

In 1387, the payment system in Iran experienced great developments which include: issuance of Iran-Checks by the Central Bank and their replacement for those issued by banks; quantitative and qualitative growth of electronic payment instruments, facilities and services; and development of the Interbank Information Transfer Network (SHETAB) and the Real

Time Gross Settlement System (SATNA) as the center for interbank electronic settlement. Moreover, the legal foundation of the Automated Clearing House System (PAYA), the Scripless Securities Settlement System (TABA), and the establishment of a center for oversight and supervision of banks' credit (MAKNA) were carried out in this year.

#### **Box 6- The Launching of PAYA, TABA, and MAKNA**

##### **PAYA: Automated Clearing House System**

Automated Clearing House System (PAYA), the main infrastructure for processing individual and multilateral payment orders, is designed to receive and process multiple payment orders from origin banks, then forward them to banks for settlement. This system is composed of two separate cores namely, "direct credit" and "direct debit", which facilitate credit and debit transfers by banks. The launching of the PAYA for banks' payments by either standing orders or direct debit as one part of the comprehensive payments system project was on the CBI agenda as of the beginning of 1387.

##### **TABA: Scripless Securities Settlement System**

In the Scripless Securities Settlement System (TABA), settlement of securities

takes place instantaneously as and when transactions take place. Whenever a transaction takes place, securities will be transferred from one account to another in the form of an electronic data entry. In an outright buying or selling transaction for instance, there will be a buyer whose account will be credited after receiving securities and there will be a seller whose securities account will be debited. The corresponding funds transfer will take place through SATNA where licensed banks are participants. The corresponding accounting entries will be made to the settlement account of relevant licensed banks. The settlement of securities through TABA and funds through SATNA will be confirmed electronically to the participant involved.

**Box 6 (cont.)- MAKNA: Center for Oversight and Supervision of Banks' Credit**

A centralized loan database is a prerequisite for creation of the comprehensive customers' identification system as well as customers' information database. Creation of a center for oversight and supervision of banks' credit (MAKNA) based on paragraph 5, Article 43 of the Supervisory-Policy Package of the Banking System in 1387 is a major step forward in creating the mentioned centralized database. MAKNA is a center for registering, storing and updating data on small-value and large-value

credits extended to banks' customers. The first phase of this system is devoted to the registration of customers' information regarding their requests for credit cards, which by expansion of activities in the next years help cover all customers' information. Creation of MAKNA is for the purpose of resolving the problems faced by the credit section of banks through transforming the separated customers' information databases of banks into an integrated one for all banks.

**Cash Payment**

**Notes and Coins**

For facilitation of business transactions and trade settlements, Central Bank took the initiative to print and issue CBI Iran-Checks in pursuance of the Cabinet approval on Esfand 21, 1386, to replace guaranteed checks and check notes issued by banks, which were widely in circulation as currency substitute (legal tender). It is noteworthy that printing notes is the sole responsibility of CBI according to the Monetary and Banking Law of Iran approved in 1351. CBI issued Rls. 110 trillion Iran-Checks till end-1387. With inclusion of Central Bank Iran-Checks,

total notes and coins issued in the review year equaled Rls. 207.3 trillion. Notes and coins with the public (including CBI Iran-Checks) increased from Rls. 79,909 billion in 1386 year-end to Rls. 157,764 billion at end-1387, up by 97.4 percent. Therefore, ratio of notes and coins with the public to GDP (at current prices) increased by 1.9 percentage points to 4.7 percent, compared with previous year. Furthermore, share of notes and coins with the public in money (M1) and liquidity (M2) rose 15.1 and 3.4 percentage points to 30.0 and 8.3 percent,

**Notes and Coins with the Public and their Ratio to Macroeconomic Indicators**

	Amount (billion rials)	Percentage change (annual)	Share in money (percent)	Share in liquidity (percent)	Ratio to GDP (percent)	Notes and coins per capita (thousand rials)
1383	44,772	15.6	17.7	6.5	3.1	655
1384	50,676	13.2	15.9	5.5	2.7	730
1385	61,452	21.3	14.8	4.8	2.7	872
1386	79,909	30.0	14.9	4.9	2.8	1,117
1387 <sup>1</sup>	157,764	97.4	30.0	8.3	4.7	2,174

<sup>1</sup> Surge in the amount of notes and coins with the public was due to issuance of CBI Iran-Checks to replace check notes issued by banks, which were widely used by the public, and their inclusion in the notes issued by the CBI.

respectively, in 1387 year-end compared with the same period previous year. Notes and coins per capita went up by 94.6 percent to Rls. 2,174 thousand compared with 1386.

### Demand Deposits

Total demand deposits decreased by 19.3 percent (Rls. 88,080 billion) to Rls. 367,718 billion in 1387 year-end, compared with 1386. This was mainly due to prohibition of issuance of check notes by banks and their replacement with CBI Iran-Checks. Net amount of checks issued by banks<sup>1</sup> (upon deduction of the checks of other banks) decreased from Rls. 136,501 billion in 1386 year-end to Rls. 34,467 billion at end-1387, down by Rls. 102,035 billion. Thus, share of these checks in banks' demand deposits declined from 29.9 percent at end-1386 to 9.4 percent in 1387 year-end. Share of these deposits in money was 70.0 percent, and in liquidity 19.3 percent. Meanwhile, the ratio of these deposits to GDP was 10.9 percent, at current prices. Demand deposits per capita reached Rls. 5,066 thousand, down by 20.5 percent compared with the preceding year. Therefore, money volume shrank by 1.9 percent to Rls. 525,483 billion at end-1387.

### Interbank Clearing House

In 1387, over 482 million checks worth Rls. 8,469 trillion were channeled through the interbank clearing house. The issue and

circulation of CBI Iran-Checks as substitutes for check notes issued by banks and the similarity of CBI checks with notes in circulation allayed the need for settlement of these checks in clearing rooms. Total Iran-Checks channeled through this House, in terms of volume and value, reached 305 million and Rls. 320 trillion, down by 53.5 and 49.7 percent, respectively. Therefore, in 1387, each transaction at Rls. 1,049 thousand, on average, indicated 8.1 percent growth compared with the corresponding figure of previous year (Rls. 970 thousand). Moreover, the number and value of transactions per capita reached 4.2 times and Rls. 4,406 thousand, respectively.

Ordinary checks include various kinds of checks such as bank checks, interbank coded checks, guaranteed checks, traveler's checks, and personal checks. In 1387, the number of ordinary checks delivered to the Interbank Clearing House decreased by 31.7 percent, largely for the replacement of check notes issued by banks and prevention of the issuance of new check notes. However, total value of transactions settled through ordinary checks reached Rls. 8,149 trillion, up by 10 percent. Therefore, the average amount of each transaction increased by 61.0 percent to Rls. 46,040 thousand, compared with the respective figure of the previous year (Rls. 28,595 thousand). Moreover, the number and value of transactions

### Demand Deposits and their Ratio to Macroeconomic Indicators

	Amount (billion rials)	Percentage change (annual)	Share in money (percent)	Share in liquidity (percent)	Ratio to GDP (percent)	Demand deposits per capita (thousand rials)
1383	208,043	16.5	82.3	30.3	14.3	3,044
1384	267,244	28.5	84.1	29.0	14.4	3,851
1385	353,093	32.1	85.2	27.5	15.6	5,009
1386	455,798	29.1	85.1	27.8	15.9	6,372
1387	367,718	-19.3	70.0	19.3	10.9	5,066

<sup>1</sup>Includes balance of all checks (except personal checks) including coded checks, guaranteed checks, traveler's checks, as well as check notes issued by banks.

## Chapter 15 PAYMENT SYSTEM

settled through ordinary checks per person were respectively 2.4 times and Rls. 112,270 thousand. This reveals higher use of ordinary checks for large value payments compared with notes and CBI Iran-Checks.

In 1387, ratio of total value of transactions processed through the interbank clearing house to GDP (at current prices) was 2.5, down from 2.8 in the previous year. This ratio was 0.1 for Iran-Checks, and 2.4 for ordinary checks.

### Electronic Payment System

#### Expansion of Electronic Payment Instruments

In the review year, electronic payment instruments, equipment and systems in banks network expanded with an admissible growth. The pace of growth in this year was lower than the previous years, however. The number of cards issued by the banking system rose 55.7 percent to 60.1 million. Among these cards, 48.1 million were debit

cards (80 percent), 11.7 million prepaid (gift) cards (19.5 percent), 328 thousand credit cards (0.5 percent), and about 12 thousand e-money cards.

The number of cards issued in the country for each individual reached 0.8 at end-1387, indicating a remarkable growth, compared with the corresponding figure of the preceding year (0.5). The number of ATMs increased by 30.7 percent to 12,959 in the review year. The number of Pin-pads, the electronic devices used in banks for funds transfer through cards, rose 24.6 percent to 27,048. The number of POSs surged by 78.9 percent to 764 thousand, representing the positive trend of banking system in expanding electronic payment. At end-1387, the ratio of cards issued per ATM, Pin-pad and POS was 4,636, 2,221 and 79 cards, respectively, showing a rise for ATMs and Pin-pads, and a reduction for POSs. Given the significant rise in the number of electronic instruments, it is expected that this growing trend will continue in the future.

#### Volume and Value of Transactions Processed through Interbank Clearing House

	Volume (million)			Percentage change		Value (trillion rials)			Percentage change	
	1385	1386	1387	1386	1387	1385	1386	1387	1386	1387
<b>Total transactions through Interbank Clearing House</b>	<b>604</b>	<b>915</b>	<b>482</b>	<b>51.5</b>	<b>-47.3</b>	<b>5,542</b>	<b>8,042</b>	<b>8,469</b>	<b>45.1</b>	<b>5.3</b>
Iran-Checks issued by banks	351	656	305	86.9	-53.5	283	636	320	124.7	-49.7
Ordinary checks	253	259	177	2.4	-31.7	5,259	7,406	8,149	40.8	10.0

#### Electronic Payment Instruments

	Year-end		Percentage change
	1386	1387	
Bank cards	38,593,283	60,078,271	55.7
ATMs	9,917	12,959	30.7
POSs	427,082	763,938	78.9
Pin-pads	21,707	27,048	24.6

#### Bank Cards (thousand)

	Year-end		Percentage change
	1386	1387	
Debit cards	30,163	48,062	59.3
Credit cards	265	328	24.0
Prepaid/gift cards	8,166	11,688	43.1
E-money cards	8.8	11.9	34.8

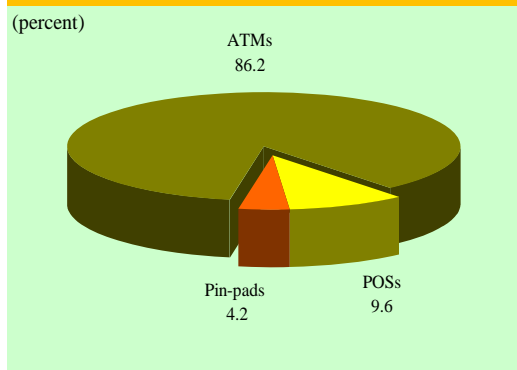
### Development of Electronic Transactions

In 1387, along with the expansion of electronic payment technology and equipment, banks' electronic transactions increased remarkably. Total number and value of electronic transactions settled through the banking system reached 928 million and Rls. 682,133 billion. The number of transactions processed through ATMs, POSs and Pin-pads during the review year grew by 30.5, 162.9, and 22.5 percent, respectively. Thus, total settled transactions by means of these instruments, in terms of value, went up by 76.0, 126.9, and 40.1 percent, respectively, in 1387. Total transactions settled through each card, on average, reached 15.4 transactions. The average number of transactions settled by each ATM was 61,710, Pin-pad 1,446, and POS 116. The average value of each transaction processed through ATMs reached Rls. 329 thousand, POSs Rls. 540 thousand, and Pin-pads Rls. 9,494 thousand.

In spite of the significant rise in the volume and value of transactions processed through POSs, the highest share still belonged to ATMs. Share of ATMs in total number of transactions was 86.2 percent and in total value of transactions 38.5 percent, while that of POSs was 9.6 and 7 percent, respectively. This is indicative of the limited use of POSs by the public against that of ATMs, mostly for receipts and payments. It is

expected that with the extensive use of credit cards and prepaid cards, as well as availability of POSs throughout the country, the share of transactions through POSs increases and the use of notes decreases. Pin-pads, which were largely used for checking the balance of bank cards and electronic transfer of funds between banks' branches, held a significant share of 54.5 percent in total value of transactions at end-1387. Moreover, the electronic interbank transfer of funds up to Rls. 150 million through Pin-pads became operational in the review year, reducing the use of cash and interbank coded checks for funds transfer from one bank to another.

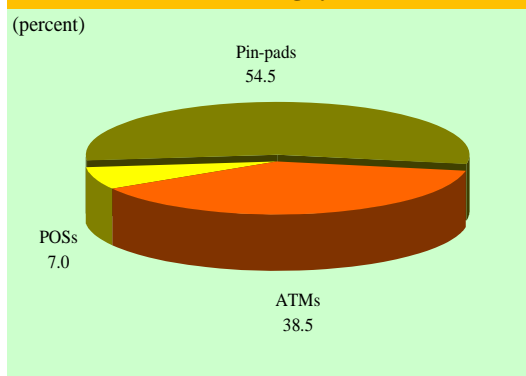
**Figure 15.1. Share of electronic payment instruments in total number of electronic transactions in the banking system in 1387**



### Volume and Value of Electronic Transactions Processed through the Banking System

	Volume (thousand)		Growth (percent)	Value (billion rials)		Growth (percent)
	1386	1387		1386	1387	
<b>Total electronic transactions through the banking system</b>	<b>678,307</b>	<b>927,683</b>	<b>36.8</b>	<b>435,512</b>	<b>682,133</b>	<b>56.6</b>
ATMs	612,575	799,698	30.5	149,242	262,733	76.0
POSs	33,794	88,861	162.9	21,143	47,975	126.9
Pin-pads	31,938	39,124	22.5	265,127	371,425	40.1

**Figure 15.2. Share of electronic payment instruments in total value of electronic transactions in the banking system in 1387**



The interbank information transfer network (SHETAB) plays a key role in processing electronic transactions in the banking system. Share of SHETAB in total transactions processed through ATMs was 58.6 percent, and through POSs 63.5 percent. The number of interbank electronic transactions processed in SHETAB through ATMs and POSs went up by respectively 30.4 and 156 percent to 468,427 thousand and 56,452 thousand. Therefore, net value of transactions processed through SHETAB reached Rls. 32,224 billion, up by 81.4 percent compared with 1386. Gross value of these transactions amounted to Rls. 212,249 billion. Share of POSs in total number of interbank transactions was 10.8 percent, indicating a significant growth compared with the corresponding figure of 1386 (5.8 percent).

### Electronic Settlement System

#### SAHAB

The retail fund transfer system (SAHAB) helps transfer of up to Rls. 30 million through ATMs and Internet round-the-clock, as well as online and real time transfer of up to Rls. 150 million through Pin-pads.

In 1387, the number of transactions processed in the banking system through SAHAB reached 8,551 thousand worth Rls. 30,417 billion, indicating the extensive use of this service. Shares of ATMs, Pin-pads, and Internet in total transactions processed through SAHAB, in terms of volume, were 97.6, 2.3, and 0.1 percent, respectively, and in terms of value, 87.6, 12.3, and 0.1 percent, respectively. It is expected that by the extensive use of this service in the banking network, the electronic means of payment develop, and the alternative means of transactions such as the coded checks, Iran-Checks, and notes recede from the Iranian payment system in the future.

#### SATNA

In the review year, a new strategy for providing a wide range of electronic services to banks' customers, including the customer to customer real time electronic payment services, was adopted. The customer to customer real time electronic payment service was added to the all inclusive service basket of RTGS (Real Time Gross Settlement) of

### Volume and Net Value of Transactions Processed through SHETAB

	Volume (thousand)		Growth (percent)	Value (billion rials)		Growth (percent)
	1386	1387		1386	1387	
<b>Total transactions through SHETAB<sup>1</sup></b>	<b>381,184</b>	<b>524,879</b>	<b>37.7</b>	<b>17,766</b>	<b>32,224</b>	<b>81.4</b>
ATMs	359,134	468,427	30.4	..	..	0
POSs	22,050	56,452	156.0	..	..	0

<sup>1</sup> Figures for ATMs include transactions processed through Pin-pads, and those for POSs comprise transactions processed through Internet, landline, and cell phone.

banks' electronic products. Through this improvement, all sorts of real time electronic payments and cash transfer services for all categories and customers and for all sorts of accounts (centralized and non-centralized) were made possible. Moreover, given the fact that ordinary public should have incentives to use these electronic services more widely, the minimum threshold level of transactions (to be routed into the system) and the commission and fees of the RTGS (SATNA) services were eliminated. Therefore, it was made possible for all banks' customers and account holders to transfer money from different accounts without minimum threshold level restriction and service charge. All these factors led to a situation that banks payment and settlement systems and electronic services attained a wide ranging development in terms of safety and speed of transactions resulting in a more advanced nationwide system of payments and settlement. The number of transactions through SATNA, in terms of volume and value, increased by 994.5 and 90 percent to 268 thousand and Rls. 2,971.8 trillion, respectively, compared with 1386. The lion's share of transactions processed through SATNA, in terms of volume, belonged to customer to customer transactions by 85.5 percent, and in terms of value, to intraday liquidity facility, SHETAB, and interbank clearing house by 81.8 percent.

### Total Value of Transactions

Review of the total value of transactions in 1387 as compared with 1386 points to 13.1

percent reduction in real terms (including 25.4 percent growth of the CPI), despite 9 percent rise in the nominal value of transactions.

Issuance of the CBI Iran-Checks and their replacement for check notes issued by banks in 1387 reduced the gross value of Iran-Checks issued by banks as well as the ordinary checks (including bank checks) cleared through the interbank clearing house. However, issuance of the CBI Iran-Checks raised the volume of notes and coins with the public, which is not included in calculations due to unlimited circulation.

Electronic transactions increased in 1387, despite the fall in transactions through various kinds of checks. Thus, share of electronic transactions in total value of transactions went up by 3.2 percentage points in the review year, and the volume of transactions through Iran-Checks issued by banks decreased by the same figure. Despite the meager rise in the value of transactions through ordinary checks, the lion's share in the value of transactions still belonged to these checks. The value of transactions through POSs rose 126.9 percent in 1387; however, these instruments held a mere 0.5 percent share in total. Share of ATMs in total value of transactions increased from 1.7 percent in 1386 to 2.8 percent in 1387, up by 1.1 percentage points.

### Share of Non-cash Payment Instruments

In spite of development of electronic banking and expansion of electronic payment

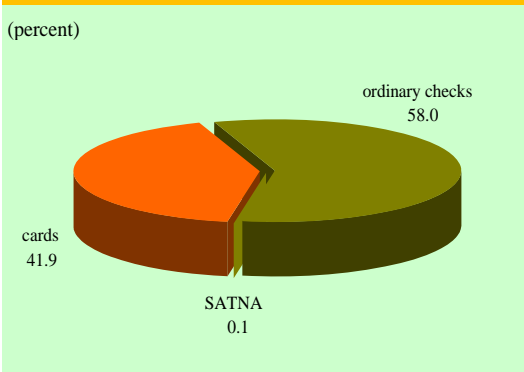
### Volume and Value of Transactions Processed through SATNA

	Volume		Growth (percent)	Value (billion rials)		Growth (percent)
	1386	1387		1386	1387	
Bank to bank	8,416	20,408	142.5	435,143	391,080	-10.1
Customer to customer	1,493	228,646	⊠	55,431	148,330	167.6
Intraday liquidity facility, Interbank Clearing House, and SHETAB	14,536	18,507	27.3	1,073,664	2,432,415	126.6
<b>Total</b>	<b>24,445</b>	<b>267,561</b>	<b>⊠</b>	<b>1,564,238</b>	<b>2,971,825</b>	<b>90.0</b>

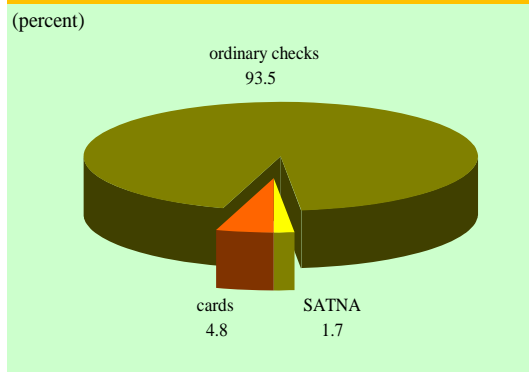
instruments in recent years, the highest share in total non-cash payments, in terms of volume and value, belonged to ordinary checks in 1387. Ordinary checks<sup>1</sup> constituted 58.0 percent of total number of non-cash transactions in this year, holding 93.5 percent of total value of non-cash transactions as a result of high average value per transaction settled through ordinary checks worth Rls. 46,061 thousand. The average value of transactions through cards was Rls. 3,277 thousand. Although transactions through bank cards accounted for 41.9 percent of total number of transactions, share of card transactions in total value of non-cash transactions stood at 4.8 percent.

With regard to adoption of supportive policies, as well as elimination of the minimum threshold level restriction and the commission received from customers for transactions through SATNA, volume of transactions through this system constituted 0.1 percent of non-cash payments. Value of transactions through SATNA held 1.7 percent share in total non-cash transactions owing to the fact that transactions through this system were mostly in large-value funds. It is expected that by the rise in public awareness, the use of SATNA expands in the future, accounting for a higher share in non-cash transactions, in terms of volume and value.

**Figure 15.3. Share of non-cash payment instruments in total number of non-cash transactions in 1387**



**Figure 15.4. Share of non-cash payment instruments in total value of non-cash transactions in 1387**



**Share of Non-cash Payment Instruments in Total Volume and Value of Non-cash Transactions**

	Share in total volume (percent)		Share in total value (percent)		Average value per transaction (thousand rials)	
	1386	1387	1386	1387	1386	1387
Cards <sup>1</sup>	20.2	41.9	3.7	4.8	4,355	3,277
Ordinary checks <sup>2</sup>	79.8	58.0	95.6	93.5	28,595	46,061
SATNA <sup>3</sup>	*	0.1	0.7	1.7	37,127,261	648,732
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>23,859</b>	<b>28,568</b>

<sup>1</sup> Includes transactions processed through POSs and Pin-pads, and excludes ATMs. Non-cash payment transactions processed through ATMs (such as payment of utility bills and cash transfers whose breakdown is not available) are excluded from this calculation. <sup>2</sup> Includes only ordinary checks channeled through the Interbank Clearing House. <sup>3</sup> Includes only customer to customer transactions.

<sup>1</sup> Includes only volume and value of ordinary checks channeled through the Interbank Clearing House.



**Total Value of Transactions via Payment Instruments Processed  
through the Banking System**

	Value (trillion rials)		Growth (percent)	Share in growth (percentage points)	Share in total value of transactions (percent)		Change in share (percentage points)
	1386	1387			1386	1387	
	Iran-Checks issued by banks	636			320	-49.7	
Ordinary checks	7,406	8,149	10.0	8.7	86.8	87.6	0.8
ATMs	149	263	76.0	1.3	1.7	2.8	1.1
POSs	21	48	126.9	0.3	0.2	0.5	0.3
Pin-pads	265	371	40.1	1.2	3.1	4.0	0.9
SATNA (customer to customer)	55	148	167.6	1.1	0.6	1.6	0.9
<b>Total transactions (nominal)</b>	<b>8,533</b>	<b>9,300</b>	<b>9.0</b>	<b>9.0</b>	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>
<b>Total transactions (real)</b>	<b>5,836</b>	<b>5,073</b>	<b>-13.1</b>				

**Note:** CPI is used for the calculation of total transactions in real terms.