

Evolution of Automation in Wealth Management: A Study of Asian Countries

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Abstract:

The financial industry is changing face with the emergence of automated investment services tools, termed “robo advisors.” Robo Advisory has changed the style of working of every individual in every field. Many wealth management firms have adopted robo advisory services to aid their clients for optimizing portfolio and for various other services. This study is focused on use of robo advisory, difference between traditional advisors and robo advisors, types of robo advisors in different countries, scope of robo advisors in India. The information gathered for this paper is based on secondary data collected from journals, reports, internet, published articles. This paper analyses how robo advisors work in wealth management and in what basis they are different from traditional investors. As per Asian countries they have been bifurcated in advanced, developing, emerging and nascent stages. This paper is useful to cater the need of robo advisors in India in wealth management and in other areas. This paper tries to highlight the hybrid model of human intervention and robo advisors in wealth management which adds novelty to the study.

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I. INTRODUCTION

Financial sectors which have been developed and lots of innovations have been done in that sector can enhance as well as disrupt the clients the way they are served. So many technology centric newcomers like Amazon, which is known for global distribution, Uber for domestic transportation has affected so many traditional industries with their innovation skills and techniques (Phoon&Koh, 2017). Traditional providers who provides the wealth management services are facing lots of challenges due to new technologies because they are delivering these services at low cost (Phoon&Koh, 2017).

Robo- advisors came into existence in 2008 before that wealth management services were provided by

human only with their understanding of market structure and investor preferences towards investing in which market (Future advisor, 2015).

Now traditional wealth managers have been replaced by robo advisors. Robo advisors are a program which uses computer algorithm which reduces the work of human for asset allocation and wealth management (Edwards & Benjamin, 2018). Human interference is needed only to a certain extent (e.g., taxes, retirement or estate planning) (Investopedia, 2018).

Use of Robo-advisory is changing the working styles of every individual in almost every range. From tourism, healthiness, telecom, education, and other sectors and now wealth management too. Several wealth management advisors have accepted the Robo-based services to the clients (Jung et al.,

2018). So, there is no limitation for time, date or place limitation for the investment purpose. These facilities are easily available, economical, clear and impartial. Since the robo advisory facilities are being provided by the machineries just like supercomputers, they are being called as “robo – advisors” (Singh & Kaur, 2017).

Robo-advisory is a rapidly growing application of FinTech sector to asset and wealth management. Getting clients on board is probably the most critical step in robo-advisory, and it is also effectively suitable and effective. To provide varied and cost-effective investment results, robo-advisory mainly invest in Exchange traded funds (Fein & Melanie, 2015). Robo-advisors create client portfolios using processes based on mean-variance optimization. Automatic rebalancing of portfolios to maintain targets and minimize losses and provide tax-efficient solutions through tax-loss planning. In the United states alone start up related to automated wealth management and working for asset under management saw an exponential growth in last few years. The main segment of target was retired and voluntarily retired workers. The number of organizations in developed countries in European union, which have robo-advisors which execute Asset under management are only some 5-6% of that in the US (Baker et al., 2017). They may get advantage from better interest from commercial investors. The marketplace is becoming very sharp and strong place for business-to-customer robo-advisory start-ups. As a result, there will possibly be corporations and mergers by recognized asset managing firms or banks in the recent years (Deutsche, 2017).

To start with concrete meaning of the word Robo Advisory. The word consists of two words. Robo for robotics which is nothing, but automation and the other part is consultant. Robo stands for an automated process without interference of human being, using scientific processes to support investment decisions. Consultant somewhat stands for wealth management services, in this case an automated one (Sironi & Paolo, 2016). Robo advisory

provides necessary information in a totally different way that doesn't require a deep financial background. Robo advisors interpret client input into investment logic such as risk-taking capacity and propose acceptable investment opportunities well beyond simply highlighting a few of exchange traded funds out of a few thousands of options. The majority of robo advisors aim to allocate their clients to manage exchange traded funds portfolio based on individual preferences (Moulliet et al., 2016).

But there are some cons when client considers using robo-advisory. Sometimes clients need to see the investment advisor to get some assurance from him that his investment is safe with him. Which obviously will not be possible when it comes down to artificial intelligence or the robo advisory (Cocca & Teodora, 2016). Even though a machine is working as an advisor, for any change in investment rules or strategies, robo advisors need to be reprogrammed and that may take time, money and strategies. Human counsellors on the other hand start using the adjustments with instant result. The thinking capacity of the robo-advisor is still some limited extent, robo advisory will be able to do complex mathematics problems but they fail to think beyond the programmed capacity (Singh & Kaur, 2017).

Investors who have less amount of money to invest and they don't know what to do, in which field they should invest so robo advisory is a perfect solution for them because this advisory can help those with more tailored solution (Dunham, 2018).

Distinct robos work in different ways like Betterment, Wealth front, Blooms, Acorns etc. (Investor Junkie, 2018). Basically, robo advisors will study that clients should invest in which field whether equity, bonds, electronic transfer funds, domestic and international securities.

In this research paper it can be seen that how robo advisors are different from traditional wealth managers. Whether you should use robo advisors or not. What kind of benefits robo advisors are having which results in trend of those advisory in wealth management. This paper will tell you that what are

the current situation of robo advisories in the market and what can be done in future.

II. LITERATURE REVIEW

Robo-advisory is an emerging trend which has been a great help for the various financial consultants, banks and financial institutions. For example, Deutsche bank as per Robo-advice – a true innovation in asset management report published by Deutsche Bank on 10th August 2017, E&Y as per Advice goes virtual: how new digital investment services are changing the wealth management landscape report published by E&Y in Winter 2015, Deloitte as per the report the expansion of robo advisory in wealth management report published by Deloitte in August 2016. It is basically artificial intelligence which comes under Fintech development and the applications at wealth management and portfolio management.

Asset division is an investment strategy that aims to minimize the risk and return by appointing a portfolio's assets according to an investors goals, risk tolerating capacity and investment prospect. The Robo-advisory helps an individual to understand the identify the possible assets, asset division and execution process (Phoon&Koh, 2017).

Portfolio managing is a scientific way of making decisions about where to invest, how to invest, what amount of funds should go into that allocated part of your investment basket. The robo-advisory will help the individual in investment mix and policies (Phoon&Koh, 2017).

In near future there is a chance total range of products and services in banking as well as finance sector can be seen under the umbrella of robo-advisory. Apart from the asset management services robo-advisory can also work with retirement plans, estate planning g, tax planning, insurance planning, education of individual, data mining and artificial intelligence software. (Phoon&Koh, 2017).

One shortcoming of many robo-advisors is the lack of personal customization for their clients. A client is better served if the provider is able to have a clearer picture of the client's risk profile, needs, and

objectives. In using rudimentary and simplistic onboarding processes, robo-advisors end up offering simple asset allocation solutions and easy-to-reach products (Yanagawa&Eiichiro, 2017).

To start with real definition of the word Robo Advisory. The word consists of two words. Robo for robotics and the other part is advisor. Robo stands for a computerized process without interfering of human being, using mathematical algorithms to support investment decisions. Advisor somewhat stands for wealth managing services, in this case a computerized one (Gomber et al., 2018).

But again, client may have variety have choices and complex needs. Human interface is often helpful to clarify wealth solutions, provide assurance, and explain complicated situations to ensure that clients are clear about the recommendations and product suitability (Salampasis et al., 2017). So, in my opinion there should be a human interference also, to give assurance to the client that his investment is safe with the corporation. It's surely going to enhance the client's portfolio and the trust on the company. There must be an integrated solution which will include the artificial intelligence and human support (Kaya et al., 2017).

Robo advisors are giving challenge to wealth managers with their special software which they are using for financial planning, taxes, retirement benefits and portfolio management (Bhanotet al., 2017).

Robo advisors uses algorithms which means that there is no space for emotions. All the decisions are taken by software to minimize cost, reduce the level of risk and it shows the transparency level also (Bhanotet al., 2017).

III. OBJECTIVES OF THE STUDY

A study of emerging trends in automated wealth management service with special reference to robo-advisory. Robo advisors had started in 2008 in the fields of wealth management. This paper had shown how robo advisors are different from traditional wealth advisors. To gather information for this paper secondary data had been collected. The source of secondary data were journals, magazines, article,

internet, research papers etc. These resources highlighted the potential of robo advisors in wealth management. There were many top robo advisors in many countries like USA, UK, Germany etc. but this paper had talked about robo advisors in Asian countries. These Asian countries were bifurcated among four stages which were advanced, developing, emerging and nascent. This paper showed that there was still a scope of robo advisors

in the fields of wealth management. For further analysis this paper showed the swot analysis of robo advisors in Indian context. So basically, this research was differentiating robo advisors from traditional wealth advisors. Furthermore, how robo advisors could be helpful in wealth management in near future in India (Nowak &Kamil, 2018).

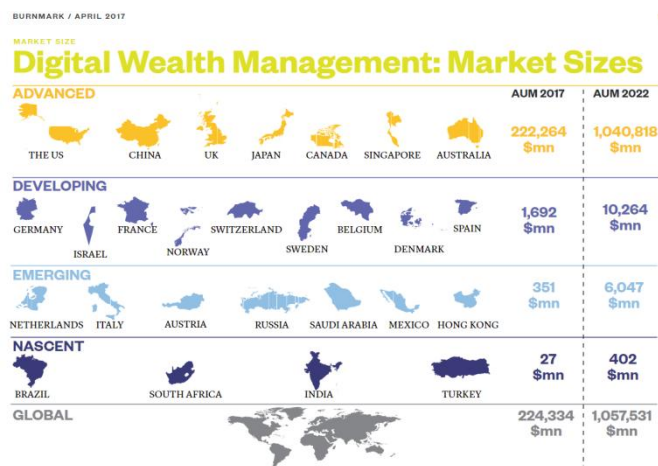
Table 1 Robo advisors versus Traditional wealth managers

Dimension	Robo advisors	Traditional wealth managers
Business model	<ul style="list-style-type: none"> • online platform with algorithm software's 	<ul style="list-style-type: none"> • Personal advice is given
Target market	<ul style="list-style-type: none"> • Mass affluent. • Investments up to \$250,000. • Average portfolio size of \$30,000 	<ul style="list-style-type: none"> • HNW individuals. • Investments exceeding \$500,000. • Average portfolio size of \$500,000
Typical products	Usually limited to: <ul style="list-style-type: none"> • Exchange traded funds (ETFs), mutual funds. • Shares, bonds. 	<ul style="list-style-type: none"> • Full range of investment choices, including structured products and leveraged instruments.
Typical services	Automated services which include: <ul style="list-style-type: none"> • Tax loss harvesting. • Simple goal-based retirement planning. 	A dedicated advisor offering: <ul style="list-style-type: none"> • Financial planning. • Asset allocation. • Brokerage. • Mandated portfolio rebalancing. • Sophisticated tax planning
Typical pricing	0.25% to 0.5% of AUM.	0.75% to 1.5% of AUM plus management fees.

(Source :- Cognizant report, 2017)

Robo advisors in Asian countries had been selected based on Assets under management. In Asian countries Robo advisors were bifurcated among advanced, developing, emerging and nascent. No countries were come under developing stage. China, Singapore, Japan were in the advanced stage. Xuanji, clipper advisors were 2 robo advisors which would come under China. Theo, Wealth Navi and Chloe were in Japan. In Singapore there were also three robo advisors- Auto wealth, Smartly and stash

away. In emerging stage there were two countries Hongkong and Russia. In Hongkong, Robo advisors were Youyu, Aquomon and Prive mangers. In Russia there were only two robo advisors which were top in the list Iiwiii and Financial autopilot. Finally, in nascent stage India was the only country and it had ArthaYantra and 5nance. The following figure depicts the bifurcation of Asian countries based on their market size.



(Source:-Burnmark Database April, 2017)
‘Figure 1 Robo advisors in Asian counties

Table 2 Characteristics of Top Robo advisors’ firms of the advanced stage Countries

Name of the country	History	Features	Min. investment	Fee	Assets under management	Investment method/model	Perks	Funding	User interface
China									
Xuanji	11-Jul-16	It uses onshore mutual funds categorized into 13 asset classes to construct its portfolios.	NA	NA	NA	The resulting portfolio generally includes five to seven asset classes with one or two mutual funds in each.	NA	Mr. Pu put 500000 yuan (\$72610) into an account.	PINTEC digital asset configuration solution provider
Clipper advisor	Founded in Beijing in 2015	It Includes real-time monitoring of market conditions to execute portfolio rebalancing.	\$10,000	NA	NA	To create optimal portfolio for clients , it uses modern portfolio theory in behavior finance.	To take a hedge against depreciation client can invest RMB in a QDII portfolio with underlying US dollar assets.	It focuses on HNW clients who have an equivalent of US\$500,000, allowing them to invest in global assets via the route of Qualified Domestic Institutional Investors funds.	NA
Japan									
Theo	May 2015.	Based on an algorithm developed with the latest financial engineering and technology.	\$909	1%	\$12,954,955	It realizes the allocation of related assets (Hong Kong equities, US bonds, gold and oil, etc.) by investing in ETFs and adapts strategies based on the users' age and market conditions.	They can provide you with a tokutei account. It provides you with an annual summary that vastly simplifies your tax declaration.	Money Design received \$13,635,000 US financing in March 2015.	With the help of smartphone client can invest.

Wealth navi	Officially launched in July in 2016	People who come in the middle-income level can have a better diversified option with the help of cloud-based asset management service	\$9,090	1%	\$1,261,261	It has bank brokerage robo model. SBI securities and SBI Sumishin Net Bank.	A mobile app that lets users connect their credit cards or other mobile payments in Japan to automatically round up the change from every purchase, adding to their investment portfolio.	To provide service SBI's 2.6 million online banking customers plus 3.6 million stock trading customers they have partnered with to offer the robo-advisory service. company has fundraised a total of \$19089000.	API (Application Programming Interface) help the managing of data and software functions from an outside program source
Chloe	Feb. 17, 2017	It constructs portfolios with exchange traded funds (ETFs) listed on the Tokyo Stock Exchange (TSE). The service is available both on iOS and Android and is the first robo-advisor in Japan available entirely on smartphones and tablets.	\$88	YEARLY FEE OF .88%	\$5,225,225	artificial intelligence and machine-learning technologies developed in-house	customers can deposit or withdraw their money anytime with no fees and no questions. It gives you a flexible solution to save for the future with the power of investing.	NA	Based on Amazon web and Microsoft services, cloud technology is built for readjustment of exchange traded funds.
Singapore									
Auto wealth		To provide financial advice and investment management online, it uses proprietary algorithm	\$3,000	Flat 0.5% of total invested	NA	Economic Regime-based Asset Allocation (ERAA)	It saves the processing time and middleman profits whilst still giving.	Undisclosed but with high net worth angels.	A heavier interface with bright visuals
Smartly		collaboration with VCG Partners, a licensed fund manager, investing for millennials.	NOT REQUIRED	of total invested per year	NA	Black Litterman model	rebalancing, withdrawals and trading are free of cost.	Undisclosed but with high net worth angels and Expara Ventures	intensive design iteration from version 1.0 until now.
Stash away		Based on client's salary, capacity, risk preference and time horizon it personalizes, rebalances and optimize client's portfolio.	NOT REQUIRED	total invested per year	NA	Economic Regime-based Asset Allocation (ERAA)	users withdraw their money at any time.	\$4 million	interface like Betterment (USA) with simple goals, charts, and visuals

NA: Not Applicable

(Source: Compiled by Authors from secondary data sources)

From Table 2 in advancestage the reports have 3 countries which have done very well so far in terms of providing robo advisory services. In china a robo advisor known as XUANJI has provided the feature like seeking the risk profile, screening investment portfolio and all these are fully automated. They have an advantage of their user interface which is known as Pintech digital. These robo advisors have a very large funding. They help their clients by providing real time monitor data. Another robo advisor of China is CLIPPER ADVISOR which is famous for providing flexibility to make investments in oversea assets. Let’s move on to Japan. There THEO robo advisors which institutional investors as well as High Net Worth individual. Fee for all these robo advisors vary between .5% to 1%. The best part of this robo advisor is that it has its own app which is available in smartphones. Wealth Navi, another robo advisor which has bridged the banking brokerage model where your information relates to your credit card. Last, CHLOE robo advisor which

has iOS and android service available on smartphones and tablets only in Japan. Because of its funding, services, user interface and perks these robo advisors have reached to the advanced stage (Ludden et al., 2015).

With reference to Burnmark report there are no Asian countries available in the Developing stage in the automatedwealth management sector by April 2017. Most of the developed European, Scandinavian countries and Israel come in the advance stage of the Robo-advisory. The asset under management 10,264 million dollars as of April 2017 which is approximately 70% more than the Assets under management of countries under emerging stage. Still the gap between the Advance stage and emerging stage is close to 1 million dollars. Considering the growth in Scandinavian and European countries the adaptability of the automated wealth management can be seen in coming years. As a small country like Estonia can adapt a very high-tech technology adaption.

Table 3 Characteristics of Top Robo advisors’ firms of the emerging stage Countries

Name of the country	History	Features	Minimum investment	Fee	Assets under management	Investment method/model	Perks	Funding	User interface
Hongkong									
Youyu	Launched in April 2017	It differentiates itself by focusing on individual fund selection from a list 300 well-established global funds managed by global names to deliver more customized advisory to both experienced and inexperienced clients	between \$200 and \$800. The entry point for a portfolio has been set at \$2,000	cheaper subscription and redemption fees, free asset allocation	NA	Its model portfolios include mutual funds in six major asset classes: equities, bonds, real estate investment trusts, commodities, diversified funds, and money market funds.	NA	The number of funds available to investors has grown to 351 from 145 when it was launched	Its database includes approximately 10,000 funds

Aqumon	Jul-17	Its process is to screen investment products and form asset allocation views to rebalance portfolios	NA	NA	Average portfolio turnover stands at 20-30% annually.	asset allocation views to rebalance portfolios	Type 1 (dealing in securities) and Type 4 (advising in securities) licenses	funded by the Alibaba Entrepreneurs Fund.	to create a balanced investment portfolio for clients it uses machine learning
Prive managers	Established in 2011	All these wealth management, product creation, wealth planning and client relationship management platform help in bringing the client, advisor and the investment manager into one ecosystem.	NA	NA	NA	Technology benefits and human qualities are combined together with bionic advisory solution. of judgment and empathy.	Investment Explorer	It is building tools to help clients address the middle market in wealth, for people with net worth in the \$500,000-to-\$10 million range	Prive Managers is rolling out API tools that could let its customers, which are licensed financial institutions, digitize and cater to market segments
							Consolidated Reporting		
							Portfolio Management		

Russia

Iiwoi	2017 Started Robo-advisory software's.	Product (Software) based robo advisory.	NA	Differs from product to product.	NA	Product name	1)Online questionnaire	NA	Specially designed for women investors.	
	Company established in 2012.	Started by a woman specially for women.				1)Robo-advisor -19\$	2)Online robot financial diagnostics			No exact amount of investments or Asset under management is available as it is a product-based company and not a software based.
	Closed club for women founded in 2006.					2)Risk manager adventure -85\$	3)Online diagnosis & recommendations unique IIWOII Code			
						3)Video course on finance for life-49\$	4)Online self-monitoring			
						4)Investment boutique for women-223\$				

Financia I- autopilot	Fin-Ex Plus was founded in 2007	Simple explanations given on the website with the help of live algorithm and software	1569.00\$	No fees	170 million dollars.	Simple control of investments	3 Asset classes			
	The Finance Autopilot service was founded on February in 2017		(100,000 Russian ruble)		(Verification is required)		Suitable if there is no operational experience on the exchange			7 Countries
							Individual approach to each			12 instruments
										Which opens access to 76% of global stock market capitalization

From Table 3 it has Emerging countries like Russia and Hong Kong are adopting new changes regard to the advance stages like Singapore and USA. Robo advisory services in Russia are product based and only available for citizen of their country. Hong

Kong is slightly better state then Russia because there are many types of funds involved in Robo advisors working in Hong Kong. Russia is only in emerging sector because of asset under management.

Table 4 Characteristics of Top Robo advisors' firms of the nascent stage Countries

Name of the country	History	Features	Minimum investment	Fee	Assets under management	Investment method/model	Perks	Funding	User interface	Additional information
India										
Artha Yantra	Founded in 2012	App called Arthos	NA	1000/- PER YEAR 14.67 dollars per year	Not disclosed	Asset allocation With tax planning Mutual funds Pension fund	Online investments Help with video conferencing	Not disclosed	Analyst from ArthaYantra analyze investors profile, age and income and suggests the investment strategy	Arthos is the robo advisor founded by ArthaYantra.

Finance	November 2015	Manual filing advising	NA	NA	1500 Crores	Lump sum investment Tax planning Systematic investment plan Retirement plan Tax planning Loans	Online investment with the advisory planning and artificial intelligence. Starts with tele conferencing followed by Video conferencing.	3 million dollars in angel funding from the clubs of HNI's from Dubai and pension fund in United Kingdom. Venture Capitalist 15 million dollars.		Especially famous for tax planning and tax filing. Situating at Malad, Mumbai.
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NA: Not Applicable

(Source: Compiled by authors from secondary data sources)

India is in nascent stage for automated wealth management. The main reason for that is lack of awareness and conventional advisor and client relationship. Human interference does make a significant impact on investor and they believe in the assured given by the financial advisor to the client. India will surely get more asset under management as the tech savvy generation will be much more involved in robo advisory than the conventional advisors.

Table 5 SWOT analysis of Nascent stage countries (India)

Strength	Weakness
1 It is cost effective	1 Doesn't provide accurate prediction of changes in the global and domestic economy
2 Investors have saved a lot of money	2 Glitches on technical front can affect investors experience
3 Minimum or nil investment is needed	3 Cannot identify market sentiment
4 Give chance to young generation for early investment	4 There is no personal contact with an investor
5 Real time monitoring of data	5 Real estate investments may not be possible
6 It is time saving	6 Conventional investors have trust issues
Opportunity	Threats

1 It can target large number of customers	1 Cyber fraud are on the rise can lead to cease of confidential information
2 Hybrid model for India (Robo advisory with Human interference)	2 Cannot include real estate for Indian context
3 If SEBI approves Robo-advisory, there can be a start of an era of commission less wealth management	3 Some basic knowledge about financial instruments is essential
4 Can penetrate easily in the market as there are very few qualified financial planners	4 Senior citizens will avoid opting for robo advisory.
5 Accessible 24x7. No need to take prior appointment for advisor	5 Government may intervene

(Source: Compiled by Authors)

From Table 5 With the help of swot analysis, it can be interpreted that the Automated wealth management can penetrate in India. The limitations and weaknesses can be overcome with the human interventions and continuous monitoring. The strengths and study of existing models working in Advance stage countries can provide an optimal and profitable solution to scope the Indian financial system and conditions. The government policies may

become liberal after introducing the first robo advisor in India by a foreign market. For example, VITEOS a settlement company based in United States of America and currently working from India. It deals with all the trading and settlement of the stock in New York Stock Exchange and Hedge fund. There was a news of WIPRO acquiring VITEOS for the services. The same model can be applied for robo advisory also. The robo advisory services which deals in USA and UK may start in operating in India also.

Considering the strength of automated wealth management such as cost effectiveness will be a beneficial part for the model in India. Investors have saved a lot of money because as the assets under management grow the handling fees will come down. There can be models having low fees or no fees to acquire client base. A nominal maintenance charges can be applied. Robo advisory will give chance to younger generation to start investing at their early ages. Current generation is tech savvy and adapting the fintech technology in their daily uses like Paytm, Google pay. So robo advisory will surely attract them as it is convenient then going to a convention financial planner. Real time monitoring can be done (Arwaset al.2016). The process is very simple and convenient. It is not necessary to monitor it always but it can be done very quickly. It will again surely save time of the investor in both ways i.e. investor will have information ready where to invest, how much to invest as well as he need not go to the financial planner every month.

Looking at the weaknesses the robo advisor may not be able to provide you the information corresponding to global situation and Indian

economic conditions. Non-tech savvy investors may avoid it. This segment will include basically the population from rural area and semi urban area. Although algorithmic-trading will be able to catch the fluctuation on every tick size, but it won't be able to catch the market sentiment in the country. Considering the variation in rates of the lands in metro and mega city the robo advisory cannot include real-estate (land, commercial properties, residential properties). Conventional investors may have a trust issue because they have been doing it with a human mediator for a longer period. The generation before 1970's which are in their early retirement phase and have no technological adaptability will avoid going with robo advisory.

Robo advisory can target a large number of customers all over India. The main cities like Mumbai, Pune, Bengaluru and Delhi will generate the first client base as these cities are highly populated and average earning per capita is comparatively good. Having the facility of robo advisory with an associate advisor will generate good hype in the market at the early stages. If Securities and Exchange Board of India approves the automated wealth management sector in India it will create a separate segment in Indian financial structure. It will attract a lot of customers as they are very few well qualifies financial planners and wealth manager available with respect to the drastically increasing population. As it is a digital platform it will be available throughout the day and night and there won't be a time-consuming session with the planner.

Table 6 Suggested Hybrid value chain process of Wealth Management for Nascent stage and emerging stage countries

WM Process	Client data collection	Risk profiling	Smart goals	Product classification and investment	Execution, monitoring revision of portfolio
Current scenario	KYC is decentralized. Separate KYC is needed for different platforms like Aadhaar card, Paytm, Bank	Hard to track the risk profile of a client.	Clients objective for investment. Based on data which client shared.	Right now, only financial advisor advises about the products.	Large paper-based reporting is there with high quality. Human intervention is there, and it is semi-automated.

	account.				
Technology intervention	Centralized KYC can be used with the help of Automation. This will lead to automatic updating of KYC everywhere. Use behavioral analytics.	This help in better understanding of client for robo advisors about client's potential and risk appetite. Table based applications should be used for key data and plan input.	Mobile, tablet and financial app can be used for financial planning. Online Questionnaire specify his/her target of investment.	Automated asset allocation will be done by robo advisors for certain class of assets. Algo- trading and algorithm will help to monitor the asset classes.	Real time monitor data and available for 24X7. Multiple resource can reduce risk modelling. Tax loss harvesting
Suggested method	Centralized method save time of doing KYC again and again.	This will lead to lower the chances of risk.	This will lead to better understanding of investment objective of client to robo advisors.	Asset allocation Mutual funds, Exchange traded funds.	Rebalancing Efficient for tax planning.

(Source: Compiled by Authors from secondary data sources)

From Table 6 it can be interpreted that the Indian context it requires the intervention of a human financial analyst just to ensure the customer is satisfied with the choices he has made. If customer has at least basic knowledge about the financial instrument like stock or bonds he will have a clearer vision and he can participate more in the investment process. The automation in the robo advisory will lead to more benefits to the customer like having linked bank accounts or connecting every account to each other so there will be ease of access to the customer. It will ensure that the funds are transferred immediately from one account to another account. The advisor will have the idea of different investment avenues such as stocks , mutual funds , gold. The algorithm-based trading will ensure the loss is at the minimum level and the investment is intact. Another advantage over the conventional investment will be the auto rebalancing of the portfolio. For an instance a portfolio consists of 60% equity and 40% debt, suddenly the market becomes bearish and the stock price start going down. It will affect the weights of equity and debt component in the portfolio. The robo advisor will ensure it buys the stocks at low price and optimum quantity so it it will automatically rebalance the portfolio back to 60% equity and 40% debt.

IV. CONCLUSION

The whole study consisted of the overview of robo advisor's worldwide which will give us the glance as how the technology is working and trending. The developed countries like United states, United Kingdom, Germany and Singapore are at advanced stage when it comes down to the services they offer in terms of products and order execution as well as the Assets Under Management.

There are mainly 4 categories for the robo advisory – advance, developing, emerging, nascent. To limit extent of our studies, the scope of our study was specific to automated wealth management and robo advisory services for Asian countries, which simply consists of artificial intelligence and algorithmic trading, where you just need to give orders to the robo and he will execute it on behalf of you. The question comes what the use of artificial intelligence in all this? The robo senses the market reaction considering all the governing factor which drive the market up and down and it tries to minimize the impact and uses it potential to maximize the profit. In other words, you need to look for every tick movement in the graph of any share.

China, Japan, Singapore come under advance stage. Being developed nation assets under

management are much higher in these countries. Due to technological advancement and adaptability of the people the people in these countries they choose robo advisor over the conventional financial planner. There are no Asian countries in developing categories. Mostly Scandinavian countries, Spain, Israel and France come under this category. The emerging category has Russia, Hongkong and Saudi Arabia in it. Russia and Hongkong are growing steadily but still assets under management are far less than advanced countries, but close to the developing countries. Saudi Arabia does not have their own robo advisory as they have Shariat law. Recently Wahed group who run their business on wall street have penetrated in the Saudi market.

When it comes down to nascent stage India and Turkey are the only Asian countries. Akyatrim and one more company will be starting the robo advisory services in Turkey but currently there are no robo advisory services in the country which make a significant impact. India is rapidly developing in the robo advisory services but there is a huge gap between the nascent countries and emerging countries in terms of Assets under management. There are many challenges when it comes to Indian context form acquiring the customer base, retention of existing customer and making them comfortable with technological advancement.

There were a few limitations for this study. The language was barrier in Russian and Chinese robo advisory study. Some numbers were not disclosed for Assets under management. The pattern was changed (Russian robo advisor iiwoii gives a product based robo advisory service). The major limitation of the study was all the robo advisory firms are big firms. So, it was not possible to practically see or investigate the process of robo advisory.

When it comes to Indian context the robo advisory is seen from the different perspective altogether because the customer base or the client base is totally different from the developed countries. The basic difference between any developed country and India is, people at young age to the financial planning services. They start hiring a financial planner or manager after they cross 40 or when retirement is close. So, the robo advisory model for Indian should require a financial analyst to guide the client with the asset allocation and choosing the perfect time horizon. The robo advisor will look after the tactical problems like at what time trading

should be done and smart buying and ordering. So overall the improvement in current robo advisory structure in Indian wealth management industry can be achieved with human intervention and support.

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