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THE ESSENCE OF FINANCIAL TECHNOLOGIES IN THE BANKING

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The concept of "financial technology", or "fintech" is relatively new, so its generally accepted definition does not yet exist. The Oxford Dictionary defines fintech as computer programs and other technologies used to support or provide banking and financial services. The Basel Committee on Banking Supervision understands fintech as "technology-generated financial innovation that can lead to the creation of new business models, applications, processes or products for financial markets, institutions, or the production of financial services" [1].

Experts from Ernst & Young define financial technology as a collective term denoting the use of modern technologies in the field of financial services, such as lending, insurance, asset and capital management, money transfers and others. The concept of fintech is also used in relation to companies, usually startups, that actively use innovative, disruptive technologies in the provision of financial services in competition with traditional institutions, i.e. banks [2]. On the other hand, traditional banks, insurance and management companies are also actively introducing new technologies and from this point of view they are also participants in the fintech market. In a narrow sense, fintech is innovative financial services provided by small firms, in a broad sense, it is all financial innovations introduced in the market and by large and small organizations. The PwC survey provides the following interpretation: "financial technology is a dynamic segment at the intersection of the financial services and technology sectors, in which technology start-ups and new market entrants are applying innovative approaches to the products and services currently provided by the traditional financial services sector" [3, p. 5].

In our opinion, financial technology is most correctly viewed as a sector that intensively uses computer and Internet technologies in order to improve the quality of banking and financial services.

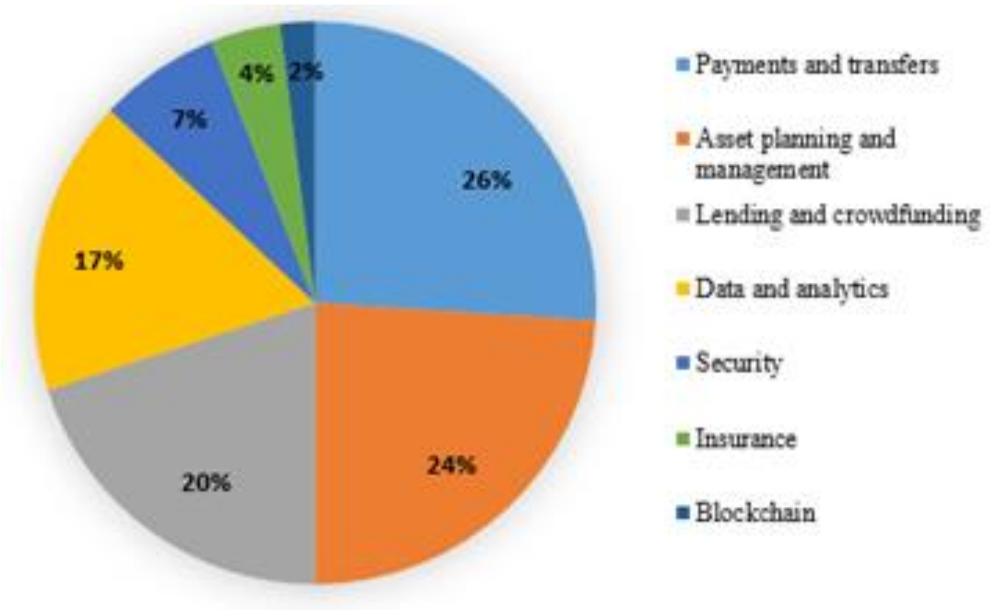

Fig. 1. – Distribution of investments in the financial services industry in the world in 2010-2016 by sector according to KPMG, % [2]

The most popular financial technology investments are payments and transfers, as well as investments and asset management (figure). These segments are the main sources of income for traditional banks, bringing in about 46% of all revenue.

The main areas of application of fintech in the banking sector are:

– **instant lending operations**, for example, "payday loans", which are not practiced by banks. One of the first firms in this market was the British Wonga. It issues loans up to £ 400 for a period of 1 to 35 days, and for borrowers who have repaid loans several times on time and in full, the maximum amount may be increased. At the same time, customers can receive money on a bank card or immediately make a payment (for example, for utilities);

– **P2P lending** as an alternative to bank retail lending, providing an opportunity for the population to borrow from other individuals and provide loans themselves. The popularity of this area is explained by lower interest rates compared to traditional loans. For example, OnDeck, valued at $ 1.8 billion during its IPO, offers loans of up to $ 500,000 at a rate of 5.99% per annum for a period of 3 to 36 months. In this case, the borrowing company must pay a commission in the amount of 2.5 to 4% of the amount of the loan received. In addition, it is possible to open a credit line for up to $ 100,000 at a rate of 13.99% per annum with a monthly service fee of $ 20 per month [5, p. 15];

– **electronic payment systems** that take interest or commission from the seller of the goods (borrower) who used the platform of this settlement system [6, p. 51]. Among the most famous fintech companies in the field of payments is PayPal, which is owned by the online auction Ebay, then Klarna, the best payment system of this type in Europe, Alipay, whose owner is the online store Alibaba. At the moment, Sqware, a competitor to PayPal, is actively developing in Germany, owned by the founder of Twitter, J. Dorsey. In Russia, well-known companies of this type are electronic wallets Qiwi, Google, Yandex money [7, p. 46].

– **digital banking** as the implementation of financial services using mobile and online platforms, which saves time and costs, increases the security of personal data, increases the speed and quality of services. Traditionally, since the inception of banking, customer service has been carried out through physical contact at bank branches. During the period of the emergence and active development of remote banking services, such service channels as telephone banking, terminal banking, Internet banking, TV banking, and mobile banking appeared. The new period of digital banking is characterized by the emergence of such communication methods as a reverse form of communication through the bank's web application on a mobile phone, social media platforms (VKontakte, Odnoklassniki, Facebook, Twitter, etc.), as well as interactive video communication with a client in points of sale, offices and self-service devices [8, p. 215];

According to a study by the American consulting company BCG, top players in the global financial services market are investing heavily in creating next-generation banking models. The largest banks with competent human resources and ambitious executives invest generously in digital technologies and benefit from their use through economies of scale. Market leaders are already applying new approaches to organizing large amounts of data on the basis of a single platform, and the use of in-depth analysis of large amounts of data allows the largest banks to improve the accuracy of credit scoring, form individual offers addressed to customers and efficiently allocate resources. In addition, large banks are rapidly changing the format of their branches, reducing their number, equipping them with the equipment necessary for the independent implementation of most of their service operations by clients, and focusing the efforts of the remaining staff on consulting and sales. Banks are introducing new solutions to improve the quality and simplify operations, which is facilitating the transition from physical channels to digital/mobile customer service. Open development and software-as-a-service (SaaS) solutions are especially important for banks to streamline their operational capabilities. The implementation of APIs allows third parties to develop solutions and features with additional characteristics that are easy to integrate with banking platforms. At the same time, SaaS solutions help banks offer customers a wider range of options that are constantly being updated while banks do not need to invest in relevant research, design and development of new technologies.

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