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MUTUAL FUND FLOW SCALE: A MULTI-ITEM SCALE FOR MEASURING PERCEPTION OF MUTUAL FUND INVESTORS

Pooja Chaturvedi Sharma*

Abstract *With an ever-increasing amount of information related to the stock market or various investment avenues, misperception or no perception regarding mutual funds is becoming a norm for investors and marketers. To date no perception measuring scale has been developed for mutual fund investors, to assist investors, marketers, and promoters to focus on the most crucial factors for mutual fund market application. This paper discovers the dimensions of investor perception and its relevance for investment practitioners. A five-factor conceptual model of mutual fund flow is developed, operationalised and validated, using a sample of 3,738 investors. Using exploratory factor analysis and confirmatory factor analysis techniques, results of this study support all the five dimensions of risk, return, fund characteristics, fund manager, and fund family, and confirms that they have a significant impact on investor perception regarding mutual fund investment decision. This work makes an equivalent influence on academic, as well as practical, domains.*

Keywords: *Fund Characteristics, Fund Family, Fund Manager, Investor Behaviour, Investor Perception, Mutual Funds, Return, Risk*

INTRODUCTION

Stock investing is not an exact science; it is a result of the permutation of various quantitative measures, like beta, standard deviation, and ROI, along with various emotions such as greed, conviction, fear, and so on. Due to the presence of these emotions, empirical rationality in decision-making is limited and there is always space for subjective interpretation. Emotions are generated as a result of some transitory events or moments structured around perceptions (Zadra & Clore, 2011). Perception is the course of elucidating information about any other person or thing. This explanation noticeably focuses the fact that the perception which individuals form about other people or things depend majorly on two parameters: the amount of information accessible and the extent to which the information can be accurately interpreted (Nelson & Quick, 1997). This study adopted a micro approach regarding perception, because this study is focused on identifying the factors that investors themselves believe affect their final investment decision-making.

It is imperative to know about investor perception regarding mutual fund flows, as these fund investments persuade consumer savings, individual future wealth, and fund managers' earnings and incentives. Apart from this, perception has a driving role in affecting investor inclination towards any investment avenue. Secondly, as information processing capability is restricted, people may end up making imperfect decisions to attain the so-called best decision (Tversky & Kahneman, 1974); however, in the case of investments where finances are involved, imperfect decision making cannot be afforded. Thirdly, asset management companies (AMCs) are in terrible need of taking steps to identify gaps between the final investment decision and investor perception, because during the survey process it was found that the number of inquiries which these companies receive about mutual funds is almost five times compared to the actual number of investors who opt for mutual funds. As investor perception is a subjective phenomenon and is highly affected by market momentum, its constant monitoring is required for bridging the aforementioned gap.

A consumer survey by Capon et al. (1990) conveyed that risk and return are not the solitary descriptive variables for investor's perception regarding mutual fund investment decisions. They also mentioned that mutual fund flows are an outcome of background factors, like fund family, fund characteristics, and fund manager. Thus, a realistic examination was required for measuring and validating the antecedents of mutual fund flows in the Indian mutual fund industry, to develop strategies to enlarge margins and market share. Gaps also existed in the literature concerning the exploration of linkages between factors that have quantit-ative as well as psychological effects on the related investment decision making. Based on acknowledged research gaps, the goals of this study are to categorise the antecedents affecting investor perception about mutual fund flow, develop a scale for measuring mutual fund flows, and

* Assistant Professor, Apeejay School of Management, Delhi, India. Email: poojamitsharmaa@gmail.com

estimate the reliability and validity of the scale. With this study, the researcher intends to contribute towards a novel and meticulous scale development in mutual funds research by inspecting all the decisive steps in the scale development procedure.

India's GDP has grown 2.5 times and GDP per head has increased 3.3 times in the past 15 years. India is among the top three economies in the world by purchasing-power parity, after the US and China. The Indian mutual funds' industry has matured many folds in the past 25 years. The Indian mutual fund industry's asset under management (AUM) has expanded from ₹13.24 trillion as of October 31, 2015, to ₹28.23 trillion as of October 31, 2020. The industry's AUM crossed ₹10 trillion in May 2014, and in a short period of three years, the size of AUM increased more than two times and crossed ₹20 trillion in August 2017. The industry's AUM stood at ₹28.23 trillion as of October 31, 2020. A majority of the assets (59% of assets) of the individual investors have come from tier-II cities through distributors. Considering the growth prospects of the Indian mutual fund industry, this market has been considered for research background to substantiate the existing opportunities, and encourage global investors to invest in the Indian mutual fund market. The role of Indian investors has also switched from being inactive and conventional to active and assertive. This research work focuses on retail investors, because they have participated in a noteworthy way in the progression of the global mutual fund industry. Citing from the Indian mutual funds industry, retail investors at present possess a major segment (52% in September 2020) of the industry's assets. Individual investors hold Rs. 14.42 lakh crore in mutual funds as of September 2020, an increase of 4.20% from September 2019.

This scale is the outcome of a blend of exploratory qualitative in-depth personal surveys and a detailed assessment of mutual fund investor perception. Along with this, the sample size of 3,738 respondents in the third and final cycle of data collection was significantly sufficient to comply with the prerequisite of statistical substance. Data for this research was gathered through a self-structured questionnaire from investors in 17 states of India. Analysis of this research work depicted that all the identified variables showed prognostic controls about mutual fund flows. Of the added variables, two factors demonstrated greater importance, namely fund characteristics and fund family. To have better market analysis and customer relationship management, identifying factors that investors think are relevant for their decision-making will help practitioners and researchers delve deep into this scattered domain and heave out some really useful concepts to help financial advisors.

After the introduction of individual perception, this paper provided a theoretical backdrop about the factors affecting investor perception about mutual fund investment, to focus on research and impart context. Subsequently, the methodology of research and data analysis results were discussed concerning future research scope, theoretical and managerial implications, and so on.

REVIEW OF LITERATURE AND THEORETICAL FRAMEWORK

Psychological considerations have an important role in nurturing a belief related to a fund's performance, as they eventually frame individuals' final investment decisions. As expressed in the research work of Kahneman and Tversky (1979) and Shefrin and Statman (1985), the disposition effect is investors' tendency to sell funds that are giving higher returns and stay locked in the funds which are showing losses. The disposition effect has emerged as a leading determinant of individual investor decisions regarding share trading (e.g., Odean, 1998; Grinblatt & Titman, 1994). However, a very small section of literature has inquired to check the application of such findings to mutual funds. Despite the dominant emphasis on risk and return in previous studies, there is evidence regarding the insufficiency of these variables as sole explanatory factors of mutual fund performance. The existing literature is not converged towards these factors from retail investors' perspectives (Ferson & Kim, 2012). Sirri and Tufano (1998) worked on the association between fund flows and fund performance. Their research work also concluded that investors pour money into funds with credible past performance, but take time in exiting from funds with a poor performance. An interesting finding in the study by Del Guercio and Tkac (2002a) is that retail investors give more importance to past raw performance rather than risk-adjusted performance measures. Contrary to this, the literature of security analysis puts a lot of emphasis on the consideration of risk-adjusted measures of performance evaluation. Sankaran (2012) recommended that investors, as well as financial intermediaries, should emerge from their age-old inclination towards return and risk. Similar findings were also depicted in the work of Judith and Ellison (1997) and Sharma (2021), as their studies revealed that risk and return are correlated in the context of mutual fund flows. A study by Kaur (2021) mentioned that investment in experienced or non-experienced mutual fund schemes seems promising. The relevance of fund managers as a predictor for fund flow was mentioned in the research study by Shukla and Singh (1994). This study reported that mutual funds were precarious, but superiorly spread when handled by professionally qualified managers. The fund characteristics approach allows us to compress fund flow into components like fund style, characteristic selectivity, timing, and so on. This compression provides a more accurate way of determining how funds will perform. Working on the role played by past performances

in estimating the risk associated with a mutual fund, Santhi and Gurunathan (2012) and Koski and Pontiff (1996) found that it is not futuristic as quantum and direction of risk is dynamic for all schemes. Prabhu and Vechalekar (2012) researched the association between investor's age and their risk-bearing capacity; the findings of their study disclosed that there is a negative association between both. This means that as age increases, risk-bearing capacity reduces, and ultimately, fund flows also reduce, due to fewer redemptions as a result of disposition effect and conservatism bias. Market fluctuations are also an undisputable predictor of risk associated with an investment instrument. Research work of Jagongo and Mutswenje (2014), Baker et al. (1977), Hussein (2006), and Balaji and Kumar (2002) have advocated the association of market fluctuations with fund flows.

Alekhya (2012), Sharma (2019), and Sharma (2021) found that while making a final choice about mutual funds investment, returns is one of the major incentives to invest. The work of Warther (1995) supported the notion of a positive association between mutual fund flows and their returns, based on the association between the US aggregate net equity fund flows and stock market returns. Edwards and Zhang (1998) found that stock returns significantly affect the size of flows into stock funds. Pollet and Wilson (2008) and Ramasamy and Yeung (2003) documented that fund style also occupies an imperative position in shaping the returns of an asset. Brinson et al. (1991) quoted in their paper that asset allocation is certainly the leading variable, as it determines the level of portfolio returns.

Abundantly available literature on mutual fund flows takes into account fund-related characteristics to be latent determinants. Fund size has been designated as one of the fundamental fund characteristics, because it can build or ruin any portfolio (Pollet & Wilson, 2008; Golec, 1996; Shukla & Inwegen, 1995). Shukla and Inwegen (1995) also mentioned that bigger funds which are handled by larger staff help investors opt for a perfect portfolio, according to their requirements. Apart from fund size, fund age has also been considered one of the determining factors by some researchers like Blake and Timmermann (1998), concerning economies of experience. The research work by Sikidar and Singh (1996) added tax dimension and revealed that mutual funds are favoured by salaried and self-employed individuals, due to tax benefits.

Another factor that affects fund flow is the fund manager's experience. Among various associated fund costs, a significant chunk is contributed by the manager's fee. Various academic pieces of writing, like Golec (1996); Roll (1992); Das and Sundaram (1998a, b, 2002); and Grinblatt and Titman (1989) have studied the justification of manager's fee structure. Apart from them, Li and Tiwari (2009); Volkman (1999); and Giambona and Gloec (2007) concluded that the performance-based fee structure is justified and has shown better performance when compared with other actively managed funds. Capon et al. (1996) found that a fund manager's reputation is another influential mutual fund selection criterion for retail investors. Not only retail investors, but financial advisers also accentuate the significance of fund manager's reputations (Jones et al., 2005).

Almost all mutual funds are associated with a fund family. On examining them in comparison to stand-alone funds, fund families have given better results. It is because a fund family has better flexibility and opportunities in shifting its human assets and other assets, conferring to the market outlook. A novel term concerning mutual funds is 'spillover effects'. This is a condition when exceptional performance by a fund results in increasing cash inflow in other funds of the family. This notion is corroborated by Khorana and Servaes (1999). Another dimension of the spillover effect was touched upon by Ippolito (1992); Goetzmann and Peles (1997); Chevalier and Ellison (1997); and Sirri and Tufano (1998), as they mentioned that mutual fund investors compensate better players more, compared to reprimanding bad performers. Consequently, fund families struggle to create maximum star funds to distribute their profit margins to low performers. Like the spillover effect, the outsourcing process has also been promoted by researchers like Grinblatt and Titman (1994); Golec (1996); Roll (1992); Das and Sundaram (1998a, b and 2002); and Li and Tiwari (2009). Chakrabarti and Rungta (2000) mentioned that brand image and returns of a fund family are the prominent factors in mutual fund investing.

RESEARCH METHODOLOGY

Survey Instrument Development

With the intent of developing, improving, and authenticating measures for various constructs, scale development methods given by Churchill (1979), Connor and Korajczyk (1988), Gerbing and Anderson (1988), and Lehmann and Modest (1988) were used. Accordingly, the factors considered for framing the scale can be chosen based on a theoretical or academic approach. The items were sent for content validity examination. Data has been gathered through survey mode. Surveys were well spread into three cycles. The first cycle was a pilot study, followed by an initial scale process; the third cycle was for the final scale. The researcher recorded the responses on a five-point Likert scale, due to its compatibility with the data analysis procedure (Hair et al., 2006).

Data Set

The research population for this study was aimed at all present, as well as past, mutual fund investors. In total, 17 Indian states have been covered in a three-phase data collection process. In the pilot study, respondents were from five Indian states, namely Delhi/NCR, Gujarat, West Bengal, Tamil Nadu, and Himachal Pradesh. For the initial scale, six states (Uttar Pradesh, Madhya Pradesh, Rajasthan, Karnataka, Telangana, and Bihar) were included. And, for the final scale, the respondents were from six other Indian states (Punjab, Haryana, Andhra Pradesh, Jharkhand, Maharashtra, and Chhattisgarh). The non-probability judgemental sampling methodology was considered for this study. Each state was divided into four zones, according to directions, namely the south zone, north zone, west zone, and east zone, in all three cycles. Sample size in the pilot, as well as the final scale, highly supported item to response ratio of a minimum of 1:10. Sample size in the pilot was 894 for 38 items, whereas it was 3738 for 25 items in the final scale.

MEASUREMENT OF CONTENT VALIDITY

Considering the definition of content validity given by Netemeyer, Bearden and Sharma (2003), a panel of four experts – two academicians and two practicing mutual fund managers – assessed the items of the questionnaire for content validity and recommended the deletion of a few items, which they judged to be superfluous and vague. They also suggested improvements, in terms of the sequence of questions, their arrangement, and physical appearance. The outcome of this procedure was the exclusion of seven items and a collection of 38 items for further data analysis.

Pre-Testing

This phase is intended to trim down the set of items and to examine the internal consistency of the scale. In this study, the process of data screening has been meticulously followed. In data, less than 1.8% missing values have been found; as the number is low, the data has been filled with average values. Being a Likert scale-type data, the possibility of the presence of outliers has been rejected outright. Univariate kurtosis values and critical ratio values were taken into account for checking data normality. With a standard kurtosis value of seven (West et al., 1995), the estimation depicted that none of the items were significantly kurtotic. Along with this, Mardia's (1970, 1974) normalised estimate of multivariate kurtosis value is considered. This value is depicted by the C.R. value. In this context, the z-statistic of 1.284 indicated data normality. The absence of multicollinearity signifies that data explains the exclusive discrepancy in the dependent variable. Here, for all independent variables, variable inflation factor (VIF) has been used to check data multicollinearity. VIF values were less than three in all cases. This depicted that exclusive discrepancy about the concerned dependent variable was explained by all independent variables.

The sample consisted of 463 (51.8%) males and 431 (48.2%) females. Data filtration was done in four phases. Initially, items with low correlations were removed from the scale, after calculating each item's correlation with each construct's total score (Hair et al., 2006). In the second phase, the correlation of items in each construct was calculated with other constructs' total scores. Items that showed statistically insignificant correlations with the constructs to which they were theorised to be related were deleted from the analysis (Hair et al., 2006). Next, corrected item-to-total correlations were inspected and items with values higher than 0.40 were preserved; the remaining items were removed (Hair et al., 2006). The outcome of this sequential investigation is a condensed scale with 30 items. The internal consistency of the items was scrutinised on the basis of Cronbach's alpha and exploratory factor analysis (Hair et al., 2006). Table 1 denotes that each sub-scale's items load on only one factor. All the obtained eigenvalues surpass the criterion of 1.0 (Hair et al., 2006). Table 1 also illustrates the reliability alphas for all the constructs. In this table, coefficient alphas for all the six sub-scales are higher than 0.60, which is above the set standard values (Nunnally & Bernstein, 1990).

Table 1: Reliability and Construct Validity of Measures – Pre-Testing Results

Construct	Item Label	Eigen Value	Factor Loading	Cronbach's Alpha	Variance Explained
Risk	LTDI	5.184	.765	.898	12.869
	MFluct		.762		
	InvAge		.738		
	PPerf		.833		
	FPerf		.390		
Return	Turnover	3.484	.734	.854	12.458
	InvObj		.771		
	AssetAlloc		.734		
	FFlows		.381		
	ExpRatio		.821		
	Perst		.378		
	FirmValue		.880		

Construct	Item Label	Eigen Value	Factor Loading	Cronbach's Alpha	Variance Explained
Fund Characteristics	TaxB	2.551	.856	.824	10.801
	Innovate		.789		
	FAge		.820		
	FStyle		.294		
	FSize		.719		
Fund Family	BValue	2.062	.765	.862	10.697
	Spillover		.741		
	Outsourcing		.807		
	FFSize		.690		
Fund Manager	MExp	1.866	.793	.892	10.434
	MFees		.684		
	MTAbility		.814		
	FMRepute		.788		
Mutual Fund Flows	MStructure	1.600	.859	.890	10.303
	Origin		.875		
	InvPerc		.352		
	RReturns		.852		
	BPolicies		.854		

Note: This table shows items in each sub-scale, their eigenvalues, factor loadings, factor-wise reliability alphas, and factor-wise variance explained. In this table, all the recommended standard criterion were taken from Hair et al. (2006).

CONFIRMATORY FACTOR ANALYSIS – INITIAL MFF SCALE

Data Analysis: Initial MFF Scale

The subsequent phase of refining the scale was conducted with a fresh and different sample of investors. This was done using the modified version of the pilot instrument with 30 items. Around 2,068 investors were approached to be a part of the survey process; however, finally, effective survey sessions were conducted with 1,761 investors. For further improving the initial scale, the refinement course of action followed similar stages as were employed in the pilot phase. Coefficient alpha ranged from 0.568 to 0.894. Six factors comprising 25 items were identified based on the results of the initial scale. As depicted in Table 2, a majority of the items showed factor loadings higher than .40 (Hair et al., 2006), except five items, which were deleted from the scale. These five items also had low contextual relevance to the MFF scale concept.

Table 2 shows that all the items had R^2 values above 0.50, which proves that all variables were substantially associated with their specific constructs, and hence confirmed the hypothesised associations among indicators and constructs (Hair et al., 2006). It also shows that all constructs had a total reliability higher than the threshold level of 0.70 (Hair et al., 2006). AVE values of all the constructs were greater than the suggested level of 0.50, which consequently gave further validation of reliability (Bagozzi & Yi, 1988; Hair et al., 2006).

Table 2: Reliability and Construct Validity of Measures – Initial Scale Results

Latent Variables	Item Label	Standardised Factor Loading	Critical Ratio[a]	R2	AVE	Composite Reliability
Risk	LTDI	0.833	_b	0.693	0.541	0.824
	MFluct	0.765	14.555	0.585		
	InvAge	0.762	11.892	0.580		
	PPerf	0.738	13.425	0.544		
Return	Turnover	0.880	_b	0.774	0.575	0.871
	InvObj	0.821	16.323	0.674		
	AssetAlloc	0.771	15.887	0.594		
	ExpRatio	0.734	13.372	0.538		
	FirmValue	0.736	15.357	0.541		
Fund Characteristics	TaxB	0.856	_b	0.732	0.555	0.831
	Innovate	0.820	10.781	0.672		
	FAge	0.789	11.014	0.622		
	FSize	0.719	11.831	0.516		
Fund Family	BValue	0.807	_b	0.651	0.558	0.789
	Spillover	0.765	10.352	0.585		
	Outsourcing	0.741	9.664	0.549		
	FFSize	0.790	10.369	0.624		

Latent Variables	Item Label	Standardised Factor Loading	Critical Ratio[a]	R2	AVE	Composite Reliability
Fund Manager	MExp	0.814	_b	0.662	0.542	0.823
	MFees	0.793	11.562	0.628		
	MTAbility	0.788	14.802	0.620		
	FMRepute	0.784	10.703	0.614		
Mutual Fund Flow	BPolicies	0.940	_b	0.883	0.621	0.863
	Origin	0.854	12.977	0.729		
	RReturns	0.742	14.514	0.550		
	MStructure	0.912	22.888	0.831		

a. All Critical Ratios (t-values) are significant at 0.05.
b. Indicates a parameter fixed at 1.0 in the measurement model.
Note: This table shows R^2 values of all items and validity measures like factor-wise composite reliability and factor-wise AVE values. In this table, all the recommended standard criteria were taken from Hair et al. (2006).

The underlying factor structure was estimated through confirmatory factor analysis (CFA) (Hair, 2006). Model fit ascertains the extent to which the model fits the sample data. Standard indices given by various distinguished scholars like Hair et al. (2006), Kaplan (2000), Kline (1998), and Nunnally and Bernstein (1990) were used for evaluating model fit values. All the values for fit indices surpassed the recommended levels and confirmed that the hypothesised model represented a satisfactory fit to the data (see Table 3).

Table 3: Model Fit Indices of Initial Scale

Parameter	Estimated Value	Accepted Value
Chi square value	542.18 with 125 degrees of freedom	Higher the better
CMIN/DF ratio	3.097	Less than 5
Goodness-of-fit index (GFI)	0.877	More than 0.90
Adjusted goodness-of-fit-index (AGFI)	0.829	More than 0.90
Root mean square error of approximation (RMSEA)	0.076	Less than 0.08
Comparative fit index (CFI)	0.902	More than 0.90
Bentler-Bonett normed fit index (NFI)	0.714	More than 0.90
Bollen's incremental fit index (IFI)	0.856	More than 0.80

Note: This table shows model fit indices of the initial scale by using confirmatory factor analysis. In this table, all the recommended standard criterion were taken from Hair et al. (2006), Kaplan (2000), Kline (1998), and Nunnally & Bernstein (1990), which were used for evaluating model fit values.

Data Analysis: Final MFF Scale

The final sample comprised the mutual fund investors from six different Indian states. Around 4,320 investors were approached to be a part of the survey process; however, finally, effective survey sessions were conducted with 3,738 investors (86.5% response rate). The concluding phase of scale development comprised further re-examination of the factor structure of the scale using structural equation modelling. The CFA outcome for the initial scale, comprising 25 items condensed into six factors, produced a reasonable fit. The final scale also contained 25 items trimmed down to six factors (see Table 3). The final scale provided a satisfactory match for the selected sample ($\chi 2 = 373.114$, $p = 0.00$, CFI = 0.92, IFI = 0.94, NFI = 0.81, NNFI = 0.93, GFI = 0.96, AGFI = 0.87, RFI = 0.86, RMSR = 0.04, RMSEA = 0.062). Meticulous scrutiny of the results, as shown in Table 4, illustrates that the entire set of factor loadings is statistically substantial and demonstrates a value superior to the suggested level of 0.40 (Hair et al., 2006; Jöreskog, 1993).

Table 4: Results of Confirmatory Factor Analysis of Final MFF Scale

Latent Variables	Item Label	α Values	Mean Scores	Factor Loadings	S.E.	C.R.	P
Risk	LTDI	0.851	4.13	0.74	.38	19.38	*
	MFluct		4.02	0.77	.24	17.02	*
	InvAge		4.06	0.67	.04	23.01	*
	PPerf		4.21	0.80	.30	21.05	*

Latent Variables	Item Label	α Values	Mean Scores	Factor Loadings	S.E.	C.R.	P
Return	Turnover	0.864	4.62	0.71	.15	18.07	*
	InvObj		4.84	0.65	.16	10.69	*
	AssetAlloc		4.83	0.70	.22	13.10	*
	ExpRatio		4.10	0.75	.25	14.53	*
	FirmValue		4.82	0.88	.15	28.01	*
Fund Characteristics	TaxB	0.887	4.89	0.75	.18	15.08	*
	Innovate		4.96	0.82	.12	11.44	*
	FAge		4.09	0.71	.17	14.30	*
	FSize		4.54	0.83	.35	21.64	*
Fund Family	BValue	.816	4.07	0.74	.12	18.01	*
	Spillover		4.14	0.89	.14	15.32	*
	Outsourcing		3.88	0.7	.27	12.30	*
	FFSize		4.02	0.63	.31	18.23	*
Fund Manager	MExp	0.843	4.29	0.77	.10	18.07	*
	MFees		4.24	0.89	.14	15.82	*
	MTAbility		4.88	0.77	.17	13.30	*
	FMRepute		4.52	0.69	.41	19.72	*
Mutual Fund Flows	BPolicies	0.860	4.15	0.78	.16	18.09	*
	Origin		4.84	0.89	.17	17.57	*
	RReturns		4.58	0.79	.23	11.57	*
	MStructure		4.42	0.69	.34	16.17	*

Note: Overall α = .831 and all loadings are significant at .01 level.
Note: This table shows the MFF final scale factor-wise Cronbach's alpha values, along with mean scores, factor loadings, standard error, critical ratio, and respective p values of all items.

A range of goodness-of-fit measures has been recorded, to smooth the progress of evaluation base, extended up to three phases of the scale, in Table 5. The comprehensive estimation of the goodness-of-fit indices illustrates remarkable up-gradation from the pilot to the initial, and from the initial to the final scale.

Table 5: Goodness-of-Fit Measures Comparison of Scale at All Phases

	Pilot Scale	Initial Scale	Final Scale
Absolute fit measures			
Value of the χ2 and significance level	1109.23 (p = 0.00)	542.18 (p = 0.00)	373.114 (p = 0.00)
Non-centrality parameter (NCP)	741.03	536.83	180.3
Goodness-of-fit index (GFI)	0.74	0.87	0.96
Root mean square residual (RMSR)	0.11	0.06	0.04
Root mean square of approximation (RMSEA)	0.094	0.07	0.06
Expected cross-validation index (ECVI)	5.21	2.58	1.36
Incremental fit measures			
Adjusted goodness-of-fit index (AGFI)	0.60	0.82	0.87
Normed fit index (NFI)	0.63	0.71	0.81
Non-normed fit index (NNFI)	0.79	0.90	0.93
Comparative fit index (CFI)	0.78	0.91	0.92
Incremental fit index (IFI)	0.72	0.85	0.94
Relative fit index (RFI)	0.66	0.80	0.86

	Pilot Scale	Initial Scale	Final Scale
Parsimony fit measures			
Parsimony goodness-of-fit index (PGFI)	0.49	0.61	0.65
Parsimony normed fit index (PNFI)	0.59	0.68	0.71
Akaike information criterion (AIC)	1294.78	692.67	479.10
Critical N (CN)	58.17	118.44	138.31

Note: This table shows a comprehensive estimation of fit indices from the pilot to the initial to the final scale. This table also demonstrates a smooth progression in the scale's model fit values. In this table, all the recommended standard criteria were taken from Hair et al. (2006).

VALIDITY AND RELIABILITY

According to Fornell and Larcker (1981), a measure to check convergent validity is through the value of average variance extracted (AVE). AVE for all the factors was higher than 0.50 (minimum acceptable AVE should be above 0.50). This showed that all items exclusively ascertained the construct to which they were theorised as belonging. The analysis of discriminant validity has been shown on the diagonal in Table 6. All factors exhibited sufficient discriminant validity, since the diagonal values are higher than the correlations. This scale also satisfies the norms laid down for external validity, as this questionnaire was tested on three different sets of investors and their statistical results were also compared. Table 6 exhibits convergent validity indices for the factors in consideration, and shows that constructs are valid and are capable of assessing the context of what they were intended to measure. The internal consistency of the scale has been exhibited in Table 6, which illustrates that the highest correlation (r = 0.789) was among the factors mutual fund flows and fund characteristics. This high correlation depicts the influential role played by various fund characteristics in affecting investor decisions, and as a result, the mutual fund flows. As the correlations are considerably lesser than 0.80 in total values, there is unlikely to be any statistical concern of multicollinearity in the concerned data (Hair et al., 2006). To sum up, the MFF scale, on evaluation, demonstrates an acceptable fit, as the items demonstrate strong convergent validity and consistency.

Table 6: Reliability and Validity Analysis of Final MFF Scale

	FManager[a]	Risk	Return	FChar[b]	FFamily[c]	MFF[d]
FManager[a]	**0.737**					
Risk	0.699	**0.736**				
Return	0.714	0.694	**0.758**			
FChar[b]	0.674	0.528	0.601	**0.845**		
FFamily[c]	0.613	0.745	0.637	0.540	**0.698**	
MFF[d]	0.695	0.616	0.605	0.789	0.768	**0.888**

*Based on Fornell and Larcker (1981): AVE in the diagonal and squared correlation off-diagonal.
FManager[a] = Fund Manager, FChar[b] = Fund Characteristics, FFamily[c] = Fund Family, MFF[d] = Mutual Fund Flows.
Note: This table shows values related to discriminant validity and convergent validity indices of the final MFF scale. Based on these parameters, this table also depicts the internal consistency of the final scale.

FINDINGS, DISCUSSION, IMPLICATIONS, AND FUTURE SCOPE

This paper identified determinants of mutual fund flows, with special reference to individual investors' perceptual buying and selling behaviour. This study also provided additional insights regarding elements of mutual fund flows, by including new perceptual variables, namely fund family, fund manager, and fund characteristics (these variables are called perceptual, because according to investor perception, these are the relevant factors affecting their investment decision) to the empirical models of risk and return analysis. This scale also highlights the fact that the present mutual fund investors are aware and conversant about their preferences while selecting a mutual fund for investment. Of the newly included variables, two factors appear to demonstrate better standing, namely fund characteristics and fund family. This relationship was also defended in the research work of Kopsch, Song and Wilhelmsson (2015), Geoffrey and Sapp (2007), and Sharma (2019), as various characteristics of funds like their size, age, innovativeness, and tax benefits affects the investor's decision to hold or to move funds from a particular mutual fund. Similarly, the association between fund family and fund flow was defended in the research work of Kempf and Ruenzi (2004) and Sharma (2019), because fund families carry brand baggage with them, which

ultimately makes the investors hold funds even in losing investments, due to their brand loyalty.

This scale emerged as a result of a detailed traditional scale development model, and thus, would add to the qualitative base of available literature. This study was carried out over an extensive period to cover the ups and downs of the stock market, as they have a noteworthy effect on investors' investment patterns and preferences. Other advantages of the MFF scale are its briefness, ease of handing out, and its proven validity across 17 Indian states. This scale also does not suffer from any social desirability bias, as an investment in mutual funds or perception regarding investing in mutual funds do not put respondents in an embarrassing position or portray their unfavourable image in society. Hence, there is no threat to the validity of this scale.

The work makes an equivalent contribution in academic and managerial domains. According to the academic perspective, it adds a new dimension to literature by developing and validating a scale for analysing investor perception regarding mutual funds to the accessible literature on investment management and behavioural finance. The newly developed and authenticated measure is open for application by prospective researchers for studying mutual fund flow and its antecedents. From the managerial viewpoint, this study will have long-run implications in edging high-pressure market strategies and in shifting the focus towards individual investors. Millennials are globally leading and rapidly enlarging the grown-up section, and represent higher prospects for the asset management companies, because they are not only enlarging in count, but additionally mounting up resources at a remarkable rate. Taking the favourable demographics as an opportunity, characteristics of the fund as identified in this study should be so assigned that serve the purpose and demand of this group of investors. Although, this research work covers mutual fund investors only in 17 states of India and this scale has come up with very few factors that can limit its scope in practical market scenarios. Despite these limitations, this scale fills an imperative gap of unavailability of a measurement instrument for modelling complex relationships among variables affecting investors' decision-making. The choice of states and demographics of the samples therein are also the strengths of the study. This paper is limited as the researcher considered net fund flows only. For future research direction, further research may include the outcome of variables like regulatory arbitrage, the role of rating agencies, price perceptions on mutual fund flows, and exploring more predictors. Upcoming research works may analyse the moderating effects of demographics and situational characteristics on mutual fund flows. This research was carried out only in India, a huge and diverse nation. It would be realistic to examine this scale globally to enhance the reliability and validity of the study.

CONCLUDING REMARKS

This study is an endeavour to bring forward the dominant investor perception factors affecting an individual's investment decision. Using exploratory factor analysis and confirmatory factor analysis, this research work developed and validated a scale for measuring the perception of mutual fund investors. Mutual fund companies have to have a comprehensive perceptive awareness and consideration about these dominant factors. These factors must be given the deserved thought and focus during the time of conceiving and expanding mutual fund schemes, as the perception of the investors regarding mutual funds has changed over the years. This scale has been developed by solely using Indian respondents, although the sample size is quite large.

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APPENDIX

Please indicate the extent to which you agree or disagree with the following statements (1 = strongly disagree and 5 = strongly agree).

	Item Code
Risk	
i) Long term investments are riskier.	LTDI
ii) Market fluctuations and risk involved are positively correlated.	MFluct
iii) Age of investor and their risk appetite are negatively correlated.	InvAge
iv) A fund's past performances play a crucial role in evaluating various types of associated risks.	PPerf
Fund Characteristics	
i) Size of mutual fund is positively correlated to higher fund flows.	FSize
ii) Credibility of a fund is developed over the years only.	FAge
iii) Innovativeness plays a dominant role in popularising mutual fund schemes.	Innovate
iv) Tax benefits available with a mutual fund help in selection by investor.	TaxB
Return	
i) Mutual funds sales are affected by their turnover.	Turnover
ii) Investment style plays an imperative role in anticipating returns. (Investment style means the investment objective of a particular mutual fund, like growth funds, income funds, balanced funds, and so on.)	InvObj
iii) Returns of a mutual fund are greatly affected by its asset allocation.	AssetAlloc
iv) Mutual funds justify higher expense ratio on the basis of higher returns.	ExpRatio
v) Mutual funds returns are positively correlated with higher firm value.	FirmValue
Fund Family	
i) Pattern of mutual fund returns are greatly affected by its fund family size. (Fund family size refers to large cap, mid cap, and small cap).	FFSize
ii) Higher cash inflows in mutual funds are a result of brand value of a fund family.	BValue
iii) Outsourcing portfolio management functions makes mutual funds cost-effective.	Outsourcing
iv) Spillover effect results in increasing fund family's market share.	Spillover
Fund Manager	
i) Mutual fund manager's market exposure and experience aids in accomplishing investor's financial goals.	MExp
ii) Mutual fund flows are greatly affected by the market timing ability of the fund manager.	MTAbility
iii) Fund managers' reputation has an imperative role in selection of a mutual fund.	FMRepute
iv) Fund managers' fees are vindicated matching their services.	MFees
Mutual Fund Flows	
i) Due to change in banking policies, mutual funds have become a risky investment avenue.	BPolicies
ii) Country of origin of a mutual fund affects its fund flows.	Origin
iii) Consistent returns are the main motive to invest in mutual funds.	RReturns
iv) Management structure of a mutual fund positively influences its fund flow.	MStructure

Notes: The investor's responses to questions could represent their knowledge, comprehension, and preconceived notions about the mutual funds as an investment avenue. In this study, an attempt has been made to minimise these possibilities by selecting investors who were associated with mutual funds in the form of investors, whether presently or somewhere in the past. No potential investors or non-mutual fund investors have been approached.