

COMMERCIAL BANKS AND FINTECH COMPANIES IN THE DIGITAL TRANSFORMATION: CHALLENGES FOR THE FUTURE

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Abstract

Innovations in technologies are changing consumers' behaviour and their understanding of financial services' great importance for the financial industry today. It is a great challenge for "traditional" banking to stay on track by understanding and accepting this change when there is no way back. Banking is no longer a place you go, but something you do (King, 2013). Many researchers and industry experts are discussing the future of FinTech companies and the threat that they may possibly replace banks. As Annika Falkengren (2015), CEO of Skandinaviska Enskilda Banken, has said, "They look like banks, they talk like banks, but are not regulated like banks."

The **research problem** of the present research is formulated as follows: 'will non-banking entities be able to generate competition to such an extent that the lines of business which are traditionally considered to belong to banks will no longer be their privilege?'

The **aim of the research** is to investigate, evaluate and compare the interaction between FinTech and commercial banks and the development trend of commercial banking, taking into consideration the influence of FinTech companies on traditional business models.

Research methods applied:

- Review of the literature and secondary data;
- Primary data collected by survey and interviews;
- Analysis of gathered data and analysis of financial parameters of FinTech companies, such as investments made in these companies by international banks.

Research questions:

RQ1: What is the substance of FinTech, what kind of services are offered by FinTech, and to what extent are customers aware of FinTech?

RQ2: Are banks investing in FinTech and which of the FinTech business areas are most attractive for investors?

Research limitations

This research has limitations related to the collection of both primary and secondary data. The pool of survey respondents and experts is limited and does not cover worldwide locations, being from Baltic countries, Sweden and Finland. In total 231 respondents participated in the survey.

Keywords: Digital transformation, commercial banks, FinTech companies

JEL codes: M15, O31, O16

INTRODUCTION

According to a publication by The Economist (The Economist, 2015), FinTech companies attracted around \$12 billion US dollars in investments last year, and some of the companies have gone public. But what is the detailed definition of a FinTech company? One definition is given by David Lee Kuo Chen (Chen, 2015) in his paper "Emergence of FinTech and LASIC (Low margin, Asset light, Scalable, Innovative, and Compliance easy) Principles". He states that "Fintech refers to innovative financial services or products delivered via technology". According to the definition found in the Oxford Dictionary (Oxford Dictionary, 2015), FinTech comprises "computer programs and other technology used to support or enable banking and financial services". A definition preferred by Accenture considers FinTech companies as "the ones offering technologies for banking and corporate finance, capital markets, financial data analytics, payments and personal financial management". (Stockholm School of Economics, 2015). A Silicon Valley Bank report on London and Global FinTech does not define

FinTech but includes companies that use technology in lending, personal finance, payments, retail investments, institutional investments, equity financing, remittances, consumer banking, financial research and banking infrastructure. Still other definitions include both e-commerce and cybersecurity as aspects of FinTech. (Stockholm School of Economics, 2015).

Summarising the quotes above, the authors could provide the following definition of the term: FinTech is an industry oriented toward arranging financial services for private individuals and industries with the aim of providing customer-oriented solutions in the most efficient way and at the lowest cost possible, ensuring this via innovation and technology. Exploring the current FinTech market more deeply, the authors have found that these companies are currently focusing on four main areas: payment-related services, wealth management, peer-to-peer lending (P2P lending), and crowdfunding.

In order to examine a different view on FinTech companies, a report by PricewaterhouseCoopers, "States of Guernsey. A strategic vision for FinTech", published in July 2015 (PwC, 2015), could be examined. In this report (PwC, 2015) FinTech is defined as a combination of innovative financial services and the availability of capital through the use of new (digital) technologies, such as crowdfunding. FinTech is also considered as a trend encompassing a wide area, ranging from technology used in existing financial services organisations to new consumer products and new market players competing with existing leaders. FinTech includes new models, such as cryptocurrencies, and is rapidly evolving in any area of financial services where technology is the key driving factor. As a result, FinTech can be defined as a term not only related to single methods and solutions or to traditional financial institutions looking to streamline their processes and emerging technologies, which seek to disrupt traditional industries. The term covers all of the above; the key question is whether these players will be able to unite forces, to make financial services even better, or whether they will choose the path of rivalry and competition.

FinTech Summary

FinTech can be described as a technologically driven process in the financial industry which introduces new working methods and approaches to standard processes. It aims to enhance the customer experience and increase process efficiency at traditional financial institutions and it opens market doors for new entrants who re-design traditional services so that they are more personalized, transparent and accessible for via digital channels, offering potential customers alternatives to traditional services provided by the financial industry.

The authors suggest the following division of activities in the FinTech area:

- Service-oriented – development of technologies related to services which are traditionally provided by financial institutions, such as fund transfers or card payments, lending and investment, P2P lending, crowdfunding, or foreign exchange.
- Data-oriented – solutions and technologies devoted to collecting, processing and analysing information. Although banks have not been paying much attention to the big data phenomenon, recently there are signs that this tendency is changing.
- Process-oriented – after the financial crisis of 2008, banks all over the world re-defined their operating models. Nowadays, banks are introducing so-called cost caps and have started working on increasing efficiency and process automation.

Theoretical Framework

The interaction between FinTech and commercial banks is considered as the *dependent* variable. The following *independent* variables affect the dependent variable: the financial industry, regulations, customer behaviour, public interest, investments.

The conceptual model of the research is shown in Figure 1.

With regard to financial technology, the *financial industry* is influenced by: Internet usage, use of mobile payments, the invention of digital currency, and the introduction of real-time payments. *Regulations* consist of: legislation towards different financial services and anti-money-laundering, know-your-customer issues, etc. *Customer behaviour* is impacted by: Internet usage, use of smartphones, lack of necessity to visit a physical branch. *Public interest* may be influenced or imposed by a crowd, where mass media and social networks play a big role. *Investment* flow and investment amount may be influenced by two factors: investments in financial technology or FinTech startups and foreign direct investment in emerging markets.

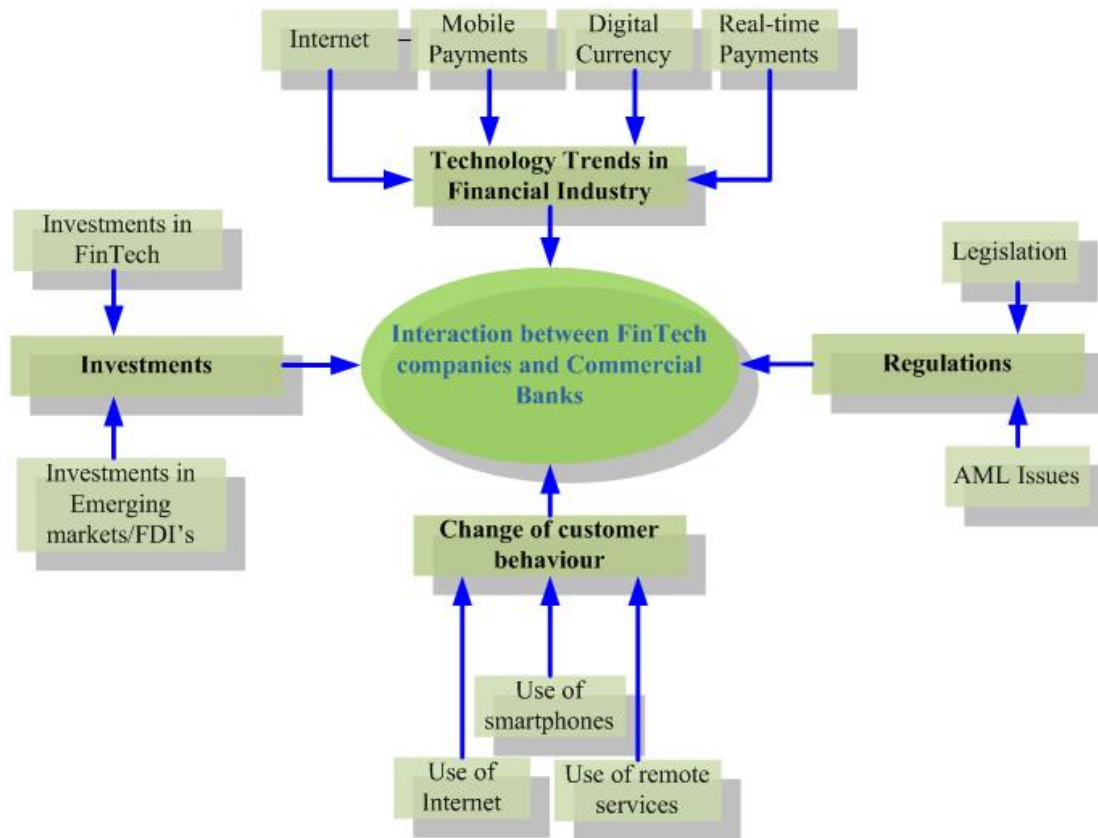


Figure 1. Conceptual model of the research.

Research Question 1: *What is the substance of FinTech, what kind of services are offered by FinTech, and to what extent are customers aware of FinTech?*

Research Question 2: *Are banks investing in FinTech? And which of the FinTech business areas are most attractive for investors?*

Analysis of investments made by banks in FinTech companies

The authors have analysed investments in FinTech companies made by some of the world's largest banks and the expected outcome of the analysis is to identify the areas of a greater interest on the part of banks with regard to some of the companies. This provides the basis for identifying what potential actions banks could undertake in the nearest future with regard to FinTech and innovative technologies. Based on this information about banks' investments during the past five years, the following taxonomy for business areas engaged in FinTech is proposed:

- Big data
- Trading
- Payments
- Billings
- Investments
- Insurance
- Identity Management
- Loan Management
- Lending
- Messaging

By analysing a number of companies which have received investments through financing rounds and dividing these companies into various FinTech areas, the authors determine which of the areas are of greatest interest for the banks which were leading or taking part in the investment rounds. Given that the number of companies, from one or another business area, which have received investments is only one aspect, the total amounts which were invested in the companies during the financing rounds were

analysed as well for more grounded conclusions. In order to estimate the division of investments by business area (see Table 1 below), the biggest companies situated in the USA, Sweden and Norway were analysed.

Table 1

Division of investments in FinTech companies by business area	
Area	Number of Companies
Big Data	6
Trading	5
Payments	7
Billing	2
Investment	3
Insurance	1
Identity Management	1
Loan Management	1
Lending	2
Messaging	1

Source: created by the authors

As we can see, the major areas of interest are big data, trading and payments. A smaller amount of interest can be seen in billing, investment and lending and the least amount of interest can be seen in insurance, identity management, loan management and messaging.

Most of the companies from the researched list provide card-based payment services and the reason for this could be that card payments are based on the ISO format and are usually made in real time. In the case of person-to-person transfers, this means that the payment beneficiary can receive the money almost simultaneously with the confirmation of payment. The attractiveness of card-based payment solutions is also based on the fact that card payments are becoming more and more common in our society. The processing of such transactions brings less risk to banks that work with cash and the same applies to merchants. The conclusion made based on the information described above is that banks see a big future in card payments and realize that this network could become the prime payment network for private individuals.

The next biggest area of interest for banks, by both number of companies which have received investments and the invested amount, are companies working with data analysis and big data. Analytical software is becoming more and more advanced and is now capable of building complex models. In addition to this, along with digitization, the amount of information available to banks has grown tremendously. Currently it is becoming evident that such information can offer a deep insight into customer habits, and banks are examining ways to gather, analyse and make conclusions based on this analysis. Big data might be a key to answering this challenge, and banks investing in companies which are developing analytical software might serve as proof of this.

The third group of companies which have received investment are involved in trading. Although the total invested amount for these companies is smaller than for billing and lending companies, some of these companies are offering a different approach to traditional investments and are also applying a global approach. The authors suggest that banks are investing in these companies since they can use some aspects of the services the companies are providing in order to enhance their own services.

The remaining groups, which have not yet been described in detail, are related to the following areas: billing, identity management, loan management, lending and messaging.

Of the examined companies, only those classified under billing and lending have received a slightly larger amount of interest from investors and especially banks. The interest shown by banks in electronic billing solutions seems quite logical, since the ability to provide customers with online or electronic services definitely enhances the customer experience and also allows both banks and customers to automate and streamline accounting processes.

On the other hand, investments in peer-to-peer lending platforms are a bit harder to explain, since currently these platforms are considered to be able to create a considerable amount of competition for banks in the nearest future. But since the popularity of these platforms is growing, the authors would suggest that, although most probably banks will not be able to apply the peer-to-peer lending model to

their services, lending is being performed between two parties without an intermediary.

Interview with experts – main results

As part of the research the authors have interviewed several experts from different areas – banking, IT and education areas – from the Baltic states and Ukraine.

Five questions were formulated concerning the topic:

- Are you familiar with the term "FinTech"? Can you indicate if it is present in your area of expertise?
- Have you recently experienced a strong presence of non-banking service providers in areas traditionally associated with banks (alternative payment providers, lending, etc.)?
- Do you see an increased amount of interest on the part of international corporations in investing in alternative financial solutions? If yes, describe some examples.
- In your opinion, do non-banking service providers pose serious competition for banks in the nearest future? (e.g. fund transfers, lending, forex, etc.)
- What is your view on digitization within commercial banks? How would you evaluate digitization of services in the banking industry?

The 13 experts were from Latvia, Lithuania, Estonia and Ukraine and were top managers and chief specialists from: the banking area – 6; a brokerage company – 1; IT development companies – 3; higher education institutions – 3.

Summarizing the experts' answers, the authors concluded that, in the case of the Baltic states and Ukraine, most industry experts and academics have heard about FinTech, but have never used the services personally. At the same time the population in the United Kingdom and other European countries is using FinTech services to a greater extent and these services are much more popular there. In the Baltic countries people are slightly more conservative, still preferring banks as the main source of financial services.

The interview participants believe that bigger companies invest heavily in new technologies and startups such as FinTech companies, believing it is worth their investment. Those startups may become stronger due to better offerings for customers – quicker, cheaper, and easier compared with traditional offerings. Almost all of the industry experts interviewed believe that banks will continue to be the main market players, because only they have access to real money, and they own the infrastructure unless FinTech creates its own. Banks are also more trustworthy and compliant when it comes to anti-money-laundering or know-your-customer issues. Digitization within commercial banks should be considered as an essential tool for keeping their market share. At the same time the experts assumed there is no real threat of banks disappearing from the financial sector. Only banks have access to real money; they own the infrastructure of money transaction and they are regulated in a way that prevents money laundering activities and terrorist financing. However, commercial banks should keep track of new technologies in order to provide their customers with the best solutions, not expensive, quick and easy services. FinTech will be able to compete with financial giants only if a new infrastructure is built, an alternative to the one banks have. But for now this is not even in conception. FinTech actually helps banks to go digital because of the new ideas startups have and its inability to operate completely independently.

Summary of the interview data

A. T. Kearney, a global management consulting firm, claims in its study "Time to Reinvent Your Banking Model" (2015) that internet and mobile banking are becoming the main contact points for customers as they value simplicity, transparency and convenience highly. At the same time experts think banks still have a strong position, and customers will prefer banks due to security reasons and anti-money-laundering aspects. Banks have access to real money and they own the infrastructure, so that FinTech companies need to interact with banks or become banks themselves. Innovative blockchain technology could be independent in theory, but there are still a lot of issues for its introduction in practice. However, FinTech companies are presenting themselves as serious business opportunity for banks and other financial institutions. There could be a combination between a classical bank and a new FinTech solution, their cooperation, in order to deliver the best to the client. The following conclusion could be made: banks are going digital, keeping up with the changing environment. The core minus is that banks still need to take into account their existing infrastructure while developing completely new solutions and digitizing their services.

In order to analyse customer behaviour, a public survey was made. The survey consisted of 9 questions,

divided into two parts; the first part consisted of personal questions in order to be able to divide respondents into various groups during the analysis, while the second part consisted of questions related to innovative financial services. The survey was conducted via a web service, in April 2016, with 231 respondents.

Among the respondents, a large part were aged 25 to 34 years – 53%; those aged 35 years and older made up 34%, while 14% were aged 18 to 24 years. As the authors were examining the situation in the Baltic and Scandinavian markets, the target audience was located in Latvia, Estonia, Lithuania, Sweden and Finland. The residential breakdown of the respondents was as follows: Latvia – 34% (79 respondents); Estonia – 15% (35 respondents); Lithuania – 17% (38 respondents); Sweden – 20% (45 respondents); Finland – 15% (35 respondents). The largest group of respondents stated that they were employed in banking, insurance or finance – 41%; the breakdown for other business areas was as follows: IT and software development – 16%; education – 11%; public services – 12%; “other” – 22% (telecommunication, logistics, engineering, legal and some other areas). Summarizing the general information about the respondents, the authors believe that the group is sufficiently diversified, taking into consideration age, area of employment and country of residence, in order to gain objective and meaningful insight as a result of the survey conducted.

In the given research the authors asked a question about the frequency of bank service usage where respondents had to choose between a frequency of once a year or more seldom, once every six months, once every three months, once a month, once in two weeks, and more than once a week. Surprisingly, the answers divided up approximately equally with 16-17 % for each option. 52% of the respondents were familiar with the term FinTech itself, while 48% were not.

The authors could not identify any correlation between age of respondents or country of residence and knowledge of FinTech, which is natural. A slightly bigger percentage of banking employees is familiar with the term compared to other areas of employment, but this is most probably linked to the fact that for banks, financial technology, digitisation of services and competition created by non-traditional service providers and possible consequences currently is a hot and widely discussed topic. The authors suggest that respondents’ familiarity with the term FinTech depends on people’s interest in news in the world of finance and technology.

The next question was aimed at clarifying whether respondents are using non-banking service providers for banking services. It was explicitly stated in the question that micro financing companies are not considered to be non-banking service providers in the scope of the survey. 62% of respondents have used non-banking service providers for traditional banking services at least once. Below, in Figure 2, the respondents’ ranking of the most popular non-banking service providers is shown.

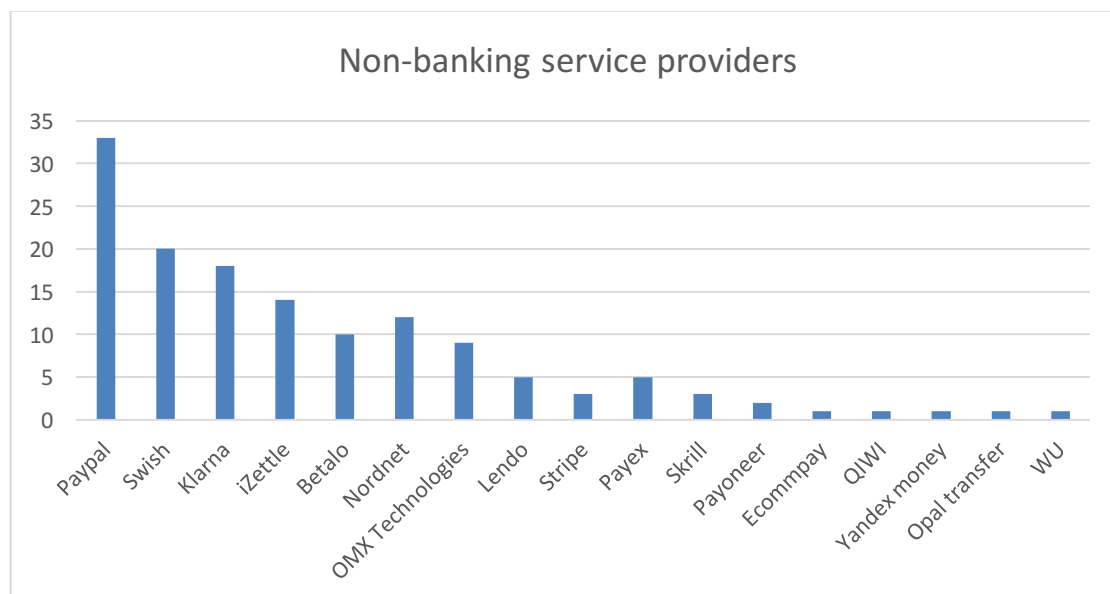


Figure 2. The respondents’ ranking of the most popular non-banking service providers.

Source: created by the authors

While looking into correlations between the answers given above and respondent groups, the authors determined that younger respondents are more likely to use non-banking service providers; on the other hand, respondents employed in banking and finance showed less certainty for such a choice and more often chose one of the unlikely options or indicated that they didn't know how to answer the question. A high level of uncertainty, which non-banking service providers are still associated with, combined with some security concerns, may be the reason for such behaviour.

Asking about the key factors when selecting service providers showed the most essential aspects – see Figure 3.

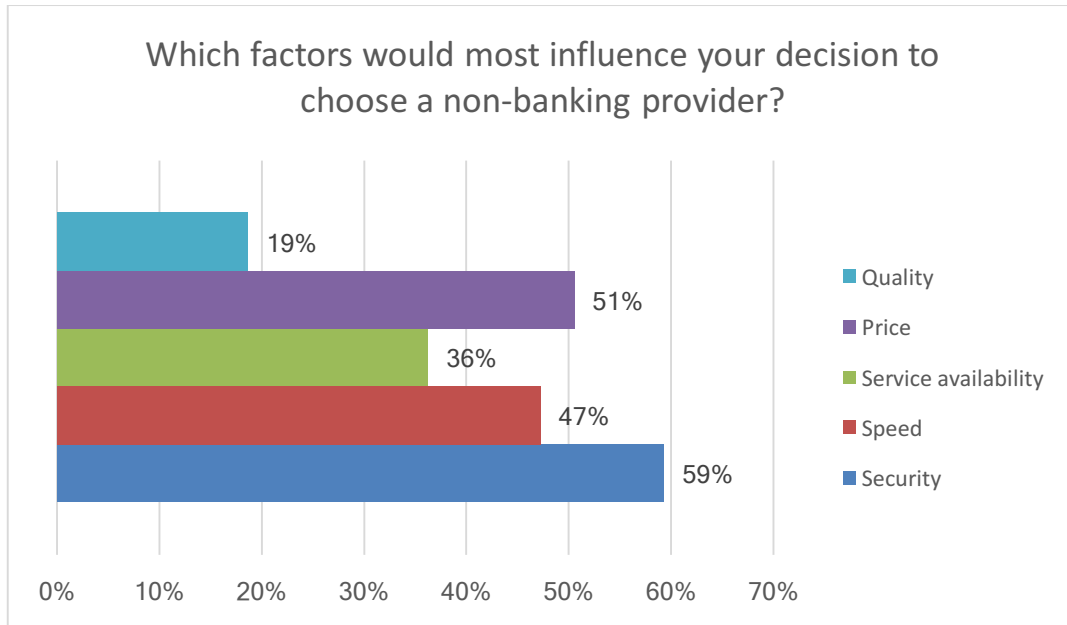


Figure 3. Factors influencing the selection of a service provider
Source: created by the authors

One of the most essential questions in the survey was the question as to what extent each service factor is important when choosing a non-banking service provider – see Figure 4.

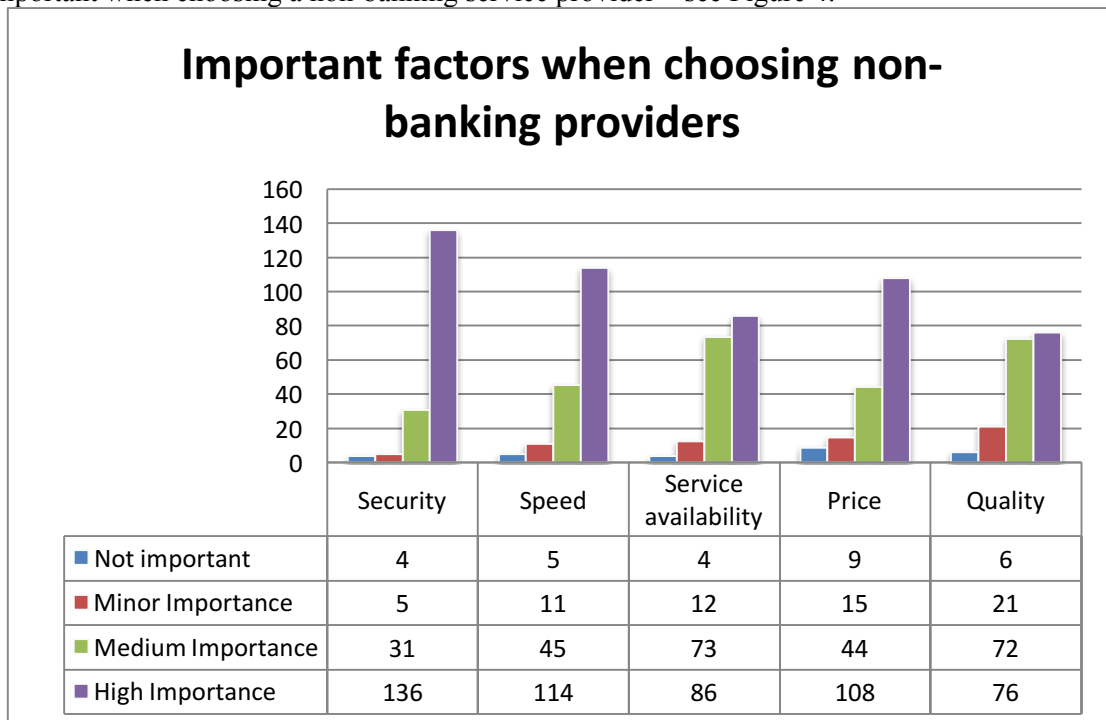


Figure 4. Service factor importance
Source: created by the authors

CONCLUSIONS AND DISCUSSION

- Banks are very interested in investing in the improvement of process efficiency and are most concerned with digitization, process automation and improving straight through processing levels.
- Banks are interested in creating a secure centralized communication network, appropriate for new market demands, currently considered to be the only worldwide secure communication network for financial institutions.
- The most interesting FinTech area for customers, according to the survey, is payment services. However, FinTech services are not as popular in Latvia and the Baltics as they are in the Nordic countries.
- Banks have strong market positions, and more customers prefer to use banks due to security reasons and trust. It is still a challenge for FinTech companies to build trust and prove their reliability compared with traditional banks.
- Banks are subject to regulations, where FinTech still is not. However, a fully digital bank will be possible when virtual money becomes real and easy to transfer. There should be a combination of traditional banking and FinTech to deliver the best solutions for customers.

RQ1: What is the substance of FinTech, what kind of services are offered by FinTech, and to what extent are customers aware of FinTech?

FinTech is an abbreviation for financial technology. It introduces new working methods and approaches to standard processes. It aims to enhance the customer experience and increase process efficiency at traditional financial institutions as well as re-design traditional services to become more personalized, transparent and accessible via digital channels, offering alternatives to traditional services provided by the financial industry.

In Latvia and the Baltic region, a very small number of people is ready for FinTech; most are still loyal to traditional banks. However, in Scandinavia, many people are moving to non-banking providers, and it is becoming a trend.

RQ2: Are banks investing in FinTech? And which of the FinTech business areas are most attractive for investors?

Banks are still strong in their structure, but they understand the need to be fast in order to compete with new technologies. Many banks are investing in FinTech companies or buying them to make their services more digitized and to offer new solutions. The business areas they are most interested in are payments, big data and trading.

RECOMMENDATIONS

1. Banks must invest primarily in digitization and innovative solutions, such as automation of services, new payment infrastructure, and analysis of big data. In order to generate ideas, banks should have innovation labs inside their organizations and look for interesting ideas outside them, e.g. on startup forums.
2. Banks should analyse and use the information they own about their customers and their transactions, not only on a know-your-customer basis, but in general. Use of such data will improve the understanding of customer needs and behavioural patterns and also drive operational efficiency and effectiveness throughout the organization.
3. Banks should transfer new business processes related to customer service online. As we discovered during this study, use of online banking and mobile banking applications is growing among banking customers. If banks were to introduce agreement confirmation online with the help of a mobile banking application, it would bring benefits to both banks and customers. The main recommendation in this regard would be to explore such business possibilities and implement them in order to retain and attract more customers with easily accessible and efficient service.
4. FinTech companies need to pay more attention to popularization of their services and advertising in order to attract more customers and establish public trust.

Further Research

Taking into account the defined limitations, the present research could be repeated in the future with a larger sample size.

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