

Some Aspects of the Development of Payment Innovations in the Kyrgyz Republic

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Abstract: This paper reveals the subject of payment innovations and their types, as well as presents analysis of the state and development of funds remittance using payment systems and growth of payments with plastic cards. In particular, it provides an overview of the number of payment cards in circulation in the regions and payment systems, reveals a picture of the development of money transfers that were carried out through international and local systems, as well as in the context of regions in terms of the volume of incoming payments. Disclosed measures and actions of the National Bank of the Kyrgyz Republic in the progress of a digital payment systems.

Keywords: Money transfers, payment cards, payment system, acquiring, Elcard.

INTRODUCTION

Innovation can make a life better, and in this regard, financial and banking innovations have traditionally taken the leading role. With the active introduction of new technologies, the financial services market began to develop even faster, which led to a noticeable decrease in cash turnover in the world. And the number of countries actively using modern technologies of cashless payments is growing. Payments are the basis of economic relations and transactions, and for these reasons they are associated with the formation of costs and economic benefits. The expenses of financial institutions associated with the implementation of cash circulation for servicing commodity exchange operations include the costs of printing and putting into circulation the money supply, maintaining and controlling the turnover, counting and collecting, withdrawing counterfeit and damaged banknotes, and their disposal (Lobacheva and Rodionova 2014).

The listed expenses are paid by trade and service enterprises in the form of bank commissions and in the end are passed on to the end consumer. The introduction and use of innovations have caused a decrease in costs and an increase in the economic effect for all participants in economic relations in the retail payment system. Efficient payment processing methods facilitate the reallocation of resources in favour of more significant and productive goals provide ample opportunities for users (Zakharova 2016). Innovations in the payment system are new

approaches to working with payments, conducting settlements, which develop under the pressure of active progress in the payment market and the emergence of new products and technologies in this market. Practical activity in the payment market allows the authors to highlight such types of innovations:

- money transfers through various payment systems;
- payments by plastic cards;
- online brokerage services;
- self-service;
- remote banking services, consisting of three subsystems: client – bank, phone banking, Internet banking. All three directions of Remote Banking services can be provided both simultaneously by banks and separately, and in various combinations.

REGULATION OF THE PAYMENT SYSTEM IN THE KYRGYZ REPUBLIC

As part of research, the authors will investigate the development of two payment innovations in the Kyrgyz Republic: the state and development of money transfers using payment systems; the development of payments with plastic cards. It should be noted that the procedure and forms of payment, settlement, and money transfers on the territory of the Kyrgyz Republic, is defined by the Law of the Kyrgyz Republic “On the payment system of the Kyrgyz Republic” (On the payment system ... 2015). This law regulates payment systems, the procedure for relations between

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participants in payments and settlements, supervision (oversight) of payment systems and defines the powers of the National Bank of the Kyrgyz Republic (hereinafter – NBKR) in the payment system of the Kyrgyz Republic. The following elements of the payment system function in Kyrgyzstan:

1. Large Payment System of the National Bank – Real-Time Gross Settlement System (RTGS).
2. Systems of retail payments: Batch clearing system of small retail and regular payments (BCS), systems of settlements by bank payment cards, systems of money transfers.
3. Infrastructure for the exchange of financial messages (SWIFT multiuser application, Interbank Communication Network).

The volume of average daily liquid funds of participants indicated an increase by 32.1 percent (compared to 2017) and amounted to KGS 19.8 billion. The level of RTGS availability during 2018 remained high and amounted to 100.0 percent, while the level of operational risk (taking into account the extension of the operating day) was 4.1 percent (Figure 1).

RTGS is a systemically important payment system, failure of which can cause serious upsets both for the banking system and the financial system as a whole. In the functioning of the batch clearing system in the reporting period, the level of financial risks was also at a low level. The indicator of the availability of the BCS has recently remained high during the reporting period and amounted to 100.0 percent (in 2017 – 99.8 percent). At the same time, due to the extension of the operating procedures at the request of the system participants, and minor failures, the level of operational risk amounted to 5.8 percent.

As of January 1, 2019, on the territory of the Kyrgyz Republic, all commercial banks provided services for the emission and acquiring of bank payment cards, of which 16 banks were emitters and acquirers of IPS cards and 25 banks were under the national “Elcard” system. The total number of bank payment cards in circulation as of January 1, 2019 amounted to 2,432.6 thousand cards. Compared to the previous quarter, the number of cards increased by 3.1 percent, compared to the same period of previous year, the number of cards increased by 22.6 percent. By types, the distribution of payment cards is as follows:

1. International systems 1 222 284 (50.2%):
 - “Visa” 670,571 (27.6%);
 - “Master Card” 22 641 (0.9%);
 - “Zolotaya Korona” (Russia) 518 867 (21.3%);
 - “Union Pay International” 10,205 (0.4%).
2. National system “Elcard” 1 210 306 (49.8%):
 - “Elcard” 1 201 154 (49.4%);
 - “Elcard-UPI” 9 152 (0.4%).

From the above figure it can be seen that in the territorial context the city of Bishkek is in the lead with 40% of the circulation of payment cards, followed by Osh Region 16% and Jalal-Abad Region 14%. Payment cards are not popular in Talas and Naryn regions.

The city of Bishkek is characterised by the highest indicators in terms of concentration of branches/outlets of commercial banks, financial resources, etc., respectively, the payment services market is the most

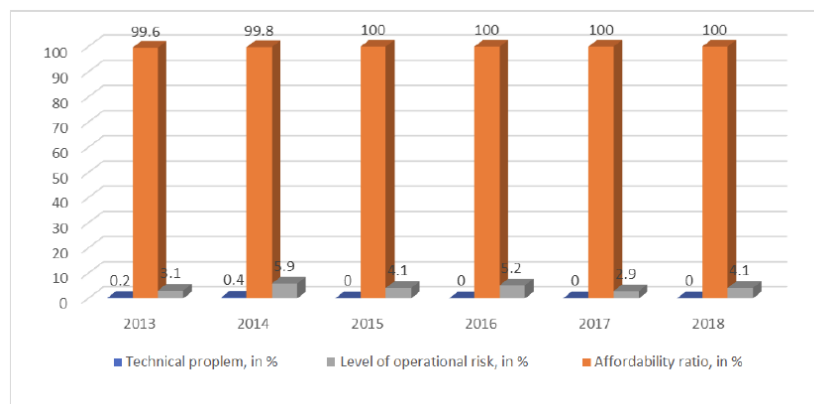


Figure 1: Affordability ratio and operational risk in the RTGS (Report on the stability of the financial sector 2019).

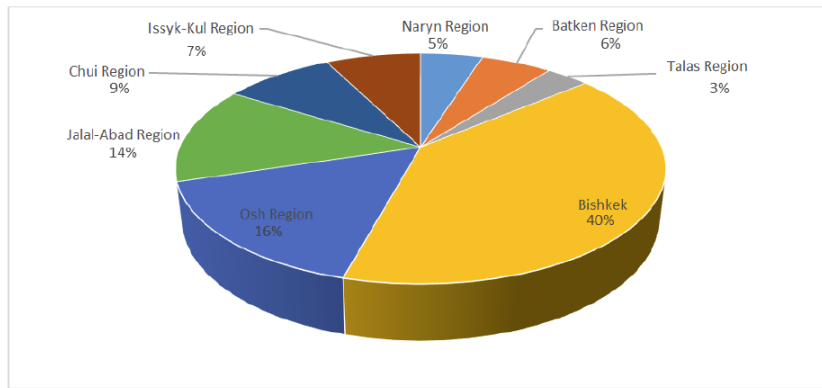


Figure 2: Number of cards in circulation by regions at the beginning of 2019, in %.

Table 1: Number of Cards in Circulation by Regions and Payment Systems at the Beginning of 2019

	Visa	Master Card	Zolotaya Korona	Elcard	UPI	Elcard-UPI
Naryn Region	8 450	428	33 332	76 126	0	140
Batken Region	14 521	515	33 218	88 545	99	477
Talas Region	14 514	224	17 878	47704	562	1 027
Bishkek city	468355	15423	144635	342345	6599	5075
Osh Region	64 701	1 447	91 567	229 631	386	1 025
Jalal-Abad Region	40 155	1 457	96 357	192 469	587	745
Chui Region	28 801	1 979	56 993	121 039	1 516	224
Issyk-Kul Region	31 074	1 168	44 887	103 295	456	439

developed there. For example, by the end of the fourth ten-day period of 2018, the share of the total volume of transactions using plastic cards in Bishkek was 55.6 percent. The lowest rate is in Talas Region – 3.4 percent. For the construction and organisation of the payment system over the past decade, the necessary key technological tools have been developed and implemented in the Kyrgyz Republic. These instruments are the batch clearing system, the gross settlement system, and the unified interbank processing center. The listed components are the basis of the modernised payment system operating in almost all economically developed countries. Using world practice, the payment system in Kyrgyzstan has accelerated its development path in comparison with other similar systems in countries, where the genesis of payment systems lasted for many decades. In the authors’ opinion, the National Bank of the Republic has achieved significant success by launching a project “on the basis of the Interbank Processing Centre for processing retail transactions with bank payment cards and transferring pensions, benefits and salaries of civil servants to the “Elcard” national card. To increase the degree of security, an innovative microprocessor card

was introduced in 2016 – the “Elcard” chip card. Since chip cards were manufactured in accordance with international standards, they can be serviced not only in Kyrgyzstan, but also outside its borders. Taking into account the high degree of security, “Elcard” payment chip cards serve as an excellent basis for the introduction and implementation of innovative modern products” (Main directions of development... 2017a).

ANALYSIS OF PAYMENT INNOVATION IN THE KYRGYZ REPUBLIC

In Kyrgyzstan, most of transactions at the end of 2018 fell on the conversion of cashless currency into cash, that is, 94.5% in relation to the total volume of all transactions. The second position is taken by transactions carried out through POS terminals in service and trade organisations, they accounted for 5.5% of all transactions carried out, in comparison with 2017, the value of transactions increased by 8.8%. The volume of transactions carried out through POS terminals in service and trade organisations at the end of 2018 amounted to 2,055.7 thousand transactions, or 8.6% of all transactions carried out. Compared to 2018,

Table 2: Money Transfers in the Kyrgyz Republic

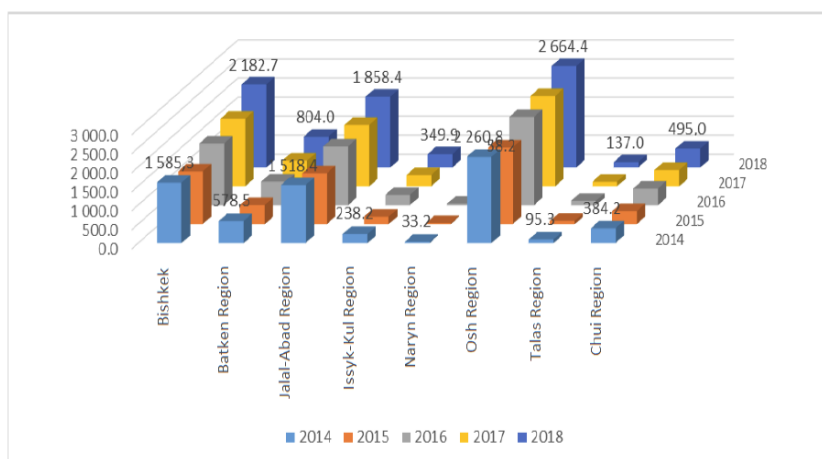
		Incoming Payments	Outgoing Payments
2014	quantity (ths. tr.)	6693.3	382.9
	amount (mln. KGS)	123697.6	32610.1
2015	quantity (ths. tr.)	5871.9	453.7
	amount (mln. KGS)	131283.0	30011.1
2016	quantity (ths. tr.)	6968.9	531.0
	amount (mln. KGS)	148308.2	34836.1
2017	quantity (ths. tr.)	7320.2	641.5
	amount (mln. KGS)	184255.1	42788.2
2018	quantity (ths. tr.)	8549.7	751.2
	amount (mln. KGS)	192409.7	47294.7

the volume of transactions carried out increased by 31.3%. Today there is an increase in remittances. This suggests that there are comfortable conditions from the standpoint of commercial banks and the population is actively using banking products. Growth can also be influenced by the specifics of the foreign exchange market development, i.e. its seasonality and volatility. Money transfers were carried out via international and local money transfer systems.

Analysis of Table 2 shows that the number of incoming payments in 2018 amounted to 8549.7 thousand transfers while increasing in comparison with 2014 by 1,856.4 thousand or by 27.7%. The volume of incoming payments in millions of KGS also increased by 55.5%. Outgoing payments on transfer also show growth dynamics, in 2018 their number reached 751.2 thousand, which is more by 368.3 thousand compared to 2014, or 96.2%. The volumes of outgoing payments in millions of KGS also increased by 45.1%, the

discrepancy between the growth in the number and volume of payments indicates that the number of citizens who made transfers increased, but transfers were made with smaller amounts of funds. Most of the transactions were carried out through the “Zolotaya Korona” system, for example, the number of incoming transfers through this system in 2018 amounted to 6,658.8 thousand, which is 5891.3 thousand or 767.5% more compared to 2014. The second place in 2018 was occupied by the “Unistream” system with 942.5 thousand incoming transfers and “Contact” is on the third 524.3 thousand transfers.

Analysis of Figure 3 indicates that in terms of the number of incoming payments, Osh Region was the leader in 2018, 2664.4 transactions were made in this region, which is 403.6 thousand more than in 2014 or growth occurred by 17.8%. Also, the city of Bishkek was among the leaders in 2018, 2,182.7 thousand transfers were committed to the city, which is 597.4

**Figure 3: Money transfers by regions, incoming payments, ths. tr.**

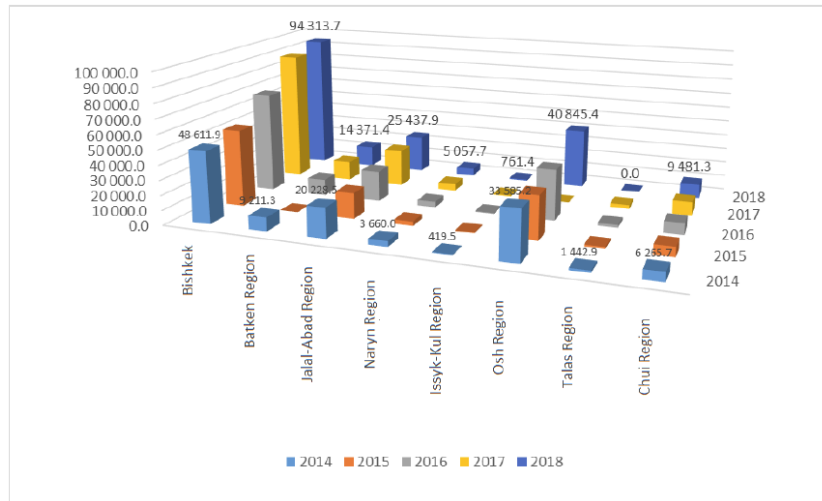


Figure 4: Remittances by regions, incoming payments, mln. KGS.

(Bulletin of the National Bank ... 2020).

thousand more than in 2014 or an increase occurred by 37.8%, in third place is the Jalal-Abad Region, with an increase of 22.4%.

The analysis of Figure 4 indicates that in terms of the volume of incoming payments, the city of Bishkek was the leader in 2018, the volumes reached 94,313.7 million KGS, despite the fact that in terms of the number of incoming payments, Bishkek was in second place after Osh Region, which means that citizens send larger amounts of money than in other areas. It should be noted that the main financial regulator represented by the National Bank of the Kyrgyz Republic, at the present stage of development of the payment system, is making every effort to develop digital payment innovations that correspond to the long-term priorities of the economic development of Kyrgyzstan and the payment system, set out in such documents as:

1. Decrees of the President of the Kyrgyz Republic:

- “On the announcement of 2020 as the Year of Regional Development, Digitalization of the Country and Support for Children” dated January 8, 2020, UE No. 1 (On declaring 2020... 2020);
- “On the National Development Strategy of the Kyrgyz Republic for 2018-2040” dated December 31, 2018 No. 221 (About the National Development Strategy... 2018);

2. The Law of the Kyrgyz Republic “On the payment system of the Kyrgyz Republic” dated

January 21, 2015 No. 21 (About the payment system... 2015);

3. Concept of the national program “Digital Kyrgyzstan – 2019-2023” and a roadmap for implementation (Order of the Government of the Kyrgyz Republic dated February 15, 2019 No. 20-r 2019) (Order of the Government of the Kyrgyz Republic... 2019);
4. Resolution of the Government of the Kyrgyz Republic and the National Bank of the Kyrgyz Republic “On approval of the State program of measures to increase the share of non-cash payments and settlements in the Kyrgyz Republic for 2018-2022 (third stage)” dated March 28, 2018 No. 166/51-6 (State program... 2018);
5. The main directions of development of the payment system of the Kyrgyz Republic for 2018-2022, approved by the Resolution of the Board of the National Bank of the Kyrgyz Republic dated December 13, 2017 No. 2017-P-14-51-7- (PS) (Main directions of development... 2017b).

At this stage of the payment system development, this kind of effort by the National Bank of the Kyrgyz Republic is expressed in the development of the Concept for the Development of Digital Payment Technologies in the Kyrgyz Republic for 2020-2022, which outlines the main vectors of growth in the sector of digital payment technologies, taking into account the world practice of increasing efficiency, reliability and

the security of the payment system of the Kyrgyz Republic, ensuring by 2022 the harmonious interaction of financial institutions, their clients, government bodies and commercial organisations through digitalised communication channels. The study reveals that Kyrgyzstan has quite well accepted payment innovations and is ready to further transform and improve in this direction, other non-financial organisations are trying to break through to the payment market, in addition to commercial banks, for example, cellular operators with their payment services.

Studies have shown that in 2006 one of the cellular companies tested and then implemented an innovative payment processing scheme, which made it possible to link the billing of a cellular operator with payment systems. A year later, some of the participants in the payment system launched the use of automated payment terminals, which made it possible to significantly expand the range of payment services provided: Internet, cellular and fixed-line communications, television and services provided by utilities. In 2010, the first domestic electronic wallet “Mobilnik” was launched. Currently, 21 legal entities operate in the market for receiving instant retail payments in the Kyrgyz Republic, including 19 legal entities licensed by the National Bank of the Kyrgyz Republic for the right to carry on business of a payment system operator. 20 legal entities have licenses with the right to carry on business of a payment institution. According to the National Bank of the Kyrgyz Republic, as of the end of 2017, more than 4,062 payment terminals and over 27 thousand payment acceptance outlets operated within the framework of fast retail payment systems.

It should be noted, “... that cellular operators have been trying to enter the payments market for several years in a row. For the first time, they tried to obtain a license for the emission of electronic money two years prior. But the existing legislation did not allow this. The only way to enter the market in such legal circumstances was the partnership with financial institutions” (Abdieva and Uraimova 2019). The expansion of the subscriber base and healthy competition in the mobile services market have made mobile communications available to almost all segments of the population. Currently, in the Kyrgyz Republic, according to the National Statistical Committee (hereinafter NSC), at the end of 2018, 7,401 million mobile users were registered for 6,389.5 million of the population (see Figure 5).

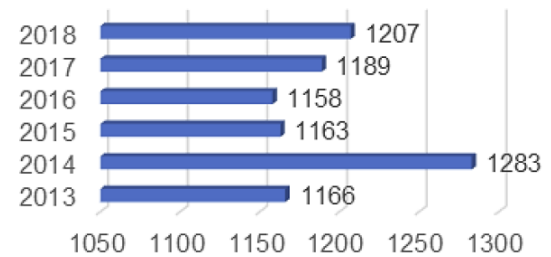


Figure 5: The number of connected subscriber devices of cellular communication (per 1000 people) (Abstract statistics book “Kyrgyzstan” 2020).

Kyrgyzstan has a high level of mobile Internet coverage. About “70% of mobile users use smartphones to access the Internet, more than 80% of visits to Internet resources occur through mobile communications. Kyrgyzstan has the lowest tariff plans for the Internet in Central Asia and the rapid growth in the number of mobile Internet users, which are positive factors affecting the development of e-commerce in the republic, namely the development of the payment system”. Final buyers of cellular operators’ services indicate that it is much more convenient to carry out payment transactions through mobile companies, according to research by the Centre for Sociological Research “Zerkalo” “... about 29% of respondents are ready to use mobile banking services to pay bills, download data to the phone, and on money transfers, and according to the same data, consumers” (Tairov 2018) and mobile operators highlight the following benefits from mobile financial services:

- easy access, i.e. anywhere and anytime;
- payment channels are cheaper;
- convenience of use;
- continuity.

At the present stage of cooperation in the payment system between cellular companies and commercial banks, the work of three new domestic electronic wallets from three communication service providers that appeared in mid-2017 can be distinguished. Each of them is a joint product of a mobile operator and a commercial bank. The subscriber’s personal account, as before, is regulated by cellular operators, but the electronic wallet is regulated by commercial banks. In the authors’ opinion, big changes are coming in this direction, in particular, the whole world is getting ready, and some countries are already modernising payment processing systems and laying the foundations for a successful economy based on the blockchain.

Kyrgyzstan should be ready for such innovations. An excellent achievement for the smooth operation of payment systems is the launch of the Data Centre by the National Bank of the Kyrgyz Republic. The NBKR Data Centre is the only organisation in Central Asia that has been certified by the international independent organisation in the field of IT “Uptime Institute”, recognised all over the world (Modernisation of payment systems ... 2014).

CONCLUSIONS

Thus, it can be concluded that the Data Centre is designed to fulfil the main tasks of the NBKR – ensuring the operation of payment and trading systems, systems of interstate payments and settlements, receiving and processing bank reports within the framework of banking supervision, electronic document management system, organising information exchange through the system of electronic interagency interaction “Tunduk”, systems for the internal operational activities of the Bank, etc. The Data Centre will allow modernisation of all payment systems, provide more new digital products for the population of Kyrgyzstan.

Most importantly, the launch of the Data Centre ensures complete security of the country's payments and allows thinking about the development of new ambitious projects for the digitalisation of the banking sector. According to experts, the Data Centre is distinguished by the highest level of reliability, security and resiliency. Duplication of all major systems ensures uninterrupted operation of the Data Centre equipment for an unlimited time in the event of a power outage, which significantly increases the stability of the country's banking and payment systems. Digitalisation of the banking sector is one of the important directions of the state policy on the digital transformation of the country and an integral part of building the digital economy, and at this time, within the framework of digitalisation, the most significant contribution of the National Bank of Kyrgyz Republic is the launch of this Data Centre.

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