



DECISION FUNCTION FOR MUTUAL FUND INVESTMENTS FOR RETAIL AND INSTITUTIONAL INVESTORS IN INDIA

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ABSTRACT

This study focuses on how make investment decisions for mutual funds. The investment decision is different for retail and institutional investors. Investors report that they consider many nonperformance related variables. When investors are grouped by similarity of investment decision process, a single small group appears to be highly knowledgeable about its investments. However, most investors appear to be naive, having little knowledge of the investment strategies or financial details of their investments. The present analysis focuses on the mutual fund investment decision function to establish the causal relationship inherently pertinent amongst the factors influencing one's decision to invest in the mutual funds. The decision variable leading to invest on mutual funds among the two group of investors may be differ from each other since their intention to invest on mutual funds and the amount of investment on mutual funds are differ. The present study has made an attempt on analyzing the important discriminant decision variable among the two group of investors of invest in mutual funds. Initially, the mean difference, its statistical significance and the discriminant power of the decision variable are computed.

KEYWORDS: Mutual Funds, Retail Investors, Institutional Investors, Decision Function

INTRODUCTION

Mutual fund in itself is deemed to be an institutional entity that encompasses the commonly derived and/or schematically accumulated financial goals of the community of investors. The money collected from a plethora of sources is invested by the fund manager in various types of securities depending on their duly specified objectives. A mutual fund, therefore, in its rudimentary conceptualization, is a collection of stocks and/or bonds, wherein an investor holds a share, which represents a part of the fund holding thereof.

OBJECTIVE

The present analysis focuses on the mutual fund investment decision function to establish the causal relationship inherently pertinent amongst the factors influencing one's decision to invest in the mutual funds.

The mutual fund investment function (IF) can be expressed as:

$$I_f = f(B_E, F_S, T_P, R_I, R_{FM}, P_P, L_F, C_M)$$

Whereas

- I_f – Mutual fund invested so far
- B_E – Brand equity
- F_S – Fund size

- T_F – Type of fund
- T_P – Type of portfolio and schemes
- R_I – Risk involved in the mutual fund
- R_{FM} – Reputation of fund manager
- P_P – Past performance of the fund
- L_F – Liquidity factors
- C – Current market conditions

ANALYSIS AND INTERPRETATION

The important decision variables among the retail investors are liquidity factors, risk involved in mutual fund and current market conditions since their respective mean scores are 4.1324, 3.8963 and 3.8643. Among the institutional investors, these decision variables are reputation of fund manager, type of fund and past performance of the fund since the respective mean scores are 4.2341, 4.1245 and 4.1149. Regarding the important given on the decision variables, the significant difference among the retail and institutional investors have been identified in the case of brand equity, family size, type of portfolio/scheme, risk involved in mutual fund, reputation of fund manager and liquidity factors since their respective 't' statistics are significant at five per cent level.

TABLE 1
Investors attitude on Decision Variables
One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Brand equity	524	2.14	.906	.040
Fund size	524	2.67	.889	.039
Type of fund	524	2.75	.904	.039
Type of portfolio/scheme	524	2.92	1.117	.049
Risk involved in mutual funds	524	2.74	.982	.043
Reputation of fund managers	524	2.91	.805	.035
Past performance of the fund	524	2.83	1.108	.048
Liquidity factors	524	3.03	1.028	.045
Current market conditions	524	2.02	.917	.040

One-Sample Test

	Test Value = 0					
	95% Confidence Interval of the Difference					
	T	Df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Brand equity	54.084	523	.000	2.141	2.06	2.22
Fund size	68.857	523	.000	2.674	2.60	2.75
Type of fund	69.745	523	.000	2.754	2.68	2.83
Type of portfolio/scheme	59.770	523	.000	2.916	2.82	3.01
Risk involved in mutual funds	63.859	523	.000	2.740	2.66	2.82
Reputation of fund managers	82.840	523	.000	2.914	2.85	2.98
Past performance of the fund	58.409	523	.000	2.828	2.73	2.92
Liquidity factors	67.448	523	.000	3.029	2.94	3.12
Current market conditions	50.501	523	.000	2.023	1.94	2.10

Sl.No.	Decision variables	Retail Investor		Institutional Investor		T-Statistics
		Mean	Standard Deviation	Mean	Standard Deviation	
1.	Brand equity	3.8184	0.4311	2.7508	0.2819	2.7568*
2.	Fund size	2.9963	0.4911	3.8164	0.3675	-2.4501*
3.	Type of fund	3.4561	0.7047	4.1245	0.3568	-1.5678
4.	Type of portfolio/scheme	2.4578	0.3891	3.9603	0.5576	-2.8103*
5.	Risk involved in mutual funds	3.8963	0.5723	2.8042	0.2438	-2.6089*
6.	Reputation of fund managers	3.2412	0.6369	4.2341	0.5441	-2.5142*
7.	Past performance of the fund	3.6891	0.5788	4.1149	0.5181	-2.5142*
8.	Liquidity factors	4.1324	0.8496	3.0245	0.4141	2.8642*
9.	Current market conditions	3.8643	0.7559	3.6869	0.4041	0.4565

*Significant at five per cent level.

Impact of Decision Variables on the Investment on Mutual funds

The decision variables may have its own influence on their investment on mutual funds. In order to analyse the impact of decision variables on the investment on mutual funds

have been analysed with the help of multiple regression analysis. The fitted regression model is

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + b_9X_9 + e$$

Whereas Y – investment on mutual fund

- X₁ – score on brand equity
 - X₂ – score on fund size
 - X₃ – score on type of fund
 - X₄ – score on type of portfolio and schemes
 - X₅ – score on risk involved in the mutual fund
 - X₆ – score on reputation of fund manager
 - X₇ – score on past performance of the fund
 - X₈ – score on liquidity factors
 - X₉ – score on current market conditions
 - b₁, b₂ . . . b₉ – regression co-efficient of decision variable
 - a – intercept and
 - e – error term
- The impact of decision variables on their investment on mutual funds among the retail and institutional investors have been analysed separately and also for pooled data. The resulted regression co-efficients are shown in Table 2.

TABLE 2

Regression Co-efficient of Decision Variables on the in Mutual fund Investment				
<i>Sl.No.</i>	<i>Decision variables</i>	<i>Number of Investors in</i>		<i>Total</i>
		<i>Retail</i>	<i>Institutional</i>	
1.	Brand equity	0.2498*	0.1438*	0.2092*
2.	Fund size	0.0913	0.1604*	0.1308*
3.	Type of fund	0.0678	0.1517*	0.1017
4.	Type of portfolio/ scheme	0.1133	0.1339*	0.1104
5.	Risk involved in mutual fund	-0.1032	0.1807*	0.1149
6.	Reputation of fund manager	0.0849	0.2403*	0.1636*
7.	Past performance of the fund	0.1448*	0.1917*	0.1509*
8.	Liquidity factors	0.1802*	0.1108	0.1344*
9.	Current market condition	0.1144	0.1039	0.1045
	Constant	0.9895	1.9637	1.3542
	R ²	0.7439	0.8137	0.8339
	F-statistics	9.5844*	13.4543*	0.8339

*Significant at five per cent level.

The significantly influencing decision variables on the investment on mutual funds among the retail investors are brand equity, past performance of the fund and liquidity factors since their respective regression co-efficients are significant at five per cent level. A unit increase in the importance given on the above said decision variables results in an increase in the investment on mutual funds by 0.2498, 0.1448 and 0.1802 units respectively. The change in importance given on decision variables result in an explanation on the change in the investment on mutual funds to the extent of 74.39 per cent. Among the institutional investors, the significantly influencing decision variables on the investment on mutual funds are brand equity, fund size, type of fund, type of portfolio/scheme, risks involved in mutual fund, reputation of fund manager and past performance of the fund. A unit increase in the importance given on above decision variables result in an increase in investment on mutual fund by 0.1438, 0.1604, 0.1517, 0.1339, 0.1807, 0.2403 and 0.1917 respectively. The changes in the investment on mutual funds is explained by the changes in the importance on decision variables to the extent of 81.37 per cent.

The analysis of pooled data reveals that the important decision variables influencing the investment on mutual funds among the investors are brand equity, fund size, reputation of fund manager, past performance of the fund and liquidity factors. The changes in the investment on mutual funds are explained by the changes in importance given on the decision variables to the extent of 83.39 per cent. The significant ‘F’ statistics show the viability of the fitted regression model.

Discriminant Decision Variable among the Retail and Institutional Investors

The decision variable leading to invest on mutual funds among the two group of investors may be differ from each other since their intention to invest on mutual funds and the amount of investment on mutual funds are differ. The present study has made an attempt on analyzing the important discriminant decision variable among the two group of investors of invest in mutual funds. Initially, the mean difference, its statistical significance and the discriminant power of the decision variable have been computed and illustrated in Table 3.

TABLE 3

Mean Difference and Discriminant Power of Decision Variable among the Retail and Institutional Investors

Sl.No.	Factors	Mean score among		Mean difference	T-Statistics	Wilks Lambda
		Retail investors	Institutional investors			
1.	Brand equity	3.8184	2.7508	1.0676	2.7568*	0.2911
2.	Fund size	2.9963	3.8164	-0.8201	-2.4501*	0.3648
3.	Type of fund	3.4561	4.1245	-0.6684	-1.5678*	0.4116
4.	Type of portfolio/ scheme	2.4598	3.9603	-1.5005	-2.8103*	0.1246
5.	Risk involved in mutual funds	3.8963	2.8042	1.0921	-2.6089*	0.2816
6.	Reputation of fund managers	3.2412	4.2341	-0.9929	-2.5142*	0.1807
7.	Post performance of the fund	3.6891	4.1149	-0.4258	-1.7089	0.3391
8.	Liquidity factors	4.1324	3.0245	1.1079	2.8642*	0.2246
9.	Current market conditions	3.8643	0.1774	0.4565	0.5701	

*Significant at five per cent level.

The significant mean difference among the two group of investors have been noticed in the case of brand equity, fund size, type of portfolio/scheme, risk involved in mutual funds, reputation of fund manager and liquidity factors since their respective 't' statistics are significant at five per cent level. The high mean difference is identified in the case of type of portfolio/schemes liquidity factors and risk involved in mutual funds since their respective mean difference are -1.5005, 1.1079 and 1.0921. The higher discriminant power is identified in the case of type of portfolio/scheme and reputations of fund manager since their respective Wilks Lambda are 0.1246 and 0.1807 respectively. The significant

decision variables are included to establish the two discriminant function. The unstandardized procedure have been followed. The estimated function is:

$$Z = -0.9317 + 0.1901 X_1 - 0.0966 X_2 - 0.1021 X_4 + 0.2614 X_5 - 0.1817 X_6 + 0.1913 X_8$$

The relative contribution of decision variables in total discriminant score is computed by the product of discriminant co-efficient and the mean difference of the respective decision variable. The results are given in Table 4.

TABLE 4
Relative Contribution of Discriminant Decision Variable in Total Discriminant Score

Sl.No.	Factors	Canonical Discriminant Co-efficient	Mean Difference	Product	Relative Contribution in total Discriminant Score
1.	Brand equity	0.1901	1.0676	0.2029	18.23
2.	Fund size	-0.0966	-0.8201	0.0792	7.12
3.	Type of portfolio	-0.1021	-1.5005	0.1532	13.76
4.	Risk involved in mutual funds	0.2614	1.0921	0.2855	25.64
5.	Reputation of fund manager	-0.1817	-0.9929	0.1804	16.21
6.	Liquidity factors	0.1913	1.1079	0.2119	19.04
	Total			1.1131	100.00

*Per cent of cases correctly classified: 72.08

The higher discriminant co-efficient is identified in the case of risk involved in mutual funds, liquidity factors and brand equity since their respective discriminant co-efficients are 0.2614, 0.1913 and 0.1901. It reveals the higher influence of the above said decision variables in the discriminant function. The higher relative contribution in total discriminant score is identified in the case of risk involved in mutual fund, liquidity factors and brand equity since its relative contributions are 25.64, 19.04 and 18.23 respectively. It reveals that the important discriminant decision variable among the two group of investors are risk involved in mutual fund, liquidity factors and brand equity. The estimated discriminant function correctly classify the cases to the extent of 72.08 per cent.

Discriminant Decision Variables among the Three Group of Investors

The investors are classified into three important groups namely ranking-driven investors (RDI), Active-information driven investors (AII) and advertiser-influenced investors (ADI). The importance given on the decision variables among the three group of investors have been examined with the help of its mean scores on the decision variables. The multi discriminant analysis have been administered to identify the important discriminant decision variable among the three group of investors. The results are given in Table 5.

TABLE 5
Mean Scores and Standardised Discriminant Function Co-efficients among Different Investors Groups

Sl.No.	Investors view on Decision Variable	Mean score among			Standardised Discriminant Function Co-efficient
		RDI	AII	ADI	
1.	Brand equity	3.0164	0.1468	3.9194	-0.9345*
2.	Fund size	3.7875	3.5165	3.3165	0.4541*
3.	Type of fund	3.9693	3.7076	3.5693	0.3097*
4.	Type of portfolio/ scheme	3.8441	3.3346	3.0143	0.6861*
5.	Risk involved in mutual fund	2.8185	3.6062	3.9145	-0.8117*
6.	Reputation of fund manager	3.9908	3.7908	3.3091	0.9139*
7.	Past performance of the fund	3.9661	3.8124	3.7443	0.2468*
8.	Liquidity factors	3.2717	3.6404	3.9233	-0.7133*
9.	Current market conditions	3.6265	3.9093	3.8144	-0.3741*
10.	Cluster size (in per cent)	23.31	31.37	45.32	100.00
11.	Eigen value				17.39
12.	Per cent of variance explained				81.48
13.	Canonical correlation				0.6783

*Significant at 5 per cent level.

The highly viewed decision variables among the RDI are reputation of fund manager, type of fund and past performance of the fund size their respective mean scores are 3.9908, 3.9693 and 3.9661. Among the AII, these decision variables are current market conditions, past performance of the fund and reputation of fund manager since their respective mean scores are 3.9093, 3.8124 and 3.7908. The highly viewed decision variables among ADI are liquidity factors, brand equity and risk involved in mutual funds since their respective mean scores 3.9233, 3.9194 and 3.9145. The important discriminant decisions variables among the three group of investors are brand equity, reputation of fund manager and risk involved in mutual fund since their respective discriminant co-efficients are -0.9345, 0.9139 and -0.8117.

CONCLUSION

The important given on the decision variables, the significant difference among the retail and institutional investors have been identified in the case of brand equity, family size, type of portfolio/scheme, risk involved in mutual fund, reputation of fund manager and liquidity factors since their respective 't' statistics are significant at five per cent level. The changes in the investment on mutual funds is explained by the changes in importance given on the decision variables to the extent of 83.39 per cent. The significant 'F' statistics show the viability of the fitted regression model. The important discriminant decisions variables among the three groups of investors are brand equity, reputation of fund manager and risk involved in mutual fund.

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