

# 4 PAYMENT AND SETTLEMENT SYSTEMS

## 4.1 Overview

Supervision of payment and settlement systems is one of the main functions of the State Bank of Pakistan. While SBP oversees payment systems for promoting the maintenance of a sound and efficient financial system the role of SBP-BSC is to assist them through its sixteen field offices in accomplishing this vital function. SBP-BSC facilitates payments, transactions and provision of requisite services to support the payment systems. In order to institutionalize its focus on stability of payment systems, SBP has established a separate Payment Systems Department (PSD). The objective of PSD is to closely monitor the existing payment systems and develop a strategy with the banking sector for improvement in the system besides developing Real-Time Gross Settlement system (RTGS) in coordination with SBP-BSC. SBP-BSC offices provide inter-bank settlement facilities to banks and financial institutions through current accounts maintained at these offices and provide information to PSD of SBP on payments, settlements and instruments used in this regard. During FY07, SBP-BSC continued to support SBP's plans of upgrading automated services in the payment arena. For automation of the process, an arrangement has been made with National Institutional Facilitation Technologies (NIFT) which is a joint venture between a consortium of six commercial banks and private sector. The NIFT collects the financial instruments and after processing them provides the inter-banks' position for settlement to the concerned SBP-BSC office where the position of each bank is settled by making debit / credit entries in their respective current account.

## 4.2 Clearing Services

Over the past few years, the SBP-BSC has actively contributed in the development of automated clearing services in the country. For this purpose, the job of clearing services has been delegated to NIFT, which provides a nation wide mechanism to process and settle the transactions between the commercial banks with the extensive coordination of SBP-BSC field offices across the country.

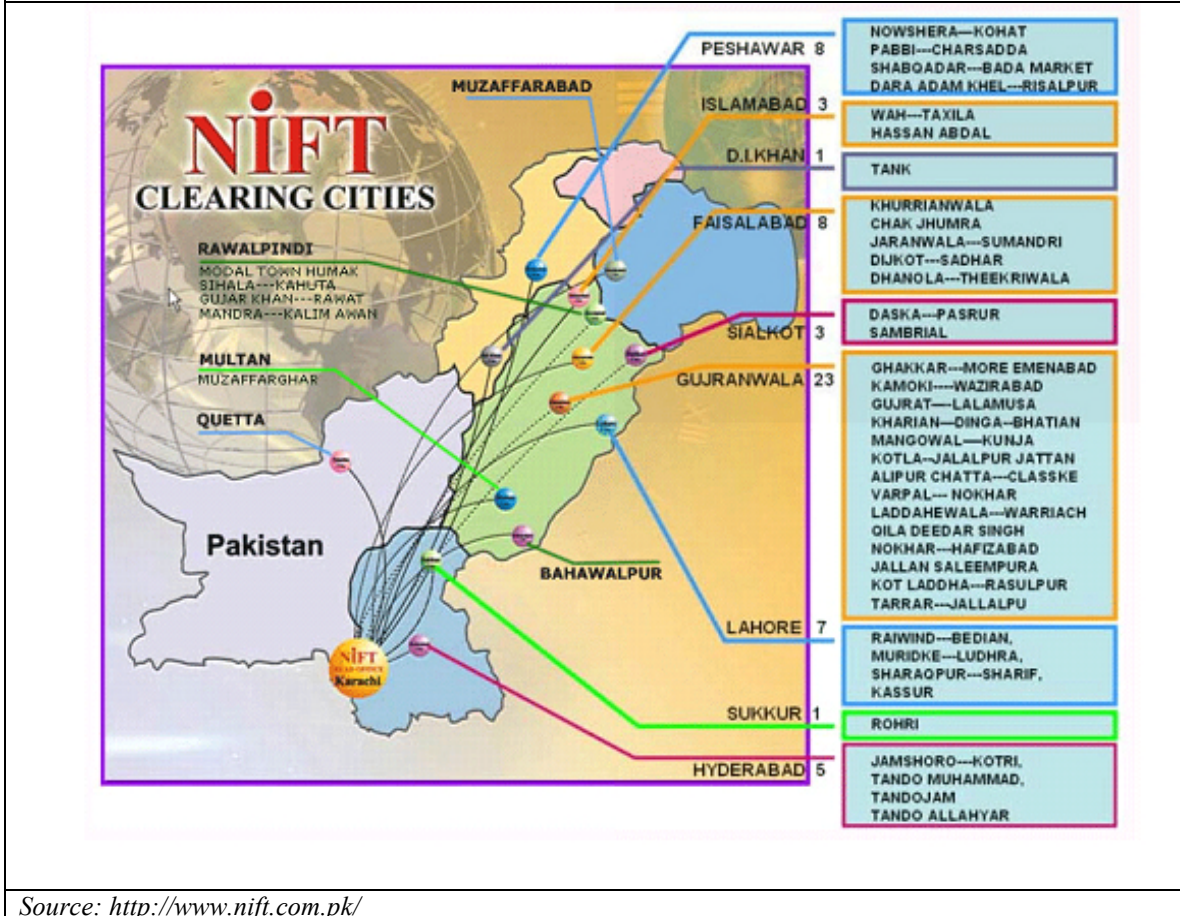
During the year under review, NIFT remained engaged in modernizing the financial instruments processing mechanism require for payment and settlement system in the country. The automation of clearing operations which commenced with the establishment of the first centre at Karachi way back in 1996 has now been extended to Lahore, Islamabad, Rawalpindi, Gujranwala, Sialkot, Faisalabad, Hyderabad, Peshawar, Multan, Bahawalpur, Quetta, Sukkur, D. I. Khan and Muzaffarabad where data centers are providing clearing services. Almost entire country is now on NIFT ACH grid. The

introduction of the automated clearing involved creating local standards for encoding cheques and other instruments, assisting banks in preparing standard code line and training the staff of commercial banks' branches.

NIFT has established image based clearing systems harnessing high speed MICR Reader / Sorter equipment from NCR, UNISYS and FUJI. The approach has paved way for the next step towards cheque truncation and electronic clearing. The software implementation has been configured with a large component of code developed in-house to facilitate local requirements and ever changing needs. NIFT's clearing operation has proved to be a successful arrangement. The basic implementation has been tailored to take care of the local needs while the functional support is based on effective process reengineering. The main change relates to creating a direct relationship with each branch and dispensing with the role of the central branch at multi-branch-banks in a manner that NIFT collects the outward clearing directly from each and every branch and arranges processing, presenting of returns, providing the net position etc to SBP-BSC and necessary scrolls, reports and advices for accounting the entries to all commercial banks and their branches. Another major element pertains to merger of intra-bank clearing or transfer delivery into inter-bank clearing thus relieving large multi-branch-banks of typical problems and providing an economically viable solution. Furthermore, NIFT under the assistance and coordination with SBP-BSC field offices also provides an effective collection and delivery service to all banks and branches in over 80 cities. During FY07 the total number of instruments cleared through NIFT was 66,347,664 as compared to 58,747,655 during the previous year. The transactions settled through manually operated clearing houses were 153,251 during FY07 as against 2,202,133 in the previous year.

<b>Table 4.2 Instruments cleared through manual / NIFT clearing houses</b>					
<b>S #</b>	<b>Office</b>	<b>2005-06</b>		<b>2006-07</b>	
		<b>Manually Operated Clearing House</b>	<b>NIFT</b>	<b>Manually Operated Clearing House</b>	<b>NIFT</b>
1	Bahawalpur	193,079	9,300	-	238,041
2	D. I. Khan	43,903	23,483	-	88,668
3	Faisalabad	-	131,202	-	93,343
4	Gujranwala	501,740	545,616	-	1,818,430
5	Hyderabad	-	51,046	-	49,484
6	Islamabad	-	4,631,761	-	4,108,620
7	Karachi	-	32,689,355	-	32,800,758
8	Lahore	-	14,382,386	-	18,156,103
9	Multan	-	1,100,476	-	1,232,908
10	Muzaffarabad	106,637	-	78,385	23,325
11	N. N. Karachi	-	15,940	-	28,247
12	Peshawar	-	1,280,824	-	1,558,274
13	Quetta	80,741	622,202	-	921,115
14	Rawalpindi	-	3,037,832	-	3,218,694
15	Sialkot	388,206	226,232	-	818,753
16	Sukkur	887,827	-	74,866	1,192,901
<b>Total</b>		<b>2,202,133</b>	<b>58,747,655</b>	<b>153,251</b>	<b>66,347,664</b>

Figure 4.2 Nation Wide Clearing Grid



Source: <http://www.nift.com.pk/>

### 4.3 Real Time Gross Settlement

With a view to establish a safe settlement of inter bank payments, SBP has initiated setting up of Real-Time Gross Settlement system in the Bank. The implementation of RTGS systems is necessary to reduce systemic risk in high value payment systems. In an RTGS system, transactions are settled across accounts held at the central bank on a continuous gross basis where settlement is immediate, final and irrevocable. Credit risk due to settlement lags is therefore virtually eliminated. SBP is in the process of gradual shifting from traditional paper-based, end-of-the-day settlement system to the electronically operated RTGS named Pakistan Real Time Inter-bank Settlement Mechanism (PRISM) for large value, low volume inter-bank fund transfers and settlements. PRISM, when implemented, will provide the capability to settle the inter-bank transactions whether clean or against securities on real time basis thus minimizing the settlement risk for the participants.

The field offices of SBP-BSC are playing a vital role in developing the RTGS system. For the RTGS project, SBP-BSC has deputed a number of trained officers with the project team to provide them relevant information and logistic support. In addition, the departments and field offices of SBP-BSC especially Karachi office have contributed immensely in vetting various specifications and documents and provided feedback.

RTGS project has now started moving forward in the coveted direction. The required hardware for the PRISM system has been procured and installed at SBP's Primary and DR Sites. Connectivity arrangements are being finalized with PTCL and testing in this regard will start soon. Contracts with vendors for interfacing RTGS with SBP's internal banking application have been finalized and work in this regard has started. As soon as the interfacing and connectivity related aspects of the project are completed the training phase will be started.

One of the major aspects of the project has been the centralization of multilateral netting for retail clearing, currently done through NIFT in Karachi, which has seen significant progress during FY07. This initiative was a prerequisite for launching of RTGS that will also enable the commercial banks to effectively utilize their liquidity currently scattered in 16 field offices of SBP-BSC. The proposal for this purpose has been prepared and finalized by RTGS team after intensive discussions with the stakeholders and has also been tested successfully. SBP-BSC offices were again instrumental in providing their feedback and data for testing. During FY07, the RTGS team in collaboration with NIFT and SBP-BSC field offices held training / awareness sessions for the commercial banks throughout the country. These sessions were highly successful and attended by a number of officers from commercial banks. All efforts and assistance were provided by SBP-BSC to the project team for an early commencement of the RTGS system that continued to be extended during the period under review for its successful / effective operation.

#### **4.4 Electronic Banking System**

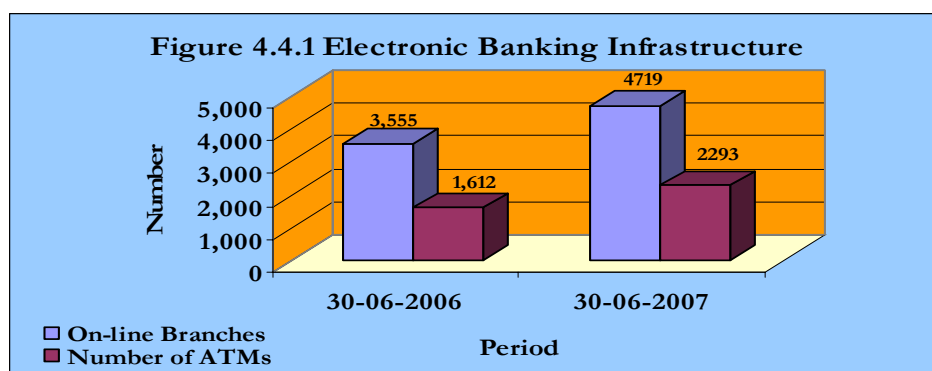
During FY07, SBP continued its focus on promoting electronic banking system in the country. SBP has encouraged the commercial banks to expand their e-banking infrastructure. Consequently the number of ATM machines has increased significantly, apart from other channels of e-banking, during the period under review. The facilities being provided by the commercial banks through their ATMs have also increased during FY07. These mainly included the expansion of card systems, Point of Sale (POS) system used by merchants and facility of accepting payment of utility bills via ATMs etc.

##### ***4.4.1 Electronic Banking Infrastructure***

During FY07, the on-line branches of the commercial banks and the ATM network both have shown a consistent growth. The current year has witnessed an addition of 1,164 new on-line branches bringing the total number of such branches to 4,719 as compared to 3,555 branches at the end of FY06. Similarly, during FY07 the commercial banks have

added 681 new ATMs in their network, bringing the total ATMs to 2,293 as compared to 1,612 ATMs at the end of FY06.

<b>Table 4.4.1 Electronic Banking Infrastructure</b>				
<b>Description</b>	<b>30-06-2006</b>	<b>30-06-2007</b>	<b>Increase</b>	<b>Increase in %</b>
On-line Branches	3,555	4,719	1,164	+32.7
Number of ATMs	1,612	2,293	681	+42.2
<i>Source: Payment Systems Department SBP</i>				



#### 4.4.2 Transactions through ATMs

The number of ATM transactions stood at 51.5 million during FY07 as compared to 35 million during the preceding year showing an increase of 47.1 percent over the year. The value of transaction stood at Rs.352.4 billion during FY07 as compared to Rs.211.0 billion in FY06 reflecting an increase of 67 percent. ATMs were largely used for cash withdrawals and field offices of SBP-BSC provided ample quantity of fresh currency notes to the online branches of commercial banks to conveniently perform electronic transactions through ATMs.

<b>Table 4.4.2 Transaction through ATMs</b>				
<b>Description of Transaction</b>	<b>2005-06</b>	<b>2006-07</b>	<b>Increase</b>	<b>Increase in %</b>
Number (in million)	35	51.5	+16.5	+47.1
Value (in billion)	211	352.4	+141.4	+67.0
<i>Source: Payment Systems Department SBP</i>				

