
Problems of the implementation and use of chat-bots, robo-advising and other products of the era of Industry 4.0 in the activities of Russian banks

Sergey V. Eshtokin, Cand. of Sci. (Econ.), Applicant MEI RAS
e-mail: *bmk.0952@gmail.com*

Abstract

Subject/topic. The article discusses the problematic issues of the introduction of chat bots, robo-advising and some other elements of artificial intelligence (AI) into the activities of the banking system of the Russian Federation in the context of the entry into the era of Industry 4.0. **Goals/objectives.** The purpose of the article is to identify topical problems that hinder the effective implementation of various elements of AI in the banking sector of the Russian Federation. **The research methodology** assumed the identification and classification of the strengths and weaknesses of the implementation of chat bots and other elements of AI based on the collection of practical information from the data of banking and other financial organizations, the study of the industry press and analytics, and relevant scientific publications devoted to this issue. **Results.** The key problems of the introduction of chat bots and other elements of AI into the banking sector were identified and classified, the main ones of which were: information security, rejection by wide groups of users, imperfection of artificial intelligence, difficulties in adapting the computer brain's perception of spoken and written human speech, the need for human participation, narrow functionality, serious staffing problems. Some ways are outlined for correcting the current situation and solving the accumulated problems. **Conclusions/Relevance.** It is concluded that the key problems of implementing chat bots are in the plane of human-machine interaction, in the field of personnel policy due to the forced need to release and redistribute personnel, and are also associated with the imperfection of AI, which at this stage is not yet in able to replace the human brain. **Application.** The necessity of additional financial injections into the digital infrastructure of financial and credit institutions has been substantiated to ensure the process of effective implementation of chat bots, robo-advising and some other artificial intelligence tools in order to immerse themselves more fully in an innovative industrial environment characterized by a transition to a qualitatively new level of development of all elements of the modern economy and to meet the changing demands and needs of all consumers of financial services.

Keywords: *information technology (IT), digitalization, artificial intelligence (AI), financial technology (fintech), banking, chat bots, roboadvising, machine learning (ML – machine learning), natural language processing technologies (NLP – natural language processing)*

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About author

Sergey V. Eshtokin, Candidate of Sci. (Econ.), Applicant, Market Economy Institute of RAS, Moscow.

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