Robo Advisors in Financial Advisory Services: A Study of Investors Perception in Mumbai

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Abstract: Robo Advisors are a direct consequence of increased penetration of Artificial Intelligence in the financial services arena. They claim to be efficient, cost effective and transparent advisors. .Present study endeavors to understand the perception of retail investors about Robo advisory services for financial planning purposes. Study also tries to understand if the income level of investors has a significant bearing on investment decision making process in the form of source of information used. Study uses sample drawn only from Mumbai metropolitan region and concludes that the future of Robo Advisors is bright. However concerns regarding cyber security and data privacy needs to be handled. It also concludes that the income level of investors has a significant bearing on investment decision making process in the form of choice of source of information.

Key Words: Fin Tech, Artificial Intelligence, Robo Advisors, Retail investors, Perception.

Introduction: Role of Financial advisors is only increasing over time. With increase in number of investment options and growing significance and awareness about aligning investment with financial goals, it is always considered a better option to have a financial advisor who with his sound knowledge of various investment options can help retail investors achieve his financial goals.

Traditionally financial advisor is an independent practitioner who helps an individual in managing their finances by providing advice on various money related issues such as investments, insurance, estate planning, tax and retirement etc. Financial Planner is an independent practitioner operating in a fiduciary capacity keeping his clients interest before his own.

Over a period of time, this sector is also evolving with the advent of technology like all other fields. Artificial Intelligence is affecting every walk of life and this sector of personal finance

is also influenced by this. Mc Karthy the father of Artificial Intelligence defines AI as *"*The science and engineering of making intelligent machines, especially intelligent computer programs"*[1]*.There are various application of Artificial Intelligence in financial sector like Chatbots, Robo Advisors etc. India being a technical hub is seeing lots of development in the field of Fin Tech with Infosys and TCS believed to be the leaders in providing core banking solutions being head quartered here.

Investopedia defines Robo Advisors as digital platforms that provide automated, algorithm-driven financial planning services with little to no human supervision[2]. Robo Advisors have speed, intelligence and are cost efficient (Fein, 2015). There origin can be traced back to the year2008.

As per Sirohi (2016), Robo Advisors can direct the investment behavior of investors towards goal centric decision making. Robo Advisors has its own advantages over traditional human advisors in terms of 24*7 accessibility and also in being cost efficient. Service accessibility and cost efficiency are cited as two most reason for usage of Robo Advisory platform by investors (Faubian,2016). Many survey reports have highlighted that even individual with small savings are finding Robo advisory online investment platforms attractive (Economist, 2015)[3]. Earlier researches have indicated that trust, transparency and information asymmetry balancing is what investors are expecting from online investment platforms (Nussbaumer etal.,2011).

Libby Kane (2014)[4] did a comparative analysis between Robo Advisors and Human Advisors taking into consideration certain parameters like cost, size of portfolio, accountability, transparency etc. However one area where human advisors can be expected to have an edge is in analyzing the personality traits and understanding that priority and goals keep changing with change in time and circumstances as pure quantification of this aspect into input data for further processing may not be possible (Möwes; Puschmann, and Alt, 2011).Because of this many believe that recommendation of Robo Advisors are suitable more for meeting short term goals (Huxley and Kim,2016). As per them future may be of a hybrid model where Robo Advisors can aid in analysis using programmed algorithms while

[1] https://towardsdatascience.com/what-is-artificial-intelligence-ai-ad5ba87b55dd
[2] https://www.investopedia.com/terms/r/roboadvisor-roboadviser.asp
[3] The Economist. (2015). Robo-advisers - Does not compute: The growth of firms selling computer-generated financial advice is slowing.

[4] https://www.businessinsider.in/personal-finance/new-report-says-robo-advisors-will-manage-255-billion-within-5-years/articleshow/43256563.cms

Psychological aspect of motivating and reassuring clients will be taken care of by human financial advisors. Tertilt and Scholz (2018), have concluded that Robo Advisors recommend very conservative portfolios with limited equity exposure.

There are also empirical studies suggesting that use of Robo advisors leads to higher diversification and reduced behavioral biases (Acunto, Prabhala, and Rossi. 2018).

Initially Robo Advisors were considered to be a threat for human advisors as having potential to replace them. However now they are perceived as being complementary to their human counterparts. Retail investors these days are showing increasing interest in latest technology such as Robo Advisors via various online investment platforms due to various reasons such as lower transaction fees, accessibility during any time of the day, ample of market updates, alerts and also periodic reviews Robo advisory services is still in nascent stages and hence there are not many studies to analyze its impact on different components of financial system. Present study endeavors to understand the perception of retail investors about Robo advisory services for financial planning purposes. Study also tries to understand if the income level of investors has a significant bearing on investment decision making process in the form of choice about source of information used.

Objective of the Study:

a. To study the perception of retail investors about Robo Advisors and usage of online investment platforms

b. To find out if income level of investors has a significant bearing on decision making process in terms of choice about source of information

Research Methodology: The Present study is an empirical study where data has been collected both from primary as well as secondary sources. Semi structured Questionnaire has been prepared for collecting primary data. Questionnaire has been divided into two parts. First part of the Questionnaire is used for collecting information regarding demographic profile of the respondent and the second part is used to understand the respondent's perception so as to meet the objective of the study.

Study intended to have a sample size of 500. For this Questionnaire was administered to around 700 individuals in Mumbai .However only 490 questionnaires came back and of this 474 fully filled questionnaire have taken for the purpose of this study. Sample includes working professional between 25-45 years of age on the assumption that risk appetite changes with the age and this category of investors have a longer planning horizon as well as increased level of awareness in terms of technology. Convenient sampling has been used for

the study. For reliability and validity of the instrument, Cronbach alpha coefficient has been calculated and the value arrived is .76 which is above the acceptable limit of .70(Hair et al., 1998).

Secondary data has been collected from various reports, websites, journals etc.

Data Analysis and Interpretation: Following table discusses the demographic profile of the retail investors included in the sample.

Table 1: Demographic Profile

Demographic Variable	Category	Frequency N=474	Percentage
Age	25-35 years	268	56.5%
	36-45 years	206	43.5%
Gender	Male	308	65%
	Female	166	35%
Annual Income Level	Less than 6 Lakhs	33	7%
	6-12 Lakhs	142	30%
	12-25 Lakhs	161	34%
	25-50 Lakhs	123	26%
	Above 50 Lakhs	15	3%

- Out of 374 Respondents more than 72% respondents that are 342 respondents were already found to be aware of this concept of Robo Advisor. More than 80% male and close to 58% females are also aware of this concept. Age Wise break up shows that more than 60% of respondent investors which are aware of the concept of Robo advisors and online investment platforms are in the age bracket of 25-35 years. Looking into the category of annual income it has observed that in the annual income level less than 6 lakhs per annum comparatively lower level of awareness(less than 40%)has been observed whereas in all other levels, more than 65% of awareness about Robo Advisors has been observed.

Table 2: Awareness about Robo Advisors

Demographic Variable	Category	Frequency N=342	Percentage
Age	25-35 years	206	60%

	36-45 years	136	40%
Gender	Male	246	80%
	Female	96	58%
Annual Income Level	Less than 6 Lakhs	13	3%
	6-12 Lakhs	105	30.7%
	12-25 Lakhs	120	35.1%
	25-50 Lakhs	94	27.49%
	Above 50 Lakhs	10	13.42%

What is clearly visible is that people in younger age bracket are expected to be more tech savvy and that is clearly visible from their level of awareness about new technological innovation in the field of financial planning and investing. Study shows that male are more aware of this concept and income category wise classification clearly reveals that people within the income group of 6 to 50 lakhs per annum are showing maximum awareness whereas awareness level is low in people with annual income less that 6 lakh per annum. One reason for this could be lack of interest due to lesser surplus income to invest.

- Another information which came from the primary data is that 30% of the investors within the age category of 25-35 are already using online platforms for investment purpose and this number is less than 10 % in higher age bracket. Total 93 respondents have stated that they are already using online investment platforms. Following table depicts demography wise break up within this category.

  Table 3: Usage of Online Investment Platforms

Demographic Variable	Category	Frequency N=93	Percentage
Age	25-35 years	80	30%
	36-45 years	13	10%
Gender	Male	71	76.34%
	Female	22	23.66%
Annual Income Level	Less than 6 Lakhs	1	1.08%
	6-12 Lakhs	10	10.75%
	12-25 Lakhs	43	46.23%
	25-50 Lakhs	37	39.78%
	Above 50 Lakhs	2	2.15%

Thus more males as compared to their female counterpart and going by income based classification people from middle to higher category are investing more using online platforms involving artificial intelligence.

Following table depicts the source of information which forms the basis on decision making.

Table 4: Source of Information

Variable	Frequency N=474	Percentage
Self-Analysis	213	45%
Dailies/Periodicals/Media Reports	47	10%
Recommendation from friends and Relatives	95	20%
Recommendation from Financial Advisors	76	16%
Automated Online Investment Platform	93	19.6%

*Total percentage in this case can be more than 100 as many respondents might be using more than one source of information

This aspect has been analyzed further by using one way ANOVA to know if income categories of respondents have a significant bearing on the source of information used for decision making as suggested in Literature.

One Way ANOVA

H0: Income wise there is no significant difference in the score of various sources of information using decision .making.

H1: Income wise there is significant difference in the score of various sources of information using decision-making.

Between Groups	Sum of Squares	Df	Mean Square	F	Sig.
Self-Analysis	38.94	5	7.788	8.12	.000
Dailies/Periodicals/Media	15.86	5	3.172	4.21	.000

Reports					
Recommendation from friends and Relatives	36.75	5	7.35	7.98	.000
Recommendation from Financial Advisors	23.95	5	4.79	5.21	.000
Automated Online Investment Platform	18.45	5	3.69	4.12	.000

Value of Sig is .000 which is < .05, hence null hypothesis would be rejected and alternative hypothesis which states that Income wise there is significant difference in the score of various sources of information affecting decision-making would be accepted.

- More than 80% of the conservative respondents who are currently not using online automated platforms when questioned about the reasons, more than 90% of them cited security and privacy as their major concern.
- Another important analysis is that investors currently not using online platforms or the services of Robo Advisors and using the service of human financial advisors are willing to use online platforms if recommended by their trusted online service providers.
- 45% of the Investors using online platforms for investments are allowing a maximum of up to 75% of their total investments to be managed with the online investment tools although most of the investors are preferring up to 25% of their investments to be managed by the same.

Conclusion: This study is an attempted to study the investor's perception regarding the usage of Artificial Intelligence (AI) in financial advisory services in the form of Robo Advisors in online investment platforms. What is a clear conclusion from the study which is based on the primary survey is that only a small group of advisors are not aware of the concept of Robo Advisors and it is a new concept for them. Now one reason for this can be since the respondents are from Mumbai which is the economic capital of country, there awareness in more in case of technological advancements. Moreover very few people with income level less that 6 lakhs per annum and more than 50 lakh per annum are using this online platforms, This category of investors can be targeted and made aware about the benefits of online investing. Study also reveals that more than 45% of respondents still take decisions on the

basis of self-analysis. This segment can be targeted and attracted as all these online platforms do provided plenty of information and update which can be used for analysis.

Overall the future of Robo Advisors seems to be bright. However concerns regarding cyber security and data privacy needs to be handled.

Presents study used sample drawn only from Mumbai Metropolitan Region and it is logically expected that the investors are expected to be more tech savvy as compared to other parts of the country. So result of this study can be generalized only with a cautious approach.

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