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Studying of the Factors Affecting on the Mutual Fund by Individual Investor in Iran, Malaysia, Turkey and US

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Abstract

This study examines the main criteria of domestic investors in mutual funds selection behavior and evaluates their performance and with a survey method and using a questionnaire, the behavior of domestic investors in selection of mutual fund was evaluated. Factor analysis along with Multinomial Logistic Regression was used to test the hypotheses of the research. The Findings of the study indicate that there are 7 major factors that influence different types of investors in mutual funds selection behavior. These include: inherent characteristics of the fund, image reputation of fund, flexibility to facilitate the investment, performance, popularity, transparency and non-cash benefits. Another important aspect of this study is analysis impressibility the different groups of investors (professional, ambitious, moderate, conservative and cautious) towards these seven factors. The results of this analysis give us what is different between professional investors and other kinds of investors in the selecting of mutual funds.

Keywords: behavioral finance, mutual funds, Iran funds, behavioral biases, factor analysis

1. Introduction

Consumer behavior from the marketing world and financial economics viewpoint has created the exciting area of behavioral finance for study and research. (Shiller 2003, Daniel, K. et al. 2002, Hoffmann et al 2013). Analysts seem to treat financial markets as an aggregate of statistical observations, technical and fundamental analysis. A rich view of research waits this sophisticated understanding of how financial markets are also affected by the 'financial behavior' of investors. Mutual funds are raised as a financial tools that it can carry out these goals and enter retail investors into the area of national economy. We examine main criteria considered by people in the selecting of MFs. Shefrin and Statman (1993) provide a behavioral framework that explains the popularity of some financial products and offer tools for the design and marketing of new ones. They suggest admitting behavioral elements.

The term 'product' is used because MF is not merely to park investor's savings but schemes are 'tailor made' to cater to investor's needs, whatever is their age, financial position, risk tolerance and return expectations. There are not many studies about the behavior patterns of domestic investors. Behavior of investors in the capital market is largely influenced by the 'their expectations' and these 'expectations' of the investors are influenced by their "perception". However, in the financial literature, there are no models which explain the influence of these "perceptions" and "beliefs" on "Expectations" and "Decision Making". Because of our own inability to understand the sources of motivations and the basis of these expectations we tend to ignore them. No doubt, reality is so complex that trying to fit an individual investor's beliefs into a model is impossible. But, to a certain extent, we can borrow concepts from social psychology (Shiller) where behavioral patterns, rational or irrational, are developed and empirically tested. In a portfolio choice example, investors overestimate their return and exhibit a preference for skewness; in general equilibrium, investors' prior beliefs are endogenously heterogeneous. Brunnermeier and Parker (2005) explain in a consumption-saving example, consumers are both overconfident and overoptimistic

On the same lines, we can develop certain models to test the financial behavior to the extent of the availability of explanatory variables. Such models can help MFs managers to understand how and why some behaviors are observed in investor.

The criteria of individual investors for selection of MFs are not available in many studies, and most of the available studies in this area are related to individual investors' behavior in purchase of stock. Furthermore, finding studies that make a comparative analysis on the status of funds in different countries is extremely difficult. Hence, this study tries to carry out a review on status of MFs in three countries Iran, Malaysia, Turkey and US and then the survey examines the behavior of domestic investors in Fund selection behavior.

The remainder of the paper is organized as follows. Section 2 contains a description of the findings before. The study has classified stages of research in two main steps; In the first step, it analyzes the status of MFs in the sample countries for getting information, in the second step, survey assesses the state of internal MFs to know what savings avenue preference ;all are developed in Section 3. The method is presented in Section 4, MLR is employed to seek a relationship between Fund qualities that affect selection of MFs and types of investors. While findings of Mutual fund in US, Turkey, Malaysia and Iran are discussed in Section 5. Finally, Section 6 concludes and provides implications of this study.

2. Review of Literature

Bailey and Kumar (2010) examined the effect of behavioral biases on the mutual fund choices of a large sample of U.S. discount brokerage investors and reported that behaviorally-biased investors typically make poor decisions about fund style and expenses, trading frequency, and timing, resulting in poor performance.

McInishand and Srivastava (1984) indicate that specific demographic characteristics are not particularly useful in differentiating among investors holding divergent opinions. The empirical results of evaluating the risk‐adjusted performance of US‐based international equity funds by Elton et al. (1996) shows that the funds with the highest average returns may lose their attractiveness to investors once the degree of risk embedded in the fund has been factored into the analysis.

Cheng‐Ru et al. (2008) find that the most important criteria of mutual fund performance for investors are the mutual fund style.

Ranganathan (2006) analyzes funds selection behavior among retail investors with many factors related to the MFs, among of these factors "fund performance" has the greatest impact on selection of MFs by an investor.

Gupta and Jithendranathan (2012) show retail investors prefer less risky investments compared to wholesale investors and have lower preference for overseas investments.

Surveying institutional investors in the United States during 1981-2002 indicates they have added significant value by generating excess returns after controlling for underlying portfolio risk factors. James and Karceski (2006)

Uninformed investors preferentially select funds that suit their investment objectives, as they cannot evaluate each product themselves. Thus, their performance depends significantly on the quality of their fund distributors' product portfolios. (Baek et al., 2015). Azeez and Yonezawa (2006) found that four different risk factors significantly influence expected returns during each of the sample periods including money supply, inflation, exchange rate, and industrial production.

Nain and Tong (2013) show that the commonly observed correlation between institutional investor ownership and the success of mergers is partly driven by active stock picking.

3. Methodology

3.1 Multinomial Logistic Regression

Multinomial Logistic Regression (MLR) can be used to predict a dependent variable on the basis of independent variables and to determine the percent of variance in the dependent variable explained by the independents variables; Hosmer et al. say. (1989), to rank the relative importance of independents variables and to assess interaction effects. Malhotra (1999) indicates many real world business situations require classification decisions that must often be made on the basis of judgment and past performance. In his study provides input to managers who make such decisions on a routine basis, by multinomial logistic regression analysis (MNL). Application of the decision framework to an actual retail department store data shows that it is most useful in those cases where uncertainty is high and a priori classification cannot be made with a high degree of reliability. Bae 2003 shows a new approach to evaluate contagion in financial markets by using a multinomial logistic regression model, the measure of contagion captures the coincidence of extreme return shocks across countries within a region and across regions, and finds that contagion is predictable and depends on regional interest rates, exchange rate changes, and conditional stock return volatility. The risk capacity of an investor also needs to be understood thoroughly for classifying investors'groups.Table 2 gives the classification of investors' groups. (Tamiz et al.

2013, Garman, Forgue 2014). In this study, MLR was employed to seek a relationship between Fund qualities that affect selection of MFs and types of investors.

Table 1. Classification of Investor Groups

	Investor Types	Risk Profile	Expectations
$\boldsymbol{D_1}$	Professional	Takes Necessary Risks	Maximum Return
$\boldsymbol{D_2}$	Ambitious	Highly Risk	Taking High Short Term Returns
$\boldsymbol{D_3}$	Moderate	Comfortable Levels of Risk	Good, Steady Return
$\boldsymbol{D_4}$	Conservative	Risk Averse	Regular Income rather than Capital Gains
$\boldsymbol{D_5}$	Cautious	Extremely Risk	Averse Minimum Return/ Capital Preservation

To classify the large number of Fund Qualities into smaller number of factors with common constructs, using Principal Component Analysis, Factor Analysis was applied. 7 Principal Components out of 24 fund qualities were extracted and subsequently named. An important part of Factor Analysis is to generate Factor scores for each case or individual survey respondent. Factor scores reflect the importance or lack of importance of each component to each respondent. In the present study Anderson-Rubin (AR) Factor scores were obtained for each respondent. The AR method of deriving Factor scores generates uncorrelated scores with zero mean and unit standard deviation.

The latter acted as the dependent variable in the regression procedure and factor scores were the independent variables. The types of investors, in this study constitute a categorical dependent variable. Additionally, MLR permits in dependent variables that may be factors or covariates. The covariates must be continuous and that is the case for the survey respondents AR Factor scores. Some results of MLR for Fund qualities affecting MF Selection by types of investors are tabulated in table 2.

Table 2. Multinomial Logistic Regression Analysis, Fund Qualities Affecting MF/Scheme Selection vs. Types of Investors

Model	-2 log likelihood	Chi-square	Dfsi	
Intercept	234.086			
Final	168.736	65.350	28	0.000

A well-fitting model is significant at .05 levels or less than that. In this study, the 'Sig' value in the 'Final' row in the 'Model Fitting Information' is .000, which proves the analysis to be a well-fitting model.

Pseudo R-Square

Cox and Snell	0.628
Nagelkerke	0.466
McFadden	0.578

Goodness-to-fit

	Chi-square	df	Sig.
Pearson	382.218	308	.005
Deviance	167.350	308	1.000

Likelihood Ratio Tests

Effect	Reduced Model	Chi-Square	df	Sig.
Intercept	225.696	56.960	4	.000
1.Intrinsic qualities of the product	182.612(a)	13.875	4	.004

2.Portfolio Management	175.632(a)	6.896	4	.004
3.Flexibleinvestment facilities	173.862(a)	5.126	4	.005
4.research group	174.419(a)	5.683	4	.004
5.Reputation	173.671(a)	4.935	4	.000
6.Preliminary Disclosure	175.339(a)	6.602	4	.000
7.Fringe Benefits	187.538(a)	18.802	4	.001

The results of Goodness-of-Fit; is based on the null hypothesis (in a null hypothesis the effects of all parameters on each other is zero.); reveal that the Model has a good level of Fitness. Significant levels of these two tests are more than 0.05, and then we conclude that the model combination of independent variables and dependent variables is very well. It means that, the independent variables can provide a fairly accurate variance for dependent variable.

Cox/Snell, Nagelkerke and Mcfaddenpsuedo (τ^2) co-efficient are 62.8%, 46.6% and 57.8%.These three coefficients- that are between 0 and 1- Show that how much of variance in the dependent variable is explained by the independent variables that we insert in the model. Therefore, the more the values of these coefficients are closer to 1, the more we are confident that model is more efficient inexplaining the dependent variable. A scrutiny of "Likelihood Ratio Tests" reveals that, in the present study, Factor 7 (Fringe Benefits), Factor 1(Intrinsic qualities of the product), and Factor 2 (Portfolio Management) have proved significant among other extracted factors, as their p value is ≤ 0.05.

The result of Parameter Estimates exploded difference between professional investors ($D1$) and other types of investorsin Mutual Fund/Scheme selection behaviour.

"Wald parameter" refers to the significance of all independent variables (7 element of Factor Analysis) that are into to the model. A well-fitting variable for model is significant at .05 levels or lesser. In this table, we omitted all of independent variables that their significant level was 0> 0.05.The "Exp(B)" indicates that what happens for dependent variable if the independent variable is changed.In other words, it shows amount of changein dependent variable (investor groups) versus the change of independent variable, and also, "B" indicates the side of the changes. Variables with positive coefficient increase probability occurrence of phenomenon and inverse.

On the basis of Parameter Estimates, comparison of fund selection behavior of professional investors (D_1) with cautious investors (D_5) reveal that cautious investors have more emphasis on 4 factors (Portfolio Management, Flexible investment facilities, Preliminary Disclosure, Fringe Benefits) in MF selection behavior toward the professional investors.

Other important results of MLR analysis is related to Parameter Estimates given in Table 3.

Table 3. Results of Multinomial Logistic Regression Analysis (Parameter Estimates) – different between Professional investors and other types of investors that affect Mutual Fund/Scheme Selection

Difference in fund selection	**Attributes leading at 2.5 or less**	**Exp (B)**	**Wald (sig)**	**B**
1.BetweenD_1 and D_5				
factor$D_1 < D_5$	Portfolio management	$5.5\,E+$	0	50.054
	Flexible investment facilities	21	0	9.972
Factors $D_1 < D_5$	Preliminary Disclosure	2.14	0	14.978
		3.19		47.953
	Fringe Benefits		0	
		$6.7\,E+$		
		20		
2.BetweenD_1 and D_4				
factor$D_1 < D_4$	Fringe Benefits	53.439	0.003	3.979
Factors $D_1 < D_4$	Intrinsic qualities of the product			-3.180
	Portfolio Management	0.042	0.002	-1.813
	Research group	0,163	0.017	-1.394
		0.248	.056	
3.Between $D1$ and $D3$				
factor$D_1 < D_3$	Preliminary Disclosure	2.407	0.044	0.878

Factors $D_1 < D_3$	Intrinsic qualities of the product		0.11	
	Research group	0.166	0.35	-1.797
		0.260		-1.348
BetweenD_1 and D_2				
factor$D_1 < D_2$	Preliminary Disclosure	3.171	0.18	1.154
Factors $D_1 < D_2$	Intrinsic qualities of the product Reputation			-1.466-0.868
		0.231	0.028	
		0.420	0.046	

3.2 Data Collection

The information needed for us also include two main parts. In the first part(Understudy countries), we got the necessary information through the annual reports of Stock markets, Fact books of MFs, previous research and other useful web sites. The unit of observation and analysis of this survey is the individual present retail investor. Our definition of present retail investor is "An individual who has currently invested in any MF scheme and it does not include high net-worth individuals, those who earn above 6,000,000 dollars per annum, and institutions. The required data was collected through a pre-tested questionnaire which was administered on a sample of 300 educated present retail investors. This sample was selected due to the time and financial constraints.

4. Findings of the Study

Findings of the study are revealed in the following section:

4.1 Mutual Fund in Understudy Countries

4.1.1 Mutual fund in US

American MFs play an important role in the domestic economy and global financial markets. This company managed about18.2trillion dollars for an early 90.4 million Americans (53.2 million U.S. households) in the end of 2014. This amount encompasses 54 percent of the total assets owned by MFs in the world wide. America's MFs employ their capital in the securities markets throughout the world and they are considered as the largest group of investors in the stock market, commercial paper and municipal bonds. At the end of 2014 about 43% of Americans households' invested in the mutual funds.In1980, this amount was near 5.7%. This indicates growing confidence of investors towards the MFs. Among all households that were invested in the MFs, 76% emphasized that saving for retirement has been their main purpose of investment.

4.1.2 Mutual Fund in Turkey

Two different kinds of MFs, (type A and type B), exist in the Turkish capital market. Type A of MFs requires to invest at least1 25% of their assets in the shares issued by Turkish companies. While, MFs that are classified as group B do not have such commitments and obligations. These two main groups of MFs are divided into17 smaller sections based on their portfolio. At the end of 2014, the total number of funds in Turkey was 369. Among all of them, Variable Funds with 120, Money Market Funds with 53 and Bond Funds with 45 constitute the majority of MFs groups, which includes 59% of funds. In 2014, approximately 6.2 million people invested in the Turkey MFs and 67% of deposits were related to foreign investors. MFs are also included in 2.9 % of gross domestic product (GDP) of Turkey.

4.1.3 Mutual fund in Malaysia

Net Asset Value (NAV) of mutual funds industry in Malaysia, compared to 39 billion dollars in previous year, was 56billion dollars. This 41% increase, or 17billion dollars, is attributed to net sales in unit trusts coupled with asset price that increases when stock markets are recovered. Overall, growth statistics for the MFs industry in Malaysia as follows:

a) Net Asset Value (NAV) of MFs increased to 81 billion dollars
b) Number of MFs account holders increased to 17,415,418 million at the end of 2014.
c) The mutual funds industry's NAV represents 20.77% of Bursa Malaysia's market capitalization
d) Net Asset Value (NAV) of Islamic mutual funds grew and reached to 11.01 billion dollars.
e) Out of the total 626 funds in the industry, conventional funds represented 436 funds while the Islamic funds accounted for 190 funds

4.2 Mutual Fund in Iran

There were 136 MFs in the stock market of Iran. These funds managed professionally the capital of 168.842 individual investors in the stock market. NAV 2.072 million dollars.Since most Iranian, investors lack professional knowledge of optimal investment, they can depòsit their capital in such funds that are managed by professionals

5. Classified Variables

We have classified stages of research in two main steps. In the first step, we analyze the status of MFs in the sample countries for getting information such as: the number of funds and their investors in that countries, variety of investors, preferences of investors for direct stock purchase or investment in the funds.

In the second step respondents were asked to rank their preferences on a scale ,5 point scale ranging from Highly Important (5) to Not at all Important (1). Using Principal Component Analysis, data for each of the 3 sub-groups were tested under factor analyses. To identify the factors that influence the investors' fund/scheme selection, **2**4 variables were identified through a brainstorming session and the evidences were collected from past research prior to the construction of the questionnaire at the time of the pilot study.

Based on theory, past research, and judgment of the researcher, the factors that could influence the investors in their selection of Mutual Funds/schemes was first grouped into 3 major factors – Fund/Scheme qualities, fund sponsor qualities and the expected investor services. The aim was to identify factors in the sub-groups which turn out to be significant in the fund selection .The 24 identified variables were classified under the appropriate group as follows:

A) Fund Related Qualities

A_1 Fund's/Scheme's performance record

A_2 Fund's/Scheme's reputation or brand name

A_3 Scheme's expense ratio

A_4 Scheme's portfolio of investments

A_5 Reputation of scheme(s), portfolio manager(s)

A_6 Withdrawal facilities

A_7 Favorable rating by a rating agency

A_8 Innovativeness of the Scheme

A_9 Products with tax benefits

A_{10} Entry and Exit load

A_{11} Minimum initial investment

B) Fund Sponsor Qualities

B_1Reputation of a sponsoring firm

B_2Sponsor has a recognized brand name

B_3Sponsor's expertise in managing money

B_4Sponsor has a well-developed Agency Net Work/Infrastructure

B_5Sponsor's past performance in terms of risk and return

C) Investor Related Services

C_1 Disclosure of investment objectives, method and periodicity of valuation in advertisement

C_2 Disclosure of periodicity of valuation in the advertisement

C_3Disclosure of the method and periodicity of the scheme's sales and repurchase in the offer documents

C_4Disclosure of NAV on every trading day

C_5Disclosure of deviation of the investments from the original pattern

C_6Mutual fund investors' grievance redressal machinery.

C_7 Fringe benefit like free insurance, free credit card, loans on collateral, tax benefits.

C_8 Preferred MF to avoid problems, i.e., bad deliveries, and unnecessary follow up with brokers and companies.

6. Findings and results

6.1.1 Influence of Product Qualities on Selection of Fund

The 11 fund related variables were analyzed for their importance. Hence, to identify the investor's underlying fund selection criteria, they are grouped into specific market segments to enable the designing of the appropriate marketing strategy.

Thus, using Principal Component Analysis, Factor Analysis was done. Bartlett's test of sphericity and Kaiser-Meyer Olkin's (KMO) measure of sampling adequacy were used to examine the appropriateness of factor analysis. The approximate chi-square statistics is 311.425 with 45 degrees of freedom which is significant at 0.05 level. The KMO statistic (0.684) is also large(> 0.5). Hence factor analysis is considered as an appropriate technique for further analysis of data. Results of Principal Component Analysis for Product related qualities are tabulated in table 4.

Table 4. Results of Principal Component Analysis

Communalities			*InitialEigenValues*			
Variable	Initial	Extraction	*Factor*	*Eigenvalue*	*% of variance*	*Cumulative %*
A_1	1.000	0.509	1	4.006	26.420	36.420
A_2	1.000	0.570	2	1.386	12.602	49.023
A_3	1.000	0.486	3	1.061	9.648	58.671
A_4	1.000	0.690	4	.886	8.055	66..725
A_5	1.000	0.534	5	.807	7.340	74.066
A_6	1.000	0.751	6	.675	6.137	80.203
A_7	1.000	0.428	7	.629	5.720	85.923
A_8	1.000	0.470	8	.476	4.324	90.247
A_9	1.000	0.710	9	.441	4.011	94.258
A_{10}	1.000	0.690	10	.342	3.113	97.370
A_{11}	1.000	0.616	11	.289	2.630	100.000

Bartlett's Test of sphericity

Approximate chi-square =291.236; df=55; significance = 0.000

Kaiser-Meyer-Olkin Measure of Sampling Adequacy = .785

Extraction sums of squares loadings				*Rotation Sums of Squared Loadings*		
Factor	Eigen value	% of variance	*Cumulative*	*Eigen value*	*% of var*	*Cumulative*
1	4.006	36.420	36.420	2.298	20.888	20.888
2	1.386	12.602	49.023	2.115	19.223	20.111
3	1.061	9.648	58.671	2.042	18.559	58.671

	Factor Matrix			Rotated Factor Matrix		
Variable	Factor 1	Factor 2	Factor 3	Factor 1	Factor 2	Factor 3
A_1	0.618	–0.357	0.000	0.564	0.438	0.009
A_2	0.538	–0.231	0.477	0.739	–0.006	0.155
A_3	0.681	–0.057	–0.138	0.372	0.523	0.272
A_4	0.724	–0.184	0.363	0.764	0.184	0.269
A_5	0.572	–0.424	–0.163	0.470	0.551	–0.099
A_6	0.618	–0.104	–0.598	0.078	0.854	0.122
A_7	0.565	–0.252	0.211	0.606	0.222	0.107
A_8	0.595	0.050	–0.338	0.144	0.607	0.285
A_9	0.576	0.580	–0.206	–0.049	0.338	0.746

$\boldsymbol{A_{10}}$	0.592	0.559	0.163	0.195	0.114	0.799
$\boldsymbol{A_{11}}$	0.532	0.513	0.266	0.241	0.007	0.747

Because only variables with Eigen values greater than one (Kaiser's criterion) will remain in the Model, we can infer that 36.420% of variance is explained by factor 1; 12.602% of variance is explained by factor 2 and 96.48% of variance is explained by factor 3 and all three factors together contributed to 57.671% of variance.

Factor loadings are very high in case of factor 1 (all of 11 variables have factor loading$>$ 0.5). It reveals that all of the variables are clubbed into one factor. But on the basis of theory, we can infer that there must be more than one factor. Therefore, Varimax Rotation was done to obtain factors that can be named and interpreted. Under Varimax Rotation only4 out of 11 variables have factor loadings > 0.5 for factor 1.

On the basis of Varimax Rotation with Kaiser Normalization 3 factors have emerged. Each factor is constituted of all those variables that have factor loadings greater than or equal to 0.5

Thus A_1, A_2, A_4 and A_7 constituted the first factor. The researcher conceptualized this factor as "Intrinsic Product Qualities" A_3, A_5, A_6 and A_8 constituted the second factor and this was conceptualized as "Portfolio Management"; A_9, A_{10} and A_{11} constituted the 0rd factor and this was conceptualized as "Flexible investment facilities" factor.

Thus, after rotation, factor 1 (Intrinsic Product Qualities) accounts for 20.888% of the variance; factor 2 (Portfolio Management) accounts for 19.223% of variance and factor 3 (Flexible investment facilities) accounts for 18.559% of variance and all 0 factors together explain for 58.671% of variance. The identified factors with the associated variable and factor loadings are given in Table 5.

Table 5. Identification of product related factors in fund selection

Intrinsic qualities of the product	A_1	Fund's/Scheme's performance record	0.564
	A_2	Fund's/Scheme's performance record	0.739
	A_4	Scheme's expense ratio	0.764
	A_7	Scheme's portfolio of investments	0.606
Portfolio Management	A_3	Reputation of scheme(s), portfolio manager(s)	0.523
	A_5	Withdrawal facilities	0.551
	A_6	Favorable rating by a rating agency	0.854
	A_8	Innovativeness of the Scheme	0.607
Flexible investment facilities	A_9	Products with tax benefits	0.746
	A_{10}	Entry and Exit load	0.779
	A_{11}	Minimum initial investment	0.747

6.1.2 Influence of Fund Sponsor Qualities on Selection of Fund

The six sponsors' related variables were analyzed for their importance.

Hence, to identify the investor's sponsor related qualities which influence his fund/scheme selection, so as to enable the sponsors to develop the identified qualities. Its results for sponsor related qualities are tabulated in Table 6.

Table 6. Results of Principal Component Analysis

Communalities			Initial Eigen Values			
Variable	Initial	Extraction	Factor	Eigen value	% of variance	Cumulative %
B_1	1.000	0.709	1	3.181	63.615	63.615
B_2	1.000	0.999	2	0.737	14.737	78.352

B_3	1.000	0.672	3	0.502	10.041	88.393
B_4	1.000	0.596	4	0.359	7.183	95.576
B_5	1.000	0.342	5	0.221	4.424	100.000

Bartlett's Test of sphericity

Approximate chi-square =214.485; df=10; significance = 0.000

Kaiser-Meyer-Olkin Measure of Sampling Adequacy =0.801

Extraction sums of squares loadings				Rotation Sums of Squared Loadings		
Factor	Eigen value	% of variance	Cumulative	Eigen value	% of var Cumulative	
1	2.248	44.961	44.961	1.770	35.404	35.404
2	1.071	21.423	66.384	1.549	30.980	66.384

	Factor matrix		**Rotated factor matrix**	
Variable	Factor 1	Factor 2	Factor 1	Factor 2
B_1	0.741	0.400	0.598	0.593
B_2	0.999	-0.003	0.288	0.957
B_3	0.540	0.617	0.748	0.337
B_4	0.564	0.527	0.669	0.386
B_5	0.299	0.503	0.568	0.140

Retaining only variables with Eigen Values greater than 1, we can infer that 44.961% of variance is explained by factor 1 and 21.423% of variance is explained by factor 2; both together contribute to 66.384% of investors' behavior.

A scrutiny of Factor Matrix reveals that factor loadings are very high in case of factor 1 (4 out of 5 variables have factor loading> 0.5). It reveals that 80% of the variables are clubbed into one factor. But, on the basis of theory we can infer that there must be more than one factor. Therefore, Varimax Rotation was done to obtain factors that can be named and interpreted.

On the basis of Varimax Rotation with Kaiser Normalization, 2 factors emerged. Each factor is constituted of all those variables that have factor loadings greater than or equal to 0.5. ThusB_3, B_4 and B_5 constituted the first factor. The researcher conceptualized this factor as "research group"; B_1 and B_2constituted the second factor and this was conceptualized as "Reputation".

Thus, after rotation, factor 2 (research group) accounts for 35.404% of variance and factor 2 (Reputation) accounts for 30.904% of variance and together they explain for 66.384%of variance. The identified factors with the associated variable and factor loadings are given in Table 7.

Table 7. Identification of product related factors in fund selection

Research group	B_3	Sponsor`s expert in managing money	0.564
	B_4	Sponsor has a well-developed Agency Net Work /Infrastructure	0.739
	B_5	Sponsor `s past performance in terms of risk	0.764
Reputation	B_1	Reputation of a sponsoring firm	0.523
	B_2	Sponsor has a recognized brand name	0.551

6.1.3. Influence of Investor Services on Selection of Fund/Scheme

The six investor Services related variables were analyzed for their importance. Hence, to identify the investor services related factor, which influences the investor's fund selection, and to enable the AMCs to develop/maintain/improve the identified services. Results of Principal Component Analysis for investor services related factors are tabulated in Table 8.

Table 8. Results of Principal Component Analysis

Communalities			Initial Eigen Values			
Variable	Initial	Extraction	Factor	Eigen value	% of variance	Cumulative %
C_1	1.000	0.462	1	3.109	38.861	38.861
C_2	1.000	0.651	2	1.385	17.316	56.177
C_3	1.000	0.460	3	0.898	11.223	67.400
C_4	1.000	0.392	4	0.812	10.153	77.553
C_5	1.000	0.538	5	0.541	6.759	84.313
C_6	1.000	0.678	6	0.473	5.912	90.224
C_7	1.000	0.646	7	0.436	5.449	95.673
C_8	1.000	0.668	8	0.346	4.327	100.000

Bartlett's Test of sphericity

Approximate chi-square =188.877; df=28; significance = 0.000

Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.750

	Extraction sums of		squares loadings		Rotation Sums of Squared Loadings	
Factor	Eigen value	% of variance	*Cumulative*	*Eigen value*	*% of var*	*Cumulative*
1	3.109	38.861	38.861	2.297	28.711	28.711
2	1.385	17.316	56.177	2.197	27.466	56.177

Variable	Factor 1	Factor 2	Factor 1	Factor 2
$\boldsymbol{C_1}$	0.636	0.241	0.628	0.261
$\boldsymbol{C_2}$	0.556	0.585	0.806	-0.044
$\boldsymbol{C_3}$	0.618	0.280	0.641	0.220
$\boldsymbol{C_4}$	0.472	0.412	0.626	0.024
$\boldsymbol{C_5}$	0.722	0.130	0.614	0.401
$\boldsymbol{C_6}$	0.707	-0.421	0.225	0.792
$\boldsymbol{C_7}$	0.580	-0.556	0.040	0.803
$\boldsymbol{C_8}$	0.659	-0.483	0.148	0.804

Retaining only variables with Eigen Values greater than 1, we can infer that 38.861% of variance is explained by factor 1 and 17.316 %of variance is explained by factor 2; both together contribute to 56.177% of behavior.

A scrutiny of Factor Matrix reveals that factor loadings are very high in case of factor 1 (7 out of 8 variables have factor loading(> 0.5). It reveals that 87% of the variables are clubbed into one factor. But, on the basis of theory we can infer that there must be more than one factor. Therefore, Varimax Rotation was done to obtain factors that can be named and interpreted.

On the basis of Varimax Rotation with Kaiser Normalization, 2 factors emerged. Each factor is constituted of all

those variables that have factor loadings greater than or equal to 0.5. Thus C_1, C_2, C_3, C_4 andC_5 constituted the first factor. The researcher conceptualized this factor as "Preliminary Disclosure" andC_6, C_7 and C_8, constituted the second factor and this was conceptualized as "Fringe Benefits".

Thus, after rotation, factor 1 (Preliminary Disclosure) accounts for 28.711% of variance and factor 2 (Fringe Benefits) accounts for 27.466% of variance and together they explain for 56.177% variance. The identified factors with the associated variable and factor loadings are given in Table 9.

Table 9. Identification of Service related factors in Fund/Scheme Selection

Preliminary Disclosure	C_1	Objective disclosure in advertisements	0.564
	C_2	Disclosure of periodicity of valuation	0.739
	C_3	Disclosure of the method and periodicity of the schemes sales and repurchases	0.764
	C_4	Daily disclosure of NAV	0.523
	C_5	Disclosure of Deviation of investment	0.531
Fringe Benefits	C_6	Grievances Redressal Machinery	0.523
	$C7$	Fringe Benefits	0.551
	$C8$	Prefer MF to avoid problems of bad deliveries and follow up with brokers and companies	0.542

7. Conclusions

To understand the status of MFs in the under study countries; the US, Turkey and Malaysia and Iran, we have classified stages of research in two main steps. In the first step, we analyze the status of MFs; the number of funds and their investors in that countries, variety of investors, preferences of investors.

Second step assesses the state of internal MFs to know what savings preference, fund preference and objectives of investment are, and to identify information sources that influence fund selection and preferred mode of communication. Respondents were asked to rank their preferences on a scale.

By using Principal Component Analysis recognize factors in the sub-groups which turn out to be significant in the fund selection. Multinomial Logistic Regression (MLR) can be used to predict a dependent variable on the basis of independent variables and to determine the percent of variance in the dependent variable explained by the independents variables to rank the relative importance of independents variables and to assess interaction effects.

Then MLR technique was employed to seek a relationship between the Factor scores and types of investors, to indicate statistically important factors that influence the Fund selection behavior of different types of investors.

Futur research , the AMC can then apply this knowledge for developing marketing strategies for all types of investors -present and potential- and also identify significant factors that govern an investors' selection of MFs. The results of the research can also be used by the individual investors for the renovation in their investment behavior, so that they will be able to manage their capital in best way.

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Appendix A

Table 4. Distribution of Individual Investors by Demographic Factors

Investor Particulars	*Number of Respondents (Total =300)*	*Percentage (%)*
Sex		
Male	246	82
Female	54	18
age		
Below 30	123	41
31– 40	108	36
41- 50	42	14
Above 50	27	9
Academic qualification		
Elementary school	9	3
School Final	63	21
Graduate	135	45

Post graduate	81	27
Professional	12	4
Marital Status		
Married	99	33
Unmarried	201	67
Occupation		
Professional	90	30
Salaried	93	31
Business	87	29
Retired	30	10
Annual Income (in Rial)		
Less than 100,000,000	118	39.34
100,000,001-300,000,000	159	53
300,000,001-500,000,000	22	7.34
Above 500,000,000	3	1
Annual Savings (in Rial)		
Less than 50,000,000	195	65
50,000,001-100,000,000	72	24
Above 100,000,000	33	11

Appendix B

Table 5. Mutual Fund Investment Objective among Present Investors

Objectives	*Weighted Mean Value*	*Rank*
Safety	3.6049	VI
Flexibility	5.2222	IV
Good Return	3.7531	V
Liquidity	3.3333	VIII
Capital Appreciation	5.6420	II
Tax Benefit	5.8148	I
Diversification Benefit	5.2593	III
Professional Management	3.3334	VII

Appendix C

Table 6. Communication Mode Preference among Mutual Fund Investors Numbers of respondents

	(Total =322)	*Percentage (%)*
automated response	150	50
personally visit the office	66	22
telephone the office	54	18
have no preferences	15	5
No respond	15	5

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