

THE ROLE OF DIGITIZED SERVICES TO IMPROVE INTERNATIONAL ACTIVITIES OF BANKS

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Abstract

Due to the globalization, the financial sector has undergone major changes in the way services are provided and delivered. Customers increasingly prefer to receive services remotely, which is a more convenient and faster way, but the majority of European banks are not ready to provide it. 90% of European banks invest less than 0.5% of total spending on service digitization; therefore, only 20 – 40% of the processes are digitized. The service digitization can be a major challenge for banks in the future. Only banks that provide a full range of digitized services will be able to increase profitability and revenues and reduce costs. Therefore, it is necessary to analyse the satisfaction of international corporate customers and define the role of digitized services to improve international activities of banks. Quantitative and qualitative research methods, including the statistical data analysis, graphical analysis, linear and multiple regression analysis, correlation, comparison and grouping methods, as well as survey have been used for the research, and SPSS 20 has been used for data processing. So far there are no analyses of the digitized services in Latvia that would be based on international customer experience and needs. The results of the research concluded that the higher usefulness indicator, the higher is the possibility that international corporate customers will continue to use internet banking services. The digitized services strategy ensures the availability of essential daily digitized services in internet banking and ensures the savings in time and in financial resources for the bank and its international corporate customers.

Key words: service digitization, banking sector, internet banking.

Introduction

Technological developments over the last 20 years have opened up even greater possibilities for cooperation throughout the world, and both personal and professional life is inconceivable without them. Companies try to provide services accessible to everyone, and the distance is not an obstacle to successful mutual cooperation. The competition between companies influences the development of innovative solutions to ensure digital services, with the possibility to use them remotely.

Theoretical and practical research is being conducted in the financial industry looking closely at banking sector. The digitized services strategy applies to the banks internet banking to improve their international activity; therefore, the aspects of internet banking usage and its advantages and disadvantages have been studied in depth.

The aim of the research is to analyse the role of digitized services to improve activities of banks in order to clarify the trends of digitized service development, to ensure digitized banking services in Latvia. In order to achieve the objective, the following tasks have been set:

1. To explore the historical aspects of the digitized services and previous research carried out in the framework of digitization and its connection with banking activities;
2. To summarize and analyse the statistical information on the internet banking users and the digitization impact on banks' activities;

3. To make a structured survey for international banking customers who use digitized services.

Materials and Methods

Quantitative and qualitative research methods have been used for the research. The statistical data analysis, comparison, graphical analysis and grouping methods have been used for the collection of statistical data. In order to analyse the factors affecting the choice of internet banking included in the developed questionnaire, the linear and multiple regression analysis, as well as correlation have been used. A 5-point Likert scale (where 1 – strongly disagree; 5 – strongly agree) have been used in the survey to measure the quality of internet banking and the respondents' satisfaction with the received service. The program of statistical calculation SPSS (Statistical Package for the Social Sciences) 20 has been used for data processing. The research was done in the period from October 23 to November 4, 2015. The target audience was international corporate customers who are using internet banking services. During the research period 65 questionnaires were sent to respondents via e-mail. 57 completed questionnaires were received and analysed.

Results and Discussion

Digitized services and banking activities

As a result of the digitization, the world economy gained almost 193 billion US dollars and 6 million jobs were created in 2011. (Sabbagh, Friedrich, & El-

Darwiche, 2013, 37) Such developed regions as North America and Western Europe accounted for 29% in gross domestic product (GDP) and created just 7% of new jobs. In the developing countries the situation is dramatically different. For example, in East Asia and the Pacific, Latin America and Africa the impact of digitization on GDP accounted for 50%, and there were created more than 50% new jobs. The world’s population, which uses the Internet, is increasing every year. This means that in the number of internet banking users will also increase in the future. Since September 2000 the number of internet users has increased by 806% to nearly 3.3 billion. The number of internet users in Latvia is 1.6 million. (Internet Usage..., 2015) Analysing data on the internet banking use in different regions of the world, it can be concluded that the leader is North America. In 2012, 45% of North American Internet users used also the internet banking services. It is almost 1.5 times more than average worldwide (28.70%).

According to the statistics, Europe was lagging behind North America with 37.80% internet banking users. The least number of internet banking users was in Middle East and Africa (8.80%). (Global online..., 2012). If the indicators of European internet banking users are analysed separately, the internet banking users in 2014 has increased to 44%, approaching the figures of North America in 2012. Most active internet banking users have been in Iceland (91%). In the first ten positions there are also Scandinavian countries, the Netherlands, Estonia, Luxembourg, Belgium and France. It is mainly related to the developed banking systems of these countries. 57% active internet banking users are in Latvia, and it is 11th place on the list. The least internet banking users in Europe are in Bulgaria and Romania 5% and 4%. (Online banking..., 2015) respectively.

In 2011, a research on Latvian internet banking users was carried out by Association of Latvian Internet Banking. (Latvijas internetbanku..., 2011, 6) The aim of this research was to follow up with the internet banking development trends in Latvia, as well as to assess the dynamics of internet banking users and their activities in the usage of offered digitized services. The authors conclude that the largest number of internet banking users in the private individual segment in 2011 was for Swedbank – 831 202 users, followed by SEB Bank with 617 042 users while 61 026 legal entities were using SEB Bank internet banking, followed by Swedbank – 55 268 users. The least number of internet banking users both in the private individual segment and legal entities was for UniCredit Bank (Figure 1).

Comparing the proportion of private individuals and legal entities which are using internet banking, research shows that 92% of internet banking users are private individuals, while only 8% legal entities; therefore, it is important to ensure the high level service for digitized services to promote the loyalty of legal customers. During the period from 2007 to 2011, the number of internet banking users increased from 1.4 million to 2.5 million users. The rapid increase is explained with the introduction of new digitized services in banks’ internet banking and the modernisation of user interface, which improved the customer satisfaction with the services provided by banks. However, starting from January 2012 the number of customers had decreased. As part of the banks’ customers and internet banking users are foreign individuals and companies, the decrease in the number of internet banking users during this period is due to the fragile international economic relations, as well as changes in bank lending policies. However, there is a positive trend in 2015. The number of



Figure 1. Number of internet banking users in Latvian commercial banks in 2011, in units:
 1 – Legal entities, 2 – private individuals, units (Latvijas internetbanku..., 2011, 6).

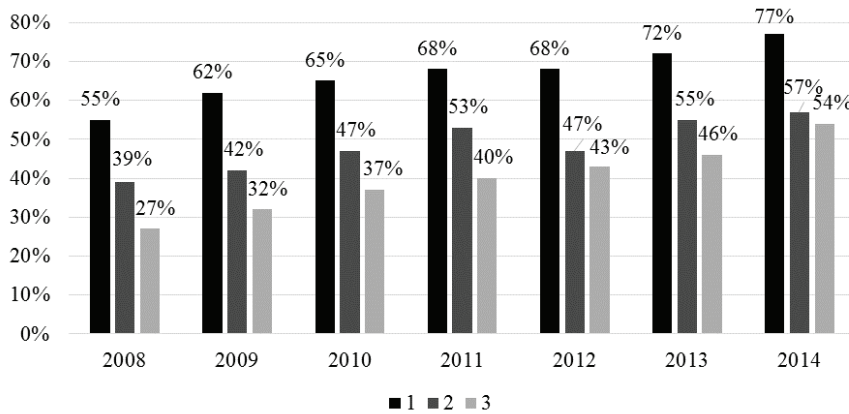


Figure 2. Number of internet banking users in Baltics 2008 – 2014 (%):
1 – Estonia, 2 – Latvia, 3 – Lithuania (Figure made by authors).

internet banking users in second half 2015 is higher than figures in 2012 and 2014, reaching 1.4 million users. A result of globalization, which is affected by changes in the financial sector, the large Scandinavian banks have developed successful operation in the Baltic countries, which allows to strengthen the leading position in the Baltic financial markets. Baltic financial market is one of the most open in the world. Estonia, Lithuania and Latvia are characterized by the ability to attract foreign direct investment and promote trade within the country and beyond national borders, in cooperation with other EU Member States, because Estonia and Latvia already have become the members of Eurozone, followed by Lithuania on January 1st, 2015. Baltic banking sector is mainly dominated by foreign banks. The largest Baltic banks are subsidiaries or branches of Scandinavian banks, which account for 95% of total assets and domestic loans in Lithuania and Estonia, while this ratio is slightly different in Latvia – 53% of total assets and 80% of domestic credit. This difference is explained by the non-resident deposits, as well as foreign assets held by domestic banks. (Tūma, 2014, 7) In all three Baltic countries foreign banks mainly provide credits

to private individuals, therefore it is necessary to pay more attention to cooperation with companies in the future to promote the competitiveness in the legal entities segment. Despite the global financial crisis the number of internet banking users in Baltic countries has grown (Figure 2). The largest increase in the number of internet banking users took place in Lithuania. 27% of bank customers used internet banking in Lithuania in 2008. In 2014, the number doubled (54%), increasing by 27 percentage points, while in Estonia and Latvia there was a moderate increase in numbers of internet banking users.

Digitization impact on banks' activities

While banks provide similar digitized internet banking services, one of the biggest drawbacks is insufficient range of digitized services. Companies in other sectors are able to offer most of their services remotely; therefore, customers want to receive digitized services offered by banks at a lower cost. This is one of the risk moments when the number of loyal customers could also decrease in major commercial banks. In order to implement digitized services, it is necessary to understand whether the customer

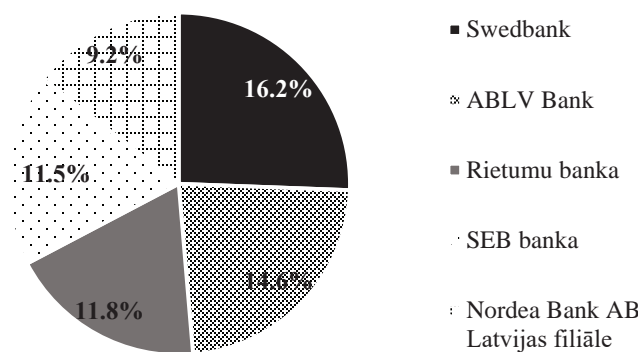


Figure 3. The market share of the largest Latvian commercial banks in the 2nd quarter, 2015 (%) (Figure made by authors).

changes will affect the banks' performance; therefore, authors analysed the main indicators characterizing the operation of major Latvian commercial banks firstly.

In the 2nd quarter of 2015, 17 banks and 7 bank branches were operating in Latvia. Their total assets amounted to 31.4 billion euro and have risen by 10.9% compared to 2nd quarter of 2014. (Banku aktīvi..., 2015). The largest market share in terms of assets is held by five Latvian commercial banks (Figure 3), which will be analysed in detail.

The largest Latvian bank in the 2nd quarter, 2015 was AS 'Swedbank' with a market share of 16.2% or 5.1 billion euro. The market share has risen by 0.6% compared to 2nd quarter of 2014. The second largest Latvian bank in terms of asset value was AS 'ABLV Bank' with a market share of 4.6 billion or 14.6% of the total banking sector. Among five largest banks, AS 'ABLV Bank' had the biggest asset growth, it increased by 26.4% compared to the 2nd quarter of 2014. AS 'Rietumu Banka' had 11.8% market share, its assets increased by 17.8% during the year, reaching EUR 3.7 billion euro. AS 'SEB banka' ranked in the fourth place with 11.5%, increasing the market share by 0.2%, and reached 3.6 billion euro. AS 'Nordea Bank AB Latvijas filiāle' concluded the top five of the largest Latvian commercial banks with 9.2%. The market share in terms of asset value has remained unchanged (2.9 billion euro). Successful banking is based on the ability to attract new customers and ensure customer satisfaction providing high quality internet banking services; therefore, within the framework of this report the changes in the number of bank customers were analysed. In 2015, the number of active clients (client, which carried out at least two transactions within 6 months, with the exception of the bank fee deduction) reached 2.2 million, which has decreased by 2% of 41 thousand since September 2014. AS 'Swedbank' has taken the first place in both volume of banking assets and the number of

customers. The number of customers has continued to increase in the last four years, reaching almost 950 thousands in the 2nd quarter 2015. In contrast, the number of customers has slightly decreased for other four largest banks at the same period. The number of customers of AS 'SEB banka' is twice as low as AS 'Swedbank' – 478 thousands. In turn, the number of customers of AS 'Nordea Bank AB Latvijas filiāle' does not exceed 100,000. AS 'Rietumu banka' and AS 'ABLV Bank' the client base is less than 30,000. Comparing customer changes since September 2012, there were no significant differences in terms of number of clients. The number of customers in the major banks is stable. Minor changes in the number of clients in banks indicate positive trend. The trend shows that the collaboration partners are chosen deliberately by customers and the choice has been changed rarely. Despite the changes of the total number of bank customers, the number of internet banking users continues to increase. Due to this fact, the banks' interest is to ensure wider range of digitized services via internet banking to attract new users.

The statement that banking customers increasingly prefer to do business remotely is true. It is also reflected in the changes of the bank branch network, which includes branches, settlement groups and customer service centres. Since 2008 the number of customer service centres has been rapidly decreasing. There were 647 commercial banks branches or settlement groups in 2008 in Latvia, while the number dropped to 297 in 2015. The most rapid decrease in branches and settlement groups in absolute figures were in 2012, when 406 units continued to provide services for customers compared to 538 units at the end of 2011 (Banku sektors..., 2015).

Evaluating the dynamics of number of the largest Latvian commercial banks' customer service centres from 2012 to 2015, the authors conclude that the sharpest reduction was carried out by AS 'SEB banka' (Figure 5). In 2.5 years, the number of customer

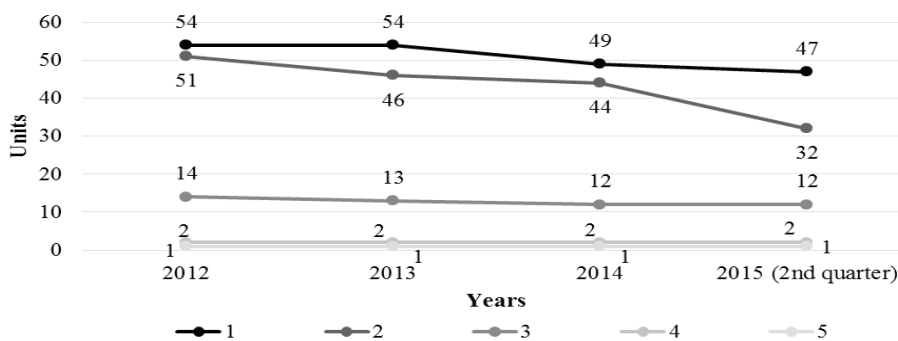


Figure 5. The dynamics of the largest commercial banks' customer service locations (branches, settlement groups) 2012 – 2015, by units: 1 – Swedbank, 2 – SEB banka, 3 – Nordea Bank AB Latvijas filiāle, 4 – ABLV Bank, 5 – Rietumu banka (Figure made by authors).

service locations has decreased by 19 units, because of the lack of customer attendance at branches and increase in the use of remote services. AS ‘Swedbank’ has decreased the number of branches and settlement groups by 7 units, however, AS ‘Swedbank’ still has the biggest network of branches and settlement groups in Latvia – 47 customer service locations. AS ‘Nordea Bank AB Latvijas filiāle’ has less branches and settlement groups. In 2012, the bank had 14 units that decreased to 12 in 2014. Since 2012 AS ‘ABLV Bank’ and AS ‘Rietumu banka’ have had a fixed number of customer service centres – only 2 and 1 (Banku darbība, 2015).

In order to determine the exact changes of the number of customer service locations’ in banking sector, the chain and the absolute increase was calculated, as well as the growth rates of the banking sector as a whole and the largest commercial banks. Calculating the chain absolute growth of branches and settlement groups, there was the biggest absolute reduction by 132 units of 24.5% in 2012 compared with 2011. The second largest reduction in the numbers of units was in 2010 compared with 2009, when the number of branches and settlement groups was reduced by 70 of 11.4%. The authors conclude that the negative dynamics of units in 2010 is due to the cost optimization, which was carried out by banks in the post-crisis period. Analysing the base absolute growth, the trend is negative, because the number of customer service locations was reduced by 350 units of more than 50% in 2015 compared with the base period of 2008. Based on previous research, it can be expected that the negative trend will continue in upcoming years. Banks will continue to reduce the number of branches and settlement groups.

AS ‘SEB banka’ branch network decreased by 27.27% in 2015 compared with 2014. The base growth rate is negative (-37.25%) compared with 2012. Comparing

data of AS ‘SEB banka’ and AS ‘Swedbank’, it can be concluded that the number of customer service centres for AS ‘Swedbank’ has decreased three times slower. The reduction in the base rate was 12.96% in 2015. The most rapid reduction of AS ‘Swedbank’ branches and settlement groups was in 2014, when the total branch network was cut by 5 units compared to 2013. In 2012, the customer service centres of AS ‘Nordea Bank AB Latvijas filiāle’ were four times less than AS ‘Swedbank’ and AS ‘SEB banka’; therefore, the bank has not taken such a sharp reduction in the branch network as the other two banks. In 2013 and 2014, the number of bank’s branches and settlement groups were reduced by 2 units. The chain reduction was 7.14% and 7.69%, while the base reduction was 14.29 % in 2015.

Not only in Latvia, but also in the EU there has been a similar trend – the liquidation of bank branches. The number of bank branches and settlement groups in the EU has decreased by almost 19,000 or 9% (Šteinfelde, 2015). Due to the decrease of bank branches, there were about 200,000 branches in the EU at the end of 2013 (Data shows..., 2014).

The assets of banks, the number of customers or branch network provides the conception of the bank’s market power, however, one of the major banks’ profitability indicators is return on assets (ROA), which indicates how profitable a bank is relative to its total assets (Return On..., 2015). The formula (1) is used to calculate ROA:

$$ROA = \frac{\text{Net Income}}{\text{Total Assets}} \tag{1}$$

where ROA – return on assets;

Net Income – gross profit-administrative costs;

Total Assets – average total assets of a business during a financial year.

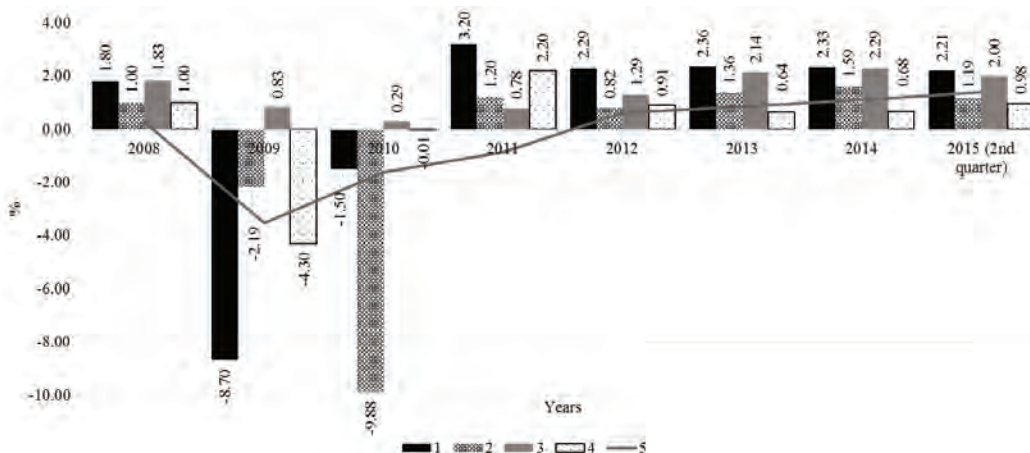


Figure 6. ROA of the largest Latvian commercial banks 2008 – 2015 (%): 1 – Swedbank, 2 – ABLV Bank, 3 – Rietumu banka, 4 – SEB banka, 5 – ROA in banking sector (Figure made by authors).

The equity of AS ‘Nordea Bank AB Latvijas filiāle’ is not separated from Nordea Bank group; therefore, ROA for this bank cannot be compared with other major commercial Latvian banks, thus authors analyse the four major commercial banks in Latvia.

Based on ROA analysis, the authors conclude that the largest banks’ ROA began to decrease in 2009. Three out of four largest Latvian commercial banks had negative ROA in 2009 and 2010. Only AS ‘Rietumu banka’ ROA was positive. In 2009, the bank’s ROA was 0.83%, and it decreased to 0.29% in 2010. AS ‘‘ABLV Bank’’ experienced the largest ROA drop (-9.88% in 2009). In the 2nd quarter of 2015, the best asset management efficiency was shown by AS ‘Swedbank’. The bank’s ROA was 2.21%. The second highest level is for AS ‘Rietumu banka’ (2.00%), followed by AS ‘ABLV Bank’ with 1.19%. ROA of AS ‘SEB banka’ is 0.98%. Due to the global financial crisis in 2009, the banking sector’s efficiency and performance was significantly reduced. The crisis affected not only the global economy in general but also the economy of each country individually.

Since 2010 performance indicators continue to improve every year, and the overall trend remains positive. Since 2011 the average ROA of the largest Latvian commercial banks is higher than on average level of ROA in banking sector. From 2013 to 2015 AS ‘SEB banka’ had not been able to exceed the average level, while the difference between AS ‘ABLV Bank’ and the average level of banking sector was 0.22 percentage points in 2015. It can be concluded that AS ‘Swedbank’ achieved the highest efficiency (2.21%) in 2015, while it decreased by 0.03 percentage points in 2014 compared to 2013. The reduction could probably be explained by the geopolitical situation worldwide, the government’s decisions relating to the issue of temporary residence permits to non-residents and changes of banks’ lending policy for non-residents. The less effective was AS ‘SEB banka’ (0.98% in

2015). ROA decreased from 0.91% in 2012 to 0.68% in 2014. AS ‘ABLV Bank’ and AS ‘Rietumu banka’ focus mainly on the co-operation with non-residents. Evaluating the banks’ approaches for the operations, the authors conclude that various strategies of banks affect also ROA.

Analysis of international banking customers’ survey

Authors carried out banks’ international corporate customers’ survey via e-mail in 2015. In order to find out as broad view as possible, the survey was sent out to international companies in different sectors with different number of employees (Figure 7).

To assess the use of internet banking, 6 factors – Usefulness, Easy to use, Trust, Security, Confidentiality and Satisfaction with internet banking were included in the survey. In order to evaluate the credibility of respondents’ view regarding the satisfaction with internet banking, the reliability test of factors was made using Cronbach’s Alpha coefficient. The Cronbach’s Alpha coefficient indicated high confidence level – 0.924 or 92.4%. 87.8% of respondents believe that the usefulness of the internet banking is very important, because using 5-point Likert scale the most selected answers are 4 and 5. 12.2% of respondents have given a neutral evaluation. 87.7% of respondents consider that the use of internet banking services provides economic benefits, and that the digitized reports provide the necessary information. Respondents have given the highest assessment for the factor ‘Trust’ (93%). Almost one-third of the respondents assessed the security of the internet banking neutral, which means that customers do not pay increased attention to security issues when they use digitized services. However, 73.6% of the respondents are convinced about the security of transactions in the internet banking and the stability of the system and its protection. The lowest average rating (3.47 of 5) is given for satisfaction with the range internet banking

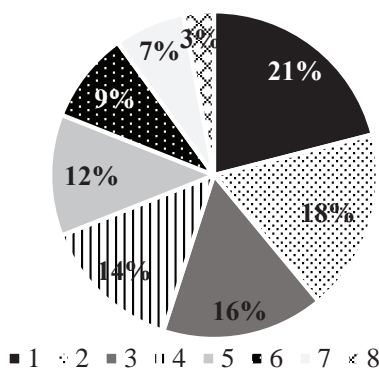


Figure 7. Allocation of respondents by sectors (%); 1 – Trade and services, 2 – Construction and real estate, 3 – Food and drinks, 4 – Information Technologies, 5 – Transport and logistics, 6 – Financial services, 7 – Manufacturing, 8 – Insurance. (Figure made by authors).

services. 17.6% of respondents are not satisfied with digitized services in the internet banking in general, while satisfaction level for 48.2% of respondents is high. The main factor for dissatisfaction on international corporate customers is the condition that they cannot receive daily banking services remotely. Based on the correlation analyses, it was concluded that there is a strong correlation between satisfaction with the internet banking and usefulness (0.694), as well as a moderate correlation between satisfaction with internet banking and security (0.674) and trust (0.585). Low correlation exists between satisfaction with internet banking, confidentiality (0.389) and ease of use (0.148). The ease of use means that customers can make transactions very fast, and it is convenient. Further, multiple regression analysis examined which factors influence the international corporate customers' satisfaction with internet banking the most. Using stepwise method, only statistically significant figures were included in the multiple regression equation. The results demonstrate that usefulness and security contribute significantly and predict 59% (R Square – 0.59) of variation with satisfaction with internet banking. The ANOVA results also confirm that the variables are significant ($p < 0.001$), and the coefficient summaries bring out the β values of usefulness ($\beta = .454$, $p < 0.05$) and security ($\beta = .407$, $p < 0.05$). According to these results, usefulness is the major variable that affects the satisfaction with internet banking, followed by security. 91% of respondents have pointed out that there should be a possibility for customers to make automatic bank financial transaction limit increase to improve business efficiency and ensure faster circulation of financial resources. 84% of the respondents indicated that it is important for them that they are able to submit financial reports in the internet banking. This service could save the time and financial resources for customers and also for the bank. The originals of financial reports must be submitted quarterly, half-yearly or annually. From the customers' perspective the third most important improvement is the possibility to fill in and approve the AML or anti-money laundering reports in internet banking. The bank currently offers already existing solution for different digitized services, which gives customers the ability to receive remote digitized services that are the most important for them, for example, to increase the limits of the financial transactions. To receive this service, it is necessary to give the permission to one or more of the company's employees to make all transactions and other activities in internet banking. 75% of respondents indicated that they do not use this service, because companies' managers do not

want to give the power to one employee to manage unrestricted activities in companies' bank accounts. 10% were not informed about this kind of digitized service, and 15% of companies' managers approved the payments in the internet banking by themselves.

The results of the research concluded that the higher usefulness indicator the higher is the possibility that customers will continue to use internet banking services. For international corporate customers it is important to receive daily banking services remotely. Internet banking functionality at the moment is incomplete, because customers do not use the proposed self-service options, due to the fact that in the framework of existing service there is big responsibility for one employee of the company to do wide range of actions in the internet banking. The digitized services strategy ensures the availability of essential daily digitized services in internet banking and ensures the savings in time and in financial resources for the bank and its international corporate customers.

Conclusions

1. The digitization is one of the tools by which companies can provide competitive products or services in the market to meet customers' expectations and needs.
2. Comparing the Baltic States, Estonia has the highest ratio in the digital development index of EU Member states, followed by Lithuania, and the lowest – Latvia, however, the digitized services provided by banks in all countries are similar, and banking customers consider the internet banking as the most appropriate channel for digitized transactions.
3. The results of the research demonstrate that usefulness, security and trust have an influence on international corporate customers satisfaction with the internet banking.
4. The higher the usefulness of internet banking is, the stronger intention international corporate customers use internet banking services offered by banks.
5. The higher the security of internet banking is, the greater possibility that international corporate customers will continue to use these services.
6. While banks provide similar digitized internet banking services, one of the biggest drawbacks is insufficient range of digitized services.
7. To improve business efficiency and ensure faster circulation of financial resources, there should be a possibility for customers to make automatic bank financial transaction limit increase.

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