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Problems and prospects of cash circulation development in Kazakhstan

Abstract. Organization of effective cash circulation throughout the territory of the Republic of Kazakhstan is one of the main tasks of the National Bank of Kazakhstan (NBK). Against the backdrop of the rapid development of non-cash payments, cash continues to serve as an important payment instrument for the population.

Research on the use of cash and non-cash money by the population has been regularly conducted in the European countries for more than 10 years, in Germany - every three years, in Russia - every year. In the context of modern trends and challenges, there is a need for research in Kazakhstan. In Kazakhstan, a survey on payment preferences of economic entities was conducted for the first time by the National Bank. At the same time, the study was conducted not only among the population, but also among entrepreneurs. In Kazakhstan, despite the development of non-cash payments, in parallel, there is a steady increase in the amount of cash in circulation, which is also typical for developed countries. Accordingly, the purpose of the study is to determine the trends in the development of cash circulation, identify the factors that form the demand for cash, as well as study the use of cash and its nominal structure by economic entities.

Keywords: cash, cash circulation, central banks, National Bank of the Republic of Kazakhstan, means of automatic identification.

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Introduction

Money is now on the cusp of a transformation that could change banking, finance, and even the fabric of society. In particular, the era of physical currency or cash is coming to an end, even in low- and middle-income countries; The era of digital currencies has begun. A new round of competition between official and private currencies is also planned both on the domestic and international arenas. The digital diffusion that powers this transformation can drive beneficial innovation and expand access to basic financial services [1].

Due to the emergence and spread of new payment instruments, cash is less often used as a means of payment for goods and services. At the same time, the amount of cash in circulation does not decrease. The causes of this phenomenon, called the "paradox of cash," are diverse and not the same in different countries. Important factors in the increase in absolute cash volumes have been the decrease in the marginality of bank deposits in various countries in recent years, the performance of individual currencies as a "refuge" from financial shocks. In 2020, due to the restrictions imposed due to the coronavirus pandemic, many people created additional reserves of cash. Taking into account the steady trends of recent years, it can be assumed that cash, at least in the coming decades, will continue to play a significant role in the economic turnover and people's lives. That is why the issues of maintaining and developing the system of cash circulation, its optimization, improvement of quality and efficiency do not lose their relevance.

Despite the significant changes taking place in the modern world in a number of areas, cash, due to its unique characteristics, will play an important role in the economic life of society for a long time to come. Some of the characteristics of cash include:

- Independence from special infrastructure (possibility of use in any conditions, including in the absence of access to the Internet and in the event of a power outage, which is important during the elimination of the consequences of natural disasters and man-made disasters).

- Demand on the part of certain social groups (older people, rural residents, labor migrants, visually impaired citizens, etc.).

Thus, in Kazakhstan, the annual average increase in the number of Kazakhstani tenge banknotes in circulation from 2017 to 2022 is 4.4%; the projected minimum average annual growth of cash in circulation until 2050 is 1.2% (NBK official website).

Methodology

The solution of the tasks set in the article was carried out on the basis of the application of general scientific research methods in the framework of comparative, logical and statistical analysis, as well as through the analysis of structure and dynamics, methods of financial analysis.

Discussion

A similar situation was observed not only in Kazakhstan, but also in many other countries, where, in the face of increased uncertainty and restrictive measures provoked by the pandemic, the population and small businesses also began to show higher demand for cash. Under normal conditions, the demand for cash depends mainly on the rate of growth of the economy, adjusted for inflation, as well as on the speed and extent of the spread of non-cash payments.

In recent years, in many countries of the world, the average annual growth rate of cash has fluctuated around the 5% level. Even in Sweden, where an attempt was made to reduce the volume of cash money supply, its growth resumed in 2017-2020. In 2020, during the pandemic, an increased need for cash was recorded in most countries. Despite the growth of cash in absolute terms, in Kazakhstan in the period leading up to the pandemic 2020, the ratio of cash to nominal GDP was declining. The share of non-cash payments in the retail trade turnover at the same time steadily increased.

It should be noted that cash is used less and less for everyday transactions. For example, the share of retail and person-to-person payments made in cash has declined from about 79% to 73% [2] in the Eurozone, from 31% to 26% in the US [3] and from 40% up to 23% in the UK [4] in 2016-2019.

However, cash does not disappear. In contrast, the demand for cash has grown steadily in absolute terms over the past few decades [5-6], with non-transactional demand reportedly being the main driver of this growth [7].

The COVID-19 pandemic has accelerated both phenomena. Recent studies have shown that the use of non-cash instruments increased during the pandemic [8-10], while the demand for cash increased [5,11]. Moreover, this happened despite the fact that cash was less often used in retail transactions due to fear of contracting COVID-19 when handling [2,12-13] and despite the findings of Cevik (2020) [14], who demonstrated that the demand for cash decreased during previous epidemics (for example, during the Ebola and SARS epidemics).

However, this observed increase in the demand for cash has not been uniform across the world. International financial databases of statistics for 128 countries show that the value of currency in circulation increased by an average of 18.7% in 2020, but that this change ranged from a decrease of 7.5% to an increase of 120.5% (IFS IMF).

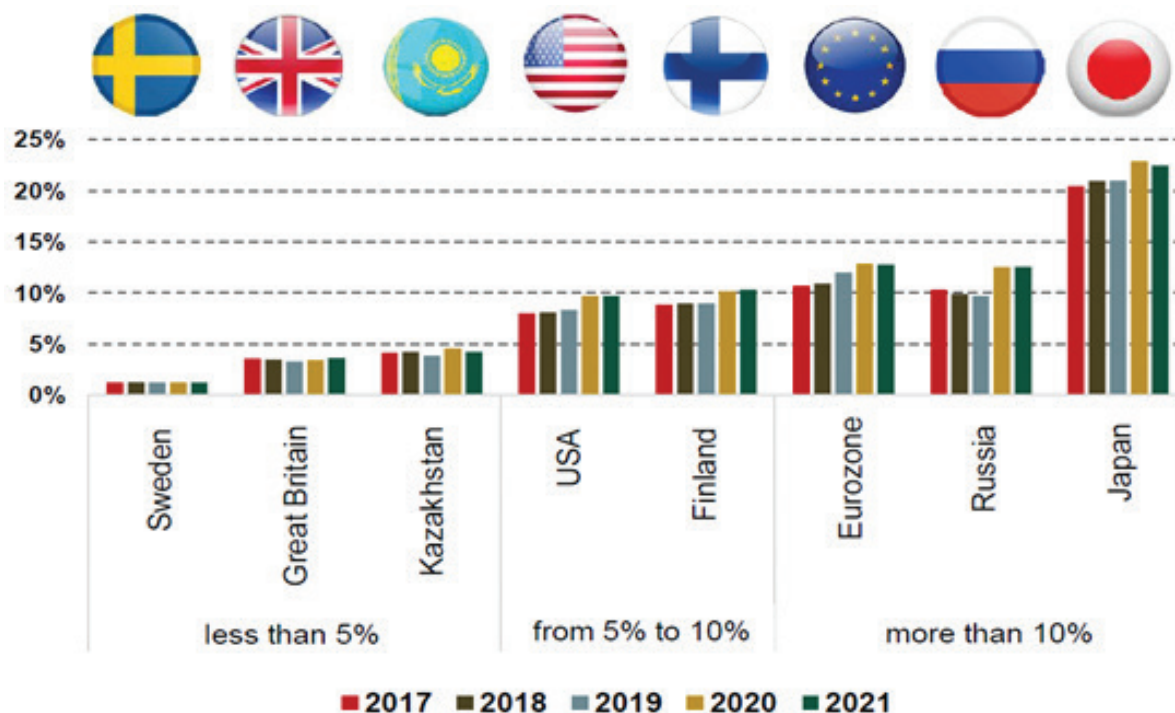


Fig. 1. The ratio of the amount of cash in circulation to GDP

Cash in relation to GDP is growing all over the world, except for Norway and Sweden, as the two countries purposefully pursued a policy to reduce cash through government initiatives and the development of electronic infrastructure.

In Kazakhstan, despite the development of non-cash payments, in parallel, there is a steady increase in the amount of cash in circulation, according to a study by the NBK.

In total, in 2021, cash in the amount of 6.9 trillion tenge was issued from the reserve funds of the National Bank, which is 292.6 billion tenge, or 4.4%, more than this indicator for 2020. In 2021, compared to last year, the volume of cash withdrawal from circulation increased by more than 650 billion tenge, or almost 11%, and amounted to more than 6.5 trillion tenge. In this period, the amount of cash in circulation increased by 201.3 billion tenge, or 6.2%, and at the end of the year amounted to 3.5 trillion tenge (Figure 2).

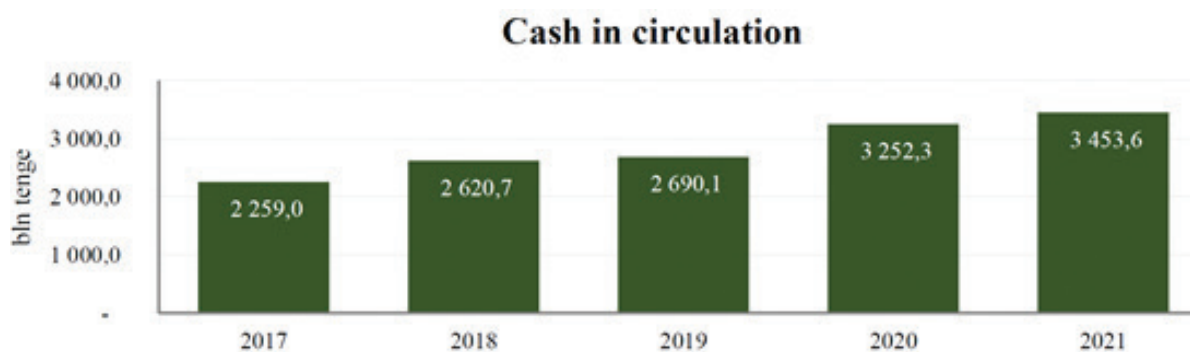


Fig. 2. Cash in circulation

The reason for the growth of cash in circulation is due to an increase in the volume of retail trade, economic activity of economic entities against the background of relaxation of quarantine measures.

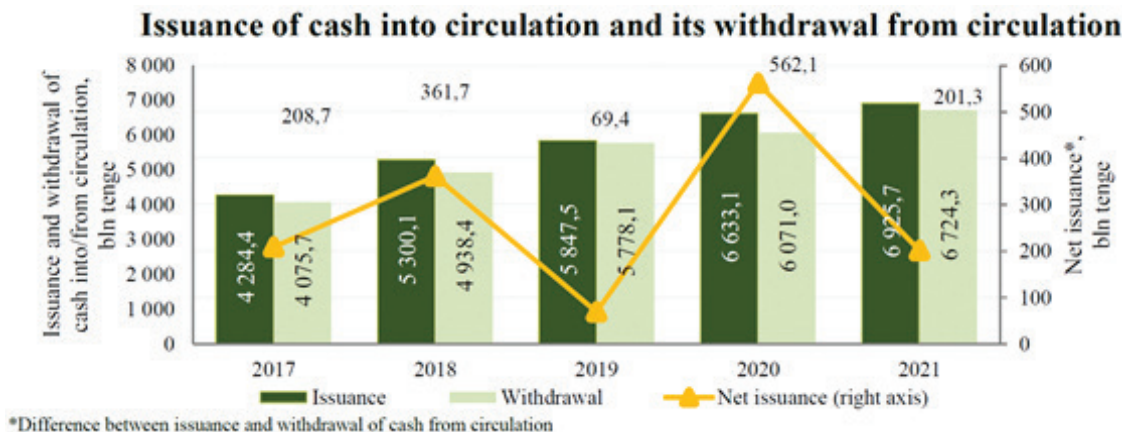


Fig. 3. Issue and withdrawal of cash from circulation

Banknotes of the national currency are the main component of cash in circulation. There were almost 3.5 trillion tenge of banknotes at the end of 2021, which is almost 98% of the total amount of cash in circulation. The volume of circulating coins amounted to more than 83 billion tenge, or almost 2.5% of the total amount of cash (Figure 4).

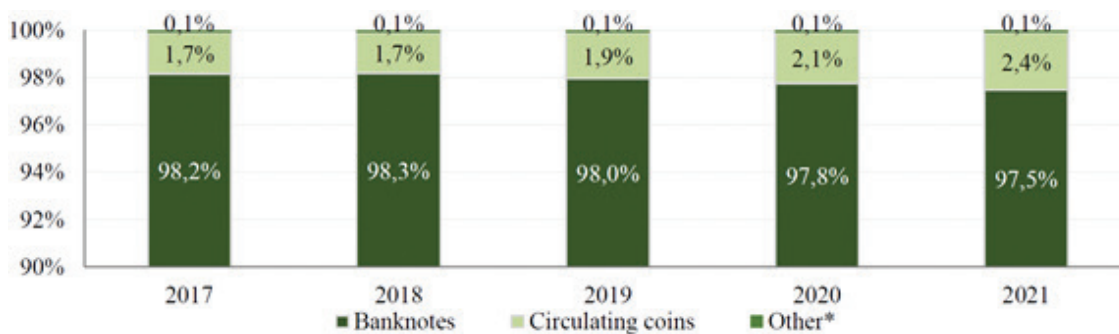


Fig. 4. The share of banknotes and coins in circulation

Despite the increase in the volume of cash in circulation, there is a stable level of banknotes per capita. The average number of banknotes per capita over the past 5 years was 25 banknotes. On average, over the past 5 years, the annual growth rate of circulating coins per capita has been 8%. At the end of 2021, the number of circulating coins per inhabitant of Kazakhstan amounted to 193 pieces (Figure 2.2.1.4). At the end of 2021, with a total issue of circulating coins in the amount of 16.4 billion tenge, the amount of withdrawal from circulation amounted to 2.2 billion tenge, or 13.2% of the total issue. Taking into account the existing demand, the NBK organizes uninterrupted supply of the demand for circulating coins.

The average return rate of banknotes to the cash desks of the branches of the National Bank over the past 5 years is 95% (Figure 5).

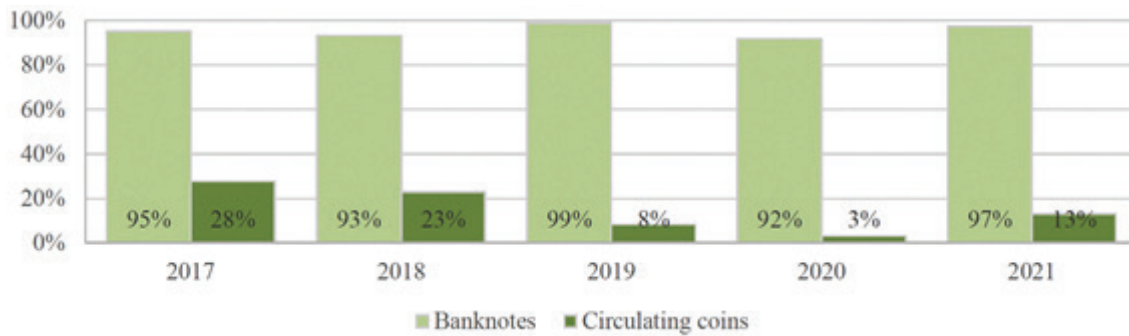


Fig. 5. The ratio of the amount of withdrawal from circulation to the issue

In 2021, the largest share of cash issued by banks accounted for operations to reinforce ATMs with cash (an increase of 11.7% compared to 2020) and withdrawals from accounts on deposits of individuals (an increase of 28.5%).

Currently, the NBK is also modernizing and optimizing the entire cash flow management cycle in our country. In order to achieve these goals, two actual automatic cash centers are being built in the cities of Astana and Aktobe and automated detection tools are being introduced in order to monitor and digitalize the chain of processes. In the future, the cities of Almaty, Astana and Aktobe will provide round-the-clock and timely provision of cash to the adjacent territories of Kazakhstan.

The NBK is working to regulate the entire system chain of cash withdrawals by entrepreneurs from bank accounts. The data were analyzed and processed using the identification numbers of entrepreneurs through banks and business entities. The purpose is to identify business entities whose cash withdrawal volumes exceed the established amounts.

More than 2.5 trillion tenge of circulating money was withdrawn from the bank accounts of entrepreneurs in 2021. Of which, the amount of cash withdrawals more than the maximum amounts determined by the legislation amounted to almost 215 billion tenge, which is more than 8% of the total volume. Since mid-2020, the total amount of withdrawals by legal entities over certain amounts (for payment of goods, services and work performed) has not been more than 15%. In the second half of the year, they withdrew: in 2020 – more than 85 billion tenge (7.8%), in 2021 – almost 126 billion tenge (12.3%). All this indicates the validity of the thresholds of maximum volumes.

Thus, 60% of those surveyed still use cash in everyday transactions; 30-40% - the average share of cash in the turnover of business entities; 35% of respondents' expenses are in cash.

According to the Comprehensive Action Plan for Countering the Shadow Economy for 2021-2023, last year the Ministries of National Economy and Finance of the Republic of Kazakhstan and the Agency of the Republic of Kazakhstan for Financial Monitoring (in coordination with the National Chamber of Entrepreneurs of the Republic of Kazakhstan) analyzed and developed proposals to update the maximum amounts of cash withdrawal by entrepreneurs from bank accounts.

The study of world practice and current trends in NDOs resulted in the development of the Concept for the Development of Cash Circulation in the Republic of Kazakhstan for 2022-2026. The document provides for measures to improve the security features for banknotes and raise public awareness of the ways to recognize genuine banknotes. It is planned to introduce a new format of logistics units for cash and valuables, as well as automatic identification tools, such as bar codes, RFID tags, etc. and electronic data interchange based on the international GS1 standard. This involves interaction with second-tier banks at a new technological level.

In addition, digitalization and robotization of NDO internal business processes will be carried out, which will not only optimize operating costs, but also increase productivity.

It is planned to develop cooperation between the Mint and the Banknote Factory of the NBK with the central banks of the world in the production of banknotes and coins of foreign countries.

It also provides for the introduction of a new segment of collectible coins made of base metals, which will make collecting coins more accessible to the public. At the same time, the production of coins from precious metals (gold, silver) will continue.

It should be noted that it is planned to develop new channels and methods for the sale and promotion of collectible coins both in the domestic and foreign markets to increase the recognition of the Qazaqstan brand.

The NBK will carry out appropriate work to update and improve the methodological framework governing NDO, which will allow the implementation of the above areas.

Successful implementation of the Concept will allow moving to a qualitatively new level of cash infrastructure development in the country. This will improve the quality of cash-related services for the population and reduce costs for both the NBK and financial sector participants.

Results

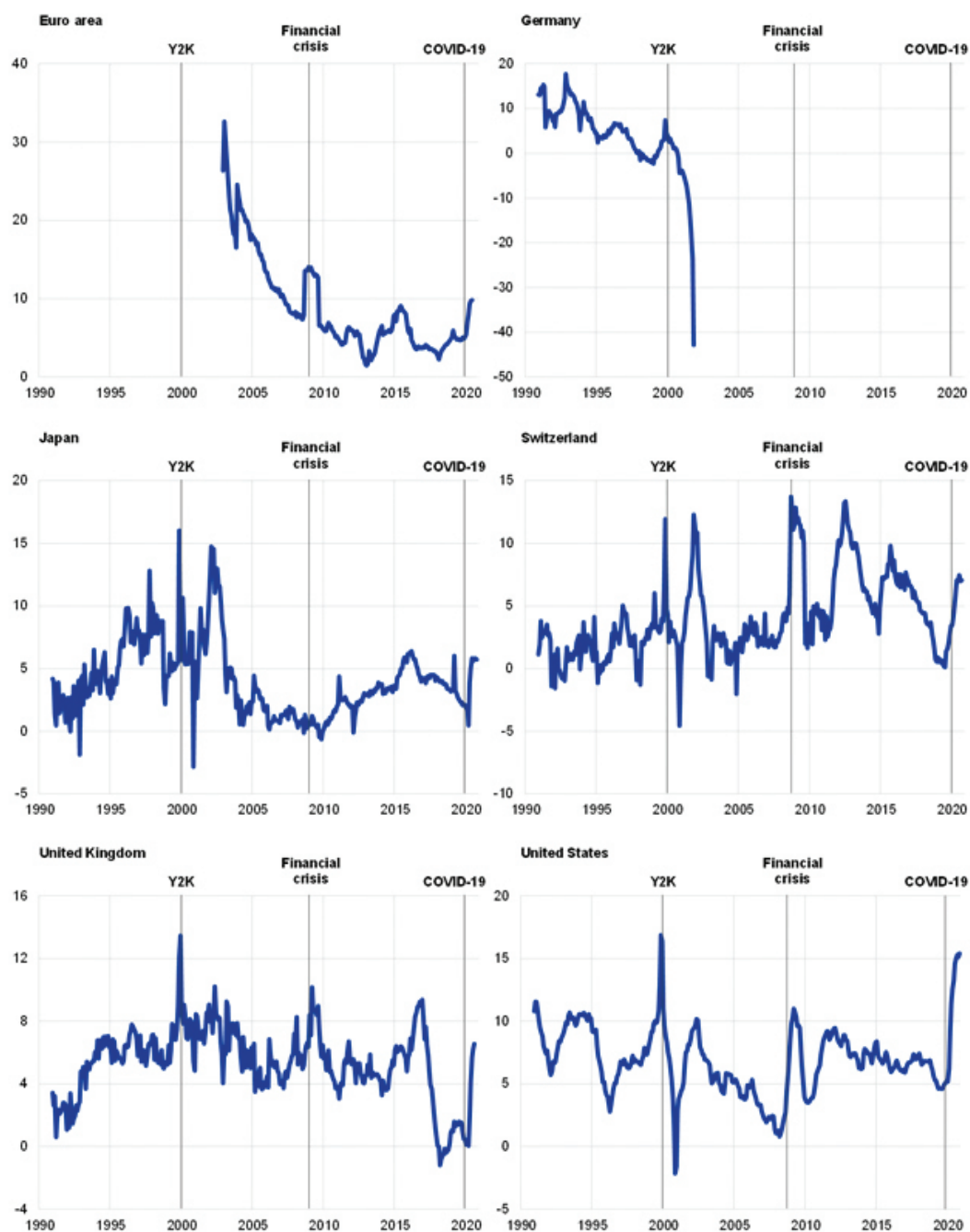
There are many reasons why there is a high demand for local currency cash in general and strong foreign currencies in particular in developing and transition economies [15]. In the literature, the widespread use of cash in developing and transition economies is usually attributed to both supply-side problems (such as poor payment infrastructure and lack of access to reliable savings alternatives) and demand-side factors (lack of confidence in banks, deeply rooted habits or unfavorable attitude towards electronic payments).

Regarding the use of the US dollar outside the United States, some of the factors that influence its external demand have been found to be high historical inflation in these countries, the size of the domestic market, global and local economic uncertainty, and past use of the dollar.

Recent data from a survey regularly conducted by the Oesterreichische Nationalbank (OeNB) [16] also provides valuable data on the determinants of demand for euro banknotes, although they are limited to central, eastern and southeastern Europe. These determinants include limited confidence in local financial systems and local currencies, stronger individual preferences for cash, or expectations of the future adoption of the euro.

It has been observed around the world that in the past an important factor in large increases in cash stocks has been the increase in demand for cash due to crises very sharply [17].

There are world examples, which we will consider below. According to the example data, it can be seen how strongly cash affects in crisis periods. It is necessary to consider the difference between the three types of crisis. These are technological crises (Y2K), financial market crises (2000, 2008-2009) and natural disasters (man-made disasters and, of course, the COVID-19 pandemic).



Source: respective national central banks.

Fig. 6. Annual growth rates of cash in selected countries (local currency)

Uncertainty created a surge in global demand for cash in the 2000s, when there was a technological crisis. At the time, there were fears that resetting the dates of computer programs to adapt to the new millennium would result in the closure of important institutions such as utilities, as well as the uninterrupted functioning of payment systems and cash withdrawals from ATMs. Thus, the surge in cash in circulation (see Figure 6) over the millennium was driven by transactional and precautionary motives, as well as a desire to preserve value. For example, in the United States, the issuance of both small and large denomination cash increased at an annual rate of more than 20% at the end of 1999

[18]. Domestic demand for cash around 2,000 yen was often also fueled by an increase in cash in bank vaults, especially in the United States.

Following the collapse of Lehman Brothers in October 2008, the financial turmoil in the United States quickly escalated into a global financial crisis that led to a marked increase in demand for cash. In the United States, where the financial crisis began, as well as in the euro area, Switzerland and the United Kingdom, cash issuance increased significantly. In contrast, in Japan, which was not so hard hit by the crisis, neither the total currency issue nor the yen denominations showed unusual growth. This time around, the preservation of value appears to have been the dominant motive for demand for cash, especially as demand for large denominations has risen. In these currency zones, this happened due to the need both inside and outside of specific currencies.

The outbreak of COVID-19 led to a sharp downturn in the global economy in 2020, resulting in a sharp decline in sales at the point of sale. All the same, we observed the world's cash increased exceptionally. As for the demand for small and large denomination banknotes, interesting differences emerged. In the United States, as well as in the euro area, the annual growth rate of small denomination banknote balances in mid-2020 exceeded that of the largest denomination banknote transactions, while the reverse was observed in Switzerland and Japan.

In summary, crisis periods in the past have stimulated the demand for cash, no matter what crisis occurred. This points to the important role that cash plays in successful crisis management.

Conclusion

Foreign experience is of great interest. Credit organizations and cash collection companies are joining their efforts in the field of creating cash centers for cash processing. In Denmark and Norway, the prospects for a single national cash handling organization are being considered. In Italy, the *sala conta* (account room) system has been implemented, involving the use of joint cash counting centers in regional hubs. In the vast majority of countries, considerable attention is constantly paid to improving the security complex, updating the design of banknotes, and increasing their durability.

In the field of cash circulation, digital technologies are being actively introduced: a single information space is being formed, automated systems and digital applications are being created, work with Big Data is being established, and the movement of banknotes by serial numbers is being monitored. In a number of countries, big data and artificial intelligence technologies are used to assess the quality of banknotes, their level of wear and tear, and predict their life cycle. For example, the Bank of Canada monitors about 20 indicators for each banknote issued by it (serial number, date of issue into circulation, date of processing, etc.), and the Bank of Israel analyzes about 100 indicators characterizing the state of cash circulation.

Recently, ATMs with a cash recycling function have been actively introduced in many countries. Such automated banknote processing devices have already become quite widespread – for example, in Japan, China, South Korea, Turkey, Germany, Austria.

Taking into account the identified and promising trends, it is necessary to develop the NDO system in order to adapt it to the new economic realities that are emerging in the context of global digitalization, automation, robotization, as well as to a change in the nature of the relationship between financial regulators and credit institutions.

Taking into account the results of the study, further activities of the National Bank of the Republic of Kazakhstan should be aimed at strengthening the infrastructure of cash circulation (CBT) and addressing topical issues [19], in particular:

- saturation of NDOs with small denominations of banknotes and coins in the context of the regions of the country;
- maintaining the state of banknotes, especially small denominations, suitable for human use and cash equipment;
- informing the general public about the main security elements of banknotes, which allow you to easily and quickly determine the authenticity of banknotes, and about the possibility of acquiring collection / investment coins of the NBK.

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Қазақстанда қолма-қол ақша айналымын дамытудың проблемалары мен перспективалары

Аңдатпа. Қазақстан Республикасының бүкіл аумағында тиімді қолма-қол ақша айналымын ұйымдастыру Қазақстан Ұлттық Банкінің негізгі міндеттерінің бірі болып табылады. Қолма-қол ақшасыз төлемдердің қарқынды дамуы аясында қолма-қол ақша халық үшін маңызды төлем құралы қызметін атқаруды жалғастыруда.

Халықтың қолма-қол және қолма-қол ақшасыз ақшаны пайдалануы туралы зерттеулер Еуропа елдерінде 10 жылдан астам, Германияда-әр үш жыл сайын, Ресейде-Жыл сайын үнемі жүргізіліп келеді. Қазіргі заманғы трендтер мен сын-қатерлер жағдайында Қазақстанда да зерттеу қажеттілігі пісіп жетілді. Қазақстанда экономика субъектілерінің төлем қалауы туралы сауалнаманы алғаш рет Ұлттық Банк жүргізді. Бұл ретте зерттеу халық арасында ғана емес, кәсіпкерлер арасында да жүргізілді. Қазақстанда қолма-қол ақшасыз төлемдердің дамуына қарамастан, айналыстағы қолма-қол ақша санының тұрақты өсуі байқалады, бұл дамыған елдерге де тән.

Тиісінше, зерттеудің мақсаты қолма-қол ақша айналымының даму тенденцияларын анықтау, қолма-қол ақшаға сұранысты қалыптастыратын факторларды анықтау, сондай-ақ экономика субъектілерінің қолма-қол ақшаны және олардың номиналды құрылымын пайдалануды зерттеу болып табылады.

Түйін сөздер: қолма-қол ақша, қолма-қол ақша айналымы, орталық банктер, ҚР Ұлттық Банкі, автоматты сәйкестендіру құралдары.

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Проблемы и перспективы развития наличного денежного обращения в Казахстане

Аннотация. Организация эффективного наличного денежного обращения на всей территории Республики Казахстан является одной из основных задач Национального Банка Казахстана. На фоне стремительного развития безналичных платежей наличные деньги продолжают выполнять функцию важного платежного инструмента для населения.

Исследования об использовании наличных и безналичных денег населением регулярно проводятся в странах Европы более 10 лет, в Германии – каждые три года, в России – каждый год. В условиях современных трендов и вызовов назрела необходимость исследования и в Казахстане. В Казахстане опрос о платежных предпочтениях субъектов экономики был проведен впервые Национальным Банком. При этом исследование проводилось не только среди населения, но и среди предпринимателей. В Казахстане, несмотря на развитие безналичных платежей, параллельно наблюдается стабильный рост количества наличных денег в обращении, что характерно и для развитых стран.

Соответственно, цель исследования заключается в определении тенденций развития наличного денежного обращения, выявлении факторов, формирующих спрос на наличные деньги, а также изучении использования наличных денег и их номинальной структуры субъектами экономики.

Ключевые слова: наличные деньги, налично-денежное обращение, центральные банки, Национальный Банк РК, средства автоматической идентификации.

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