

With the improvement in financial infrastructure, the payment system efficiently settled higher volume larger value of transactions, with minimal of down time and without any material disruption. Pakistan Real Time Interbank Settlement Mechanism (PRISM) effectively managed the settlement of increased large value and quantum of transactions and facilitated provision of required funding to the market even in the times of stressed market liquidity. Similarly, in line with past trend, quantum and size of transactions in retail banking grew due to growing usage of Real Time Online banking resulting in gradual but persistent increase in volume of e-banking transactions.

Figure 8.1

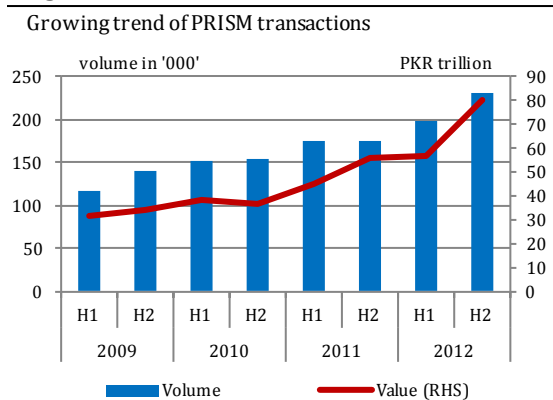
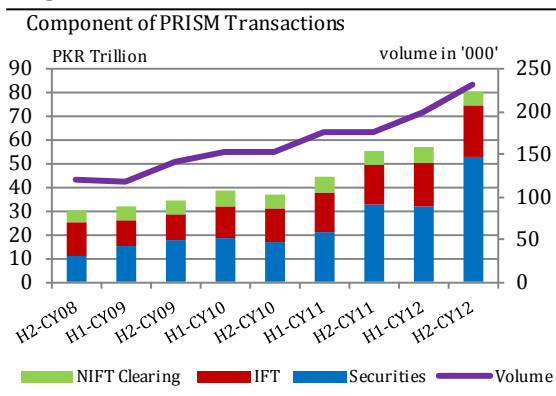


Table 8.1: Profile of Payment System Mechanisms

Mechanism	H1-CY12		H2-CY12	
	Volume	Value	Volume	Value
Volume in thousands and value in trillion Rupees				
PRISM	198.9	56.9	231.9	80.9
Retail Payments	325,100	64.3	331,600	66.4
Paper based	179,900	51.0	180,800	52.5
E-transactions	145,200	13.4	150,800	14.0

Figure 8.2



The continued stress of the SBP for bringing improvements in automated payment and settlement system resulted in increase in transactions settled both in terms of value and numbers during H2CY12. The improvement in payment system mechanism also facilitated by financial sector's investment in information technology (IT) infrastructure as also development of core banking solutions that helped to achieve the higher degree of operational efficiency, better provision of services and higher reliability of systems. Further, continued improvement in payment and settlement mechanism and broadening scope of products provided system opportunity to prove its efficiency and resilience even in stressed events.

Pakistan Real Time Interbank Settlement Mechanism (PRISM) effectively managed the efficient settlement of increased large value⁹⁴ and quantum of transactions even in the time of stress in liquidity market. To facilitate the same, the SBP also provided Intra-day Liquidity Facility (ILF) of around PKR 3.7 trillion (4.7 percent of overall value) during the period under review. Similarly, in line with past trend, value and volume of transactions in retail banking grew by 3.3 percent and 2.0 percent respectively over H1-CY12 (Table 8.1) resulting into gradual but persistently increasing volume of e-banking transactions.

PRISM facilitates multipronged interbank settlements...

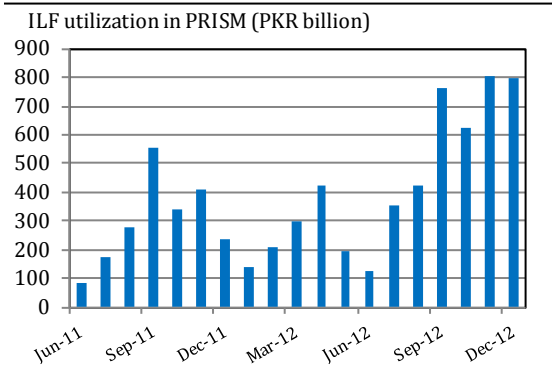
PRISM established at SBP is a large value payment system (LVPS) which ensures efficient settlement of large value government security transactions on real-time basis, thereby minimizing the settlement risk.⁹⁵ The capability of any LVPS is judged by its capacity to handle increasing number of large value critical transaction in an efficient manner. A detailed analysis reveals

⁹⁴ PRISM transactions are classified as high value transactions due to higher average size per transactions although there is no lower limit on such transactions.

⁹⁵ PRISM started operations with the settlement of interbank money market transactions and the domestic leg of FX market operations in July 2008. Since then, the scope of PRISM has been enhanced over time to provide a range of services such as; a) settlement of government securities, b) Intra-day Liquidity Facility (ILF), c) SBP's internal transactions such as OMO/auction settlement, d) settlement of interbank fund transfer received in batches through NIFT, e) bank's own account transfer and f) excess to stock exchange member through their settlement banks.

that the consolidated value of transactions settled through PRISM reached PKR 80.6 trillion in H2-CY12, almost 42 percent higher than the value of transaction in H1-CY12 (**Figure 8.1**). As a result, average transaction of LVPs surged to PKR 347 million in H2-CY12 against PKR 288 million in H1-CY12. The rise in average transaction was due to 66 percent growth in settlements of high value government securities as collateral in meeting short-term market liquidity requirements. The value of Interbank Fund Transfer (IFT), another component of PRISM, increased by 15.5 percent (**Figure 8.2**).

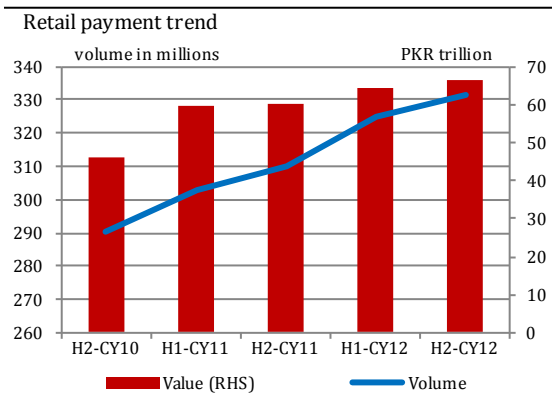
Figure 8.3



PRISM successfully catered settlement risk ...

Major risk facing the LVPs is the settlement risk, which may materialize in face of market stress. To address the issue and to allow the smooth settlement of LVPs, banks can avail ILF from SBP to make instant settlement in case of temporary funding shortages⁹⁶. Due to market liquidity pressures during H2-CY12, banks/DFIs considerably increased the ILF utilization, as a result, it enhanced substantially by around 88 percent. This allowed banks to settle transactions and avoid queues and gridlocks⁹⁷ in the PRISM. Similarly, the ratio of ILF utilization to PRISM transactions almost doubled in H2-CY12 to 4.7 percent from the level of previous half year. Since the inception of PRISM in July 2008, the ILF value continued uptrend and remained considerably high particularly since June 2011, an outcome of continuous market liquidity stress (**Figure 8.3**).

Figure 8.4



Retail payment transactions maintained decent growth...

The financial system continued to provide a wide range of efficient retail payment services (**Figure 8.4**). The retail payment system comprises both traditional cash transactions and modern technology based e-banking modes including card-based payments, merchant settlements, and settlements of transactions through mobile phones. Nonetheless, cash continued to be the most dominant mode of payments mainly for person-to-person (P2P) payments due to liquidity preference of the public. Despite host of issues associated with cash based transactions⁹⁸, people prefer cash transactions due to cultural issues, low level of financial penetration⁹⁹, lesser awareness, and to avoid documentation for possible tax evasion.

⁹⁶ ILF is hundred percent collateralized based facility at zero cost to be honored within a day, otherwise, it may render to be penalized or even SBP may redeem the pledged securities.

⁹⁷ PRISM transactions are based on FIFO (First in First out) as per the priorities assigned by the banks. If any transaction is not complete, the PRISM will keep the pending transaction in form of queues. Gridlock occurs when there are large unsettled transactions in the queue.

⁹⁸ This not only involves higher economic cost due to problems arising from manual counting, verification, and storage of physical currency note but also have social issues including risk of theft.

⁹⁹ Financial Inclusion in Pakistan is relatively lower than its peer countries as 56 percent of population is out of financial net.

Paper based transaction dominates the retail payment...

Apart from the cash transactions, the non-cash based mode of retail banking was dominated by traditional paper based chequing transactions while the second best, i.e., e-banking transactions gained momentum over the last few years due to rapid speed of innovation and technological developments.

Box 8.1: National Institutional Facilitation Technologies (NIFT)

Efficient and reliable settlement of transactions is key to a robust payment system, wherein, clearing mechanism plays a pivotal role. Earlier, the SBP BSC had been providing clearing and settlement services to commercial banks. Thereafter, NIFT, a joint venture between a consortium of major banks and private sector, has been handed over the responsibility for establishment and management of automated clearing house facility in Pakistan which introduced the automated clearing way back in 1995.

The NIFT now provides multi-dimensional facilities (Cheque clearing, funds transfer from government to public under government's social programs, utility bills' payment etc) to more than 7,365 banks' branches in over 265 cities/small towns in Pakistan. The NIFT brought in efficiency and enhanced the velocity of money through reducing the effective time of clearing process.

Paper based transactions (mostly cheque transactions) represented 54.5 percent share in volume and 79.0 percent share in value of retail banking transactions. During H2-CY12, volume of paper based payments increased marginally, while value increased moderately by 2.9 percent compared to 6.8 percent in the first half of 2012. Among paper-based retail banking transactions, chequing transaction¹⁰⁰ accounted for 83.5 percent share while other segments viz.-a-viz. Demand Draft (DD), Pay Order and Telegraphic Transfers contributed 10.2 percent share in aggregate.

Cheque truncation can bring about efficiencies into clearing process.....

Though, automated clearing through National Institutional Facilitation Technologies (NIFT) improved the clearing mechanism (**Box 8.1**), cheque truncation is one area which can bring about further efficiencies in the clearing process through low cost, easy and swift access and efficient settlement of cheque transactions.¹⁰¹

Work on cheque truncation was initiated sometime in the mid of the last decade. However, pace of work remained somewhat slow. This was despite the fact that legal framework-Payment Systems and Electronic Fund Transfers Act, 2007- provided for definition, process, and facilitation of electronic fund transfers through truncated cheques by Authorized Party (financial institution, clearing house or service provider). Knowing its importance, SBP in collaboration with banks and NIFT took the lead for implementing the cheque truncation project. For the purpose, Standard Operating Procedure (SOP), a roadmap, and Committee comprising representatives from banks, NIFT, and SBP has been formulated for implementation of Cheque Truncation Mechanism (CTM).

The share of e-banking on continuous rise...

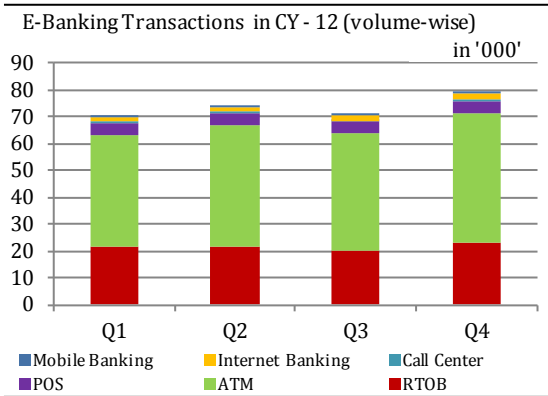
Table 8.2

E-Banking Infrastructure					
	H2-CY10	H1-CY11	H2-CY11	H1-CY12	H2-CY12
Point of Sale	44,382	37,232	35,703	34,879	34,724
Online branches	7,036	7,416	8,905	9,291	9,896
No. of ATMs	4,734	5,200	5,409	5,745	6,232

¹⁰⁰ Include cash withdrawal, clearing, transfer and refunds.

¹⁰¹ Cheque Truncation allows settlement of clearing transactions on the basis of images and electronic data without the physical movement of the instruments.

Figure 8.5

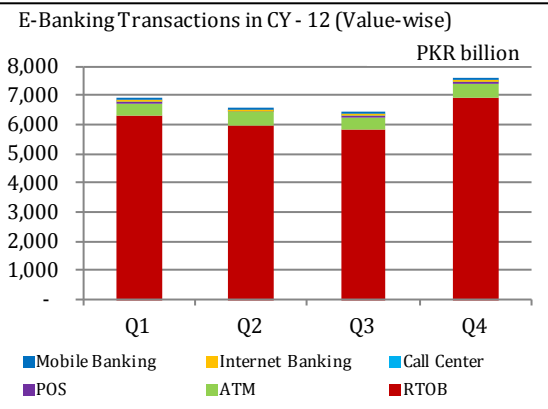


E-banking, over a decade, has grown exponentially both in terms of products being offered and diversity of technology based payment channels. Segment wise analysis shows that volume of ATM transactions led the e-banking due to “high volume low value transactions”. The number of ATMs surged from 1,612 in Jun-06 to 6,232 in Dec 2012 (**Table 8.2**). Branches offering Real Time Online Banking (RTOB) increased to 94 percent by end of CY12 from around 60 percent in June 2008 (**Figures 8.5 & 8.6**). Internet and mobile banking though remained low in terms of volume and value; it continued to improve its share in overall e-banking transactions¹⁰².

RTOBs led e-banking payments in terms of value.....

During H2-CY12, the system added another 605 Real Time Online Branches (RTOB), which increased the value of transaction by 4.0 percent and volumes by 0.1 percent. Due to lower volume growth, average size of RTOB transaction improved to PKR 295 thousand compares to PKR 284 thousand in the first half. Relative size of RTOB transaction was significantly higher than other e-transactions (against average size ATM transaction value of PKR 9.75 thousand) as most transactions were carried out by small and medium businesses.

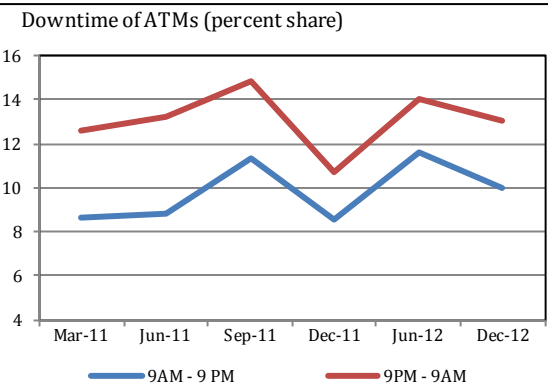
Figure 8.6



.....while ATMs growth further enhanced the transaction volumes

ATMs lead the e-banking transactions in term of volumes. During H2-CY12, newly installed ATMs grew by 8.5 percent to reach 6,232 (against 6.2 percent growth in H1-CY12), which further enhanced the volume and value of ATM transactions (**Box 8.2**). This partially resulted from regulatory instructions for improving the coverage ratio of ATMs (the number of ATMs per branch)¹⁰³ which, among others, required banks to add one ATM for each newly opened branch. However, value and volume of transactions decelerated due to base effect and host of other factors.

Figure 8.7



The efficiency of the ATM network improved during H2-CY12 as downtime decreased to 11.5 percent compared to 12.5 percent during the first half of the year. Though improvement was observed in both business and off-business hour transaction, it was more pronounced for the earlier (**Figure 8.7**). Analysis of trend over the last two years shows that downtime on average

¹⁰² Internet banking has actually moved from a sheer information channel to a financial transaction based channel. Mobile banking, which was nowhere in 2006, is now establishing foot hold and becoming “anywhere anytime” banking.

¹⁰³ BPRD Circular No.1 of 2012

Box 8.2: Automated Teller Machines (ATMs) in Pakistan

ATM network not only expanded over the years but also enhanced variety of services covering round the clock cash withdrawals, interbank fund transfers, utility bills payment, cash deposit, cross-border fund withdrawals, credit card top-ups etc. However, major share of ATM's transaction remain confined to cash withdrawal and balance information. Further lower utilization volumes and small average transaction values resulted from a numerous factors including cap on a single day withdrawal limits, withholding tax imposed on cash withdrawals, preference of the public to use over the counter services. Introduction of new avenues like cash withdrawal and remittance services through branchless banking, particularly the mobile banking, may impact utilization rate of ATMs as well.

remained stagnant for the business hours while it gradually increased for the off-business hours. As highlighted in the earlier issues of FSR, issues like technological problems, breakdown of system wide links, power shortages and security concerns resulted into ATM's high rate of lost service hours. To address the situation, banks and regulator needs to take measures for further improving the efficiency of the system. In case of Pakistan, such collaboration has worked well in the past, which facilitated the phenomenal growth in ATM network.

The time is ripe for the regulator to reassess the existing regulatory framework in conjunction with banks for bringing about improvements in service delivery and ATM availability. Further, banks need to improve on the efficiency of ATMs for enhancing the services as well as provision of uninterrupted services to the ATM users.

POS based transaction observed downtrend due to slowing consumer financing ...

E-banking facilitates its customers for execution of transactions at merchant through their debit/credit cards. During H2-CY12, the overall Point of Sale (POS) transactions observed a marginal increase of 0.4 percent while volumes decline by 2.60 percent. The overall POS terminals installed continued to decline during the last few years, the trend which prevailed in the period under review as well. Number fell from 35,703 in Dec 2011 to 34,724 in Dec 2012 (**Table 8.2**). As most of POS transactions are credit card based, the stagnancy in transactions corroborate with the slowing Credit Card business of banks, which observed substantial dip since 2008. This was perhaps due to banks' cautious approach in extending credit to consumer finance in the wake of heightened credit risk in this segment. Resultantly, banks either limited their credit card business or adopted selective approach by targeting only middle and upper end clients for extending Credit Cards to new customers.

The low-scaled interbank banking is on rise...

Internet banking, though contributes to small share in e-banking transactions, continued gradual gains with improved awareness. The internet banking, with PKR 228 billion transactions during H2-CY12, stood third in terms of value of e-banking transaction after ATMs. Its volume and value almost doubled over the last two years. During the half year under review, it observed almost double digit growth which enhanced their share in e-banking transaction to 1.63 percent in terms of value(1.5 percent in H1-

CY12) and 2.8 percent in terms of volumes(2.6 percent in H1-CY12)

Entry of new players maintained the growth pattern of branchless banking

Branchless banking has gained a substantial momentum within a short span of time; thanks to wide penetration of mobile telephones and increasing number of players providing mobile based banking services (**Table 8.3**). In H2-CY12, the number of mobile phone service subscribers increased to 121.9 million, representing a teledensity of about 69 percent (68.5 percent in H1-CY12)¹⁰⁴. This growth coupled with entry of two new players¹⁰⁵ significantly enhanced the value and volume of branchless banking transaction. With the expected entry of top banks in the branchless banking arena in near future, it is expected that the innovations and growth in this segment of banking services will flourish further in the period ahead.

E-banking is no exception in terms of risks involved...

Although e-banking enhanced the efficiency and provided comfort to customer and an obvious solution for expanding the outreach of financial services to unbanked/remote areas, it remained exposed to wide spectrum of risks. These risks include breaches of criminal intent and hackers, loopholes in system design resulting in to operational difficulties in its utilization, provision of services below the promised standard, services disruptions, theft of customers' confidential information and conduct of frauds. The degree of risks may not be as higher for non-financial services as for the financial transactions. To address the issues, SBP has issued several regulatory guidelines¹⁰⁶ to mitigate the risks without causing disruption to operational efficiency of system.

Branchless Banking Indicators				
	H2-CY11	H1-CY12	H2-CY12	Growth rate
No. of Agents*	22,512	29,525	41,467	40
No. of Accounts	929,184	1,447,381	2,112,052	46
No. of Transaction (millions)	37	54	67	25
Transaction Value (Rs. billions)	138	200	292	46

¹⁰⁴ Source: Pakistan Telecommunication Authority

¹⁰⁵ Mobicash" and „Timepey

¹⁰⁶ For example, PSD's Circular No2 of 2007 "Operational Guidelines on ATMs, BP&RD's Circular No2 of 2008 on "Branchless Banking Regulations for Financial Institutions", PSD Circular No1 of 2009 on "Operational Guideline for Credit Card Business in Pakistan" etc