



AENSI Journals

Australian Journal of Basic and Applied Sciences

ISSN:1991-8178

Journal home page: www.ajbasweb.com



A Structural Equation Modeling Approach for Evolving New Business Model for Next Generation Mutual Fund Industry

¹S. Prakash and ²Dr. C. Sundar

¹Research Scholar, SRM University Sr. Test Engineer, Franklin Templeton International Services (I) Pvt. Limited, India

²Research Supervisor Professor and Head, School of Management SRM University, Ramapuram, India

ARTICLE INFO

Article history:

Received 8 August 2014

Received in revised form

12 September 2014

Accepted 25 September 2014

Available online 2 November 2014

Keywords:

Mutual fund, Business Model, AMFI,

Asset Management Company,

Distribution Models

ABSTRACT

Mutual funds as an investment vehicle have gained immense popularity in the current scenario. The existing mutual fund business models faces a number of issues which are characterized by lack of investor awareness, high dependence on corporate sector, low penetration levels and spiraling cost of operations. The study explores the critical factors that influence to restructure the Mutual Funds business models to provide for increased efficiencies and investor satisfaction. This paper focuses on the key growth drivers for the industry, identifying in the process the factors which may also reflect growth in the future. A new business model called *INSIGHT* is proposed for the sustainability of Indian mutual fund industry by considering aspects such as entry load, regulation of distributors, management fees paid to asset management companies, and taxation of mutual funds from the investor's point of view. Exploratory factor analysis, confirmatory factor analysis and structural equation modeling were used to analyze the data. The results suggest that the proposed model is central to meeting customer needs while streamlining the business processes. The proposed model fits for both development and sustainability of Indian mutual fund industry in coming years.

© 2014 AENSI Publisher All rights reserved.

To Cite This Article: S. Prakash And Dr. C. Sundar., A Structural Equation Modeling Approach for Evolving New Business Model for Next Generation Mutual Fund Industry. *Aust. J. Basic & Appl. Sci.*, 8(16): 186-189, 2014

INTRODUCTION

The mutual fund industry is passing through a revolution. On one side it has seen a number of regulatory developments while on the other the overall economy is just recovering from the global crisis. Despite this growth, as compared to other global economies, India has low penetration levels. India's GDP is less than 5 percent in Assets under management as compared to 37 per cent in Brazil, 61 per cent in France and 70 per cent in the US.

The challenges faced by the Indian industry are inaccessibility in smaller towns and cities due to lack of low financial literacy levels, an efficient distribution network, heavy reliance on institutional sales and cost pressures emanating as a result of inefficiencies in systems and processes. The industry should start taking appropriate measures to deal with these challenges, so that growth is not hampered in any way, and the sector is free to scale greater heights, and achieve greater penetration. In order to establish a defensible model, which will yield profits in the long run, a sustainable model is developed with key parameters namely investor education, regulation for distributors, cost management, Broker discount, diverse range of products and customer service through technology.

Average assets under management (AUM) have a growth of 23% for the year ended March 2013. This was higher than the 12% growth in March 2012. The industry has grown at a compound annual growth rate (CAGR) of 18% from 2009 -2013. A total of 139 new schemes were launched for the year ended March 2013, generating sales of 236,470 million INR. Furthermore, AUM under the equity segment has actually declined 5%, whereas the debt segment has grown significantly at 36%, which implies that investors are still wary of investing in the market looking for relatively safer investments by directing their investments into the debt bucket. Assets under management in the liquid and money market and gold exchange traded funds (ETFs) grew by 16% and 18% respectively.

Corresponding Author: S. Prakash, Research Scholar, SRM University Sr. Test Engineer, Franklin Templeton International Services (I) Pvt. Limited, India
E-mail: Prakashs90@yahoo.com

Current Mutual Fund trend in Global Market:

The Indian population is largely under-banked with a very low level of financial inclusion leaving room for further penetration. The extent of under-penetration in the market is as core point with the banking and financial services industry, with a large amount of savings being channelized into gold and real estate rather than the capital market. The GDP growth has slowed down, sluggish at 5% in 2012-13, with savings and investment rates following a downward trend. In 2010-11, the savings and investment rates were 34% and 36.8%, respectively, which declined to 30.8% and 35%, respectively, in 2011-12 and 31.8% and 35.4% in 2012-13. Comparing India to other countries, we realize how financial inclusion is yet to be achieved. While the UK and the US have 25.5 and 35.7 branches per 0.1 million adults and developing countries such as Brazil have 13.8 branches per 0.1 million adults, India is at as low figure of 10.9 branches per 0.1 million adults. For savings to be streamlined into the capital market, investors need to first and foremost be made aware of avenues and opportunities.

Literature Survey:

Literature on mutual funds industry includes research on competition and conflicts of interest (Khorana and Servaes 2004). Ramos (2009) finds that competition through entry is positively associated with larger industry and greater efficiency in terms of returns and fees. Grinblatt and Titman (1992) stated that performance differences between funds persist, and it was confirmed by Elton *et al.* (1996) applying risk-adjusted measures. Anderson and Schnusenberg (2005) provide an overview on performance persistence literature. Capon, Fitzsimons and Prince (1996) build clusters among mutual funds investors with their information sources used and selection criteria. Lenard *et al.* (2003) develop a model that predicts investors' switching behavior of mutual funds and find that investors consider investment risk, fund performance, investment mix and capital base of the fund before switching. Bailey, Kumar and Ng (2009) associated behavioral finance originated anomalies to mutual funds trading and concluded that experienced investors make better use of mutual funds.

Hacketh *et al.* (2009) stated that smart investment decisions are made by investors that are holder, more experienced and wealthier. Barber, Odean, Zheng, (2005) find that investors are sensitive to the fund expenses and find negative relations between flows and load fees. Müller and Weber (2009) find a positive relationship between financial literacy and the likelihood of investing passively. As Keswani and Stolin (2008) stated gaining insight into mutual fund investor behavior continues to be an exciting area for future research. Specifically from professional industry perspective, it becomes crucial to find out more, on what drives individuals to purchase or to not purchase mutual funds.

The purpose of this paper is to improve understanding of willingness and intention to invest in mutual funds and thus to identify key factors that determine the next generation mutual funds schemes. Furthermore, we want to find a model that can assist as basis for further research questions in this field. To examine this, a research model using the Structural equation modeling is used.

Mutual Fund- Emerging Challenges:

The following are the key challenges for mutual fund industry

- Low penetration in rural areas
- Lack of efficient distribution network
- Lack of investor education
- Cost Management

INSIGHT - Sustainable Mutual Fund Business Model for Next Generation:

In order for the Mutual Fund Industry to survive, a sustainable Business Model – *Insight (as shown in Figure 1)* is proposed. It focuses on the challenges and issues in Mutual Fund Industry and suggests the following factors that need to be incorporated by the Asset Management Companies for the growth and penetration of Mutual Fund Industry in India. Insight has been termed as

I – Investor Awareness / Services

N – New Product Design

S – Streamline Cost

I – Investment Advisor Discount

G – Grab Rural Sales

H – High Distribution Network Model

T – Technology Usage

Investor Awareness/Services:

- Creating awareness Campaign on Mutual Funds for the Investors in their regional languages
- AMC's Tie up with Cooperative banks / societies to provide fund services to investors
- Organizing one day camps on Mutual Fund Products and Services for women investors in regular intervals

- Application in various regional languages should be given along with the application in English which the investor is filling while making the investments

New Product Design:

- To Design Innovative Products for the Investors on Tax / Pension
- To increase Cash Investment Products for small investors (who may not pay taxes and not having PAN or Bank Accounts)

Streamline Cost:

- Reduce Distribution cost.
- Manpower hiring cost to be reduced.
- Sales and Marketing expenses, such as brokerage which forms large proportion of total costs for AMC's should be managed.

Investment Advisor Discount:

- Conducting Investment Advisor certification Programme in their regional language
- Providing more Discounts to Investment Advisors for attracting more Mutual Fund Investors

Grab Rural Sales:

- Providing customized fund services to Investors through self-help groups in Rural Areas.

High Distribution Network Model:

- Increasing the Distribution Strength of Mutual Fund Advisors through postal agents, retired government officials, retired teachers, and retired bank officers.
- The online channel of distribution should be exploited to its full potential.
- Training and educating the distributors to strengthen the network.
- The tied distribution model could be explored, where the agent is tied to a particular institution.

Technology Usage:

- SMS / Social Media based marketing strategy to promote mutual fund products
- Empowering Sales Channels to reach customers through digital strategies (mobile, tablets) for value added services
- Daily updates on Fund/AMC/investor related alerts through Mobile SMS and on Websites
- Customized Goal Planner options for Investor by AMC through Mobile SMS
- Set up of e-fund Information Centers
- Centralized data to be maintained across AMC's to avoid the Fraud during Transmission of Units



Fig. 1: Sustainable Business Model – Insight.

Structural Equation Modeling (Sem):

The purpose of SEM is to study complex relationships among variables as conceptualized. It enables competing of models and brings out the best close fit model. The INSIGHT model are organized into set of six factors such as Investor Awareness / Services(IAS), Intention to invest (INTV), Streamline Cost(CST), Investment Advisor Needs (IAN), High Distribution Network Model(NET), Technology Usage(TECH).

Hypothesis:

H1: There exists no relationship between the factors Investor Awareness / Services (IAS), Intention to invest (INTV), Streamline Cost (CST), Investment Advisor Needs (IAN), High Distribution Network Model (NET), and Technology Usage (TECH) proposed in the frame work.

H2: There exist no close model fit among the listed factors in the frame work (Investor Awareness / Services (IAS), Intention to invest (INTV), Streamline Cost (CST), Investment Advisor Needs (IAN), High Distribution Network Model (NET), Technology Usage (TECH)) and successful new business model development in the mutual fund industry.

RESULTS AND DISCUSSION

The insight model is based on the sample size of 234. The model contains Observed endogenous variables such as TECH, INTV, and IAN. Observed exogenous variables such as CST, NET, IAS, Unobserved exogenous variables such as e1, e2 and e3.

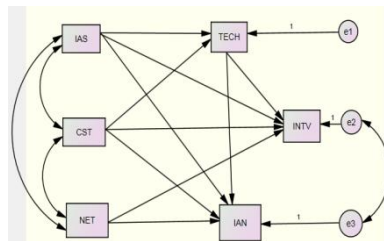


Fig. 2: SEM diagram for INSIGHT.

Table 1: INSIGHT Model Data Description.

| |
|---|
| The model is recursive. Sample size = 234 |
| Number of variables in the model: 9 |
| Number of observed variables: 6 |
| Number of unobserved variables: 3 |
| Number of exogenous variables: 6 |
| Number of endogenous variables: 3 |
| Observed, endogenous variables: TECH, INTV, IAN |
| Observed, exogenous variables: CST, NET, IAS |
| Unobserved, exogenous variables: e1, e2, e3 |

i) Hypothesis Testing Of H1:

The Null hypothesis H1 - there exists no relationship between the factors Investor Awareness / Services (IAS), Intention to invest (INTV), Streamline Cost (CST), Investment Advisor Needs (IAN), High Distribution Network Model (NET), Technology Usage(TECH)proposed in the frame work.

Structured equation modeling has been used to test the hypothesis, which also includes arriving best fit for the framework. It is observed and shown in Table 2 the correlation coefficients are ranging from 0.295 to 0.946. The correlation coefficients values were found to be moderate and positive for all the 36 constructs and statistically significant at 1% level, thereby rejecting the null hypothesis H1.

ii) Correlation Among Factors:

The correlations among the factors have been provided in the Table 2.

Table 2: Correlations among the variables.

| | IAS | NET | CST | TECH | IAN | INTV |
|------|-------|-------|-------|-------|-------|-------|
| IAS | 1.000 | | | | | |
| NET | .883 | 1.000 | | | | |
| CST | .946 | .791 | 1.000 | | | |
| TECH | .904 | .828 | .824 | 1.000 | | |
| IAN | .931 | .837 | .874 | .924 | 1.000 | |
| INTV | .352 | .562 | .295 | .567 | .377 | 1.000 |

Reliability Co-efficient:

In order to measure the reliability for a set of two or more constructs, the Cronbach’s alpha is a commonly used method where alpha coefficient values range between 0 and 1 with higher values indicating higher reliability among the indicators (Hair *et al.*, 1992). Hence, 1 is the highest value that can be achieved (Table 3).

In accordance with the Cronbach's alpha test, overall a higher reliability factor has the total scale of reliability as 0.914. The reliability of this paper is substantial in every respect, as the highest reliability value that can be achieved is 1.0.

Table 3: Reliability Statistics.

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|------------------|--|------------|
| .914 | .914 | 27 |

Table 4: KMO and Bartlett's Test.

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .668 |
|--|--------------------|--------|
| Bartlett's Test of Sphericity | Approx. Chi-Square | 70.556 |
| | df | 10 |
| | Sig. | .000 |

Factor Analysis:

The results obtained from 234 respondents were thoroughly analyzed and the outputs of the results have been clearly explained. Applying SPSS, the Principal Component Analysis (PCA) was carried out to explore the underlying factors associated with 27 items. The constructs validity was tested using Bartlett's Test of Sphericity and The Kaiser-Mayer-Olkin Measure of sampling adequacy analyzing the strength of association among variables. As rule of thumb states, to perform factor analysis the overall KMO value should be 0.60 or higher. If this value is not obtained, then it is essential to plunge the variables with the lowest anti image value until the KMO overall rises above 0.60. The results for the Bartlett's Test of Sphericity and the KMO revealed that both were highly significant and eventually it was concluded that this variable was suitable for the factor analysis (Table 4).

The factor analysis draws a distinction regarding factors. To determine the minimum loading it is necessary to include an item in its respective constructs, it was suggested by Hair *et al.* (1992) that variables with loading more than 0.30 is considered to be significant, loading more than 0.40 is very important and loading 0.50 or greater is very significant. For this analysis, the general criteria were accepted on items with loading of values greater than or equal to 0.40. Under this condition, not a single factor had been dropped out which means the factor analysis ran on an ultimate success. The result shown explaining a total variance by the six factors was 63.050%. The values of the following Table 5 indicate the amalgamation of the items to a factor. Generally, the factor is the natural accord of an item for a group. The higher loading (factor) indicates the stronger affiliation of an item to a specific factor. The findings of this paper indicate that each of the six dimensions was homogeneously loaded into the different factors.

Reliability Test:

Reliability Test is the degree to which a test is consistent and stable in measuring what it is intended to measure. The coefficient alpha estimates for the multi-item scales used in this study are presented in Table 6. Reliability coefficients (Cronbach's Alpha) were computed for the items that formed each factor. As recommended by Nunally and Bernstein (2010), Table 6 shows, all alpha coefficients for the data exceed the minimum standard for reliability of 0.70. Thus, the analysis indicates that these multiple measures are highly reliable for measuring each construct.

Confirmatory Factor Analysis:

Factor analysis assumes that the covariance between a set of observed variables can be explained by a smaller number of underlying latent factors. Statistical procedures are used to estimate the number of underlying factors and to estimate the factor loadings. The model is arbitrary in exploratory factor analysis: all factors will be loaded with variables. In contrast, the path diagram will be utilized that will represent a clear hypothesis about the factor structure. CFA is actually the measurement part of Structural Equation Modeling (SEM).

The fit indices from the default measurement model were: $\chi^2 = 0.000$, $d.f = 0$ (Probability level cannot be computed as the model has zero degrees of freedom). The chi-square statistic should be zero and data should be perfectly fit for a model. Consequently, no probability level can be assigned to the chi-square statistic. As referred to Table 7, GFI = 1.00, CFI = 1.00, NFI = 1.00 and RMSEA = 0.607. All indices represent an adequate fit of the model, except the value of RMSEA, thus, there was no need to examine the modification indices.

Hypothesis testing of H2:

The Null hypothesis H2 - there exists is no close model fit among the listed factors in the frame work (Investor Awareness / Services(IAS), Intention to invest (INTV), Streamline Cost(CST), Investment Advisor Needs (IAN), High Distribution Network Model(NET), Technology Usage(TECH)) and successful new model development for mutual fund industry.

Table 5: Factor loading matrices.

| Investor Services | F1 | F2 | F3 | F4 | F5 |
|---|------|------|------|------|------|
| Creating awareness Campaign on Mutual Funds for the Investors in their regional languages and making application available in various regional languages along with the application in English which the investor is filling while making the investments | .882 | | | | |
| Organizing one day camps on Mutual Fund Products and Services for women investors in regular intervals and Providing customized fund services to Investors through self-help groups in Rural Areas | .883 | | | | |
| AMC's Tie up with Cooperative banks / societies to provide fund services / Additional Benefits like Free Insurance, Free Credit Card to investors | .881 | | | | |
| Issuing of Guidelines by the industry regarding the process to be followed across the industry and the same should be available to investors in various regional languages for easy and hassle free transactions. | .872 | | | | |
| IAN/Asset Management Company | | | | | |
| Introducing Goal Based Innovative Products (for Retirement, Education, Marriage...) | | .862 | | | |
| Increasing Cash Investment Products for small investors (who may not pay taxes and not having PAN or Bank Accounts) | | .865 | | | |
| Providing attractive incentives to Investment Advisors for attracting more Mutual Fund Investors | | .872 | | | |
| Sales and Marketing expenses, such as brokerage which forms large proportion of total costs for AMCs should be managed | | .842 | | | |
| Technology | | | | | |
| SMS / Social Media based marketing strategy to promote mutual fund products | | | .832 | | |
| Empowering Sales Channels to reach customers through digital strategies (mobile, tablets) for value added services | | | .883 | | |
| Daily updates on Fund/AMC/investor related alerts through Mobile SMS and on Websites | | | .881 | | |
| Set up of e-fund Information Centers | | | .872 | | |
| Centralized data to be maintained across AMC's to avoid the Fraud during Transmission of Units | | | .842 | | |
| Distribution Network | | | | | |
| Increasing the Distribution Strength of Mutual Fund Advisors through postal agents, retired government officials, retired teachers, retired bank officers | | | | .882 | |
| Online channel of distribution should be exploited to its full potential | | | | .883 | |
| Training and educating the distributors to strength the network | | | | .881 | |
| Tied distribution model could be explored, where the agent is tied to a particular institution | | | | .872 | |
| Intention to Invest | | | | | |
| I intend to invest in mutual funds, as soon as I have money free for disposal and MF will be one of my choice | | | | | .881 |
| It is very likely, that I will invest in mutual funds within the next 12 months. | | | | | .872 |
| I plan to extend investments in mutual funds | | | | | .842 |

Table 6: Reliability coefficients for derived factors.

| Factors | No of cases | No of items | Cronbach's Alpha |
|--------------------------|-------------|-------------|------------------|
| Investor Services | 234 | 4 | 0.913629792 |
| Asset Management Company | 234 | 4 | 0.913629792 |
| Technology | 234 | 5 | 0.913629792 |
| Distribution Network | 234 | 4 | 0.913629792 |
| Intention to Invest | 234 | 3 | 0.913629792 |

Table 7: SEM Fit indices for all factors.

| | |
|------|--|
| CST | ($\chi^2=0.079$, d.f=2); GFI= 1.00, AGFI=0.997, CFI=1.00, NFI= 1.00 and RMSEA= 0.048 |
| IAN | ($\chi^2=0.023$, d.f=5); GFI= 0.998, AGFI=0.965, CFI=0.969, NFI= 1.00 and RMSEA= 0.040 |
| IAS | ($\chi^2=0.028$, d.f=5); GFI= 0.998, AGFI=0.997, CFI=0.969, NFI= 1.00 and RMSEA= 0.040 |
| INTV | ($\chi^2=0.000$, d.f=0); GFI= 1.00, AGFI=0.0, CFI=1.00, NFI= 1.00 and RMSEA= 0.336 |
| NET | ($\chi^2=0.023$, d.f=5); GFI= 1, AGFI=0.997, CFI=0.969, NFI= 1.00 and RMSEA= 0.048 |
| TECH | ($\chi^2=0.028$, d.f=5); GFI= 0.998, AGFI=0.997, CFI=0.969, NFI= 1.00 and RMSEA= 0.040 |

In SEM the terms independent and dependent variables are derelict; instead, variables are referred to as exogenous and endogenous. The exogenous are not dependent on other variable and endogenous variables are those modeled as dependent on other variables. In the frame work evolved, Observed endogenous variables such as TECH, INTV, and IAN. Observed exogenous variables such as CST, NET, IAS. The path diagram of frame work which has been tested through SEM is shown with standardized regression weights are shown in Figure 3.

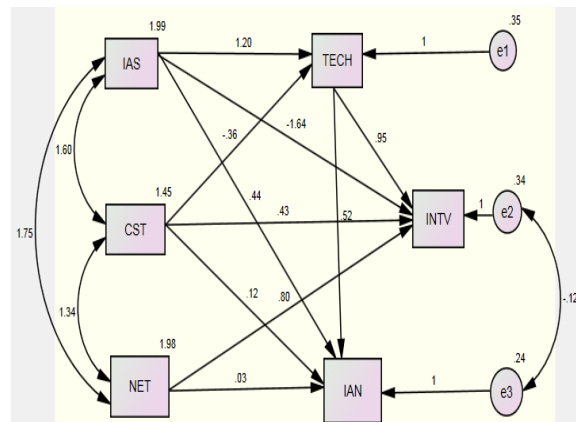


Fig. 3: SEM Path diagram for INSIGHT Model.

Table 8: SEM Model fit summary for the frame work.

| Parameter | Acceptable Values | Actual Values |
|-----------|-------------------|---------------|
| P | > 0.05 | 0.380 |
| CMIN/DF | < 2 excellent fit | 0.968 |
| RMR | < 0.1 | 0.016 |
| GFI | > 0.9 | 0.998 |
| AGFI | > 0.9 | 0.965 |
| NFI | > 0.9 | 0.999 |
| NNFI | > 0.9 | 1.000 |
| RFI | > 0.9 | 0.988 |
| CFI | > 0.9 | 1.000 |
| RMSEA | < 0.05 | 0.040 |
| SRMR | < 0.05 | 0.0048 |
| PClose | > 0.05 | 0.31 |

In Amos 18.0 user's guide the guidelines for confirming the model fit has been provided (Arbuckle, 2007). To start, the model should be recursive model which is confirmed as there is only one way relation between endogenous variables. The minimum discrepancy, CMIN value from the model fit analysis is 1.723. This is a Chi-square statistic comparing the tested model and the independence model with the saturated model. Degrees of freedom, DF is 2 which make CMIN/DF as 0.968 as against the best fit model target value of less than 2 which quantitatively confirms the existence of relationship between variables.

The probability value P which gives a test of exact fit for a model is 0.380 which is greater than 0.05 indicating a close fit of the model. The GFI which indicates the proportion of the observed covariance explained by the model covariance is 0.998 as against an acceptable limit of greater than 0.9. Adjusted Goodness of fit index (AGFI) is an adjustment for model complexity. This is done because in any model more parameters has been included, and the greater the amount of variance was described. It corrects the value of GFI downward; AGFI value is 0.965 as against greater than 0.9 acceptable good fit limits.

The NFI indicates the proportion in the improvement of the overall fit of the researcher's model relative to an independence model. The independence model is one in which all variables are assumed to be uncorrelated. The NFI of 0.999 from SEM means that the overall fit of the tested model is 99.9% better than that of an independence model. The CFI is also interpreted the same way as NFI, but less affected by sample size. CFI is 1 as against a best acceptable limit of greater than 0.90. The Hoelter's critical N, focuses on the adequacy of sample size. A model is considered adequately fit if the Hoelter's N is greater than 200, which is used as a threshold in conjunction with a significance level of 0.05. The value obtained is 1 for 0.05 indicating the sample size chosen is sufficient to accept the model fit of the model on a statistical basis.

RMR, the root mean square residual is an index of the amount by which the estimated variances and covariance differ from the observed variances and covariance. RMR is 0.016 a value less than 0.1 is considered to be good. RMSEA value is 0.040 which is less than the target of ≤ 0.05 . The RMSEA estimates lack of fit compared to the saturated model. When the fit of the model is perfect, the Standardized root mean residual (SRMR) equals zero. The SRMR from SEM is 0.0048 which is closer to zero. All the statistical parameters

confirm close fit of the model. This means the null hypothesis (H2) is rejected. In SEM the P of close fit (Pclose) is a test of close fit, a measure that provides greater than 0.050 then it is concluded that the fit of the model is close. The Pclose is observed as 0.315. This supports the rejection of null hypothesis (H2).

The model fit gives wisdom to the mutual fund company, which are in business of making the schemes to their customers. The impact of the model and the way it is structured provides a clear depiction to the industry the importance of the factors and benefits of interweave. The evidence from the data analysis for this model is that the factors when identified and related as given in the model, provides an opportunity to the organization and engineers to acquire the best of successful new business solution to mutual fund schemes.

Conclusion:

The mutual fund industry is depends on the economic situation in the country. The current economic scenario results in depressed equity inflows with sticky inflation and rising fuel prices. Hence steps need to be taken to put confidence in the minds of the investor and to encourage him to invest in mutual funds, even in times of uncertainty. The proposed model INSIGHT focuses on the huge opportunity of growth and further penetration of the mutual fund industry in India. The model suggests strengthening distribution networks and enhancing levels of investor education to increase presence in rural areas. Also, it focuses on the innovative pension products that bring mutual fund industry to grow. Lastly, the success and sustainability of mutual fund industry is achieved if some best practices from other industries and sectors are followed which results to the next level of growth.

The SEM approach shows that there exists relationship between the factors. The interaction has resulted in a complex but interesting framework. This work facilitated in listing, integrating and understanding the relationship of the factors leading to successful new business model development. In a nutshell this work has identified the relationships of the listed factors and its impact on successful new model development. The structural equation modeling has been used to understand the interactions with factors.

REFERENCES

- Anderson, S.C., O. Schnusenberg, 2005. A review of studies in mutual fund performance, timing, and persistence, Working Paper.
- Bailey, W., A. Kumar, D. Ng, 2009. Behavioral Biases and Mutual Fund Clienteles, Working Paper, Cornell University.
- Barber, B., Odean, T., Zheng, L.: Out of sight, out of mind: the effects of expenses on mutual fund flows, *Journal of Business*, 78: 2095-2120.
- Capon, N., G. Fitzsimmons, R. Prince, 1996. An individual level analysis of the mutual fund investment decision, *Journal of Financial Services Research*, 10: 59-82.
- Grinblatt, M., T. Sheridan, 1992. The Persistence of Mutual Fund Performance, *Journal of Finance* 47: 1977-1984.
- Hackethal, A., F. Niebling, S. Meyer, 2009. Whose money is smart? Mutual fund purchases of private investors; Working Paper.
- Keswani, A., D. Stolin, 2008. Which Money is Smart? Mutual Fund Buys and Sells of Individual and Institutional Investors, *Journal of Finance*, 63: 85-118.
- Khorana, A., H. Servaes, 2004. Conflicts of Interest and Competition in the Mutual Fund Industry. doi:10.2139/ssrn.240596
- Lenard, M.J., S.H. Akhter, P. Alam, 2003. Mapping Mutual Fund Investor Characteristics and Modeling Switching Behavior, *Financial Services Review* 12-12(1): 39-59.
- Müller, S., M. Weber, 2010. Financial Literacy and Mutual Fund Investments: Who Buys Actively Managed Funds?, *Schmalenbach Business Review*, 62: 126-153.
- Ramos, S.B., 2009. The Size and Structure of the World Mutual Fund Industry. *European Financial Management*, 15: 145-180.
- KPMG, 2015. research report - Indian Mutual Fund Industry – The Future in a Dynamic Environment
Outlook for
RNCOS Report - Current and Future outlook of Mutual Fund Industry
PWC research report – The Mutual Fund Industry – Is there silver lining?
<http://www.business.mapsofindia.com>
<http://www.amfiindia.com>
<http://www.mutualfundsindia.com>