Current state and prospects for the development of Digital financial literacy in Ukraine

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Abstract
The digitalization of financial services of banks and financial institutions has become important in the digital economy and has spread significantly during the pandemic. Digital financial literacy has become urgency. For its part, this has led to a new cycle in the development of digital financial literacy. The purpose of this article is to study the development of digital financial literacy in CEE countries and to develop recommendations for the implementation of national strategies for digital financial literacy, including for Ukraine. Identify factors and potential problems that may arise on a result of developing and implementing national digital strategies of financial literacy and identify the main components and indicators for evaluating the implementation of these strategies.

Determined that, Ukraine has everything necessary for the successful implementation of initiatives in the field of financial technologies, namely: growing penetration of mobile communications and the Internet, innovative banking institutions, the availability of world-class talent.

The creation of a separate unit on digital financial literacy in the National Bank of Ukraine, responsible for implementing the national strategy of digital financial literacy will ensure the unity of scientific and economic policy and integration of NDFIS development goals into digital modernization projects based on powerful feedback mechanisms. The main tasks of such a unit will be to develop appropriate methodological support for selecting and tracking the results of the implementation of the national strategy, assisting staff employed in the implementation of NDFIS and even reviewing the existing structure and powers of executive bodies at national and local levels.

Keywords: digitalization, financial inclusion, financial protection, financial literacy.

Introduction
Digital financial literacy - the cornerstone of an effective financial market that can have a positive impact on economic growth, financial stability and social cohesion in a digital economy.

Every year, more and more of population has access to personal digital devices, especially smartphones. This opens up new perspectives for financial institutions, such as banks, credit unions, microfinance institutions which have been already existed, as well as for new Fintech companies for the development of digital technologies, along with traditional financial products and services.

In today's context of ambiguity, when all governments around the world are responding to the health, social and economic consequences of the COVID-19 pandemic, the
A question about the access to and use of financial products and services provided by digital media is important and relevant.

At the same time, it is equally important to recognize the potential technological risks of digital innovation. Access to digital financial services should be supported by financial and digital education and provided with appropriate financial protection for consumers of digital financial services. During developing of national strategy for financial digital literacy, it is necessary to take into account the country's context, cultural environment, standard of living, available infrastructure and resources. Therefore, at the beginning of the study the countries of Central and Eastern Europe as a model for the development of digital financial inclusion for Ukraine were selected.

**Material and methods**

Research shows that, on average, companies with a higher level of digital maturity more efficient and more profitable. Researchers expect economic growth on $ 5.4 billion due to the digitalization of companies. According to Accenture forecasts, by 2023 the number of such companies will grow in industry (48%), insurance (42%), banking (37%). These industries will become leaders in digitization. According to Accenture, the benefits of digital transformation for change-ready companies will increase efficiency on 13.1% and increase profitability on 6.4% (Research “Fast Track to Future-Ready Performance”. PlusWorld, 2021).

Therefore, it is recommended that financial institutions and non-financial institutions and governments across the world adopt and scale up the use of AI tools and applications as they present benefits in the quest to ensure that the vulnerable groups of people who are not financially active do participate in the formal financial market with minimum challenges and maximum benefits (Industry 4.0 in Finance, 2020).

Covid-19 has increased the awareness and familiarity with mobile money among citizens, particularly those that still prefer to use cash. Governments and policymakers should therefore take this opportunity to boost financial inclusion and drive the digitization of their payments systems and wider economies (Intelligence Brief: Can mobile money cash in on the impact of Covid-19?? 202).

Furthermore, scientific research confirms that modern technologies such as digital technologies, robotics, and artificial intelligence penetrate production processes in many countries (Jabłoński, M., 2019).

Complex and multifaceted range of problems implementation of economic and financial policies of states in the context of globalization revealed instability in the growth of economies of different countries (Zhukova Yu., Sobolieva-Tereshchenko O., 2021).

Also, the growth trend of cashless payments in the bank card market and the possible transformation of the market under the influence of Covid–19, and the global digitalization of economics were noticed (Sobolieva-Tereshchenko, O., Moyseyenko, O., Zharnikova, V., 2021).

So, digital transformation, as the technical and technological core of the digital economy, through the introduction of digital technologies, transforms the structure of the added value of the product by including the digital and intellectual component in the chain of its
creation (Mickiewicz, B., & Volkova, Y. 2022).

Clarifying the policy priorities and supporting digital financial services through developing a strategy for digital financial inclusion, can be effective in catalyzing and informing actions by a wide range of stakeholders. The rapid pace of growth in digital financial services requires regulators and policymakers to be proactive in engaging with industry to ensure that while new innovations expand the reach of financial services to new market segments and through new channels, potential risks to consumer protection, inclusion, market integrity and investor confidence, and financial stability are sufficiently addressed. The issue of regulatory capacity to properly oversee such programs will be critical. The capacity to balance risk and innovation to achieve digital financial inclusion, while ensuring financial stability, integrity and consumer protection is crucial for regulators.

Thus, the main Conclusions on the digitalization of the economy and the digitalization of finance are the following:

1. Digital solutions help expand financial inclusion and financial literacy. Much has been achieved in a relatively short time.
2. Digital financial solutions open up new opportunities to develop products tailored to the needs of the end user.
3. Digitalization facilitates the entry of new players into the financial market and requires the development of new regulatory approaches in the financial and banking spheres.
4. Digitalization has a rapid pace of implementation. A high level of digitalization requires a high level of literacy of consumers of digital financial services.

The purpose of the article is to assess the current level of digital financial literacy in Ukraine, comparing with the level of digital financial literacy in Eastern and Central Europe and to identify priority areas for development and implementation of the Ukrainian National Strategy for Financial literacy in the digital economy. Outcomes can be used in developing strategy for financial literacy and identifying measures that can contribute to the growth of digital financial literacy of the population.

Results and discussion

According to United Nations E-Government Survey, which was prepared by the Department of Economic and Social Affairs of the United Nations (UN DESA), through its Division for Public Institutions and Digital Government (DPIDG) over a two-year period (from July 2018 to June 2020) the E-Government Development Index (EGDI) among CEE countries was analyzed.

The EGDI, which assesses e-government development at the national level, is a composite index based on the weighted average of three normalized indices: the Online Services Index (OSI), the Telecommunications Infrastructure Index (TII) and the Human Capital Index (HCI). In order to further study the issue, we have considered in detail the E-Government Development Index (EGDI) in the CEE countries.

Table 1. E-Government Development Index (EGDI) in the CEE countries

<table>
<thead>
<tr>
<th>Country</th>
<th>EGDI Level</th>
<th>Rank</th>
<th>EGDI</th>
<th>Online Service Index</th>
<th>Telecommunications Infrastructure Index</th>
<th>Human Capital Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albania</td>
<td>High EGDI</td>
<td>59</td>
<td>0.7399</td>
<td>0.8412</td>
<td>0.5785</td>
<td>0.8001</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>Very High EGDI</td>
<td>44</td>
<td>0.798</td>
<td>0.7706</td>
<td>0.7826</td>
<td>0.8408</td>
</tr>
<tr>
<td>Croatia</td>
<td>Very High EGDI</td>
<td>51</td>
<td>0.7745</td>
<td>0.7529</td>
<td>0.7293</td>
<td>0.8414</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>Very High EGDI</td>
<td>39</td>
<td>0.8135</td>
<td>0.7235</td>
<td>0.814</td>
<td>0.903</td>
</tr>
<tr>
<td>Hungary</td>
<td>Very High EGDI</td>
<td>52</td>
<td>0.7745</td>
<td>0.7471</td>
<td>0.7255</td>
<td>0.8509</td>
</tr>
<tr>
<td>Poland</td>
<td>Very High EGDI</td>
<td>24</td>
<td>0.8531</td>
<td>0.8588</td>
<td>0.8005</td>
<td>0.9001</td>
</tr>
<tr>
<td>Romania</td>
<td>Very High EGDI</td>
<td>55</td>
<td>0.7605</td>
<td>0.7235</td>
<td>0.7586</td>
<td>0.7995</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>Very High EGDI</td>
<td>48</td>
<td>0.7817</td>
<td>0.7176</td>
<td>0.7988</td>
<td>0.8286</td>
</tr>
</tbody>
</table>
Among the 12 CEE countries, only Albania has a High EGDI Level, the rest of the countries have a Very High EGDI Level. Estonia occupies the leading position in the ranking with a large gap from other CEE countries (ranking 3). Next in the ranking is Lithuania (ranking 20), Slovenia (ranking 23), Poland (ranking 24). The lowest rating among 12 CEE countries is Albania (ranking 59), for comparison Ukraine has ranking 69 and like Albania belongs to the group of countries with High EGDI Level. Like Albania (0.5785), Ukraine has a low Telecommunications Infrastructure Index (0.5942). Like Latvia (0.5824), Ukraine has a low Online Service Index (0.6824).

It should be noted that Ukraine belongs to the group of countries with very highly developed human capital, the Human Capital Index is 0.8591, but the overall E-Government Development Index EGDI is low - 0.7119, probably due to the relatively small Telecommunications Infrastructure Index and Online Service Index.

The high level of Ukraine according to the Human Capital Index is also confirmed by the Global Services Location Index. According to the 2021 Kearney Global Services Location Index (GSLI) Central and Eastern Europe Countries have a fairly high level of digital skills activity.

Kearney Global Services Location Index (GSLI) The Kearney Global Services Location Index (GSLI) is calculated every two years based on an analysis of 60 countries in four main categories: financial attractiveness, human skills and availability, business environment and digital resonance. Financial attractiveness People skills and availability Business environment Digital resonance. GSLI indicators for 2021 are given in the table.

<table>
<thead>
<tr>
<th>Country</th>
<th>EGDI Level</th>
<th>Rank</th>
<th>Financial attractiveness</th>
<th>People skills and availability</th>
<th>Business environment</th>
<th>Digital resonance</th>
<th>GSLI Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slovakia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.17</td>
</tr>
<tr>
<td>Ukraine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.21</td>
</tr>
<tr>
<td>Hungary</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.20</td>
</tr>
<tr>
<td>Czech Republic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.31</td>
</tr>
<tr>
<td>Romania</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.36</td>
</tr>
<tr>
<td>Russia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.52</td>
</tr>
<tr>
<td>Latvia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.55</td>
</tr>
<tr>
<td>Poland</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.63</td>
</tr>
<tr>
<td>Estonia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.73</td>
</tr>
</tbody>
</table>

Figure 1. Global Services Location Index indicators of CEE countries for 2021

Source: https://www.kea.envy.com/documents/20152/103653672/The+2021+Kearney+Global+Services+Location+Index%e2%80%94Toward+a+global+network+of+digital+hubs.pdf/24a8b740-e9c-1180-41fa-71ffe7fd982a?t=1618504448585
As can be seen among Central and Eastern Europe Countries, Estonia (5.73) and Poland (5.63) have the highest GSLI, and Ukraine (5.24) and Slovakia (5.17) have the lowest. At the same time, among the analyzed countries, Ukraine has the highest indicator of Financial attractiveness (2.65), which indicates the availability of Ukrainian specialists in the financial aspect.

Thus, within the framework of developing a national strategy for digital financial inclusion in Ukraine, the experience of Estonia, Lithuania (ranking 20), Slovenia (ranking 23), Poland can be used as countries that have achieved a high level of state support and willingness to implement digital financial services. E-Government Survey and Kearney Global Services Location Index.

Table 2. Indicators of the Inclusive Internet Index 2021

<table>
<thead>
<tr>
<th>No</th>
<th>Country</th>
<th>OVERALL</th>
<th>AVAILABILITY</th>
<th>AFFORDABILITY</th>
<th>RELEVANCE</th>
<th>READYNESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bulgaria</td>
<td>37</td>
<td>29</td>
<td>51</td>
<td>18</td>
<td>40</td>
</tr>
<tr>
<td>2</td>
<td>Croatia</td>
<td>53</td>
<td>49</td>
<td>69</td>
<td>9</td>
<td>58</td>
</tr>
<tr>
<td>3</td>
<td>Czech Republic</td>
<td>31</td>
<td>22</td>
<td>23</td>
<td>62</td>
<td>36</td>
</tr>
<tr>
<td>4</td>
<td>Hungary</td>
<td>40</td>
<td>34</td>
<td>26</td>
<td>73</td>
<td>61</td>
</tr>
<tr>
<td>5</td>
<td>Poland</td>
<td>12</td>
<td>32</td>
<td>11</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>6</td>
<td>Romania</td>
<td>29</td>
<td>24</td>
<td>29</td>
<td>28</td>
<td>61</td>
</tr>
<tr>
<td>7</td>
<td>Slovakia</td>
<td>34</td>
<td>30</td>
<td>40</td>
<td>19</td>
<td>47</td>
</tr>
<tr>
<td>8</td>
<td>Estonia</td>
<td>30.0</td>
<td>37</td>
<td>36</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>9</td>
<td>Latvia</td>
<td>32</td>
<td>24</td>
<td>45</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>10</td>
<td>Lithuania</td>
<td>17</td>
<td>11</td>
<td>28</td>
<td>12</td>
<td>45</td>
</tr>
<tr>
<td>11</td>
<td>Ukraine</td>
<td>48</td>
<td>57</td>
<td>44</td>
<td>33</td>
<td>77</td>
</tr>
</tbody>
</table>

According to the table, the highest rating for the Inclusive Internet Index 2021 has Poland (12), Lithuania (17), Romania (29). In addition, Poland also has a high overall rating among CEE countries in terms of composite indicators: affordability (11), relevance (1) and readiness (15).

It should be noted that Albania and Slovenia did not participate in the study Inclusive Internet Index 2021. At the same time, Ukraine ranks 48th among 120 countries. At the same time, affordability indicators in Ukraine (44) are better than similar indicators in Bulgaria (51) and Croatia (69), relevance indicators in Ukraine (33) are better than Czech Republic (62) and Hungary (73).

Thus, in the framework of developing a national strategy for digital financial inclusion in Ukraine, we can use the experience of Poland, Lithuania, Romania as countries that have achieved a high level of access to financial Internet services according to the Inclusive Internet Index 2020.

European countries are among the most advanced digital economies, but as technology advances, it must approach to them. A favorable political environment, efficient institutions, favorable infrastructure conditions and a high level of user confidence help Europe’s national economies to grow steadily and to take the lead in financial digital literacy.

The greatest development of financial technologies in Ukraine and the world took place during the pandemic in 2020. According to 2020, two thirds of all financial transactions were carried out online. Among the important figures in the world is the fact that 2 billion people not covered by banking services can be reached by mobile devices. In this case, 40% of the available functions in banking can be
replaced by artificial intelligence. In total, according to USAID research, $50 million is needed to create a new digital bank.

According to data from 2020, 55.2% of non-cash transactions with payment cards and 89% of payment terminals that support the contactless payment function were processed in Ukraine with the help of digital financial technologies. Also, according to 2020, the number of fintech companies in the field of payment services and money transfers increased by 14%. This development was facilitated by the back-office infrastructure of the banking system of Ukraine.

Ukraine has everything necessary for the successful implementation of initiatives in the field of financial technologies, namely: growing penetration of mobile communications and the Internet, innovative banking institutions, the availability of world-class talent.

The growing penetration of mobile communications and the Internet is a significant lever in the development of digital financial technologies.

The penetration rate of SIM-cards exceeds 100% in all EU countries, which means that the number of active SIM-cards exceeds the population and indicates a very active use of mobile phones.

According to 2020, about 49% of active Internet users live in cities with a population of over 100,000 inhabitants (69% of all inhabitants of such cities). About 21% of regular Internet users live in cities and towns with a population of up to 100,000 people (62% of the population), and 30% - in rural areas (56% of rural residents regularly use the Internet).

The most active Internet users are Ukrainians aged 15 to 24, among whom the share of users reaches 95%, while among those aged 25 to 34 - 92%, and among those over 65 - only 14%. About 40% of Internet users in Ukraine have average incomes, and 40% - incomes below average; this means that the Internet can be the optimal tool for interacting with people with lower-than-average incomes. The level of Internet penetration and speed of access in Ukraine is constantly increasing due to lower costs and increasing availability of services, mainly mobile Internet. Further investment and support for high-speed Internet access will help increase the development and use of fintech products and services in Ukraine.

The number of Internet access points as at 30.09.2020 in Ukraine was 7167.2 thousand units, of which 5816.5 thousand units in urban areas and 1350.7 thousand units in rural areas (National Commission for the State Regulation of Electronic Communications, Radiofrequency Spectrum and the Provision of Postal Services, 2021).

In Ukraine, there are three mobile operators: Kyivstar, Vodafone Ukraine and Lifecell, as well as a fixed telephone operator Ukrtelecom. Among mobile operators, Kyivstar has the largest share (50%), Vodafone Ukraine (37%) and Lifecell (13%) have a third share of the market (Mobile communications | Life between two giants. Why lifecell is losing market share, 2021).

According to the National Commission for State Regulation of Communications and Informatization, the number of active mobile communication cards (SIM, USIM R-UIM) as at 30th of September, 2020 in Ukraine was 53.8 million units, of which prepayment of 46.1 million units and under the contract 7.6 million units.

At the same time, out of the total number of active mobile cards in 53.8 million units in Ukraine as at 30.09.2020, only 35 million of active mobile cards were accessed on the Internet, i.e. only 65% of mobile owners phones use the mobile Internet and, accordingly, an even smaller percentage use mobile banking and mobile financial applications (National Commission for the State Regulation of Electronic Communications, Radiofrequency Spectrum and the Provision of Postal Services, 2021).

The Ukrainian market of mobile services is financially accessible to the population, mobile operators offer services at reasonable rates compared to Eastern European standards. Tariffs for mobile operators in Europe are much higher. Thus, in 2019, mobile operators in Poland with a population of 35-37 million and
twice the size of the territory earned 3.7 times more than Ukrainian operators.

There are four full-fledged mobile operators in Poland: Orange, Play, Plus and T-mobile. Orange subscription packages cost 1.09 and 2.19 euros, usually have a time limit depending on the amount of their top-up. A minute of an outgoing call in the network and on other operators costs 0.06 euros, SMS - 0.04 euros.

If someone top up account for a certain amount, you get bonus megabytes:
- 1.09 euros - 500 MB, duration 2 days;
- 2.19 euros - 1 GB, duration 5 days;
- 8.76 euros - 6 GB, duration 1 month;

For example, the minimum package of services of the Play operator per month is 5.47 euros. The monthly T-mobile package for 5.47 euros provides 10 GB of Internet and free calls, SMS in the network. Operator Plus offers two subscription packages for 5.47 euros and 6.35 euros per month. At a higher rate you will receive free calls and SMS to all numbers, as well as 6 GB of traffic. For 5.47 euros a month, the same goes for 2 GB of Internet (Review Mobile operators in Poland, 2021).

For example, the minimum package of services per month is 1 euro, the package provides free calls in Kyivstar 350MB / month mobile Internet, 50 SMS and 50 minutes of calls to other operators. The Kyivstar website offers several financial services that the subscriber can use after paying for communication services in the amount of 1.3 euros.

The minimum service package "Vodafone Ukraine" is 1 euro per month, including 1 gigabyte of internet, unlimited network, 100 min. to other numbers. The minimum tariff of lifecell worth 1.2 euros includes 1 GB of Internet, 250 minutes for all mobile numbers in Ukraine (including lifecell) ((National Commission for the State Regulation of Electronic Communications, Radiofrequency Spectrum and the Provision of Postal Services, 2021).

So, Ukraine has great penetration of mobile communications and the Internet for the successful implementation of initiatives in the field of financial technologies and for the development of digital financial literacy.

Innovative banking institutions are the main basis for the development of digital financial and banking technologies.

Bank cards are used by 70% of the population of Ukraine. Among cardholders, 79% use SMS banking, 17% - Internet banking, and 12% - mobile banking.

61% of bank customers use SMS banking services several times a month, but 29% never use them. 21% of bank customers use Internet banking services several times a month, while 67% do not use them. 18% of bank customers use mobile banking services several times a month, and 73% do not use them 41 1GFK, 2019.

It should be noted that the main drivers of digital financial services are innovative banks. Among the most innovative banks in Ukraine are joint-stock company "Universal Bank", on the basis of which the mobile application "Monobank" and joint-stock company "Privatbank", on the basis of which the mobile application "Privat24" is implemented.

The presence of world-class talents in the field of IT technologies is a determining factor in the development of digital financial technologies and digital financial literacy.

Many of the world's leading technology companies are of Ukrainian origin; Ukraine is one of the world leaders in the field of outsourcing of information technology services. Companies from all over the world regularly establish contacts with Ukrainian developers in order to develop or support various technological platforms and software solutions, including the latest fintech programs. New developments in the field of alternative credit scoring, big data analytics and financial benchmarking tools are regularly outsourced to Ukraine and developed in Ukraine.

Ukraine maintains high standards of education - especially in mathematics and other sciences; Many Ukrainian IT specialists work in different countries around the world in the field of fintech industry. Despite the availability of highly educated IT staff in the fintech sector of
Ukraine, it would be beneficial to attract and retain more experienced staff in the field of finance, able to support the emerging fintech sector.

In the global arena, Ukraine remains a small player with huge potential. The main share of the global IT market is in the United States (36.8%), followed by China (11.3%) and the United Kingdom (5.8%). According to the Top Lead directory, Ukraine can be compared to Romania and Poland in terms of market size (IT in Ukraine: where we are heading, 2021) (The first issue of infographic atlas "IT industry in Ukraine" is ready! 2021).

According to experts of the IT Ukraine Association, the IT market of Ukraine will grow steadily by 22-30% annually, and the number of specialists will double by 2024. This scenario may become even more optimistic if more and more IT businesses enter the market with their own product (Ukrainian IT Industry: Analytical Report, 2020).

So, Ukraine has availability of world-class talent for the successful implementation of initiatives in the field of financial technologies and for the development of digital financial literacy.

Adequate support for the development of digital financial technologies by policy makers and state regulators, in particular the National Bank of Ukraine.

Conclusions

An important area of the National Strategy for Financial Literacy is the protection of consumers of digital financial services.

Starting from 2019, the National Bank of Ukraine has the authority to protect the rights of consumers of financial services and regulates the behavior of banks and non-bank financial institutions in relation to their customers. The special unit that takes care of this is the Office for the Protection of Consumers’ Rights of Financial Services (PCRFS). The main management functions (Consumer protection National Bank of Ukraine Report on Inquiries of financial services’ consumers, 2021):

- development and improvement of the methodological framework for the protection of the rights of consumers of financial services provided by banks, other financial institutions and persons who are not financial institutions, but have the right to provide certain financial services to persons providing intermediary services in financial markets services, including credit intermediaries, state regulation and supervision of which is carried out by the NBU (hereinafter - financial services market participants), as well as on the organization of consideration of appeals and personal reception of citizens in the NBU, organization of access to public information NBU and organization of work with public information in the NBU;
- supervising the observance by the participants of the financial services market of the requirements of the legislation on the protection of the rights of consumers of financial services and control over the observance of the legislation on advertising (in terms of advertising financial services);
- consideration and provision of answers to appeals and requests for access to public information of citizens and legal entities / associations of citizens without the status of a legal entity on the activities of participants in the
financial services market; organizes access to public information of the NBU.

According to the data of 2020, PCRFS received almost 50 thousand telephone and written appeals of consumers of financial services, among which a certain share had questions about digital financial services, including appeals and calls about the quality of ATMs, POS-terminals, problems in the operation of systems Internet banking and Mobile banking, investigation of disputed payment card transactions, Internet and mobile fraud, unauthorized debiting of funds from card accounts, making erroneous transfers from card to card.

Thus, the number of appeals of the population on the protection of the rights of consumers of financial services is growing and needs further improvement.

Protecting consumers of financial services requires a clear approach and strengthening the capacity to ensure compliance with established consumer protection requirements. The NBU is already working to increase the level of financial literacy and is developing a National Strategy for Financial Literacy of the Population. At the same time, it is important to ensure that the National Strategy for Financial Literacy of the Population complement each other.

Create preconditions for the development of the financial culture of the citizens of Ukraine, which will support the personal well-being, growth and financial stability of the country. The purpose of the National Financial Literacy Strategy is to form a new mentality of a financially savvy European Ukrainian, ready to live by European standards. The strategic goals are to increase the level of knowledge and skills of Ukrainian citizens in the financial sphere, ensure the financial security of citizens, promote confidence building and attract customers to the financial system. It is necessary to integrate strategies of financial literacy.

The strategy should encourage the NBU, banks of Ukraine, non-bank financial institutions, credit bureaus and other stakeholders to develop joint programs for the development of non-cash economy and remote banking services. This strategy should provide appropriate incentives to encourage cooperation between public and private sector stakeholders. The strategy should aim to increase the demand for financial services using both soft (information campaigns) and hard (cashbacks, discounts for digital payments): in particular, all transfers from the government should be made through a bank account to which money will be credited electronically.

Therefore, the following recommendations should be taken into account when developing a national strategy for digital financial literacy:

![Figure 2. Dynamics of appeals to PCRFS NBU for 2020](image-url)
1. Currently, a lot of attention is paid to the use of bank cards in Ukraine. The transition to mobile payments, and especially new developments in the field of international standards for payments using QR-codes, reduce the cost of installing expensive terminals in stores.

2. As cash still dominates in the calculations, the new strategy of financial literacy should be focused on increasing the share of electronic payment of bills, money transfers through cash withdrawal operations in order to reduce the amount of cash in circulation.

3. It is necessary to expand the network of digital payments. Large stores in cities usually accept payment cards. However, there are few shops in small towns and rural areas where cards are accepted. Banks need to develop attractive incentives to encourage retailers to accept digital payments, which will ultimately make them cheaper for merchants compared to cash.

4. Review of digital financial literacy education programs at all levels of education, training of specialists in the field of artificial intelligence, database management and cybersecurity.

5. State support for national programs for the development of digital financial literacy in Ukraine.

In general, from the point of view of public policy, the processed information will help policymakers to make more informed decisions about financial education, and from the point of view of the financial sector, will help banks and financial institutions to develop products that are more suitable for their education and income.

The results of the study will be useful for both governments, financial and educational institutions involved in the development and implementation of financial literacy strategies.

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