



ORGANIZATION OF OPERATION OF PAYMENT SYSTEMS AND ITS CURRENT STATE: UZBEKISTAN AND FOREIGN BANKING PRACTICES

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Abstract: A payment system is no more than an organized arrangement for transferring value between its participants. So defined, it is clear that payment systems are fundamental to the functioning of all monetary economies, no matter they are developed economies, transitional economies, or developing economies. The aim of this work is to show how the architecture of payment systems (payment instruments, processing, participants and etc.) influence to payment industry (microeconomic approach) and for the role of central bank in payment systems (macroeconomic - public approach). We use the method of qualitative analyses, not empirical measures. Central banks, as issuers of money, have always had a keen interest in the smooth functioning of the national payment system and the way it affects the economy. Their involvement has, however, evolved over time, as central banks have increasingly taken on a prominent role in the pursuit of the public good of maintaining trust in the currency and ensuring its smooth circulation. Consequently, their involvement in payment, clearing and settlement has changed.

Keywords: Payment Systems, Payment Methods, Payment Types, Interbank Payment System, Retail Payment System, Settlement Center, Electronic Payments, Bilateral Contract, Object and Subject of Payment System.

Introduction: The payment system is a set of relations that ensures the implementation of payments by the operator of the payment system, participants of the payment system and (or) payment organizations through the use of the procedures, infrastructure and rules of the payment system established by the operator of the payment system.

A payment system is any system used to settle financial transactions through the transfer of monetary value. This includes the institutions, payment instruments such as payment cards, people, rules, procedures, standards, and technologies that make its exchange possible.[1][2] A payment system is an operational network which links bank accounts and provides for monetary exchange using bank deposits.[3] Some payment systems also include credit mechanisms, which are essentially a different aspect of payment.

Payment systems are used in lieu of tendering cash in domestic and international transactions. This consists of a major service provided by banks and other financial institutions. Traditional payment systems include negotiable instruments such as drafts (e.g., cheques) and documentary credits such as letters of



credit. With the advent of computers and electronic communications, many alternative electronic payment systems have emerged. The term electronic payment refers to a payment made from one bank account to another using electronic methods and forgoing the direct intervention of bank employees. Narrowly defined electronic payment refers to e-commerce—a payment for buying and selling goods or services offered through the Internet, or broadly to any type of electronic funds transfer.

Modern payment systems use cash-substitutes as compared to traditional payment systems. This includes debit cards, credit cards, electronic funds transfers, direct credits, direct debits, internet banking and e-commerce payment systems.

Literature Review:

The efficiency and effective functioning of financial markets are affected by payment systems. For example, the instruments available for making payments, the clearing and settlement facilities to which financial market participants have access and whether there is a large-value transfer system (LVTS), among other things, greatly influence speed, financial risks, reliability and cost of transacting when financial market participants make payments.

Payment systems also contribute to integrating financial systems, both domestically and internationally.

Some of these threats may derive from the design and operation of payment systems themselves. Millard and Saporta (2007) identify two principal sources of systemic risk arising from payment and settlement activity: single point of failure risk; and risk arising from strategic interaction between payment system participants. In other words, faced with a prolonged disruption (or frequent disruptions) to the operation of a single provider of payment and settlement services in a particular market, users will be unable to re-route volume readily to an alternative provider. Trades may then remain unsettled for a period, either implying direct losses or creating unintended credit or market exposures.

Millard et al. (2007) argue that the difference reflects a tension between different aspects of the central bank's monetary stability objective: on the one hand, a central bank sets overnight rates to meet its price stability objective; on the other, it may be prepared to inject intraday liquidity into an RTGS payment system at a very low cost to ensure that banks do not have an incentive to delay payments and risk settlement failure (as in Furfine and Stehm, 1998). Williamson (2009) argues that the distinction between intraday and overnight policy action has become blurred.

Central banks and the private sector have both been actively involved in the provision of fast payments. In general, payment infrastructures like FPS require significant investment and coordination among many stakeholders. Central banks, often in collaboration with private sector PSPs, can help overcome coordination problems associated with a revamp of existing infrastructures or building new ones



(CPMI (2016)). This collaboration can be important in reconciling competing goals in the provision of FPS, which exhibit characteristics of a public good.

Research methodology. Payment systems, Financial Market Infrastructures (FMIs) and digital financial services (DFS) help expand financial inclusion, foster economic development, enable digital economy, and support financial stability. Given this, promoting safe, reliable, and efficient domestic and cross-border payments systems, and FMIs is an integral component of the World Bank Group's (WBG) work to reduce poverty and boost shared prosperity.

The work of the WBG on these topics span development of legal/regulatory framework, large value payment systems, securities settlement, foreign exchange settlement, retail payment systems, government payments, cross-border payments, oversight and cooperation, as well as the latest developments in fintech notably crypto, central bank digital currency, and open banking. Over the last two decades, the WBG has contributed to the global payment systems knowledge agenda and has supported payment systems reforms in over 120 countries through:

The development of Payments Systems Strategies and formulation of reforms.

The establishment of appropriate institutional arrangements for central banks / other regulators for steering National Payments System (NPS) development.

The formulation of international standards related to payment systems, alongside other standard setting bodies.

Global convening.

Technical and financial assistance for implementation of specific payment system components such as Automated Clearinghouses (ACH), Real Time Gross Settlement (RTGS) Systems, Fast Payment Systems (FPS), Central Security Depositories (CSD), Securities Settlement Systems (SSS).

Analyzes and results

The 'payments system' refers to arrangements which allow consumers, businesses and other organisations to transfer funds usually held in an account at a financial institution to one another. It includes the payment instruments – cash, cards, cheques and electronic funds transfers – which customers use to make payments and the usually unseen arrangements that ensure that funds move from accounts at one financial institution to another.

The interbank payment system of the Central Bank is regulated in accordance with the regulatory and legal documents:

The Law of the Republic of Uzbekistan "On the Central Bank of the Republic of Uzbekistan" (November 11, 2019), The Law of the Republic of Uzbekistan "On Banks and Banking Activities" (November 11, 2019), Law of the Republic of Uzbekistan "On Payments and Payment Systems" (November 1, 2019), Regulation "On the procedure for making electronic payments through the interbank payment system of the Central Bank" (February 14, 2006) and Regulation "On cashless payments in the Republic of Uzbekistan" (April 13, 2020).



Central Bank Information Center and Central Bank Settlement Center are participants of the interbank payment system. Users of the interbank payment system are banks and financial institutions that have a representative account in the Settlement Center of the Central Bank.

Settlement Center of the Central Bank (SCCB) — its task includes opening and servicing representative accounts of the Head Offices of commercial banks (banks) and ensuring the continuity of electronic payments between them.

The Central Bank's Central Information Center (CBCIS) is a center that provides technical, software and operational services of the interbank payment system in accordance with current legislation and contracts between the CBCIS and banks.

Table 1.

Payment organizations registry¹

No	Operator name	Payment system name	Date of issue of license	Website
1	2	3	4	7
1	"The only one All-Republic Processing Center" LLC	UZCARD	11.04.2020	www.uzcard.uz
2	"National Interbank Processing Center" LLC	HUMO	11.04.2020	www.humocard.uz
3	"KULAY PUL" LLC	UNITED FINTECH	27.11.2021	www.unitedfintech.uz

Today, commercial banks are issuing national currency bank cards of "Uzcard" and "Humo" payment systems, and their infrastructure is being expanded.

According to the decision of the Cabinet of Ministers of the Republic of Uzbekistan dated September 24, 2004 No. 445 "On measures to further develop the settlement system using plastic cards", the Unified All-Republic processing center was established and the "Uzcard" payment system began to operate.

On April 11, 2020, the "Uzcard" payment system operator license was presented by the Central Bank to the Unified All-Republic Processing Center LLC.

According to the decision of the President of the Republic of Uzbekistan dated September 19, 2018, "On Measures for the Development of the National Payment System" No. PQ-3945, the National Interbank Processing Center was established, and the "Humo" payment system was launched from the first quarter of 2019.

On April 11, 2020, the National Interbank Processing Center LLC was granted the operator license of the "Humo" payment system by the Central Bank.

¹ <https://cbu.uz/oz/payment-systems/remote-banking-services/>



During 2019, integration of two national retail ("Humo" and "Uzcard") payment systems with Visa, Mastercard, China Union Pay and Mir international payment systems was carried out effectively. This gives the opportunity to make payments in national currency through the Humo and Uzcard payment infrastructures (network of ATMs and payment terminals), creating wide conditions for the users of these international payment system cards, i.e. tourists and guests visiting our country.

Table 2.

Register of electronic money systems

				Electronic money release according to activity start date
		"CENTER FOR DIGITAL TECHNOLOGY AND INNOVATION" LLC	U z	
		Genesis Innovation" LLC		
		"		
			U	
		U	U	
		"Uzbekistan Republic goods - raw materials stock exchange" JJ	B	
			U	
			H	

As of 2024, there are a total of 13 electronic money systems in Uzbekistan, most of which are owned by private commercial banks.

The provision of remote banking services is a set of services that provide the opportunity to perform various banking operations remotely. It is enough to use a computer or mobile phone without visiting a bank.

Remote technologies allow the client to use banking services with maximum convenience and to minimize time and financial costs in the process of working with the bank.

Types of remote service systems for bank accounts:

Bank-Client is a computer-based system in which a special program is installed on the client's computer. This program stores all customer information (mainly payment documents and account statements) on the computer. Direct



communication between the bank and the client's computer is carried out through a modem.

Internet banking is a system that allows clients to manage their deposit accounts, including bank card accounts, via the Internet. This type of service is a system designed to transfer payments in real time while the client is connected to the bank remotely. The user accesses the system through a web browser. The Internet banking system is hosted on the bank's web server. The user has the opportunity to review all his information (payment documents and account statements) on the bank's website.

Through the Internet banking service, the client can:

transfer payments;

monitoring the stages of payment;

makes it possible to use its practices like getting all reports at any time.

Through Internet banking, the client will be able to connect to the bank's website from his workplace, see the money coming into his account and prepare money transfers and send them to the bank.

The mobile banking system is created on the basis of internet banking technology.

SMS-banking is a system of receiving information in the form of SMS to bank customers about transactions in their deposit accounts and accounts opened for bank cards. In order to receive information from the account, the client needs to send an SMS request to the bank's special phone number.

The SMS-banking service allows the client to perform the following actions:

funds received on the account;

expenses made from the account;

account balance;

to receive operational information about bank operations conducted during the day.

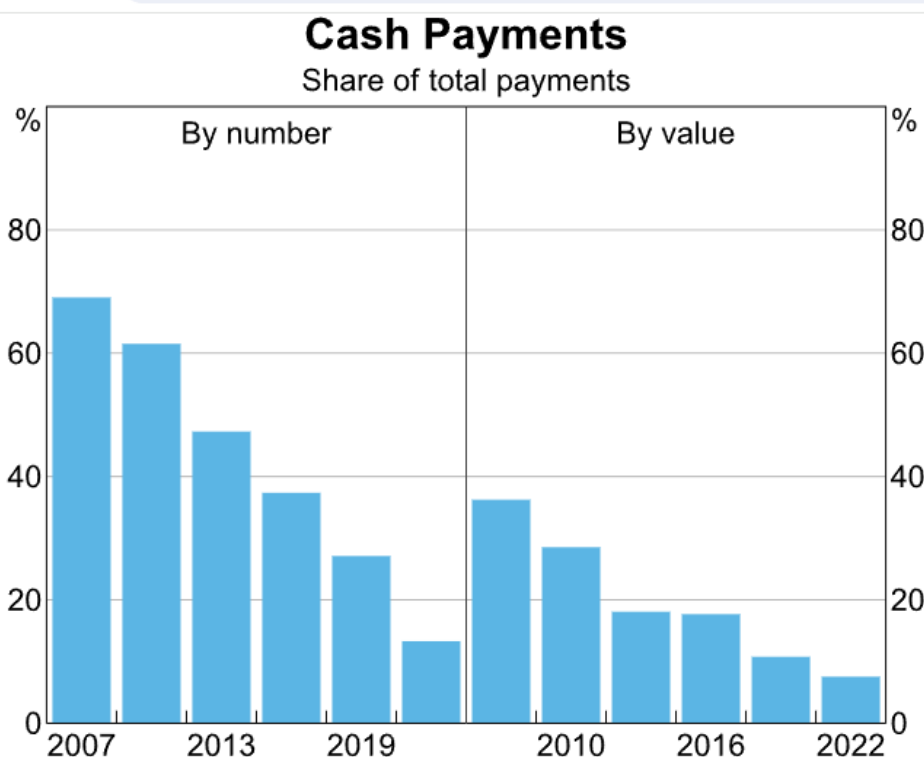
Today, the population can perform real-time card-to-card (P2P) money transfer operations, make tax, budget, utility and other payments, receive microloans and repay loans, issue online deposits, deposit and loan (credit) accounts through the mobile application programs of commercial banks. remote opening, making payments from an international bank card account, online conversion operations and other remote banking services are widely used.

On the other hand, for enterprises and organizations, through remote bank account management systems, real-time management of funds in bank accounts and making payments, sending an order for the purchase (conversion) of foreign currency to the service bank in electronic form, transferring monthly wages and equivalent payments opportunities were created for transferring an electronic account to the bank and using other services.



A safe, competitive and efficient payments system is essential to support the day-to-day business of the Australian economy. The Payments System Board of the Reserve Bank has a mandate to contribute to promoting efficiency and competition in the payments system, and the overall stability of the financial system. The Bank oversees the payments system as a whole, which encompasses a wide variety of individual payment instruments – ranging from cheques and payment cards to high-value corporate payments – and the usually unseen arrangements that ensure the smooth transfer of funds from accounts at one financial institution to another.

The Bank also has a formal regulatory role to ensure that the infrastructure supporting the clearing and settlement of transactions in financial markets is operated in a way that promotes financial stability. In addition, the Bank has an important operational role in the payments system through its ownership and management of the Reserve Bank Information and Transfer System (RITS), Australia's real-time gross settlement system.



Source: RBA calculations, based on data from Colmar Brunton, Ipsos and Roy Morgan Research.

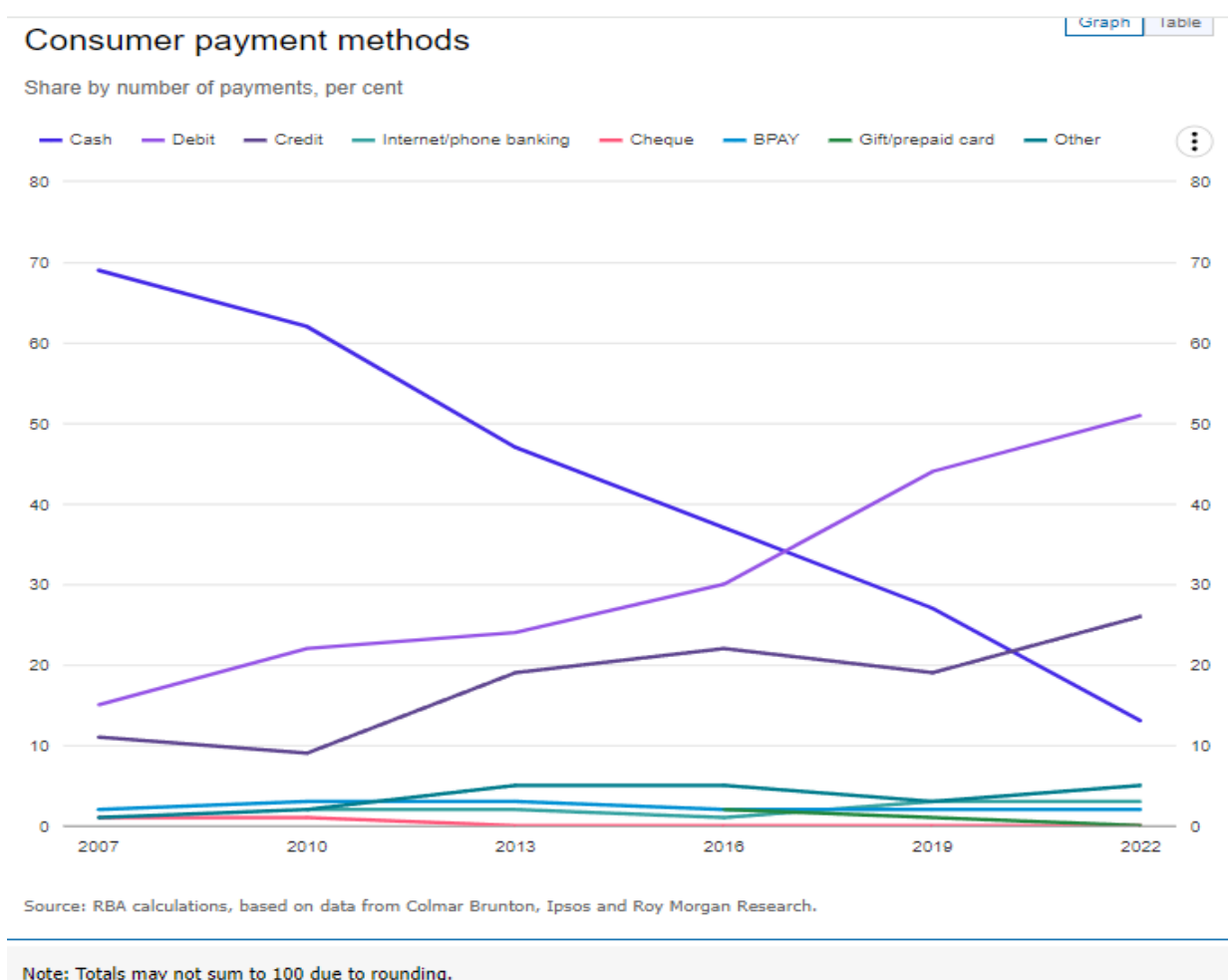
The use of cash as a payment method has declined in recent years. One of the most comprehensive sources of data on individual cash payments is the Reserve Bank's Consumer Payments Survey. This study was first undertaken in 2007 and was repeated in 2010, 2013, 2016, 2019 and 2022. The latest survey showed continued substitution away from cash use and towards electronic methods. Overall,



cash payments accounted for 13 per cent of the number and 8 per cent of the value of all consumer payments in 2022. The most common way consumers withdraw cash is through ATMs, which accounted for 72 per cent of the total number of cash withdrawals and 66 per cent of the value of withdrawals in 2023.

The Payments System Board (PSB) of the Reserve Bank oversees the payments system in Australia. It is responsible for promoting the safety and efficiency of the payments system and through the Payment Systems (Regulation) Act 1998 and the Payment Systems and Netting Act 1998, the Reserve Bank has one of the clearest and strongest mandates in the world in relation to payments systems.

This interactive tool allows you to explore the payment methods of Australians. The data come from the Reserve Bank's Consumer Payments Survey. The survey is run every three years and asks a representative sample of 1,000 Australians to record every payment they made during a week.



The Bank's objectives and approach to regulation of the payments system are shaped by its governing legislation, along with the intent of the legislators expressed at the time the legislative framework was established. The Bank is required to control risk and promote efficiency and competition in the payments system. However, there



is a presumption in favour of self-regulation by the industry, with the Bank only intervening where the industry is unable to address a public interest concern. This means that in practice the Reserve Bank has imposed regulation in a relatively narrow range of payments system activity.

Summary and Recommendations:

The Interbank Payment System of the Central Bank is the first payment system of our country after independence and is the foundation for the operation of all payment systems. Currently, 36 commercial banks are connected as users of the payment system in order to make payments in the Interbank Payment System of the Central Bank.

In this payment system, payments are made in real time based on the principle of gross settlement, that is, within a few seconds from the receipt of the payment document, and the initiator and beneficiary are notified of the result. The rules of the interbank payment system are determined by the Central Bank of the Republic of Uzbekistan.

A safe and efficient payments system is essential to support the day-to-day business of the Australian economy and to settle transactions in its financial markets. Accordingly, the Reserve Bank of Australia has important regulatory responsibilities for the payments system and plays a key role in its operations.

The Bank consults closely with participants in the payments industry. The Bank is represented on a number of industry committees responsible for the day-to-day management of payments clearing systems and Bank staff regularly meet with industry representatives and other regulators.

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