

In line with the 2001 Payment System Comprehensive Strategy Project and the utilization of modern information and communication technologies, the CBI adopted various significant measures in 2017/18 for the furtherance of the payment system. This was with a view to the expansion of retail payment services, which was fulfilled via the PAYVAND system, and making money transfers as well as cross-border payments through cards safer and more secure. Deepening of supervision, advocacy of transparency in the economy, prevention of corruption in the banking system, development of NAHAB (the Electronic Banking Authentication System) as the integrated inquiry center of Iran's banking system, the expansion of MAKNA (the Credit Control and Oversight Center) as a priority on the project list of Resistance Economy Command Headquarters, and the establishment of SAYAD (System of Bank-Wide Standard E-Checkbook Issuance) for raising the security and efficiency of checks as a payment instrument were among the CBI's important measures. The design and implementation of three projects including cross-border communication, establishment

of a direct credit-based payment system, and enablement of international standards were put on the CBI's agenda as of 2017/18. The transfer of public accounts to the CBI was another important project, which was done with the aim of implementing the Comprehensive Roadmap of E-Government Plan and the improved management of public accounts by the CBI, as the banker to the government.

### Cash Payment

#### Notes and Coins

Banknotes and coins act as direct instruments for cash payment. With the inclusion of Iran-Checks issued by the CBI, total notes and coins issued amounted to Rls. 562.9 trillion in 2017/18. Notes and coins with the public (including the CBI Iran-Checks) rose 12.6 percent compared with the year before, reaching Rls. 442.7 trillion in March 2018 from Rls. 393.3 trillion in the previous year-end. Therefore, the ratio of notes and coins with the public to GDP (at current prices) decreased by 0.1 percentage point compared with the year before to reach 3.0 percent in 2017/18.

**Table 14.1. Notes and Coins with the Public and their Ratio to Macroeconomic Indicators**

	Value (trillion rials)	Percentage change (annual)	Share in M1 (percent)	Share in M2 (percent)	Ratio to GDP (percent)	Value per capita (thousand rials)
2016/17	393.3	5.8	24.1	3.1	3.1	4,921
2017/18	442.7	12.6	22.7	2.9	3.0	5,461

### Sight Deposits

Total sight deposits reached Rls. 1,504.0 trillion in March 2018, showing 21.6 percent increase compared with the year before. Shares of sight deposits in M1 and M2 were 77.3 and 9.8 percent, respectively, and their ratio to GDP was 10.2 percent at current prices. Moreover, sight deposits per capita reached Rls. 18,552 thousand, showing 19.9 percent growth compared with the preceding year. Due to the rise in the value of notes and coins with the public as well as sight deposits, total money supply (including notes and coins with the public plus sight deposits) increased by 19.4 percent from Rls. 1,630.3 trillion in March 2017 to Rls. 1,946.7 trillion in March 2018.

### Check Settlement System

The implementation of CHAKAVAK (the infrastructure of systematic and electronic processing of checks and banking documents) in 2014 and its gradual replacement for the Interbank Clearing House by month June 2015 paved the way for the execution of check clearance solely through this system as of 2016. The number of checks channeled via CHAKAVAK reached 122.2 million, down by 1.6 percent compared with 2016/17. The

value of these checks reached Rls. 22,813.8 trillion, showing an increase of 31.7 percent compared with the year before. Thus, the average value per transaction rose by 33.8 percent to Rls. 186.7 million compared with Rls. 139.5 million in 2016/17. The per capita number and value of transactions through checks were 1.5 and Rls. 281.4 million, respectively, in 2017/18. The ratio of the value of check transactions to GDP was 1.5 at current prices, indicating an increase compared with the respective figure in the year before (1.4).

### Electronic Payment System

#### Expansion of Electronic Payment Instruments

In 2017/18, the number of cards issued in the banking sector decreased by 20.3 percent to 330.3 million. Of these cards, 220 million were debit cards (66.6 percent), 108 million were prepaid cards in the form of purchase and gift cards (32.8 percent), and merely 2 million were credit cards (0.6 percent). The number of issued cards per capita decreased from 5.2 in March 2017 to 4.1 cards in March 2018.

**Table 14.2. Sight Deposits and their Ratio to Macroeconomic Indicators**

	Value (trillion rials)	Percentage change (annual)	Share in M1 (percent)	Share in M2 (percent)	Ratio to GDP (percent)	Value per capita (thousand rials)
2016/17	1,237	24.3	75.9	9.9	9.7	15,477
2017/18	1,504	21.6	77.3	9.8	10.2	18,552

**Table 14.3. Transactions Processed through Checks**

	Volume (million)		Percentage change	Value (trillion rials)		Percentage change
	2016/17	2017/18		2016/17	2017/18	
CHAKAVAK	124.2	122.2	-1.6	17,317.3	22,813.8	31.7

The number of ATMs increased by 15.6 percent to 54,765 in 2017/18. The number of PIN pads (electronic devices used in debit, credit, or smart card-based transactions within bank branches) fell by 4.0 percent to 69,290 and that of POSs surged by 13.5 percent to 5,984 thousand. Ratios of issued cards to ATMs, PIN pads, and POSs were respectively 6,031, 4,767, and 55 which, considering the decrease in the number of issued cards and PIN pads as against the rise in that of POSs and ATMs, were all lower than 2016/17.

### *Development of Electronic Transactions*

In 2017/18, the total volume and value of electronic transactions settled through the banking sector reached 23,620 million and Rls. 45,910 trillion, respectively. The volume of electronic transactions processed through

ATMs and POSs grew by respectively 7.8 and 36.8 percent. Accordingly, the value of transactions processed through these devices increased by respectively 15.9 and 25.7 percent. The volume and value of PIN pad transactions increased by respectively 3.2 and 28.4 percent. Moreover, the volume and value of transactions processed through cell phones, landlines, kiosks, and internet rose 28.4 and 64.3 percent, respectively. The total number of transactions per card was 71.5 in 2017/18, indicating a rise when compared with 44.8 transactions in 2016/17. The ratio of the number of ATM transactions to each ATM was 103,325 in 2017/18. This ratio was 2,497 for POS and 4,253 for PIN pad transactions. The ratio of the value of transactions to their volume totaled respectively Rls. 3,081 thousand, Rls. 1,078 thousand, and Rls. 27,898 thousand per ATM, POS, and PIN pad.

**Table 14.4. Number of Electronic Payment Instruments**

	Year-end		Percentage change
	2016/17	2017/18	
Bank cards (thousand)	414,590	330,313	-20.3
ATM	47,374	54,765	15.6
POS	5,271,735	5,984,036	13.5
PIN pad	72,187	69,290	-4.0

**Table 14.5. Bank Cards**

	Number (million)		Growth (percent)	Share (percent)		Change in share (percentage points)
	2016/17	2017/18		2016/17	2017/18	
Debit cards	273	220	-19.4	65.8	66.6	0.8
Credit cards	1	2	28.5	0.4	0.6	0.2
Prepaid cards	140	108	-22.7	33.8	32.8	-1.0

**Table 14.6. Electronic Transactions Processed through the Banking Sector**

	Volume (million)		Growth (percent)	Value (trillion rials)		Growth (percent)
	2016/17	2017/18		2016/17	2017/18	
ATM	5,251	5,659	7.8	15,042	17,434	15.9
POS	10,919	14,943	36.8	12,810	16,106	25.7
PIN pad	286	295	3.2	6,402	8,222	28.4
Cell phone, landline, kiosk, and internet	2,121	2,724	28.4	2,526	4,149	64.3
<b>Total</b>	<b>18,577</b>	<b>23,620</b>	<b>27.1</b>	<b>36,780</b>	<b>45,910</b>	<b>24.8</b>

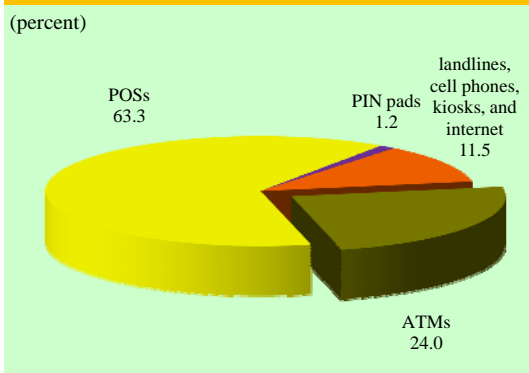
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ATMs had respectively 24.0 and 38.0 percent shares in the total volume and value of electronic transactions processed through the banking sector in 2017/18. Accordingly, POSs enjoyed shares of respectively 63.3 and 35.1 percent in the total volume and value of electronic transactions. The share of transactions processed through ATMs and PIN pads decreased by 4.3 and 0.3 percentage points in terms of number while the share of the number of POSs in total transactions rose 4.5 percentage points and that of cell phones, landlines, kiosks, and internet increased by 0.1 percentage point. This showed the growing public tendency towards the wider use of new electronic payment instruments in daily transactions. Furthermore, PIN pads enjoyed respectively 1.2 and 17.9 percent shares in the total volume and value of electronic transactions in 2017/18. PIN pads are mainly used for the electronic transfer of funds via

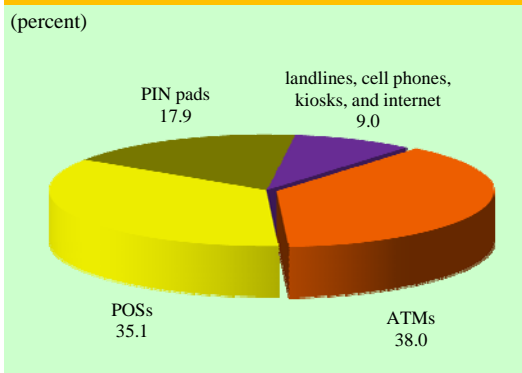
bank cards among various accounts of one bank or the interbank transfer of funds.

Interbank Information Transfer Network (SHETAB) played a key role in processing electronic transactions in the banking sector in 2017/18. The share of SHETAB center in the total volume of electronic transactions processed through the banking sector was 91.6 percent and in total value, 69.3 percent. This indicated a rise when compared with the corresponding figures in the year before (89.6 and 68.7 percent). The number of ATM and POS transactions processed via the SHETAB center increased by 10.1 and 36.8 percent to 3,887 million and 14,943 million, respectively. The value of SHETAB transactions via ATMs and POSs reached Rls. 8,724 trillion and Rls. 16,106 trillion in 2017/18, showing respectively 15.4 and 25.7 percent increase compared with 2016/17.

**Figure 14.1. Share of electronic payment instruments in total volume of electronic transactions in the banking sector in 2017/18**



**Figure 14.2. Share of electronic payment instruments in total value of electronic transactions in the banking sector in 2017/18**



**Table 14.7. Interbank Transactions Processed through SHETAB**

	Volume (million)		Growth (percent)	Value (trillion rials)		Growth (percent)
	2016/17	2017/18		2016/17	2017/18	
ATM	3,530	3,887	10.1	7,562	8,724	15.4
POS	10,919	14,943	36.8	12,810	16,106	25.7
Others (landline, cell phone, internet, kiosk, and branches)	2,187	2,795	27.8	4,891	6,985	42.8
<b>Total<sup>1</sup></b>	<b>16,636</b>	<b>21,625</b>	<b>30.0</b>	<b>25,262</b>	<b>31,815</b>	<b>25.9</b>

<sup>1</sup> Includes interbank electronic transactions processed through SAHAB.

## Electronic Settlement System

### SAHAB

Retail Funds Transfer System (SAHAB), as a major service rendered by the SHETAB center, helped the transfer of 1,187 million transactions through ATMs in 2017/18, indicating 14.7 percent growth compared with the year before. Furthermore, 61 million transactions processed through PIN pads were related to SAHAB. The volume of transactions processed through SAHAB via the internet and kiosks increased by 94.3 percent. Shares of ATMs, PIN pads, and "internet and kiosks" in the total number of transactions processed through SAHAB were respectively 66.2, 3.4, and 30.4 percent and in total value, 57.3, 22.2, and 20.4 percent. A total of 1,792 million transactions, valued at Rls. 12,764 trillion, were processed through SAHAB in 2017/18. Therefore, the expansion of the use of electronic money orders in the future is well expected.

### SATNA

The total volume of transactions processed through RTGS (Real Time Gross Settlement)

System or SATNA, as the main infrastructure for large-value payments, increased by 18.0 percent to 11.2 million. Moreover, the value of transactions processed through SATNA reached Rls. 91,197 trillion, indicating 33.4 percent growth compared with 2016/17. Total volume of customer-to-customer transactions processed through SATNA increased by 18.4 percent to 10.8 million, with their value increasing by 10.8 percent to Rls. 23,837 trillion. Meanwhile, the volume and value of clearing settlement systems increased by 9.0 and 36.7 percent in 2017/18, to reach 291 thousand and Rls. 48,816 trillion, respectively. Moreover, the total volume and value of bank-to-bank transactions rose by respectively 9.6 and 66.2 percent, reaching 123 thousand transactions, with a value of Rls. 18,544 trillion. Customer-to-customer transactions accounted for the highest share in the total number of transactions processed through SATNA by 96.3 percent. The highest share in the value of these transactions in 2017/18 was related to clearing settlement systems by 53.5 percent.

**Table 14.8. Transactions Processed through SAHAB**

	Volume (million)		Growth (percent)	Value (trillion rials)		Growth (percent)
	2016/17	2017/18		2016/17	2017/18	
ATM	1,034	1,187	14.7	6,223	7,320	17.6
PIN pad	53	61	15.2	2,358	2,834	20.2
Internet and kiosk	280	545	94.3	1,432	2,610	82.3
<b>Total</b>	<b>1,368</b>	<b>1,792</b>	<b>31.0</b>	<b>10,012</b>	<b>12,764</b>	<b>27.5</b>

**Table 14.9. Transactions Processed through SATNA**

	Volume (thousand)		Growth (percent)	Value (trillion rials)		Growth (percent)
	2016/17	2017/18		2016/17	2017/18	
Bank-to-bank	112	123	9.6	11,157	18,544	66.2
Customer-to-customer	9,135	10,816	18.4	21,510	23,837	10.8
Clearing settlement systems	267	291	9.0	35,721	48,816	36.7
<b>Total<sup>1</sup></b>	<b>9,514</b>	<b>11,230</b>	<b>18.0</b>	<b>68,388</b>	<b>91,197</b>	<b>33.4</b>

<sup>1</sup> Excludes intraday liquidity facility and settlement by the CBI.

**PAYA**

The Automated Clearing House System (PAYA), as one of the infrastructures of interbank transactions, receives payment orders from the originating bank and, after processing, sends orders to the destination bank. Accordingly, upon the full launching of SHAPARAK (Electronic Card Payment and Settlement System), completion of transactions and the transfer of funds to the accounts of goods' and services' suppliers were directed through the PAYA system. Moreover, with the possibility of processing direct transfer orders through PAYA, this system together with SATNA and SAHAB covered and processed all electronic orders for fund transfers. SATNA and PAYA are utilized for account-to-account transfer of funds while SAHAB is used for card-to-card retail fund transfers. In 2017/18, about 105 million banking transactions worth Rls. 5,856 trillion were processed through PAYA in the form of credit transfer, indicating 73.1 percent growth in volume and 42.2 percent growth in value. Meanwhile, a number of 2,330 million transactions, worth Rls. 17,450 trillion, were processed via SHAPARAK. Total PAYA transactions were 2,435 million in number and Rls. 23,307 trillion in terms of value, up by 13.0 and 30.3 percent, respectively.

**SIMA**

Upon the launching of Scripless Securities Settlement System (TABSA) in 2010/11, which was introduced as an infrastructure for the electronic issue and settlement of securities,

various feasibility studies were conducted on the operation of the Integrated Management System of Securities (SIMA), with the aim of the fully electronic issuance of securities. This subsystem was made operational in 2012/13. Accordingly, Rls. 45.0 trillion worth of participation papers was issued via the SIMA system, Rls. 20 trillion of which was issued by the Ministry of Economic Affairs and Finance, to be offered to the public by Maskan and Sepah banks. The remaining Rls. 25 trillion of participation papers were issued by Mashhad, Isfahan, Ahvaz, Qom, and Tehran municipalities, to be sold by Ayandeh, Shahr, and Tose'e Ta'avon agent banks. Moreover, Rls. 440.8 trillion of securities were in the form of electronic general Certificates of Deposit, issued by Tejarat, Saman, Keshavarzi, Sepah, Refah, Mellat, Parsian, Ayandeh, EN, Melli, Pasargad, Tose'e Ta'avon, Iran Zamin, Saderat, Tourism, and Middle East banks as well as Melal Credit Institution.

**Total Value of Transactions**

In 2017/18, the nominal value of total transactions of the banking system increased by 23.4 percent compared with 2016/17 to reach Rls. 98,417 trillion. The real value of total transactions (considering 9.6 percent growth in the CPI of goods and services) rose 12.6 percent. Due to their unrestricted circulation frequency, notes and coins with the public as well as the CBI Iran-Checks are not included in calculations.

**Table 14.10. Transactions Processed through PAYA**

	Volume (million)		Growth (percent)	Value (trillion rials)		Growth (percent)
	2016/17	2017/18		2016/17	2017/18	
Credit transfer	61	105	73.1	4,119	5,856	42.2
SHAPARAK	2,094	2,330	11.3	13,775	17,450	26.7
<b>Total</b>	<b>2,155</b>	<b>2,435</b>	<b>13.0</b>	<b>17,894</b>	<b>23,307</b>	<b>30.3</b>

Price increases in the market, along with further public tendency for cash transactions, led to a decrease in the number of check transactions as against an increase in their value. Therefore, the share of the value of check transactions in total electronic transactions increased by 1.5 percentage points to 23.2 percent. Contrarily, the share of the value of electronic payment instruments and systems in total fell by 1.5 percentage points to reach 76.8 percent. Despite 1.2 percentage points decline in the ATM share in total value of transactions, ATM transactions rose 15.9 percent compared with the year before, accounting for 3.0 percentage points of growth in the total value of transactions. The value of transactions processed via POSs increased by 25.7 percent in 2017/18 and the share of POS transactions in total value rose 0.3 percentage point to 16.4 percent.

Data on transactions processed through electronic payment systems indicated that customer-to-customer transactions processed via SATNA, despite enjoying the lion's share

in the total value of electronic transactions, decreased from 27.0 percent in 2016/17 to 24.2 percent in 2017/18. The value of PAYA transactions (credit transfers), with 42.2 percent increase compared with 2016/17, accounted for 6.0 percent of the total value of transactions in 2017/18.

### Share of Non-cash Payment Instruments

Of total non-cash transactions processed in the banking system, 98.9 percent were related to bank cards in terms of number. Meanwhile, checks constituted 0.5 percent of the total number of non-cash transactions in 2017/18 and the remaining 0.6 percent was processed through PAYA and SATNA systems. The average value of each transaction settled via bank cards reached Rls. 2,046 thousand, constituting about 45.3 percent of the total value of non-cash transactions. The high average value of transactions settled through checks at Rls. 186.7 million brought the share of checks in the total value of non-cash transactions to 23.8 percent.

**Table 14.11. Transactions Processed through the Banking Sector**

	Value (trillion rials)		Growth (percent)	Share in growth (percentage points)	Share in total value of transactions (%)		Change in share (percentage points)
	2016/17	2017/18			2016/17	2017/18	
<b>Checks<sup>1</sup></b>	<b>17,317</b>	<b>22,814</b>	<b>31.7</b>	<b>6.9</b>	<b>21.7</b>	<b>23.2</b>	<b>1.5</b>
<b>Electronic payment instruments and systems</b>	<b>62,409</b>	<b>75,604</b>	<b>21.1</b>	<b>16.5</b>	<b>78.3</b>	<b>76.8</b>	<b>-1.5</b>
<b>Electronic payment instruments</b>	<b>36,780</b>	<b>45,910</b>	<b>24.8</b>	<b>11.4</b>	<b>46.1</b>	<b>46.6</b>	<b>0.5</b>
ATM	15,042	17,434	15.9	3.0	18.9	17.7	-1.2
POS	12,810	16,106	25.7	4.1	16.1	16.4	0.3
PIN pad	6,402	8,222	28.4	2.3	8.0	8.4	0.4
Cell phone, landline, kiosk, and internet	2,526	4,149	64.3	2.0	3.2	4.2	1.0
<b>Electronic payment systems</b>	<b>25,629</b>	<b>29,694</b>	<b>15.9</b>	<b>5.1</b>	<b>32.1</b>	<b>30.2</b>	<b>-2.0</b>
SATNA (customer-to-customer)	21,510	23,837	10.8	2.9	27.0	24.2	-2.8
PAYA (credit transfers)	4,119	5,856	42.2	2.2	5.2	6.0	0.8
<b>Total (nominal)</b>	<b>79,727</b>	<b>98,417</b>	<b>23.4</b>		<b>100.0</b>	<b>100.0</b>	
<b>Total (real)<sup>2</sup></b>	<b>79,727</b>	<b>89,797</b>	<b>12.6</b>				

<sup>1</sup> Includes only bank-to-bank transactions processed through the Interbank Clearing House and CHAKAVAK system, excluding intra-bank transactions.

<sup>2</sup> The CPI is used for the calculation of total transactions in real terms (2016/17=100).

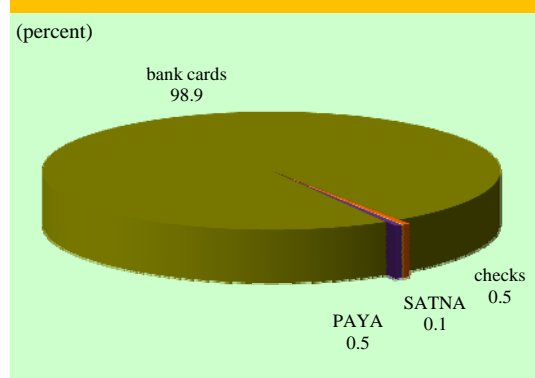


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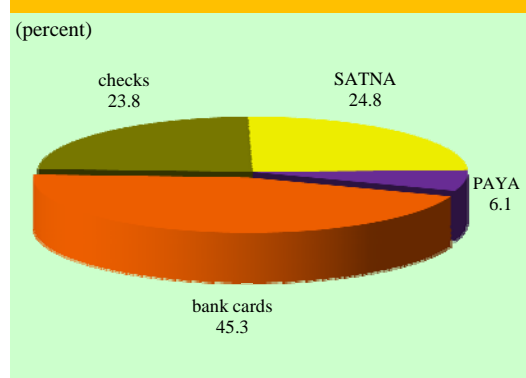
Customer-to-customer transactions via SATNA accounted for 0.1 percent of the total volume of non-cash transactions in 2017/18. As SATNA transactions, covering large-value payments, averaged high at Rls. 2,203.8 million in 2017/18, customer-to-customer transactions processed through this system accounted for 24.8 percent of

the total value of non-cash transactions. The share of the value of customer-to-customer transactions processed through SATNA fell by 3.0 percentage points compared with 2016/17 while the overall share of bank cards, checks, and PAYA in the total value of non-cash transactions indicated 3.0 percentage points rise in 2017/18.

**Figure 14.3. Share of non-cash payment instruments in total volume of non-cash transactions in 2017/18**



**Figure 14.4. Share of non-cash payment instruments in total value of non-cash transactions in 2017/18**



**Table 14.12. 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)	
	2016/17	2017/18	2016/17	2017/18	2016/17	2017/18
Bank cards <sup>1</sup>	98.8	98.9	44.5	45.3	2,118	2,046
Checks <sup>2</sup>	0.7	0.5	22.4	23.8	139,484	186,668
SATNA (customer-to-customer)	0.1	0.1	27.8	24.8	2,354,730	2,203,838
PAYA (credit transfers)	0.4	0.5	5.3	6.1	68,003	55,852
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>4,700</b>	<b>4,463</b>

<sup>1</sup> Includes transactions processed through POS, PIN pad, cell phone, landline, kiosk, internet, and ATM (excluding cash withdrawals).

<sup>2</sup> Includes only ordinary checks channeled through the Interbank Clearing House and CHAKAVAK system, excluding intra-bank documents.