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Investment Time Frame for Positive Return in Indian Capital Market

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ABSTRACT

In India, 95 percent of the household invest in bank deposits which provides fixed rate of interest. When we talk about the risky assets only 9.7 percent of the household invested in mutual funds followed by 8.1 percent in equity shares *(SEBI Investor survey 2015). F*inancial analysts and financial planners suggest that if the investors invest in these risky assets for a long term period they can reduce the risk and get inflation adjusted return. In order to know the meaning of long term, the study examines the investment time frame for positive return in Indian equity market represented by S&P BSE SENSEX and CNX Nifty. The study used monthly observations of market index over a period of 22 years (Jan 1995 to March 2017).The study employed Augmented Dicky Fuller test and found the returns are stationary at level. Using the above mentioned data the study calculated the Compounded Annual Growth Rate (CAGR) and found that the households will get positive return if they have invested in the index for 9 years and above.

JEL Classification Code: E22, C49, C87, D14.

Keywords: Long term, positive return, CAGR, Market return.

1. INTRODUCTION

In India, the household's savings and investments are skewed towards fixed income securities such as bank fixed deposits, post office schemes, life insurance policies, provident funds etc. The quantum of household investing in risky assets such as mutual funds, stocks are very less. One of the reasons attributed to such savings and investments pattern is that investments in mutual funds and stocks are risky.

According to SEBI investor's survey 2015, 95 percent of the household invested in the public deposit which provides fixed income to the investors, whereas in case of risky assets only 9.7 percent household invested in mutual funds followed by 8.1 percent in equity shares.

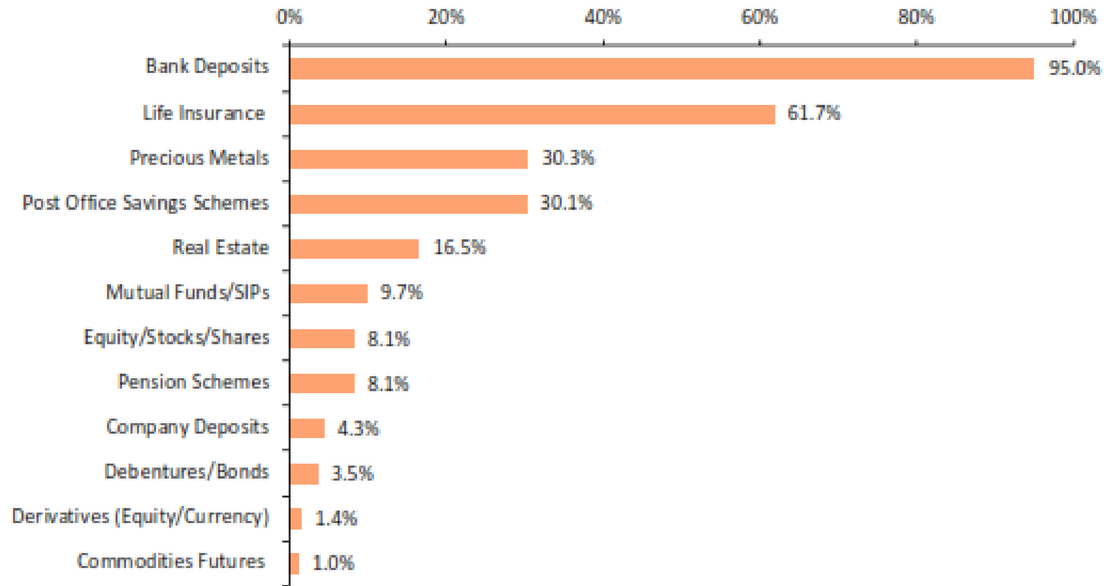

Figure 1: Investment and Savings vehicle used by Household
***Source:* SEBI investors survey 2015**

Table 1
Financial Assets held by Indian Households

Year	*Currency*	*Bank Deposits*	*Non-Banking deposits*	*Life Insurance Funds*	*Provident Funds & Pension Funds*	*Share & Debentures*
2012-13	10.9	56.1	1.7	17.8	12.1	4.3
2013-14	8	60.5	2.4	16	10.6	2.5
2014-15	10.7	46.9	2.2	19	16.3	4.6

Source: Outlook Money, May 2017

From the Table 1, one can infer that nearly half of the country's annual household savings were invested in fixed deposits, which is followed by Life Insurance Funds, Provident & Pension funds. In terms of risky assets such as shares and debentures it is less than 10 per cent in all the three years.

When, one request the financial planner for their suggestions to savings and investment, their advice to the household is that investment in stocks and mutual funds will provide inflation adjusted returns in the long-run. When the households request them to define the term long-term, they were not able to concretely define long-term and respond to them as 5 years, 7 years etc. Different people define it in a different way which the households find difficult to comprehend. Hence, the present study made an attempt to find out the time frame for generating positive return for Indian households in Indian Stock Market.

2. METHODOLOGY

Here the authors try to analyze the best (maximum) returns and the worst (minimum) returns of the market indices (SENSEX and Nifty) for 22 years between Jan 1995 to March 2017.

Augmented Dicky Fuller test (ADF) was employed to check whether the time series data of selected market indices are stationary or not. The test results were shown in the Table 2. The p value is found to be

significant indicating the rejection of H_0. That means, the data points of Sensex and Nifty are stationary at I(0).

Table 2
Stationary Test Results

Variables Name	*Augmented Dicky Fuller Test At level*	
	t-statistics	*P value*
SENSEX	–16.15215	0.0000*
NIFTY	–16.47087	0.0000*

*Significant level at 1 percent

Best scenario is defined as the time when the household will get the maximum return for the concerned period. Similarly the worst scenario means, the investor will get the minimum return for the concerned period. Thus, if the worst scenario period return is minus, it means, the investor will lose his money to that extent. If the same is positive, it indicates that the investors' capital is protected and he is getting some positive return for the concerned period.

The study calculated the rolling returns for 1 year to 22 years for both Sensex and Nifty using monthly data. Then from the rolling returns, the best returns and the worst returns for the 1 year to 22 years periods were calculated. Then, the compounded average growth rate (CAGR) for the best and worst returns for each period (1 year, 2 years, 3 years up to 22 years) is calculated for the study periods. The results of them are shown in Table 3.

Table 3
CAGR of SENSEX and NIFTY for the period Jan 1995 to 31st March 2017

Years	*SENSEX*		*NIFTY*	
	Best Scenario	*Worst Scenario*	*Best Scenario*	*Worst Scenario*
1	0.404392	–0.32848	0.381712	–0.32366
2	0.57572	–0.22899	0.567777	–0.19465
3	0.602956	–0.16563	0.566291	–0.14811
4	0.475948	–0.08021	0.45027	–0.0683
5	0.462241	–0.07301	0.438792	–0.04919
6	0.364966	–0.04049	0.344306	–0.0215
7	0.287376	–0.03639	0.277933	–0.02717
8	0.273263	–0.01837	0.261942	–0.00894
9	0.247434	0.030464	0.244907	0.035166
10	0.208646	0.054411	0.205162	0.059898
11	0.20388	0.077866	0.201732	0.0828
12	0.205748	0.069168	0.199218	0.07661
13	0.189119	0.07363	0.18146	0.078658
14	0.174834	0.067264	0.170608	0.06963
15	0.166718	0.096268	0.16212	0.10257
16	0.156107	0.093878	0.156388	0.096472

Years	*SENSEX*		*NIFTY*	
	Best Scenario	*Worst Scenario*	*Best Scenario*	*Worst Scenario*
17	0.141221	0.084105	0.143138	0.0875
18	0.136564	0.093286	0.139697	0.094678
19	0.127047	0.092564	0.129213	0.091353
20	0.12075	0.098708	0.122348	0.100938
21	0.112466	0.09444	0.1166	0.092214
22	0.101437	0.090776	0.103923	0.093143

Source: Author's estimation from NSE & BSE Websites

From the Table 3 one can infer that, if one has invested in the Indian capital market and held his investments for a period of 9 years and above, he would not have lost his capital even under the worst scenario. Thus, for both the Sensex & Nifty, the time frame to minimize the loss of capital to the investors is found out to be 9 years and above. Hence, we could say that keeping the money in the Indian stock market for a period of 9 years and above would ensure that the investors are better off in protecting their capital.

Table 4
Risk and Return Behaviour of SENSEX and NIFTY for the period Jan 1995 to 31st March 2017

Rolling Periods (in Years)	*Sensex*			*Nifty*		
	No of Observations	*Negative Return Data Points*	*Risk/Probability of Loss*	*No of Observations*	*Negative Return Data Points*	*Risk/Probability of Loss*
1	255	88	0.3450	255	85	0.3333
2	243	72	0.2962	243	67	0.2757
3	231	40	0.1731	231	32	0.1385
4	219	32	0.1461	219	23	0.1050
5	207	26	0.1256	207	15	0.0724
6	195	18	0.0923	195	12	0.0615
7	183	12	0.0655	183	7	0.0382
8	171	6	0.0350	171	3	0.0175
9	159	0	0	159	0	0
10	147	0	0	147	0	0
11	135	0	0	135	0	0
12	123	0	0	123	0	0
13	111	0	0	111	0	0
14	99	0	0	99	0	0
15	87	0	0	87	0	0
16	75	0	0	75	0	0
17	63	0	0	63	0	0
18	51	0	0	51	0	0
19	39	0	0	39	0	0
20	27	0	0	27	0	0
21	15	0	0	15	0	0
22	3	0	0	3	0	0

Source: Author's estimation

The same analysis is also carried out in a different manner. The calculated returns for different time frame (1 year to 22 years) were segregated as positive and negative returns. The Table 4 shows the probability of negative returns for different time period ranging between 1 year and 22 years. It was found out that for Nifty and Sensex, the probability of investors getting negative return is above zero for an investment horizon of up to 8 years. If any investor has invested for 9 years and above, his capital is not lost and he made some positive return. Thus, one could say that if any investor has invested in the Indian Capital Market for 9 years and above, he would not have lost his capital.

3. LIMITATIONS

The study is carried out for the main indices of Indian capital market. Hence, it could not be generalized for the Indian market as well as the international markets.

4. FUTURE STUDY

The same could be carried out for the other indices such as BSE100, BSE200, BSE500 etc. Also the same could be carried out for different categories of mutual funds to identify and classify the time frame for different categories of funds/investment for the benefits of different investors. Similarly it could be tested for the international markets as well.

5. CONCLUSION

The objective of any investor is to generate positive risk adjusted return. However, more than 90 per cent of the Indian households don't invest in the Indian capital market due to the fear of losing their money. If they are aware that they will not lose their money by investing their money for certain time frame, they may invest the quantum of money they can spare for such period in the capital market. Thus, the study found that the time frame to ensure that the investors will not lose their capital and will earn positive returns in the Indian Capital Market is 9 years and above.

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