

4 PAYMENT AND SETTLEMENT SYSTEMS

4.1 Overview

Payment and settlement systems are crucially important to the smooth functioning of the economy. It is the responsibility of a central bank to promote sound and efficient payment and settlement systems. Financial institutions use payment systems to settle financial market transactions. State Bank of Pakistan has made incredible efforts for improving the efficiency of the payment system. The development of Real-Time Gross Settlement (RTGS) system is one response to meet the growing need for an efficient payment system. For effective management of the payment and settlement systems, the SBP maintains close liaison with the BSC. Being an operational arm of the State Bank, the BSC facilitates in maintaining an efficient, safe and reliable payment and settlement system. During FY06, BSC continued to contribute in SBP's plans of upgrading automated services in the payment arena. BSC also provided inter-bank settlement facilities to financial institutions through their current accounts. During the period under review, payment instruments of commercial banks have been standardized to facilitate the automated clearing facilities provided by the National Institutional Facilitation Technologies (NIFT) in most of the field offices of BSC.

4.2 Clearing System

The SBP BSC offices oversee the operation of the clearing house for the commercial banks operating within their jurisdiction. Automated clearing services are provided by the NIFT at most of the field offices. It is a nationwide mechanism that processes electronically originated transactions of credit and debit transfers among commercial banks. Through electronic clearing, different risks of commercial banks and customers have been minimized and payment processing costs have also been reduced. Increasing volume of non-cash payment instruments like cheques, drafts, payment orders etc are being processed through a network of clearing house. Each participating bank's net position is generated through automated clearing house. Field offices of BSC oversee the activities of non-cash payment settlement and suggest corrective measures whenever necessary. At present all field offices of BSC except Muzaffarabad have automated clearing house facility.

The image based facilities for automated cheque clearing has also been activated in major cities. Head office of the BSC closely coordinate with the key players of the payment system i.e. NIFT, National Bank of Pakistan and field offices of BSC during the clearing and settlement process. During FY06 a remarkable improvement has been seen in quick processing of instruments with maximum security due to introduction of Magnetic Ink Character Recognition (MICR) technology last year. Establishment of Automated Clearing Houses is the key initiative for updating the businesses of BSC. The total number of transactions through NIFT was 59,742,921 during FY06 as against 46,573,009 during the previous year. While the transactions settled through manually operated clearing houses were 2,202,133 during FY06 as against 3,646,028 in the previous year, which showed a significant decline in manual clearing in the country.

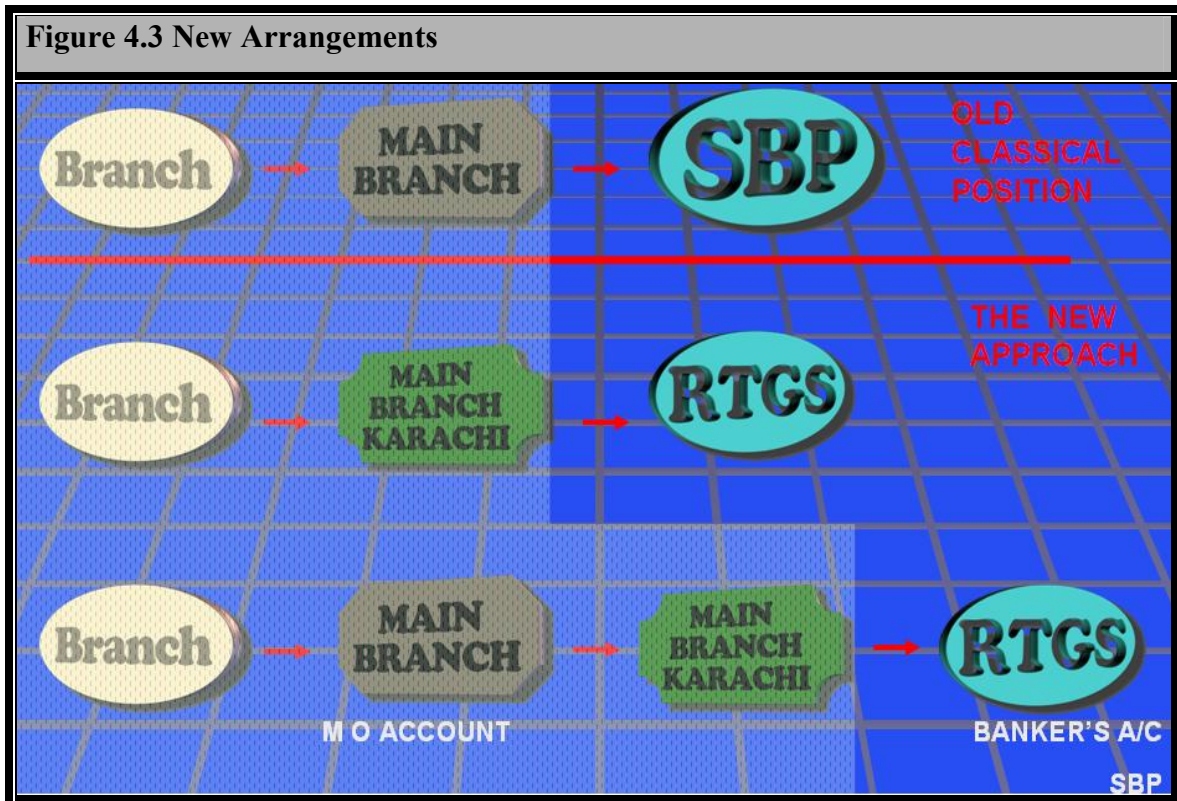
Table 4.2 Number of Cheques Cleared Through Clearing House Operations					
S #	Office	2004 – 05		2005 - 06	
		Manually Operated Clearing House	NIFT	Manually Operated Clearing House	NIFT
1	Bahawalpur	197,723	-	193,079	9,300
2	D. I. Khan	51,002	-	43,903	23,483
3	Faisalabad	-	18,000	-	22,500
4	Gujranwala	680,516	-	501,740	545,616
5	Hyderabad	-	884,400	-	1,155,014
6	Islamabad	-	3,423,428	-	4,631,761
7	Karachi	-	26,880,651	-	32,689,355
8	Lahore	-	11,996,553	-	14,382,386
9	Multan	883,606	-	-	1,100,476
10	Muzaffarabad	84,392	-	106,637	-
11	N. N. Karachi	-	14,830	-	15,940
12	Peshawar	-	960,334	-	1,280,824
13	Quetta	513,817	-	80,741	622,202
14	Rawalpindi	-	2,394,813	-	3,037,832
15	Sialkot	485,413	-	388,206	226,232
16	Sukkur	749,559	-	887,827	-
Total		3,646,028	46,573,009	2,202,133	59,742,921

4.3 Real Time Gross Settlements

State Bank of Pakistan has taken initiative to establish an integrated payment and settlement system in the country. Real-Time Gross Settlement (RTGS) system is one of the projects initiated by the SBP in this regard. RTGS system is being introduced for large value payments in the inter bank market in which commercial banks holding accounts at SBP would be able to operate their accounts in real time from their own premises via computerized network between SBP and the participating banks. Under the new arrangements banks would be able to settle their transactions affecting their accounts at SBP (e.g. inter bank lending/borrowing) immediately after the terms of the transaction have been agreed and executed between the banks. The ability to make the final settlement of funds in real time would require that the bank sending a debit instruction must have sufficient balance available in its account before the funds transfer takes place. The system would effect final settlement of inter-bank fund transfer on a continuous, transaction-by-transaction basis throughout the processing day. RTGS, when implemented, will completely automate the settlement of large value inter-bank financial market transactions.

4.3.1 NIFT's role in the implementation of RTGS

In implementation of RTGS system, one of the key elements of change that will impact the clearing system is the countrywide multilateral netting of clearing results and its settlement at SBP BSC Karachi. Under the requirement of new system, NIFT would collect nets from all automated centers and provide a consolidated net to the SBP BSC Karachi for settlement. Hence, the countrywide net position will subsequently be debited / credited to banks' current accounts in Karachi.



4.4 Standardization of Government Payment Instruments

During the period under review, most of the payment instruments of commercial banks have been standardized to facilitate the automated Clearing House facilities provided by the NIFT in the field offices of BSC. Standardization of Government Payment Instruments is imperative for automated clearing of government accounts through NIFT Clearing Houses. The standardization of financial instruments encompassing the area of finalization of colours and standard size of different government instruments with the proposed SBP MICR Code Line was discussed with PSPC, NIFT, PIFRA and other stakeholders. Based on their suggestions, it has been decided that:

- Cheques bearing serial numbers with alpha numeric characters of different dimensions will be discontinued
- Instruments of different light colours for the federal and provincial governments will be used to avoid chances of wrong payment
- Machine readable MICR will now be used so that electronic processing of payment instruments is managed by NIFT

With the introduction of standardized instruments, no internal accounting procedure or internal control of any department will be changed rather the new system shall provide more controls over the payment process. In an integrated environment, vital data concerning the payment instruments can be exchanged electronically thereby minimizing the chances of fraud. It will bring efficiency, accuracy and ensure best internal control / coverage of risk and also reduce the turn around time for the stakeholders.

Accordingly Standardization of the payment instruments (Colours shades / standard sizes etc.) used by the Federal and Provincial Government Departments is in process. Accordingly PSPC has discontinued further printing of cheques of old designs. However it has decided that simultaneously the existing stock of unused cheques in hand / lying with the stakeholders will be freely used and SBP BSC will accept the same without hindrance till their stocks exhaust completely as requested by the Director General (MIS) Controller General of Accounts Islamabad.

4.5 Electronic Banking Infrastructure

The process of transformation of payment and settlement system of the banking sector from manual transactions to on-line electronic transactions continued during the period under review. Transactions of non-cash payment instruments showed a rising trend as they are comparatively safe and convenient. Apart from non-cash payment instruments like cheques, drafts etc card-based payments, which include credit card, debit card and Automated Teller Machines (ATM) transactions, are gaining momentum gradually. However, the value of electronic transactions has achieved a rapid growth. BSC field offices are providing ample quantity of currency notes to the on-line branches of commercial banks to conveniently perform electronic transactions through ATMs. The following data showed considerable increase in the number and value of transactions of e-banking during last few quarters.

Table 4.5 (A) Number of Transactions in Retail Electronic and Paper Based Payments								
<i>(In thousands)</i>								
Variables	Q1 FY05	Q2 FY05	Q3 FY05	Q4 FY05	Q1 FY06	Q2 FY06	Q3 FY06	Q4 FY06
Electronic	10,021	10,571	11,467	11,656	15,611	16,348	18,035	20,205
Paper Based	50,642	54,257	48,078	53,446	66,572	80,030	72,255	82,131

Source: Payment Systems Department, State Bank of Pakistan

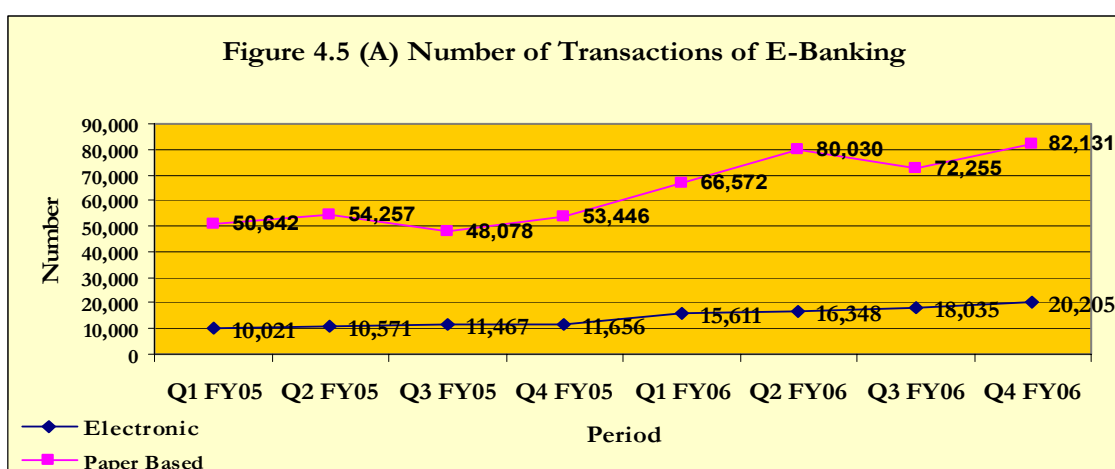
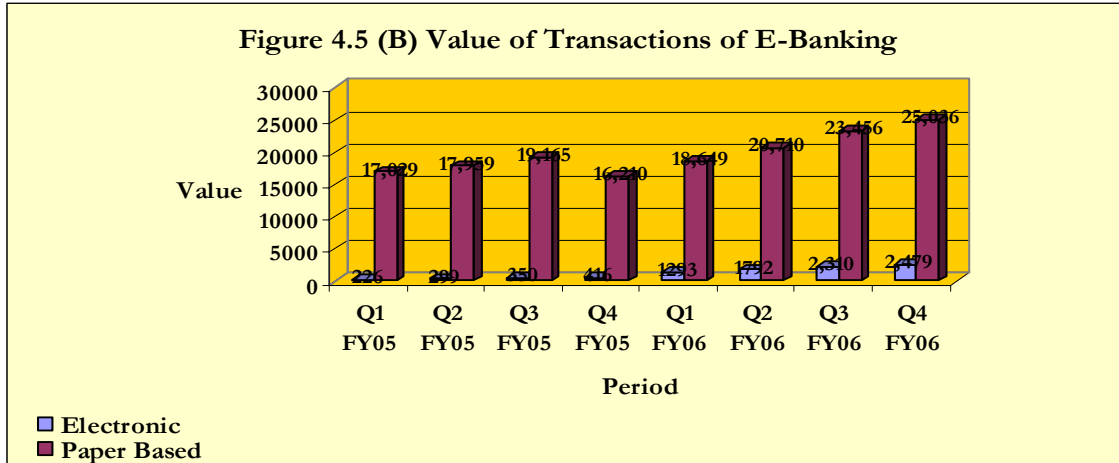


Table 4.5 (B) Amount of Transactions in Retail Electronic and Paper Based Payments								
<i>(Rs. in billion)</i>								
Variables	Q1 FY05	Q2 FY05	Q3 FY05	Q4 FY05	Q1 FY06	Q2 FY06	Q3 FY06	Q4 FY06
Electronic	226	299	350	416	1,293	1,792	2,310	2,479
Paper Based	17,029	17,959	19,165	16,210	18,649	20,710	23,456	25,036

Source: Payment Systems Department, State Bank of Pakistan



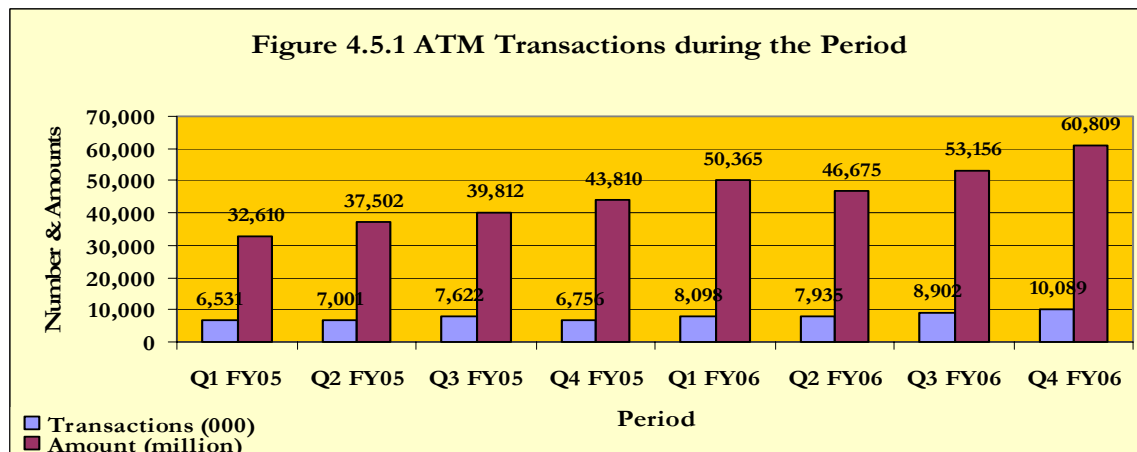
4.5.1 Transactions through ATMs

ATMs transactions during the Q4 of FY06 recorded at 10.1 million valuing at Rs.60.8 billion as compared to 6.7 million valuing at Rs.43.8 billion during Q4 of the previous year. The number of transactions on ATMs showed an increase of 49 percent and the amount of transactions increased by 39 percent. ATMs were used 99 percent for cash withdrawal and only 1 percent for other purposes i.e. cash deposit payment of utility bills and account to account fund transfers. The trend in usage of ATM is shown in **Figure 4.5.1**.

Table 4.5.1 ATM Transactions during the period (Number & Amount)

Variables	Q1 FY05	Q2 FY05	Q3 FY05	Q4 FY05	Q1 FY06	Q2 FY06	Q3 FY06	Q4 FY06
Transactions (000)	6,531	7,001	7,622	6,756	8,098	7,935	8,902	10,089
Amount (million)	32,610	37,502	39,812	43,810	50,365	46,675	53,156	60,809

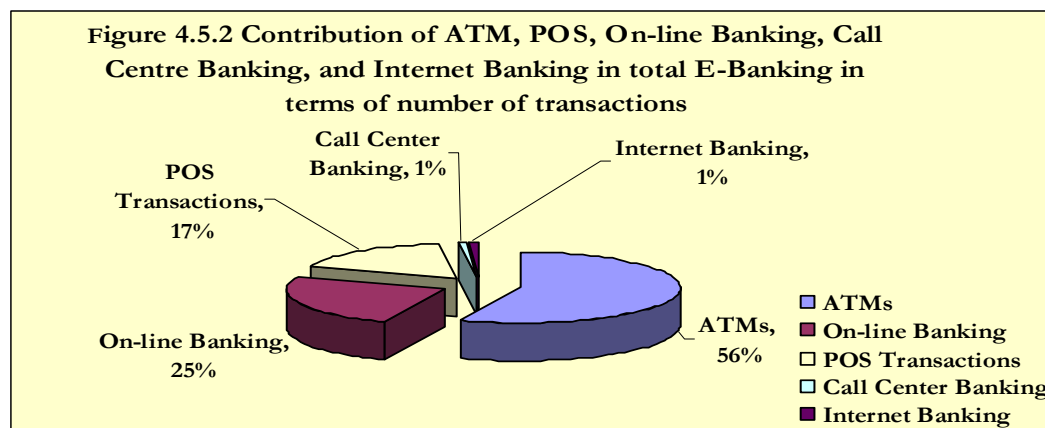
Source: Payment Systems Department, State Bank of Pakistan



4.5.2 Contribution of ATMs, POS and Real Time Online Banking in E-Banking Operations

ATM is commonly used for cash withdrawal of small value. Therefore, the share of ATMs in the number of transactions out of total number of electronic transactions is highest at 56 percent. Similarly, the share of Online Banking, POS, Call Centre and Internet Banking in the total E-Banking business was 25

percent, 17 percent, 1 percent and 1 percent respectively. However, in terms of amount, the contribution of online banking is 95 percent, since this channel is used for bank to bank transactions.



4.6 Training on Payment and Settlement Systems

During FY06, 141 officers of the BSC field offices participated in different training courses related to Payment & Settlement Systems within the organization as well as organized by different institutions of the country with a view to improve theoretical and practical knowledge of the employees about the latest systems to enable them to perform their jobs effectively and efficiently by using their enhanced skills.

Table 4.6 Training Imparted to the Employees of BSC during 2005-06

S #	Field Office	Payment & Settlement Systems	RTGS Systems	Anti Money Laundering	E-banking Business	TOTAL
1	Bahawalpur	2	-	-	1	3
2	D.I.Khan	2	3	-	-	5
3	Faisalabad	6	3	1	1	11
4	Gujranwala	2	3	-	-	5
5	Hyderabad	4	3	-	-	7
6	Islamabad	4	3	-	1	8
7	Karachi	10	-	1	1	12
8	Lahore	10	22	4	5	41
9	Multan	4	3	1	-	8
10	Muzaffarabad	2	3	-	1	6
11	N.N.Karachi	2	-	-	-	2
12	Peshawar	6	-	-	-	6
13	Quetta	7	-	-	-	7
14	Rawalpindi	7	-	-	-	7
15	Sialkot	4	-	2	-	6
16	Sukkur	4	3	-	-	7
	Total	76	46	9	10	141