of Market Efficiency of Indian Capital Market with reference to evaluation of performance of top 10 open ended equity diversified growth mutual funds and comparing it with the BSE SENSEX Index as benchmark.

Objectives

- To compare the performance of open ended equity diversified growth mutual funds with BSE SENSEX Index return.
- To test the Strong Form of Market Efficiency of Indian Capital Market by evaluating the performance of open ended equity diversified growth mutual funds in India.

Hypotheses

To test the above objectives following null hypothesis were framed:

- H_{01}: Open ended equity diversified growth mutual funds are not earning higher return than the BSE SENSEX Index return.

- H_{02}: Indian Capital Market is not Strong Form Efficient with reference to open ended equity diversified growth mutual funds performance.

DATA

The present study is based on secondary data. Daily closing NAV's of top 10 open ended equity diversified growth mutual funds and BSE SENSEX have been used for the period of 7 years from April 2010 to March 2017. The secondary data were collected from websites of respective mutual funds, www.bseindia.com, www.mutualfundsindia.com and www.yahoofinance.com.

SAMPLE DESIGN

Daily closing NAV's of best performing open ended equity diversified mutual funds schemes have been selected on the basis of last 5 years performances. The fund schemes are ICICI Prudential Discovery Fund - IP- Growth, ICICI Prudential Discovery Fund – Growth, Birla Sun Life Dividend Yield Plus – Growth, Reliance Equity Opportunities Fund – Growth, ING Dividend Yield Fund – Growth, IDFC Premier Equity Fund - Regular – Growth, Quantum Long-Term Equity Fund – Growth, HDFC Equity Fund - Growth, Birla Sun Life India Gen Next Fund – Growth, UTI Dividend Yield Fund – Growth.

Tools For Analysis

Return of fund schemes and the market has been calculated from the NAVs and the daily index value respectively. Growth in the value of each day over the previous day has been calculated and it has been divided by the value of the previous day; the average of the full series has been taken. The performance of mutual funds was measured by using Risk and Return Analysis, Sharpe's Measure, Treynor's Measure and Jensen's Measure to test the Strong Form Efficiency of Indian Stock Market.

Data Analysis & Interpretation

Table 1: Risk & Return Analysis Of Sample Mutual Funds Scheme

S. No	Scheme Name	Fund Return	S.D. Fund	BSE SENSEX Benchmark Return	Beta (Market Risk)
1	ICICI Prudential Discovery Fund - IP- Growth	0.04548 3672	1.52488 4576	0.043456334	0.91066207 2
2	ICICI Prudential Discovery Fund - Growth	0.05605 3325	1.44591 6018	0.043456334	0.92610785 9
3	Birla Sun Life Dividend Yield Plus - Growth	0.05219 3541	1.66672 732	0.043456334	0.93011927 3
4	Reliance Equity Opportunities Fund - Growth	0.09608 9129	2.62173 5907	0.043456334	0.01157476 7
5	ING Dividend Yield Fund - Growth	0.05979 9268	1.35864 2929	0.043456334	1.11671131 7
6	IDFC Premier Equity Fund - Regular - Growth	0.06339 878	1.46315 947	0.043456334	1.04063557 7
7	Quantum Long-Term Equity Fund - Growth	0.05690 9393	1.47285 7635	0.043456334	0.96261134 7
8	HDFC Equity Fund - Growth	0.04936 3098	1.51816 2701	0.043456334	1.03761739 4
9	Birla Sun Life India Gen Next Fund - Growth	0.05516 0764	1.54865 4506	0.043456334	0.93798569 7
10	UTI Dividend Yield Fund - Growth	0.05318 1875	1.33342 4373	0.043456334	0.89739275 7
	Average	0.05876 328	1.59541 6544	0.043456334	0.87714180

Table 1 indicates the risk and returns statistics for the mutual funds schemes and the market return. Returns of both fund schemes and market has been calculated from the NAV and the daily S&P BSE SENSEX index value respectively. Growth in the value of each day over the previous day has been calculated and it has been divided by the value of the previous day, the

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average of the full series has been taken. The results of Risk & Return Analysis reveled that all the 10 mutual fund earned higher return individually than the S&P BSE SENSEX Index i.e., the benchmark return. This implies that all the 10 mutual fund schemes outperform the market performance. The result shows that 100% of the sample mutual funds have earned superior returns than the benchmark return. It is also observed that the average return earned by the sample mutual funds is 5.87%, whereas the average return of the benchmark is 4.34% which is lower than the mutual funds return. The average risk for the sample funds is 15.95% whereas the average risk of the benchmark is 8.77%. This shows that the funds have taken much higher risk than the benchmark.

Table 2: Sharpe Ratio for the Sample Mutual Funds Schemes

S. No.	Scheme Name	Sharpe Ratio	
			BSE SENSEX as Benchmark
1	ICICI Prudential Discovery Fund - IP- Growth	0.031935587	0.043456334
2	ICICI Prudential Discovery Fund – Growth	0.047706287	0.043456334
3	Birla Sun Life Dividend Yield Plus – Growth	0.034953072	0.043456334
4	Reliance Equity Opportunities Fund – Growth	0.050875094	0.043456334
5	ING Dividend Yield Fund – Growth	0.049428452	0.043456334
6	IDFC Premier Equity Fund - Regular – Growth	0.048380179	0.043456334
7	Quantum Long-Term Equity Fund – Growth	0.031698182	0.043456334
8	HDFC Equity Fund – Growth	0.052043833	0.043456334
9	Birla Sun Life India Gen Next Fund – Growth	0.050644582	0.043456334
10	UTI Dividend Yield Fund – Growth	0.05890288	0.043456334

Table 2 shows the values of Sharpe Ratio of funds and the benchmark return. It is an excess return earned over the risk free return i.e; the Standard Deviation. Higher Sharpe Ratio of the fund schemes than the benchmark return indicates better performance of fund schemes and vice versa. Out of 10 mutual funds schemes 07 schemes outperform the market, as these funds schemes recorded better Sharpe index than the market and 03 were not outperform the benchmark i.e. market. In total 70% of fund schemes have recorded better Sharpe Ratio in comparison to the relevant benchmark portfolio i.e. BSE SENSEX return. This further strengthens earlier conclusion that on average mutual funds have performed better with regard to return on investment as compared to market. The better performance made by the fund schemes than the market indicates that the fund managers who have full access to the inside information can make best use of it in order to earn higher return.

Table 3: Treynor's Ratio of the Sample Mutual Funds Scheme

	Treynor's Ratio of the Schemes		
S.No	Scheme Name	Treynor's Ratio	Benchmark
1	ICICI Prudential Discovery Fund - IP- Growth	0.034674368	0.043456334
2	ICICI Prudential Discovery Fund - Growth	0.065874537	0.043456334
3	Birla Sun Life Dividend Yield Plus - Growth	0.034252865	0.043456334
4	Reliance Equity Opportunities Fund - Growth	0.872478343	0.043456334
5	ING Dividend Yield Fund - Growth	0.055526822	0.043456334

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6	IDFC Premier Equity Fund - Regular – Growth	0.063867377	0.043456334
7	Quantum Long-Term Equity Fund – Growth	0.048924812	0.043456334
8	HDFC Equity Fund – Growth	0.048347367	0.043456334
9	Birla Sun Life India Gen Next Fund – Growth	0.052162186	0.043456334
10	UTI Dividend Yield Fund – Growth	0.048670794	0.043456334

Table 3 shows the Treynor's measure of different fund schemes along with Benchmark portfolio. It is the excess return earned over risk-free return per unit of systematic risk i.e. Beta. It evaluates the performance with respect to systematic risk. It can be observed from Table 3 that 08, out of 10 fund schemes outperform their respective benchmark i.e. BSE SENSEX return. This again implies that 80% of the fund schemes have outperformed their respective Benchmarks. This indicates that the fund schemes outperformed the market in terms of total risk including systematic risk.

Table 4: Jenson's Index

Jensen's Measure

S. No.	Scheme Name	Fund Returns	Alpha
1	ICICI Prudential Discovery Fund - IP- Growth	0.068627017	0.043456334
2	ICICI Prudential Discovery Fund - Growth	0.083195633	0.043456334
3	Birla Sun Life Dividend Yield Plus - Growth	0.077272321	0.043456334
4	Reliance Equity Opportunities Fund - Growth	0.057651614	0.043456334
5	ING Dividend Yield Fund - Growth	0.089502739	0.043456334
6	IDFC Premier Equity Fund - Regular - Growth	0.088768127	0.043456334
7	Quantum Long-Term Equity Fund - Growth	0.067698399	0.043456334
8	HDFC Equity Fund - Growth	0.071399529	0.043456334
9	Birla Sun Life India Gen Next Fund - Growth	0.066342384	0.043456334
10	UTI Dividend Yield Fund - Growth	0.056499352	0.043456334

Table 4 shows the results of Jenson's Measure. The positive value of alpha posted by the schemes indicates its better performance. Jenson's measure is the regression of excess return of the scheme with excess return of the market acting as dependent and independent variables. As shown in Table 4 out of all the 10 fund schemes chosen for study have positive alpha values. This implies that higher or superior performance of the fund schemes than the market. So this indicates that fund managers are able to earn superior return by taking the advantage of inside information on which they have full access.

Conclusion

On testing the Strong Form of Market Efficiency of Indian Stock Market by evaluating performance of mutual funds and comparing it with BSE SENSEX as benchmark return it was found that in case of Risk and Return Analysis all the 10 mutual funds schemes outperformed the market. In case of Sharpe's Measure 07 out of 10 mutual funds schemes outperformed. Where as, for Treynor's Measure 08 out of 10 mutual funds schemes outperformed and for Jensen's measure all the 10 mutual funds schemes outperformed and have superior returns than the respective benchmark returns i.e., BSE SENSEX returns. Thus the null hypothesis that open ended equity diversified growth mutual funds is not earning higher return than the BSE SENSEX Index return is rejected. So, it is conclude the mutual funds are earning higher returns in long term. On the whole, the results conclude that the mutual fund's performance is superior to that of the market returns. This implies that the fund managers are able to earn abnormal

return by taking the advantage of the inside information to which they have full access than the other market players like individual investors. So, the null hypothesis that and the null hypothesis that Indian Capital Market is not Strong Form Efficient with reference to open ended equity diversified growth mutual funds performance is accepted. It means that Indian Capital Market is not Strong Form Efficient with reference to mutual funds performance. Finally it may be concluded that as mutual funds are outperforming than market returns so there exists no Strong Form of Market Efficiency.

Suggestions

As mutual funds have entered into the Indian Capital Market, playing important role for developing Indian Stock Market in an innovation global economy, there is need to take some strategy to bring more confidence among investors for which mutual fund would be able to project the image of the market successfully to achieve efficient market existence. Steps should be taken for mutual funds to make fair and truthful disclosures of information to the investors, so that subscribers know what risk they are taking by investing in mutual fund including non systematic risks. Greater degree of disclosure is required from mutual funds regarding there asset management company and its capabilities to manage timings of assets turnover and regarding professional qualifications of mutual funds managers.

Implications

Non existence of Strong Form of Market Efficiency implies that market regulators needs legislative improvement towards leakage of information. The role of media for corporate news further strengthened to timely circulate information among all stakeholders rightly and quickly to all to reflect all information in to market price, so that no one can be able to earn abnormal returns on the basis of insider information.

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