



НАЦИОНАЛЬНЫЙ БАНК КАЗАХСТАНА

ANALYSIS OF REFORMING THE NATIONAL PAYMENT SYSTEM OF KAZAKHSTAN

Department of Payment Systems

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Creating and developing wholesale payment systems

KEY CHARACTERISTICS

Real time gross settlement systems (RTGS)

- Real-time settlements
- **Settlements guarantee** within the provided liquidity
- **Minimum** credit risk
- Ensuring settlement finality and its completeness

Deferred net settlement systems (DNS)

- Making settlements on a **net basis**
- Multilateral netting of the mutual obligations
- final settlement and recording of the transactions occurs at the **end of the settlement period**
- No requirements to deposit liquidity



RTGS: Interbank Money Transfer System (IMTS)

Large and urgent payments in the money and stock markets, payments to the state budget

DNS: Interbank Clearing System (ICS)

Regular payments

Year 2020 - 92% of the country's payment turnover (for 10 months of 2021 transactions made amounted to 629 trillion tenge)

RTGS systems are used in **176 countries**

IMTS and ICS of Kazakhstan comply with all international standards

- Confirmed by the previous assessments made by the international financial institutions (World Bank, International Monetary Fund)
- National Bank regularly conducts **self-assessment** of **ISMT** and **ICS** for **compliance with the Principles for Financial Market Infrastructures** approved by the Bank for International Settlements

In Kazakhstan the **infrastructure of the wholesale payments** (IMTS, ICS) has been built, it is successfully operating and developing on the basis of the National Bank



Retail payments: payment cards infrastructure

KEY CHARACTERISTICS

1. Local interbank infrastructure
2. Processing and clearing of interbank card transactions
3. Payments security

International experience

Active implementation and development of the national **card infrastructure**

- **National switching** for processing card transactions has been introduced in Portugal (SIBS), Italy (PagoBancomat), Korea (KFTC), Japan (ATM switching - NTT Data, terminal switching - CAFIS), Russia (NSPK), Malaysia (MEPS), etc.
- **National card** is in operation in China (UnionPay), India (RuPay), Germany (Girocard), Russia (MIR), Belarus (BELKART), Turkey (TROY), etc.



Kazakhstan

- **Interbank payment card system** represents **local switching** for **processing** interbank **transactions** with the Kazakhstan's bank cards
- Processing is carried out regardless of the payment cards system.
- **In November 2021** the **system** has been launched **in a pilot mode**.
- The **full-scale** launch of the system is planned for **mid-2022**.

Interbank payment card system is one of the **components** of the **National Payment System**, it **complements** Kazakhstan's **payments infrastructure** and is designed to ensure continuity and efficiency of the domestic card transactions



Retail payments: Fast payment systems

KEY CHARACTERISTICS

1. Retail payments, money transfers in real-time in **24/7/365**
2. Instant money transfer to the recipient
3. Payments made using simplified details (*mobile phone number, QR code, or email address*)
4. Making payments **regardless of the servicing bank**

Recent significant global trend



* In November 2021 **Instant Payment System** has been launched in a **pilot** mode, the launch in its commercial operation is **scheduled for July 2022**.

Instant payment system **complies with the best international practice**, being an important component of the National Payment System and a necessary mechanism for the **widespread use of online payments**, regardless of the servicing bank and payment instrument



Development of cross-border payments

A new direction in the development of the payments industry, that became possible due to the emergence of fast/instant payment systems in the financial markets

29 April of 2021



Launch of the first international **cross-border fast payment system PromptPay-PayNow** (Singapore - Thailand). Customers of the participating banks in both countries can transfer up to \$750-800 daily between the countries **using only a mobile phone number**.

✓ *To promote the cross-border platform the Bank for International Settlements and the Monetary Authority of Singapore have **published a plan** called **Project Nexus**, describing how countries can fully integrate their retail payment systems into a single cross-border network, allowing customers to make instant and secure cross-border money transfers using their mobile phones or other gadgets.*

- EU has a functioning system of the **fast cross-border payments** called **TIPS** (Target Instant Payment Settlement), which provides making payments in EU.
- **European Payments Initiative** (*creation and implementation of a unified payment solution for consumers and merchants throughout Europe - a payment card and a digital wallet*) represents a new initiative designed to solve the fragmentation problem of the European payments market.

After the full implementation of the new components of the National Payment System, it is necessary to start developing a new cross-border payments mechanism that will solve the problem of slow and expensive cross-border payments.



Introducing digital technologies in the National Payment System

International experience

Biometric technologies (Digital ID)

- Centralized systems of remote identification were organized at the initiative of the Central Banks and implemented based on the biometric indicators: India - **Aadhaar**, Russia - **Unified Biometric System**, Belarus - **Interbank Identification System**, etc.

Open API

- Implemented by the financial regulators in EU, UK (Open Banking Standard), Australia (Australian Open Banking APIs) and other countries around the world

ISO 20022

- The format of the financial messages has been implemented into the national payment systems of **70 countries**, including Switzerland, China, India, Japan and other

QR-code standards

- National QR code standard** has been implemented in Hong Kong, Singapore, Indonesia, Saudi Arabia, Australia, Brazil

Central banks' digital currencies

The central banks of many countries are actively engaged in the study of the Central banks' digital currencies

- In China there are more than 20.8 million users in 11 cities and regions (at the pilot stage)
- In Russia the platform's concept and prototype have been developed, testing is in process with 12 banks in 2022.
- In Sweden the first stage of the pilot project using blockchain technology and tokens in simulation mode has been successfully completed, at the next stage it is planned to test offline payments and integration with POS terminals

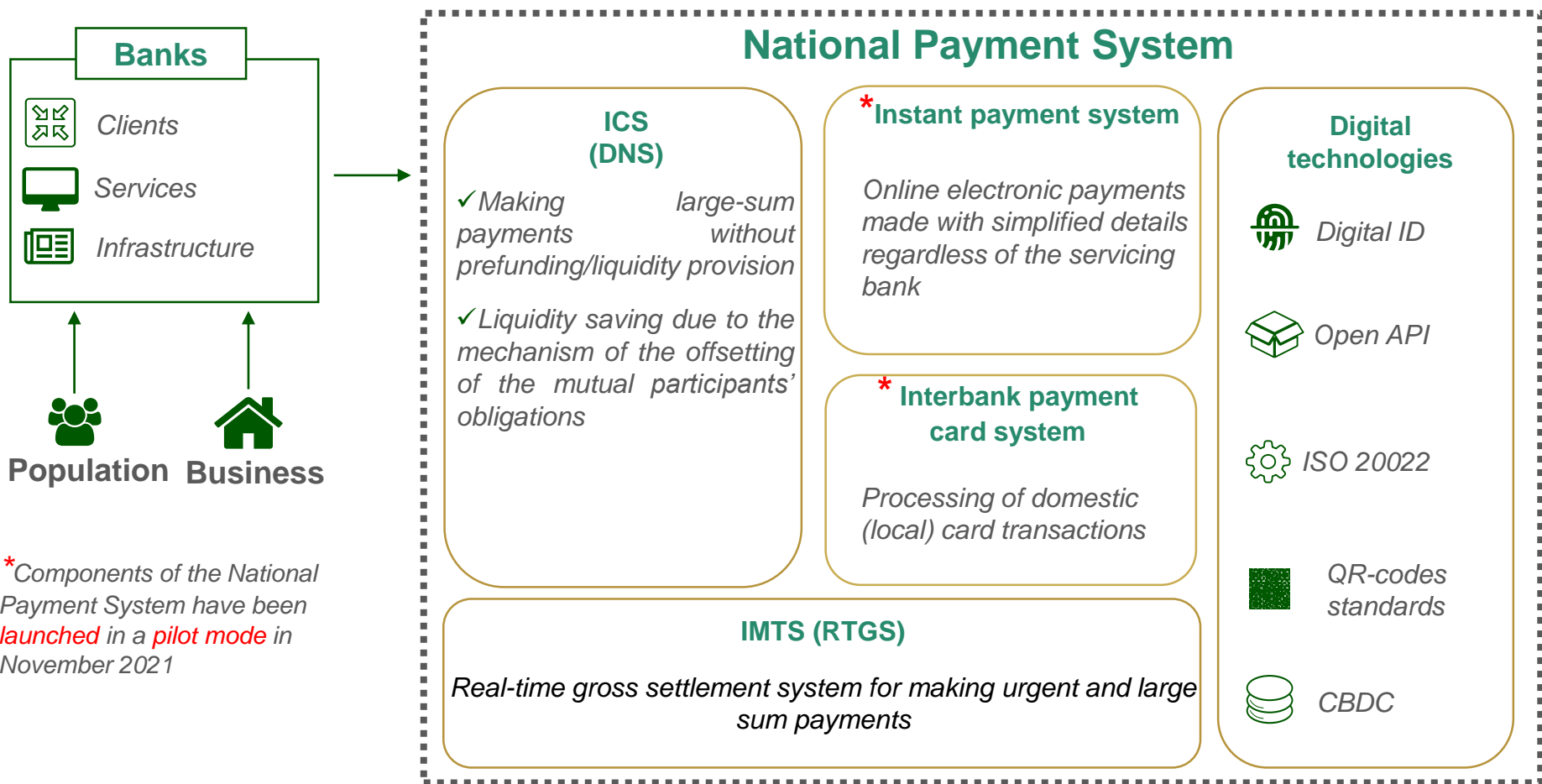


Kazakhstan

- In October 2020 on the basis of KISC NBK the service for the remote biometric identification of clients was **launched**, by means of which financial institutions provide a wide range of remote services to their clients (more than **10 million** requests have been processed since the launch of the service)
 - National Bank is working on the Development concept of programming interfaces (Open API) in the financial sector and a Roadmap for its implementation in 2022-2023.
 - Since 2020 National Bank has been working on the implementation of the international standard ISO 20022; transition to the usage of the payment messages' new formats is planned for 2022.
 - The national QR code standard was approved in August 2021 (effective from January 1, 2022)
 - Kazakhstan has been conducting a study of the digital currency, within the framework of which the pilot project is being implemented
- The National Bank published:
- In may 2021 – an advisory report on the digital tenge for public comment
 - in December 2021 a report on the results of the pilot project's first phase



Architecture of the National Payment System



*Components of the National Payment System have been launched in a pilot mode in November 2021

The analysis made on the international best practices has showed the relevance of the **initiatives implemented by National Bank** on building the components of the National Payment System (IPS and IPCS), standardizing and introducing digital technologies that **form a full-fledged infrastructure** at the national level to meet the current and future needs of the state, economy, population and business.