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**"Global Challenges and Prospects of the Modern Economic Development"****ROBO-ADVISING AS A KEY FACTOR OF THE RUSSIAN STOCK  
MARKET DEVELOPMENT**

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***Abstract***

Artificial Intelligence implants more and more in our everyday life. It is very hard to imagine even one solution of professional problem or everyday situation without digital technologies. National projects also affected financial sphere. High tempo of modern life and the necessity of making decisions quickly require automatization and robotization of certain spheres of Finance. In that case, the study of robo-advising is considered to be interesting and perspective. The objective of this article is coverage of main stages of development of the world market of robo-advising, including separation of technical, robotic advising and usage of standard procedures. Statistical, analytical and comparison methods application allows to create understanding of necessitate of economic and other transformations in different spheres. A significant increase of the market of robo-advising in USA is forecasted by the end of 2025. USA as the biggest economy in the world is also the biggest market of robo-advising. Although the advising is robotized, it does not exclude control of algorithms by human for better reliability of trades. This article analyzes main aspects such markets of economically developed countries. Russia uses their experience in the strategy of the development of robo-advising. Recommendations depend on risk-profile of the client, his aims and goals. The analysis of robo-advising shows prospects of the development of this sector of financial consulting. For younger generation of economists it is especially interesting, as they have great opportunities for new additional studies of theory and practical solutions based on this methods.

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## 1. Introduction

Nowadays, vector of the development of the modern economy is directed to digitalization. Due to the development of digital technologies, Big Data, Artificial Intelligence, more and more solutions in the field of Financial Technologies are based on this technologies (Sukharev & Voronchikhina, 2018; Medvedev, 2018; Mau, 2019). Trading on the stock markets and financial consulting are also affected (Statista, 2019).

Many issues are now solving by algorithms based on the neuronet technology (Bereznoy, 2018). This inevitably causes the competition between human and such technologies. In this article, the market of robo-advising would be considered.

## 2. Problem Statement

Robo-advising is a very promising way of the development of financial consulting. Usage of such services has a lot of advantages (Danilov, 2019). There is a comparative characteristics of traditional consulting services and robo-advising.

Analytics from Deloitte conducted a study about efforts spent on routine operations by managers and clients (Gilmoure, Kunzle, Toh, Hong, & Khoo, 2019). Efforts were estimated by the grade from 1 to 5, where 1 means low effort, 5 means high effort (Table 01).

**Table 01.** Comparative characteristics of the time spent on the provision of services

Characteristic	Traditional advising		Robo-advising	
	Relationship manager	Client	Relationship manager	Client
Account opening, closing and maintenance	4	4	1	1
Client due diligence and Know Your Customer process	4	4	2	1
Prospecting and referrals	4	4	2	1
Financial planning and account aggregation	4	5	3	2
Investment policy statement	5	5	3	2
Pre-trade compliance	4	5	2	1
Proposal generation and trade execution	4	4	2	1
Portfolio construction	4	5	2	2
Cash flow and portfolio monitoring	4	4	2	1
Alerts and rebalancing	4	5	2	2
Investment research and pre-trade analytics	4	5	2	2
Advisory	4	4	2	2
Reporting	4	4	2	1
Education	4	3	2	1
Accounting, fees and billing	4	4	2	1

As it could be seen, technological solutions can definitely reduce time for solving routine tasks both for manager and client.

### **3. Research Questions**

It is indispensably to study the following aspects:

- development of the market of robo-advising in the main regions of the world;
- study and compare the use conditions of robo-advising services and traditional consulting services in particular countries from each macro-region;
- study the situation in Russian Federation and the prospects of development.

### **4. Purpose of the Study**

Robo-advising shows fast development all over the world, the market is predicted to increase rapidly in the next 5 years. In Russian Federation such market is only starting to grow. The main purpose of this article is to analyze the market of robo-advising in the main regions of the world with the examples of the countries from each region with advanced market of robo-advising, compare results with the data of such market in Russian Federation and make a conclusion.

### **5. Research Methods**

Statistics about robo-advising in 4 regions is used in this article: America, Europe, Australia and Oceania, Asia; with examples in countries from each region: USA, UK, Australia, Singapore. After that data about Russian Federation would be considered and compared.

### **6. Findings**

The world market of robo-advising is estimated at \$980,5 Billion, more than that, it is forecasted to increase to \$3,7 Trillion by 2020 and to \$16 Trillion by the end of 2025. The main part of the money is managed by the companies from USA (Sadovaya, 2018). Robo-advising is also successfully developing in other parts of the world.

#### **6.1. Robo-advising in USA**

The volume of the market of robo-advising in USA is estimated at \$749,7 Billion, this is a major part of the volume among the whole world. Vanguard Personal Advisor Services by Vanguard robo-adviser by Wealthfront were chosen for comparison.

At the moment, robo-adviser by Vanguard is the biggest in the world. The offers following conditions: minimal sum of money to use the service \$50000, commission is 0,30% per year. More than that, in contradistinction with other services, the work of algorithm is periodically checked by human, that makes such investment more protected. Despite this, commission is still rather low.

At the start, service creates financial plan for a client, that considers life goals, current investments and future financial needs. This allows to adapt to the life situation of the client and offer a unique

solution. After this procedure, the service makes individual portfolio from more than 100 ETFs Vanguard for stocks and bonds (Vanguard, 2019).

Service by Wealthfront offers following conditions: minimal sum to use the service is \$500, commission is 0,25% per year. At the start of usage client passes questioning, which defines his risk-profile and prior sectors for investments. After that the service makes a portfolio. It is automatically controlled and rebalanced if necessary, to match the key parameters. This service also makes portfolio from ETFs: Vanguard, Schwab and iShares (Wealthfront, 2019).

Pricelist of traditional financial consultant nearly looks like this:

- one-time treatment with making of a financial plan – from \$100 to \$300;
- periodical consultations with making of a financial plan and recommendations about implementations – from \$1000 to \$3000.

Extra commission for portfolio management is 1-2% from total sum of investment.

It is clear, that robo-advising services definitely can compete with traditional financial consultants. Millennials can feel all the robo-advising service advantages, as remote work with such services becomes more and more simple and convenient, quality also increases. All investments could be controlled in a special application for smartphone, alongside this, the quality of management is high and commission is rather low.

Statistics of the market of robo-advising in USA confirms previous statements: in 2019 total sum of money under management of robo-advisers increased by 76%, the number of users increased by 26% and estimates at 8,3 Million people (Statista, 2019).

## **6.2. Robo-advising in Singapore**

The total volume of the market of robo-advising in Singapore is \$3 Billion. Services by Smartly and Autowealth were chosen for comparison. Service by Smartly offers the following conditions: minimal investment is \$50, commission depends on the sum of investment under the management: less than \$10000 – 1%, from \$10000 to \$100000 – 0,7%, more than \$100000 – 0,5%. At the start of usage, client complete questioning, which defines his risk-profile and aims, after that individual portfolio is created by the service. It is controlled and rebalanced automatically. This service uses nearly 20 different ETFs (Smartly, 2019).

Service by Autowealth offers following conditions: minimal investment is \$3000, commission is 0,5% + \$15 yearly. At the start of usage, client completes a questioning, which discovers financial aims and risk-profile of the client. According to this data, the service creates portfolio from a big amount of ETFs, both from stock market of Singapore and other big stock markets in the world (Autowealth, 2019).

Pricing for traditional consulting is nearly similar to USA, that allows to conclude, that Singapore also has great potential for the development of robo-advising services. According to statistics, in 2019 total sum under management of robo-advisors in Singapore increased by 69,5%, the number of users also increased by 55,9% and is estimated at 189,7 thousand people (Statista, 2019).

## **6.3. Robo-advising in UK**

Total volume of the market of robo-advising in UK is estimated at \$14,8 Billion. Services by MoneyFarm and Nutmeg were chosen for comparison. Service by MoneyFarm offers the following

conditions: minimal investment is £100, commission depends on the sum of investment and differs from 0,4% to 0,99%. Before the start, client completes questioning, this allows to define the risk-profile and aims of a client. After that service creates an individual portfolio. It is controlled and rebalanced automatically if necessary (MoneyFarm, 2019).

Service by Nutmeg offers the following conditions: minimal sum of investment is £100, commission is 0,75%. Before the start, client completes the survey, it allows to define risk appetite, current financial conditions and financial aims of a client. According to the result, service creates a portfolio, which is managed automatically (Nutmeg, 2019).

Traditional consulting costs nearly £150 per hour. According to statistics, in 2019 total sum under the management of robo-advisors in UK increased by 90,4%, the number of users also increased by 43,5% and is estimated at 527,7 thousand people (Statista, 2019).

#### **6.4. Robo-advising in Australia**

Total volume of the market of robo-advising in Australia in 2019 is \$2,2 Billion. Services by Six Park and Clover were chosen for comparison. Minimal investment to start using Six Park robo-advisor is \$10000, commission depends on the amount of money under management of the service: from \$10000 to \$199999 – 0,5%, from \$200000 to \$499999 – 0,4%, more than \$500000 – 0,3%. (Mamedyarov & Polivach, 2018).

Before usage, client passes questioning, it allows to discover aims, current financial conditions of the client and his risk appetite. After that, service creates suitable portfolio using more than 200 ETFs, listed on Australian Stock Exchange (ASX) (Six Park, 2019).

Minimal sum to start using service by Clover is \$2500, commission depends on the sum of investment: from \$2500 to \$9999 - \$5,5, from \$10000 to \$49999 – 0,65%, from \$50000 to \$99999 – 0,6%, from \$100000 to \$499999 – 0,55%, more than \$500000 – 0,45%.

At the start of using the service, client completes a survey, this allows to define risk appetite, aims and financial conditions of the client. After that, service creates a portfolio, using different ETFs (Clover, 2019). Financial planning by traditional consultant costs nearly \$3000, portfolio management costs extra 1-2%. According to statistics, in 2019 total sum of money managed by robo-advising servicers increased by 57,3%, the number of users also increased by 42,5%, it is estimated at 95,5 thousand people (Statista, 2019).

#### **6.5. Robo-advising in Russia**

Total volume of the market of robo-advising in Russia in 2019 is \$72 Million. At the moment, the market of robo-advising in Russia only starts to grow. For the present day, only 12 services work in Russia. They offer automatic creation of portfolio, but not all of them can manage the portfolio and rebalance it.

Method of work considers creating the risk-profile and analysis of financial aims of the client. Portfolio is created according to this information, using ETFs, bonds, stocks of Russian or foreign companies. Different services offers different assets for portfolios.

Some of the algorithms use the core algorithm, created by FinEx, the provider of ETFs on Moscow Stock Exchange (MOEX). Due to it, the work of this algorithm should be studied by analyzing the service “Simple investments” by Sberbank in comparison to the service Right, made by Conomy.

Minimal investment to start using “Simple investments” is ₺100000 (nearly \$1532, by the course on MOEX 01.10.2019; all such following calculations will use this course, \$1=₺65,265) (Moscow Exchange (MOEX), 2019). Commission is 1,5% of annual average value.

Before usage, questioning defines risk appetite, aims and financial conditions of the client. This service uses ETFs, listed on MOEX. Portfolio is managed automatically (Sberbank, 2019).

Service Right by Conomy offers the following conditions: minimal investment is ₺30000 (nearly \$459,6). Commission depends on the amount of money under management: from ₺30000 (nearly \$459,6) to ₺99999 (nearly \$1532) – 3%, from ₺100000 (nearly \$1532) to ₺499999 (nearly \$7661) – 2-4%, more than ₺500000 (nearly \$7661) – 1-3%.

Before usage client is suggested to choose potential profit and appropriate risk, according to that, the service creates portfolio, which is managed automatically. This service creates portfolio, using stocks and bonds, ETFs are excluded (Conomy, 2019).

The traditional consultant service cost ₺3000-₺7000 (nearly \$46-\$107,3) for one-time treatment, ₺40000-₺100000 (nearly \$613-\$1532) for financial planning and 10-20% of profit for portfolio management. According to statistics, in 2019 assets under management of robo-advisers increased by 105,9%, the number of users also increased by 95% and now it is estimated at 8,1 thousand people (Statista, 2019).

## 7. Conclusion

From the foregoing it can be concluded, that robo-advising is rapidly developing in all macro-regions, it is a really perspective sector of financial consulting. It has a big potential in Russian Federation. Besides that, the cost of consulting in Russia is higher than in other analyzed countries and Russian services use rather small number of different financial instruments, respectively, there are many aspects and opportunities for the development of robo-advising services in Russia. The improvement of financial intelligence, the strategy of Russian Central Bank to involve mass investor to the stock market and appropriate legal acts also make Russian users more interested in such services.

At the present day, Millennials gain bigger weight in economy. These people accumulate money, they become the main workforce in economy. This generation has distinctive characteristics such high susceptibility of technologies, high level of reliance on Internet research. They are strongly affected by technologies from the childhood. This causes pragmatical wish to manage their money in an appropriate way, making a capital for difficult times. Along with this, they understand the difficulty of literate managing their money. Due to all these factors, robo-advising seems to be a convenient solution. It combines high level of technology, excludes direct influence of emotions, that allows to minimize the risk of manager mistake. Alongside with this, deeply individualized portfolio can be created, considering aims and risk appetite of the client. Portfolio is diversified enough, because often uses ETFs, which are deeply diversified products by themselves. All of this allows to reduce statistical risk of unexpected losses. More than that, portfolio is managed automatically, and the client has an opportunity to check the results in real

time. Client can stop using this service at any time. As a result, people get a way of literate management of their money without delving into the wilds of economy and investing, but with the control of the process and without high commissions.

Next generation, generation Z, grew up with the total affection of technologies from the early childhood. These services would be a good solution for them. All of these shows, that robo-advising has good long-term prospects. Such services are in demand, and demand is growing, that is proved by statistics from all macro-regions.

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