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# Robo Advisor: Emergence, Present Status, and Future

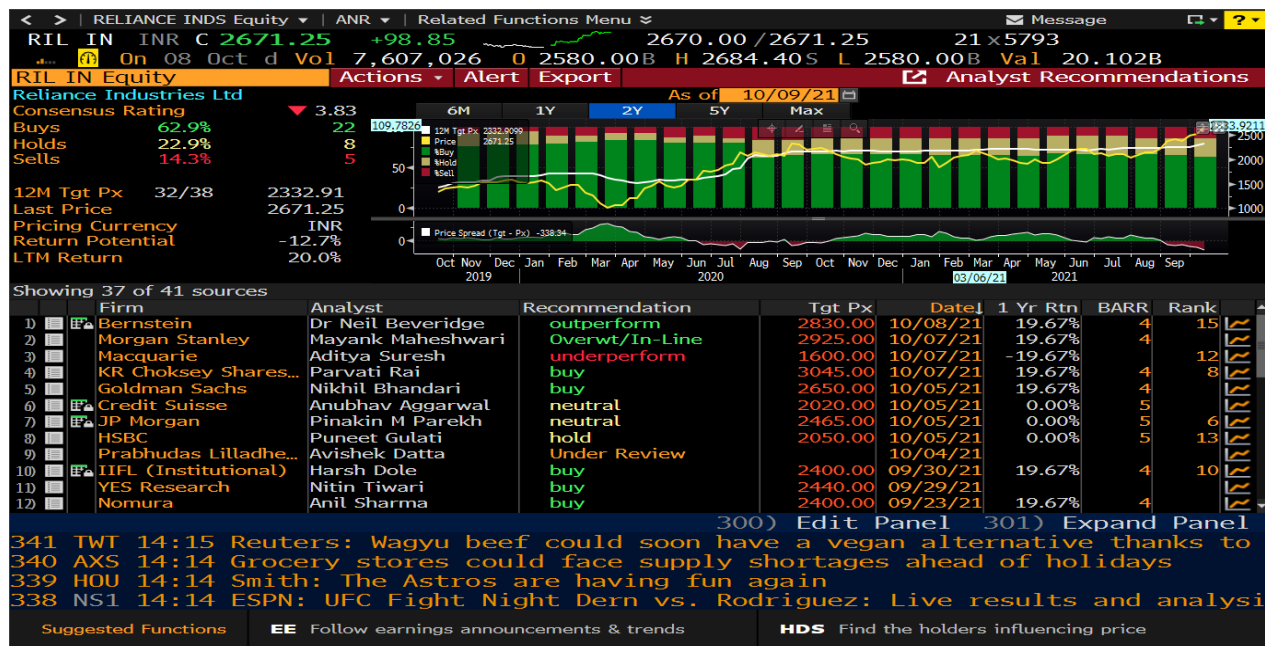
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## Introduction

Technological advancements have changed how we live, and they have impacted our daily life in a big way. We have been living in web 2.0 since early 2000 (O'Reilly, 2009). Web 2.0 is characterized by user-generated content, social network, cloud, etc., which gives rise to a vast amount of data. The field of data analytics emerged out of the data generated daily. Web 2.0 also comprises various technology-driven mobile applications such as Tiktok, WhatsApp, and Instagram. Today, we refer to web 3.0, which is expected to transform individuals, society, business, and government. This transformation is revolutionary and disruptive due to the inherent nature of being open, decentralized, trustless, and incorporating artificial intelligence and machine learning. Some of the cryptocurrencies are part of Web 2.0 and 3.0. Those started during 2.0 have become popular in recent times and have adopted definite characteristics of web 3.0. Technological advancement has touched the financial sector momentarily and has given rise to a new era known as, Fintech, which is considered a separate segment. Most of the start-ups in India are coming up in this segment. There are many niche areas within banking and finance, which give rise and opportunity to these start-ups, and Robo advisory is one such area.

Robo Advisors are part of the FinTech evolution which emerged in early 2007-08. Robo Advisors use artificial intelligence and machine learning to advise investors to replace financial/investment advisors potentially. Robo Advisors work on a mathematical algorithm to provide investment advice to their clients and belong to the family of online investment series. Robo Advisors are part of the wealth management industry and work on minimal human interference. Robo Advisors uses an online questionnaire to capture the investor's risk profile, income, family members, number of dependents, expected returns, and other information. This information helps the platform define the risk-return profiles of the investors. Robo Advisors allocate and manage client funds to generate superior returns based on the client's risk-return profile. Robo Advisors are also known as Digital Advice Platforms and Automated Investment Advisors. There has been a surge in these platforms recently. Much research has been carried out to find the user perception and expectation from these services to make these services widely available.

Figure 1: Analyst Recommendation on Reliance Industry Ltd. On 09.10.2021



(Source: Bloomberg)

Financial advisors are subjective to various criteria. Therefore, their recommendation may not be the same as seen in Figure 1, where some analysts recommend a Buy recommendation, whereas others provide a Neutral, Outperform, Hold, or Underperform recommendation. Analysts have various biases that affect their stock recommendations and impact investor behavior. Robo Advisors are not affected by these behavioral biases. Consequently, they have an edge while recommending assets to the investors. Using their proprietary algorithm and investor risk profile, they suggest investments. As a result, there would be neither behavioral bias nor a different recommendation for a single investor.

Robo Advisors can provide one-time investment advice and help in portfolio rebalancing. Portfolios are designed based on investor risk-return profiles and portfolio theories. If there are changes in the portfolio due to movement in the index, Robo Advisors can rebalance the portfolio within no time to achieve the target portfolio.

Financial advisors take around 1%-1.25% as their fee. In contrast, Robo Advisors charge as low as 0.25%, and they can extend their services to a larger client base than what Financial Advisors can. The reach of Robo Advisors can be extensive as it is system-driven. In contrast, Financial Advisors have a limitation as they can serve only a limited number of clients and investors at any given point in time. The mobile phone penetration will also help grow Robo Advisory services as these platforms will cater to the client requirements through a mobile application.



## History

Betterment was the first Robo Advisory firm founded in the 2008 financial crisis in the USA. Subsequently, the number of Robo Advisors globally has increased substantially, and their Assets Under Management (AUM) have also been growing at a higher rate.

As per the data from Statista, in 2022, the AUM is expected to be \$1.787 trillion globally for Robo Advisory services, while the figure stands at \$ 16.912 billion for India.<sup>1</sup> The size of AUM for Robo advisory is expected to be \$2.842 trillion globally by 2025. The Compounded Annual Growth Rate (CAGR) of AUM is 16.72% globally and 35.02% for India between 2022 and 2025.<sup>2</sup> USA dominates the position in terms of having the highest AUM for the Robo Advisory segment globally.

India has a demographic dividend, and many investors are young, leading to a big market for Robo Advisors. These investors are tech-savvy and would want to invest without the middleman or Financial Advisors. These investors prefer the DIY (Do-It-Yourself) strategy instead of taking the financial advisor's services.<sup>3</sup> . The demand for an ever-increasing market for Robo Advisory services in India will emanate from these young tech-savvy investors.

## Features of Robo advisors

Robo Advisors are cost-effective, easy to use, and provide secure platforms enabling investors to increase their return and reduce their risk. These Robo advisors are available on multiple platforms such as desktop, laptop, mobile, tablet, and are available 24 x 7 while no Financial Advisor can be available all the time. The machines will reach a larger population due to the scalability at very economical rates. The Robo Advisors can also track the investment priorities of the investors and advise their clients and investors, which is not prone to human bias. Some Robo Advisors can provide comprehensive services, including financial planning, retirement planning, and tax planning. Most Robo Advisors use modern portfolio theory to design portfolios for their investors (Beketov et al., 2018), while few smaller ones use sample portfolios and constant portfolios.

Robo Advisors have certain drawbacks, one of them being the lack of human interaction. Often, investors want to seek the opinion of a Financial Advisor as they feel more comfortable talking to a person rather than only

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<sup>1</sup> <https://www.statista.com/outlook/dmo/fintech/digital-investment/robo-advisors/india?currency=usd>, extracted on 13.02.2022

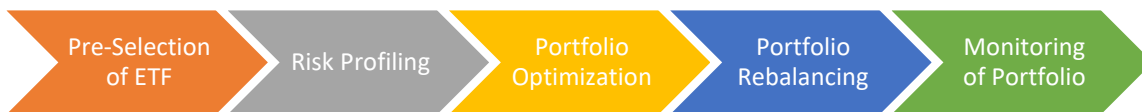
<sup>2</sup> <https://www.statista.com/outlook/dmo/fintech/digital-investment/robo-advisors/worldwide?currency=usd>, extracted on 13.02.2022

<sup>3</sup> <https://www.businesstoday.in/magazine/markets/story/hello-robo-how-robo-advisory-firms-are-revolutionising-financial-services-in-india-308232-2021-10-08>, extracted on 14.02.2022



making investment decisions through a machine. At present, Robo Advisors do not cater to all financial assets. They provide service limited to specific assets, which can be considered a limiting factor. Robo Advisors also require that the investors use technology and be tech-savvy. However, this does not seem to be a significant constraint as smartphones and mobile applications have made these things much easier these days.

*Figure 2: Process of Robo advisors*



(Source: Beketov, et al., 2018)

A typical Robo Advisor first collects and selects some assets, representing the investment asset in which an investor would be keen to invest, considering the risk and return. After this, clients or investors fill up the questionnaire, which helps the Robo Advisor to understand the investor's risk profile. The questionnaire may include questions related to income, investment, loans, number of dependents, inheritance, past saving, and future goals in terms of child education.

These answers help assess the investor's risk preference basis on which portfolio allocation is made. Modern portfolio theory is used in the background while selecting the portfolio. Most Robo Advisors can rebalance the portfolio once the threshold is breached due to movement in the market. These thresholds are decided based on the risk profile of the investor. The last step is to monitor the portfolio based on the investor's risk preference and ensure that returns are generated for the investors.

### **The present state of Robo Advisors**

Some Robo Advisors started as early as 2008-2010; however, the term "Robo Advisors" did not exist. The Robo Advisory companies were there to provide investment advice with the help of technology in the wealth management space, which later came to be known as Robo Advisor. More than 200 Robo advisory firms are in the USA, with Betterment, Wealthfront, and Personal Capital being the biggest of the lot. Today there are more than 85 Robo Advisory firms in India, and more than 58% of the Robo advisory firms are located in Mumbai and Bangalore. Some of the well-known and popular Robo Advisors are 5paisa.com, ET money, Fisdom, Funds India, Prime Investor, Finedge, and Money Frog. Few Robo Advisory services are more than 15-year-old. However,

those were not known as Robo Advisors during that time, but today they are referred to as Robo Advisors. Few Robo Advisory services provide only fund-based advisory or equity-based services, while the others offer comprehensive Robo Advisory services.

Robo Advisory services are regulated in the respective countries and should meet the regulatory requirement of the Wealth Management Professionals. However, there is a greater need for better control, surveillance, and supervision of the Robo Advisors. They will help build the trust and confidence of the investors and eventually strengthen the market participation of the investors. The designing part of the Robo Advisory platform might be subject to regulatory requirements. The design part of the platform provides advice, makes decisions, allocates assets, and rebalances portfolios.

The customization is the challenge in the present form, although each investor fills out a form that helps the platform to ascertain the investor's risk appetite. Financial Advisors provide customized advice to the investor, and Robo Advisors also provide customization advice which is much more basic and less specific to an investor.

Named Robo Advisor vis-à-vis unnamed Robo Advisor: participants were more receptive to the designated human advisor's advice than the unnamed human advisor. At the same time, the scene is entirely different, where participants were more receptive to the suggestion of an unnamed Robo advisor than the named Robo advisor (Hodge et al., 2021). Robo Advisors are an intermediary between market and consumers for affordable and customized financial advice (Baulkaran and Jain, 2021)

## Future

It is a fact that institutional investors and ultra-high earners require much more complex advice than individual and retail investors.<sup>4</sup> As per a survey conducted by the CFA Institute, institutional investors and ultra-high earners are not likely to be affected by the Robo Advisors and are more likely to continue with Financial Advisors. Retail investors are numerous but have less investible funds. In contrast, institutional and ultra-high earners may be few but have significant investible funds and higher volume. Consequently, Robo Advisors must be able to accommodate both on their platforms. A report of Deloitte shows that few Robo Advisory firms have reached the stage of 4.0, where the investments are fully automated, and algorithms are self-learning. 80% of the UK, USA, and German companies have 3.0 capabilities, and India would lie between 2.0 to 3.0.<sup>5</sup>

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<sup>4</sup> Available at : <https://www.cfainstitute.org/en/advocacy/market-integrity-insights/2016/04/survey-ultra-hnw-institutional-clients>, extracted on 02.02.2022

<sup>5</sup> Available at : <https://www2.deloitte.com/content/dam/Deloitte/de/Documents/financial-services/Deloitte-Robo-safe.pdf>, extracted on 28.01.2022

It is interesting to know that some of the Financial Advisors are moving towards Digital Solutions to provide services to their clients efficiently, signalling the presence of the hybrid model. The wealth management firms have started incorporating Robo Advisory within their present advisory models to service their clients efficiently. The banks and wealth management firms will adopt the innovative technology within their operations, and Robo Advisory will become part of their offering in the future (Uhl and Rohner, 2018). Robo Advisory service usage depends on a customer's perceived ease of use and privacy (Seiler and Fanenbruck, 2021).

## **Conclusion**

Technology has made things available at our fingertips, whether watching movies, ordering food, making video calls, online shopping, among others. Online investment is one such significant contribution of technology. Today we not only buy stocks and other financial assets online, but we are also able to get advice online now. The Robo Advisors are capable of providing investment advice to the investors, at the time when they want, in a cost-efficient manner. Moreover, those pieces of advice are free from human error or bias as those are driven by algorithms. At the same time, Robo Advisors cannot provide human touch and emotional support to the investor, which is very much needed by some in the bear phase of the market cycle. The investors are more comfortable talking to Financial Advisors if the financial assets are not performing as per their expectations. There are certain times, especially when the investors have lost money, notional or otherwise, and they would like to talk to the Financial Advisor, which is not possible in the case of Robo Advisory services.

There is a greater need to create awareness of the Robo Advisory services among the investors. There are multiple ways to do this, such as conducting investor education programs, seminars, and workshops. Another way could be to reach out to the various corporates and run an awareness campaign for their employees. Also, there could be an opportunity to reach out to various post-graduate institutions to spread awareness about investment among students who will soon be joining the workforce and will have an investible surplus.

Robo Advisory services can reach the lower strata of society and help in financial inclusion as the mobile application is effortless to use and understand. Accuracy of the advice and its suitability for the clients are the two critical aspects for clients to adopt these services (Kaya et al., 2017).

Technology can replace repetitive or computational tasks, but it is not easy to replace the subjective and human elements. Still, it will be helpful to those investors who are exposed to a potential conflict of interest in the case of Financial Advisors. We have many examples from the finance domain where technology has brought change but has not replaced humans, mobile banking, internet banking, etc. Robo Advisors are here to stay but not replace



human or Financial Advisors. We will witness the co-existence of the Robo and Financial Advisors, which can be considered a new normal in the wealth management space.

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