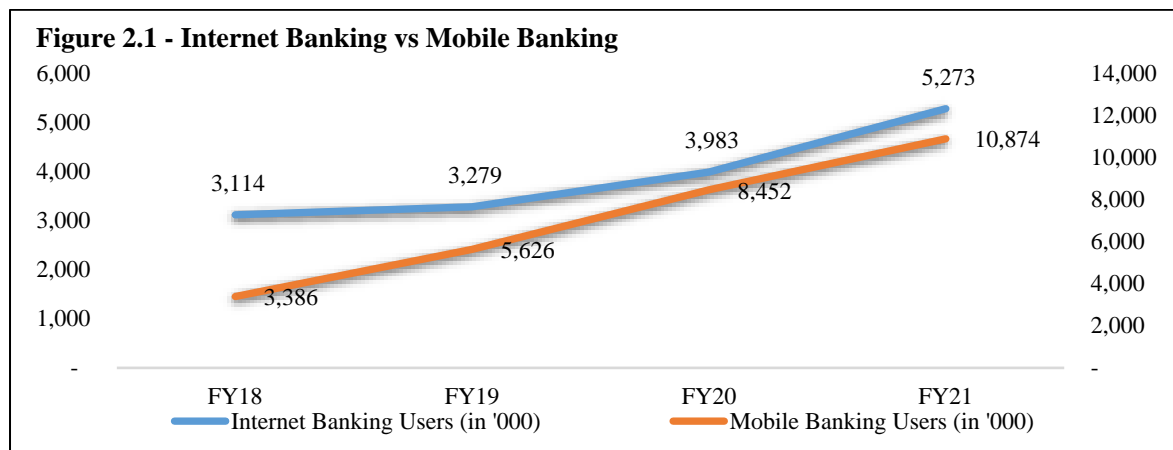


2 Payment System

The outbreak of COVID-19 and the resultant lockdowns from March 2020 onwards had shaken up large swathes of the economy. The continuation of uninterrupted financial services, including transaction settlements, had to be ensured, to mitigate the financial impact of the pandemic on the economy. SBP, being the regulator of payments and financial industry, had already played a pivotal role in promoting and developing payment and digital financial services in the country over the past many years; these policy efforts were significantly scaled up after the COVID-19 outbreak. SBP took numerous steps, including promoting and developing interoperable payments infrastructure, issuing enabling regulations especially for retail payment providers and financial technology (fintechs) firms, ensuring trust and security of digital payment channels, and promoting new technologies and innovations. Simultaneously, there was a focus on keeping these services affordable for the general public. These initiatives were primarily aimed at developing digital payment platforms, providing a conducive regulatory environment for the industry and promoting innovative and convenient digital payment instruments in the economy. Resultantly, the payments industry in Pakistan continued to show a healthy growth, both in terms of volume and value of transactions conducted during FY21.

2.1 Trends in Payment and Settlement Systems

Over the last 4 years, usage of Internet Banking and Mobile Banking channels has grown significantly, recording annualized transactions growth of 44 percent and 107 percent, respectively. Substantial growth has also been observed in the user base of these channels over the same period, as evident from Figure 2.1.

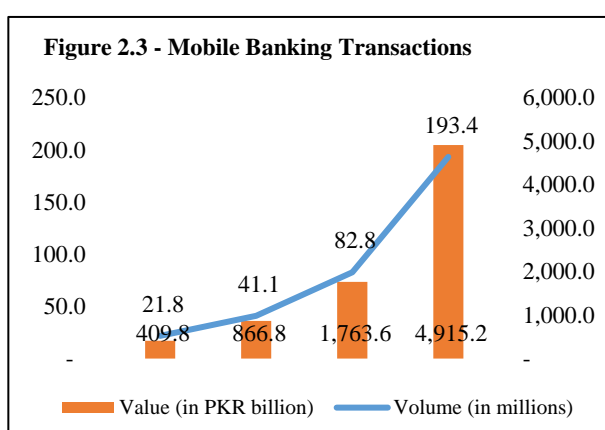
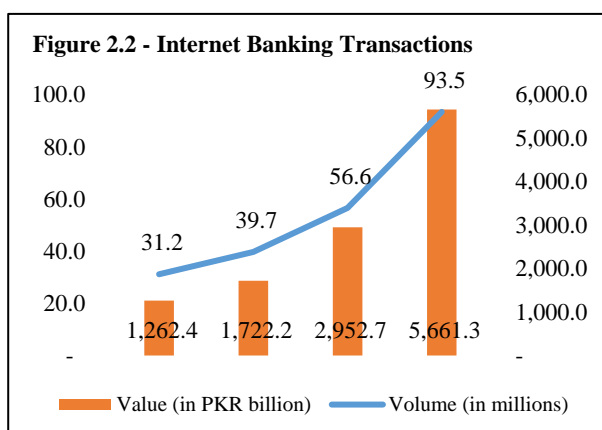


In addition, the digital access points and infrastructure has grown in parallel: the number of ATMs in the country is growing continuously with annualized growth of 5.3 percent during the last 4 years. The number of POS machines, also recorded a substantial growth of 47 percent YoY, since SBP's regulatory intervention via PSD Circular No. 1 of 2020 on Improving Payment Card Acceptance Infrastructure in Pakistan, played an important role in increasing the number of POS machines in the country, with positive spillover onto both digitization and documentation of the economy.

From the customer standpoint, the number of debit cards has also increased, mainly due to the mandate given by SBP to issue more secure Europay Master Visa (EMV) Chip and PIN-compliant cards, to enhance security without compromising customer experience. The number of debit cards had risen 11.8 percent YoY and reached 29.8 million by the end of FY21; over the last 4 years, debit cards have increased 11.2 percent on an annualized basis.

Some major indicators depicting the strong growth in the usage of digital channels during FY21 are presented in Table 2.1 and Figure 2.2 and Figure 2.3 below:

Channel	FY20		FY21		Percentage Change	
	Volume (in million)	Value (in PKR billion)	Volume (in million)	Value (in PKR billion)	Volume	Value
RTOB	173.7	54,433.2	186.6	67,308.4	7.4%	23.7%
ATM	512.1	6,429.4	598.7	8,075.6	16.9%	25.6%
POS	70.3	364.2	88.8	453.1	26.3%	24.4%
E-commerce	10.2	34.9	21.9	60.6	114.7%	73.6%
Internet Banking	56.6	2,952.7	93.4	5,661.3	65.0%	91.7%
Mobile Banking	82.8	1,763.6	193.4	4,915.2	133.6%	178.7%



2.2 Strategic Measures by SBP

2.2.1 Stakeholders Session with Industry Leaders on Digital Payments Ecosystem

To enhance the digital payments landscape of Pakistan, SBP under the leadership of the Governor SBP, arranged multiple stakeholder sessions. These sessions were attended by the top executives of payments and financial sectors, heads of multilateral organizations like the World Bank, and the IFC, top management of national regulators like the PTA, SECP, and FBR and other government representatives. The outcome of the discussions during these sessions contributed to the development of a national synergy among all the relevant stakeholders towards a common goal – i.e., digitizing the economy for the benefit of the people of Pakistan.

During FY21, SBP arranged two sessions to discuss the adoption of innovative technologies including open banking, instant payment system, adoption of QRs, Central Bank Digital Currencies (CBDCs), digital banks, e-KYC, and digital onboarding of customers. These consultative sessions complemented the agenda set out under the National Payments Systems Strategy, and facilitated the

development of a clear roadmap for the adoption of innovative technologies. These consultative sessions also assisted in reducing friction in the adoption of digital payments by rationalizing the tax regime for both consumers and businesses, and by streamlining the prices of customer authentication for fintechs and the financial sector.

2.2.2 Implementation of Raast (Instant Payment System of Pakistan)

SBP worked rigorously to achieve its strategic goal of developing modern and robust payment systems in the country. These efforts culminated with the successful launched of the instant payment system, Raast, in a ceremony held on January 11, 2021 at the Prime Minister House Islamabad, with the Honorable Prime Minister of Pakistan as the chief guest. Raast is a state-of-the-art, interoperable and secure payment platform that would enable consumers, merchants and government entities to exchange funds in a seamless, instant and cost-effective manner. It has advanced functionalities to process instant/near real-time and alias-based payments, bulk transfers and Request-to-Pay. Raast also has the capability to on-board participants, including banks, and merchants, Electronic Money Institutions (EMIs) through Application Programming Interfaces (APIs).

2.2.3 Implementation of National Payment Systems Strategy

The National Payment Systems Strategy (NPSS) was launched in 2019. It gives a roadmap and recommendations to design a digital National Payments System that complies with international standards and best practices related to safety, efficiency and inclusiveness.

The dual objectives of enhancing financial stability and increasing financial inclusion are the overarching goals of this strategy. The NPSS made recommendations in a number of areas including:

- Create an enabling legal and regulatory regime for payment system
- Strengthen payment systems oversight
- Development and modernization of the national payments infrastructure
- Digitization of government payments
- Enhancing the efficiency of the retail payments market
- Bringing efficiency in remittance payments

The regulatory measures taken by SBP, are part of the NPSS, and have played a vital role in enhancing the adoption of digital channels across the country.

2.3 Regulatory Measures Taken by SBP during FY21

2.3.1 Enhancing Digitization Initiatives in Banks and Microfinance Banks

To enhance the digitization landscape in the banking industry, SBP issued a comprehensive set of instructions to the banking industry. These included regulations related to banks' governance structure, benchmarking the list of services provided through internet banking and mobile application, promoting use of cards for authentications and payments, discouraging issuance of cheques, enabling accessibility of all beneficiary financial institutions on alternate delivery channels, a card-per-account policy, and deployment of cash deposit machines.

2.3.2 Regulations for Payment Card Security

SBP issued Payment Card Security Regulations in 2016 to provide a set of controls to the banking industry for securing payments through cards. One of the landmarks achieved through these instructions was the transition from the magnetic stripe standard to the more secure EMV Chip & Pin compliant standard. Since then, there has been tremendous strides in the country's payments landscape, along with a reduction in the number of card frauds as well.

During FY21, SBP updated these regulations in line with the evolving global practices. These included disallowing fallback transactions on card processing infrastructure, to prevent skimming frauds, mandating the use of EMV 3D secure for e-commerce transactions, policy measure on contactless payments and providing a limit for authorizing transactions without requiring a PIN.

2.3.3 Provision of Repayment Facility to Bank Borrowers on Alternate Delivery Channels (ADCs)

In 2018, SBP advised banks to develop their systems to allow customers to pay their credit card bills through any bank account using ADC channels. As a next step, SBP, in FY21 instructed the banks to extend the same facility to customers for consumer financing facilities offered by the banks. The instructions also required banks to develop their systems to fetch the amount of outstanding loan as well as installment due, for the particular loan, to facilitate the borrower in making payments via ADCs. This is regulatory change represented another leap towards achieving an interoperable payment systems regime in the country, which would strengthen the financial stability and increase the usage of digital platforms for day-to-day financial needs.

2.3.4 Pricing of Interbank Fund Transfer (IBFT) Services

In March 2020, at the outset of the COVID-19 outbreak, SBP introduced a wide range of regulatory changes to stabilize the country's financial system amidst a rapidly changing local and global landscape. One of these measures was the introduction of a zero-pricing regime on all IBFTs, to facilitate digital payments while physical bank branches were closed due to lockdowns. The result of the free IBFT was so remarkable that 1Link, which registered less than 150,000 IBFTs per day on average, started to process over 800,000 IBFTs per day by December 2020 an over 5-time increase.

Since the change, banks, particularly agent-based branchless banking players, approached SBP numerous times to allow them to charge fees on IBFTs due to the heavy operational and maintenance costs involved in providing the service. The costs were higher for branchless banking players, due to the additional agent costs for each transaction, and were leading to heavy financial pressures for these service providers.

To protect and encourage the low-income segments of the population to use digital transactions particularly IBFTs, SBP with effect from July 1, 2021 allowed the industry to charge high-value IBFT transactions with a minimal fee of 0.1 percent of the transfer amount or Rs.200 (whichever is lower), to cover their operational costs. To protect the low-income segments from these fees, aggregate per account transfers up to Rs.25,000 per month are exempt from the charges; the IBFT fees would only apply beyond this threshold.

2.4 Additional Efforts to Digitize Banking during FY21

2.4.1 Facilitation of EMIs, Payment System Operators and Payment Service Providers

To foster innovations in payments through technology and to provide an enabling regulatory environment to non-bank entities, SBP had further strengthened the regulatory landscape for payment service providers, by introducing Regulations for Electronic Money Institutions in 2019. Since then, SBP has received tremendous response from stakeholders as these regulations provided a new space to numerous fintechs operating in Pakistan

SBP has processed eight applications for EMI licenses, out of which five EMIs have started their pilot operations and would launch their operations on a commercial scale, over the coming few months. The remaining three EMI licensees were given in-principal approval and are expected to soon start their pilot operations. It is quite promising to see that many international and local fintechs have shown their interest for a potential EMI license in Pakistan. The integration of these high-tech service providers into the country's financial landscape would help provide pioneering payment solutions and further facilitate the ongoing digitization of the economy.

In addition to facilitating the EMIs, SBP has also enabled payment system operators (PSOs) and payment service providers (PSPs) to offer white label ATM services, payment initiation and account aggregation services, and e-payment gateway services, to promote innovative payment products and services in the country.

2.5 Efforts to digitalize Government Payments

Government payments make up a significant part of the payment and settlement systems of the country. As payments systems have evolved swiftly in the private sector, providing multiple options for moving money, SBP has also been working to bring the same agility to the cash flows of the government. In this regard, SBP is providing the necessary support to both the federal and provincial governments to digitize their payments and receipts to bring them at par with the industry standards. Particular emphasis is on the digitization of tax and levy collections, tax refunds to businesses, and on payments of salaries, pensions and social security payments to government employees. The process has assumed particular urgency due to the unprecedented spread of COVID-19 pandemic, making the automation and digitization of government payments a priority for the SBP. This initiative has helped provide an alternative to the traditional mode of government payments in the country, and would help to reduce delays and inconsistencies in the process. The key initiatives undertaken by the SBP in this regard are given as under:

2.5.1 Collection of Government Taxes and Fees through ADCs

The collection of government taxes and fees through alternate delivery channels (ADCs) has gained traction, amid trust of the taxpayers. An aggregate amount of Rs.4,310 billion of government taxes and duties has been collected through ADCs since its inception in March 2018, out of which Rs.3,799 billion have been collected from July 1, 2020. This points to the robustness of the new system, especially over the past year. Taxpayers can pay their taxes through internet banking, mobile banking, over 15,000 ATMs and via over-the-counter (OTC) facilities of around 16,000 branches of commercial banks across the country. The Federal Board of Revenue (FBR) and the Government of the Punjab initially adopted the system in 2018. Keeping in view the success of the payments through

the ADCs, the Islamabad Capital Territory Administration (ICTA), and the governments of Khyber Pakhtunkhwa, Sindh and Balochistan also adopted the ADC mechanism for their taxpayers in FY21. Furthermore, to promote digital payment of government taxes and duties, SBP eliminated the transaction fee for taxpayers using digital modes with effect from January 1, 2020.

2.5.2 Automation of Duty Drawback and Income Tax Refunds

The government incentivizes exports via tax refunds under the duty drawback on local taxes and levies (DLTL) scheme, which provides the necessary liquidity and working capital to businesses to contribute positively to country's foreign exchange earnings. Thus, the payment of tax refunds to taxpayers in an important role in helping the businesses manage their cash flows, with positive spillover on the country's export performance and thereby putting the current account on a stable trajectory. SBP in collaboration with FBR has developed and implemented an e-payment system for end-to-end digitization of duty drawbacks and income tax refunds to businesses. After digitization of these processes, the refunds are directly credited to the beneficiaries' (taxpayers) accounts through Straight through Processing (electronic transfers). This reduces the human involvement on part of the Pakistan Customs/FBR to absolute minimum, and significantly decreases the turnaround time for the payment of refunds. Since the introduction of the e-payment refunds on September 30, 2021, Rs.25.2 billion have been refunded to business through approximately 297,000 transactions.

2.5.3 Enhancing currency management practices of Commercial Banks through Currency Management Strategy (CMS)

Despite the technological advancements in the currency and payments infrastructure, cash remains a dominant medium of exchange in Pakistan's economy, which necessitates timely provision of clean disinfected and good quality notes into the economic system. The implementation of SBP's Cash Management Strategy in 2015 has helped streamline the automated currency management system by ensuring timely availability of clean, optimum quality and machine-authenticated banknotes that incorporate state-of-the-art security features. This has helped enhance capacity of commercial banks in the area of currency management, and to implement more standardized banknote packaging and distribution processes in line with practices followed in peer countries. Soiled and unfit notes are removed proactively from the system, while the authentication of banknotes provides a high degree of reliance on the genuineness of the currency. This has been significantly supported by the establishment of the Cash Processing Centers (CPCs) within a large number of commercial banks. In case a bank is unable to set up an independent CPC, they have been encouraged to collaborate with other banking entities having surplus capacity to provide them with authenticated and processed cash for onward disbursement to branches.

2.5.4 Evolution of Currency Management Strategy (CMS)

The SBP has worked to further strengthen CMS implementation during FY21. All commercial banks' branches are now mandated to disburse machine-authenticated banknotes of Rs. 50 and above from January, 2021. The banks have installed 9,685 banknotes authentication machines and 8,686 banknotes packing machines, which are deployed at CPCs and standalone branches. Banks have also increased Cash Processing Centers (CPCs) to 712, which are providing machine-processed banknotes to 9,608 bank branches. Further, banks have equipped 5,939 branches with individual banknotes processing machines to meet their own needs. It is also seen that banks with cash processing

arrangements with other banks has decreased slightly from 550 to 532, with a corresponding increase in independent CPCs, implying that the industry is moving towards establishment of independent CPCs over time.

2.5.5 COVID-19 – Uninterrupted Supply of Disinfected Cash at Banks and ATMs

After COVID-19 pandemic, central banks across the world were compelled to take multiple steps to curtail the spread of the contagious disease through banknotes by pursuing new technologies. Similarly, SBP also continued to monitor the ongoing global developments in this regard to ensure the uninterrupted supply of disinfected cash at banks and ATMs. SBP issued special instructions to the banks to contain the potential spread of the virus through banknotes by taking additional precautionary measures concerning disbursement and collection of cash. Accordingly, a 14-day quarantine period was mandated for all banknotes received by the bank before their re-issuance to customers and the public. With a view to facilitate banks and ensure availability of a number of banknote disinfection machines and technologies in the market, SBP allowed banks to either continue with the fourteen 14-day quarantine requirement, or to process banknotes through machines certified by the Pakistan Council of Scientific and Industrial Research (PCSIIR). The banks were advised to procure machines that specifically mentioned their capacity of the machine to disinfect bacteria and viruses including the SARS-CoV-2 virus that causes COVID-19.

2.5.6 Outsourcing of Cash Processing Activities

The SBP's cash management strategy requires the banks to automate their cash-processing function and disburse only machine-authenticated good quality banknotes of Rs.50 and above to the public. Until last year, the banks could either process the cash through their own processing facilities, or get their cash processed through banks that had the required capacity to process the cash. The outsourcing of processing banknotes of higher denominations was, however, restricted only to banks having the requisite capacity, as the CMS did not allow outsourcing of this function to commercial cash-processing companies. With a view to facilitate banks and to ensure the availability of processed cash, SBP allowed the outsourcing of cash processing functions for all denominations of banknotes to cash-processing companies that have the capacity to process the cash, in full conformity with the CMS instructions.

2.6 The Way Forward

SBP has been diligently working to digitize the payments and financial infrastructure of the country for the last many years, in line with the strategic goal and objectives outlined in the National Payment Systems Strategy. In pursuance of these overarching objectives, SBP is planning to undertake the following measures:

2.6.1 Deployment of 2nd Phase of Raast

SBP has completed the major work on the deployment of the second use-case of Raast i.e., enablement of person-to-person transfers. Successful deployment of this stage would allow consumers to make instance transfer to their family, friends and acquaintance.

2.6.2 Comprehensive Framework on Internet Banking Security Regulations

SBP had, in 2015, issued a set of principle-based instructions under the Internet Banking Security Regulations. These regulations were issued just as usage of mobile applications began to increase substantially, due to increasing ease of access and affordability of smart phones across the world, particularly in Pakistan. With this rapid evolution of digital access points, the associated risks are also evolving. SBP being cognizant of the inherent risks in digital payments, has been strengthening the oversight functions to ensure security of digital payment systems and consumer protection. To protect financial institutions and customers from potential losses due to cyber-crimes and online frauds, SBP is updating the regulations issued in 2015. The updated regulations would help to mitigate the newly emerging risks amidst a constantly evolving landscape. The regulations would cover security aspects related to mobile applications of financial institutions and the usage of APIs (particularly financial APIs). The regulations would also include a revised framework for the deployment and usage of internet banking, in line with the recognized international standards and best practices.

2.6.3 Single & Unified QR Standard in Pakistan

SBP, in order to implement an interoperable payments regime in Pakistan, is working to develop a standardized approach with respect to QR payments across the country. The major objectives envisioned are as follows:

- 1) Enable domestic payments through QR Codes
- 2) Devise a unified QR standard to support a multi-scheme model (both domestic and international)
- 3) Promote wider adoption of QR codes for different types of electronic payments (in-store, ecommerce, bill payments)
- 4) Reduce capital as well as transactional costs for mass adoption of digital payments
- 5) Allow merchant aggregators/ non-bank acquirers to enter into the merchant acquiring business for overall growth of the QR acceptance eco system
- 6) Harmonize the practices of QR placement at merchant locations through interoperability.

To achieve these objectives, SBP is continuously engaged with banks and other financial institutions to enable customers and financial institutions to accept and process QR payments in a seamless manner.

2.6.4 Digital Clearing of Cheques

In order to leverage digital technology and to make the clearing process more efficient, SBP has envisioned developing a regime for the digital clearing of cheques. In addition to reducing processing time, the digital clearance will also in-turn increase consumer convenience. In this regard, SBP has been engaged with relevant stakeholders over the last few months, in order to reform the cheque-clearing process in Pakistan.

2.6.5 Formation of Digital Financial Services Group

As the digital world is changing rapidly with the emergence of new technological advancements, there has been an imminent need to focus and prioritize the new emerging technologies, centric to the banking industry, which would transform the digital banking landscape of the country. In this regard, a new “Digital Financial Services Group” has been created at SBP, comprising departments of

Payment Systems Policy & Oversight, and Digital Innovation & Settlements. This new group would be housed under the portfolio of DG Financial Inclusion, Digital Financial Services & IT and would contribute in bringing efficiency and effectiveness in the digital payments infrastructure of Pakistan.