IMPACT OF DEMONETIZATION ON STOCK MARKET IN INDIA

[1]DR. S.GAUTAMI, MBA, Ph.D.
Associate Professor,
S V College of Engineering, Tirupati-517501

***ABSTRACT:** To gauge the impact of demonetization on growth, one requires distinguishing between liquidity, wealth, and income effect. Loss of demand due to liquidity effect or as one would put it 'unavailability of adequate quantum of rupee notes' would be transient and can be recouped to a large extent. This study brings the facts & figures of investor's investment pattern and across the world, mutual fund sector is observed as a serious mechanism to direct investor fund in to the capital market. Performance of the SBI Nifty index fund need to be studied with the changes in the economic policies and merging strategy of SBI group made relevance of this sensitive study. The objectives of the study are to identify risk and returns involved in Nifty index fund, to evaluate and analyse the performance of SBI Nifty index fund and benchmark (Nifty 50 index) during pre-demonetization and post-demonetization.*

***Key words:** Demonetization, mutual fund sector, Nifty index fund.*

INTRODUCTION

Indian markets witness a downfall partly due to rising markets sell-off after Donald Trump's victory and declaration of demonetization of high value notes by the Indian Government. In the equity markets, Nifty witness down 3% since 8th November 2016, Performance down the capitalization curve worsened with the NSE Midcap index and the NSE Smallcap index underperforming the large cap Nifty by 2.9% and 4.6%, respectively. FIIs sold US$ 2 billion which was suited with considerably higher buying by domestic institutions. The demonetization impact might sustain for more than a quarter or two but given that there are too many moving parts, its bit too early to call. While the disruption in economic activity particularly on discretionary consumption may drive sentiments, one must not lose sight of the fact that a good part of index earnings (Technology, healthcare, energy, staples, telecom, global commodities etc) may remain mostly insulate. Barring the risk of a deeper slowdown leading to systemic balance sheet issues, 'Digitalization of finance' and 'financialization of savings' actually augur very well for financials (almost 30% of index).

A Mutual fund is a pool of money that is managed on behalf of the investors, by a Professional fund manager. The manager uses the money to buy stocks, bonds and other securities according to specific investment objective that have been established for the fund. In return of the investment, the investors are given units for that fund. The investments range from shares to debentures to money market instruments. Each mutual fund with different type of schemes is managed by respective Asset Management Company (AMC). An investor can invest his money in one or more schemes depending upon his choice. The income earned by the investor and the capital appreciation realized by the scheme is shared by the unit holders in proportion to the number of units held by him. Thus mutual fund is a best investment option for a common investor as it offers an opportunity to invest in a diversified, professionally managed portfolio at a relatively lower cost.

Mutual Funds in India are governed by the SEBI (Mutual Fund) Regulations 1996 as amended from time to time.

SBI NIFTY INDEX SCHEME

SBI NIFTY INDEX scheme is an open-ended Equity Linked Savings Scheme helps the investors to gain more returns.It has a lock-in period of 3 years. This fund helps investors to address two critical issues:

- Investment planning
- Wealth creation

SBI NIFTY INDEX fund

Fund category	:	Index
Scheme plan	:	Growth
Scheme type	:	Open Ended from 1999
Launch date	:	Jan-14-2002
52-Week High	:	77.805(30/03/2017)
52-Week Low	:	63.753 (04/07/16)
Fund manager	:	Ravi prakash Sharma
AMC	:	SBI Funds Management Ltd
Scheme Objective	:	Investment objective of the scheme is to invest in stocks of companies comprising S&P Nifty index and endeavor to achieve returns equivalent to Nifty by passive investment
Risk Grade	:	Above average
Return Grade	:	Below average
Net Assets (Cr)	:	38.39(31/12/16)
Benchmark	:	S&P CNX Nifty

REVIEW OF LITERATURE

There is an extensive collection of literature which mainly focuses on US funds and investors but very limited work has been done on mutual funds that exist in emerging markets. This could be due to the difficulties in portfolio evaluation of these markets (Hwang and Satchell, 1998) Moreover , the literature available on behavioral finance is also limited both for developed and emerging markets and not much information is available about investor perception, preference, attitudes, and behavior. Whatever is able to select a mutual fund which is able to offer high returns with acceptable risk is a complex task.

Elton and Gruber,grind blatt and titman (1989) were Consistent with these findings that there is some empirical evidence that mutual fund investors make purchase decision on the basis of past performance at el 1990 Paterl et al 1992 .However other evidence suggests that consumers are influenced by factors other than return and risk. A consumer report (1990) server of, mutual fund in investors found that although past performance and level of risk were relevant like amount of sale charge management fees fund manager reputation clarity of funds accounting statements recommendation from a financial magazine or newsletter.

Some studies reveal that there is only a slight positive relationship or no relationship at all between previous performance and current returns (Blake et al 1993 Bogle 1992 Brown and Goetz man 1995:beown at 1992) raised the question of why poorly performing funds still survive Harless and Peterson (1998) they explain that investors tend to choose funds based on previous performance but stick to these funds despite their poor return in a recent study of consumers rationally and the mutual fund purchase decision.

Capon et al 1992 explored the extent to which investors make purchase decision inconsistent with modern finance theory .The theory suggested that purchase decisions for financial assets should be made on the basis of investors beliefs regarding the future return and risk of those assets. Markowitz 1959 study results offered support the mutual fund investment decision is better considered in a multi attribute framework where return and risk are merely two aspects of a set of attributes whose importance varies across consumers however one might hypothesize intuitively that as mutual fund purchase value increases investors would behave in a more rational manner simply because of the magnitude of potential gains and losses.

NEED FOR THE STUDY

Index funds are low-cost mutual funds that track underlying index. For example SBI nifty index fund- Nifty plan invests in a way that its performance is almost same as nifty 5o index.

index funds are funds which aim to replicate the constituents of a particular index such that the performance of the fund is commensurate to the performance of the underlying index.

Such funds are suitable for investors requiring low cost passive investments without any active management involved.

OBJECTIVES OF THE STUDY

To identify risk and returns involved in Nifty index fund.

To analyse the performance of SBI Nifty index fund and benchmark (Nifty 50 index) during pre-demonetization and post-demonetization.

HYPOTHESIS OF THE STUDY

$H_0$1: There is no significant difference between the performance of SBI Nifty index fund and benchmark (Nifty 50 index) during pre-demonetization and post-demonetization.

RESEARCH METHODOLOGY

SOURCES OF DATA:

The data has been collected based on purely secondary data.

Secondary data sources

Secondary data has been collected through internet, books, magazines, journal, manual & records of SBI Funds Management Pvt. Ltd.

Type of study: Descriptive

Tools used: The tools used to compare the fund performance with benchmark are Mean, Standard deviation and Beta.

FINANCIAL TOOLS

- **Mean ,Standard Deviation, Beta, Correlation, t Test**

LIMITATIONS

The study is confined to data available from fact sheets and websites.

There is less period of time to analyze the future performance of nifty index fund scheme.

Micro level data have been considered for analyzing the facts.

DATA ANALYSIS & INTERPRETATION

Table: 1.1 Performance of SBI Nifty Index Fund By Using Mean & Standard Deviation

Calculation of Mean &Standard Deviation of Selected Scheme for 2014

Date	Opening	Closing	Returns®
Jan-14	53.67	51.84	-0.03446
Feb-14	51.1	53.39	0.0299
Mar-14	52.92	56.91	0.06593
Apr-14	57.06	56.74	-0.00299
May-14	56.72	61.2	0.078604
Jun-14	62.36	64.58	0.055229
Jul-14	64.78	65.58	0.015485
Aug-14	65.65	67.65	0.031565
Sep-14	68.27	67.65	0
Oct-14	67.49	70.6	0.043607
Nov-14	70.61	72.74	0.030312
Dec-14	72.46	70.06	-0.03684

Source: Collected from the Website bluechipfundindia.co.in

Mean: 0.023029 Standard Deviation: 0.036576

Table: 1.1.1 Calculation of Correlation and Beta for 2014

Month	Index	returns(I)	returns®
Jan-14	6089.5	-0.034026015	-0.03446
Feb-14	6276.95	0.030782494	0.0299
Mar-14	6704.2	0.068066497	0.06593
Apr-14	6696.4	-0.00116345	-0.00299
May-14	7229.95	0.07967714	0.078604
Jun-14	7611.35	0.052752785	0.055229
Jul-14	7721.3	0.014445532	0.015485
Aug-14	7954.35	0.030182741	0.031565
Sep-14	7964.8	0.001313747	0
Oct-14	8322.2	0.044872439	0.043607
Nov-14	8588.25	0.03196871	0.030312
Dec-14	8282.7	-0.035577679	-0.03684

Source: Collected from the Website bluechipfundindia.co.in

Beta: $Beta(\beta) = \frac{n\sum XY-(\sum X*\sum Y)}{n\sum X^2-(\sum X)^2}$ **=1.002992**

Correlation: 0.99923

Average returns for the year 2014 is 0.023029 and highest returns are from May and negative returns are from January and December.
Volatility is 0.0365 from the expected normal returns.
Beta is >1 i.e. 1.0029 so risk level is high.
Correlation is 0.99923.

Table: 1.2
Performance of SBI Nifty Index Fund By Using Mean & Standard Deviation
Calculation of Mean & Standard Deviation of Selected Scheme for 2015

Month	Opening	Closing	Returns
Jan-15	70.07	74.37	0.061519
Feb-15	74.25	74.54	0.002286
Mar-15	75.48	71.64	-0.03891
Apr-15	72.43	69.05	-0.03615
May-15	70.32	71.05	0.028965
Jun-15	71.05	70.68	-0.00521
Jul-15	71.39	72.19	0.021364
Aug-15	72.27	67.41	-0.06621
Sep-15	65.88	67.23	-0.00267
Oct-15	67.24	68.22	0.014726
Nov-15	68.09	67.08	-0.01671
Dec-15	67.24	67.11	0.000447

Source: Collected from the Website bluechipfundindia.co.in

Mean: 0.00305 Standard Deviation: 0.033991

Table: 1.2.1 CALCULATION OF CORRELATION AND BETA FOR 2015

Month	Index	Return(I)	Return(R)
Jan-15	8808.9	0.063530008	0.061519
Feb-15	8901.85	0.010551828	0.002286
Mar-15	8491	-0.04615332	-0.03891
Apr-15	8181.5	-0.03645035	-0.03615
May-15	8433.65	0.030819532	0.028965
Jun-15	8368.5	-0.00772500	-0.00521
Jul-15	8532.85	0.019639123	0.021364
Aug-15	7971.3	-0.06581036	-0.06621
Sep-15	7948.9	-0.00281008	-0.00267
Oct-15	8065.8	0.014706437	0.014726
Nov-15	7935.25	-0.01618562	-0.01671
Dec-15	7946.35	0.001398822	0.000447

Source: Collected from the Website bluechipfundindia.co.in

Beta: $Beta(\beta) = \frac{n\sum XY-(\sum X*\sum Y)}{n\sum X^2-(\sum X)^2}$ **=0.958064**

Correlation: 0.99548

Average mean for the year 2015 is -0.003 and highest returns is in the month of January are and more negative returns are from August.
Volatility is 0.03399 from the expected normal returns.
Beta is < 1 i.e. 0.95806 so risk level is under control.
Correlation is 0.9954.

Table: 4.3 PERFORMANCE OF SBI NIFTY INDEX FUND BY USING MEAN & STANDARD DEVIATION

Calculation of Mean & Standard Deviation of Selected Scheme for 2016

Month	Opening	Closing	Return
Jan-16	67.26	63.83	-0.04887
Feb-16	63.77	58.96	-0.0763
Mar-16	60.93	65.39	0.109057
Apr-16	65.17	66.27	0.013458
May-16	65.9	68.96	0.040592
Jun-16	69.12	70.25	0.018706
Jul-16	70.59	73.31	0.043559
Aug-16	73.29	74.58	0.017324
Sep-16	74.48	73.08	-0.02011
Oct-16	74.15	73.31	0.003147
Nov-16	73.22	69.78	-0.04815
Dec-16	69.5	69.4	-0.00545

Source: Collected from the Website bluechipfundindia.co.in

Mean: 0.003913 Standard Deviation: 0.049597

Table: 4.3.1 CALCULATION OF CORRELATION AND BETA BETWEEN NIFTY INDEX AND NIFTY INDEX FUND FOR 2016

Month	Index	Return(I)	Return(R)
Jan-16	7563.55	-0.048173061	-0.04887
Feb-16	6987.05	-0.076220822	-0.0763
Mar-16	7738.4	0.107534653	0.109057
Apr-16	7849.8	0.014395741	0.013458
May-16	8160.1	0.03952967	0.040592
Jun-16	8287.75	0.015643191	0.018706
Jul-16	8638.5	0.042321499	0.043559
Aug-16	8786.2	0.017097876	0.017324
Sep-16	8611.15	-0.019923289	-0.02011
Oct-16	8625.7	0.00168967	0.003147
Nov-16	8224.5	-0.046512167	-0.04815
Dec-16	8185.8	-0.004705453	-0.00545

Source: Collected from the Website bluechipfundindia.co.in

Beta: $Beta(\beta) = \frac{n\sum XY-(\sum X*\sum Y)}{n\sum X^2-(\sum X)^2}$ **=0.003913**

Correlation: 0.049597

Average mean for the year 2016 is 0.0039 and highest returns is in the month of March are and more negative returns are from February.

Volatility is 0.0495 from the expected normal returns.

Beta is > 1 i.e; 1.0155 so risk level is high.

Correlation is 0.9997.

One-Sample Statistics

		Statistic	Bootstrap[a]			
			Bias	Std. Error	95% Confidence Interval	
					Lower	Upper
@2014	N	12				
	Mean	7453.4958	-2.3885	232.7966	6966.8231	7873.8553
	Std. Deviation	840.35562	-39.39981	121.23819	556.17394	1018.33229
	Std. Error Mean	242.58977				
@2015	N	12				
	Mean	8298.8208	1.3721	97.7238	8115.4610	8506.4955
	Std. Deviation	342.81698	-17.25394	53.10447	211.79412	417.92030
	Std. Error Mean	98.96274				
@2016	N	12				
	Mean	8138.2083	-5.8973	148.9646	7812.4285	8408.4368
	Std. Deviation	527.64346	-33.52199	110.32029	289.89164	693.70951
	Std. Error Mean	152.31755				

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

One-Sample Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper

@2014	30.725	11	.000	7453.49583	6919.5593	7987.4323
@2015	83.858	11	.000	8298.82083	8081.0053	8516.6364
@2016	53.429	11	.000	8138.20833	7802.9597	8473.4570

Bootstrap for One-Sample Test

	Mean Difference	Bootstrap[a]				
		Bias	Std. Error	Sig. (2-tailed)	95% Confidence Interval	
					Lower	Upper
@2014	7453.49583	-2.38848	232.79656	.001	6966.82306	7873.85531
@2015	8298.82083	1.37206	97.72380	.001	8115.46097	8506.49548
@2016	8138.20833	-5.89729	148.96463	.001	7812.42847	8408.43678

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

FINDINGS: 1 . Mean value of SBI Nifty Index fund is yielding high returns in the year 2014 (0.023029) and low returns in the year 2015 (-0.00305)
2.Standard Deviation of SBI Nifty Index fund is having high risk in the year 2016 (0.04959) and low risk in the year 2015 (0.0339)
3.Beta of SBI Nifty Index fund is having high risk compared to market returns in the year 2014 (1.0029) and low risk in the year 2016 (0.0039)
4.T test of Performance of Nifty index is fluctuating as 30.725, 83.858, 53.429 for 2014, 2015 & 2016 respectively. Hence there is effect of demonetization on the stock market, the null hypothesis is rejected.

SUGGESTIONS

SBI Nifty Index fund is having high risk, so investors are cautioned about investing in this to earn high returns.
SBI Nifty index has to be revised the portfolio to increase fund returns and provide to the investors a more secure investment option. It should take more efforts on spreading awareness about mutual Index funds as these investment instruments provides a higher return compared to other schemes.

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