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Fintech as Financial Innovation – The Possibilities and Problems of Implementation

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Abstract:

There is a growing competition between banks and fintech not only in advanced economies, but also in the emerging markets. However, it is yet to be observed in Latvia to the same extent. This paper aims to evaluate fintech's level of development in Latvia compared to Europe.

The paper identifies financial services using innovative technologies offered by fintech companies, analyses the advantages and disadvantages of these services in comparison with services offered by the traditional financial sector companies (banks, insurance companies, institutions involved in asset management and investment, etc.), and evaluates how prepared are consumers to use fintech services. This paper documents the results of the survey aiming to clarify how well-informed consumers in Latvia are about fintech services, their convenience, speed and safety, as well as the consumers' current satisfaction with banking services.

The hypothesis of this paper is that Latvian society is not ready to use services provided by fintech, but prefers banking services instead. Survey results provide some evidence in favour of this hypothesis: they show that respondents are generally unaware about fintech services in Latvia and their associated innovations and new financial products.
This paper makes several recommendations for managers of fintech enterprises, association of start-up enterprises and risk capital funds as well as state institutions.

Keywords: *fintech, competition, innovation in financial services.*

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1. Introduction

Fintech or financial technology is a term used to denote firms that offer modern technology in the financial sector. Such companies have become a noticeable trend since 2010. Fintech firms are mostly micro, small or medium-sized firms that do not have a lot of equity, but have a clear idea of how to introduce new or how to improve existing services in the financial services market. Commonly, these are *fintech start-ups*, the number of which is constantly increasing (by various estimates, their number has already exceeded ten thousand firms). As a rule, venture investment and crowdfunding are used to finance fintech firms. Some professionals also claim that fintech start-up enterprises improve the efficiency of the financial system (Vlasov, 2017; Vovchenko *et al.*, 2017; Setyawati *et al.*, 2017).

There are two main reasons for the emergence of fintech companies. First, the global financial crisis of 2008, has vividly demonstrated to consumers the shortcomings of the traditional banking system that led to the crisis. Second, the emergence of new technologies that helped provide mobility, ease of use (visualization of information), speed and lower cost of financial services (Anikina *et al.*, 2016).

The potential market for the users of fintech services is very broad - essentially all of the adult population of the globe. According to the McKinsey Social Sector page (Chaia *et al.*, 2010), a study conducted back in 2010, nearly 2.2 billion financially unserved adults live in Africa, Asia, Latin America, and the Middle East, consisting of eight percent of population of high-income OECD countries (60 million adults), 65 percent of population in Latin America (250 million adults), 49 percent of population in Central Asia and Eastern Europe (193 million adults), 67 percent of population in Middle East (136 million adults), 80 percent of population in Sub-Saharan Africa (326 million adults), 59 percent of population in East and Southeast Asia (876 million adults) and 58 percent of population in South Asia (612 million adults).

These people are potential users of fintech services. The increase in the number of people around the world, who for various reasons cannot use or are not willing to use traditional banking services, contributes to the development of FinTech which offers the same services, but is faster, cheaper and more profitable than banks. For banks, these trends mean an increase in operational risks and long-term risks (Novokreshchenova *et al.*, 2016; Fetai, 2105; Thalassinos *et al.*, 2015).

On the other hand, Sharf (2016) indicates that a survey of 10,131 people across Australia, Canada, Hong Kong, Singapore, the UK and the US about their use of fintech products revealed that only 15.5 percent of all respondents were using non-banking services and it was expected that this number would rapidly increase in the future. 25 percent of respondents indicated that they use non-banking services very often and in normal practice they use 2-3 non-banking products. These data indicate that users of banking services are potential customers of fintech services as well.

According to a report by *Accenture* (a global management consulting, technology services and outsourcing company), fintech is one of the fastest growing sectors of the economy. Investments in the industry have increased rapidly reaching 12,2 billion dollars in 2014, while in 2008, it was only 930 million dollars. The highest increase was observed in Europe (Accenture, 2015). Table 1 summarizes statistics on investment in fintech in the USA, Europe and Asia for 2014-2016.

Table 1. *Investment in FinTech, 2014-2016 bln.US$ (KPMG, 2016).*

Region	**2014**	**2015**	**2016**
USA	14.1	27.4	13.5
Europe	12.0	10.9	2.2
Asia	3.3	8.4	8.6

As can be seen from Table 1, the total volume of investment in fintech in these regions was $46.7 billion in 2015. In 2016 it fell to $24.3 billion, but this does not mean a decrease in interest towards this field of activity in general.

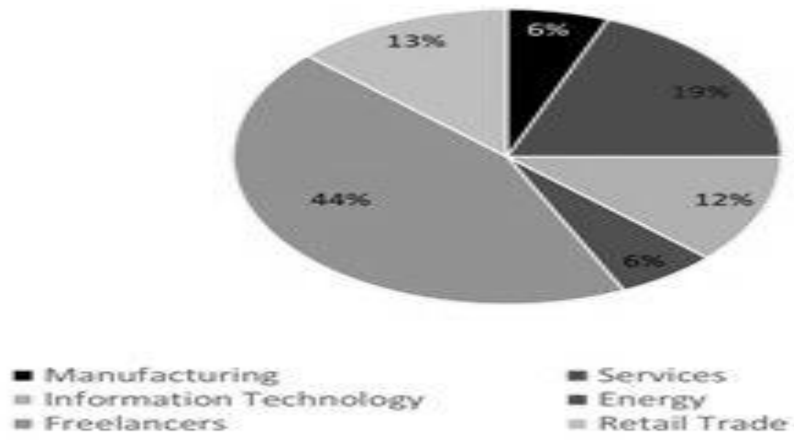
However, despite the increase in the total volume of investment in fintech, these firms cannot yet seriously compete with the banking and insurance sectors of financial services - according to a survey of young entrepreneurs, users of banking services in Latvia (2016-2017), most clients are not ready to replace them with the fintech alternatives (Kims, 2017).

2. Research Methodology

The research was carried out by summarizing scientists' and experts' estimation about this new and relatively little researched topic both from theoretical and historical aspects. To reach the aim of the research and verify the hypothesis, data was processed and gathered with the help of consumer survey. The hypothesis of the research was: Latvia's society is not ready to use fintech service, preferring to use banking services instead. 378 people (representatives of legal entities interested in using innovations in the field of financial services) from the industries represented in Figure 1 have responded to the survey, which is still ongoing.

Figure. 1 shows the areas of activity of respondents who participated in the survey. The largest number of respondents work as freelancers (44 percent), followed by work in the service sector (19 percent), retail trade and information technology were in the third and fourth place (13 and 12 percent respectively).

Figure 1. *Respondents to the Survey by Industry (authors' calculations)*



2.1 Areas of application of fintech industry innovative technology, advantages and disadvantages of financial services in comparison with traditional companies in the financial sector

Many papers (for example, Harrison *et al.,* 2014) show that business innovations stimulate economic development on both micro and macro levels. The application of information technology in the finance industry is a field with great potential for innovations; therefore, both enterprises and investors are highly interested in it.

Webster and Pizalla (2015) point out that competition between fintech and traditional banking services gets more intense every year due to continuing development of information technology. Simultaneously, fintech increases the interest in modern financial services from progressive financial institutions that aim to maintain and strengthen their leading role in the field and provide modern services of high quality in a convenient and effective form for their clients anywhere, anytime. Recently the collaboration between traditional financial institutions and *fintech* branch is growing as both parties see promising avenues for further development.

A review of the areas in which the fintech industry offers new technologies and traditional institutions of the financial sector, with which the fintech firms want to compete, as well as a description of the advantages and disadvantages of fintech technology is given in Table 2.

Table 2. *Overview of the areas of application of new technologies, competitors, advantages and disadvantages of fintech services[3].*

Area of application of new technology	**Competitors: Traditional financial sector companies and fintech companies**	**Advantages and disadvantages of financial services in comparison with traditional financial sector companies**
Online payments and money transfers, E-commerce	• Banks; • Companies offering payments and other services (PayPal, Ant Financial, etc.) In Latvia: Weststein, Monea, Swipe, MeaWallet; E-commerce in Latvia -eComCharge, Payment Ninja	Successful competition of fintech companies with banks is manifested with large volumes of transactions in close cooperation with the world's largest trading platforms eBay and Alibaba; Bank competitors have much lower transaction costs.
Lending	• Banks; • Non-bank lending companies for individuals and legal entities: Wonga (UK); In Latvia: 4finance, CreamFinance, SohoCredit; • P2P, B2B lending platforms. In Latvia: Mintos, Viventor, Twino.	Successful competition of fintech firms with banks began after the crisis of 2008 due to the refusal by banks to lend to certain groups of borrowers, incl. small enterprises, because of high risks; Fintech firms, working on the peer-to-peer (P2P) model, provide a platform for matching borrowers with lenders; Banking competitors may charge much higher loans and commissions; A major scandal in the history of fintech - bankruptcy of the P2P lending company Ezubao, operated in China.
Asset and Investment Management	• Banks and institutions dealing with asset and investment management; • Crowdsourcing platforms: crowdfunding (Indiegogo, Kickstarter, etc.), crowd investing. • In Latvia: the brokerage company Exante	Fintech companies have a very competitive value proposition in the new technology of robo-advising, when an individual's investment portfolio is selected by algorithms that offer clients an investment structure that corresponds to their investment preferences and risk profile; Annual maintenance costs are lower than those accepted in banks (1-2 percent), i.e., 0.3-0.5 percent; They allocate free assets of clients

[3] *The overview is compiled by authors, summarizing scientists' and experts' estimations, data of FinTech companies.*

		in deposits, convert currencies, bond and stock portfolios, seek to hedge risks and receive credit lines for these assets. Fintech firms make services that previously were only available to the wealthy accessible to the general population.
Neobanks (digital banks)	• Traditional banks; • Neobanks – mobile (digital) banks sucxh as ImaginBank (in Spain), EQ Bank (in Canada)- based on traditional banks;	Digital banks can provide convenient mobile services (settlement account, debit card, consumer loans, financial management tools, as well as the latest innovations in the field of mobile and p2p-payments) on the basis of the existing banking infrastructure, as well as create the infrastructure from scratch; Fintech companies use the flexibility of banking regulations: in the UK, after changing the banking legislation in 2014-2015, five new banks were licensed; In many cases charges for services are lower and interest rates on savings products are higher.
Personal finance management, planning, analytics	• Banks; • Fintech firms managing personal finances (Credit Karma, USA). In Latvia: Nordigen, Grandma, inBudget	In the field of personal finance management, fintech firms (for example, Credit Karma, USA) allow users to access their credit rating and credit history, as well as keep records of all client financial products - a free service; Comparable products in banks used to cost up to $100. In planning and analytics, fintech firms offer an online platform for project managers to manage budgets, invoices and reports.
Insurance	• Traditional insurance companies and banks; • Digital insurers - new generation companies (Bright Health, USA). In the Baltic States, Estonian companies are known - Inspool, Insly	Fintech firms can offer new technologies in the insurance business instead of conservative distribution of products through the use of offline agent networks, charging up to 20 percent in the form of commissions. As a result services become cheaper.

Infrastructure and support services	• B2B-FinTechs offering their technologies to banks and insurance companies or to other financial companies	Technologies related to security, work with large data, scoring mechanisms for borrowers, platforms, for example, on arranging loans or mobile payments; They do not compete, but cooperate with banks

As can be seen from Table 2, fintech firms actively and successfully offer their technologies and services in all areas where traditional banks, insurance companies and other financial sector companies operate. At the same time banks, despite their inherent conservatism and caution, have already begun to actively recognize fintech, understanding that the new technologies they offer in conjunction with banks' large client base, opportunities to attract low-cost resources and a robust regulatory system that ensures clients' trust, can lay the foundations of a new generation of digital financial institution.

Thus, the larger fintech firms become, the more they have been overlapping with traditional financial companies. In fact, in some cases it may be difficult to distinguish between a fintech company and a traditional bank, for example, the so-called low-cost banks, which Hes and Jilkova (2016) define as "retail banking based on an Internet platform" effectively combine the two. Such banks rapidly gained clients in Czech Republic and became profitable (Hes and Jilkova, 2016). Many experts note that the closer integration of FinTech start-ups with large traditional companies is inevitable and is, in fact, already starting a new stage in the development of the industry - fintech 2.0.

The development of fintech and innovative technologies such as mobile money has been going in parallel for some time and is actively followed by regulators and policymakers worldwide, e.g. the U.S. Federal Reserve System (Board of Governors of the Federal Reserve System, 2015, 2016) or the Federal Deposit Insurance Corporation (FDIC, 2016). There is abundant literature on the topic, for example, LevyBencheton (2016) and Shrier *et al.* (2016) who have analyzed current regional practices in Africa. In 2016, the question about mobile finance and digital identification using biometrics has risen to the top level of discussion reports and strategic plans by the World Bank (World Bank Group, GSMA, 2016, WBG, 2016) and the World Economic Forum (WEF, 2016).

3. The Possibilities of Using Fintech in Latvia

There are few fintech enterprises in Latvia, but those firms that do work and develop in Latvia, introduced specific upgrades in Latvia's financial market and changed the consumers' opinion about financial services, their quality and speed of provision of the service. The most popular fintech start-up enterprises are Dacta, Swipe.lv, Monea, Mintos, Twino and several others.

The authors conducted a survey of start-up businesses, who would be interested in using innovations in financial services, from industries such as manufacturing, information technology, freelancers, services, energy, retail trade (Figure 1). The survey was carried out using a questionnaire that was posted on social networks, as well as offered at seminars for professionals and entrepreneurs and 378 people have responded to the survey, which is still ongoing.

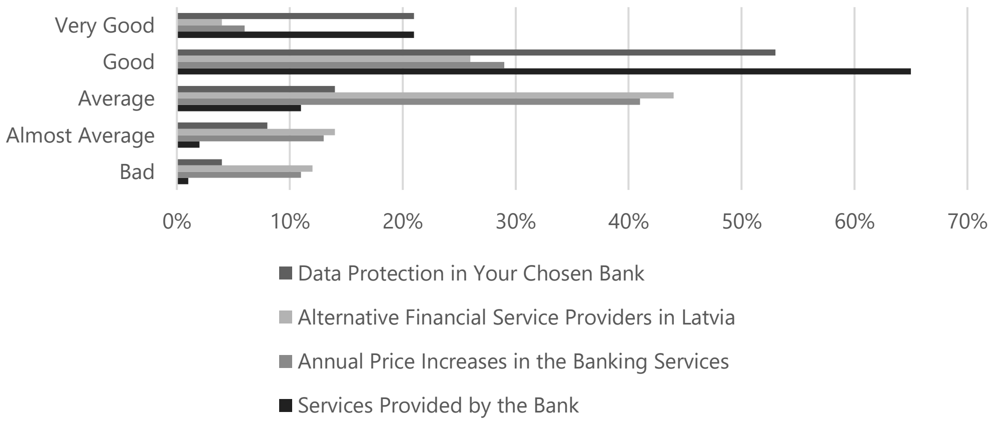
Most respondents were women (about 70 percent of all respondents, which is explained by their greater willingness to participate in surveys) at the age of 25 to 30, who could be considered part of the millennial generation, most ready to accept innovations in financial services.

The survey was started at the end of 2016 (Kims, 2017) and continue because the authors believe that involving respondents in the survey simultaneously means informing them about the services offered to increase interest in their use. Gathering further survey responses would further increase the statistical power or survey results, which for now can be used only as an indicative guide to reveal the preferences of the population.

Respondents were asked about alternative banking service providers in Latvia. There was a slight misunderstanding regarding the term "alternative banking service providers". At first, when the respondents heard the words "alternative banking service providers", they thought that they were asked to provide their opinion about fast lending companies, so the question had to be clarified to reveal respondents' opinion about fintech companies.

The survey asked the respondents to rate their satisfaction with different aspects of banking services as well as alternative financial services providers in Latvia on a five-point scale. The results are shown in Figure 2. In general, the respondents appreciated the protection of client data in banks, as well as the speed and accuracy of bank transfers as good and very good. However, respondents noted that the attitude of Latvian banks towards new entrepreneurs is such that it is practically impossible for them to get financing for their businesses, even if there is a stable cash flow of the company. Interestingly, the same attitude could hamper the development of fintech start-ups in Latvia as well. Risk capital funds in Latvia rarely invest in small enterprises, such as fintech, because the risk of loss is higher than from enterprises with stable profit and money flow. At the same time access to finance is one of the critical ingredients for the success of a small or medium enterprise (Mareš and Dlaskova, 2016), so to the extent that fintech can contribute to alleviating it, it can make an important contribution in the development of the overall economy in which SMEs play a crucial role.

Figure 2. *Survey respondents' satisfaction with the services provided by the bank (authors' calculations).*



Unsurprisingly, most respondents viewed the annual growth of bank commissions for the services provided unfavourably. Also, in the majority of cases, the recently adopted Cabinet Regulations 20 "Procedures for Financial Institutions on Performing Due Diligence of the Financial Accounts and Submitting Information on Financial Accounts to the State Revenue Service" (Government of Latvia, Cabinet of Ministers, noteikumi Nr.20, 2016.) were not evaluated positively either by legal entities or individuals, since the respondents believe that this does not contribute to the protection and confidentiality of data on the status of clients' accounts, while illegal transactions are carried out mainly not by using online banking, but in cash.

The respondents were also asked about alternative financial service providers. Low awareness of respondents about fintech services was manifested in the fact that the most common initial reaction to the question was that the respondents thought that the question was about non-bank providers of quick loans. After explanations, the majority of respondents noted their willingness to positively assess the possibility of using such services, since this will create competition for large banks and limit their ability to dictate their terms. The majority of respondents felt positive about fintech companies entering the market, because it keeps the largest banks like Swedbank or SEB Bank from maintaining and dictating their own market rules. When there is an innovative competitor, market participants tend to improve their offerings or lower prices thereby benefiting clients. Therefore, the expansion of fintech in the field of financial services will work for the benefit of their users, especially services such as P2P lending and digital payments using peer to peer platforms. This is evidenced by the pace of investment in fintech companies in Europe, Asia and the United States.

Forty percent of respondents noted that they have an interest in using non-bank financial services in their businesses, and they have experience in using such services, mainly in online payments and money transfers. This means that this percentage is already so large that the popularization of the provided fintech services could be effective.

On May 27th, 2017, Latvian government adopted the Latvian Financial Sector's Development Plan 2017-2019 (Government of Latvia, Cabinet of Ministers, rīkojums Nr. 126, 2017). If in previous similar plans the main goal was to ensure the stability of the financial sector, the newly adopted plan, while not neglecting that earlier goal, also aims to look for ways of developing the financial sector, especially by promoting the export opportunities of financial technologies. The first steps in the development of FinTech companies in Latvia show that many Latvian companies, for example, Mintos, 4finance and others can create and export competitive financial technologies on a world-wide basis.

As one of the most important priorities, the Plan puts forward digitalization and innovations in the financial sector, which is where fintech firms operate. It is encouraging that for Latvia fintech companies have become an object of interest from the government, since their activities allow diversifying the services of the financial sector by offering financial non-banking services to clients. How could the Latvian state stimulate the development of innovative financial services?

There are at least three avenues for exploration. First, the government could encourage the creation of a platform (sandbox) allowing innovative financial technologies to enter the market and validate their safety. Second, there needs to be an understandable and transparent system of supervision over the activities of fintech firms, especially the P2P and B2B lending platforms. Third, the government could create a program of tax incentives stimulating investments in the financial sector. As suggested by Menshchikova and Sayapin (2016), taxation system can be a powerful resource for stimulation of domestic investment at the state level. For example, in the UK, where the investor, who invests in enterprises on the list giving the right to receive tax benefits, receives a privilege to reduce corporate income tax payments to the budget by up to 50 percent.

4. Conclusions and Recommendations

This paper provided an overview of the trends in the development of the fintech industry. The development of fintech was due to globalization giving a chance to small but sophisticated enterprises to develop financial services without the help of banks, by combining finance with IT, and offering consumers faster execution of typical banking processes.

Their development in Latvia has been relatively slow, including due to credit constraints faced by all young businesses in Latvia. This paper posed a hypothesis that Latvian society is not ready to use fintech services preferring bank services instead. The survey of young entrepreneurs found some supporting evidence for this. Notably, Latvian society isn't properly informed about new innovations and new financial products, because a lot of respondents did not know about fintech services in Latvia.

Having analysed and summarized the trends of the fintech sector development, the authors are sure that the new fintech technologies together with the traditional services and achievements of banks (a large client base, an opportunity to attract large volumes of cheap financial resources, trust from clients) are the basis for the formation of digital financial companies of a new generation. Therefore, the fintech's development is necessary for both global and Latvian financial sectors, since this will allow clients to use the opportunities and advantages of both the traditional banking system and fintech companies. One can expect that fintech technologies will change the traditional activity of banks - banks will adopt innovative IT technologies, and fintech companies will have to work in conditions of more stringent supervision to ensure the safety of client operations. Such convergence will mark the beginning of a new era in the development of the financial industry.

Several recommendations can be addressed to managers of fintech enterprises, association of start-up enterprises and risk capital funds:

- Excessively strict licensing regulations in Latvia are one of the main drawbacks preventing fintech development. Worldwide experience suggests that reinforcing lobbying and collaboration with State institutions has helped fintech start-up enterprises to enter the market, gain consumers and regulators' trust and attract investors. This experience could prove useful in Latvian circumstances.
- Association of start-up enterprises should inform the population about fintech services that are already available for use.
- Risk capital funds need to support new companies in this field because they have a large potential to develop and grow not only in Latvia's but also Baltic and European international markets;
- Fintech firms have to create impactful marketing campaigns enhancing the public's awareness.

Finally, Latvian government should stimulate the implementation of financial services at least in three directions:

- By creating a platform (sandbox) allowing innovative financial technologies to enter the market and validating their safety;
- By creating an understandable and transparent system of supervision over the activities of fintech firms, especially the P2P and B2B lending platforms;
- By creating a program of tax incentives stimulating investments in the financial sector.

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