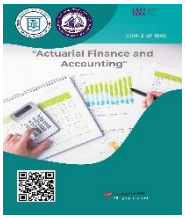

AKTUAR MOLIYA VA BUXGALTERIYA HISOBI ILMIY JURNALI

Vol. 4 Issue 09 | **pp.** 64-69| **ISSN**: 2181-1865
Available online https://finance.tsue.uz/index.php/afa

PROSPECTS OF USING ARTIFICIAL INTELLIGENCE IN ASSESSMENT ACTIVITIES

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Abstract: This article discusses the theoretical foundations of the development of the infrastructure of the evaluation services market in Uzbekistan, as well as the current situation, analyzes and future plans. Conclusions, scientific proposals and practical recommendations are presented on the improvement of the quality of services provided to individuals and legal entities through the use of artificial intelligence in the evaluation services market.

Keywords: valuation services market, artificial intelligence, bigdate, automated valuation models, tangible and intangible assets, software.

INTRODUCTION

Today, the digital transformations taking place in the world economy, the emergence of new technologies and their use in the economy are increasing, and as the President of the Republic of Uzbekistan Shavkat Mirziyoyev stated within the framework of the "Digital Uzbekistan 2030"[1] program: "the world changing by the hour…"[2]. In particular, the President signed a decree on the approval of the "Digital Uzbekistan 2030" strategy and measures for its effective implementation.

Artificial intelligence is important in analyzing data and automating the complex processes to be adopted in the future, making it easier and faster to learn situations and draw clear conclusions based on past experience. AI can perform a task better than a human or with a higher level of accuracy and in less time. Computers have not only become geometrically more powerful, they have also become relatively "intelligent". Although the term artificial intelligence has been around since 1956, it was not until the 21st century that machines began to solve problems reserved for humans. While AI used only computation until 1997, today AI relies on other developments[3] such as neural networks and their learning.

The world is changing day by day, technologies are changing, artificial intelligence is rapidly entering our lives. In order to facilitate the work of appraisers to a certain extent,

[1] Decree of the President of the Republic of Uzbekistan. On approval of the Strategy "Digital Uzbekistan-2030" and measures for its effective implementation No. PF-6079 dated 05.10.2020

[2] The President of the Republic of Uzbekistan Shavkat Mirziyoyev's speech during the inspection of the border customs post "Ayritom" in the Termiz district within the framework of the "Digital Uzbekistan - 2030" program. 02.06.2021.

[3] Davenport, T.H. From Analytics to Artificial Intelligence. J. Bus. Anal. **2018**, 1, 73–80. [Google Scholar]

new legal documents are being complicated. In recent years, many professional programs, electronic databases and algorithms have been developed by specialists in the field of digital technologies. They allow evaluators to significantly reduce the time associated with the calculation of indicators and provide the most accurate information on the objects of evaluation.

LITERATURE REVIEW

Although the topic of using artificial intelligence in evaluation activities is a relatively new topic today, scientific work has been carried out by a number of experts in the field. However, textbooks and manuals on the use of artificial intelligence in assessment activities have not yet been published not only in our country, but also around the world.

In the context of globalization, several foreign experts have their own views on the replacement of evaluators by automated evaluation models systematized by artificial intelligence. RICS board member Laura Piantani argues that AI-based automated valuation models can replace valuers[4], Alexander Aronsohn, technical director of the IVSC Council, says that automated assessment models systematized by artificial intelligence will remain as an aid to the evaluator[5]. Also James E. Gibbons, Mark Linné, Canonne J. and Macdonald R.J. scientific research can be seen by

One of our local scientists, M.Q.Allayorova, in her research on artificial intelligence and its impact on the economy, says "Artificial intelligence is a system that imitates human intelligence to improve jobs, create high efficiency and stimulate economic growth"[6] put forward the views.

ANALYSIS AND RESULTS

The traditional clients of appraisal services, banks and large corporations, are already successfully working with bigdate, and most appraisers are in the process of familiarizing themselves with and mastering these tools and methods. Reliable and transparent evaluation plays an important role in supporting stable financial markets, and today Internet resources are able to provide this, so the topic of using digital technologies in evaluation activities is relevant.

As the influence of rating activities on the financial system increases, increasing the reliability and transparency of ratings will ensure economic growth, reduce the number of complaints or claims and increase the level of confidence of investors and users of rating services. Information transparency of evaluators' actions related to the preparation and submission of reports is also important, and in this regard, the government is implementing an electronic document circulation system, and a number of achievements are being made in this regard. From the technical side, it will be much easier and more convenient for evaluators to carry out direct activities in the process of using modern technologies and algorithms.

[4] www.rics.org - Royal Institution of Chartered Surveyors

[5] Stability Board httpsArtificial intelligence and machine learning in financial services. Market developments and financial stability implications, 1 November 2017, Financial ://www.fsb.org: site of Financial Stability Board.

[6] Journal of Advanced Research and Stability Volume: 03Issue: 02| fab-2023 ISSN: 2181-2608

In our country today there are more than 230 evaluation organizations[7], including international companies, in which 1322 evaluators are working professionally.

In our country or in the world as a whole, we can see that evaluation activities have achieved great results today, but it will continue like this or it is time for a radical change in the field. Clearly, appraisers must consider and remain relevant to the needs and desires of customers, as well as the new and more complex factors affecting markets.

Table 1.

The possibility of occupations being influenced by technology [8]

	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
Judges and moderators.										
Construction managers										
City planners										
Cadastral staff										
Cost estimators										
Construction inspectors										
Real estate managers										
Real estate appraisers and others										
Geodetic staff										
Real estate agents										
Brokers										

The 21st century is the century of technologies. According to research, many occupations in this century will be drastically reduced or no longer required by the introduction of technology, digitization or robots. The diagram above, a collection of scientific and statistical data entitled "World Change"[9], shows that if 1/10 of the activities of judges and moderators are affected by the latest technologies, there is a possibility that digital technologies will enter 9/10 of the profession of evaluators engaged in evaluation activities, and this field will change dramatically in the near future.

Automated valuation models use one or more mathematical methods to provide an estimate of the value of a given property on a given date, with a measure of accuracy of the result, without human intervention. Automated valuation models (AVM) have been around for a long time and have become more sophisticated today. AVMs can be seen as either a useful software tool or a potential threat in assessment activities.

Automated valuation models (AVM) can be described as: "...using one or more mathematical methods to estimate the value of a property at a given date without human intervention and to automatically analyze the accuracy and reliability of the result about the appraised property and the reliability multifunctional assessment program that can provide"[10]. Automated valuation models can be used in practice to assist a qualified

[7] https://data.gov.uz/uz. Open data portal of the Republic of Uzbekistan as of 01.09.2024
[8] "Our Changing World: Let's be ready", paragraph 4.3, page 39. 2022 (Carl Benedikt Frey & Michael A. Osborne)
[9] Our Changing World: Let's be ready", paragraph 4.3, page 39. 2022 (Carl Benedikt Frey & Michael A. Osborne)
[10] www.rics.org Automated Valuation Models 1st edition

appraiser in the property valuation process, and the following advantages and disadvantages are likely to be encountered in this process (Table 2):

Table 2

Advantages and disadvantages of automated assessment models[11]

Advantages	Disadvantages
Save money, time and resources:	• There is a possibility that the model will be used for fraudulent purposes,
It helps in reliable management of regularly growing data flow;	• Non-representation of the real state of the object of evaluation due to the fact that there is no possibility of physical inspection of the object of evaluation.
Reducing the human factor and thereby reducing the risk of fraud;	Achieving incorrect evaluation results due to incorrect data entry into the system;

The use of artificial intelligence in automated valuation models is highly effective when the software algorithms used in AVM are complex and the data input to AVMs are qualitative. Here, the skill level of the evaluator determines when this AVM can be used as a convenient assessment tool and when it is necessary to be able to analyze whether it is pure or not.

Artificial intelligence has definitely entered the assessment activity. Perhaps it can be said that it is already slowly mastering various aspects of assessment. In the course of scientific research, we can clearly say that the evaluation of ordinary objects that are available in the market will become the first target of digital technologies and artificial intelligence.

AI-based valuation software takes data from a variety of sources and creates algorithms that automatically calculate property values through an evolutionary process[12]. Algorithms are tested against a conditional "good" value for valuation through multipliers. The AI takes feedback, and essentially the difference between the results and the "correct" answer, and re-analyzes the algorithm hundreds of times until the results closely resemble the "accepted" value[13]. At this time, the software may be ready to accept new instructions for the valuation of assets of unknown value (database formation, systematization).

AI can be likened to a black box when used in AVMs. Because after artificial intelligence is systematized with AVMs, it is very difficult to describe the calculations of how the evaluation object is evaluated, and it is not possible to change the AVM parameters without affecting the evaluation result. If evaluators are required to interpret

[11] www.rics.org Created by Author using data from Automated Valuation Models 1st edition.

[12] Benbya, H.; Pachidi, S.; Jarvenpaa, S. Special Issue Editorial: Artificial Intelligence in Organizations: Implications for Information Systems Research. *J. Assoc. Inf. Syst.* **2021**, *22*, 281–303.

[13] RICS (November, 2017) The Future of Valuations: The relevance of real estate valuations for institutional investors and banks – views from a European expert group.

or explain the methodology for using artificial intelligence in AVMs, the explanation of this methodology will be very complex.

However, it should be noted that AVMs use artificial intelligence to analyze data at a very high speed, and even the most professional appraisers cannot achieve this speed, so AVMs systematized by artificial intelligence are the most convenient evaluation for appraisers. there is no doubt that it will become an instrument

Currently, automated evaluation models developed in some developed countries cannot replace professional evaluators in all situations of the evaluation process. However, it is hard to imagine that automated evaluation models programmed on the basis of artificial intelligence and big data will not affect the professional activity of evaluators. Because with the development of automated valuation models, their capabilities allow using AVMs with different property types and more complex algorithms in the valuation process of any property type.

According to RICS (Royal Institution of Chartered Surveyors) executive director Laura Piantanidan, the majority of valuation activities in the future will be carried out by artificial intelligence systems[14]. For example, large accounting firms are radically changing the way they work, because the work of relatively inexperienced employees with basic knowledge is already being done by software and is being improved every day. The work of evaluators engaged in evaluation activities is relatively easier and less complicated than other consulting services, such as auditing. In particular, we can already see automated valuation models being used by banks today to conduct their valuation work. What automated scoring models are doing today, tomorrow they can be systematized by artificial intelligence to perform even more complex tasks.

IVSC (The International Valuation Standards Council) Alexander Aronsohn, technical director of the International Valuation Standards Council, emphasizes the opinion that automated valuation models systematized through artificial intelligence will remain as an auxiliary tool for the appraiser. According to him, Appraisal is “part art and part science.” Artificial intelligence can certainly change the way appraisers spend time and the way appraisers work in different parts of the appraisal process. can further simplify its relatively routine aspects, which allows appraisers to spend less time on data collection, analysis and other processes, and on the contrary, the appraiser has more time to determine the value of the property based on his experience and knowledge, make conclusions and work on other studies Artificial intelligence may even eliminate the "science" part of the appraisal process, but it will allow appraisers to make their own judgments about the data and draw conclusions about how that information affects the value of the appraised property. i.e. the "art" part describes[15] the irreplaceable.

CONCLUSIONS

In conclusion, it should be noted that recent technological developments may change the way the appraiser delivers the appraisal report to the client. Appraisers who can

[14] RICS (24 February 2017) – Blockchain platforms: Speeding up the money & assets transfer process: www.rics.org/nl/news/het-latest-nieuws/ comment/chain-reaction

[15] Stability Board httpsArtificial intelligence and machine learning in financial services. Market developments and financial stability implications, 1 November 2017, Financial ://www.fsb.org: site of Financial Stability Board.

provide digital reports to their clients can then leverage the latest technology to offer their clients a higher level of service.

It is desirable to develop assessment activities based on a common legal, methodological and informational space. In practice, it is necessary to create all possible regulatory documents, technological or software solutions and other scientific works based on international assessment standards. All measures for the development of assessment activities should meet today's demand for economic reforms. Based on the experience of foreign countries, it is necessary to develop national assessment activities and revise them as necessary

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