Ivanova T.G.
PhD (Economics), associate professor,
Doctoral student at the Department of Banking
Kyiv National Economic University named after Vadym Hetman

THE MAIN APPROACHES FOR EFFECTIVE USE OF BANK CHATBOTS IN THE DIGITAL ECONOMY

From year to year, traditional banking institutions are increasingly introducing new technologies into the system of communication with the client. The use of digital technologies for storing, processing and transmitting information in conjunction with the dissemination of Internet accessibility not only through PCs but also via mobile phones has created the conditions for the creation and use of chatbots by banks. According to a 2019 NPR and Edison report, 24% of adults in the USA own a smart speaker device [1]. This number is likely to grow in the coming decade, and banks have an opportunity to capitalize on this trend by integrating chat and voice bots into their customer service workflows. According to Global Market Insights forecasts, by 2024 the global chatbot market will grow by 31% and will be valued at $ 1.34 billion [2].

Customer expectations in the banking industry have continually evolved in the last two decades. Previously, people walked into a branch in order to carry out their banking needs. With the advent of the internet, banks created digital self-service channels via "internet banking." With the smartphone boom, there became a need to bring banking to mobile. All of this led to the birth of omni-channel banking services and, the potential loss of a personal connection in banking. Undoubtedly, voice and chatbots could partially return this personal connection to the banking industry.

Conversational user interfaces (CUI) is a new and recent form of two-way human-computer conversation that occurs through natural language processing (NLP). There are two forms of CUI: voice bots (voice interface) and chatbots (text interface).

The main approaches for effective use of bank chatbots in the digital economy are:

1. Marketing. Banks could use chatbots in marketing efforts that also improve the customer experience and increase brand loyalty. Chatbots have the potential to:

- personalize the customer's experience;
- send the customer relevant notifications while they are on the bank's website or logged into their accounts;
- gather and analyze customer feedback, allowing customer service teams to address emerging issues;
- moving customers through the sales funnel, increasing conversion rate and revenue.

2. Answering frequently asked questions. Customers are looking for a fast and easy way to get answers to their banking-related questions, such as:

- frequently asked questions, such as how to freeze an account when they lose a credit card, how to add a cardholder to an account, and more;
- quick and accessible links to FAQ pages so they can look up answers on their own;
- product inquiries and information about loan interest rates, the best credit cards for them, and more.

Banks could save on call center overhead by integrating chatbots that can handle these types of questions. Instead, call center agents could spend their time handling escalated calls and tickets that require more nuance and care.

As consumers become more familiar with talking to voice-controlled devices, it stands to reason that they'll be more open to "conversations" with non-humans. In fact, research from Survey Monkey and Drift show that only 38% of consumers actually want to talk with a human when engaging a brand. This isn't to say they always prefer chatbots, but it highlights just how many ways there are to get answers today that don't involve live human conversation — text messaging and self-service portals, just to name a few [3].

3. "Onboarding" customers. Chatbots could also play a pivotal role in banking by "conversing" with potential customers. They know how pre-populate fields on landing pages and within application forms, which could increase the chance that a customer opts into that landing page and expedite the time it takes f or them to apply for a loan respectively.

4. Facilitating core banking activities. In some cases, chatbots can handle core banking activities, such as loans and payments, within a chat window. Customers could transfer money from one account to another, pay invoices, apply for a mortgage, and more by conversing with a chatbot. Most chatbots can only handle basic questions and pull information from FAQs, but the few robust chatbots in banking that exist are integrated with customer accounts via API.

5. Analyzing customer tone and sentiment. Sentiment analysis features could allow CUIs to report on how a customer is feeling while it is engaged with a customer. Algorithms are constantly being refined to better understand user sentiment. In the past, an algorithm may have analyzed a sentence with a double negative as one containing negative sentiment.

Sentiment analysis algorithms today can take more context into consideration and analyze the sentence as one containing positive sentiment. Some chatbots can properly analyze sarcasm, as well. This could help the bank decide what to do next to best serve that customer. Sentiment analysis results could trigger a chatbot to route the customer to a human customer service agent who then knows to handle their concern with more care.

Therefore, with the further development of the digital economy and artificial intelligence, the use of chatbots by banks is inevitable. Although the proliferation of chatbots raises data security concerns, but chatbots effectively perform the function of supporting the customer service of the bank and optimize customer service to the maximum level, reducing its costs. The introduction of chatbots allows to relieve the load on the contact centre and quickly provide communication to the bank's customers in 24/7/365 mode.

References:

1. NPR & Edison report (2019), "The Smart Audio Report", available at: https://www.nationalpublicmedia.com/insights/reports/smart-audio-report (accessed 10 March 2020).

2. HB (2019), "Tsyfrovue boltynu. Chto zhdet industriyu chat-botov v 2019 godu", available at: https://nv.ua/techno/it-industry/posidim-pogovorim-chto-zhdet-industriyu-chat-botov-v-2019-godu-50003503.html (accessed 10 March 2020).

3. Survey Monkey & Drift report (2019), "Key chatbot statistics to know in 2019", available at: https://www.salesforce.com/blog/2019/08/chatbot-statistics.html (accessed 09 March 2020).

Андрійчук А.Ю., Пономарьова К.С.
«Фінанси, банківська справа та страхування», 3 курс
ДВНЗ «Київський національний економічний університет імені Вадима Гетьмана»
Науковий керівник — к.е.н., доцент кафедри фінансів Кондратюк С.Я.