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Development of the banking sector in the digital economy

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Abstract

Digitalization is the area that has undergone great changes in recent years, which led to profound transformation of the banking system. Digitalization opens new opportunities for banks, which allow placing the client in the center of the information development process. New technologies develop in the market to disrupt the value chain of retail financial services, as well as to introduce new players to the competitive arena. Both existing and new players have innovative levers for adopting new trends. The forces that shape these changes have made it necessary to reconsider the role of banking and finance. The bank begins to act more as an "assistant" than a "supplier" of products and services. The article deals with the image of the main financial and economic organization in the nearest future; it shows exactly how banks will realize their activities in perspective. The article presents the principles on the basis of which modern banking technologies are created nowadays. The essence of two main directions of modern e-Commerce system (B2B, B2C) is disclosed. The article considers the systems of client-Bank, Internet banking and mobile banking as the main areas of development in the field of remote management of banking operations. The authors of the article describe new electronic technologies, which help banks change their relationship with customers and find new ways to make profit. The article also states that rapid growth in the popularity of online banking confirms the existence of the stable and effective demand for this new type of banking services.

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Keywords

Digital economy, digitalization, banking sector, client-bank system, Internet banking, mobile banking.

Introduction

Digitalization is the area that has undergone great changes in recent years, which led to profound transformation of the banking system. Digitalization opens new opportunities for banks, which allow placing the client in the centre of the information development process. New technologies continue to develop in the market to disrupt the value chain of retail financial services, as well as to introduce new players to the competitive arena. Both existing and new players have innovative levers for adopting new trends. The forces that shape these changes have made it necessary to reconsider the role of banking and finance. The bank begins to act more as an "assistant" than a "supplier" of products and services.

Main part

Banks play an important role in the economy because they manage the payment system; they are the main source of credit for large sectors of the economy and, as a rule, they act as a safe haven for depositors' funds. They also include the provision of banking and financial products to consumers and small businesses. In this case, banks are highly dependent on interest rates, fees and proprietary products. Time for banks has changed with the emergence and development of technological innovation, including the rapid spread of such technologies as smartphones, artificial intelligence and big data analytics; new competitors - financial start-ups; and changes in the attitude and behaviour of the client. Computer-assisted technology (ITC) facilitates the launch of technology in the financial services industry and offers products and services directly to consumers and businesses, including operating financial institutions [Kashapova, Sharafutdinov, 2013, 167-168].

The rapid development of information systems allowed credit institutions to automate their activities and develop a mechanism for remote banking services via the Internet. Service in the Internet banking system is free of charge and can occur from anywhere in the world, and its universality allows being accessible both for individuals and legal entities.

With the increase in types of financial transactions, the boundaries of the distribution of Internet banking expand, and, as a result, new horizons are constantly opening up. Of course, all this requires a complex and comprehensive assessment, since everything new contains not only potential benefits but also negative aspects that must be taken into consideration when building a strategy for the development of Internet banking in Russia. Nowadays, using Internet banking systems, you can make purchases and sales of non-cash currency, carry out non-cash payments, pay utility bills and much more, and moreover, track all banking transactions on your accounts. The range of innovations in this sphere is not limited. With the introduction of several economic sanctions against our country, most organizations face the problem of introducing innovative processes in a short time [Varian, 2001].

Digitalization is changing the rules of the game in many industries through possible disruptions of business models, and it results in the emergence of a much more complex and dynamic ecosystem for growth and innovation. The digital infrastructure has accelerated the emergence of new technologies – social media, cloud computing, analytics and big data, wearable devices, 3D printing, and intelligent autonomous systems, to name some recent ones – that enable transformations in the way we live and work, in companies' organization, as well as in the structure of entire industries.

Banking technologies are inseparably linked with information technologies, which provide comprehensive business automation. Modern banking technologies as a tool for supporting and developing the banking business are created on the basis of a number of fundamental principles, such as:

- modular construction that allows you to easily configure systems for a specific order with subsequent build-up;
- openness of technologies that can interact with various external systems, provide a choice of software and hardware platform and its portability to other hardware;
- flexibility in setting up banking system modules and adapting them to the needs and conditions of a particular bank;
- scalability, which provides the expansion and sophistication of functional modules of the system as business processes develop;
- multi-user access to real-time data and the implementation of functions in a single information space;
- modelling of the bank and its business processes, the possibility of algorithmic adjustments to business processes;
- continuous development and improvement of the system based on its reengineering of business processes [Valitova, Sharafutdinov, 2014, 876].

It should be noted that in the currently popular technology, three main trends of development can be identified: the client-bank system, Internet banking and mobile banking [Azhluni, Petrova, 2017, p. 46].

With the help of the client-bank system, the clients of the bank can perform various operations from home or from the office: managing accounts, obtaining information on the status of accounts and other banking information, making payments and paying for services from current accounts and plastic cards, and carrying out other operations.

Mobile banking is the reception of banking services directly from a mobile phone or laptop using wireless access technology. This technology allows you to transfer information from Internet sites to mobile phones with the function of access to the Internet. This system provides even greater freedom of access. Among the consumers of banking services using a mobile phone, the Scandinavian countries take the first place, and, according to experts, in the nearest future more than 40% of customers will switch to mobile service of their accounts.

The most promising area for the development of banking information technologies is Internet banking. The development of remote maintenance systems has led to the creation of various systems in terms of the volume and forms of banking services: Internet-Bank, Internet-Client, home bank, telebanking, mobile bank or WAP-service. With the help of these systems, almost all services, except for cash services, are performed by the requirements of the bank's customers. Not only in the West, but also in Russia, more and more participants of the stock market (banks and brokerage companies) are developing a new perspective direction of brokerage services, which includes providing individuals with access to Russian and international currency and stock markets (Internet trading) [Wehinger, 2008].

It should be mentioned that modern e-commerce system includes two main directions: B2B (business-to-business), where banks work as the main executor and seller of financial services, and B2C (business-to-customer) that is sale of goods and services to private individuals, where credit institutions act as a financial intermediary [Gontar, 2017, 93-94.]. With the help of the latest technology of working with clients, one manager can conduct active work with a very large number of clients. The most important trend related to the expansion of efficiency and multifunctionality of credit institutions was the creation of budgeting systems and an integrated approach to financial management of the bank's resources.

Undoubtedly, the formation of the Russian banking sector is still developing. However, it is obvious that the future of banking activities will be connected with information technologies. In

accordance with the natural laws of life, the strongest one survives. In the current economic conditions, to survive and remain afloat is destined for those banks and financial institutions that are now widely developing and investing in their information and technological activities. The Russian banking system is pouring into the world; and fighting against western competitors is inconceivable without reliance on modern high-level information technologies. In future, the main factors to stay competitive in the market will depend greatly on the visions and strategies banks develop and implement [Bashkirtseva, Dubinina, 2018, 38].

Internet banking is a more advanced modification of such a system and has a number of advantages:

- it does not require the installation of additional software on the computer;
- clients instantly receive all information about the state of their banking accounts, which significantly saves time by eliminating the need for visiting the bank in person and tracking the operations;
- the exchange of documents takes place electronically, but this does not remove obligations from the client to provide all required documents in the form of paper originals;
- convenience of operations saves time for bank workers on paper work, accordingly, results in savings in bank costs;
- all calculations occur in real time;
- easy and simple connection to the system, subject to availability of banking account, the agreement "On servicing in the Internet banking system" and the electronic digital certificate;
- the system monitors the correct completion of documents;
- protection of sent information from illegal access using SSL protocol of the international cryptography format. Returning to the question security, it should be noted that an important property of Internet banking security is the confirmation of transactions using one-time passwords (so that interception of traffic does not allow an attacker to get access to other people's finances). Although the theoretical possibility of server spoofing nevertheless remains, however the implementation of such fraud is pretty problematic;
- all electronic documents have legal force and are confirmed;
- Internet banking is free of charge, and customers are provided with preferential rates for various operations. There is a chain between the bank and the client intermediaries, then in the presence of direct communication (info communication technologies), these costs are rapidly declining [Sheremet, 2018, 34].

As new entrants are putting pressure on banks' margins in various products, they have started reconsidering the way they do business. There is, of course, significant variation among banks in reacting to digital disruption. Globally, more innovative banks and financial institutions are moving rapidly to the introduction of digital technologies [Maksimtsev, 2018, 79]. Most of them have invested heavily in transaction migration. They have also significantly upgraded web and mobile technologies and created innovation and testing centres, both own and innovation divisions separated from the broader business.

Some other banks have decided to develop new products (some of them represent new financial technology products in end-to-end digital banking, digital investment services, electronic trading, and online cash management); while others are also collaborating with financial technologies to improve their consumer offerings [Varian, 2001].

In addition to the advantages of this system, it is also possible to identify its shortcomings. Despite the fact that SSL is the standard of Internet security, there are such intruders who know how to break into the personal offices of bank customers therefore it cannot guarantee the same level of security that closed Internet networks that do not have access to the Internet. So, there are some drawbacks.

Firstly, the problem of non-financial risks is much higher in the remote system banking services than in traditional services. The sources of threats are software and the human factor. It is possible to distinguish – attacks from Internet, malicious use of remote service channels, erroneous actions, negligence of bank personnel, etc. However, tightening legislative regulation of the market for remote banking services causes additional costs for providers. Since January 1, 2014, the bank is obliged to return to the client the amount of the transaction made without its consent and the bank's side. Consequently, RBS systems require additional investment in security.

Secondly, in order to launch only one system of Internet banking, large investments are necessary, which are approximately from 1 to 5 million US dollars [Smagina, Abdugarimov, 2017, 83].

Thirdly, there are disproportions in the banking services between large cities and individual regions, between cities and rural areas.

Fourth, from the users of the system there is a fact of insufficient awareness and absence of an explicit need for online payments, the complexity of interfaces for new users. Despite the growth and development of Internet banking, the current level of its state is ambitious. The main reasons restraining its growth are: distrust of the majority of the adult population to Internet services, connecting inconvenience, variety and complexity of the interfaces of most systems.

However, rapid growth in the popularity of Internet banking confirms the existence of a stable and effective demand for this new type of banking services. The cost of customer service through the Internet is minimal, which causes customers' interest. But not only for the bank's clients, but also for the bankers themselves, this system is attractive, because it allows to lure potential customers and to reduce as much as possible the burden on the banking departments, so as forms of documents are ready, they quickly pass all the checks through the network.

Conclusion

Thus, new electronic technologies help banks change their relationships with customers and find new ways to make profit. Nowadays, banking computer systems are one of the fastest growing areas of application network software. Staying competitive in the future will depend greatly on the decisions banks make today. Events of the past few years have shown the price that they might have to pay for poor strategic decisions or from the adoption of similar business models in the retail banking industry. Considering the problem of innovation it is unpredictable in terms of timing, scale and impact. The future of the banking sector also assumes that the landscape will be determined by both digital technology and non-traditional competitors. The more friendly functions are for the user, the more they develop on the market, especially if they can increase the interaction and personalization that grow demanded by the market. All that is transforming the traditional model of face-to-face interaction with important consequences on authentication, assistance, contents to deliver, a new role on the advice side. On the other hand there is a completely new approach towards data, considering the new model of interaction between providers and consumers. The iPhone, for example, is a key platform on which that app ecosystem operates. There is every reason to expect financial services to make a similar transition to an increasingly interconnected digital world.

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Развитие банковского сектора в эпоху цифровой экономики

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Аннотация

В статье анализируется образ финансово-экономической организации в ближайшем будущем, рассматривается реализация банковской деятельности в перспективе. В статье

представлены принципы, на основе которых в настоящее время создаются современные банковские технологии. Раскрывается содержание двух основных направлений современной системы электронной коммерции (B2B, B2C); рассматриваются системы: клиент-банк, Интернет-банкинг и мобильный банкинг как три основных перспективных направления развития в области дистанционного управления банковскими операциями (счетами). Авторы статьи описывают преимущества электронных технологий, которые помогают банкам в их деятельности, меняют их отношения с клиентами и находят новые способы получения прибыли. В статье также констатируется, что быстрый рост популярности онлайн-банкинга подтверждает наличие стабильного и эффективного спроса на этот вид банковских услуг.

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Ключевые слова

Цифровая экономика, цифровизация, банковский сектор, система клиент-банк, Интернет-банкинг, мобильный банкинг.

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